

Client Data		Sample Data		Laboratory Data	
Sample ID: IPA0103-01	Del Mar Analytical, Irvine IPA0103	Matrix:	Aqueous	Lab Sample: 27141-001	Date Received: 5-Jan-06
Date Collected: 3-Jan-06	Time Collected: 0845	Sample Size: 1.00 L		QC Batch No.: 7632	Date Extracted: 8-Jan-06
				Date Analyzed DB-5: 12-Jan-06	Date Analyzed DB-225: NA
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.000000964		IS 13C-2,3,7,8-TCDD	79.8 25 - 164
1,2,3,7,8-PeCDD	ND	0.00000144		13C-1,2,3,7,8-PeCDD	80.9 25 - 181
1,2,3,4,7,8-HxCDD	ND		0.00000139	13C-1,2,3,4,7,8-HxCDD	82.2 32 - 141
1,2,3,6,7,8-HxCDD	0.00000441			13C-1,2,3,6,7,8-HxCDD	75.2 28 - 130
1,2,3,7,8,9-HxCDD	0.00000313			13C-1,2,3,4,6,7,8-HpCDD	78.3 23 - 140
1,2,3,4,6,7,8-HpCDD	0.000100			13C-OCDD	48.2 17 - 157
OCDD	0.000949			13C-2,3,7,8-TCDF	79.1 24 - 169
2,3,7,8-TCDF	ND	0.000000981		13C-1,2,3,7,8-PeCDF	81.9 24 - 185
1,2,3,7,8-PeCDF	ND	0.00000138		13C-2,3,4,7,8-PeCDF	82.1 21 - 178
2,3,4,7,8-PeCDF	ND	0.00000126		13C-1,2,3,4,7,8-HxCDF	77.2 26 - 152
1,2,3,4,7,8-HxCDF	ND	0.00000104		13C-1,2,3,6,7,8-HxCDF	76.2 26 - 123
1,2,3,6,7,8-HxCDF	ND	0.000000978		13C-2,3,4,6,7,8-HxCDF	78.7 28 - 136
2,3,4,6,7,8-HxCDF	ND	0.00000107		13C-1,2,3,7,8,9-HxCDF	80.8 29 - 147
1,2,3,7,8,9-HxCDF	ND	0.00000139		13C-1,2,3,4,6,7,8-HpCDF	70.0 28 - 143
1,2,3,4,6,7,8-HpCDF	0.0000183			13C-1,2,3,4,7,8,9-HpCDF	79.6 26 - 138
1,2,3,4,7,8,9-HpCDF	0.00000230			13C-OCDF	57.3 17 - 157
OCDF	0.0000761			CRS 37CI-2,3,7,8-TCDD	85.2 35 - 197
<b>Totals</b>					
Total TCDD	ND	0.000000964			
Total PeCDD	ND	0.00000144			
Total HxCDD	0.0000328		0.0000356		
Total HpCDD	0.000210				
Total TCDF	ND	0.000000981			
Total PeCDF	0.00000227		0.00000426		
Total HxCDF	0.0000146		0.0000162		
Total HpCDF	0.0000615				

**Footnotes**

- a. Sample specific estimated detection limit.
- b. Estimated maximum possible concentration.
- c. Method detection limit.
- d. Lower control limit - upper control limit.

Analyst: JMH  
Approved By: Martha M. Maier  
17-Jan-2006 09:11

*level III*  
*KS 01/13/06*

Project 27141

# **APPENDIX G**

## **Section 39**

Outfall 012, January 12, 2006

Del Mar Analytical Laboratory Report



LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project: Alfa Outfall 012 - During Test

Sampled: 01/12/06  
Received: 01/13/06  
Issued: 02/04/06 16:32

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 Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. 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
IPA1080-01	Outfall 012	Water
IPA1080-02	Trip Blank	Water

Reviewed By:

*Michele Chamberlin*

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

## TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1080-01 (Outfall 012 - Water)									
Reporting Units: mg/l									
Total Recoverable Hydrocarbons	EPA 418.1	6A16046	0.30	0.95	1.5	0.952	01/16/06	01/16/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

**EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1080-01 (Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	6A18068	0.042	0.47	0.38	0.943	01/18/06	01/19/06	J
Surrogate: n-Octacosane (40-125%)					80 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

**VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1080-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6A19042	0.050	0.10	0.22	1	01/19/06	01/19/06	
Surrogate: 4-BFB (FID) (65-140%)					97 %				
<b>Sample ID: IPA1080-02 (Trip Blank - Water)</b>									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6A19042	0.050	0.10	ND	1	01/19/06	01/19/06	
Surrogate: 4-BFB (FID) (65-140%)					85 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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) 505-8996 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1080-01 (Outfall 012 - Water)</b>									
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	6A23017	0.32	2.0	ND	1	01/23/06	01/23/06	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6A23017	0.32	5.0	ND	1	01/23/06	01/23/06	
1,2,3-Trichloropropane	EPA 624	6A23017	0.40	10	ND	1	01/23/06	01/23/06	
Di-isopropyl Ether (DIPE)	EPA 624	6A23017	0.25	5.0	ND	1	01/23/06	01/23/06	
tert-Butanol (TBA)	EPA 624	6A23017	3.1	25	ND	1	01/23/06	01/23/06	
Surrogate: Dibromofluoromethane (80-120%)					108 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					108 %				
<b>Sample ID: IPA1080-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	6A23017	0.32	2.0	ND	1	01/23/06	01/23/06	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6A23017	0.32	5.0	ND	1	01/23/06	01/23/06	
1,2,3-Trichloropropane	EPA 624	6A23017	0.40	10	ND	1	01/23/06	01/23/06	
Di-isopropyl Ether (DIPE)	EPA 624	6A23017	0.25	5.0	ND	1	01/23/06	01/23/06	
tert-Butanol (TBA)	EPA 624	6A23017	3.1	25	ND	1	01/23/06	01/23/06	
Surrogate: Dibromofluoromethane (80-120%)					112 %				
Surrogate: Toluene-d8 (80-120%)					111 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					114 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (658) 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1080-01 (Outfall 012 - Water)</b>									
Reporting Units: ug/l									
Naphthalene	EPA 625	6A15016	4.3	9.6	21	0.962	01/15/06	01/18/06	
N-Nitrosodimethylamine	EPA 625	6A15016	3.6	19	ND	0.962	01/15/06	01/18/06	
Surrogate: 2-Fluorophenol (30-120%)					56 %				
Surrogate: Phenol-d6 (35-120%)					67 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					81 %				
Surrogate: Nitrobenzene-d5 (45-120%)					87 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					77 %				
Surrogate: Terphenyl-d14 (45-120%)					89 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Croley 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1080-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A20097	0.30	0.50	2.0	1	01/20/06	01/20/06	
Biochemical Oxygen Demand	EPA 405.1	6A13122	0.59	2.0	1.4	1	01/13/06	01/18/06	J
Oil & Grease	EPA 413.1	6A17048	0.90	4.8	ND	1	01/17/06	01/17/06	
Total Dissolved Solids	SM2540C	6A18104	10	10	310	1	01/18/06	01/18/06	
Total Suspended Solids	EPA 160.2	6A16117	10	10	15	1	01/16/06	01/16/06	
<b>Sample ID: IPA1080-01 (Outfall 012 - Water)</b>									
Reporting Units: ml/hr									
Total Settleable Solids	EPA 160.5	6A13089	0.10	0.10	0.10	1	01/13/06	01/13/06	
<b>Sample ID: IPA1080-01 (Outfall 012 - Water)</b>									
Reporting Units: NTU									
Turbidity	EPA 180.1	6A14040	0.20	5.0	46	5	01/14/06	01/14/06	
<b>Sample ID: IPA1080-01 (Outfall 012 - Water)</b>									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	6A16069	0.80	4.0	ND	1	01/16/06	01/16/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (658) 505-8596 FAX (658) 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

## 1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1080-01 (Outfall 012 - Water) - cont.									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B	P6A2307	0.49	1.0	ND	1	01/23/06	01/23/06	
Surrogate: Dibromofluoromethane (70-130%)					106 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

## SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 012 (IPA1080-01) - Water	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	01/12/2006 19:42	01/13/2006 15:34	01/13/2006 20:00	01/13/2006 21:00
EPA 180.1	2	01/12/2006 19:42	01/13/2006 15:34	01/14/2006 14:45	01/14/2006 15:45
EPA 405.1	2	01/12/2006 19:42	01/13/2006 15:34	01/13/2006 21:30	01/18/2006 17:00

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 8-120, 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

### METHOD BLANK/QC DATA

### TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A16046 Extracted: 01/16/06</b>											
<b>Blank Analyzed: 01/16/2006 (6A16046-BLK1)</b>											
Total Recoverable Hydrocarbons	ND	1.0	0.31	mg/l							
<b>LCS Analyzed: 01/16/2006 (6A16046-BS1)</b>											
Total Recoverable Hydrocarbons	3.98	1.0	0.31	mg/l	5.00		80	65-120			M-NR1
<b>LCS Dup Analyzed: 01/16/2006 (6A16046-BSD1)</b>											
Total Recoverable Hydrocarbons	4.10	1.0	0.31	mg/l	5.00		82	65-120	3	20	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06

Received: 01/13/06

## METHOD BLANK/QC DATA

### EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18068 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18068-BLK1)</b>											
EFH (C13 - C22)	ND	0.50	0.045	mg/l							
EFH (C13 - C40)	ND	0.50	0.045	mg/l							
Surrogate: n-Octacosane	0.152			mg/l	0.200		76	40-125			
<b>LCS Analyzed: 01/18/2006 (6A18068-BS1)</b>											
EFH (C13 - C40)	0.601	0.50	0.045	mg/l	0.776		77	40-120			M-NR1
Surrogate: n-Octacosane	0.155			mg/l	0.200		78	40-125			
<b>LCS Dup Analyzed: 01/18/2006 (6A18068-BSD1)</b>											
EFH (C13 - C40)	0.554	0.50	0.045	mg/l	0.776		71	40-120	8	25	
Surrogate: n-Octacosane	0.148			mg/l	0.200		74	40-125			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (658) 505-8596 FAX (658) 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06

Received: 01/13/06

## METHOD BLANK/QC DATA

### VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A19042 Extracted: 01/19/06</b>											
<b>Blank Analyzed: 01/19/2006 (6A19042-BLK1)</b>											
GRO (C4 - C12)	ND	0.10	0.050	mg/l							
Surrogate: 4-BFB (FID)	0.00893			mg/l	0.0100		89	65-140			
<b>LCS Analyzed: 01/19/2006 (6A19042-BS1)</b>											
GRO (C4 - C12)	0.859	0.10	0.050	mg/l	0.800		107	65-140			
Surrogate: 4-BFB (FID)	0.0312			mg/l	0.0300		104	65-140			
<b>Matrix Spike Analyzed: 01/19/2006 (6A19042-MS1)</b>											
						<b>Source: IPA1006-20</b>					
GRO (C4 - C12)	0.246	0.10	0.050	mg/l	0.220	ND	112	60-145			
Surrogate: 4-BFB (FID)	0.00976			mg/l	0.0100		98	65-140			
<b>Matrix Spike Dup Analyzed: 01/19/2006 (6A19042-MSD1)</b>											
						<b>Source: IPA1006-20</b>					
GRO (C4 - C12)	0.247	0.10	0.050	mg/l	0.220	ND	112	60-145	0	20	
Surrogate: 4-BFB (FID)	0.00977			mg/l	0.0100		98	65-140			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (619) 505-8596 FAX (619) 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A23017 Extracted: 01/23/06</b>											
<b>Blank Analyzed: 01/23/2006 (6A23017-BLK1)</b>											
1,2-Dibromoethane (EDB)	ND	2.0	0.32	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	0.32	ug/l							
1,2,3-Trichloropropane	ND	10	0.40	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	0.25	ug/l							
tert-Butanol (TBA)	ND	25	3.1	ug/l							
Surrogate: Dibromofluoromethane	27.0			ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	27.4			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	25.5			ug/l	25.0		102	80-120			
<b>LCS Analyzed: 01/23/2006 (6A23017-BS1)</b>											
1,2-Dibromoethane (EDB)	24.0	2.0	0.32	ug/l	25.0		96	70-125			
Methyl-tert-butyl Ether (MTBE)	28.1	5.0	0.32	ug/l	25.0		112	55-140			
1,2,3-Trichloropropane	26.3	10	0.40	ug/l	25.0		105	55-130			
Di-isopropyl Ether (DIPE)	27.1	5.0	0.25	ug/l	25.0		108	60-135			
tert-Butanol (TBA)	114	25	3.1	ug/l	125		91	65-135			
Surrogate: Dibromofluoromethane	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	28.3			ug/l	25.0		113	80-120			
Surrogate: 4-Bromofluorobenzene	23.6			ug/l	25.0		94	80-120			
<b>Matrix Spike Analyzed: 01/23/2006 (6A23017-MS1)</b>					<b>Source: IPA1080-01</b>						
1,2-Dibromoethane (EDB)	23.8	2.0	0.32	ug/l	25.0	ND	95	65-130			
Methyl-tert-butyl Ether (MTBE)	27.3	5.0	0.32	ug/l	25.0	ND	109	50-150			
1,2,3-Trichloropropane	24.4	10	0.40	ug/l	25.0	ND	98	50-135			
Di-isopropyl Ether (DIPE)	27.0	5.0	0.25	ug/l	25.0	ND	108	60-140			
tert-Butanol (TBA)	116	25	3.1	ug/l	125	ND	93	60-145			
Surrogate: Dibromofluoromethane	27.2			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	28.0			ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	24.2			ug/l	25.0		97	80-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06

Received: 01/13/06

**METHOD BLANK/QC DATA**

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A23017 Extracted: 01/23/06</b>											
<b>Matrix Spike Dup Analyzed: 01/23/2006 (6A23017-MSD1)</b>						<b>Source: IPA1080-01</b>					
1,2-Dibromoethane (EDB)	25.6	2.0	0.32	ug/l	25.0	ND	102	65-130	7	25	
Methyl-tert-butyl Ether (MTBE)	28.1	5.0	0.32	ug/l	25.0	ND	112	50-150	3	25	
1,2,3-Trichloropropane	25.5	10	0.40	ug/l	25.0	ND	102	50-135	4	30	
Di-isopropyl Ether (DIPE)	27.2	5.0	0.25	ug/l	25.0	ND	109	60-140	1	25	
tert-Butanol (TBA)	112	25	3.1	ug/l	125	ND	90	60-145	4	25	
Surrogate: Dibromofluoromethane	27.4			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.9			ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	26.5			ug/l	25.0		106	80-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A15016 Extracted: 01/15/06</b>										
<b>Blank Analyzed: 01/17/2006 (6A15016-BLK1)</b>										
Naphthalene	ND	10	4.5	ug/l						
N-Nitrosodimethylamine	ND	20	3.7	ug/l						
Surrogate: 2-Fluorophenol	109			ug/l	200		54 30-120			
Surrogate: Phenol-d6	125			ug/l	200		62 35-120			
Surrogate: 2,4,6-Tribromophenol	127			ug/l	200		64 45-120			
Surrogate: Nitrobenzene-d5	67.4			ug/l	100		67 45-120			
Surrogate: 2-Fluorobiphenyl	69.4			ug/l	100		69 45-120			
Surrogate: Terphenyl-d14	71.2			ug/l	100		71 45-120			
<b>LCS Analyzed: 01/17/2006 (6A15016-BS1)</b>										
Naphthalene	73.5	10	4.5	ug/l	100		74 50-120			M-NRI
N-Nitrosodimethylamine	61.4	20	3.7	ug/l	100		61 40-120			
Surrogate: 2-Fluorophenol	118			ug/l	200		59 30-120			
Surrogate: Phenol-d6	130			ug/l	200		65 35-120			
Surrogate: 2,4,6-Tribromophenol	139			ug/l	200		70 45-120			
Surrogate: Nitrobenzene-d5	72.8			ug/l	100		73 45-120			
Surrogate: 2-Fluorobiphenyl	73.5			ug/l	100		74 45-120			
Surrogate: Terphenyl-d14	69.6			ug/l	100		70 45-120			
<b>LCS Dup Analyzed: 01/17/2006 (6A15016-BSD1)</b>										
Naphthalene	74.8	10	4.5	ug/l	100		75 50-120	2	20	
N-Nitrosodimethylamine	57.6	20	3.7	ug/l	100		58 40-120	6	20	
Surrogate: 2-Fluorophenol	113			ug/l	200		56 30-120			
Surrogate: Phenol-d6	131			ug/l	200		66 35-120			
Surrogate: 2,4,6-Tribromophenol	131			ug/l	200		66 45-120			
Surrogate: Nitrobenzene-d5	70.7			ug/l	100		71 45-120			
Surrogate: 2-Fluorobiphenyl	76.3			ug/l	100		76 45-120			
Surrogate: Terphenyl-d14	74.0			ug/l	100		74 45-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - During Test  Report Number: IPA1080	Sampled: 01/12/06 Received: 01/13/06
--	--	---

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A13122 Extracted: 01/13/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A13122-BLK1)</b>											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
<b>LCS Analyzed: 01/18/2006 (6A13122-BS1)</b>											
Biochemical Oxygen Demand	190	100	30	mg/l	198		96	85-115			
<b>LCS Dup Analyzed: 01/18/2006 (6A13122-BSD1)</b>											
Biochemical Oxygen Demand	190	100	30	mg/l	198		96	85-115	0	20	
<b>Batch: 6A14040 Extracted: 01/14/06</b>											
<b>Blank Analyzed: 01/14/2006 (6A14040-BLK1)</b>											
Turbidity	ND	1.0	0.040	NTU							
<b>Duplicate Analyzed: 01/14/2006 (6A14040-DUP1)</b>											
Turbidity	47.0	5.0	0.20	NTU		Source: IPA1080-01 46			2	20	
<b>Batch: 6A16069 Extracted: 01/16/06</b>											
<b>Blank Analyzed: 01/16/2006 (6A16069-BLK1)</b>											
Perchlorate	ND	4.0	0.80	ug/l							
<b>LCS Analyzed: 01/16/2006 (6A16069-BS1)</b>											
Perchlorate	50.2	4.0	0.80	ug/l	50.0		100	85-115			
<b>Matrix Spike Analyzed: 01/16/2006 (6A16069-MS1)</b>											
Perchlorate	70.5	4.0	0.80	ug/l	50.0	Source: IPA1160-01 13	115	80-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A16069 Extracted: 01/16/06</b>											
<b>Matrix Spike Dup Analyzed: 01/16/2006 (6A16069-MSD1)</b>											
						<b>Source: IPA1160-01</b>					
Perchlorate	72.1	4.0	0.80	ug/l	50.0	13	118	80-120	2	20	
<b>Batch: 6A16117 Extracted: 01/16/06</b>											
<b>Blank Analyzed: 01/16/2006 (6A16117-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/16/2006 (6A16117-BS1)</b>											
Total Suspended Solids	998	10	10	mg/l	1000		100	85-115			
<b>Duplicate Analyzed: 01/16/2006 (6A16117-DUP1)</b>											
						<b>Source: IPA1082-01</b>					
Total Suspended Solids	112	10	10	mg/l		110			2	10	
<b>Batch: 6A17048 Extracted: 01/17/06</b>											
<b>Blank Analyzed: 01/17/2006 (6A17048-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							
<b>LCS Analyzed: 01/17/2006 (6A17048-BS1)</b>											
Oil & Grease	16.0	5.0	0.94	mg/l	20.0		80	65-120			M-NRI
<b>LCS Dup Analyzed: 01/17/2006 (6A17048-BSD1)</b>											
Oil & Grease	17.0	5.0	0.94	mg/l	20.0		85	65-120	6	20	
<b>Batch: 6A18104 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18104-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18104 Extracted: 01/18/06</b>											
<b>LCS Analyzed: 01/18/2006 (6A18104-BS1)</b>											
Total Dissolved Solids	1020	10	10	mg/l	1000		102	90-110			
<b>Duplicate Analyzed: 01/18/2006 (6A18104-DUP1)</b>											
						<b>Source: IPA0965-11</b>					
Total Dissolved Solids	807	10	10	mg/l		800			1	10	
<b>Batch: 6A20097 Extracted: 01/20/06</b>											
<b>Blank Analyzed: 01/20/2006 (6A20097-BLK1)</b>											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
<b>LCS Analyzed: 01/20/2006 (6A20097-BS1)</b>											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0		115	80-115			
<b>Matrix Spike Analyzed: 01/20/2006 (6A20097-MS1)</b>											
						<b>Source: IPA1193-01</b>					
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	0.56	109	70-120			
<b>Matrix Spike Dup Analyzed: 01/20/2006 (6A20097-MSD1)</b>											
						<b>Source: IPA1193-01</b>					
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	0.56	109	70-120	0	15	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

## METHOD BLANK/QC DATA

### 1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: P6A2307 Extracted: 01/23/06</b>											
<b>Blank Analyzed: 01/23/2006 (P6A2307-BLK1)</b>											
1,4-Dioxane	ND	1.0	0.49	ug/l							
Surrogate: Dibromofluoromethane	0.950			ug/l	1.00		95	70-130			
<b>LCS Analyzed: 01/23/2006 (P6A2307-BS1)</b>											
1,4-Dioxane	11.0	1.0	0.49	ug/l	10.0		110	70-130			
Surrogate: Dibromofluoromethane	0.890			ug/l	1.00		89	70-130			
<b>LCS Dup Analyzed: 01/23/2006 (P6A2307-BSD1)</b>											
1,4-Dioxane	10.4	1.0	0.49	ug/l	10.0		104	70-130	6	20	
Surrogate: Dibromofluoromethane	0.910			ug/l	1.00		91	70-130			
<b>Matrix Spike Analyzed: 01/23/2006 (P6A2307-MS1) Source: PPA0387-08</b>											
1,4-Dioxane	10.5	1.0	0.49	ug/l	10.0	ND	105	65-125			
Surrogate: Dibromofluoromethane	0.990			ug/l	1.00		99	70-130			
<b>Matrix Spike Dup Analyzed: 01/23/2006 (P6A2307-MSD1) Source: PPA0387-08</b>											
1,4-Dioxane	11.7	1.0	0.49	ug/l	10.0	ND	117	65-125	11	20	
Surrogate: Dibromofluoromethane	0.980			ug/l	1.00		98	70-130			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06

Received: 01/13/06

### 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.
- M-NR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

### ADDITIONAL COMMENTS

**For GRO (C4-C12):**

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

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

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

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (619) 505-8596 FAX (619) 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

## Certification Summary

### Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 314.0	Water	N/A	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 418.1	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8015B	Water	X	X
EPA 8260B	Water	X	X
Level 4	Water		
SM2540C	Water	X	X

*Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at [www.dmalabs.com](http://www.dmalabs.com).*

### Subcontracted Laboratories

**Del Mar Analytical - Phoenix** NELAC Cert #01109CA, California Cert #2446, Arizona Cert #AZ0426, Nevada Cert #AZ-907

9830 S. 51st Street, Suite B-120 - Phoenix, AZ 85044

Method Performed: EPA 8260B

Samples: IPA1080-01

### Del Mar Analytical, Irvine

Michele Chamberlin

Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9589  
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3820 Fax (702) 798-3821

## SUBCONTRACT ORDER - PROJECT # IPA1080

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Del Mar Analytical - Phoenix 9830 S. 51st Street, Suite B-120 Phoenix, AZ 85044 Phone : (480) 785-0043 Fax: (480) 785-0851

Analysis	Expiration	Due	Comments
<b>Sample ID: IPA1080-01 Water      Sampled: 01/12/06 19:42</b> Dioxane-8260B-out      01/26/06 19:42      01/27/06 12:00 Level 4 Data Package - Phoenix-02/09/06 19:42      01/27/06 12:00			Boeing-permit, sub DMAP, J flags, ID=DMA+Outfall 012 Boeing, TAT= 17 days from receipt at Phoenix  <div style="font-size: 2em; font-family: cursive; text-align: center;">PPADU18-01</div>
<b>Containers Supplied:</b> 40 ml VOA w/HCL (IPA1080-01M) 40 ml VOA w/HCL (IPA1080-01N) 40 ml VOA w/HCL (IPA1080-01O)			

**SAMPLE INTEGRITY:**

All containers intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sample labels/COC agree: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Custody Seals Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Preserved Properly: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received at (temp): <u>1.0</u>

<i>Handwritten Signature</i> Released By	<u>1-16-06</u> Date	<u>1700</u> Time	<i>Handwritten Signature</i> Received By	<u>1/17/06</u> Date	<u>1000</u> Time
---	------------------------	---------------------	---	------------------------	---------------------



Del Mar Analytical Version 02/17/05

**CHAIN OF CUSTODY FORM**

O12

IPA 1080

Page 1 of 1

ANALYSIS REQUIRED

Client Name/Address:  
 MWH-Pasadena  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101

Project:  
 Boeing-SSFL NPDES  
 During Test - Outfall 012  
 Alfa Test Stand

Project Manager: Bronwyn Kelly  
 Sampler: *Rick Barry*

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

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (EPA 413.1)	8015-gas	8015-diesel/jet fuel	1,4-Dioxane-8260B	TRPH, =Total Rec. Petroleum Hydrocarbons (EPA 418.1)	624 (EDB, 1,2,3-TCP, MTBE, DPE, TBA)	BOD5(20 degrees C)	625 Naphthalene +NDMA analysis	Ammonia-N, Titr. (350.2) w/ dist	Perchlorate	Turbidity, TDS, TSS	Settleable Solids	Field readings: Temp = <b>62.5</b> pH = <b>7.11</b>	Comments
Outfall 012	W	1L Amber	1	01-28-06 09:25-08	HCl	1A	X													
Outfall 012 duplicate	W	1L Amber	1	01-28-06 10:00	HCl	1B	X													
Outfall 012 duplicate	W	VOAs	1		HCl	2A		X												
Outfall 012 duplicate	W	VOAs	2		HCl	2B, 2C		X												
Outfall 012 duplicate	W	1L Amber	1		None	3A		X												
Outfall 012 duplicate	W	1L Amber	1		None	3B		X												
Outfall 012 duplicate	W	VOAs	1		HCl	4A		X												
Outfall 012 duplicate	W	VOAs	2		HCl	4B, 4C		X												
Outfall 012 duplicate	W	1L Amber	1		HCl	5A				X										
Outfall 012 duplicate	W	1L Amber	1		HCl	5B				X										
Outfall 012 duplicate	W	VOAs	1		HCl	6A					X									
Outfall 012 duplicate	W	VOAs	2		HCl	6B, 6C					X									
Outfall 012	W	1L Poly	1		None	7A					X									
Outfall 012 duplicate	W	1L Amber	1		None	8A					X									
Outfall 012 duplicate	W	1L Amber	1		None	8B					X									
Outfall 012	W	500ml Poly V	1		H2SO4	9A						X								
Outfall 012	W	1L Poly	1		None	10A						X								
Outfall 012	W	1L Poly	1		None	11A						X								
Outfall 012	W	VOAs	1		HCl	12A, 12B, 12C, 12D, 12E, 12F		X												

Relinquished By: *Rick Barry* Date/Time: 01-28-06 09:25  
 Received By: *[Signature]* Date/Time: 01-28-06 10:00

Relinquished By: *[Signature]* Date/Time: 1-30-06 15:34  
 Received By: *[Signature]* Date/Time: 1-30-06 15:34

Turn around Time: (check)  
 24 Hours \_\_\_\_\_ 5 Days \_\_\_\_\_  
 48 Hours \_\_\_\_\_ 10 Days \_\_\_\_\_  
 72 Hours \_\_\_\_\_ Normal \_\_\_\_\_  
 Perchlorate Only 72 Hours \_\_\_\_\_  
 Metals Only 72 Hours \_\_\_\_\_  
 Sample Integrity (Check) On Is: **5C**

012

**CHAIN OF CUSTODY FORM**

Del Mar Analytical Version 02/17/05

Client Name/Address:

MWH-Pasadena  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101

Project:  
Boeing-SSFL NPDES  
During Test -- Outfall 012  
Alfa Test Stand

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

ANALYSIS REQUIRED

Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Oil & Grease (TPA 413.1)	8015-gas	8015-diesel/jet fuel	1,4-Dioxane-8260B	TRPH = Total Rec (EPA 418.1)	624 (EDB, 1,2,3-TCF, MTBE, DPE, TBA)	BOD5(20 degrees C)	625 Naphthalene +NDMA analysis	Ammonia-N, Ttr. (350.2) w/ dist	Perchlorate	Turbidity, TDS, TSS	Settleable Solids	Field readings: Temp = 62.3 pH = 7.11	Comments
Outfall 012	W	1L Amber	1	HCl	1A	X													
Outfall 012 duplicate	W	1L Amber	1	HCl	1B	X													
Outfall 012	W	VOAs	1	HCl	2A		X												
Outfall 012 duplicate	W	VOAs	2	HCl	2B, 2C		X												
Outfall 012	W	1L Amber	1	None	3A			X											
Outfall 012 duplicate	W	1L Amber	1	None	3B			X											
Outfall 012	W	VOAs	1	HCl	4A				X										
Outfall 012 duplicate	W	VOAs	2	HCl	4B, 4C				X										
Outfall 012	W	1L Amber	1	HCl	5A					X									
Outfall 012 duplicate	W	1L Amber	1	HCl	5B					X									
Outfall 012	W	VOAs	1	HCl	6A						X								
Outfall 012 duplicate	W	VOAs	2	HCl	6B, 6C						X								
Outfall 012	W	1L Poly	1	None	7A							X							
Outfall 012	W	1L Amber	1	None	8A								X						
Outfall 012 duplicate	W	1L Amber	1	None	8B								X						
Outfall 012	W	500ml Poly	1	H2SO4	9A									X					
Outfall 012	W	1L Poly	1	None	10A										X				
Outfall 012	W	1L Poly	1	None	11A											X			
Trip Blank	W	VOAs	6	HCl	12A, 12B, 12C, 12D, 12E, 12F		X				X								

Relinquished By: *[Signature]* Date/Time: 01-22-06 09:15

Relinquished By: *[Signature]* Date/Time: 1-13-06 15:34

Relinquished By: *[Signature]* Date/Time: 1-13-06 15:34

Received By: *[Signature]* Date/Time: 1-13-06 10:14

Received By: *[Signature]* Date/Time: 1-13-06 15:34

Turn around Time: (check)  
 24 Hours \_\_\_\_\_ 5 Days \_\_\_\_\_  
 48 Hours \_\_\_\_\_ 10 Days \_\_\_\_\_  
 72 Hours \_\_\_\_\_ Normal \_\_\_\_\_  
 Perchlorate Only 72 Hours \_\_\_\_\_  
 Metals Only 72 Hours \_\_\_\_\_  
 Sample Integrity: (Check) On Is: 5C

## **APPENDIX G**

### **Section 40**

Outfall 012, January 12, 2006

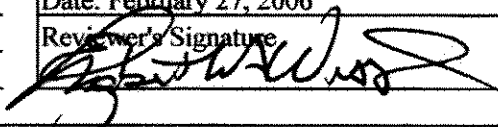
AMEC Data Validation Reports

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MECX, LLC  
 12260 East Vassar Drive  
 Suite 500  
 Lakewood, CO 80226

Package ID B4PC4  
 Task Order 1261.001D.01  
 SDG No. IPA1080  
 No. of Analyses 1

Laboratory Del Mar - Irvine  
 Reviewer E. Wessling  
 Analysis/Method Perchlorate

Date: February 27, 2006  
 Reviewer's Signature 

ACTION ITEMS <sup>a</sup>	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: - Data acceptable as reviewed
COMMENTS <sup>b</sup>	
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 012

ANALYSIS: PERCHLORATE

SAMPLE DELIVERY GROUP: IPA1080

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPA1080  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Perchlorate  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: E. Wessling  
Date of Review: February 27, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Perchlorate (DVP-14, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 314.0*, and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPA1080-01	Water	314.0

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . The analysis does not require preservation and no preservation was noted by the field. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and analysis presented in this SDG. As the sample was couriered directly from the site to the laboratory, custody seals were not necessary. No sample qualifications were required.

#### 2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analysis. The 28-day analytical holding time for perchlorate was met. No qualifications were required.

### 2.2 CALIBRATION

The initial calibration correlation coefficients were  $\geq 0.995$ . The ICV, ICCS, and CCVs had acceptable recoveries within the control limits of 90-110%. The IPC-MA was recovered within the method control limits of 80-120%. No qualifications were required.

### 2.3 BLANKS

There were no detects in the associated method blank or CCBs. Raw data was reviewed to verify the blank data. No qualifications were required.

### 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample recovery was within the method-established control limits of 85-115%. Raw data was reviewed to verify the value reported for the LCS recovery. No qualifications were required.



## 2.5 LABORATORY DUPLICATES

No MS/MSD or duplicate analyses were performed in association with this SDG; therefore, no assessment was made with respect to this criterion.

## 2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was based on LCS results. No qualifications were required.

## 2.7 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the samples in this data package. Calculations were verified, and the sample result reported on the Form I was verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

## 2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

### 2.8.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1080-01 (Outfall 012 - Water) - cont. Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A20097	0.30	0.50	2.0	1	01/20/06	01/20/06	
Biochemical Oxygen Demand	EPA 405.1	6A13122	0.59	2.0	1.4	1	01/13/06	01/18/06	J
Oil & Grease	EPA 413.1	6A17048	0.90	4.8	ND	1	01/17/06	01/17/06	
Total Dissolved Solids	SM2540C	6A18104	10	10	310	1	01/18/06	01/18/06	
Total Suspended Solids	EPA 160.2	6A16117	10	10	15	1	01/16/06	01/16/06	
Sample ID: IPA1080-01 (Outfall 012 - Water) Reporting Units: ml/hr									
Total Settleable Solids	EPA 160.5	6A13089	0.10	0.10	0.10	1	01/13/06	01/13/06	
Sample ID: IPA1080-01 (Outfall 012 - Water) Reporting Units: NTU									
Turbidity	EPA 180.1	6A14040	0.20	5.0	46	5	01/14/06	01/14/06	Del Mar
Sample ID: IPA1080-01 (Outfall 012 - Water) Reporting Units: ug/l									
Perchlorate	EPA 314.0	6A16069	0.80	4.0	ND	1	01/16/06	01/16/06	u

\* Analysis not available  
 Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

Level IV

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA1080 <Page 7 of 21>

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4SV18  
 Task Order: 1261.001D.01  
 SDG No.: IPA1080

No. of Analyses: 1

Laboratory: Del Mar Analytical

Reviewer: L. Calvin

Analysis/Method: Semivolatiles by Method 625

Date: February 24, 2006

Reviewer's Signature  


<b>ACTION ITEMS<sup>a</sup></b>	
1. <b>Case Narrative</b>	_____
<b>Deficiencies</b>	_____
2. <b>Out of Scope Analyses</b>	_____
3. <b>Analyses Not Conducted</b>	_____
4. <b>Missing Hardcopy Deliverables</b>	_____
5. <b>Incorrect Hardcopy Deliverables</b>	_____
6. <b>Deviations from Analysis Protocol, e.g.,</b>	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Outfall 012

ANALYSIS: Semivolatiles

SAMPLE DELIVERY GROUP IPA1080

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPA1080  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Semivolatiles  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: L. Calvin  
Date of Review: February 24, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC<sup>X</sup> Data Validation Procedure for Levels C and D Semivolatile Organics (DVP-3, Rev. 2), EPA Method 625, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPA1080-01	Water	625

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$  at  $5^{\circ}\text{C}$ . No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the analysis presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

The water sample was extracted within seven days of collection and analyzed within 40 days of extraction. No qualifications were required.

### 2.2 GC/MS TUNING

The DFTPP tunes analyzed at the beginning of each daily analytical sequence met the abundance criteria specified in EPA Method 625. No qualifications were required. No qualifications were required.

### 2.3 CALIBRATION

One initial calibration analyzed 01/17/06 was associated with the sample in this SDG. The %RSDs for target compounds naphthalene and n-nitrosodimethylamine (NDMA) were  $\leq 35\%$ . An initial calibration verification (ICV) was analyzed following the initial calibration, with %Ds for both target compounds within the QC limits of  $\leq 20\%$ . Sample Outfall 012 was analyzed in the same analytical sequence as the initial calibration and ICV; therefore a continuing calibration was not necessary. No qualifications were required.

DATA VALIDATION REPORT

## 2.4 BLANKS

One method blank (6A15016-BLK1) was extracted and analyzed with this SDG. Target compounds naphthalene and NDMA were not detected above the MDLs in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6A15016-BS1/BSD1) was extracted and analyzed with this SDG. All recoveries were within the laboratory-established QC limits, and the RPDs were within the QC limit of  $\leq 20\%$ . The recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy and precision was based on the blank spike and blank spike/blank spike duplicate results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

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

### 2.7.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### 2.7.2 Field Duplicates

There were no field duplicate samples identified for this SDG.



DATA VALIDATION REPORT

## 2.8 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times for the sample were within the control limits established by the continuing calibration standard: -50%/+100% for internal standard areas and  $\pm 30$  seconds for retention times. The recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for target compounds naphthalene and NDMA by EPA Method 625. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limit was supported by the low point of the initial calibration and the laboratory MDLs. Results were reported in  $\mu\text{g/L}$  (ppb). No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 8-120, 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - During Test Report Number: IPA1080	Sampled: 01/12/06 Received: 01/13/06
--	--	---

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
Sample ID: IPA1080-01 (Outfall 012 - Water)										
Reporting Units: ug/l										
Naphthalene	EPA 625	6A15016	4.3	9.6	21	0.962	01/15/06	01/18/06	<i>see qual code</i>	
N-Nitrosodimethylamine	EPA 625	6A15016	3.6	19	ND	0.962	01/15/06	01/18/06		u
Surrogate: 2-Fluorophenol (30-120%)					56 %					
Surrogate: Phenol-d6 (35-120%)					67 %					
Surrogate: 2,4,6-Tribromophenol (45-120%)					81 %					
Surrogate: Nitrobenzene-d5 (45-120%)					87 %					
Surrogate: 2-Fluorobiphenyl (45-120%)					77 %					
Surrogate: Terphenyl-d14 (45-120%)					89 %					

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*Level IV*

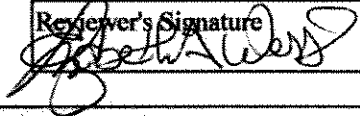
The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

IPA1080 <Page 6 of 21>

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MECX, LLC  
 12260 East Vassar Drive  
 Suite 500  
 Lakewood, CO 80226

Package ID B4TF1  
 Task Order 1261.001D.01  
 SDG No. IPA1080

No. of Analyses 2  
 Date: March 7, 2006  
 Reviewer's Signature 

Laboratory Del Mar - Irvine  
 Reviewer E. Wessling  
 Analysis/Method TFH- 8015 (GRO and DRO)

ACTION ITEMS <sup>a</sup>	
1. Case Narrative Deficiencies	_____
2. Out of Scope Analyses	_____
3. Analyses Not Conducted	_____
4. Missing Hardcopy Deliverables	_____
5. Incorrect Hardcopy Deliverables	_____
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Data acceptable as reviewed _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
COMMENTS <sup>b</sup>	_____
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Outfall 012

ANALYSIS: Total Fuel Hydrocarbons

SAMPLE DELIVERY GROUP IPA1080

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPA1080  
Project Manager: P. Costa  
Matrix: Water  
Analysis: TFH  
QC Level: Level IV  
No. of Samples: 2  
No. of Reanalyses/Dilutions: 0  
Reviewer: E. Wessling  
Date of Review: March 7, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Levels C and D Total Fuel Hydrocarbons (DVP-8, Rev. 0)*, *EPA Method 8015B*, and the *National Functional Guidelines For Organic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPA1080-01	Water	8015B & 8015M
Outfall 012-Trip Blank	IPA1080-02	Water	8015B

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C at 5°C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the analyses presented in this SDG. As the samples were couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

The water samples were analyzed within seven days of collection for the volatile range hydrocarbon analysis and extracted within seven days of collection for the extractable hydrocarbons and analyzed within 40 days of extraction. No qualifications were required.

### 2.2 CALIBRATION

Two initial calibrations, one for volatile range organics and one for extractable range organics, were analyzed 01/07/06 and 1/17/06; respectively, in association with the samples in this SDG. The %RSDs for target compounds were ≤20%. An initial calibration verification (ICV) was analyzed following the initial calibration, with %Ds for target compounds within the QC limits of ≤15%. Samples Outfall 012 and sample Outfall 012 Trip blank were analyzed with bracketing continuing calibration verification samples with %Ds ≤15%. No qualifications were required.

### 2.3 BLANKS

Two method blanks (6A19042-BLK1 and 6A16046-BLK1) were analyzed and extracted and analyzed with this SDG. Target compounds were not detected above the MDLs in the method blanks. Review of the method blank raw data indicated no false negatives. No qualifications were required.

## 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two blank spike/blank spike duplicate pairs (6A19042-BS1/BSD1 and 6A16046-BS1/BSD1) were analyzed and extracted and analyzed with this SDG. All recoveries were within the laboratory-established QC limits, and the RPDs were within the QC limit of  $\leq 20\%$ . The recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.5 SURROGATE RECOVERY

All samples were fortified with the surrogate compound 4-BFB for volatile hydrocarbon analysis and n-octacosane for extractable hydrocarbon analysis. Surrogate recoveries were within the laboratory-established QC limits of 65-140% for volatile hydrocarbon analysis and 40-125% for extractable hydrocarbon sample analysis. A representative number of recoveries were calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the samples of this SDG. Evaluation of method accuracy and precision was based on the blank spike and blank spike/blank spike duplicate results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

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

### 2.7.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### 2.7.2 Trip Blanks

There was one trip blank analyzed with the volatile organic hydrocarbons, Outfall 012 Trip Blank which was free from target compound contamination. No qualification of the data was required.



### 2.7.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

### 2.8 COMPOUND IDENTIFICATION

The laboratory analyzed for target compounds GRO and DRO. Review of the sample chromatograms, retention times, and patterns indicated no problems with target compound identification. No qualifications were required.

### 2.9 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limit was supported by the low point of the initial calibration and the laboratory MDLs. Results were reported in  $\text{m}\mu\text{g/L}$  (ppb). No qualifications were required.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Copton, 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

## EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Method	Batch	MDL Reporting		Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
			Limit	Limit					
Sample ID: IPA1080-01 (Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	6A18068	0.042	0.47	0.38	0.943	01/18/06	01/19/06	J-J
Surrogate: n-Octacosane (40-125%)					80 %				

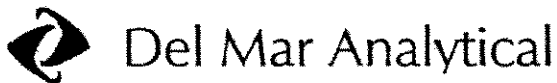
*Handwritten notes and signatures:*  
 [Signature]  
 [Signature]  
 [Signature]

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

# LEVEL IV

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

IPA1080 <Page 3 of 21>



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

**VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1080-01 (Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6A19042	0.050	0.10	0.22	1	01/19/06	01/19/06	Raw Gas
Surrogate: 4-BFB (FID) (65-140%)					97 %				
Sample ID: IPA1080-02 (Trip Blank - Water)									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6A19042	0.050	0.10	ND	1	01/19/06	01/19/06	u
Surrogate: 4-BFB (FID) (65-140%)					85 %				

**LEVEL IV**

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

IPA1080 <Page 4 of 21>

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4VO19  
 Task Order: 1261.001D.01  
 SDG No.: IPA1080

No. of Analyses: 2

Laboratory: Del Mar Analytical  
 Reviewer: L. Calvin  
 Analysis/Method: Volatiles by Method 8260B

Date: February 24, 2006  
 Reviewer's Signature: *L. Calvin*

ACTION ITEMS <sup>a</sup>	
Case Narrative	_____
Deficiencies	_____
2. Out of Scope Analyses	_____
3. Analyses Not Conducted	_____
4. Missing Hardcopy Deliverables	_____
5. Incorrect Hardcopy Deliverables	_____
6. Deviations from Analysis Protocol, e.g.,	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
COMMENTS <sup>b</sup>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Outfall 012

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPA1080

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>x</sup> Project Number: 1261.001.01  
Sample Delivery Group: IPA1080  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Volatiles  
QC Level: Level IV  
No. of Samples: 2  
No. of Reanalyses/Dilutions: 0  
Reviewer: L. Calvin  
Date of Review: February 24, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 624*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPA1193-01	Water	624
Trip Blank	IPA1193-02	Water	624

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The samples in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , at  $5^{\circ}\text{C}$ . According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved. Information regarding lack of headspace in the VOA vials was not provided. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

#### 2.1.3 Holding Times

The water samples were analyzed within 14 days of collection. No qualifications were required.

### 2.2 GC/MS TUNING

The BFB tune performed at the beginning of each daily analytical sequence met the abundance criteria specified in EPA Method 624. No qualifications were required.

### 2.3 CALIBRATION

One initial calibration was associated with the samples in this SDG, dated 01/15/06. The average RRFs were  $\geq 0.05$  and the %RSDs were  $\leq 35\%$  for the target compounds listed on the sample result summary forms. The continuing calibration associated with the sample analyses was dated 01/23/06. The RRFs for all target compounds were  $\geq 0.05$  and all %Ds were within the QC limit of  $\leq 20\%$ . A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

### 2.4 BLANKS

One method blank (6A23017-BLK1) was analyzed with this SDG. No target compounds were detected in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.



## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (6A23017-BS1) was analyzed with this SDG. The recoveries were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.6 SURROGATE RECOVERY

Surrogate recoveries were within the laboratory QC limits of 80-120% for this SDG. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on site sample Outfall 012. Recoveries and RPDs were within the laboratory-established QC limits. No qualifications were required.

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with site sample Outfall 012. No target compounds were detected in the trip blank. No qualifications were required.

### 2.8.2 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### 2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times were within the control limits established by the continuing calibration standard: -50%/+100% for internal standard areas and  $\pm 30$  seconds for retention times. The recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for five volatile target compounds by EPA Method 624. Review of the sample chromatograms, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. No qualifications were required.

## 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

## 2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1080-01 (Outfall 012 - Water)</b>									
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	6A23017	0.32	2.0	ND	1	01/23/06	01/23/06	u
Methyl-tert-butyl Ether (MTBE)	EPA 624	6A23017	0.32	5.0	ND	1	01/23/06	01/23/06	
1,2,3-Trichloropropane	EPA 624	6A23017	0.40	10	ND	1	01/23/06	01/23/06	
Di-isopropyl Ether (DIPE)	EPA 624	6A23017	0.25	5.0	ND	1	01/23/06	01/23/06	
tert-Butanol (TBA)	EPA 624	6A23017	3.1	25	ND	1	01/23/06	01/23/06	
Surrogate: Dibromofluoromethane (80-120%)					108 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					108 %				
<b>Sample ID: IPA1080-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	6A23017	0.32	2.0	ND	1	01/23/06	01/23/06	u
Methyl-tert-butyl Ether (MTBE)	EPA 624	6A23017	0.32	5.0	ND	1	01/23/06	01/23/06	
1,2,3-Trichloropropane	EPA 624	6A23017	0.40	10	ND	1	01/23/06	01/23/06	
Di-isopropyl Ether (DIPE)	EPA 624	6A23017	0.25	5.0	ND	1	01/23/06	01/23/06	
tert-Butanol (TBA)	EPA 624	6A23017	3.1	25	ND	1	01/23/06	01/23/06	
Surrogate: Dibromofluoromethane (80-120%)					112 %				
Surrogate: Toluene-d8 (80-120%)					111 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					114 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

Level III

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4VO20  
 Task Order: 1261.001D.01  
 SDG No.: IPA1080

No. of Analyses: 1

Laboratory: Del Mar Analytical – Phoenix  
 Reviewer: L. Calvin  
 Analysis/Method: Volatiles by Method 8260B

Date: February 24, 2006  
 Reviewer's Signature: *L. Calvin*

<b>ACTION ITEMS<sup>a</sup></b>	
1. Case Narrative Deficiencies	_____
2. Out of Scope Analyses	_____
3. Analyses Not Conducted	_____
4. Missing Hardcopy Deliverables	_____
5. Incorrect Hardcopy Deliverables	_____
6. Deviations from Analysis Protocol, e.g.,	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Outfall 012

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPA1080

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001.01  
Sample Delivery Group: IPA1080  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Volatiles (1,4-dioxane)  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: L. Calvin  
Date of Review: February 24, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *SW-846 Method 8260B*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Del Mar ID	Laboratory ID	Matrix	COC Method
Outfall 012		IPA1080-01	Water	8260B

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , at  $5^{\circ}\text{C}$  at Del Mar – Irvine. The 1,4-dioxane analysis was subcontracted to Del Mar – Phoenix, and the sample was received below the temperature limits at  $1^{\circ}\text{C}$ . As the sample was not damaged or frozen, no qualification was necessary. According to the case narrative for this SDG, the sample was received intact, on ice, and properly preserved. Information regarding lack of headspace in the VOA vials was not provided. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC from the field to the laboratory was signed and dated by both field and laboratory personnel, and the transfer COC from Del Mar – Irvine to Del Mar – Phoenix was signed by personnel from both laboratories. As the sample was couriered directly from the field to the laboratory, custody seals were not required. Custody seals were present on the cooler upon receipt at Del Mar – Phoenix. No qualifications were required.

#### 2.1.3 Holding Times

The water sample was analyzed within 14 days of collection. No qualifications were required.

### 2.2 GC/MS TUNING

The BFB tunes met the abundance criteria specified in SW-846 Method 8260, and the sample was analyzed within 12 hours of the BFB injection times. No qualifications were required.

### 2.3 CALIBRATION

One initial calibration was associated with the sample in this SDG, dated 12/08/05. The average RRF for target compound 1,4-dioxane was  $\geq 0.05$  and the %RSD was  $\leq 15\%$ . The continuing calibration associated with the sample in this SDG was dated 01/23/06. The RRF for 1,4-dioxane was  $\geq 0.05$  and the %D was within the QC limit of  $\leq 20\%$ . The average RRF and %RSD in the initial calibration and RRF and %D in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.



## 2.4 BLANKS

One method blank (P6A2307-BLK1) was analyzed with this SDG. Target compound 1,4-dioxane was not detected in the method blank. Review of the method blank raw data indicated no false negative. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (P6A2307-BS1) was analyzed with this SDG. The recovery for 1,4-dioxane was within the QC limits of 70-130%. The recovery was calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.6 SURROGATE RECOVERY

The surrogate recovery was within the laboratory QC limits of 80-120% for this SDG. The recovery was calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy was based on the blank spike results. No qualifications were required.

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Trip Blanks

There was no trip blank sample associated with the sample in this SDG; however, as there were no sample detects, evaluation of possible trip blank contamination was not necessary. No qualifications were required.

### 2.8.2 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### 2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area count and retention time were within the control limits established by the continuing calibration standard: -50%/+100% for internal standard areas and  $\pm 30$  seconds for retention times. The recovery was checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for volatile target compound 1,4-dioxane by EPA Method 8260B. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. No qualifications were required.

## 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

## 2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 9484 Chesapeake Dr., Suite 803, 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - During Test  Report Number: IPA1080	Sampled: 01/12/06 Received: 01/13/06
--	--	---

**1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1080-01 (Outfall 012 - Water) - cont. Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B	P6A2307	0.49	1.0	ND	1	01/23/06	01/23/06	see qual code
Surrogate: Dibromofluoromethane (70-130%)					106 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*Level IV*

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA1080 <Page 8 of 21>


**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>a</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID B4WC23  
 Task Order 1261.001D.02  
 SDG No. IPA0180 1080

No. of Analyses 1

Laboratory Del Mar Analytical  
 Reviewer P. Meeks  
 Analysis/Method General Minerals

Date: February 27, 2006  
 Reviewer's Signature  


ACTION ITEMS <sup>a</sup>	
1. Case Narrative Deficiencies	  
2. Out of Scope Analyses	  
3. Analyses Not Conducted	  
4. Missing Hardcopy Deliverables	  
5. Incorrect Hardcopy Deliverables	  
6. Deviations from Analysis Protocol, e.g.,	Qualifications applied for detects below the reporting limit.
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
<b>COMMENTS<sup>b</sup></b>	
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 012

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPA1080

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPA1080  
Project Manager: P. Costa  
Matrix: Water  
Analysis: General Minerals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: February 27, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the MEC<sup>X</sup> *Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 160.2, 160.5, 180.1, 335.2, 350.2, 405.1, 413.1, and 418.1*, and *Standard Methods for the Examination of Water and Wastewater Method SM2540-C*, and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPA1080-01	Water	General Minerals

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . No preservation problems were noted by the laboratory. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and all analyses presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analysis. All samples were analyzed within the method specified holding times. No qualifications were required.

### 2.2 CALIBRATION

For all applicable analyses, the initial calibration correlation coefficients were  $\geq 0.995$  and the ICV and CCV recoveries were within the control limits of 90-110%. For TSS and TDS balance calibration logs were provided by the laboratory and were determined to be acceptable. For ammonia, no information for the titrant standardization was provided; however, as the LCS recovery was within the calibration control limits, no qualifications were required. Calibration is not applicable to total settleable solids. No qualifications were required.

### 2.3 BLANKS

There were no detects in the method blanks or CCBs associated with the sample analyses. Raw data was reviewed to verify the blank data. No qualifications were required.

### 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The reported LCS and LCSD recoveries were within the laboratory-established control limits. No qualifications were required.



## 2.5 LABORATORY DUPLICATES

Duplicate analyses were performed on Outfall 012 for turbidity only. The RPD was within the laboratory control limit of  $\leq 20\%$ . No qualifications were required.

## 2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was assessed based on LCS results. No qualifications were required.

## 2.7 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. BOD reported by the laboratory between the MDL and reporting limit was qualified as estimated, "J," and annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No further qualifications were required.

## 2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

### 2.8.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



# Del Mar Analytical

17461 DeRian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (658) 505-8596 FAX (658) 505-9689  
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0831  
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1080-01 (Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A20097	0.30	0.50	2.0	1	01/20/06	01/20/06	Raw Qual
Biochemical Oxygen Demand	EPA 405.1	6A13122	0.59	2.0	1.4	1	01/13/06	01/18/06	J J DNG
Oil & Grease	EPA 413.1	6A17048	0.90	4.8	ND	1	01/17/06	01/17/06	U
Total Dissolved Solids	SM2540C	6A18104	10	10	310	1	01/18/06	01/18/06	
Total Suspended Solids	EPA 160.2	6A16117	10	10	15	1	01/16/06	01/16/06	
Sample ID: IPA1080-01 (Outfall 012 - Water)									
Reporting Units: ml/hr									
Total Settleable Solids	EPA 160.5	6A13089	0.10	0.10	0.10	1	01/13/06	01/13/06	
Sample ID: IPA1080-01 (Outfall 012 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	6A14040	0.20	5.0	46	5	01/14/06	01/14/06	
Sample ID: IPA1080-01 (Outfall 012 - Water)									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	6A16069	0.80	4.0	ND	1	01/16/06	01/16/06	*

\* Analysis not validated

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

LEVEL IV

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

IPA1080 <Page 7 of 21>



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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) 785-0831  
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPA1080

Sampled: 01/12/06  
 Received: 01/13/06

## TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1080-01 (Outfall 012 - Water)									
Reporting Units: mg/l									
Total Recoverable Hydrocarbons	EPA 418.1	6A16046	0.30	0.95	1.5	0.952	01/16/06	01/16/06	

# LEVEL IV

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*

IPA1080 <Page 2 of 21>

## **APPENDIX G**

### **Section 41**

Outfall 012, January 17, 2006

Del Mar Analytical Laboratory Report



**LABORATORY REPORT**

Prepared For: MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project: Alfa Outfall 012 - Annual

Sampled: 01/17/06  
Received: 01/17/06  
Issued: 02/06/06 09:47

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 Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 5 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
IPA1345-01	Outfall 012	Water
IPA1345-02	Trip Blank	Water

Reviewed By:

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager



Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

## CORRECTIVE ACTION REPORT

Department: Extractions

Date: 01/25/2006

Method: EPA 625

Matrix: Water

QC Batch: 6A22022

### Identification and Definition of Problem:

The percent recoveries in the LCS and LCSD for dimethylphthalate and diethylphthalate were below laboratory acceptance limits.

### Determination of the Cause of the Problem:

A definitive cause for the QC failure has not been determined.

### Corrective Action Taken:

All results reported for dimethylphthalate and diethylphthalate are potentially biased low and can be considered estimates only.

Quality Assurance Approval:

Dave Dawes

Date: 02/17/2006 09:43 AM

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*

IPA1345 <Page 2 of 48>  
NPDES - 1074



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water)</b>									
<b>Reporting Units: mg/l</b>									
Total Recoverable Hydrocarbons	EPA 418.1	6A24041	0.34	1.1	2.2	1.11	01/24/06	01/24/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	6A23088	0.043	0.48	0.74	0.952	01/23/06	01/24/06	
Surrogate: n-Octacosane (40-125%)					95 %				

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6A21021	0.50	1.0	1.1	10	01/21/06	01/21/06	
Surrogate: 4-BFB (FID) (65-140%)					77 %				
<b>Sample ID: IPA1345-02 (Trip Blank - Water)</b>									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6A21021	0.050	0.10	ND	1	01/21/06	01/21/06	
Surrogate: 4-BFB (FID) (65-140%)					79 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water)</b>									
Reporting Units: ug/l									
Benzene	EPA 624	6A18021	0.28	1.0	1.6	1	01/18/06	01/18/06	
Bromodichloromethane	EPA 624	6A18021	0.30	2.0	1.1	1	01/18/06	01/18/06	J
Bromoform	EPA 624	6A18021	0.32	5.0	0.66	1	01/18/06	01/18/06	J
Bromomethane	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	
Carbon tetrachloride	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
Chlorobenzene	EPA 624	6A18021	0.36	2.0	ND	1	01/18/06	01/18/06	
Chloroethane	EPA 624	6A18021	0.40	5.0	ND	1	01/18/06	01/18/06	
Chloroform	EPA 624	6A18021	0.33	2.0	0.84	1	01/18/06	01/18/06	J
Chloromethane	EPA 624	6A18021	0.30	5.0	ND	1	01/18/06	01/18/06	
Dibromochloromethane	EPA 624	6A18021	0.28	2.0	1.3	1	01/18/06	01/18/06	J
1,2-Dibromoethane (EDB)	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichlorobenzene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
1,3-Dichlorobenzene	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
1,4-Dichlorobenzene	EPA 624	6A18021	0.37	2.0	ND	1	01/18/06	01/18/06	
1,1-Dichloroethane	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloroethane	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
1,1-Dichloroethene	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	
trans-1,2-Dichloroethene	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloropropane	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
cis-1,3-Dichloropropene	EPA 624	6A18021	0.22	2.0	ND	1	01/18/06	01/18/06	
trans-1,3-Dichloropropene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
Ethylbenzene	EPA 624	6A18021	0.25	2.0	ND	1	01/18/06	01/18/06	
Methylene chloride	EPA 624	6A18021	0.70	5.0	ND	1	01/18/06	01/18/06	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6A18021	0.32	5.0	ND	1	01/18/06	01/18/06	
1,1,2,2-Tetrachloroethane	EPA 624	6A18021	0.24	2.0	ND	1	01/18/06	01/18/06	L
Tetrachloroethene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
Toluene	EPA 624	6A18021	0.36	2.0	0.60	1	01/18/06	01/18/06	J
1,1,1-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
1,1,2-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
Trichloroethene	EPA 624	6A18021	0.26	2.0	0.27	1	01/18/06	01/18/06	J
Trichlorofluoromethane	EPA 624	6A18021	0.34	5.0	ND	1	01/18/06	01/18/06	
1,2,3-Trichloropropane	EPA 624	6A18021	0.40	10	ND	1	01/18/06	01/18/06	
Vinyl chloride	EPA 624	6A18021	0.26	0.50	ND	1	01/18/06	01/18/06	
Di-isopropyl Ether (DIPE)	EPA 624	6A18021	0.25	5.0	ND	1	01/18/06	01/18/06	
Xylenes, Total	EPA 624	6A18021	0.90	4.0	ND	1	01/18/06	01/18/06	
tert-Butanol (TBA)	EPA 624	6A18021	3.1	25	ND	1	01/18/06	01/18/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A18021	1.2	5.0	ND	1	01/18/06	01/18/06	
Surrogate: Dibromofluoromethane (80-120%)					104 %				
Surrogate: Toluene-d8 (80-120%)					105 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					96 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-02 (Trip Blank - Water)</b>									
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	6A18021	0.28	1.0	ND	1	01/18/06	01/18/06	
Bromodichloromethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
Bromoform	EPA 624	6A18021	0.32	5.0	ND	1	01/18/06	01/18/06	
Bromomethane	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	
Carbon tetrachloride	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
Chlorobenzene	EPA 624	6A18021	0.36	2.0	ND	1	01/18/06	01/18/06	
Chloroethane	EPA 624	6A18021	0.40	5.0	ND	1	01/18/06	01/18/06	
Chloroform	EPA 624	6A18021	0.33	2.0	ND	1	01/18/06	01/18/06	
Chloromethane	EPA 624	6A18021	0.30	5.0	ND	1	01/18/06	01/18/06	
Dibromochloromethane	EPA 624	6A18021	0.28	2.0	ND	1	01/18/06	01/18/06	
1,2-Dibromoethane (EDB)	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichlorobenzene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
1,3-Dichlorobenzene	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
1,4-Dichlorobenzene	EPA 624	6A18021	0.37	2.0	ND	1	01/18/06	01/18/06	
1,1-Dichloroethane	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloroethane	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
1,1-Dichloroethene	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	
trans-1,2-Dichloroethene	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloropropane	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
cis-1,3-Dichloropropene	EPA 624	6A18021	0.22	2.0	ND	1	01/18/06	01/18/06	
trans-1,3-Dichloropropene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
Ethylbenzene	EPA 624	6A18021	0.25	2.0	ND	1	01/18/06	01/18/06	
Methylene chloride	EPA 624	6A18021	0.70	5.0	ND	1	01/18/06	01/18/06	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6A18021	0.32	5.0	ND	1	01/18/06	01/18/06	
1,1,2,2-Tetrachloroethane	EPA 624	6A18021	0.24	2.0	ND	1	01/18/06	01/18/06	L
Tetrachloroethene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
Toluene	EPA 624	6A18021	0.36	2.0	ND	1	01/18/06	01/18/06	
1,1,1-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
1,1,2-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
Trichloroethene	EPA 624	6A18021	0.26	2.0	ND	1	01/18/06	01/18/06	
Trichlorofluoromethane	EPA 624	6A18021	0.34	5.0	ND	1	01/18/06	01/18/06	
1,2,3-Trichloropropane	EPA 624	6A18021	0.40	10	ND	1	01/18/06	01/18/06	
Vinyl chloride	EPA 624	6A18021	0.26	0.50	ND	1	01/18/06	01/18/06	
Di-isopropyl Ether (DIPE)	EPA 624	6A18021	0.25	5.0	ND	1	01/18/06	01/18/06	
Xylenes, Total	EPA 624	6A18021	0.90	4.0	ND	1	01/18/06	01/18/06	
tert-Butanol (TBA)	EPA 624	6A18021	3.1	25	ND	1	01/18/06	01/18/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A18021	1.2	5.0	ND	1	01/18/06	01/18/06	
Surrogate: Dibromofluoromethane (80-120%)					103 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					91 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**PURGEABLES-- GC/MS (EPA 624)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6A18021	4.6	50	ND	1	01/18/06	01/18/06	
Acrylonitrile	EPA 624	6A18021	0.70	50	ND	1	01/18/06	01/18/06	
2-Chloroethyl vinyl ether	EPA 624	6A18021	1.8	5.0	ND	1	01/18/06	01/18/06	
Surrogate: Dibromofluoromethane (80-120%)					104 %				
Surrogate: Toluene-d8 (80-120%)					105 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					96 %				
<b>Sample ID: IPA1345-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6A18021	4.6	50	ND	1	01/18/06	01/18/06	
Acrylonitrile	EPA 624	6A18021	0.70	50	ND	1	01/18/06	01/18/06	
2-Chloroethyl vinyl ether	EPA 624	6A18021	1.8	5.0	ND	1	01/18/06	01/18/06	
Surrogate: Dibromofluoromethane (80-120%)					103 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					91 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6A22022	4.1	9.5	ND	0.952	01/22/06	01/25/06	
Acenaphthylene	EPA 625	6A22022	3.0	9.5	4.6	0.952	01/22/06	01/25/06	J
Aniline	EPA 625	6A22022	2.8	9.5	ND	0.952	01/22/06	01/25/06	
Anthracene	EPA 625	6A22022	3.0	9.5	ND	0.952	01/22/06	01/25/06	
Benzidine	EPA 625	6A22022	5.0	19	ND	0.952	01/22/06	01/25/06	
Benzoic acid	EPA 625	6A22022	2.5	19	ND	0.952	01/22/06	01/25/06	
Benzo(a)anthracene	EPA 625	6A22022	3.5	9.5	ND	0.952	01/22/06	01/25/06	
Benzo(b)fluoranthene	EPA 625	6A22022	2.6	9.5	ND	0.952	01/22/06	01/25/06	
Benzo(k)fluoranthene	EPA 625	6A22022	3.2	9.5	ND	0.952	01/22/06	01/25/06	
Benzo(g,h,i)perylene	EPA 625	6A22022	5.0	9.5	ND	0.952	01/22/06	01/25/06	
Benzo(a)pyrene	EPA 625	6A22022	3.3	9.5	ND	0.952	01/22/06	01/25/06	
Benzyl alcohol	EPA 625	6A22022	2.4	19	ND	0.952	01/22/06	01/25/06	
Bis(2-chloroethoxy)methane	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06	
Bis(2-chloroethyl)ether	EPA 625	6A22022	4.2	9.5	ND	0.952	01/22/06	01/25/06	
Bis(2-chloroisopropyl)ether	EPA 625	6A22022	4.4	9.5	ND	0.952	01/22/06	01/25/06	
Bis(2-ethylhexyl)phthalate	EPA 625	6A22022	5.0	48	ND	0.952	01/22/06	01/25/06	
4-Bromophenyl phenyl ether	EPA 625	6A22022	4.4	9.5	ND	0.952	01/22/06	01/25/06	
Butyl benzyl phthalate	EPA 625	6A22022	3.3	19	ND	0.952	01/22/06	01/25/06	
4-Chloroaniline	EPA 625	6A22022	5.7	9.5	ND	0.952	01/22/06	01/25/06	
2-Chloronaphthalene	EPA 625	6A22022	3.8	9.5	ND	0.952	01/22/06	01/25/06	
4-Chloro-3-methylphenol	EPA 625	6A22022	3.3	19	ND	0.952	01/22/06	01/25/06	
2-Chlorophenol	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	
4-Chlorophenyl phenyl ether	EPA 625	6A22022	2.9	9.5	ND	0.952	01/22/06	01/25/06	
Chrysene	EPA 625	6A22022	2.7	9.5	ND	0.952	01/22/06	01/25/06	
Dibenz(a,h)anthracene	EPA 625	6A22022	4.5	19	ND	0.952	01/22/06	01/25/06	
Dibenzofuran	EPA 625	6A22022	2.5	9.5	ND	0.952	01/22/06	01/25/06	
Di-n-butyl phthalate	EPA 625	6A22022	2.7	19	ND	0.952	01/22/06	01/25/06	
1,3-Dichlorobenzene	EPA 625	6A22022	3.9	9.5	ND	0.952	01/22/06	01/25/06	
1,4-Dichlorobenzene	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06	
1,2-Dichlorobenzene	EPA 625	6A22022	4.3	9.5	ND	0.952	01/22/06	01/25/06	
3,3-Dichlorobenzidine	EPA 625	6A22022	10	19	ND	0.952	01/22/06	01/25/06	
2,4-Dichlorophenol	EPA 625	6A22022	3.9	9.5	ND	0.952	01/22/06	01/25/06	
Diethyl phthalate	EPA 625	6A22022	3.0	9.5	ND	0.952	01/22/06	01/25/06	L2
2,4-Dimethylphenol	EPA 625	6A22022	4.2	19	ND	0.952	01/22/06	01/25/06	
Dimethyl phthalate	EPA 625	6A22022	3.4	9.5	ND	0.952	01/22/06	01/25/06	L2
4,6-Dinitro-2-methylphenol	EPA 625	6A22022	4.9	19	ND	0.952	01/22/06	01/25/06	
2,4-Dinitrophenol	EPA 625	6A22022	5.0	19	ND	0.952	01/22/06	01/25/06	
2,4-Dinitrotoluene	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	
2,6-Dinitrotoluene	EPA 625	6A22022	3.0	9.5	ND	0.952	01/22/06	01/25/06	
Di-n-octyl phthalate	EPA 625	6A22022	4.5	19	ND	0.952	01/22/06	01/25/06	
Fluoranthene	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Fluorene	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06	
Hexachlorobenzene	EPA 625	6A22022	4.6	9.5	ND	0.952	01/22/06	01/25/06	
Hexachlorobutadiene	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	
Hexachlorocyclopentadiene	EPA 625	6A22022	3.2	19	ND	0.952	01/22/06	01/25/06	
Hexachloroethane	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6A22022	5.1	19	ND	0.952	01/22/06	01/25/06	
Isophorone	EPA 625	6A22022	3.5	9.5	ND	0.952	01/22/06	01/25/06	
<b>2-Methylnaphthalene</b>	EPA 625	6A22022	2.9	9.5	<b>14</b>	0.952	01/22/06	01/25/06	
2-Methylphenol	EPA 625	6A22022	3.5	9.5	ND	0.952	01/22/06	01/25/06	
4-Methylphenol	EPA 625	6A22022	3.6	9.5	ND	0.952	01/22/06	01/25/06	
<b>Naphthalene</b>	EPA 625	6A22022	4.3	9.5	<b>17</b>	0.952	01/22/06	01/25/06	
2-Nitroaniline	EPA 625	6A22022	3.7	19	ND	0.952	01/22/06	01/25/06	
3-Nitroaniline	EPA 625	6A22022	4.3	19	ND	0.952	01/22/06	01/25/06	
4-Nitroaniline	EPA 625	6A22022	4.7	19	ND	0.952	01/22/06	01/25/06	
Nitrobenzene	EPA 625	6A22022	4.0	19	ND	0.952	01/22/06	01/25/06	
2-Nitrophenol	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	
4-Nitrophenol	EPA 625	6A22022	6.3	19	ND	0.952	01/22/06	01/25/06	
N-Nitrosodiphenylamine	EPA 625	6A22022	3.8	9.5	ND	0.952	01/22/06	01/25/06	
N-Nitroso-di-n-propylamine	EPA 625	6A22022	3.4	9.5	ND	0.952	01/22/06	01/25/06	
Pentachlorophenol	EPA 625	6A22022	3.8	19	ND	0.952	01/22/06	01/25/06	
Phenanthrene	EPA 625	6A22022	3.1	9.5	ND	0.952	01/22/06	01/25/06	
Phenol	EPA 625	6A22022	3.8	9.5	ND	0.952	01/22/06	01/25/06	
Pyrene	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06	
1,2,4-Trichlorobenzene	EPA 625	6A22022	4.2	9.5	ND	0.952	01/22/06	01/25/06	
2,4,5-Trichlorophenol	EPA 625	6A22022	3.4	19	ND	0.952	01/22/06	01/25/06	
2,4,6-Trichlorophenol	EPA 625	6A22022	3.9	19	ND	0.952	01/22/06	01/25/06	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6A22022	4.8	19	ND	0.952	01/22/06	01/25/06	
N-Nitrosodimethylamine	EPA 625	6A22022	3.5	19	ND	0.952	01/22/06	01/25/06	
Surrogate: 2-Fluorophenol (30-120%)					57 %				
Surrogate: Phenol-d6 (35-120%)					76 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					75 %				
Surrogate: Nitrobenzene-d5 (45-120%)					110 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					77 %				
Surrogate: Terphenyl-d14 (45-120%)					122 %				ZX

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aldrin	EPA 608	6A22021	0.029	0.096	ND	0.962	01/22/06	01/23/06	
alpha-BHC	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	
beta-BHC	EPA 608	6A22021	0.014	0.096	ND	0.962	01/22/06	01/23/06	
delta-BHC	EPA 608	6A22021	0.019	0.19	ND	0.962	01/22/06	01/23/06	
gamma-BHC (Lindane)	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	
Chlordane	EPA 608	6A22021	0.19	0.96	ND	0.962	01/22/06	01/23/06	
4,4'-DDD	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	
4,4'-DDE	EPA 608	6A22021	0.024	0.096	ND	0.962	01/22/06	01/23/06	
4,4'-DDT	EPA 608	6A22021	0.034	0.096	ND	0.962	01/22/06	01/23/06	
Dieldrin	EPA 608	6A22021	0.014	0.096	ND	0.962	01/22/06	01/23/06	
Endosulfan I	EPA 608	6A22021	0.014	0.096	ND	0.962	01/22/06	01/23/06	
Endosulfan II	EPA 608	6A22021	0.038	0.096	ND	0.962	01/22/06	01/23/06	
Endosulfan sulfate	EPA 608	6A22021	0.019	0.19	ND	0.962	01/22/06	01/23/06	
Endrin	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	
Endrin aldehyde	EPA 608	6A22021	0.043	0.096	ND	0.962	01/22/06	01/23/06	
Endrin ketone	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	
Heptachlor	EPA 608	6A22021	0.029	0.096	ND	0.962	01/22/06	01/23/06	
Heptachlor epoxide	EPA 608	6A22021	0.029	0.096	ND	0.962	01/22/06	01/23/06	
Methoxychlor	EPA 608	6A22021	0.034	0.096	ND	0.962	01/22/06	01/23/06	
Toxaphene	EPA 608	6A22021	1.4	4.8	ND	0.962	01/22/06	01/23/06	
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					78 %				
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					93 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A. Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**TOTAL PCBS (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aroclor 1016	EPA 608	6A22021	0.19	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1221	EPA 608	6A22021	0.096	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1232	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1242	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1248	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1254	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1260	EPA 608	6A22021	0.38	0.96	ND	0.962	01/22/06	01/23/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					99 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*





17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: mg/l</b>									
Antimony	EPA 200.7	6A18053	0.0060	0.010	ND	1	01/18/06	01/19/06	
Arsenic	EPA 200.7	6A18053	0.0044	0.0050	<b>0.0048</b>	1	01/18/06	01/19/06	J
Beryllium	EPA 200.7	6A18053	0.00090	0.0020	ND	1	01/18/06	01/19/06	
Cadmium	EPA 200.7	6A18053	0.0020	0.0050	ND	1	01/18/06	01/19/06	
Chromium	EPA 200.7	6A18053	0.0020	0.0050	ND	1	01/18/06	01/19/06	
Copper	EPA 200.7	6A18053	0.0020	0.010	<b>0.0038</b>	1	01/18/06	01/19/06	J
Lead	EPA 200.7	6A18053	0.0030	0.0050	ND	1	01/18/06	01/19/06	
Mercury	EPA 245.1	6A18048	0.000050	0.00020	ND	1	01/18/06	01/18/06	
Nickel	EPA 200.7	6A18053	0.0020	0.010	<b>0.0031</b>	1	01/18/06	01/19/06	J
Selenium	EPA 200.7	6A18053	0.0080	0.010	ND	1	01/18/06	01/19/06	
Silver	EPA 200.7	6A18053	0.0030	0.010	ND	1	01/18/06	01/19/06	
Thallium	EPA 200.7	6A18053	0.0070	0.010	ND	1	01/18/06	01/19/06	
Zinc	EPA 200.7	6A18053	0.015	0.020	<b>0.020</b>	1	01/18/06	01/19/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A20097	0.30	0.50	0.84	1	01/20/06	01/20/06	
Biochemical Oxygen Demand	EPA 405.1	6A18043	0.59	2.0	1.9	1	01/18/06	01/23/06	J
Total Cyanide	EPA 335.2	6A23128	0.0022	0.0050	0.0043	1	01/23/06	01/24/06	J
Oil & Grease	EPA 413.1	6A19047	0.90	4.8	ND	1	01/19/06	01/19/06	
Total Dissolved Solids	SM2540C	6A20090	10	10	260	1	01/20/06	01/20/06	
Total Suspended Solids	EPA 160.2	6A19101	10	10	24	1	01/19/06	01/19/06	

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ml/l/hr</b>									
Total Settleable Solids	EPA 160.5	6A18046	0.10	0.10	ND	1	01/18/06	01/18/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: NTU</b>									
Turbidity	EPA 180.1	6A18109	0.040	1.0	30	1	01/18/06	01/18/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Perchlorate	EPA 314.0	6A18057	0.80	4.0	ND	1	01/18/06	01/18/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

**1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
1,4-Dioxane	EPA 8260B	P6A2418	0.49	1.0	ND	1	01/24/06	01/24/06	
<i>Surrogate: Dibromofluoromethane (70-130%)</i>					96 %				

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**SHORT HOLD TIME DETAIL REPORT**

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
<b>Sample ID: Outfall 012 (IPA1345-01) - Water</b>					
EPA 160.5	2	01/17/2006 13:06	01/17/2006 18:15	01/18/2006 09:20	01/18/2006 11:00
EPA 180.1	2	01/17/2006 13:06	01/17/2006 18:15	01/18/2006 14:30	01/18/2006 15:30
EPA 405.1	2	01/17/2006 13:06	01/17/2006 18:15	01/18/2006 13:45	01/23/2006 14:45
EPA 624	3	01/17/2006 13:06	01/17/2006 18:15	01/18/2006 00:00	01/18/2006 13:37
<b>Sample ID: Trip Blank (IPA1345-02) - Water</b>					
EPA 624	3	01/17/2006 15:50	01/17/2006 18:15	01/18/2006 00:00	01/18/2006 10:57

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

## METHOD BLANK/QC DATA

### TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A24041 Extracted: 01/24/06</b>											
<b>Blank Analyzed: 01/24/2006 (6A24041-BLK1)</b>											
Total Recoverable Hydrocarbons	ND	1.0	0.31	mg/l							
<b>LCS Analyzed: 01/24/2006 (6A24041-BS1)</b>											
Total Recoverable Hydrocarbons	5.65	1.0	0.31	mg/l	5.00		113	65-120			M-NR1
<b>LCS Dup Analyzed: 01/24/2006 (6A24041-BSD1)</b>											
Total Recoverable Hydrocarbons	5.71	1.0	0.31	mg/l	5.00		114	65-120	1	20	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*





17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A23088 Extracted: 01/23/06</b>											
<b>Blank Analyzed: 01/23/2006 (6A23088-BLK1)</b>											
EFH (C13 - C22)	ND	0.50	0.045	mg/l							
EFH (C13 - C40)	ND	0.50	0.045	mg/l							
Surrogate: n-Octacosane	0.177			mg/l	0.200		88	40-125			
<b>LCS Analyzed: 01/23/2006 (6A23088-BS1)</b>											
EFH (C13 - C40)	0.691	0.50	0.045	mg/l	0.776		89	40-120			M-NR1
Surrogate: n-Octacosane	0.182			mg/l	0.200		91	40-125			
<b>LCS Dup Analyzed: 01/23/2006 (6A23088-BSD1)</b>											
EFH (C13 - C40)	0.664	0.50	0.045	mg/l	0.776		86	40-120	4	25	
Surrogate: n-Octacosane	0.175			mg/l	0.200		88	40-125			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A21021 Extracted: 01/21/06</b>											
<b>Blank Analyzed: 01/21/2006 (6A21021-BLK1)</b>											
GRO (C4 - C12)	ND	0.10	0.050	mg/l							
Surrogate: 4-BFB (FID)	0.00926			mg/l	0.0100		93	65-140			
<b>LCS Analyzed: 01/21/2006 (6A21021-BS1)</b>											
GRO (C4 - C12)	0.860	0.10	0.050	mg/l	0.800		108	65-140			
Surrogate: 4-BFB (FID)	0.0318			mg/l	0.0300		106	65-140			
<b>Matrix Spike Analyzed: 01/21/2006 (6A21021-MS1) Source: IPA1252-02</b>											
GRO (C4 - C12)	0.305	0.10	0.050	mg/l	0.220	ND	139	60-145			
Surrogate: 4-BFB (FID)	0.0104			mg/l	0.0100		104	65-140			
<b>Matrix Spike Dup Analyzed: 01/21/2006 (6A21021-MSD1) Source: IPA1252-02</b>											
GRO (C4 - C12)	0.299	0.10	0.050	mg/l	0.220	ND	136	60-145	2	20	
Surrogate: 4-BFB (FID)	0.0108			mg/l	0.0100		108	65-140			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18021 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18021-BLK1)</b>											
Benzene	ND	1.0	0.28	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							
Carbon tetrachloride	ND	0.50	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							
Dibromochloromethane	ND	2.0	0.28	ug/l							
1,2-Dibromoethane (EDB)	ND	2.0	0.32	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							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	5.0	0.42	ug/l							
trans-1,2-Dichloroethene	ND	2.0	0.27	ug/l							
1,2-Dichloropropane	ND	2.0	0.35	ug/l							
cis-1,3-Dichloropropene	ND	2.0	0.22	ug/l							
trans-1,3-Dichloropropene	ND	2.0	0.32	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Methylene chloride	ND	5.0	0.70	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	0.32	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							
1,1,1-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							
Vinyl chloride	ND	0.50	0.26	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	0.25	ug/l							
Xylenes, Total	ND	4.0	0.90	ug/l							

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18021 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18021-BLK1)</b>											
tert-Butanol (TBA)	ND	25	3.1	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l							
Surrogate: Dibromofluoromethane	26.7			ug/l	25.0		107	80-120			
Surrogate: Dibromofluoromethane	26.7			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.6			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.6			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	23.5			ug/l	25.0		94	80-120			
Surrogate: 4-Bromofluorobenzene	23.5			ug/l	25.0		94	80-120			
<b>LCS Analyzed: 01/18/2006 (6A18021-BS1)</b>											
Benzene	27.8	1.0	0.28	ug/l	25.0		111	65-120			
Bromodichloromethane	25.5	2.0	0.30	ug/l	25.0		102	65-135			
Bromoform	30.4	5.0	0.32	ug/l	25.0		122	50-130			
Bromomethane	30.6	5.0	0.42	ug/l	25.0		122	60-140			
Carbon tetrachloride	24.2	0.50	0.28	ug/l	25.0		97	65-140			
Chlorobenzene	25.8	2.0	0.36	ug/l	25.0		103	70-125			
Chloroethane	28.5	5.0	0.40	ug/l	25.0		114	55-140			
Chloroform	26.6	2.0	0.33	ug/l	25.0		106	65-130			
Chloromethane	26.9	5.0	0.30	ug/l	25.0		108	40-140			
Dibromochloromethane	27.7	2.0	0.28	ug/l	25.0		111	65-140			
1,2-Dibromoethane (EDB)	29.1	2.0	0.32	ug/l	25.0		116	70-125			
1,2-Dichlorobenzene	27.3	2.0	0.32	ug/l	25.0		109	70-120			
1,3-Dichlorobenzene	25.7	2.0	0.35	ug/l	25.0		103	70-125			
1,4-Dichlorobenzene	23.8	2.0	0.37	ug/l	25.0		95	70-125			
1,1-Dichloroethane	26.8	2.0	0.27	ug/l	25.0		107	65-130			
1,2-Dichloroethane	26.0	0.50	0.28	ug/l	25.0		104	60-140			
1,1-Dichloroethene	28.6	5.0	0.42	ug/l	25.0		114	70-130			
trans-1,2-Dichloroethene	29.0	2.0	0.27	ug/l	25.0		116	65-130			
1,2-Dichloropropane	26.7	2.0	0.35	ug/l	25.0		107	65-125			
cis-1,3-Dichloropropene	28.0	2.0	0.22	ug/l	25.0		112	70-130			
trans-1,3-Dichloropropene	28.9	2.0	0.32	ug/l	25.0		116	65-130			
Ethylbenzene	27.3	2.0	0.25	ug/l	25.0		109	70-125			
Methylene chloride	30.7	5.0	0.70	ug/l	25.0		123	60-130			
Methyl-tert-butyl Ether (MTBE)	29.7	5.0	0.32	ug/l	25.0		119	55-140			
1,1,2,2-Tetrachloroethane	34.4	2.0	0.24	ug/l	25.0		138	55-130			L
Tetrachloroethene	24.4	2.0	0.32	ug/l	25.0		98	65-125			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
 Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18021 Extracted: 01/18/06</b>											
<b>LCS Analyzed: 01/18/2006 (6A18021-BS1)</b>											
Toluene	27.3	2.0	0.36	ug/l	25.0		109	70-125			
1,1,1-Trichloroethane	25.2	2.0	0.30	ug/l	25.0		101	65-135			
1,1,2-Trichloroethane	30.5	2.0	0.30	ug/l	25.0		122	65-125			
Trichloroethene	25.2	2.0	0.26	ug/l	25.0		101	70-125			
Trichlorofluoromethane	26.0	5.0	0.34	ug/l	25.0		104	60-140			
1,2,3-Trichloropropane	28.4	10	0.40	ug/l	25.0		114	55-130			
Vinyl chloride	24.6	0.50	0.26	ug/l	25.0		98	50-130			
Di-isopropyl Ether (DIPE)	29.5	5.0	0.25	ug/l	25.0		118	60-135			
tert-Butanol (TBA)	141	25	3.1	ug/l	125		113	65-135			
Surrogate: Dibromofluoromethane	27.2			ug/l	25.0		109	80-120			
Surrogate: Dibromofluoromethane	27.2			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	26.5			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.5			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	25.0			ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	25.0			ug/l	25.0		100	80-120			
<b>Matrix Spike Analyzed: 01/18/2006 (6A18021-MS1)</b>											
<b>Source: IPA1093-01</b>											
Benzene	26.0	1.0	0.28	ug/l	25.0	ND	104	60-125			
Bromodichloromethane	22.8	2.0	0.30	ug/l	25.0	ND	91	65-135			
Bromoform	23.8	5.0	0.32	ug/l	25.0	ND	95	50-135			
Bromomethane	29.6	5.0	0.42	ug/l	25.0	ND	118	50-145			
Carbon tetrachloride	22.8	0.50	0.28	ug/l	25.0	ND	91	65-140			
Chlorobenzene	23.9	2.0	0.36	ug/l	25.0	ND	96	70-125			
Chloroethane	28.5	5.0	0.40	ug/l	25.0	ND	114	50-140			
Chloroform	25.1	2.0	0.33	ug/l	25.0	0.60	98	65-135			
Chloromethane	26.2	5.0	0.30	ug/l	25.0	ND	105	35-140			
Dibromochloromethane	23.6	2.0	0.28	ug/l	25.0	ND	94	60-140			
1,2-Dibromoethane (EDB)	23.6	2.0	0.32	ug/l	25.0	ND	94	65-130			
1,2-Dichlorobenzene	24.9	2.0	0.32	ug/l	25.0	ND	100	70-125			
1,3-Dichlorobenzene	24.2	2.0	0.35	ug/l	25.0	ND	97	70-125			
1,4-Dichlorobenzene	22.4	2.0	0.37	ug/l	25.0	ND	90	70-125			
1,1-Dichloroethane	25.2	2.0	0.27	ug/l	25.0	ND	101	60-130			
1,2-Dichloroethane	22.2	0.50	0.28	ug/l	25.0	ND	89	60-140			
1,1-Dichloroethene	26.7	5.0	0.42	ug/l	25.0	ND	107	60-135			
trans-1,2-Dichloroethene	27.1	2.0	0.27	ug/l	25.0	ND	108	60-135			
1,2-Dichloropropane	24.5	2.0	0.35	ug/l	25.0	ND	98	60-125			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18021 Extracted: 01/18/06</b>											
<b>Matrix Spike Analyzed: 01/18/2006 (6A18021-MS1)</b>						<b>Source: IPA1093-01</b>					
cis-1,3-Dichloropropene	24.8	2.0	0.22	ug/l	25.0	ND	99	65-135			
trans-1,3-Dichloropropene	24.1	2.0	0.32	ug/l	25.0	ND	96	65-140			
Ethylbenzene	25.7	2.0	0.25	ug/l	25.0	ND	103	65-130			
Methylene chloride	27.7	5.0	0.70	ug/l	25.0	ND	111	55-130			
Methyl-tert-butyl Ether (MTBE)	22.5	5.0	0.32	ug/l	25.0	ND	90	50-150			
1,1,2,2-Tetrachloroethane	26.0	2.0	0.24	ug/l	25.0	ND	104	55-140			
Tetrachloroethene	23.4	2.0	0.32	ug/l	25.0	ND	94	60-130			
Toluene	63.5	2.0	0.36	ug/l	25.0	51	50	65-125			MZ
1,1,1-Trichloroethane	23.7	2.0	0.30	ug/l	25.0	ND	95	65-140			
1,1,2-Trichloroethane	24.6	2.0	0.30	ug/l	25.0	ND	98	60-130			
Trichloroethene	25.9	2.0	0.26	ug/l	25.0	2.4	94	60-125			
Trichlorofluoromethane	25.1	5.0	0.34	ug/l	25.0	ND	100	55-145			
1,2,3-Trichloropropane	20.7	10	0.40	ug/l	25.0	ND	83	50-135			
Vinyl chloride	25.8	0.50	0.26	ug/l	25.0	ND	103	40-135			
Di-isopropyl Ether (DIPE)	26.2	5.0	0.25	ug/l	25.0	ND	105	60-140			
tert-Butanol (TBA)	163	25	3.1	ug/l	125	ND	130	60-145			
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	24.6			ug/l	25.0		98	80-120			
Surrogate: 4-Bromofluorobenzene	24.6			ug/l	25.0		98	80-120			

### Matrix Spike Dup Analyzed: 01/18/2006 (6A18021-MSD1)

### Source: IPA1093-01

Benzene	26.8	1.0	0.28	ug/l	25.0	ND	107	60-125	3	20	
Bromodichloromethane	24.4	2.0	0.30	ug/l	25.0	ND	98	65-135	7	20	
Bromoform	27.6	5.0	0.32	ug/l	25.0	ND	110	50-135	15	25	
Bromomethane	27.9	5.0	0.42	ug/l	25.0	ND	112	50-145	6	25	
Carbon tetrachloride	23.8	0.50	0.28	ug/l	25.0	ND	95	65-140	4	25	
Chlorobenzene	25.4	2.0	0.36	ug/l	25.0	ND	102	70-125	6	20	
Chloroethane	27.8	5.0	0.40	ug/l	25.0	ND	111	50-140	2	25	
Chloroform	25.4	2.0	0.33	ug/l	25.0	0.60	99	65-135	1	20	
Chloromethane	25.4	5.0	0.30	ug/l	25.0	ND	102	35-140	3	25	
Dibromochloromethane	26.4	2.0	0.28	ug/l	25.0	ND	106	60-140	11	25	
1,2-Dibromoethane (EDB)	27.2	2.0	0.32	ug/l	25.0	ND	109	65-130	14	25	
1,2-Dichlorobenzene	26.3	2.0	0.32	ug/l	25.0	ND	105	70-125	5	20	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**METHOD BLANK/QC DATA**

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18021 Extracted: 01/18/06</b>											
<b>Matrix Spike Dup Analyzed: 01/18/2006 (6A18021-MSD1)</b>						<b>Source: IPA1093-01</b>					
1,3-Dichlorobenzene	25.2	2.0	0.35	ug/l	25.0	ND	101	70-125	4	20	
1,4-Dichlorobenzene	23.5	2.0	0.37	ug/l	25.0	ND	94	70-125	5	20	
1,1-Dichloroethane	25.6	2.0	0.27	ug/l	25.0	ND	102	60-130	2	20	
1,2-Dichloroethane	23.7	0.50	0.28	ug/l	25.0	ND	95	60-140	7	20	
1,1-Dichloroethene	27.1	5.0	0.42	ug/l	25.0	ND	108	60-135	1	20	
trans-1,2-Dichloroethene	27.8	2.0	0.27	ug/l	25.0	ND	111	60-135	3	20	
1,2-Dichloropropane	25.8	2.0	0.35	ug/l	25.0	ND	103	60-125	5	20	
cis-1,3-Dichloropropene	26.1	2.0	0.22	ug/l	25.0	ND	104	65-135	5	20	
trans-1,3-Dichloropropene	26.4	2.0	0.32	ug/l	25.0	ND	106	65-140	9	25	
Ethylbenzene	27.3	2.0	0.25	ug/l	25.0	ND	109	65-130	6	20	
Methylene chloride	28.4	5.0	0.70	ug/l	25.0	ND	114	55-130	2	20	
Methyl-tert-butyl Ether (MTBE)	26.2	5.0	0.32	ug/l	25.0	ND	105	50-150	15	25	
1,1,2,2-Tetrachloroethane	29.6	2.0	0.24	ug/l	25.0	ND	118	55-140	13	30	
Tetrachloroethene	25.0	2.0	0.32	ug/l	25.0	ND	100	60-130	7	20	
Toluene	64.6	2.0	0.36	ug/l	25.0	51	54	65-125	2	20	M2
1,1,1-Trichloroethane	24.1	2.0	0.30	ug/l	25.0	ND	96	65-140	2	20	
1,1,2-Trichloroethane	27.3	2.0	0.30	ug/l	25.0	ND	109	60-130	10	25	
Trichloroethene	26.9	2.0	0.26	ug/l	25.0	2.4	98	60-125	4	20	
Trichlorofluoromethane	25.2	5.0	0.34	ug/l	25.0	ND	101	55-145	0	25	
1,2,3-Trichloropropane	24.0	10	0.40	ug/l	25.0	ND	96	50-135	15	30	
Vinyl chloride	24.3	0.50	0.26	ug/l	25.0	ND	97	40-135	6	30	
Di-isopropyl Ether (DIPE)	27.2	5.0	0.25	ug/l	25.0	ND	109	60-140	4	25	
tert-Butanol (TBA)	143	25	3.1	ug/l	125	ND	114	60-145	13	25	
Surrogate: Dibromofluoromethane	25.9			ug/l	25.0		104	80-120			
Surrogate: Dibromofluoromethane	25.9			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	25.3			ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	25.3			ug/l	25.0		101	80-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

**METHOD BLANK/QC DATA**

**PURGEABLES-- GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18021 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18021-BLK1)</b>											
Acrolein	ND	50	4.6	ug/l							
Acrylonitrile	ND	50	0.70	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: Dibromofluoromethane	26.7			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.6			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	23.5			ug/l	25.0		94	80-120			
<b>LCS Analyzed: 01/18/2006 (6A18021-BS1)</b>											
2-Chloroethyl vinyl ether	19.9	5.0	1.8	ug/l	25.0		80	25-170			
Surrogate: Dibromofluoromethane	27.2			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	26.5			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	25.0			ug/l	25.0		100	80-120			

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>Blank Analyzed: 01/24/2006 (6A22022-BLK1)</b>											
Acenaphthene	ND	10	4.3	ug/l							
Acenaphthylene	ND	10	3.2	ug/l							
Aniline	ND	10	2.9	ug/l							
Anthracene	ND	10	3.2	ug/l							
Benzidine	ND	20	5.2	ug/l							
Benzoic acid	ND	20	2.6	ug/l							
Benzo(a)anthracene	ND	10	3.7	ug/l							
Benzo(b)fluoranthene	ND	10	2.7	ug/l							
Benzo(k)fluoranthene	ND	10	3.4	ug/l							
Benzo(g,h,i)perylene	ND	10	5.3	ug/l							
Benzo(a)pyrene	ND	10	3.5	ug/l							
Benzyl alcohol	ND	20	2.5	ug/l							
Bis(2-chloroethoxy)methane	ND	10	3.9	ug/l							
Bis(2-chloroethyl)ether	ND	10	4.4	ug/l							
Bis(2-chloroisopropyl)ether	ND	10	4.6	ug/l							
Bis(2-ethylhexyl)phthalate	ND	50	5.2	ug/l							
4-Bromophenyl phenyl ether	ND	10	4.6	ug/l							
Butyl benzyl phthalate	ND	20	3.5	ug/l							
4-Chloroaniline	ND	10	6.0	ug/l							
2-Chloronaphthalene	ND	10	4.0	ug/l							
4-Chloro-3-methylphenol	ND	20	3.5	ug/l							
2-Chlorophenol	ND	10	4.2	ug/l							
4-Chlorophenyl phenyl ether	ND	10	3.0	ug/l							
Chrysene	ND	10	2.8	ug/l							
Dibenz(a,h)anthracene	ND	20	4.7	ug/l							
Dibenzofuran	ND	10	2.6	ug/l							
Di-n-butyl phthalate	ND	20	2.8	ug/l							
1,3-Dichlorobenzene	ND	10	4.1	ug/l							
1,4-Dichlorobenzene	ND	10	3.9	ug/l							
1,2-Dichlorobenzene	ND	10	4.5	ug/l							
3,3-Dichlorobenzidine	ND	20	11	ug/l							
2,4-Dichlorophenol	ND	10	4.1	ug/l							
Diethyl phthalate	ND	10	3.1	ug/l							
2,4-Dimethylphenol	ND	20	4.4	ug/l							
Dimethyl phthalate	ND	10	3.6	ug/l							

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>Blank Analyzed: 01/24/2006 (6A22022-BLK1)</b>											
4,6-Dinitro-2-methylphenol	ND	20	5.1	ug/l							
2,4-Dinitrophenol	ND	20	5.3	ug/l							
2,4-Dinitrotoluene	ND	10	4.2	ug/l							
2,6-Dinitrotoluene	ND	10	3.2	ug/l							
Di-n-octyl phthalate	ND	20	4.7	ug/l							
Fluoranthene	ND	10	4.2	ug/l							
Fluorene	ND	10	3.9	ug/l							
Hexachlorobenzene	ND	10	4.8	ug/l							
Hexachlorobutadiene	ND	10	4.2	ug/l							
Hexachlorocyclopentadiene	ND	20	3.4	ug/l							
Hexachloroethane	ND	10	4.2	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20	5.4	ug/l							
Isophorone	ND	10	3.7	ug/l							
2-Methylnaphthalene	ND	10	3.0	ug/l							
2-Methylphenol	ND	10	3.7	ug/l							
4-Methylphenol	ND	10	3.8	ug/l							
Naphthalene	ND	10	4.5	ug/l							
2-Nitroaniline	ND	20	3.9	ug/l							
3-Nitroaniline	ND	20	4.5	ug/l							
4-Nitroaniline	ND	20	4.9	ug/l							
Nitrobenzene	ND	20	4.2	ug/l							
2-Nitrophenol	ND	10	4.2	ug/l							
4-Nitrophenol	ND	20	6.6	ug/l							
N-Nitrosodiphenylamine	ND	10	4.0	ug/l							
N-Nitroso-di-n-propylamine	ND	10	3.6	ug/l							
Pentachlorophenol	ND	20	4.0	ug/l							
Phenanthrene	ND	10	3.3	ug/l							
Phenol	ND	10	4.0	ug/l							
Pyrene	ND	10	3.9	ug/l							
1,2,4-Trichlorobenzene	ND	10	4.4	ug/l							
2,4,5-Trichlorophenol	ND	20	3.6	ug/l							
2,4,6-Trichlorophenol	ND	20	4.1	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	20	5.0	ug/l							
N-Nitrosodimethylamine	ND	20	3.7	ug/l							
Surrogate: 2-Fluorophenol	119			ug/l	200		60	30-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>Blank Analyzed: 01/24/2006 (6A22022-BLK1)</b>											
Surrogate: Phenol-d6	150			ug/l	200		75	35-120			
Surrogate: 2,4,6-Tribromophenol	155			ug/l	200		78	45-120			
Surrogate: Nitrobenzene-d5	89.3			ug/l	100		89	45-120			
Surrogate: 2-Fluorobiphenyl	81.0			ug/l	100		81	45-120			
Surrogate: Terphenyl-d14	92.2			ug/l	100		92	45-120			
<b>LCS Analyzed: 01/24/2006 (6A22022-BS1)</b>											
Acenaphthene	77.9	10	4.3	ug/l	100		78	55-120			M-NR1
Acenaphthylene	81.5	10	3.2	ug/l	100		82	55-120			
Aniline	62.1	10	2.9	ug/l	100		62	35-120			
Anthracene	72.6	10	3.2	ug/l	100		73	55-120			
Benzidine	37.0	20	5.2	ug/l	100		37	20-160			
Benzoic acid	79.4	20	2.6	ug/l	100		79	35-120			
Benzo(a)anthracene	77.1	10	3.7	ug/l	100		77	60-120			
Benzo(b)fluoranthene	82.8	10	2.7	ug/l	100		83	50-120			
Benzo(k)fluoranthene	83.5	10	3.4	ug/l	100		84	50-120			
Benzo(g,h,i)perylene	66.9	10	5.3	ug/l	100		67	40-125			
Benzo(a)pyrene	73.5	10	3.5	ug/l	100		74	55-120			
Benzyl alcohol	84.4	20	2.5	ug/l	100		84	45-120			
Bis(2-chloroethoxy)methane	82.9	10	3.9	ug/l	100		83	55-120			
Bis(2-chloroethyl)ether	68.8	10	4.4	ug/l	100		69	50-120			
Bis(2-chloroisopropyl)ether	80.1	10	4.6	ug/l	100		80	45-120			
Bis(2-ethylhexyl)phthalate	91.6	50	5.2	ug/l	100		92	60-130			
4-Bromophenyl phenyl ether	76.0	10	4.6	ug/l	100		76	50-120			
Butyl benzyl phthalate	83.5	20	3.5	ug/l	100		84	55-125			
4-Chloroaniline	81.0	10	6.0	ug/l	100		81	50-120			
2-Chloronaphthalene	74.1	10	4.0	ug/l	100		74	55-120			
4-Chloro-3-methylphenol	101	20	3.5	ug/l	100		101	60-120			
2-Chlorophenol	71.7	10	4.2	ug/l	100		72	45-120			
4-Chlorophenyl phenyl ether	79.9	10	3.0	ug/l	100		80	55-120			
Chrysene	76.2	10	2.8	ug/l	100		76	60-120			
Dibenz(a,h)anthracene	60.5	20	4.7	ug/l	100		60	45-130			
Dibenzofuran	76.4	10	2.6	ug/l	100		76	60-120			
Di-n-butyl phthalate	69.8	20	2.8	ug/l	100		70	55-125			
1,3-Dichlorobenzene	60.7	10	4.1	ug/l	100		61	35-120			
1,4-Dichlorobenzene	63.9	10	3.9	ug/l	100		64	35-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>LCS Analyzed: 01/24/2006 (6A22022-BS1)</b>											
1,2-Dichlorobenzene	63.5	10	4.5	ug/l	100		64	35-120			M-NRI
3,3-Dichlorobenzidine	53.1	20	11	ug/l	100		53	45-130			
2,4-Dichlorophenol	94.4	10	4.1	ug/l	100		94	55-120			
Diethyl phthalate	15.0	10	3.1	ug/l	100		15	55-120			L2
2,4-Dimethylphenol	78.6	20	4.4	ug/l	100		79	30-120			
Dimethyl phthalate	5.64	10	3.6	ug/l	100		6	30-120			L2, J
4,6-Dinitro-2-methylphenol	90.9	20	5.1	ug/l	100		91	50-120			
2,4-Dinitrophenol	103	20	5.3	ug/l	100		103	40-120			
2,4-Dinitrotoluene	87.4	10	4.2	ug/l	100		87	60-120			
2,6-Dinitrotoluene	88.3	10	3.2	ug/l	100		88	60-120			
Di-n-octyl phthalate	76.8	20	4.7	ug/l	100		77	60-130			
Fluoranthene	74.7	10	4.2	ug/l	100		75	55-120			
Fluorene	77.8	10	3.9	ug/l	100		78	60-120			
Hexachlorobenzene	78.5	10	4.8	ug/l	100		78	50-120			
Hexachlorobutadiene	61.6	10	4.2	ug/l	100		62	40-120			
Hexachlorocyclopentadiene	61.7	20	3.4	ug/l	100		62	15-120			
Hexachloroethane	60.2	10	4.2	ug/l	100		60	35-120			
Indeno(1,2,3-cd)pyrene	60.4	20	5.4	ug/l	100		60	40-130			
Isophorone	85.7	10	3.7	ug/l	100		86	50-120			
2-Methylnaphthalene	81.8	10	3.0	ug/l	100		82	50-120			
2-Methylphenol	80.7	10	3.7	ug/l	100		81	45-120			
4-Methylphenol	82.9	10	3.8	ug/l	100		83	45-120			
Naphthalene	77.0	10	4.5	ug/l	100		77	50-120			
2-Nitroaniline	85.2	20	3.9	ug/l	100		85	60-120			
3-Nitroaniline	80.5	20	4.5	ug/l	100		80	55-120			
4-Nitroaniline	76.9	20	4.9	ug/l	100		77	50-125			
Nitrobenzene	84.5	20	4.2	ug/l	100		84	50-120			
2-Nitrophenol	88.6	10	4.2	ug/l	100		89	55-120			
4-Nitrophenol	84.4	20	6.6	ug/l	100		84	45-120			
N-Nitrosodiphenylamine	74.2	10	4.0	ug/l	100		74	55-120			
N-Nitroso-di-n-propylamine	85.9	10	3.6	ug/l	100		86	45-120			
Pentachlorophenol	100	20	4.0	ug/l	100		100	50-120			
Phenanthrene	70.8	10	3.3	ug/l	100		71	55-120			
Phenol	72.3	10	4.0	ug/l	100		72	45-120			
Pyrene	94.4	10	3.9	ug/l	100		94	50-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
 Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>LCS Analyzed: 01/24/2006 (6A22022-BS1)</b>											<b>M-NR1</b>
1,2,4-Trichlorobenzene	73.7	10	4.4	ug/l	100		74	45-120			
2,4,5-Trichlorophenol	97.5	20	3.6	ug/l	100		98	60-120			
2,4,6-Trichlorophenol	92.7	20	4.1	ug/l	100		93	60-120			
1,2-Diphenylhydrazine/Azobenzene	80.4	20	5.0	ug/l	100		80	60-120			
N-Nitrosodimethylamine	70.2	20	3.7	ug/l	100		70	40-120			
Surrogate: 2-Fluorophenol	120			ug/l	200		60	30-120			
Surrogate: Phenol-d6	142			ug/l	200		71	35-120			
Surrogate: 2,4,6-Tribromophenol	159			ug/l	200		80	45-120			
Surrogate: Nitrobenzene-d5	84.1			ug/l	100		84	45-120			
Surrogate: 2-Fluorobiphenyl	74.3			ug/l	100		74	45-120			
Surrogate: Terphenyl-d14	90.6			ug/l	100		91	45-120			
<b>LCS Dup Analyzed: 01/24/2006 (6A22022-BS1)</b>											
Acenaphthene	82.8	10	4.3	ug/l	100		83	55-120	6	20	
Acenaphthylene	87.6	10	3.2	ug/l	100		88	55-120	7	20	
Aniline	74.1	10	2.9	ug/l	100		74	35-120	18	25	
Anthracene	77.6	10	3.2	ug/l	100		78	55-120	7	20	
Benzdine	52.6	20	5.2	ug/l	100		53	20-160	35	35	
Benzoic acid	91.2	20	2.6	ug/l	100		91	35-120	14	30	
Benzo(a)anthracene	81.6	10	3.7	ug/l	100		82	60-120	6	20	
Benzo(b)fluoranthene	82.8	10	2.7	ug/l	100		83	50-120	0	25	
Benzo(k)fluoranthene	90.5	10	3.4	ug/l	100		90	50-120	8	20	
Benzo(g,h,i)perylene	83.3	10	5.3	ug/l	100		83	40-125	22	25	
Benzo(a)pyrene	76.6	10	3.5	ug/l	100		77	55-120	4	25	
Benzyl alcohol	88.2	20	2.5	ug/l	100		88	45-120	4	20	
Bis(2-chloroethoxy)methane	89.7	10	3.9	ug/l	100		90	55-120	8	20	
Bis(2-chloroethyl)ether	74.0	10	4.4	ug/l	100		74	50-120	7	20	
Bis(2-chloroisopropyl)ether	83.8	10	4.6	ug/l	100		84	45-120	5	20	
Bis(2-ethylhexyl)phthalate	90.9	50	5.2	ug/l	100		91	60-130	1	20	
4-Bromophenyl phenyl ether	77.8	10	4.6	ug/l	100		78	50-120	2	25	
Butyl benzyl phthalate	84.1	20	3.5	ug/l	100		84	55-125	1	20	
4-Chloroaniline	88.2	10	6.0	ug/l	100		88	50-120	9	25	
2-Chloronaphthalene	79.7	10	4.0	ug/l	100		80	55-120	7	20	
4-Chloro-3-methylphenol	99.8	20	3.5	ug/l	100		100	60-120	1	25	
2-Chlorophenol	78.9	10	4.2	ug/l	100		79	45-120	10	25	
4-Chlorophenyl phenyl ether	86.1	10	3.0	ug/l	100		86	55-120	7	20	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
 Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>LCS Dup Analyzed: 01/24/2006 (6A22022-BSD1)</b>											
Chrysene	82.2	10	2.8	ug/l	100		82	60-120	8	20	
Dibenz(a,h)anthracene	76.0	20	4.7	ug/l	100		76	45-130	23	25	
Dibenzofuran	79.5	10	2.6	ug/l	100		80	60-120	4	20	
Di-n-butyl phthalate	73.6	20	2.8	ug/l	100		74	55-125	5	20	
1,3-Dichlorobenzene	63.6	10	4.1	ug/l	100		64	35-120	5	25	
1,4-Dichlorobenzene	64.4	10	3.9	ug/l	100		64	35-120	1	25	
1,2-Dichlorobenzene	66.4	10	4.5	ug/l	100		66	35-120	4	25	
3,3-Dichlorobenzidine	70.4	20	11	ug/l	100		70	45-130	28	25	R-7
2,4-Dichlorophenol	93.6	10	4.1	ug/l	100		94	55-120	1	20	
Diethyl phthalate	6.10	10	3.1	ug/l	100		6	55-120	84	20	L2, J
2,4-Dimethylphenol	80.7	20	4.4	ug/l	100		81	30-120	3	25	
Dimethyl phthalate	3.64	10	3.6	ug/l	100		4	30-120	43	20	L2, J
4,6-Dinitro-2-methylphenol	93.5	20	5.1	ug/l	100		94	50-120	3	25	
2,4-Dinitrophenol	103	20	5.3	ug/l	100		103	40-120	0	25	
2,4-Dinitrotoluene	90.4	10	4.2	ug/l	100		90	60-120	3	20	
2,6-Dinitrotoluene	91.8	10	3.2	ug/l	100		92	60-120	4	20	
Di-n-octyl phthalate	79.1	20	4.7	ug/l	100		79	60-130	3	20	
Fluoranthene	78.6	10	4.2	ug/l	100		79	55-120	5	20	
Fluorene	82.9	10	3.9	ug/l	100		83	60-120	6	20	
Hexachlorobenzene	82.3	10	4.8	ug/l	100		82	50-120	5	20	
Hexachlorobutadiene	54.2	10	4.2	ug/l	100		54	40-120	13	25	
Hexachlorocyclopentadiene	64.4	20	3.4	ug/l	100		64	15-120	4	30	
Hexachloroethane	56.4	10	4.2	ug/l	100		56	35-120	7	25	
Indeno(1,2,3-cd)pyrene	72.2	20	5.4	ug/l	100		72	40-130	18	25	
Isophorone	89.5	10	3.7	ug/l	100		90	50-120	4	20	
2-Methylnaphthalene	84.0	10	3.0	ug/l	100		84	50-120	3	20	
2-Methylphenol	85.1	10	3.7	ug/l	100		85	45-120	5	20	
4-Methylphenol	85.4	10	3.8	ug/l	100		85	45-120	3	20	
Naphthalene	80.2	10	4.5	ug/l	100		80	50-120	4	20	
2-Nitroaniline	88.0	20	3.9	ug/l	100		88	60-120	3	20	
3-Nitroaniline	86.1	20	4.5	ug/l	100		86	55-120	7	25	
4-Nitroaniline	81.9	20	4.9	ug/l	100		82	50-125	6	20	
Nitrobenzene	88.7	20	4.2	ug/l	100		89	50-120	5	25	
2-Nitrophenol	90.8	10	4.2	ug/l	100		91	55-120	2	25	
4-Nitrophenol	88.7	20	6.6	ug/l	100		89	45-120	5	25	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
 Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>LCS Dup Analyzed: 01/24/2006 (6A22022-BSD1)</b>											
N-Nitrosodiphenylamine	77.5	10	4.0	ug/l	100	78	55-120	4	20		
N-Nitroso-di-n-propylamine	87.1	10	3.6	ug/l	100	87	45-120	1	20		
Pentachlorophenol	100	20	4.0	ug/l	100	100	50-120	0	25		
Phenanthrene	75.7	10	3.3	ug/l	100	76	55-120	7	20		
Phenol	79.1	10	4.0	ug/l	100	79	45-120	9	25		
Pyrene	90.6	10	3.9	ug/l	100	91	50-120	4	25		
1,2,4-Trichlorobenzene	75.6	10	4.4	ug/l	100	76	45-120	3	20		
2,4,5-Trichlorophenol	97.0	20	3.6	ug/l	100	97	60-120	1	20		
2,4,6-Trichlorophenol	95.7	20	4.1	ug/l	100	96	60-120	3	20		
1,2-Diphenylhydrazine/Azobenzene	82.9	20	5.0	ug/l	100	83	60-120	3	25		
N-Nitrosodimethylamine	75.5	20	3.7	ug/l	100	76	40-120	7	20		
Surrogate: 2-Fluorophenol	130			ug/l	200	65	30-120				
Surrogate: Phenol-d6	152			ug/l	200	76	35-120				
Surrogate: 2,4,6-Tribromophenol	150			ug/l	200	75	45-120				
Surrogate: Nitrobenzene-d5	85.2			ug/l	100	85	45-120				
Surrogate: 2-Fluorobiphenyl	78.5			ug/l	100	78	45-120				
Surrogate: Terphenyl-d14	87.0			ug/l	100	87	45-120				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**METHOD BLANK/QC DATA**

**ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22021 Extracted: 01/22/06</b>											
<b>Blank Analyzed: 01/23/2006 (6A22021-BLK1)</b>											
Aldrin	ND	0.10	0.030	ug/l							
alpha-BHC	ND	0.10	0.020	ug/l							
beta-BHC	ND	0.10	0.015	ug/l							
delta-BHC	ND	0.20	0.020	ug/l							
gamma-BHC (Lindane)	ND	0.10	0.020	ug/l							
Chlordane	ND	1.0	0.20	ug/l							
4,4'-DDD	ND	0.10	0.020	ug/l							
4,4'-DDE	ND	0.10	0.025	ug/l							
4,4'-DDT	ND	0.10	0.035	ug/l							
Dieldrin	ND	0.10	0.015	ug/l							
Endosulfan I	ND	0.10	0.015	ug/l							
Endosulfan II	ND	0.10	0.040	ug/l							
Endosulfan sulfate	ND	0.20	0.020	ug/l							
Endrin	ND	0.10	0.020	ug/l							
Endrin aldehyde	ND	0.10	0.045	ug/l							
Endrin ketone	ND	0.10	0.020	ug/l							
Heptachlor	ND	0.10	0.030	ug/l							
Heptachlor epoxide	ND	0.10	0.030	ug/l							
Methoxychlor	ND	0.10	0.035	ug/l							
Toxaphene	ND	5.0	1.5	ug/l							
Surrogate: Tetrachloro-m-xylene	0.430			ug/l	0.500		86	35-115			
Surrogate: Decachlorobiphenyl	0.504			ug/l	0.500		101	45-120			

**LCS Analyzed: 01/23/2006 (6A22021-BS1)**

**M-NR1**

Aldrin	0.449	0.10	0.030	ug/l	0.500		90	35-120			
alpha-BHC	0.481	0.10	0.020	ug/l	0.500		96	45-120			
beta-BHC	0.469	0.10	0.015	ug/l	0.500		94	50-120			
delta-BHC	0.497	0.20	0.020	ug/l	0.500		99	50-120			
gamma-BHC (Lindane)	0.482	0.10	0.020	ug/l	0.500		96	40-120			
4,4'-DDD	0.482	0.10	0.020	ug/l	0.500		96	55-120			
4,4'-DDE	0.495	0.10	0.025	ug/l	0.500		99	50-120			
4,4'-DDT	0.540	0.10	0.035	ug/l	0.500		108	55-120			
Dieldrin	0.491	0.10	0.015	ug/l	0.500		98	50-120			
Endosulfan I	0.471	0.10	0.015	ug/l	0.500		94	50-120			
Endosulfan II	0.481	0.10	0.040	ug/l	0.500		96	55-120			
Endosulfan sulfate	0.504	0.20	0.020	ug/l	0.500		101	60-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Coñton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22021 Extracted: 01/22/06</b>											
<b>LCS Analyzed: 01/23/2006 (6A22021-BS1)</b>											M-NR1
Endrin	0.481	0.10	0.020	ug/l	0.500		96	55-120			
Endrin aldehyde	0.503	0.10	0.045	ug/l	0.500		101	55-120			
Endrin ketone	0.494	0.10	0.020	ug/l	0.500		99	55-120			
Heptachlor	0.465	0.10	0.030	ug/l	0.500		93	40-115			
Heptachlor epoxide	0.474	0.10	0.030	ug/l	0.500		95	50-120			
Methoxychlor	0.475	0.10	0.035	ug/l	0.500		95	55-120			
Surrogate: Tetrachloro-m-xylene	0.410			ug/l	0.500		82	35-115			
Surrogate: Decachlorobiphenyl	0.474			ug/l	0.500		95	45-120			
<b>LCS Dup Analyzed: 01/23/2006 (6A22021-BSD1)</b>											
Aldrin	0.478	0.10	0.030	ug/l	0.500		96	35-120	6	30	
alpha-BHC	0.505	0.10	0.020	ug/l	0.500		101	45-120	5	30	
beta-BHC	0.485	0.10	0.015	ug/l	0.500		97	50-120	3	30	
delta-BHC	0.525	0.20	0.020	ug/l	0.500		105	50-120	5	30	
gamma-BHC (Lindane)	0.503	0.10	0.020	ug/l	0.500		101	40-120	4	30	
4,4'-DDD	0.499	0.10	0.020	ug/l	0.500		100	55-120	3	30	
4,4'-DDE	0.516	0.10	0.025	ug/l	0.500		103	50-120	4	30	
4,4'-DDT	0.566	0.10	0.035	ug/l	0.500		113	55-120	5	30	
Dieldrin	0.513	0.10	0.015	ug/l	0.500		103	50-120	4	30	
Endosulfan I	0.491	0.10	0.015	ug/l	0.500		98	50-120	4	30	
Endosulfan II	0.502	0.10	0.040	ug/l	0.500		100	55-120	4	30	
Endosulfan sulfate	0.529	0.20	0.020	ug/l	0.500		106	60-120	5	30	
Endrin	0.507	0.10	0.020	ug/l	0.500		101	55-120	5	30	
Endrin aldehyde	0.530	0.10	0.045	ug/l	0.500		106	55-120	5	30	
Endrin ketone	0.535	0.10	0.020	ug/l	0.500		107	55-120	8	30	
Heptachlor	0.488	0.10	0.030	ug/l	0.500		98	40-115	5	30	
Heptachlor epoxide	0.494	0.10	0.030	ug/l	0.500		99	50-120	4	30	
Methoxychlor	0.506	0.10	0.035	ug/l	0.500		101	55-120	6	30	
Surrogate: Tetrachloro-m-xylene	0.424			ug/l	0.500		85	35-115			
Surrogate: Decachlorobiphenyl	0.501			ug/l	0.500		100	45-120			

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

## METHOD BLANK/QC DATA

### TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22021 Extracted: 01/22/06</b>											
<b>Blank Analyzed: 01/23/2006 (6A22021-BLK1)</b>											
Aroclor 1016	ND	1.0	0.20	ug/l							
Aroclor 1221	ND	1.0	0.10	ug/l							
Aroclor 1232	ND	1.0	0.25	ug/l							
Aroclor 1242	ND	1.0	0.25	ug/l							
Aroclor 1248	ND	1.0	0.25	ug/l							
Aroclor 1254	ND	1.0	0.25	ug/l							
Aroclor 1260	ND	1.0	0.40	ug/l							
Surrogate: Decachlorobiphenyl	0.487			ug/l	0.500		97	45-120			
<b>LCS Analyzed: 01/23/2006 (6A22021-BS2)</b>											
Aroclor 1016	3.83	1.0	0.20	ug/l	4.00		96	45-115			M-NR1
Aroclor 1260	3.92	1.0	0.40	ug/l	4.00		98	55-115			
Surrogate: Decachlorobiphenyl	0.469			ug/l	0.500		94	45-120			
<b>LCS Dup Analyzed: 01/23/2006 (6A22021-BSD2)</b>											
Aroclor 1016	3.71	1.0	0.20	ug/l	4.00		93	45-115	3	30	
Aroclor 1260	3.91	1.0	0.40	ug/l	4.00		98	55-115	0	25	
Surrogate: Decachlorobiphenyl	0.457			ug/l	0.500		91	45-120			

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**METHOD BLANK/QC DATA**

**METALS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 6A18048 Extracted: 01/18/06</u></b>											
<b>Blank Analyzed: 01/18/2006 (6A18048-BLK1)</b>											
Mercury	ND	0.00020	0.000050	mg/l							
<b>LCS Analyzed: 01/18/2006 (6A18048-BS1)</b>											
Mercury	0.00811	0.00020	0.000050	mg/l	0.00800		101	85-115			
<b>Matrix Spike Analyzed: 01/18/2006 (6A18048-MS1)</b>											
						<b>Source: IPA1341-12</b>					
Mercury	0.00816	0.00020	0.000050	mg/l	0.00800	ND	102	70-130			
<b>Matrix Spike Dup Analyzed: 01/18/2006 (6A18048-MSD1)</b>											
						<b>Source: IPA1341-12</b>					
Mercury	0.00816	0.00020	0.000050	mg/l	0.00800	ND	102	70-130	0	20	
<b><u>Batch: 6A18053 Extracted: 01/18/06</u></b>											
<b>Blank Analyzed: 01/19/2006 (6A18053-BLK1)</b>											
Antimony	ND	0.010	0.0060	mg/l							
Arsenic	ND	0.0050	0.0044	mg/l							
Beryllium	ND	0.0020	0.00090	mg/l							
Cadmium	ND	0.0050	0.0020	mg/l							
Chromium	ND	0.0050	0.0020	mg/l							
Copper	ND	0.010	0.0020	mg/l							
Lead	ND	0.0050	0.0030	mg/l							
Nickel	ND	0.010	0.0020	mg/l							
Selenium	ND	0.010	0.0080	mg/l							
Silver	ND	0.010	0.0030	mg/l							
Thallium	ND	0.010	0.0070	mg/l							
Zinc	ND	0.020	0.015	mg/l							

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18053 Extracted: 01/18/06</b>											
<b>LCS Analyzed: 01/19/2006 (6A18053-BS1)</b>											
Antimony	0.476	0.010	0.0060	mg/l	0.500		95	85-115			
Arsenic	0.454	0.0050	0.0044	mg/l	0.500		91	85-115			
Beryllium	0.463	0.0020	0.00090	mg/l	0.500		93	85-115			
Cadmium	0.482	0.0050	0.0020	mg/l	0.500		96	85-115			
Chromium	0.468	0.0050	0.0020	mg/l	0.500		94	85-115			
Copper	0.506	0.010	0.0020	mg/l	0.500		101	85-115			
Lead	0.450	0.0050	0.0030	mg/l	0.500		90	85-115			
Nickel	0.450	0.010	0.0020	mg/l	0.500		90	85-115			
Selenium	0.451	0.010	0.0080	mg/l	0.500		90	85-115			
Silver	0.271	0.010	0.0030	mg/l	0.250		108	85-115			
Thallium	0.502	0.010	0.0070	mg/l	0.500		100	85-115			
Zinc	0.449	0.020	0.015	mg/l	0.500		90	85-115			

#### Matrix Spike Analyzed: 01/19/2006 (6A18053-MS1)

Source: IPA1278-02

Antimony	0.489	0.010	0.0060	mg/l	0.500	ND	98	70-130			
Arsenic	0.476	0.0050	0.0044	mg/l	0.500	0.0081	94	70-130			
Beryllium	0.469	0.0020	0.00090	mg/l	0.500	ND	94	70-130			
Cadmium	0.470	0.0050	0.0020	mg/l	0.500	ND	94	70-130			
Chromium	0.475	0.0050	0.0020	mg/l	0.500	0.0082	93	70-130			
Copper	0.529	0.010	0.0020	mg/l	0.500	0.0036	105	70-130			
Lead	0.446	0.0050	0.0030	mg/l	0.500	ND	89	70-130			
Nickel	0.449	0.010	0.0020	mg/l	0.500	0.0024	89	70-130			
Selenium	0.448	0.010	0.0080	mg/l	0.500	ND	90	70-130			
Silver	0.271	0.010	0.0030	mg/l	0.250	ND	108	70-130			
Thallium	0.495	0.010	0.0070	mg/l	0.500	0.013	96	70-130			
Zinc	0.544	0.020	0.015	mg/l	0.500	0.092	90	70-130			

#### Matrix Spike Dup Analyzed: 01/19/2006 (6A18053-MSD1)

Source: IPA1278-02

Antimony	0.490	0.010	0.0060	mg/l	0.500	ND	98	70-130	0	20	
Arsenic	0.473	0.0050	0.0044	mg/l	0.500	0.0081	93	70-130	1	20	
Beryllium	0.474	0.0020	0.00090	mg/l	0.500	ND	95	70-130	1	20	
Cadmium	0.471	0.0050	0.0020	mg/l	0.500	ND	94	70-130	0	20	
Chromium	0.473	0.0050	0.0020	mg/l	0.500	0.0082	93	70-130	0	20	
Copper	0.530	0.010	0.0020	mg/l	0.500	0.0036	105	70-130	0	20	
Lead	0.444	0.0050	0.0030	mg/l	0.500	ND	89	70-130	0	20	
Nickel	0.445	0.010	0.0020	mg/l	0.500	0.0024	89	70-130	1	20	

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18053 Extracted: 01/18/06</b>											
<b>Matrix Spike Dup Analyzed: 01/19/2006 (6A18053-MSD1)</b>						<b>Source: IPA1278-02</b>					
Selenium	0.453	0.010	0.0080	mg/l	0.500	ND	91	70-130	1	20	
Silver	0.271	0.010	0.0030	mg/l	0.250	ND	108	70-130	0	20	
Thallium	0.490	0.010	0.0070	mg/l	0.500	0.013	95	70-130	1	20	
Zinc	0.541	0.020	0.015	mg/l	0.500	0.092	90	70-130	1	20	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18043 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/23/2006 (6A18043-BLK1)</b>											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
<b>LCS Analyzed: 01/23/2006 (6A18043-BS1)</b>											
Biochemical Oxygen Demand	219	100	30	mg/l	198		111	85-115			
<b>LCS Dup Analyzed: 01/23/2006 (6A18043-BSD1)</b>											
Biochemical Oxygen Demand	222	100	30	mg/l	198		112	85-115	1	20	
<b>Batch: 6A18057 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18057-BLK1)</b>											
Perchlorate	ND	4.0	0.80	ug/l							
<b>LCS Analyzed: 01/18/2006 (6A18057-BS1)</b>											
Perchlorate	56.1	4.0	0.80	ug/l	50.0		112	85-115			
<b>Matrix Spike Analyzed: 01/18/2006 (6A18057-MS1)</b>											
Perchlorate	54.9	4.0	0.80	ug/l	50.0	2.4	105	80-120			
<b>Matrix Spike Dup Analyzed: 01/18/2006 (6A18057-MSD1)</b>											
Perchlorate	55.1	4.0	0.80	ug/l	50.0	2.4	105	80-120	0	20	
<b>Batch: 6A18109 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18109-BLK1)</b>											
Turbidity	ND	1.0	0.040	NTU							

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18109 Extracted: 01/18/06</b>											
<b>Duplicate Analyzed: 01/18/2006 (6A18109-DUP1)</b>											
Turbidity	29.2	1.0	0.040	NTU		30			3	20	
<b>Batch: 6A19047 Extracted: 01/19/06</b>											
<b>Blank Analyzed: 01/19/2006 (6A19047-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							
<b>LCS Analyzed: 01/19/2006 (6A19047-BS1)</b>											
Oil & Grease	17.1	5.0	0.94	mg/l	20.0		86	65-120			M-NR1
<b>LCS Dup Analyzed: 01/19/2006 (6A19047-BSD1)</b>											
Oil & Grease	17.7	5.0	0.94	mg/l	20.0		88	65-120	3	20	
<b>Batch: 6A19101 Extracted: 01/19/06</b>											
<b>Blank Analyzed: 01/19/2006 (6A19101-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/19/2006 (6A19101-BS1)</b>											
Total Suspended Solids	932	10	10	mg/l	1000		93	85-115			
<b>Duplicate Analyzed: 01/19/2006 (6A19101-DUP1)</b>											
Total Suspended Solids	60.0	10	10	mg/l		61			2	10	
<b>Batch: 6A20090 Extracted: 01/20/06</b>											
<b>Blank Analyzed: 01/20/2006 (6A20090-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A20090 Extracted: 01/20/06</b>											
<b>LCS Analyzed: 01/20/2006 (6A20090-BS1)</b>											
Total Dissolved Solids	1010	10	10	mg/l	1000		101	90-110			
<b>Duplicate Analyzed: 01/23/2006 (6A20090-DUP1)</b>											
						<b>Source: IPA1308-04</b>					
Total Dissolved Solids	731	10	10	mg/l		740			1	10	
<b>Batch: 6A20097 Extracted: 01/20/06</b>											
<b>Blank Analyzed: 01/20/2006 (6A20097-BLK1)</b>											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
<b>LCS Analyzed: 01/20/2006 (6A20097-BS1)</b>											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0		115	80-115			
<b>Matrix Spike Analyzed: 01/20/2006 (6A20097-MS1)</b>											
						<b>Source: IPA1193-01</b>					
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	0.56	109	70-120			
<b>Matrix Spike Dup Analyzed: 01/20/2006 (6A20097-MSD1)</b>											
						<b>Source: IPA1193-01</b>					
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	0.56	109	70-120	0	15	
<b>Batch: 6A23128 Extracted: 01/23/06</b>											
<b>Blank Analyzed: 01/24/2006 (6A23128-BLK1)</b>											
Total Cyanide	ND	0.0050	0.0022	mg/l							
<b>LCS Analyzed: 01/24/2006 (6A23128-BS1)</b>											
Total Cyanide	0.184	0.0050	0.0022	mg/l	0.200		92	90-110			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A23128 Extracted: 01/23/06</b>											
<b>Matrix Spike Analyzed: 01/24/2006 (6A23128-MS1)</b>						<b>Source: IPA1364-02</b>					
Total Cyanide	0.185	0.0050	0.0022	mg/l	0.200	0.012	86	70-115			
<b>Matrix Spike Dup Analyzed: 01/24/2006 (6A23128-MSD1)</b>						<b>Source: IPA1364-02</b>					
Total Cyanide	0.205	0.0050	0.0022	mg/l	0.200	0.012	96	70-115	10	15	

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: P6A2418 Extracted: 01/24/06</b>											
<b>Blank Analyzed: 01/24/2006 (P6A2418-BLK1)</b>											
1,4-Dioxane	ND	1.0	0.49	ug/l							
Surrogate: Dibromofluoromethane	0.920			ug/l	1.00		92	70-130			
<b>LCS Analyzed: 01/24/2006 (P6A2418-BS1)</b>											
1,4-Dioxane	11.3	1.0	0.49	ug/l	10.0		113	70-130			
Surrogate: Dibromofluoromethane	0.860			ug/l	1.00		86	70-130			
<b>LCS Dup Analyzed: 01/24/2006 (P6A2418-BSD1)</b>											
1,4-Dioxane	9.65	1.0	0.49	ug/l	10.0		96	70-130	16	20	
Surrogate: Dibromofluoromethane	0.900			ug/l	1.00		90	70-130			
<b>Matrix Spike Analyzed: 01/24/2006 (P6A2418-MS1) Source: PPA0612-01</b>											
1,4-Dioxane	12.5	1.0	0.49	ug/l	10.0	0.77	117	65-125			
Surrogate: Dibromofluoromethane	0.880			ug/l	1.00		88	70-130			
<b>Matrix Spike Dup Analyzed: 01/24/2006 (P6A2418-MSD1) Source: PPA0612-01</b>											
1,4-Dioxane	11.8	1.0	0.49	ug/l	10.0	0.77	110	65-125	6	20	
Surrogate: Dibromofluoromethane	0.880			ug/l	1.00		88	70-130			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

**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.
- L2** Laboratory Control Sample recovery was below method control limits.
- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-NR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- R-7** LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
- ZX** Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

**ADDITIONAL COMMENTS**

**For 1,2-Diphenylhydrazine:**

The result for 1,2-Diphenylhydrazine is based upon the reading of its breakdown product, Azobenzene.

**For GRO (C4-C12):**

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

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

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

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

### Certification Summary

#### Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 200.7	Water	X	X
EPA 245.1	Water	X	X
EPA 314.0	Water	N/A	X
EPA 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 418.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8015B	Water	X	X
EPA 8260B	Water	X	X
Level 4	Water		
SM2540C	Water	X	X

*Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at [www.dmalabs.com](http://www.dmalabs.com).*

#### Subcontracted Laboratories

**Alta Analytical** NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR

Samples: IPA1345-01

Analysis Performed: Level 4 + EDD

Samples: IPA1345-01

**Del Mar Analytical - Phoenix** NELAC Cert #01109CA, California Cert #2446, Arizona Cert #AZ0426, Nevada Cert #AZ-907

9830 S. 51st Street, Suite B-120 - Phoenix, AZ 85044

Method Performed: EPA 8260B

Samples: IPA1345-01

#### Del Mar Analytical, Irvine

Michele Chamberlin

Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9686 Fax (619) 505-9689  
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

## SUBCONTRACT ORDER - PROJECT # IPA1345

**SENDING LABORATORY:**  
 Del Mar Analytical, Irvine  
 17461 Derian Avenue, Suite 100  
 Irvine, CA 92614  
 Phone: (949) 261-1022  
 Fax: (949) 261-1228  
 Project Manager: Michele Chamberlin

**RECEIVING LABORATORY:**  
 Del Mar Analytical - Phoenix  
 9830 S. 51st Street, Suite B-120  
 Phoenix, AZ 85044  
 Phone: (480) 785-0043  
 Fax: (480) 785-0851

Analysis	Expiration	Due	Comments
<b>Sample ID: IPA1345-01 Water</b>			
Dioxane-8260B-out	01/31/06 13:06	01/31/06 12:00	
Level 4 Data Package - Phoenix-02/14/06 13:06	01/31/06 12:00		Boeing, TAT= 17 days from receipt at Phoenix
<b>Containers Supplied:</b>			
40 ml VOA w/HCL (IPA1345-01H)			
40 ml VOA w/HCL (IPA1345-01I)			
40 ml VOA w/HCL (IPA1345-01J)			P P A D 8 0 2 - 1

**SAMPLE INTEGRITY:**

All containers intact:  Yes  No      Sample labels/COC agree:  Yes  No      Samples Received On Ice:  Yes  No  
 Custody Seals Present:  Yes  No      Samples Preserved Properly:  Yes  No      Samples Received at (temp): 1.0.c

~~Released By: [Signature] Date: 1-18-06 Time: 1700      Received By: [Signature] Date: 01/19/06 Time: 09:40~~  
 Released By: [Signature] Date: 01/19/06 Time: FEDEX      Received By: [Signature] Date: 01/19/06 Time: 09:40

CHAIN OF CUSTODY FORM

IPA1345

Client Name/Address:		Project:		ANALYSIS REQUIRED												Field readings:									
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Annual Test - Outfall 012 Alfa Test Stand		Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (EPA 413.1)	8015-gas	8015-diesel/jet fuel	1,4-Dioxane-8260B	TRPH, Total Rec. (EPA 418.1)	624 (EDB, 1,2,3-TCF, MTBE, DPE, TBA) + PP	BOD5(20 degrees C)	625 Naphthalene + PP	Ammonia-N, Titr. (350.2) w/ dist	Perchlorate	Turbidity, TDS, TSS	Settleable Solids	Temp = 62.1 °	pH = 7.54	
Outfall 012	W	1L Amber	1	11/17/06 1550	HCl	1A	X																		
Outfall 012 duplicate	W	1L Amber	1		HCl	1B	X																		
Outfall 012	W	VOAs	1		HCl	2A						X													
Outfall 012 duplicate	W	VOAs	2		HCl	2B, 2C						X													
Outfall 012	W	1L Amber	1		None	3A						X													
Outfall 012 duplicate	W	1L Amber	1		None	3B						X													
Outfall 012	W	VOAs	1		HCl	4A						X													
Outfall 012 duplicate	W	VOAs	2		HCl	4B, 4C						X													
Outfall 012	W	1L Amber	1		HCl	5A								X											
Outfall 012 duplicate	W	1L Amber	1		HCl	5B								X											
Outfall 012	W	VOAs	1		HCl	6A								X											
Outfall 012 duplicate	W	VOAs	2		HCl	6B, 6C								X											
Outfall 012	W	1L Poly	1		None	7A											X								
Outfall 012	W	1L Amber	1		None	8A												X							
Outfall 012 duplicate	W	1L Amber	1		None	8B												X							
Outfall 012	W	500ml Poly	1		H2S04	9A													X						
Outfall 012	W	1L Poly	1		None	10A														X					
Outfall 012	W	1L Poly	1		None	11A															X				
Trip Blank	W	VOAs	3		HCl	12A, 12B, 12C							X												
Relinquished By	Date/Time: 11/17/06 1550		Received By: [Signature]		Date/Time: 11/17/06 1550		Turn around Time: (check) 5 Days																		
Relinquished By	Date/Time: 11/17/06 1815		Received By: [Signature]		Date/Time: 11/17/06 1815		Turn around Time: (check) 10 Days																		
Relinquished By	Date/Time: 11/17/06 1815		Received By: [Signature]		Date/Time: 11/17/06 1815		Turn around Time: (check) Normal																		
Sample Integrity: (Check) Intact		On Ice: 5		[Signature]		[Signature]																			

Time: 1917 11/17/06  
PA For 608  
= 6

[Signature]

Relinquished By [Signature]

Relinquished By [Signature]

Relinquished By [Signature]

**CHAIN OF CUSTODY FORM**

Client Name/Address:  
**MWH-Pasadena**  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101

Project:  
**Boeing-SSFL NPDES**  
**Annual Test - Outfall 012**  
**Alfa Test Stand**

Project Manager: **Bronwyn Kelly**  
 Phone Number:  
**(626) 588-6691**  
 Fax Number:  
**(626) 588-6515**

Sampler: **Ruben Barrero**  
**Kirk Ramirez**

Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Sampling Date/Time	ANALYSIS REQUIRED							Comments		
							Pb Metals	Cyanide	Pesticides/PCBs - Pp	TCDD	VOCs 624 +A+A+2CVF					
Outfall 012	W	1L Poly	2	HNO3	13A, 13B	1-17-06 13:06	X									
Outfall 012	W	600ml Poly	1	NaOH	14	1-17-06 13:06		X								
Outfall 012	W	1L Amber	2	None	15A, 15B	1-17-06 13:06			X							
Outfall 012	W	1L Amber	2	None	16A, 16B	1-17-06 13:06				X						
Outfall 012	W	VOAs	3	None	17A, 17B, 17C	1-17-06 13:06					X					
Trip Blank	W	VOAs	3	None	18A, 18B, 18C							X				
Relinquished By							Date/Time:									
<i>Kevin Poy</i>							1-17-06 1550	Received By	<i>BSD Beaulieu</i>							1/17/06 1550
Relinquished By							Date/Time:									
<i>BSD Beaulieu</i>							1/17/06 1815	Received By	<i>Kevin Poy</i>							1/17/06 1815
Relinquished By							Date/Time:									

Turn around Time: (check)  
 24 Hours \_\_\_\_\_ 5 Days \_\_\_\_\_  
 48 Hours \_\_\_\_\_ 10 Days \_\_\_\_\_  
 72 Hours \_\_\_\_\_ Normal \_\_\_\_\_  
 Sample Integrity: (Check)  
 Intact \_\_\_\_\_ On Ice: 5

LPA1345

CHAIN OF CUSTODY FORM

Client Name/Address:		Project:		ANALYSIS REQUIRED												Field readings:					
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Annual Test - Outfall 012 Alfa Test Stand		TRPH = Total Rec	Petroleum Hydrocarbons (EPA 418.1)	624 (FDB, 1,2,3-CP, MTBE, DPE, TBA) + PP	BOD5 (20 degrees C) list	625 Naphthalene + PP	Ammonia-N, Tit. (350.2) list	Perchlorate	Turbidity, TDS, TSS	Settleable Solids	Temp = 62.1 ° pH = 7.54								
Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Sampling Date/Time	Oil & Grease (EPA 413.1)	8015-gas	8015-diesel/jet fuel	1,4-Dioxane-8260B	TRPH = Total Rec	Petroleum Hydrocarbons (EPA 418.1)	624 (FDB, 1,2,3-CP, MTBE, DPE, TBA) + PP	BOD5 (20 degrees C) list	625 Naphthalene + PP	Ammonia-N, Tit. (350.2) list	Perchlorate	Turbidity, TDS, TSS	Settleable Solids	Comments	
Outfall 012	W	1L Amber	1	HCl	1A	11/17/06 13:06	X	X													
Outfall 012 duplicate	W	1L Amber	1	HCl	1B		X														
Outfall 012	W	VOAs	1	HCl	2A																
Outfall 012 duplicate	W	VOAs	2	HCl	2B, 2C		X	X													
Outfall 012	W	1L Amber	1	None	3A																
Outfall 012 duplicate	W	1L Amber	1	None	3B																
Outfall 012	W	VOAs	1	HCl	4A					X											
Outfall 012 duplicate	W	VOAs	2	HCl	4B, 4C					X											
Outfall 012	W	1L Amber	1	HCl	5A						X										
Outfall 012 duplicate	W	1L Amber	1	HCl	5B						X										
Outfall 012	W	VOAs	1	HCl	6A							X									
Outfall 012 duplicate	W	VOAs	2	HCl	6B, 6C							X									
Outfall 012	W	1L Poly	1	None	7A								X								
Outfall 012	W	1L Amber	1	None	8A									X							
Outfall 012 duplicate	W	1L Amber	1	None	8B									X							
Outfall 012	W	500ml Poly	1	H2SO4	9A										X						
Outfall 012	W	1L Poly	1	None	10A											X					
Outfall 012	W	1L Poly	1	None	11A																
Trip Blank	W	VOAs	3	HCl	12A, 12B, 12C			X													

Time: 1917 11/17/06  
PA For 608  
= 6

*(Handwritten signature)*

Turn around Time: (check)  
24 Hours \_\_\_\_\_ 5 Days \_\_\_\_\_  
48 Hours \_\_\_\_\_ 10 Days \_\_\_\_\_  
72 Hours \_\_\_\_\_ Normal \_\_\_\_\_  
Sample Integrity: (Check) On loc: 5

Received By: *(Signature)* Date/Time: 11/17/06 1550  
Received By: *(Signature)* Date/Time: 11/17/06 1815

Relinquished By: *(Signature)* Date/Time: 11/17/06 1815  
Relinquished By: *(Signature)* Date/Time: 11/17/06 1815



CHAIN OF CUSTODY FORM

31 Mar Analytical Version 02/17/05

Client Name/Address:		Project:		ANALYSIS REQUIRED										Comments				
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Annual Test -- Outfall 012 Alfa Test Stand		Cyanide	Pesticides/PCBs - PP	TCDD	VOCs 624 +A+A+2CVE											
Project Manager: Bronwyn Kelly		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	PP Metals							
Outfall 012	W	1L Poly	2	1-17-06 13:06	HNO3	13A, 13B	14		X									
Outfall 012	W	500ml Poly	1		NaOH													
Outfall 012	W	1L Amber	2		None	15A, 15B												
Outfall 012	W	1L Amber	2		None	16A, 16B												
Outfall 012	W	VOAs	3	1-17-06 13:06	None	17A, 17B, 17C												
Trip Blank	W	VOAs	3		None	18A, 18B, 18C												
Relinquished By	Date/Time:		Received By	Date/Time:														
<i>Fun Toy</i>	1-17-06 1550		<i>B.D. Pearce</i>	1/17/06 1550														
Relinquished By	Date/Time:		Received By	Date/Time:														
<i>B.D. Pearce</i>	1/17/06 1815		<i>Fun Toy</i>	1/17/06 1815														
Relinquished By	Date/Time:		Received By	Date/Time:														
<i>B.D. Pearce</i>	1/17/06 1815		<i>Fun Toy</i>	1/17/06 1815														



26, 2006

Project I.D.: 27218

Hele Chamberlin  
Analytical, Irvine  
Meridian Avenue, Suite 100  
CA 92614

Hele Chamberlin,

Here are the results for the one aqueous sample received at Alta Analytical Laboratory on January 10, 2006 under your Project Name "IPA1345". This sample was extracted and analyzed using EPA Method 1631 for tetra-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Chain-of-Custody, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Alta's current policies, and copies of the raw data (if requested).

Alta Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-933-1640 or by email at [mmaier@altalab.com](mailto:mmaier@altalab.com). Thank you for choosing Alta as part of your analytical support team.

Sincerely,

M. Maier  
of HRMS Services



*Alta Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. This report should not be reproduced except in full without the written approval of ALTA.*



**Alta Analytical Laboratory Inc.**

1104 Windfield Way  
El Dorado Hills, CA 95762

FAX (916) 673-0106  
(916) 933-1640

Page 1 of 237

NPDES - 1126

**Section I: Sample Inventory Report**

**Date Received: 1/19/2006**

Alta Lab. ID

Client Sample ID

27218-001

IPA1345-01

**SECTION II**

Method Blank		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7686	Lab Sample:	0-MB001	
Sample Size:	1.00 L	Date Extracted:	22-Jan-06	Date Analyzed DB-5:	24-Jan-06	
				Date Analyzed DB-225:	NA	
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.00000125		13C-2,3,7,8-TCDD	64.8	25 - 164
1,2,3,7,8-PeCDD	ND	0.00000167		13C-1,2,3,7,8-PeCDD	64.5	25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000336		13C-1,2,3,4,7,8-HxCDD	59.5	32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000330		13C-1,2,3,6,7,8-HxCDD	61.9	28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000322		13C-1,2,3,4,6,7,8-HpCDD	58.2	23 - 140
1,2,3,4,6,7,8-HpCDD	0.00000569		J	13C-OCDD	33.9	17 - 157
OCDD	0.0000474		J	13C-2,3,7,8-TCDF	66.4	24 - 169
2,3,7,8-TCDF	ND	0.00000106		13C-1,2,3,7,8-PeCDF	70.3	24 - 185
1,2,3,7,8-PeCDF	ND	0.00000139		13C-2,3,4,7,8-PeCDF	73.0	21 - 178
2,3,4,7,8-PeCDF	ND	0.00000121		13C-1,2,3,4,7,8-HxCDF	59.7	26 - 152
1,2,3,4,7,8-HxCDF	ND	0.00000123		13C-1,2,3,6,7,8-HxCDF	57.8	26 - 123
1,2,3,6,7,8-HxCDF	ND	0.00000114		13C-2,3,4,6,7,8-HxCDF	61.4	28 - 136
2,3,4,6,7,8-HxCDF	ND	0.00000120		13C-1,2,3,7,8,9-HxCDF	62.2	29 - 147
1,2,3,7,8,9-HxCDF	ND	0.00000176		13C-1,2,3,4,6,7,8-HpCDF	53.4	28 - 143
1,2,3,4,6,7,8-HpCDF	ND	0.00000230		13C-1,2,3,4,7,8,9-HpCDF	57.4	26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.00000246		13C-OCDF	38.9	17 - 157
OCDF	ND	0.00000535		CRS 37Cl-2,3,7,8-TCDD	83.3	35 - 197
<b>Totals</b>						
Total TCDD	ND	0.00000125		Footnotes		
Total PeCDD	ND	0.00000167		a. Sample specific estimated detection limit.		
Total HxCDD	ND	0.00000329		b. Estimated maximum possible concentration.		
Total HpCDD	0.00000569			c. Method detection limit.		
Total TCDF	ND	0.00000106		d. Lower control limit - upper control limit.		
Total PeCDF	ND	0.00000130				
Total HxCDF	ND	0.00000132				
Total HpCDF	ND	0.00000238				

Analyst: DMS

Approved By: Martha M. Maier 26-Jan-2006 08:30

OPR Results							EPA Method 1613		
Matrix:	Aqueous	QC Batch No.:	7686	Lab Sample:	0-OPR001	Date Analyzed DB-5:	24-Jan-06	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	22-Jan-06						
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL			
2,3,7,8-TCDD	10.0	10.4	6.7 - 15.8	<b>IS</b> 13C-2,3,7,8-TCDD	64.1	25 - 164			
1,2,3,7,8-PeCDD	50.0	56.0	35 - 71	13C-1,2,3,7,8-PeCDD	66.4	25 - 181			
1,2,3,4,7,8-HxCDD	50.0	54.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	61.4	32 - 141			
1,2,3,6,7,8-HxCDD	50.0	52.7	38 - 67	13C-1,2,3,6,7,8-HxCDD	62.8	28 - 130			
1,2,3,7,8,9-HxCDD	50.0	53.6	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	57.3	23 - 140			
1,2,3,4,6,7,8-HpCDD	50.0	53.5	35 - 70	13C-OCDD	36.7	17 - 157			
OCDD	100	109	78 - 144	13C-2,3,7,8-TCDF	66.8	24 - 169			
2,3,7,8-TCDF	10.0	10.8	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	69.9	24 - 185			
1,2,3,7,8-PeCDF	50.0	52.0	40 - 67	13C-2,3,4,7,8-PeCDF	74.6	21 - 178			
2,3,4,7,8-PeCDF	50.0	52.8	34 - 80	13C-1,2,3,4,7,8-HxCDF	60.7	26 - 152			
1,2,3,4,7,8-HxCDF	50.0	53.5	36 - 67	13C-1,2,3,6,7,8-HxCDF	60.4	26 - 123			
1,2,3,6,7,8-HxCDF	50.0	52.4	42 - 65	13C-2,3,4,6,7,8-HxCDF	64.7	28 - 136			
2,3,4,6,7,8-HxCDF	50.0	52.4	35 - 78	13C-1,2,3,7,8,9-HxCDF	62.5	29 - 147			
1,2,3,7,8,9-HxCDF	50.0	52.8	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	54.0	28 - 143			
1,2,3,4,6,7,8-HpCDF	50.0	51.9	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	58.8	26 - 138			
1,2,3,4,7,8,9-HpCDF	50.0	51.9	39 - 69	13C-OCDF	41.9	17 - 157			
OCDF	100	99.0	63 - 170	<b>CRS</b> 37Cl-2,3,7,8-TCDD	81.2	35 - 197			

Analyst: DMS

Approved By: Martha M. Maier 26-Jan-2006 08:30

**Sample ID: IPA1345-01**

**EPA Method 1613**

**Client Data**

Name: Del Mar Analytical, Irvine  
 Project: IPA1345  
 Date Collected: 17-Jan-06  
 Time Collected: 1306

**Sample Data**

Matrix: Aqueous  
 Sample Size: 0.998 L

**Laboratory Data**

Lab Sample: 27218-001 Date Received: 19-Jan-06  
 QC Batch No.: 7686 Date Extracted: 22-Jan-06  
 Date Analyzed DB-5: 24-Jan-06 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000100			IS 13C-2,3,7,8-TCDD	82.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000168			13C-1,2,3,7,8-PeCDD	83.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000216			13C-1,2,3,4,7,8-HxCDD	79.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000220			13C-1,2,3,6,7,8-HxCDD	82.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000211			13C-1,2,3,4,6,7,8-HpCDD	82.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000182			J,B	13C-OCDD	51.4	17 - 157	
OCDD	0.000141			B	13C-2,3,7,8-TCDF	80.2	24 - 169	
2,3,7,8-TCDF	ND	0.00000110			13C-1,2,3,7,8-PeCDF	90.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000125			13C-2,3,4,7,8-PeCDF	89.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000124			13C-1,2,3,4,7,8-HxCDF	81.5	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000662			13C-1,2,3,6,7,8-HxCDF	81.3	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000611			13C-2,3,4,6,7,8-HxCDF	81.2	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000680			13C-1,2,3,7,8,9-HxCDF	80.6	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000963			13C-1,2,3,4,6,7,8-HpCDF	75.6	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000371			J	13C-1,2,3,4,7,8,9-HpCDF	80.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000934			13C-OCDF	58.4	17 - 157	
OCDF	0.00000758			J	CRS 37Cl-2,3,7,8-TCDD	97.8	35 - 197	
<b>Totals</b>								
Total TCDD	ND	0.00000100						
Total PeCDD	ND	0.00000168						
Total HxCDD	0.00000750							
Total HpCDD	0.0000405			B				
Total TCDF	0.00000230							
Total PeCDF	ND	0.00000124						
Total HxCDF	0.00000197							
Total HpCDF	0.0000105							

**Footnotes**

- a. Sample specific estimated detection limit.
- b. Estimated maximum possible concentration.
- c. Method detection limit.
- d. Lower control limit - upper control limit.

Analyst: DMS

Approved By: Martha M. Maier 26-Jan-2006 08:30

**APPENDIX**



## DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
E	The reported value exceeds the calibration range of the instrument.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical interference
J	The amount detected is below the Lower Calibration Limit of the instrument.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated Detection Limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that corresponds to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

**CERTIFICATIONS**

<b>Accrediting Authority</b>	<b>Certificate Number</b>
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q



17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689  
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 708-3621

**SUBCONTRACT ORDER - PROJECT # IPA1345**

<p><b>SENDING LABORATORY:</b>          Del Mar Analytical, Irvine          17461 Derian Avenue, Suite 100          Irvine, CA 92614          Phone: (949) 261-1022          Fax: (949) 261-1228          Project Manager: Michele Chamberlin</p>	<p><b>RECEIVING LABORATORY:</b>          Alta Analytical          1104 Windfield Way          El Dorado Hills, CA 95762          Phone : (916) 933-1640          Fax: (916) 673-0106</p> <p style="font-size: 2em; text-align: right;">27218 0.1°C</p>
--	--

Standard TAT is requested unless specific due date is requested => Due Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Analysis	Expiration	Comments
Sample ID: IPA1345-01 Water	Sampled: 01/17/06 13:06	
1613-Dioxin-HR	01/24/06 13:06	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
Level 4 + EDD-OUT	02/14/06 13:06	Excel EDD email to pm, include Std logs for Lvl IV

**Containers Supplied:**  
 1 L Amber (IPA1345-01AA)  
 1 L Amber (IPA1345-01AB)

**SAMPLE INTEGRITY:**

All containers intact:  Yes  No      Sample labels/COC agree:  Yes  No      Samples Received On Ice:  Yes  No  
 Custody Seals Present:  Yes  No      Samples Preserved Properly:  Yes  No      Samples Received at (temp): \_\_\_\_\_

~~Released By: \_\_\_\_\_ Date: 1-18-06 Time: 1700 Received By: Bettina J. Benedict Date: 1/17/06 Time: 0845~~

### SAMPLE LOG-IN CHECKLIST

Alta Project #: 27218

Samples Arrival:	Date/Time 4/19/06 0845	Initials: LPSB	Location: WR-2			
Logged In:	Date/Time 1/19/06 1322	Initials: LPSB	Location: WR-2			
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> Cal	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice	<input type="checkbox"/> None		
Temp °C	0.1	Time:	0910	Thermometer ID: DT-20		

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk #	7902 91692667		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?		COC	Sample Container
			<input checked="" type="radio"/> None
Shipping Container	<input checked="" type="radio"/> Alta	<input checked="" type="radio"/> Client	Retain
			Return
			<input checked="" type="radio"/> Dispose

Comments:



**LABORATORY REPORT**

Prepared For: MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project: Alfa Outfall 012 - Annual

Sampled: 01/17/06  
Received: 01/17/06  
Issued: 02/06/06 09:47

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 Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 5 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
IPA1345-01	Outfall 012	Water
IPA1345-02	Trip Blank	Water

Reviewed By:

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager



MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**CORRECTIVE ACTION REPORT**

Department: Extractions  
Method: EPA 625  
QC Batch: 6A22022

Date: 01/25/2006  
Matrix: Water

**Identification and Definition of Problem:**

The percent recoveries in the LCS and LCSD for dimethylphthalate and diethylphthalate were below laboratory acceptance limits.

**Determination of the Cause of the Problem:**

A definitive cause for the QC failure has not been determined.

**Corrective Action Taken:**

All results reported for dimethylphthalate and diethylphthalate are potentially biased low and can be considered estimates only.

Quality Assurance Approval:

Dave Dawes

Date: 02/17/2006 09:43 AM

**Del Mar Analytical, Irvine**  
Michele Chamberlin  
Project Manager



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water)</b>									
<b>Reporting Units: mg/l</b>									
<b>Total Recoverable Hydrocarbons</b>	EPA 418.1	6A24041	0.34	1.1	<b>2.2</b>	1.11	01/24/06	01/24/06	

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-7046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	6A23088	0.043	0.48	0.74	0.952	01/23/06	01/24/06	
Surrogate: n-Octacosane (40-125%)					95 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*





MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6A21021	0.50	1.0	1.1	10	01/21/06	01/21/06	
Surrogate: 4-BFB (FID) (65-140%)					77 %				
<b>Sample ID: IPA1345-02 (Trip Blank - Water)</b>									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6A21021	0.050	0.10	ND	1	01/21/06	01/21/06	
Surrogate: 4-BFB (FID) (65-140%)					79 %				

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6A18021	0.28	1.0	1.6	1	01/18/06	01/18/06	
Bromodichloromethane	EPA 624	6A18021	0.30	2.0	1.1	1	01/18/06	01/18/06	J
Bromoform	EPA 624	6A18021	0.32	5.0	0.66	1	01/18/06	01/18/06	J
Bromomethane	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	
Carbon tetrachloride	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
Chlorobenzene	EPA 624	6A18021	0.36	2.0	ND	1	01/18/06	01/18/06	
Chloroethane	EPA 624	6A18021	0.40	5.0	ND	1	01/18/06	01/18/06	
Chloroform	EPA 624	6A18021	0.33	2.0	0.84	1	01/18/06	01/18/06	J
Chloromethane	EPA 624	6A18021	0.30	5.0	ND	1	01/18/06	01/18/06	
Dibromochloromethane	EPA 624	6A18021	0.28	2.0	1.3	1	01/18/06	01/18/06	J
1,2-Dibromoethane (EDB)	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichlorobenzene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
1,3-Dichlorobenzene	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
1,4-Dichlorobenzene	EPA 624	6A18021	0.37	2.0	ND	1	01/18/06	01/18/06	
1,1-Dichloroethane	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloroethane	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
1,1-Dichloroethene	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	
trans-1,2-Dichloroethene	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloropropane	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
cis-1,3-Dichloropropene	EPA 624	6A18021	0.22	2.0	ND	1	01/18/06	01/18/06	
trans-1,3-Dichloropropene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
Ethylbenzene	EPA 624	6A18021	0.25	2.0	ND	1	01/18/06	01/18/06	
Methylene chloride	EPA 624	6A18021	0.70	5.0	ND	1	01/18/06	01/18/06	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6A18021	0.32	5.0	ND	1	01/18/06	01/18/06	
1,1,2,2-Tetrachloroethane	EPA 624	6A18021	0.24	2.0	ND	1	01/18/06	01/18/06	L
Tetrachloroethene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
Toluene	EPA 624	6A18021	0.36	2.0	0.60	1	01/18/06	01/18/06	J
1,1,1-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
1,1,2-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
Trichloroethene	EPA 624	6A18021	0.26	2.0	0.27	1	01/18/06	01/18/06	J
Trichlorofluoromethane	EPA 624	6A18021	0.34	5.0	ND	1	01/18/06	01/18/06	
1,2,3-Trichloropropane	EPA 624	6A18021	0.40	10	ND	1	01/18/06	01/18/06	
Vinyl chloride	EPA 624	6A18021	0.26	0.50	ND	1	01/18/06	01/18/06	
Di-isopropyl Ether (DIPE)	EPA 624	6A18021	0.25	5.0	ND	1	01/18/06	01/18/06	
Xylenes, Total	EPA 624	6A18021	0.90	4.0	ND	1	01/18/06	01/18/06	
tert-Butanol (TBA)	EPA 624	6A18021	3.1	25	ND	1	01/18/06	01/18/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A18021	1.2	5.0	ND	1	01/18/06	01/18/06	
Surrogate: Dibromofluoromethane (80-120%)					104 %				
Surrogate: Toluene-d8 (80-120%)					105 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					96 %				

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
Benzene	EPA 624	6A18021	0.28	1.0	ND	1	01/18/06	01/18/06	
Bromodichloromethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
Bromoform	EPA 624	6A18021	0.32	5.0	ND	1	01/18/06	01/18/06	
Bromomethane	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	
Carbon tetrachloride	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
Chlorobenzene	EPA 624	6A18021	0.36	2.0	ND	1	01/18/06	01/18/06	
Chloroethane	EPA 624	6A18021	0.40	5.0	ND	1	01/18/06	01/18/06	
Chloroform	EPA 624	6A18021	0.33	2.0	ND	1	01/18/06	01/18/06	
Chloromethane	EPA 624	6A18021	0.30	5.0	ND	1	01/18/06	01/18/06	
Dibromochloromethane	EPA 624	6A18021	0.28	2.0	ND	1	01/18/06	01/18/06	
1,2-Dibromoethane (EDB)	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichlorobenzene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
1,3-Dichlorobenzene	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
1,4-Dichlorobenzene	EPA 624	6A18021	0.37	2.0	ND	1	01/18/06	01/18/06	
1,1-Dichloroethane	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloroethane	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
1,1-Dichloroethene	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	
trans-1,2-Dichloroethene	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloropropane	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
cis-1,3-Dichloropropene	EPA 624	6A18021	0.22	2.0	ND	1	01/18/06	01/18/06	
trans-1,3-Dichloropropene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
Ethylbenzene	EPA 624	6A18021	0.25	2.0	ND	1	01/18/06	01/18/06	
Methylene chloride	EPA 624	6A18021	0.70	5.0	ND	1	01/18/06	01/18/06	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6A18021	0.32	5.0	ND	1	01/18/06	01/18/06	
1,1,2,2-Tetrachloroethane	EPA 624	6A18021	0.24	2.0	ND	1	01/18/06	01/18/06	L
Tetrachloroethene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
Toluene	EPA 624	6A18021	0.36	2.0	ND	1	01/18/06	01/18/06	
1,1,1-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
1,1,2-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
Trichloroethene	EPA 624	6A18021	0.26	2.0	ND	1	01/18/06	01/18/06	
Trichlorofluoromethane	EPA 624	6A18021	0.34	5.0	ND	1	01/18/06	01/18/06	
1,2,3-Trichloropropane	EPA 624	6A18021	0.40	10	ND	1	01/18/06	01/18/06	
Vinyl chloride	EPA 624	6A18021	0.26	0.50	ND	1	01/18/06	01/18/06	
Di-isopropyl Ether (DIPE)	EPA 624	6A18021	0.25	5.0	ND	1	01/18/06	01/18/06	
Xylenes, Total	EPA 624	6A18021	0.90	4.0	ND	1	01/18/06	01/18/06	
tert-Butanol (TBA)	EPA 624	6A18021	3.1	25	ND	1	01/18/06	01/18/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A18021	1.2	5.0	ND	1	01/18/06	01/18/06	
Surrogate: Dibromofluoromethane (80-120%)					103 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					91 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

## PURGEABLES-- GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6A18021	4.6	50	ND	1	01/18/06	01/18/06	
Acrylonitrile	EPA 624	6A18021	0.70	50	ND	1	01/18/06	01/18/06	
2-Chloroethyl vinyl ether	EPA 624	6A18021	1.8	5.0	ND	1	01/18/06	01/18/06	
Surrogate: Dibromofluoromethane (80-120%)					104 %				
Surrogate: Toluene-d8 (80-120%)					105 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					96 %				
<b>Sample ID: IPA1345-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6A18021	4.6	50	ND	1	01/18/06	01/18/06	
Acrylonitrile	EPA 624	6A18021	0.70	50	ND	1	01/18/06	01/18/06	
2-Chloroethyl vinyl ether	EPA 624	6A18021	1.8	5.0	ND	1	01/18/06	01/18/06	
Surrogate: Dibromofluoromethane (80-120%)					103 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					91 %				

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acenaphthene	EPA 625	6A22022	4.1	9.5	ND	0.952	01/22/06	01/25/06	
<b>Acenaphthylene</b>	EPA 625	6A22022	3.0	9.5	<b>4.6</b>	0.952	01/22/06	01/25/06	J
Aniline	EPA 625	6A22022	2.8	9.5	ND	0.952	01/22/06	01/25/06	
Anthracene	EPA 625	6A22022	3.0	9.5	ND	0.952	01/22/06	01/25/06	
Benzidine	EPA 625	6A22022	5.0	19	ND	0.952	01/22/06	01/25/06	
Benzoic acid	EPA 625	6A22022	2.5	19	ND	0.952	01/22/06	01/25/06	
Benzo(a)anthracene	EPA 625	6A22022	3.5	9.5	ND	0.952	01/22/06	01/25/06	
Benzo(b)fluoranthene	EPA 625	6A22022	2.6	9.5	ND	0.952	01/22/06	01/25/06	
Benzo(k)fluoranthene	EPA 625	6A22022	3.2	9.5	ND	0.952	01/22/06	01/25/06	
Benzo(g,h,i)perylene	EPA 625	6A22022	5.0	9.5	ND	0.952	01/22/06	01/25/06	
Benzo(a)pyrene	EPA 625	6A22022	3.3	9.5	ND	0.952	01/22/06	01/25/06	
Benzyl alcohol	EPA 625	6A22022	2.4	19	ND	0.952	01/22/06	01/25/06	
Bis(2-chloroethoxy)methane	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06	
Bis(2-chloroethyl)ether	EPA 625	6A22022	4.2	9.5	ND	0.952	01/22/06	01/25/06	
Bis(2-chloroisopropyl)ether	EPA 625	6A22022	4.4	9.5	ND	0.952	01/22/06	01/25/06	
Bis(2-ethylhexyl)phthalate	EPA 625	6A22022	5.0	48	ND	0.952	01/22/06	01/25/06	
4-Bromophenyl phenyl ether	EPA 625	6A22022	4.4	9.5	ND	0.952	01/22/06	01/25/06	
Butyl benzyl phthalate	EPA 625	6A22022	3.3	19	ND	0.952	01/22/06	01/25/06	
4-Chloroaniline	EPA 625	6A22022	5.7	9.5	ND	0.952	01/22/06	01/25/06	
2-Chloronaphthalene	EPA 625	6A22022	3.8	9.5	ND	0.952	01/22/06	01/25/06	
4-Chloro-3-methylphenol	EPA 625	6A22022	3.3	19	ND	0.952	01/22/06	01/25/06	
2-Chlorophenol	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	
4-Chlorophenyl phenyl ether	EPA 625	6A22022	2.9	9.5	ND	0.952	01/22/06	01/25/06	
Chrysene	EPA 625	6A22022	2.7	9.5	ND	0.952	01/22/06	01/25/06	
Dibenz(a,h)anthracene	EPA 625	6A22022	4.5	19	ND	0.952	01/22/06	01/25/06	
Dibenzofuran	EPA 625	6A22022	2.5	9.5	ND	0.952	01/22/06	01/25/06	
Di-n-butyl phthalate	EPA 625	6A22022	2.7	19	ND	0.952	01/22/06	01/25/06	
1,3-Dichlorobenzene	EPA 625	6A22022	3.9	9.5	ND	0.952	01/22/06	01/25/06	
1,4-Dichlorobenzene	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06	
1,2-Dichlorobenzene	EPA 625	6A22022	4.3	9.5	ND	0.952	01/22/06	01/25/06	
3,3-Dichlorobenzidine	EPA 625	6A22022	10	19	ND	0.952	01/22/06	01/25/06	
2,4-Dichlorophenol	EPA 625	6A22022	3.9	9.5	ND	0.952	01/22/06	01/25/06	
Diethyl phthalate	EPA 625	6A22022	3.0	9.5	ND	0.952	01/22/06	01/25/06	L2
2,4-Dimethylphenol	EPA 625	6A22022	4.2	19	ND	0.952	01/22/06	01/25/06	
Dimethyl phthalate	EPA 625	6A22022	3.4	9.5	ND	0.952	01/22/06	01/25/06	L2
4,6-Dinitro-2-methylphenol	EPA 625	6A22022	4.9	19	ND	0.952	01/22/06	01/25/06	
2,4-Dinitrophenol	EPA 625	6A22022	5.0	19	ND	0.952	01/22/06	01/25/06	
2,4-Dinitrotoluene	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	
2,6-Dinitrotoluene	EPA 625	6A22022	3.0	9.5	ND	0.952	01/22/06	01/25/06	
Di-n-octyl phthalate	EPA 625	6A22022	4.5	19	ND	0.952	01/22/06	01/25/06	
Fluoranthene	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: ug/l									
Fluorene	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06	
Hexachlorobenzene	EPA 625	6A22022	4.6	9.5	ND	0.952	01/22/06	01/25/06	
Hexachlorobutadiene	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	
Hexachlorocyclopentadiene	EPA 625	6A22022	3.2	19	ND	0.952	01/22/06	01/25/06	
Hexachloroethane	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6A22022	5.1	19	ND	0.952	01/22/06	01/25/06	
Isophorone	EPA 625	6A22022	3.5	9.5	ND	0.952	01/22/06	01/25/06	
<b>2-Methylnaphthalene</b>	EPA 625	6A22022	2.9	9.5	<b>14</b>	0.952	01/22/06	01/25/06	
2-Methylphenol	EPA 625	6A22022	3.5	9.5	ND	0.952	01/22/06	01/25/06	
4-Methylphenol	EPA 625	6A22022	3.6	9.5	ND	0.952	01/22/06	01/25/06	
<b>Naphthalene</b>	EPA 625	6A22022	4.3	9.5	<b>17</b>	0.952	01/22/06	01/25/06	
2-Nitroaniline	EPA 625	6A22022	3.7	19	ND	0.952	01/22/06	01/25/06	
3-Nitroaniline	EPA 625	6A22022	4.3	19	ND	0.952	01/22/06	01/25/06	
4-Nitroaniline	EPA 625	6A22022	4.7	19	ND	0.952	01/22/06	01/25/06	
Nitrobenzene	EPA 625	6A22022	4.0	19	ND	0.952	01/22/06	01/25/06	
2-Nitrophenol	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	
4-Nitrophenol	EPA 625	6A22022	6.3	19	ND	0.952	01/22/06	01/25/06	
N-Nitrosodiphenylamine	EPA 625	6A22022	3.8	9.5	ND	0.952	01/22/06	01/25/06	
N-Nitroso-di-n-propylamine	EPA 625	6A22022	3.4	9.5	ND	0.952	01/22/06	01/25/06	
Pentachlorophenol	EPA 625	6A22022	3.8	19	ND	0.952	01/22/06	01/25/06	
Phenanthrene	EPA 625	6A22022	3.1	9.5	ND	0.952	01/22/06	01/25/06	
Phenol	EPA 625	6A22022	3.8	9.5	ND	0.952	01/22/06	01/25/06	
Pyrene	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06	
1,2,4-Trichlorobenzene	EPA 625	6A22022	4.2	9.5	ND	0.952	01/22/06	01/25/06	
2,4,5-Trichlorophenol	EPA 625	6A22022	3.4	19	ND	0.952	01/22/06	01/25/06	
2,4,6-Trichlorophenol	EPA 625	6A22022	3.9	19	ND	0.952	01/22/06	01/25/06	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6A22022	4.8	19	ND	0.952	01/22/06	01/25/06	
N-Nitrosodimethylamine	EPA 625	6A22022	3.5	19	ND	0.952	01/22/06	01/25/06	
Surrogate: 2-Fluorophenol (30-120%)					57 %				
Surrogate: Phenol-d6 (35-120%)					76 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					75 %				
Surrogate: Nitrobenzene-d5 (45-120%)					110 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					77 %				
Surrogate: Terphenyl-d14 (45-120%)					122 %				ZX

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aldrin	EPA 608	6A22021	0.029	0.096	ND	0.962	01/22/06	01/23/06	
alpha-BHC	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	
beta-BHC	EPA 608	6A22021	0.014	0.096	ND	0.962	01/22/06	01/23/06	
delta-BHC	EPA 608	6A22021	0.019	0.19	ND	0.962	01/22/06	01/23/06	
gamma-BHC (Lindane)	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	
Chlordane	EPA 608	6A22021	0.19	0.96	ND	0.962	01/22/06	01/23/06	
4,4'-DDD	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	
4,4'-DDE	EPA 608	6A22021	0.024	0.096	ND	0.962	01/22/06	01/23/06	
4,4'-DDT	EPA 608	6A22021	0.034	0.096	ND	0.962	01/22/06	01/23/06	
Dieldrin	EPA 608	6A22021	0.014	0.096	ND	0.962	01/22/06	01/23/06	
Endosulfan I	EPA 608	6A22021	0.014	0.096	ND	0.962	01/22/06	01/23/06	
Endosulfan II	EPA 608	6A22021	0.038	0.096	ND	0.962	01/22/06	01/23/06	
Endosulfan sulfate	EPA 608	6A22021	0.019	0.19	ND	0.962	01/22/06	01/23/06	
Endrin	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	
Endrin aldehyde	EPA 608	6A22021	0.043	0.096	ND	0.962	01/22/06	01/23/06	
Endrin ketone	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	
Heptachlor	EPA 608	6A22021	0.029	0.096	ND	0.962	01/22/06	01/23/06	
Heptachlor epoxide	EPA 608	6A22021	0.029	0.096	ND	0.962	01/22/06	01/23/06	
Methoxychlor	EPA 608	6A22021	0.034	0.096	ND	0.962	01/22/06	01/23/06	
Toxaphene	EPA 608	6A22021	1.4	4.8	ND	0.962	01/22/06	01/23/06	
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					78 %				
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					93 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**TOTAL PCBS (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aroclor 1016	EPA 608	6A22021	0.19	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1221	EPA 608	6A22021	0.096	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1232	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1242	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1248	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1254	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06	
Aroclor 1260	EPA 608	6A22021	0.38	0.96	ND	0.962	01/22/06	01/23/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					99 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*





17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
Antimony	EPA 200.7	6A18053	0.0060	0.010	ND	1	01/18/06	01/19/06	
Arsenic	EPA 200.7	6A18053	0.0044	0.0050	<b>0.0048</b>	1	01/18/06	01/19/06	J
Beryllium	EPA 200.7	6A18053	0.00090	0.0020	ND	1	01/18/06	01/19/06	
Cadmium	EPA 200.7	6A18053	0.0020	0.0050	ND	1	01/18/06	01/19/06	
Chromium	EPA 200.7	6A18053	0.0020	0.0050	ND	1	01/18/06	01/19/06	
Copper	EPA 200.7	6A18053	0.0020	0.010	<b>0.0038</b>	1	01/18/06	01/19/06	J
Lead	EPA 200.7	6A18053	0.0030	0.0050	ND	1	01/18/06	01/19/06	
Mercury	EPA 245.1	6A18048	0.000050	0.00020	ND	1	01/18/06	01/18/06	
Nickel	EPA 200.7	6A18053	0.0020	0.010	<b>0.0031</b>	1	01/18/06	01/19/06	J
Selenium	EPA 200.7	6A18053	0.0080	0.010	ND	1	01/18/06	01/19/06	
Silver	EPA 200.7	6A18053	0.0030	0.010	ND	1	01/18/06	01/19/06	
Thallium	EPA 200.7	6A18053	0.0070	0.010	ND	1	01/18/06	01/19/06	
Zinc	EPA 200.7	6A18053	0.015	0.020	<b>0.020</b>	1	01/18/06	01/19/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A20097	0.30	0.50	<b>0.84</b>	1	01/20/06	01/20/06	
Biochemical Oxygen Demand	EPA 405.1	6A18043	0.59	2.0	<b>1.9</b>	1	01/18/06	01/23/06	J
Total Cyanide	EPA 335.2	6A23128	0.0022	0.0050	<b>0.0043</b>	1	01/23/06	01/24/06	J
Oil & Grease	EPA 413.1	6A19047	0.90	4.8	ND	1	01/19/06	01/19/06	
Total Dissolved Solids	SM2540C	6A20090	10	10	<b>260</b>	1	01/20/06	01/20/06	
Total Suspended Solids	EPA 160.2	6A19101	10	10	<b>24</b>	1	01/19/06	01/19/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ml/hr</b>									
Total Settleable Solids	EPA 160.5	6A18046	0.10	0.10	ND	1	01/18/06	01/18/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: NTU</b>									
Turbidity	EPA 180.1	6A18109	0.040	1.0	30	1	01/18/06	01/18/06	

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Perchlorate	EPA 314.0	6A18057	0.80	4.0	ND	1	01/18/06	01/18/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

## 1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.</b>									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B	P6A2418	0.49	1.0	ND	1	01/24/06	01/24/06	
Surrogate: Dibromofluoromethane (70-130%)					96 %				

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

**SHORT HOLD TIME DETAIL REPORT**

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
<b>Sample ID: Outfall 012 (IPA1345-01) - Water</b>					
EPA 160.5	2	01/17/2006 13:06	01/17/2006 18:15	01/18/2006 09:20	01/18/2006 11:00
EPA 180.1	2	01/17/2006 13:06	01/17/2006 18:15	01/18/2006 14:30	01/18/2006 15:30
EPA 405.1	2	01/17/2006 13:06	01/17/2006 18:15	01/18/2006 13:45	01/23/2006 14:45
EPA 624	3	01/17/2006 13:06	01/17/2006 18:15	01/18/2006 00:00	01/18/2006 13:37
<b>Sample ID: Trip Blank (IPA1345-02) - Water</b>					
EPA 624	3	01/17/2006 15:50	01/17/2006 18:15	01/18/2006 00:00	01/18/2006 10:57

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**METHOD BLANK/QC DATA**

**TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A24041 Extracted: 01/24/06</b>											
<b>Blank Analyzed: 01/24/2006 (6A24041-BLK1)</b>											
Total Recoverable Hydrocarbons	ND	1.0	0.31	mg/l							
<b>LCS Analyzed: 01/24/2006 (6A24041-BS1)</b>											
Total Recoverable Hydrocarbons	5.65	1.0	0.31	mg/l	5.00		113	65-120			M-NR1
<b>LCS Dup Analyzed: 01/24/2006 (6A24041-BSD1)</b>											
Total Recoverable Hydrocarbons	5.71	1.0	0.31	mg/l	5.00		114	65-120	1	20	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**METHOD BLANK/QC DATA**

**EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A23088 Extracted: 01/23/06</b>											
<b>Blank Analyzed: 01/23/2006 (6A23088-BLK1)</b>											
EFH (C13 - C22)	ND	0.50	0.045	mg/l							
EFH (C13 - C40)	ND	0.50	0.045	mg/l							
Surrogate: n-Octacosane	0.177			mg/l	0.200		88	40-125			
<b>LCS Analyzed: 01/23/2006 (6A23088-BS1)</b>											
EFH (C13 - C40)	0.691	0.50	0.045	mg/l	0.776		89	40-120			M-NR1
Surrogate: n-Octacosane	0.182			mg/l	0.200		91	40-125			
<b>LCS Dup Analyzed: 01/23/2006 (6A23088-BSD1)</b>											
EFH (C13 - C40)	0.664	0.50	0.045	mg/l	0.776		86	40-120	4	25	
Surrogate: n-Octacosane	0.175			mg/l	0.200		88	40-125			

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**METHOD BLANK/QC DATA**

**VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A21021 Extracted: 01/21/06</b>											
<b>Blank Analyzed: 01/21/2006 (6A21021-BLK1)</b>											
GRO (C4 - C12)	ND	0.10	0.050	mg/l							
Surrogate: 4-BFB (FID)	0.00926			mg/l	0.0100		93	65-140			
<b>LCS Analyzed: 01/21/2006 (6A21021-BS1)</b>											
GRO (C4 - C12)	0.860	0.10	0.050	mg/l	0.800		108	65-140			
Surrogate: 4-BFB (FID)	0.0318			mg/l	0.0300		106	65-140			
<b>Matrix Spike Analyzed: 01/21/2006 (6A21021-MS1) Source: IPA1252-02</b>											
GRO (C4 - C12)	0.305	0.10	0.050	mg/l	0.220	ND	139	60-145			
Surrogate: 4-BFB (FID)	0.0104			mg/l	0.0100		104	65-140			
<b>Matrix Spike Dup Analyzed: 01/21/2006 (6A21021-MSD1) Source: IPA1252-02</b>											
GRO (C4 - C12)	0.299	0.10	0.050	mg/l	0.220	ND	136	60-145	2	20	
Surrogate: 4-BFB (FID)	0.0108			mg/l	0.0100		108	65-140			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**METHOD BLANK/QC DATA**

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18021 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18021-BLK1)</b>											
Benzene	ND	1.0	0.28	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							
Carbon tetrachloride	ND	0.50	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							
Dibromochloromethane	ND	2.0	0.28	ug/l							
1,2-Dibromoethane (EDB)	ND	2.0	0.32	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							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	5.0	0.42	ug/l							
trans-1,2-Dichloroethene	ND	2.0	0.27	ug/l							
1,2-Dichloropropane	ND	2.0	0.35	ug/l							
cis-1,3-Dichloropropene	ND	2.0	0.22	ug/l							
trans-1,3-Dichloropropene	ND	2.0	0.32	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Methylene chloride	ND	5.0	0.70	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	0.32	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							
1,1,1-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							
Vinyl chloride	ND	0.50	0.26	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	0.25	ug/l							
Xylenes, Total	ND	4.0	0.90	ug/l							

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18021 Extracted: 01/18/06</b>										
<b>Blank Analyzed: 01/18/2006 (6A18021-BLK1)</b>										
tert-Butanol (TBA)	ND	25	3.1	ug/l						
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l						
Surrogate: Dibromofluoromethane	26.7			ug/l	25.0		107 80-120			
Surrogate: Dibromofluoromethane	26.7			ug/l	25.0		107 80-120			
Surrogate: Toluene-d8	26.6			ug/l	25.0		106 80-120			
Surrogate: Toluene-d8	26.6			ug/l	25.0		106 80-120			
Surrogate: 4-Bromofluorobenzene	23.5			ug/l	25.0		94 80-120			
Surrogate: 4-Bromofluorobenzene	23.5			ug/l	25.0		94 80-120			
<b>LCS Analyzed: 01/18/2006 (6A18021-BS1)</b>										
Benzene	27.8	1.0	0.28	ug/l	25.0		111 65-120			
Bromodichloromethane	25.5	2.0	0.30	ug/l	25.0		102 65-135			
Bromoform	30.4	5.0	0.32	ug/l	25.0		122 50-130			
Bromomethane	30.6	5.0	0.42	ug/l	25.0		122 60-140			
Carbon tetrachloride	24.2	0.50	0.28	ug/l	25.0		97 65-140			
Chlorobenzene	25.8	2.0	0.36	ug/l	25.0		103 70-125			
Chloroethane	28.5	5.0	0.40	ug/l	25.0		114 55-140			
Chloroform	26.6	2.0	0.33	ug/l	25.0		106 65-130			
Chloromethane	26.9	5.0	0.30	ug/l	25.0		108 40-140			
Dibromochloromethane	27.7	2.0	0.28	ug/l	25.0		111 65-140			
1,2-Dibromoethane (EDB)	29.1	2.0	0.32	ug/l	25.0		116 70-125			
1,2-Dichlorobenzene	27.3	2.0	0.32	ug/l	25.0		109 70-120			
1,3-Dichlorobenzene	25.7	2.0	0.35	ug/l	25.0		103 70-125			
1,4-Dichlorobenzene	23.8	2.0	0.37	ug/l	25.0		95 70-125			
1,1-Dichloroethane	26.8	2.0	0.27	ug/l	25.0		107 65-130			
1,2-Dichloroethane	26.0	0.50	0.28	ug/l	25.0		104 60-140			
1,1-Dichloroethene	28.6	5.0	0.42	ug/l	25.0		114 70-130			
trans-1,2-Dichloroethene	29.0	2.0	0.27	ug/l	25.0		116 65-130			
1,2-Dichloropropane	26.7	2.0	0.35	ug/l	25.0		107 65-125			
cis-1,3-Dichloropropene	28.0	2.0	0.22	ug/l	25.0		112 70-130			
trans-1,3-Dichloropropene	28.9	2.0	0.32	ug/l	25.0		116 65-130			
Ethylbenzene	27.3	2.0	0.25	ug/l	25.0		109 70-125			
Methylene chloride	30.7	5.0	0.70	ug/l	25.0		123 60-130			
Methyl-tert-butyl Ether (MTBE)	29.7	5.0	0.32	ug/l	25.0		119 55-140			
1,1,2,2-Tetrachloroethane	34.4	2.0	0.24	ug/l	25.0		138 55-130			L
Tetrachloroethene	24.4	2.0	0.32	ug/l	25.0		98 65-125			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Table with columns: Analyte, Result, Reporting Limit, MDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Data Qualifiers. Includes LCS Analyzed: 01/18/2006 (6A18021-BS1) and various chemical entries like Toluene, Trichloroethane, etc.

Matrix Spike Analyzed: 01/18/2006 (6A18021-MS1)

Source: IPA1093-01

Table with columns: Analyte, Result, Reporting Limit, MDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Data Qualifiers. Lists various chemicals like Benzene, Bromodichloromethane, etc.

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
 Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18021 Extracted: 01/18/06</b>											
<b>Matrix Spike Analyzed: 01/18/2006 (6A18021-MS1)</b>						<b>Source: IPA1093-01</b>					
cis-1,3-Dichloropropene	24.8	2.0	0.22	ug/l	25.0	ND	99	65-135			
trans-1,3-Dichloropropene	24.1	2.0	0.32	ug/l	25.0	ND	96	65-140			
Ethylbenzene	25.7	2.0	0.25	ug/l	25.0	ND	103	65-130			
Methylene chloride	27.7	5.0	0.70	ug/l	25.0	ND	111	55-130			
Methyl-tert-butyl Ether (MTBE)	22.5	5.0	0.32	ug/l	25.0	ND	90	50-150			
1,1,2,2-Tetrachloroethane	26.0	2.0	0.24	ug/l	25.0	ND	104	55-140			
Tetrachloroethene	23.4	2.0	0.32	ug/l	25.0	ND	94	60-130			
Toluene	63.5	2.0	0.36	ug/l	25.0	51	50	65-125			M2
1,1,1-Trichloroethane	23.7	2.0	0.30	ug/l	25.0	ND	95	65-140			
1,1,2-Trichloroethane	24.6	2.0	0.30	ug/l	25.0	ND	98	60-130			
Trichloroethene	25.9	2.0	0.26	ug/l	25.0	2.4	94	60-125			
Trichlorofluoromethane	25.1	5.0	0.34	ug/l	25.0	ND	100	55-145			
1,2,3-Trichloropropane	20.7	10	0.40	ug/l	25.0	ND	83	50-135			
Vinyl chloride	25.8	0.50	0.26	ug/l	25.0	ND	103	40-135			
Di-isopropyl Ether (DIPE)	26.2	5.0	0.25	ug/l	25.0	ND	105	60-140			
tert-Butanol (TBA)	163	25	3.1	ug/l	125	ND	130	60-145			
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	24.6			ug/l	25.0		98	80-120			
Surrogate: 4-Bromofluorobenzene	24.6			ug/l	25.0		98	80-120			
<b>Matrix Spike Dup Analyzed: 01/18/2006 (6A18021-MSD1)</b>						<b>Source: IPA1093-01</b>					
Benzene	26.8	1.0	0.28	ug/l	25.0	ND	107	60-125	3	20	
Bromodichloromethane	24.4	2.0	0.30	ug/l	25.0	ND	98	65-135	7	20	
Bromoform	27.6	5.0	0.32	ug/l	25.0	ND	110	50-135	15	25	
Bromomethane	27.9	5.0	0.42	ug/l	25.0	ND	112	50-145	6	25	
Carbon tetrachloride	23.8	0.50	0.28	ug/l	25.0	ND	95	65-140	4	25	
Chlorobenzene	25.4	2.0	0.36	ug/l	25.0	ND	102	70-125	6	20	
Chloroethane	27.8	5.0	0.40	ug/l	25.0	ND	111	50-140	2	25	
Chloroform	25.4	2.0	0.33	ug/l	25.0	0.60	99	65-135	1	20	
Chloromethane	25.4	5.0	0.30	ug/l	25.0	ND	102	35-140	3	25	
Dibromochloromethane	26.4	2.0	0.28	ug/l	25.0	ND	106	60-140	11	25	
1,2-Dibromoethane (EDB)	27.2	2.0	0.32	ug/l	25.0	ND	109	65-130	14	25	
1,2-Dichlorobenzene	26.3	2.0	0.32	ug/l	25.0	ND	105	70-125	5	20	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18021 Extracted: 01/18/06</b>											
<b>Matrix Spike Dup Analyzed: 01/18/2006 (6A18021-MSD1)</b>						<b>Source: IPA1093-01</b>					
1,3-Dichlorobenzene	25.2	2.0	0.35	ug/l	25.0	ND	101	70-125	4	20	
1,4-Dichlorobenzene	23.5	2.0	0.37	ug/l	25.0	ND	94	70-125	5	20	
1,1-Dichloroethane	25.6	2.0	0.27	ug/l	25.0	ND	102	60-130	2	20	
1,2-Dichloroethane	23.7	0.50	0.28	ug/l	25.0	ND	95	60-140	7	20	
1,1-Dichloroethene	27.1	5.0	0.42	ug/l	25.0	ND	108	60-135	1	20	
trans-1,2-Dichloroethene	27.8	2.0	0.27	ug/l	25.0	ND	111	60-135	3	20	
1,2-Dichloropropane	25.8	2.0	0.35	ug/l	25.0	ND	103	60-125	5	20	
cis-1,3-Dichloropropene	26.1	2.0	0.22	ug/l	25.0	ND	104	65-135	5	20	
trans-1,3-Dichloropropene	26.4	2.0	0.32	ug/l	25.0	ND	106	65-140	9	25	
Ethylbenzene	27.3	2.0	0.25	ug/l	25.0	ND	109	65-130	6	20	
Methylene chloride	28.4	5.0	0.70	ug/l	25.0	ND	114	55-130	2	20	
Methyl-tert-butyl Ether (MTBE)	26.2	5.0	0.32	ug/l	25.0	ND	105	50-150	15	25	
1,1,2,2-Tetrachloroethane	29.6	2.0	0.24	ug/l	25.0	ND	118	55-140	13	30	
Tetrachloroethene	25.0	2.0	0.32	ug/l	25.0	ND	100	60-130	7	20	
Toluene	64.6	2.0	0.36	ug/l	25.0	51	54	65-125	2	20	M2
1,1,1-Trichloroethane	24.1	2.0	0.30	ug/l	25.0	ND	96	65-140	2	20	
1,1,2-Trichloroethane	27.3	2.0	0.30	ug/l	25.0	ND	109	60-130	10	25	
Trichloroethene	26.9	2.0	0.26	ug/l	25.0	2.4	98	60-125	4	20	
Trichlorofluoromethane	25.2	5.0	0.34	ug/l	25.0	ND	101	55-145	0	25	
1,2,3-Trichloropropane	24.0	10	0.40	ug/l	25.0	ND	96	50-135	15	30	
Vinyl chloride	24.3	0.50	0.26	ug/l	25.0	ND	97	40-135	6	30	
Di-isopropyl Ether (DIPE)	27.2	5.0	0.25	ug/l	25.0	ND	109	60-140	4	25	
tert-Butanol (TBA)	143	25	3.1	ug/l	125	ND	114	60-145	13	25	
Surrogate: Dibromofluoromethane	25.9			ug/l	25.0		104	80-120			
Surrogate: Dibromofluoromethane	25.9			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	25.3			ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	25.3			ug/l	25.0		101	80-120			

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

**METHOD BLANK/QC DATA**

**PURGEABLES-- GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18021 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18021-BLK1)</b>											
Acrolein	ND	50	4.6	ug/l							
Acrylonitrile	ND	50	0.70	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: Dibromofluoromethane	26.7			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.6			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	23.5			ug/l	25.0		94	80-120			
<b>LCS Analyzed: 01/18/2006 (6A18021-BS1)</b>											
2-Chloroethyl vinyl ether	19.9	5.0	1.8	ug/l	25.0		80	25-170			
Surrogate: Dibromofluoromethane	27.2			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	26.5			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	25.0			ug/l	25.0		100	80-120			

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>Blank Analyzed: 01/24/2006 (6A22022-BLK1)</b>											
Acenaphthene	ND	10	4.3	ug/l							
Acenaphthylene	ND	10	3.2	ug/l							
Aniline	ND	10	2.9	ug/l							
Anthracene	ND	10	3.2	ug/l							
Benzidine	ND	20	5.2	ug/l							
Benzoic acid	ND	20	2.6	ug/l							
Benzo(a)anthracene	ND	10	3.7	ug/l							
Benzo(b)fluoranthene	ND	10	2.7	ug/l							
Benzo(k)fluoranthene	ND	10	3.4	ug/l							
Benzo(g,h,i)perylene	ND	10	5.3	ug/l							
Benzo(a)pyrene	ND	10	3.5	ug/l							
Benzyl alcohol	ND	20	2.5	ug/l							
Bis(2-chloroethoxy)methane	ND	10	3.9	ug/l							
Bis(2-chloroethyl)ether	ND	10	4.4	ug/l							
Bis(2-chloroisopropyl)ether	ND	10	4.6	ug/l							
Bis(2-ethylhexyl)phthalate	ND	50	5.2	ug/l							
4-Bromophenyl phenyl ether	ND	10	4.6	ug/l							
Butyl benzyl phthalate	ND	20	3.5	ug/l							
4-Chloroaniline	ND	10	6.0	ug/l							
2-Chloronaphthalene	ND	10	4.0	ug/l							
4-Chloro-3-methylphenol	ND	20	3.5	ug/l							
2-Chlorophenol	ND	10	4.2	ug/l							
4-Chlorophenyl phenyl ether	ND	10	3.0	ug/l							
Chrysene	ND	10	2.8	ug/l							
Dibenz(a,h)anthracene	ND	20	4.7	ug/l							
Dibenzofuran	ND	10	2.6	ug/l							
Di-n-butyl phthalate	ND	20	2.8	ug/l							
1,3-Dichlorobenzene	ND	10	4.1	ug/l							
1,4-Dichlorobenzene	ND	10	3.9	ug/l							
1,2-Dichlorobenzene	ND	10	4.5	ug/l							
3,3-Dichlorobenzidine	ND	20	11	ug/l							
2,4-Dichlorophenol	ND	10	4.1	ug/l							
Diethyl phthalate	ND	10	3.1	ug/l							
2,4-Dimethylphenol	ND	20	4.4	ug/l							
Dimethyl phthalate	ND	10	3.6	ug/l							

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
 Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>Blank Analyzed: 01/24/2006 (6A22022-BLK1)</b>											
4,6-Dinitro-2-methylphenol	ND	20	5.1	ug/l							
2,4-Dinitrophenol	ND	20	5.3	ug/l							
2,4-Dinitrotoluene	ND	10	4.2	ug/l							
2,6-Dinitrotoluene	ND	10	3.2	ug/l							
Di-n-octyl phthalate	ND	20	4.7	ug/l							
Fluoranthene	ND	10	4.2	ug/l							
Fluorene	ND	10	3.9	ug/l							
Hexachlorobenzene	ND	10	4.8	ug/l							
Hexachlorobutadiene	ND	10	4.2	ug/l							
Hexachlorocyclopentadiene	ND	20	3.4	ug/l							
Hexachloroethane	ND	10	4.2	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20	5.4	ug/l							
Isophorone	ND	10	3.7	ug/l							
2-Methylnaphthalene	ND	10	3.0	ug/l							
2-Methylphenol	ND	10	3.7	ug/l							
4-Methylphenol	ND	10	3.8	ug/l							
Naphthalene	ND	10	4.5	ug/l							
2-Nitroaniline	ND	20	3.9	ug/l							
3-Nitroaniline	ND	20	4.5	ug/l							
4-Nitroaniline	ND	20	4.9	ug/l							
Nitrobenzene	ND	20	4.2	ug/l							
2-Nitrophenol	ND	10	4.2	ug/l							
4-Nitrophenol	ND	20	6.6	ug/l							
N-Nitrosodiphenylamine	ND	10	4.0	ug/l							
N-Nitroso-di-n-propylamine	ND	10	3.6	ug/l							
Pentachlorophenol	ND	20	4.0	ug/l							
Phenanthrene	ND	10	3.3	ug/l							
Phenol	ND	10	4.0	ug/l							
Pyrene	ND	10	3.9	ug/l							
1,2,4-Trichlorobenzene	ND	10	4.4	ug/l							
2,4,5-Trichlorophenol	ND	20	3.6	ug/l							
2,4,6-Trichlorophenol	ND	20	4.1	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	20	5.0	ug/l							
N-Nitrosodimethylamine	ND	20	3.7	ug/l							
Surrogate: 2-Fluorophenol	119			ug/l	200		60			30-120	

**Del Mar Analytical, Irvine**  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>Blank Analyzed: 01/24/2006 (6A22022-BLK1)</b>											
Surrogate: Phenol-d6	150			ug/l	200		75	35-120			
Surrogate: 2,4,6-Tribromophenol	155			ug/l	200		78	45-120			
Surrogate: Nitrobenzene-d5	89.3			ug/l	100		89	45-120			
Surrogate: 2-Fluorobiphenyl	81.0			ug/l	100		81	45-120			
Surrogate: Terphenyl-d14	92.2			ug/l	100		92	45-120			
<b>LCS Analyzed: 01/24/2006 (6A22022-BS1)</b>											
Acenaphthene	77.9	10	4.3	ug/l	100		78	55-120			M-NR1
Acenaphthylene	81.5	10	3.2	ug/l	100		82	55-120			
Aniline	62.1	10	2.9	ug/l	100		62	35-120			
Anthracene	72.6	10	3.2	ug/l	100		73	55-120			
Benzidine	37.0	20	5.2	ug/l	100		37	20-160			
Benzoic acid	79.4	20	2.6	ug/l	100		79	35-120			
Benzo(a)anthracene	77.1	10	3.7	ug/l	100		77	60-120			
Benzo(b)fluoranthene	82.8	10	2.7	ug/l	100		83	50-120			
Benzo(k)fluoranthene	83.5	10	3.4	ug/l	100		84	50-120			
Benzo(g,h,i)perylene	66.9	10	5.3	ug/l	100		67	40-125			
Benzo(a)pyrene	73.5	10	3.5	ug/l	100		74	55-120			
Benzyl alcohol	84.4	20	2.5	ug/l	100		84	45-120			
Bis(2-chloroethoxy)methane	82.9	10	3.9	ug/l	100		83	55-120			
Bis(2-chloroethyl)ether	68.8	10	4.4	ug/l	100		69	50-120			
Bis(2-chloroisopropyl)ether	80.1	10	4.6	ug/l	100		80	45-120			
Bis(2-ethylhexyl)phthalate	91.6	50	5.2	ug/l	100		92	60-130			
4-Bromophenyl phenyl ether	76.0	10	4.6	ug/l	100		76	50-120			
Butyl benzyl phthalate	83.5	20	3.5	ug/l	100		84	55-125			
4-Chloroaniline	81.0	10	6.0	ug/l	100		81	50-120			
2-Chloronaphthalene	74.1	10	4.0	ug/l	100		74	55-120			
4-Chloro-3-methylphenol	101	20	3.5	ug/l	100		101	60-120			
2-Chlorophenol	71.7	10	4.2	ug/l	100		72	45-120			
4-Chlorophenyl phenyl ether	79.9	10	3.0	ug/l	100		80	55-120			
Chrysene	76.2	10	2.8	ug/l	100		76	60-120			
Dibenz(a,h)anthracene	60.5	20	4.7	ug/l	100		60	45-130			
Dibenzofuran	76.4	10	2.6	ug/l	100		76	60-120			
Di-n-butyl phthalate	69.8	20	2.8	ug/l	100		70	55-125			
1,3-Dichlorobenzene	60.7	10	4.1	ug/l	100		61	35-120			
1,4-Dichlorobenzene	63.9	10	3.9	ug/l	100		64	35-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>LCS Analyzed: 01/24/2006 (6A22022-BS1)</b>											
1,2-Dichlorobenzene	63.5	10	4.5	ug/l	100	64	35-120				M-NR1
3,3-Dichlorobenzidine	53.1	20	11	ug/l	100	53	45-130				
2,4-Dichlorophenol	94.4	10	4.1	ug/l	100	94	55-120				
Diethyl phthalate	15.0	10	3.1	ug/l	100	15	55-120				L2
2,4-Dimethylphenol	78.6	20	4.4	ug/l	100	79	30-120				
Dimethyl phthalate	5.64	10	3.6	ug/l	100	6	30-120				L2, J
4,6-Dinitro-2-methylphenol	90.9	20	5.1	ug/l	100	91	50-120				
2,4-Dinitrophenol	103	20	5.3	ug/l	100	103	40-120				
2,4-Dinitrotoluene	87.4	10	4.2	ug/l	100	87	60-120				
2,6-Dinitrotoluene	88.3	10	3.2	ug/l	100	88	60-120				
Di-n-octyl phthalate	76.8	20	4.7	ug/l	100	77	60-130				
Fluoranthene	74.7	10	4.2	ug/l	100	75	55-120				
Fluorene	77.8	10	3.9	ug/l	100	78	60-120				
Hexachlorobenzene	78.5	10	4.8	ug/l	100	78	50-120				
Hexachlorobutadiene	61.6	10	4.2	ug/l	100	62	40-120				
Hexachlorocyclopentadiene	61.7	20	3.4	ug/l	100	62	15-120				
Hexachloroethane	60.2	10	4.2	ug/l	100	60	35-120				
Indeno(1,2,3-cd)pyrene	60.4	20	5.4	ug/l	100	60	40-130				
Isophorone	85.7	10	3.7	ug/l	100	86	50-120				
2-Methylnaphthalene	81.8	10	3.0	ug/l	100	82	50-120				
2-Methylphenol	80.7	10	3.7	ug/l	100	81	45-120				
4-Methylphenol	82.9	10	3.8	ug/l	100	83	45-120				
Naphthalene	77.0	10	4.5	ug/l	100	77	50-120				
2-Nitroaniline	85.2	20	3.9	ug/l	100	85	60-120				
3-Nitroaniline	80.5	20	4.5	ug/l	100	80	55-120				
4-Nitroaniline	76.9	20	4.9	ug/l	100	77	50-125				
Nitrobenzene	84.5	20	4.2	ug/l	100	84	50-120				
2-Nitrophenol	88.6	10	4.2	ug/l	100	89	55-120				
4-Nitrophenol	84.4	20	6.6	ug/l	100	84	45-120				
N-Nitrosodiphenylamine	74.2	10	4.0	ug/l	100	74	55-120				
N-Nitroso-di-n-propylamine	85.9	10	3.6	ug/l	100	86	45-120				
Pentachlorophenol	100	20	4.0	ug/l	100	100	50-120				
Phenanthrene	70.8	10	3.3	ug/l	100	71	55-120				
Phenol	72.3	10	4.0	ug/l	100	72	45-120				
Pyrene	94.4	10	3.9	ug/l	100	94	50-120				

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>LCS Analyzed: 01/24/2006 (6A22022-BS1)</b>											
1,2,4-Trichlorobenzene	73.7	10	4.4	ug/l	100		74	45-120			M-NR1
2,4,5-Trichlorophenol	97.5	20	3.6	ug/l	100		98	60-120			
2,4,6-Trichlorophenol	92.7	20	4.1	ug/l	100		93	60-120			
1,2-Diphenylhydrazine/Azobenzene	80.4	20	5.0	ug/l	100		80	60-120			
N-Nitrosodimethylamine	70.2	20	3.7	ug/l	100		70	40-120			
Surrogate: 2-Fluorophenol	120			ug/l	200		60	30-120			
Surrogate: Phenol-d6	142			ug/l	200		71	35-120			
Surrogate: 2,4,6-Tribromophenol	159			ug/l	200		80	45-120			
Surrogate: Nitrobenzene-d5	84.1			ug/l	100		84	45-120			
Surrogate: 2-Fluorobiphenyl	74.3			ug/l	100		74	45-120			
Surrogate: Terphenyl-d14	90.6			ug/l	100		91	45-120			
<b>LCS Dup Analyzed: 01/24/2006 (6A22022-BSD1)</b>											
Acenaphthene	82.8	10	4.3	ug/l	100		83	55-120	6	20	
Acenaphthylene	87.6	10	3.2	ug/l	100		88	55-120	7	20	
Aniline	74.1	10	2.9	ug/l	100		74	35-120	18	25	
Anthracene	77.6	10	3.2	ug/l	100		78	55-120	7	20	
Benzidine	52.6	20	5.2	ug/l	100		53	20-160	35	35	
Benzoic acid	91.2	20	2.6	ug/l	100		91	35-120	14	30	
Benzo(a)anthracene	81.6	10	3.7	ug/l	100		82	60-120	6	20	
Benzo(b)fluoranthene	82.8	10	2.7	ug/l	100		83	50-120	0	25	
Benzo(k)fluoranthene	90.5	10	3.4	ug/l	100		90	50-120	8	20	
Benzo(g,h,i)perylene	83.3	10	5.3	ug/l	100		83	40-125	22	25	
Benzo(a)pyrene	76.6	10	3.5	ug/l	100		77	55-120	4	25	
Benzyl alcohol	88.2	20	2.5	ug/l	100		88	45-120	4	20	
Bis(2-chloroethoxy)methane	89.7	10	3.9	ug/l	100		90	55-120	8	20	
Bis(2-chloroethyl)ether	74.0	10	4.4	ug/l	100		74	50-120	7	20	
Bis(2-chloroisopropyl)ether	83.8	10	4.6	ug/l	100		84	45-120	5	20	
Bis(2-ethylhexyl)phthalate	90.9	50	5.2	ug/l	100		91	60-130	1	20	
4-Bromophenyl phenyl ether	77.8	10	4.6	ug/l	100		78	50-120	2	25	
Butyl benzyl phthalate	84.1	20	3.5	ug/l	100		84	55-125	1	20	
4-Chloroaniline	88.2	10	6.0	ug/l	100		88	50-120	9	25	
2-Chloronaphthalene	79.7	10	4.0	ug/l	100		80	55-120	7	20	
4-Chloro-3-methylphenol	99.8	20	3.5	ug/l	100		100	60-120	1	25	
2-Chlorophenol	78.9	10	4.2	ug/l	100		79	45-120	10	25	
4-Chlorophenyl phenyl ether	86.1	10	3.0	ug/l	100		86	55-120	7	20	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
 Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>LCS Dup Analyzed: 01/24/2006 (6A22022-BSD1)</b>											
Chrysene	82.2	10	2.8	ug/l	100	82	60-120	8	20		
Dibenz(a,h)anthracene	76.0	20	4.7	ug/l	100	76	45-130	23	25		
Dibenzofuran	79.5	10	2.6	ug/l	100	80	60-120	4	20		
Di-n-butyl phthalate	73.6	20	2.8	ug/l	100	74	55-125	5	20		
1,3-Dichlorobenzene	63.6	10	4.1	ug/l	100	64	35-120	5	25		
1,4-Dichlorobenzene	64.4	10	3.9	ug/l	100	64	35-120	1	25		
1,2-Dichlorobenzene	66.4	10	4.5	ug/l	100	66	35-120	4	25		
3,3-Dichlorobenzidine	70.4	20	11	ug/l	100	70	45-130	28	25		R-7
2,4-Dichlorophenol	93.6	10	4.1	ug/l	100	94	55-120	1	20		
Diethyl phthalate	6.10	10	3.1	ug/l	100	6	55-120	84	20		L2, J
2,4-Dimethylphenol	80.7	20	4.4	ug/l	100	81	30-120	3	25		
Dimethyl phthalate	3.64	10	3.6	ug/l	100	4	30-120	43	20		L2, J
4,6-Dinitro-2-methylphenol	93.5	20	5.1	ug/l	100	94	50-120	3	25		
2,4-Dinitrophenol	103	20	5.3	ug/l	100	103	40-120	0	25		
2,4-Dinitrotoluene	90.4	10	4.2	ug/l	100	90	60-120	3	20		
2,6-Dinitrotoluene	91.8	10	3.2	ug/l	100	92	60-120	4	20		
Di-n-octyl phthalate	79.1	20	4.7	ug/l	100	79	60-130	3	20		
Fluoranthene	78.6	10	4.2	ug/l	100	79	55-120	5	20		
Fluorene	82.9	10	3.9	ug/l	100	83	60-120	6	20		
Hexachlorobenzene	82.3	10	4.8	ug/l	100	82	50-120	5	20		
Hexachlorobutadiene	54.2	10	4.2	ug/l	100	54	40-120	13	25		
Hexachlorocyclopentadiene	64.4	20	3.4	ug/l	100	64	15-120	4	30		
Hexachloroethane	56.4	10	4.2	ug/l	100	56	35-120	7	25		
Indeno(1,2,3-cd)pyrene	72.2	20	5.4	ug/l	100	72	40-130	18	25		
Isophorone	89.5	10	3.7	ug/l	100	90	50-120	4	20		
2-Methylnaphthalene	84.0	10	3.0	ug/l	100	84	50-120	3	20		
2-Methylphenol	85.1	10	3.7	ug/l	100	85	45-120	5	20		
4-Methylphenol	85.4	10	3.8	ug/l	100	85	45-120	3	20		
Naphthalene	80.2	10	4.5	ug/l	100	80	50-120	4	20		
2-Nitroaniline	88.0	20	3.9	ug/l	100	88	60-120	3	20		
3-Nitroaniline	86.1	20	4.5	ug/l	100	86	55-120	7	25		
4-Nitroaniline	81.9	20	4.9	ug/l	100	82	50-125	6	20		
Nitrobenzene	88.7	20	4.2	ug/l	100	89	50-120	5	25		
2-Nitrophenol	90.8	10	4.2	ug/l	100	91	55-120	2	25		
4-Nitrophenol	88.7	20	6.6	ug/l	100	89	45-120	5	25		

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22022 Extracted: 01/22/06</b>											
<b>LCS Dup Analyzed: 01/24/2006 (6A22022-BSD1)</b>											
N-Nitrosodiphenylamine	77.5	10	4.0	ug/l	100	78	55-120	4	20		
N-Nitroso-di-n-propylamine	87.1	10	3.6	ug/l	100	87	45-120	1	20		
Pentachlorophenol	100	20	4.0	ug/l	100	100	50-120	0	25		
Phenanthrene	75.7	10	3.3	ug/l	100	76	55-120	7	20		
Phenol	79.1	10	4.0	ug/l	100	79	45-120	9	25		
Pyrene	90.6	10	3.9	ug/l	100	91	50-120	4	25		
1,2,4-Trichlorobenzene	75.6	10	4.4	ug/l	100	76	45-120	3	20		
2,4,5-Trichlorophenol	97.0	20	3.6	ug/l	100	97	60-120	1	20		
2,4,6-Trichlorophenol	95.7	20	4.1	ug/l	100	96	60-120	3	20		
1,2-Diphenylhydrazine/Azobenzene	82.9	20	5.0	ug/l	100	83	60-120	3	25		
N-Nitrosodimethylamine	75.5	20	3.7	ug/l	100	76	40-120	7	20		
Surrogate: 2-Fluorophenol	130			ug/l	200	65	30-120				
Surrogate: Phenol-d6	152			ug/l	200	76	35-120				
Surrogate: 2,4,6-Tribromophenol	150			ug/l	200	75	45-120				
Surrogate: Nitrobenzene-d5	85.2			ug/l	100	85	45-120				
Surrogate: 2-Fluorobiphenyl	78.5			ug/l	100	78	45-120				
Surrogate: Terphenyl-d14	87.0			ug/l	100	87	45-120				

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual  
Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
---------	--------	-----------------	-----	-------	-------------	---------------	-----------	---------	-----------	-----------------

Batch: 6A22021 Extracted: 01/22/06

Blank Analyzed: 01/23/2006 (6A22021-BLK1)

Aldrin	ND	0.10	0.030	ug/l						
alpha-BHC	ND	0.10	0.020	ug/l						
beta-BHC	ND	0.10	0.015	ug/l						
delta-BHC	ND	0.20	0.020	ug/l						
gamma-BHC (Lindane)	ND	0.10	0.020	ug/l						
Chlordane	ND	1.0	0.20	ug/l						
4,4'-DDD	ND	0.10	0.020	ug/l						
4,4'-DDE	ND	0.10	0.025	ug/l						
4,4'-DDT	ND	0.10	0.035	ug/l						
Dieldrin	ND	0.10	0.015	ug/l						
Endosulfan I	ND	0.10	0.015	ug/l						
Endosulfan II	ND	0.10	0.040	ug/l						
Endosulfan sulfate	ND	0.20	0.020	ug/l						
Endrin	ND	0.10	0.020	ug/l						
Endrin aldehyde	ND	0.10	0.045	ug/l						
Endrin ketone	ND	0.10	0.020	ug/l						
Heptachlor	ND	0.10	0.030	ug/l						
Heptachlor epoxide	ND	0.10	0.030	ug/l						
Methoxychlor	ND	0.10	0.035	ug/l						
Toxaphene	ND	5.0	1.5	ug/l						
Surrogate: Tetrachloro-m-xylene	0.430			ug/l	0.500		86		35-115	
Surrogate: Decachlorobiphenyl	0.504			ug/l	0.500		101		45-120	

LCS Analyzed: 01/23/2006 (6A22021-BS1)

M-NR1

Aldrin	0.449	0.10	0.030	ug/l	0.500		90		35-120	
alpha-BHC	0.481	0.10	0.020	ug/l	0.500		96		45-120	
beta-BHC	0.469	0.10	0.015	ug/l	0.500		94		50-120	
delta-BHC	0.497	0.20	0.020	ug/l	0.500		99		50-120	
gamma-BHC (Lindane)	0.482	0.10	0.020	ug/l	0.500		96		40-120	
4,4'-DDD	0.482	0.10	0.020	ug/l	0.500		96		55-120	
4,4'-DDE	0.495	0.10	0.025	ug/l	0.500		99		50-120	
4,4'-DDT	0.540	0.10	0.035	ug/l	0.500		108		55-120	
Dieldrin	0.491	0.10	0.015	ug/l	0.500		98		50-120	
Endosulfan I	0.471	0.10	0.015	ug/l	0.500		94		50-120	
Endosulfan II	0.481	0.10	0.040	ug/l	0.500		96		55-120	
Endosulfan sulfate	0.504	0.20	0.020	ug/l	0.500		101		60-120	

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager





MWH-Pasadena/Boeing Project ID: Alfa Outfall 012 - Annual  
300 North Lake Avenue, Suite 1200 Report Number: IPA1345  
Pasadena, CA 91101 Sampled: 01/17/06  
Attention: Bronwyn Kelly Received: 01/17/06

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Table with columns: Analyte, Result, Reporting Limit, MDL, Units, Spike Level, Source Result, %REC, Limits, RPD, RPD Limit, Data Qualifiers. Includes sections for LCS Analyzed (01/23/2006) and LCS Dup Analyzed (01/23/2006).

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**METHOD BLANK/QC DATA**

**TOTAL PCBS (EPA 608)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A22021 Extracted: 01/22/06</b>										
<b>Blank Analyzed: 01/23/2006 (6A22021-BLK1)</b>										
Aroclor 1016	ND	1.0	0.20	ug/l						
Aroclor 1221	ND	1.0	0.10	ug/l						
Aroclor 1232	ND	1.0	0.25	ug/l						
Aroclor 1242	ND	1.0	0.25	ug/l						
Aroclor 1248	ND	1.0	0.25	ug/l						
Aroclor 1254	ND	1.0	0.25	ug/l						
Aroclor 1260	ND	1.0	0.40	ug/l						
Surrogate: Decachlorobiphenyl	0.487			ug/l	0.500		97	45-120		
<b>LCS Analyzed: 01/23/2006 (6A22021-BS2)</b>										
Aroclor 1016	3.83	1.0	0.20	ug/l	4.00		96	45-115		M-NR1
Aroclor 1260	3.92	1.0	0.40	ug/l	4.00		98	55-115		
Surrogate: Decachlorobiphenyl	0.469			ug/l	0.500		94	45-120		
<b>LCS Dup Analyzed: 01/23/2006 (6A22021-BSD2)</b>										
Aroclor 1016	3.71	1.0	0.20	ug/l	4.00		93	45-115	3	30
Aroclor 1260	3.91	1.0	0.40	ug/l	4.00		98	55-115	0	25
Surrogate: Decachlorobiphenyl	0.457			ug/l	0.500		91	45-120		

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**METHOD BLANK/QC DATA**

**METALS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18048 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18048-BLK1)</b>											
Mercury	ND	0.00020	0.000050	mg/l							
<b>LCS Analyzed: 01/18/2006 (6A18048-BS1)</b>											
Mercury	0.00811	0.00020	0.000050	mg/l	0.00800		101	85-115			
<b>Matrix Spike Analyzed: 01/18/2006 (6A18048-MS1)</b>											
						<b>Source: IPA1341-12</b>					
Mercury	0.00816	0.00020	0.000050	mg/l	0.00800	ND	102	70-130			
<b>Matrix Spike Dup Analyzed: 01/18/2006 (6A18048-MSD1)</b>											
						<b>Source: IPA1341-12</b>					
Mercury	0.00816	0.00020	0.000050	mg/l	0.00800	ND	102	70-130	0	20	
<b>Batch: 6A18053 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/19/2006 (6A18053-BLK1)</b>											
Antimony	ND	0.010	0.0060	mg/l							
Arsenic	ND	0.0050	0.0044	mg/l							
Beryllium	ND	0.0020	0.00090	mg/l							
Cadmium	ND	0.0050	0.0020	mg/l							
Chromium	ND	0.0050	0.0020	mg/l							
Copper	ND	0.010	0.0020	mg/l							
Lead	ND	0.0050	0.0030	mg/l							
Nickel	ND	0.010	0.0020	mg/l							
Selenium	ND	0.010	0.0080	mg/l							
Silver	ND	0.010	0.0030	mg/l							
Thallium	ND	0.010	0.0070	mg/l							
Zinc	ND	0.020	0.015	mg/l							

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
---------	--------	-----------------	-----	-------	-------------	---------------	-----------	-------	-----	-----------	-----------------

**Batch: 6A18053 Extracted: 01/18/06**

**LCS Analyzed: 01/19/2006 (6A18053-BS1)**

Antimony	0.476	0.010	0.0060	mg/l	0.500		95	85-115			
Arsenic	0.454	0.0050	0.0044	mg/l	0.500		91	85-115			
Beryllium	0.463	0.0020	0.00090	mg/l	0.500		93	85-115			
Cadmium	0.482	0.0050	0.0020	mg/l	0.500		96	85-115			
Chromium	0.468	0.0050	0.0020	mg/l	0.500		94	85-115			
Copper	0.506	0.010	0.0020	mg/l	0.500		101	85-115			
Lead	0.450	0.0050	0.0030	mg/l	0.500		90	85-115			
Nickel	0.450	0.010	0.0020	mg/l	0.500		90	85-115			
Selenium	0.451	0.010	0.0080	mg/l	0.500		90	85-115			
Silver	0.271	0.010	0.0030	mg/l	0.250		108	85-115			
Thallium	0.502	0.010	0.0070	mg/l	0.500		100	85-115			
Zinc	0.449	0.020	0.015	mg/l	0.500		90	85-115			

**Matrix Spike Analyzed: 01/19/2006 (6A18053-MS1)**

**Source: IPA1278-02**

Antimony	0.489	0.010	0.0060	mg/l	0.500	ND	98	70-130			
Arsenic	0.476	0.0050	0.0044	mg/l	0.500	0.0081	94	70-130			
Beryllium	0.469	0.0020	0.00090	mg/l	0.500	ND	94	70-130			
Cadmium	0.470	0.0050	0.0020	mg/l	0.500	ND	94	70-130			
Chromium	0.475	0.0050	0.0020	mg/l	0.500	0.0082	93	70-130			
Copper	0.529	0.010	0.0020	mg/l	0.500	0.0036	105	70-130			
Lead	0.446	0.0050	0.0030	mg/l	0.500	ND	89	70-130			
Nickel	0.449	0.010	0.0020	mg/l	0.500	0.0024	89	70-130			
Selenium	0.448	0.010	0.0080	mg/l	0.500	ND	90	70-130			
Silver	0.271	0.010	0.0030	mg/l	0.250	ND	108	70-130			
Thallium	0.495	0.010	0.0070	mg/l	0.500	0.013	96	70-130			
Zinc	0.544	0.020	0.015	mg/l	0.500	0.092	90	70-130			

**Matrix Spike Dup Analyzed: 01/19/2006 (6A18053-MSD1)**

**Source: IPA1278-02**

Antimony	0.490	0.010	0.0060	mg/l	0.500	ND	98	70-130	0	20	
Arsenic	0.473	0.0050	0.0044	mg/l	0.500	0.0081	93	70-130	1	20	
Beryllium	0.474	0.0020	0.00090	mg/l	0.500	ND	95	70-130	1	20	
Cadmium	0.471	0.0050	0.0020	mg/l	0.500	ND	94	70-130	0	20	
Chromium	0.473	0.0050	0.0020	mg/l	0.500	0.0082	93	70-130	0	20	
Copper	0.530	0.010	0.0020	mg/l	0.500	0.0036	105	70-130	0	20	
Lead	0.444	0.0050	0.0030	mg/l	0.500	ND	89	70-130	0	20	
Nickel	0.445	0.010	0.0020	mg/l	0.500	0.0024	89	70-130	1	20	

**Del Mar Analytical, Irvine**  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18053 Extracted: 01/18/06</b>											
<b>Matrix Spike Dup Analyzed: 01/19/2006 (6A18053-MSD1)</b>						<b>Source: IPA1278-02</b>					
Selenium	0.453	0.010	0.0080	mg/l	0.500	ND	91	70-130	1	20	
Silver	0.271	0.010	0.0030	mg/l	0.250	ND	108	70-130	0	20	
Thallium	0.490	0.010	0.0070	mg/l	0.500	0.013	95	70-130	1	20	
Zinc	0.541	0.020	0.015	mg/l	0.500	0.092	90	70-130	1	20	

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18043 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/23/2006 (6A18043-BLK1)</b>											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
<b>LCS Analyzed: 01/23/2006 (6A18043-BS1)</b>											
Biochemical Oxygen Demand	219	100	30	mg/l	198		111	85-115			
<b>LCS Dup Analyzed: 01/23/2006 (6A18043-BSD1)</b>											
Biochemical Oxygen Demand	222	100	30	mg/l	198		112	85-115	1	20	
<b>Batch: 6A18057 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18057-BLK1)</b>											
Perchlorate	ND	4.0	0.80	ug/l							
<b>LCS Analyzed: 01/18/2006 (6A18057-BS1)</b>											
Perchlorate	56.1	4.0	0.80	ug/l	50.0		112	85-115			
<b>Matrix Spike Analyzed: 01/18/2006 (6A18057-MS1)</b>											
Perchlorate	54.9	4.0	0.80	ug/l	50.0	2.4	105	80-120			
						<b>Source: IPA1093-04</b>					
<b>Matrix Spike Dup Analyzed: 01/18/2006 (6A18057-MSD1)</b>											
Perchlorate	55.1	4.0	0.80	ug/l	50.0	2.4	105	80-120	0	20	
<b>Batch: 6A18109 Extracted: 01/18/06</b>											
<b>Blank Analyzed: 01/18/2006 (6A18109-BLK1)</b>											
Turbidity	ND	1.0	0.040	NTU							

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 DeRian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A18109 Extracted: 01/18/06</b>											
<b>Duplicate Analyzed: 01/18/2006 (6A18109-DUP1)</b>											
Turbidity	29.2	1.0	0.040	NTU		30			3	20	
<b>Batch: 6A19047 Extracted: 01/19/06</b>											
<b>Blank Analyzed: 01/19/2006 (6A19047-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							
<b>LCS Analyzed: 01/19/2006 (6A19047-BS1)</b>											
Oil & Grease	17.1	5.0	0.94	mg/l	20.0		86	65-120			M-NRI
<b>LCS Dup Analyzed: 01/19/2006 (6A19047-BSD1)</b>											
Oil & Grease	17.7	5.0	0.94	mg/l	20.0		88	65-120	3	20	
<b>Batch: 6A19101 Extracted: 01/19/06</b>											
<b>Blank Analyzed: 01/19/2006 (6A19101-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/19/2006 (6A19101-BS1)</b>											
Total Suspended Solids	932	10	10	mg/l	1000		93	85-115			
<b>Duplicate Analyzed: 01/19/2006 (6A19101-DUP1)</b>											
Total Suspended Solids	60.0	10	10	mg/l		61			2	10	
<b>Batch: 6A20090 Extracted: 01/20/06</b>											
<b>Blank Analyzed: 01/20/2006 (6A20090-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A20090 Extracted: 01/20/06</b>											
<b>LCS Analyzed: 01/20/2006 (6A20090-BS1)</b>											
Total Dissolved Solids	1010	10	10	mg/l	1000		101	90-110			
<b>Duplicate Analyzed: 01/23/2006 (6A20090-DUP1)</b>											
Total Dissolved Solids	731	10	10	mg/l		Source: IPA1308-04 740			1	10	
<b>Batch: 6A20097 Extracted: 01/20/06</b>											
<b>Blank Analyzed: 01/20/2006 (6A20097-BLK1)</b>											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
<b>LCS Analyzed: 01/20/2006 (6A20097-BS1)</b>											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0		115	80-115			
<b>Matrix Spike Analyzed: 01/20/2006 (6A20097-MS1)</b>											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	Source: IPA1193-01 0.56	109	70-120			
<b>Matrix Spike Dup Analyzed: 01/20/2006 (6A20097-MSD1)</b>											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	Source: IPA1193-01 0.56	109	70-120	0	15	
<b>Batch: 6A23128 Extracted: 01/23/06</b>											
<b>Blank Analyzed: 01/24/2006 (6A23128-BLK1)</b>											
Total Cyanide	ND	0.0050	0.0022	mg/l							
<b>LCS Analyzed: 01/24/2006 (6A23128-BS1)</b>											
Total Cyanide	0.184	0.0050	0.0022	mg/l	0.200		92	90-110			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooiey Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A23128 Extracted: 01/23/06</b>											
<b>Matrix Spike Analyzed: 01/24/2006 (6A23128-MS1)</b>						<b>Source: IPA1364-02</b>					
Total Cyanide	0.185	0.0050	0.0022	mg/l	0.200	0.012	86	70-115			
<b>Matrix Spike Dup Analyzed: 01/24/2006 (6A23128-MSD1)</b>						<b>Source: IPA1364-02</b>					
Total Cyanide	0.205	0.0050	0.0022	mg/l	0.200	0.012	96	70-115	10	15	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

METHOD BLANK/QC DATA

1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: P6A2418 Extracted: 01/24/06</b>											
<b>Blank Analyzed: 01/24/2006 (P6A2418-BLK1)</b>											
1,4-Dioxane	ND	1.0	0.49	ug/l							
Surrogate: Dibromofluoromethane	0.920			ug/l	1.00		92	70-130			
<b>LCS Analyzed: 01/24/2006 (P6A2418-BS1)</b>											
1,4-Dioxane	11.3	1.0	0.49	ug/l	10.0		113	70-130			
Surrogate: Dibromofluoromethane	0.860			ug/l	1.00		86	70-130			
<b>LCS Dup Analyzed: 01/24/2006 (P6A2418-BSD1)</b>											
1,4-Dioxane	9.65	1.0	0.49	ug/l	10.0		96	70-130	16	20	
Surrogate: Dibromofluoromethane	0.900			ug/l	1.00		90	70-130			
<b>Matrix Spike Analyzed: 01/24/2006 (P6A2418-MS1)</b>											
						<b>Source: PPA0612-01</b>					
1,4-Dioxane	12.5	1.0	0.49	ug/l	10.0	0.77	117	65-125			
Surrogate: Dibromofluoromethane	0.880			ug/l	1.00		88	70-130			
<b>Matrix Spike Dup Analyzed: 01/24/2006 (P6A2418-MSD1)</b>											
						<b>Source: PPA0612-01</b>					
1,4-Dioxane	11.8	1.0	0.49	ug/l	10.0	0.77	110	65-125	6	20	
Surrogate: Dibromofluoromethane	0.880			ug/l	1.00		88	70-130			

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06**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.
- L2** Laboratory Control Sample recovery was below method control limits.
- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-NR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- R-7** LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
- ZX** Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

**ADDITIONAL COMMENTS****For 1,2-Diphenylhydrazine:**

The result for 1,2-Diphenylhydrazine is based upon the reading of its breakdown product, Azobenzene.

**For GRO (C4-C12):**

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

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

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

**Del Mar Analytical, Irvine**  
Michele Chamberlin  
Project Manager



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 200.7	Water	X	X
EPA 245.1	Water	X	X
EPA 314.0	Water	N/A	X
EPA 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 418.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8015B	Water	X	X
EPA 8260B	Water	X	X
Level 4	Water		
SM2540C	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at [www.dmalabs.com](http://www.dmalabs.com).

Subcontracted Laboratories

**Alta Analytical** NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR

Samples: IPA1345-01

Analysis Performed: Level 4 + EDD

Samples: IPA1345-01

**Del Mar Analytical - Phoenix** NELAC Cert #01109CA, California Cert #2446, Arizona Cert #AZ0426, Nevada Cert #AZ-907

9830 S. 51st Street, Suite B-120 - Phoenix, AZ 85044

Method Performed: EPA 8260B

Samples: IPA1345-01

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4867 Fax (909) 370-1046  
 9484 Chosapaoka Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9696 Fax (619) 505-9689  
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

## SUBCONTRACT ORDER - PROJECT # IPA1345

**SENDING LABORATORY:**  
 Del Mar Analytical, Irvine  
 17461 Derian Avenue, Suite 100  
 Irvine, CA 92614  
 Phone: (949) 261-1022  
 Fax: (949) 261-1228  
 Project Manager: Michele Chamberlin

**RECEIVING LABORATORY:**  
 Del Mar Analytical - Phoenix  
 9830 S. 51st Street, Suite B-120  
 Phoenix, AZ 85044  
 Phone : (480) 785-0043  
 Fax: (480) 785-0851

Analysis	Expiration	Due	Comments
<b>Sample ID: IPA1345-01 Water</b> Dioxane-8260B-out Level 4 Data Package - Phoenix	01/31/06 13:06 02/14/06 13:06	01/31/06 12:00 01/31/06 12:00	Boeing, TAT= 17 days from receipt at Phoenix  <div style="font-size: 2em; text-align: center; margin-top: 20px;">P PAD802-1</div>
<b>Containers Supplied:</b> 40 ml VOA w/HCL (IPA1345-01H) 40 ml VOA w/HCL (IPA1345-01I) 40 ml VOA w/HCL (IPA1345-01J)			

**SAMPLE INTEGRITY:**

All containers intact:  Yes  No  
 Sample labels/COC agree:  Yes  No  
 Samples Received On Ice:  Yes  No  
 Custody Seals Present:  Yes  No  
 Samples Preserved Properly:  Yes  No  
 Samples Received at (temp): 1.6°C

Released By: [Signature] Date: 1-18-06 Time: 1700  
 Received By: [Signature] Date: 01/19/06 Time: \_\_\_\_\_  
 Released By: [Signature] Date: 01/19/06 Time: 09:40  
 Received By: [Signature] Date: 01/19/06 Time: 09:40

CHAIN OF CUSTODY FORM

IPAB345 Page 1 of 2

<b>Client Name/Address:</b> MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Project Manager: Bronwyn Kelly Sampler: <i>Kathy Barrows</i> <i>Black Storage</i>		<b>Project:</b> Boeing-SSFL NPDES Annual Test - Outfall 012 Alfa Test Stand Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		<b>ANALYSIS REQUIRED</b>												Field readings: Temp = 62.1 ° pH = 7.54 Comments Time: 1917 11/17/06 PH For 608 = 6			
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (EPA 413.1)	8015-gas	8015-diesel/jet fuel	TRPH, Total Rec. Petroleum Hydrocarbons (EPA 418.1)	624 (EDB, 1,2,3-TCP, MTBE, DPE, TBA) + PP list	BOD5(20 degrees C) list	625 Naphthalene + PP + NDMA analysis + PP list	Ammonia-N, Titr. (350.2)	W/ dist	Perchlorate	Turbidity, TDS, TSS	Settleable Solids	
Outfall 012	W	1L Amber	1	11/17/06 12:06	HCl	1A	X												
Outfall 012 duplicate	W	1L Amber	1		HCl	1B	X												
Outfall 012	W	VOAs	1		HCl	2A		X											
Outfall 012 duplicate	W	VOAs	2		HCl	2B, 2C		X											
Outfall 012	W	1L Amber	1		None	3A			X										
Outfall 012 duplicate	W	1L Amber	1		None	3B		X											
Outfall 012	W	VOAs	1		HCl	4A			X										
Outfall 012 duplicate	W	VOAs	2		HCl	4B, 4C		X											
Outfall 012	W	1L Amber	1		HCl	5A			X										
Outfall 012 duplicate	W	1L Amber	1		HCl	5B			X										
Outfall 012	W	VOAs	1		HCl	6A				X									
Outfall 012 duplicate	W	VOAs	2		HCl	6B, 6C				X									
Outfall 012	W	1L Poly	1		None	7A					X								
Outfall 012	W	1L Amber	1		None	8A							X						
Outfall 012 duplicate	W	1L Amber	1		None	8B							X						
Outfall 012	W	500ml Poly	1		H2SO4	9A								X					
Outfall 012	W	1L Poly	1		None	10A									X				
Outfall 012	W	1L Poly	1	11/17/06 12:06	None	11A										X			
Trip Blank	W	VOAs	3		HCl	12A, 12B, 12C		X			X								
Relinquished By <i>Rip</i>	Date/Time: 11/17/06 1550			Received By <i>BD</i>												Date/Time: 11/17/06 1550			
Relinquished By <i>BD</i>	Date/Time: 11/17/06 1815			Received By <i>BD</i>												Date/Time: 11/17/06 1815			
Relinquished By <i>BD</i>	Date/Time: 11/17/06 1815			Received By <i>BD</i>												Date/Time: 11/17/06 1815			
Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ Sample Integrity: (Check) Intact <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>																			

Client Name/Address: <b>MWH-Pasadena</b> 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project: <b>Boeing-SSFL NPDES</b> <b>Annual Test - Outfall 012</b> Alfa Test Stand		ANALYSIS REQUIRED										
Project Manager: <b>Bronwyn Kelly</b>		Phone Number: <b>(626) 588-8891</b>		Cyanide	Pesticides/PCBs - TP	TCDD	VOCS 624 +A+A+2CVF							Comments
Sampler: <b>Rubin Barrios</b> <b>Creek Dam</b>		Fax Number: <b>(626) 588-6515</b>		FP Metals										
Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Sampling Date/Time								
Outfall 012	W	1L Poly	2	HNO3	13A, 13B	1-17-06 13:06	X							
Outfall 012	W	500ml Poly	1	NaOH	14		X							
Outfall 012	W	1L Amber	2	None	15A, 15B			X						
Outfall 012	W	1L Amber	2	None	16A, 16B				X					
Outfall 012	W	VOAs	3	None	17A, 17B, 17C	1-17-06 13:06				X				
Trip Blank	W	VOAs	3	None	18A, 18B, 18C					X				
Relinquished By <i>Kelly Kelly</i>	Date/Time: 1-17-06 550	Received By <i>B.D. Beaulieu</i>	Date/Time: 1/17/06 1550	Turn around Time: (check) 24 Hours _____ 5 Days _____										
Relinquished By <i>B.D. Beaulieu</i>	Date/Time: 1/17/06 185	Received By <i>Janet</i>	Date/Time: 1/17/06 1815	48 Hours _____ 10 Days _____										
Relinquished By	Date/Time:	Received By	Date/Time:	72 Hours _____ Normal _____										
				Sample Integrity: (Check) Intact _____ On Ice: <u>5</u>										

CHAIN OF CUSTODY FORM

Client Name/Address:		Project:		ANALYSIS REQUIRED												Field readings:	
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Annual Test - Outfall 012 Alfa Test Stand		BOD5(20 degrees C) list 624 (EDB, 1,2,3-TCF, MTBE, DPE, TBA) + PP list 625 Naphthalene + PP Ammonia-N, Titr. (350.2) w/ dist Perchlorate Turbidity, TDS, TSS Settleable Solids												Temp = 62.1 ° pH = 7.54	
Project Manager: Bronwyn Kelly		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515														Comments	
Sampler: <i>Kathy Barnes</i>																Time: 1917 11/17/06 PA For 608 = 6	
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (EPA 413.1)	8015-gas	8015-diesel/jet fuel	TRPH = Total Rec (EPA 418.1)	624 (EDB, 1,2,3-TCF, MTBE, DPE, TBA) + PP list	BOD5(20 degrees C) list	625 Naphthalene + PP	Ammonia-N, Titr. (350.2) w/ dist	Perchlorate	Turbidity, TDS, TSS	Settleable Solids
Outfall 012	W	1L Amber	1	11/17/06 15:00	HCl	1A	X										
Outfall 012 duplicate	W	1L Amber	1		HCl	1B	X										
Outfall 012	W	VOAs	1		HCl	2A											
Outfall 012 duplicate	W	VOAs	2		HCl	2B, 2C											
Outfall 012	W	1L Amber	1		None	3A		X									
Outfall 012 duplicate	W	1L Amber	1		None	3B		X									
Outfall 012	W	VOAs	1		HCl	4A			X								
Outfall 012 duplicate	W	VOAs	2		HCl	4B, 4C		X									
Outfall 012	W	1L Amber	1		HCl	5A				X							
Outfall 012 duplicate	W	1L Amber	1		HCl	5B			X								
Outfall 012	W	VOAs	1		HCl	6A				X							
Outfall 012 duplicate	W	VOAs	2		HCl	6B, 6C				X							
Outfall 012	W	1L Poly	1		None	7A					X						
Outfall 012	W	1L Amber	1		None	8A						X					
Outfall 012 duplicate	W	1L Amber	1		None	8B							X				
Outfall 012	W	500ml Poly	1		H2SO4	9A								X			
Outfall 012	W	1L Poly	1		None	10A									X		
Outfall 012	W	1L Poly	1	11/17/06 12:00	None	11A											
Trip Blank	W	VOAs	3		HCl	12A, 12B, 12C		X									

Relinquished By: <i>Rip Kelly</i>	Date/Time: 11/17/06 15:50	Received By: <i>Rip Kelly</i>	Date/Time: 11/17/06 15:50
Relinquished By: <i>Rip Kelly</i>	Date/Time: 11/17/06 18:15	Received By: <i>Rip Kelly</i>	Date/Time: 11/17/06 18:15
Relinquished By: <i>Rip Kelly</i>	Date/Time: 11/17/06 18:15	Received By: <i>Rip Kelly</i>	Date/Time: 11/17/06 18:15



Client Name/Address: <b>MWH-Pasadena</b> 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project: <b>Boeing-SSFL NPDES</b> <b>Annual Test -- Outfall 012</b> Alfa Test Stand		ANALYSIS REQUIRED												
Project Manager: <b>Bronwyn Kelly</b>		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Cyanide	Pesticides/PCBs - PP	TCDD	VOCs 624 + A+A+2CVE									Comments
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	PP Metals	Cyanide	Pesticides/PCBs - PP	TCDD	VOCs 624 + A+A+2CVE					Comments
Outfall 012	W	1L Poly	2	1-17-06 13:06	HNO3	13A, 13B	X									
Outfall 012	W	500ml Poly	1		NaOH	14		X								
Outfall 012	W	1L Amber	2		None	15A, 15B			X							
Outfall 012	W	1L Amber	2		None	16A, 16B				X						
Outfall 012	W	VOAs	3	1-17-06 13:06	None	17A, 17B, 17C					X					
Trip Blank	W	VOAs	3		None	18A, 18B, 18C					X					
Relinquished By	Date/Time:		Received By		Date/Time:						Turn around Time: (check)					
<i>Fair Boy</i>	1-17-06 1550		<i>B.D. Pearce</i>		1/17/06 1550						24 Hours _____ 5 Days _____					
Relinquished By	Date/Time:		Received By		Date/Time:						48 Hours _____ 10 Days _____					
<i>B.D. Pearce</i>	1/17/06 1815		<i>Bronwyn Kelly</i>		1/17/06 1815						72 Hours _____ Normal _____					
Relinquished By	Date/Time:		Received By		Date/Time:						Sample Integrity: (Check) On Ice: <u>5</u>					
<i>Bronwyn Kelly</i>			<i>Bronwyn Kelly</i>								Intact _____					



26, 2006

Project I.D.: 27218

Hele Chamberlin  
Analytical, Irvine  
Meridian Avenue, Suite 100  
CA 92614

Hele Chamberlin,

Here are the results for the one aqueous sample received at Alta Analytical Laboratory on January 11, 2006 under your Project Name "IPA1345". This sample was extracted and analyzed using EPA Method 1631 for tetra- to octa-chlorinated dioxins and furans. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Chain-of-Custody (Section III), which contains the chain-of-custody, a list of data qualifiers and abbreviations, Alta's current analytical methods, and copies of the raw data (if requested).

Alta Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-933-1640 or by email at [mmaier@altalab.com](mailto:mmaier@altalab.com). Thank you for choosing Alta as part of your analytical support team.

Sincerely,

M. Maier  
of HRMS Services



Alta Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAC for those applicable test methods. This report should not be reproduced except in full without the written approval of ALTA.



**Alta Analytical Laboratory Inc.**

1104 Windfield Way  
El Dorado Hills, CA 95762

FAX (916) 673-0106  
(916) 933-1640

Page 1 of 237

NPDES - 1190

**Section I: Sample Inventory Report**

**Date Received: 1/19/2006**

**Alta Lab. ID**

**Client Sample ID**

27218-001

IPA1345-01

## SECTION II

Method Blank		EPA Method 1613						
Matrix:	Aqueous	QC Batch No.:	7686	Lab Sample:	0-MB001			
Sample Size:	1.00 L	Date Extracted:	22-Jan-06	Date Analyzed DB-5:	24-Jan-06			
				Date Analyzed DB-225:	NA			
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000125			13C-2,3,7,8-TCDD	64.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000167			13C-1,2,3,7,8-PeCDD	64.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000336			13C-1,2,3,4,7,8-HxCDD	59.5	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000330			13C-1,2,3,6,7,8-HxCDD	61.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000322			13C-1,2,3,4,6,7,8-HpCDD	58.2	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000569			J	13C-OCDD	33.9	17 - 157	
OCDD	0.0000474			J	13C-2,3,7,8-TCDF	66.4	24 - 169	
2,3,7,8-TCDF	ND	0.00000106			13C-1,2,3,7,8-PeCDF	70.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000139			13C-2,3,4,7,8-PeCDF	73.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000121			13C-1,2,3,4,7,8-HxCDF	59.7	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000123			13C-1,2,3,6,7,8-HxCDF	57.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000114			13C-2,3,4,6,7,8-HxCDF	61.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000120			13C-1,2,3,7,8,9-HxCDF	62.2	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000176			13C-1,2,3,4,6,7,8-HpCDF	53.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000230			13C-1,2,3,4,7,8,9-HpCDF	57.4	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000246			13C-OCDF	38.9	17 - 157	
OCDF	ND	0.00000535			CRS 37Cl-2,3,7,8-TCDD	83.3	35 - 197	
<b>Totals</b>								
Total TCDD	ND	0.00000125						
Total PeCDD	ND	0.00000167						
Total HxCDD	ND	0.00000329						
Total HpCDD	0.00000569							
Total TCDF	ND	0.00000106						
Total PeCDF	ND	0.00000130						
Total HxCDF	ND	0.00000132						
Total HpCDF	ND	0.00000238						
<b>Footnotes</b>								
a. Sample specific estimated detection limit.								
b. Estimated maximum possible concentration.								
c. Method detection limit.								
d. Lower control limit - upper control limit.								

Analyst: DMS

Approved By: Martha M. Maier 26-Jan-2006 08:30

OPR Results							EPA Method 1613		
Matrix:	Aqueous	QC Batch No.:	7686	Lab Sample:	0-OPR001	Date Analyzed DB-5:	24-Jan-06	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	22-Jan-06						
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL			
2,3,7,8-TCDD	10.0	10.4	6.7 - 15.8	<u>IS</u> 13C-2,3,7,8-TCDD	64.1	25 - 164			
1,2,3,7,8-PeCDD	50.0	56.0	35 - 71	13C-1,2,3,7,8-PeCDD	66.4	25 - 181			
1,2,3,4,7,8-HxCDD	50.0	54.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	61.4	32 - 141			
1,2,3,6,7,8-HxCDD	50.0	52.7	38 - 67	13C-1,2,3,6,7,8-HxCDD	62.8	28 - 130			
1,2,3,7,8,9-HxCDD	50.0	53.6	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	57.3	23 - 140			
1,2,3,4,6,7,8-HpCDD	50.0	53.5	35 - 70	13C-OCDD	36.7	17 - 157			
OCDD	100	109	78 - 144	13C-2,3,7,8-TCDF	66.8	24 - 169			
2,3,7,8-TCDF	10.0	10.8	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	69.9	24 - 185			
1,2,3,7,8-PeCDF	50.0	52.0	40 - 67	13C-2,3,4,7,8-PeCDF	74.6	21 - 178			
2,3,4,7,8-PeCDF	50.0	52.8	34 - 80	13C-1,2,3,4,7,8-HxCDF	60.7	26 - 152			
1,2,3,4,7,8-HxCDF	50.0	53.5	36 - 67	13C-1,2,3,6,7,8-HxCDF	60.4	26 - 123			
1,2,3,6,7,8-HxCDF	50.0	52.4	42 - 65	13C-2,3,4,6,7,8-HxCDF	64.7	28 - 136			
2,3,4,6,7,8-HxCDF	50.0	52.4	35 - 78	13C-1,2,3,7,8,9-HxCDF	62.5	29 - 147			
1,2,3,7,8,9-HxCDF	50.0	52.8	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	54.0	28 - 143			
1,2,3,4,6,7,8-HpCDF	50.0	51.9	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	58.8	26 - 138			
1,2,3,4,7,8,9-HpCDF	50.0	51.9	39 - 69	13C-OCDF	41.9	17 - 157			
OCDF	100	99.0	63 - 170	<u>CRS</u> 37Cl-2,3,7,8-TCDD	81.2	35 - 197			

Analyst: DMS

Approved By: Martha M. Maier 26-Jan-2006 08:30

**Sample ID: IPA1345-01**

**EPA Method 1613**

Client Data		Sample Data		Laboratory Data	
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27218-001
Project:	IPA1345	Sample Size:	0.998 L	QC Batch No.:	7686
Date Collected:	17-Jan-06			Date Analyzed DB-5:	24-Jan-06
Time Collected:	1306			Date Analyzed DB-225:	NA

Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UC <sup>L</sup> d	Qualifiers
2,3,7,8-TCDD	ND	0.00000100			13C-2,3,7,8-TCDD	82.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000168			13C-1,2,3,7,8-PeCDD	83.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000216			13C-1,2,3,4,7,8-HxCDD	79.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000220			13C-1,2,3,6,7,8-HxCDD	82.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000211			13C-1,2,3,4,6,7,8-HpCDD	82.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000182			J,B	13C-OCDD	51.4	17 - 157	
OCDD	0.000141			B	13C-2,3,7,8-TCDF	80.2	24 - 169	
2,3,7,8-TCDF	ND	0.00000110			13C-1,2,3,7,8-PeCDF	90.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000125			13C-2,3,4,7,8-PeCDF	89.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000124			13C-1,2,3,4,7,8-HxCDF	81.5	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000662			13C-1,2,3,6,7,8-HxCDF	81.3	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000611			13C-2,3,4,6,7,8-HxCDF	81.2	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000680			13C-1,2,3,7,8,9-HxCDF	80.6	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000963			13C-1,2,3,4,6,7,8-HpCDF	75.6	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000371			J	13C-1,2,3,4,7,8,9-HpCDF	80.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000758			13C-OCDF	58.4	17 - 157	
OCDF	0.00000758			J	CRS 37Cl-2,3,7,8-TCDD	97.8	35 - 197	

Totals		Footnotes	
Total TCDD	ND	0.00000100	a. Sample specific estimated detection limit.
Total PeCDD	ND	0.00000168	b. Estimated maximum possible concentration.
Total HxCDD	0.00000750		c. Method detection limit.
Total HpCDD	0.0000405		d. Lower control limit - upper control limit.
Total TCDF	0.00000230		
Total PeCDF	ND	0.00000124	
Total HxCDF	0.00000197		
Total HpCDF	0.00000105		

Analyst: DMS

Approved By: Martha M. Maier 26-Jan-2006 08:30

## APPENDIX



## DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
E	The reported value exceeds the calibration range of the instrument.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical interference
J	The amount detected is below the Lower Calibration Limit of the instrument.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated Detection Limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that corresponds to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

**CERTIFICATIONS**

<b>Accrediting Authority</b>	<b>Certificate Number</b>
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q



17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689  
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

## SUBCONTRACT ORDER - PROJECT # IPA1345

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Alta Analytical 1104 Windfield Way El Dorado Hills, CA 95762 Phone : (916) 933-1640 Fax: (916) 673-0106 <div style="text-align: right; font-size: 2em; margin-top: 10px;">27218</div> <div style="text-align: right; font-size: 1.5em; margin-top: 10px;">0.1°C</div>

Standard TAT is requested unless specific due date is requested => Due Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Analysis	Expiration	Comments
<b>Sample ID: IPA1345-01 Water      Sampled: 01/17/06 13:06</b>		
1613-Dioxin-HR	01/24/06 13:06	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
Level 4 + EDD-OUT	02/14/06 13:06	Excel EDD email to pm, Include Std logs for Lvl IV
<b>Containers Supplied:</b>		
1 L Amber (IPA1345-01AA)		
1 L Amber (IPA1345-01AB)		

SAMPLE INTEGRITY:					
All containers intact:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Sample labels/COC agree:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Custody Seals Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Samples Preserved Properly:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received On Ice::	<input type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received at (temp):	_____	

1-18-06 1700 *Bethina J. Benedict* 1/19/06 *JB*

<del>Released By</del>	<del>Date</del>	<del>Time</del>	Received By	Date	Time
------------------------	-----------------	-----------------	-------------	------	------

### SAMPLE LOG-IN CHECKLIST

Alta Project #: 27218

Samples Arrival:	Date/Time 4/19/06 0845	Initials: CRB	Location: WR-2
Logged In:	Date/Time 4/19/06 1322	Initials: CRB	Location: WR-2
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> Cal
	<input type="radio"/> DHL	<input type="radio"/> Hand Delivered	<input type="radio"/> Other
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C	0.1	Time: 0910	Thermometer ID: DT-20

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk #	7902 91692667		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?		COC	Sample Container
Shipping Container	<input checked="" type="radio"/> Alta	<input checked="" type="radio"/> Client	<input type="radio"/> Retain
			<input type="radio"/> Return
			<input checked="" type="radio"/> Dispose

Comments:

# **APPENDIX G**

## **Section 42**

Outfall 012, January 17, 2006

AMEC Data Validation Reports

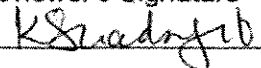
**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID B4DF33  
 Task Order 1261.001D.01  
 SDG No. IPA1345

No. of Analyses 1

Laboratory Alta  
 Reviewer K. Shadowlight  
 Analysis/Method Dioxin/Furan by Method 1613

Date: February 25, 2006  
 Reviewer's Signature  


ACTION ITEMS <sup>a</sup>	
Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	Method blank contamination
Holding Times	Detects below the laboratory lower calibration level were qualified as estimated.
GC/MS Tune/inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS <sup>b</sup>	

<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements.  
<sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Routine Outfall 012-Annual

ANALYSIS: DIOXINS/FURANS  
SAMPLE DELIVERY GROUP: IPA1345

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
Contract Task Order: 1261.001.01  
Sample Delivery Group: IPA1345  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Dioxins/Furans  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: K. Shadowlight  
Date of Review: February 25, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.



**Table 1. Sample Identification**

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 012	IPA1345-01	27218-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 0°C. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the samples were couriered directly to Del Mar Analytical-Irvine, custody seals were not required. Custody seals were present on the coolers from Del Mar to Alta; however no sample custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

#### 2.1.3 Holding Times

The samples were extracted and analyzed within one year of collection. No qualifications were required.

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%. No qualifications were required.

## 2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

The initial calibration was analyzed 01/12/2006 on instrument VG-7. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs  $\leq 20\%$  for the 16 native compounds (calibration by isotope dilution) and  $\leq 35\%$  for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

### 2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

## 2.4 BLANKS

One method blank (0-7686-MB001) was extracted and analyzed with the sample in this SDG. Target compounds 1,2,3,4,6,7,8-HpCDD and OCDD were reported at concentrations below the laboratory lower calibration level in the method blank. Target compounds 1,2,3,4,6,7,8-HpCDD and OCDD were also reported in the site sample; therefore, the detects for HpCDD and OCDD were qualified as estimated nondetects, "UJ," at the levels of contamination in the site sample. As a portion of total HpCDD was qualified for method blank contamination the result for total HpCDD was qualified as estimated, "J," in the site sample. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No further qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7686-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review

of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in this SDG. Evaluation of method accuracy was based on the OPR results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

### 2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

## 2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

## 2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," by the laboratory. These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No further qualifications were required.

Sample ID: **IPA1345-01** *Outfall 012* EPA Method 1613

**Client Data**  
 Name: Del Mar Analytical, Irvine  
 Project: IPA1345  
 Date Collected: 17-Jan-06  
 Time Collected: 1306

**Sample Data**  
 Matrix: Aqueous  
 Sample Size: 0.998 L

**Laboratory Data**  
 Lab Sample: 27218-001  
 QC Batch No.: 7686  
 Date Analyzed DB-5: 24-Jan-06  
 Date Received: 19-Jan-06  
 Date Extracted: 22-Jan-06  
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.0000100			13C-2,3,7,8-TCDD	82.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.0000168			13C-1,2,3,7,8-PeCDD	83.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0000216			13C-1,2,3,4,7,8-HxCDD	79.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0000220			13C-1,2,3,6,7,8-HxCDD	82.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0000211			13C-1,2,3,4,6,7,8-HpCDD	82.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000182			J,B	13C-OCDD	51.4	17 - 157	
OCDD	0.000141			B	13C-2,3,7,8-TCDF	80.2	24 - 169	
2,3,7,8-TCDF	ND	0.0000110			13C-1,2,3,7,8-PeCDF	90.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.0000125			13C-2,3,4,7,8-PeCDF	89.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.0000124			13C-1,2,3,4,7,8-HxCDF	81.5	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000662			13C-1,2,3,6,7,8-HxCDF	81.3	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000611			13C-2,3,4,6,7,8-HxCDF	81.2	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000680			13C-1,2,3,7,8,9-HxCDF	80.6	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000963			13C-1,2,3,4,6,7,8-HpCDF	75.6	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.0000371			J	13C-1,2,3,4,7,8,9-HpCDF	80.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000934			13C-OCDF	58.4	17 - 157	
OCDF	0.0000758			J	CRS 37Cl-2,3,7,8-TCDD	97.8	35 - 197	

**Totals**

Total TCDD	ND	0.0000100						
Total PeCDD	ND	0.0000168						
Total HxCDD	0.00000750							
Total HpCDD	0.0000405			B				
Total TCDF	0.00000230							
Total PeCDF	ND	0.0000124						
Total HxCDF	0.00000197							
Total HpCDF	0.0000105							

**Footnotes**  
 a. Sample specific estimated detection limit.  
 b. Estimated maximum possible concentration.  
 c. Method detection limit.  
 d. Lower control limit - upper control limit.

Analyst: DMS *Lavelle*  
 Approved By: Martha M. Maier  
 Date Analyzed: 26-Jan-2006 08:30

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID	<u>B4MT35</u>
Task Order	<u>1261.001D.01</u>
SDG No.	<u>IPA1345</u>

No. of Analyses 1

Date: March 7, 2006
Reviewer's Signature <i>P. Meeks</i>

Laboratory Del Mar Analytical  
 Reviewer P. Meeks  
 Analysis/Method Metals

<b>ACTION ITEMS<sup>a</sup></b>	
1. Case Narrative Deficiencies	 
2. Out of Scope Analyses	 
3. Analyses Not Conducted	 
4. Missing Hardcopy Deliverables	 
5. Incorrect Hardcopy Deliverables	 
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	 Qualifications applied for blank detects and detects below the reporting limit.                      
<b>COMMENTS<sup>b</sup></b>	

<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements.  
<sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 012

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPA1345

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: Topanga Fire Surface Samples  
 MEC<sup>x</sup> Project Number: 1261.001D.01  
 Sample Delivery Group: IPA1345  
 Project Manager: P. Costa  
 Matrix: Sediment  
 Analysis: Metals  
 QC Level: Level IV  
 No. of Samples: 1  
 No. of Reanalyses/Dilutions: 0  
 Reviewer: P. Meeks  
 Date of Review: February 27, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC<sup>x</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0), EPA Methods 200.7 and 245.1, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

sk

Project: NPDES  
 SDG: IPA1345



**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPA1345-01	Water	200.7, 245.1

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and analyses presented in this SDG. No sample qualifications were required.

#### 2.1.3 Holding Times

The date of collection recorded on the COC and the dates of analyses recorded in the raw data documented that the sample analyses were performed within the specified holding times of six months for the ICP metals and 28 days for mercury. No qualifications were required.

### 2.2 ICP-MS TUNING

ICP-MS was not used to analyze this sample; therefore, this criterion is not applicable.

### 2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP metals and 80-120% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG. No qualifications were required.

### 2.4 BLANKS

Arsenic was detected in a bracketing CCB at 4.9 µg/L; therefore, arsenic detected in Outfall 012 was qualified as an estimated nondetect, "UJ." Silver, antimony, and lead were reported in method blank 6A18053-BLK1 at -6.2, -6.8, and -5.0 µg/L, respectively; therefore, nondetected

antimony, lead, and silver in Outfall 012 were qualified as estimated, "UJ." No further qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were performed in association with the sample in this SDG;. Lead and thallium were detected in the ICSA near or above the respective reporting limit. The reviewer checked the raw data for the sample and determined that the level of interferents in Outfall 012 was not of sufficient concentration to qualify the sample results. No qualifications were required.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The ICP and mercury LCS recoveries were within the laboratory-established control limits of 85-115%. No qualifications were required.

## 2.7 LABORATORY DUPLICATES

No MS/MSD or laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.8 MATRIX SPIKES

No matrix spike analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was evaluated based on LCS results. No qualifications were required.

## 2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.10 INTERNAL STANDARDS PERFORMANCE

ICP-MS was not used to analyze this sample; therefore, this criterion is not applicable.

## 2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the samples in this data package. Calculations were verified and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. Analytes detected below the reporting limit were qualified as estimated, "J," and denoted with "DNQ," in accordance with the NPDES permit. No further qualifications were required.

## 2.12 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples.

### 2.12.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0857  
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
Antimony	EPA 200.7	6A18053	0.0060	0.010	ND	1	01/18/06	01/19/06	UJ B
Arsenic	EPA 200.7	6A18053	0.0044	0.0050	<b>0.0048</b>	1	01/18/06	01/19/06	UJ J B
Beryllium	EPA 200.7	6A18053	0.00090	0.0020	ND	1	01/18/06	01/19/06	U
Cadmium	EPA 200.7	6A18053	0.0020	0.0050	ND	1	01/18/06	01/19/06	↓
Chromium	EPA 200.7	6A18053	0.0020	0.0050	ND	1	01/18/06	01/19/06	↓
Copper	EPA 200.7	6A18053	0.0020	0.010	<b>0.0038</b>	1	01/18/06	01/19/06	J J DNQ
Lead	EPA 200.7	6A18053	0.0030	0.0050	ND	1	01/18/06	01/19/06	U J B
Mercury	EPA 245.1	6A18048	0.000050	0.00020	ND	1	01/18/06	01/18/06	U
Nickel	EPA 200.7	6A18053	0.0020	0.010	<b>0.0031</b>	1	01/18/06	01/19/06	J J DNQ
Selenium	EPA 200.7	6A18053	0.0080	0.010	ND	1	01/18/06	01/19/06	U
Silver	EPA 200.7	6A18053	0.0030	0.010	ND	1	01/18/06	01/19/06	U J B
Thallium	EPA 200.7	6A18053	0.0070	0.010	ND	1	01/18/06	01/19/06	U
Zinc	EPA 200.7	6A18053	0.015	0.020	<b>0.020</b>	1	01/18/06	01/19/06	U

LEVEL IV

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

IPA1345 <Page 13 of 48>

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>X</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4PP5  
 Task Order: 1261.001D.01  
 SDG No.: IPA1345

No. of Analyses: 1

Laboratory: Del Mar Analytical  
 Reviewer: L. Calvin  
 Analysis/Method: Pesticides/PCBs by Method 608

Date: March 3, 2006  
 Reviewer's Signature: *L. Calvin*

ACTION ITEMS <sup>a</sup>	
Case Narrative	_____
Deficiencies	_____
<b>2. Out of Scope Analyses</b>	_____
<b>3. Analyses Not Conducted</b>	_____
<b>4. Missing Hardcopy Deliverables</b>	_____
<b>5. Incorrect Hardcopy Deliverables</b>	_____
<b>6. Deviations from Analysis Protocol, e.g.,</b>	Qualifications were assigned for the following:
Holding Times	-initial calibration %RSD >10%
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	

<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements.  
<sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.



# DATA VALIDATION REPORT

## NPDES Monitoring Program Quarterly Outfall 012

ANALYSIS: PESTICIDES / PCBs

SAMPLE DELIVERY GROUP: IPA1345

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001.01  
Sample Delivery Group: IPA1345  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Pesticides  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: L. Calvin  
Date of Review: March 3, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Organochlorine Pesticides and PCBs (DVP-4, Rev. 0)*, *EPA Method 608*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.



**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPA1345-01	Water	608

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , at  $5^{\circ}\text{C}$ . According to the case narrative for this SDG, the sample was received intact and on ice. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. As the sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

#### 2.1.3 Holding Times

The water sample was extracted within seven days of sample collection and analyzed within 40 days of extraction. No qualifications were required.

### 2.2 PESTICIDES INSTRUMENT PERFORMANCE

No resolution check standards or breakdown check standards are required by Method 608 for pesticides, and according to the raw data provided, a resolution check standard was not analyzed by the laboratory. The laboratory did analyze a breakdown check standard with the breakdown for individual components (4,4-DDT and endrin)  $\leq 20\%$  and  $\leq 30\%$  for the total, as suggested in the National Functional Guidelines. A review of the raw data indicated that the analytical run time was of sufficient length to provide adequate standard separation. The two analytical columns used in the analyses were within the guidelines specified in the methods.

According to the laboratory SOP and the initial calibration raw data, the retention time windows are  $\pm 0.10$  minutes for both surrogates and target compound calibration standards. A review of the raw data indicated that the laboratory retention time criteria were met for the surrogates and pesticide calibration standards. No qualifications were required.

### 2.3 CALIBRATION

#### 2.3.1 Analytical Sequence

Based on the data provided, the analytical sequences were in accordance with the requirements of Method 608. No qualifications were required.

### 2.3.2 Initial Calibration

There was one initial calibration dated 12/22/05 associated with the Aroclor analysis of the site sample and one dated 01/17/06 associated with the pesticide analysis. The initial calibrations consisted of six point calibrations for Aroclors 1016 and 1260 and all pesticide target compounds on two analytical columns. The average %RSDs of the individual Aroclor peaks were within the EPA Method 608 QC limit of  $\leq 10\%$  on the primary analytical column (Channel A), and the %RSDs for all pesticide target compounds were  $\leq 10\%$  on the primary column, with the exception of the %RSD for alpha-bhc. The nondetect for alpha-bhc was qualified as estimated, "UJ," in sample Outfall 012.

The pesticide and average Aroclor %RSDs were  $\leq 10\%$  or  $r^2$  values  $\geq 0.995$  on the secondary column (Channel B), with the exception of the %RSD for DDE; however, as target compounds were not detected on the primary column in the sample, and all results were reported from Channel A, the secondary column was not further evaluated.

An ICV was analyzed immediately following each initial calibration, and the %Ds for all pesticide target compounds and Aroclors 1016 and 1260 were within the QC limit of  $\leq 15\%$  on the primary column. No further qualifications were required.

### 2.3.3 Continuing Calibration

The pesticide and Aroclor analyses of sample Outfall 012 were each bracketed by two continuing calibrations. The %Ds for all pesticide target compounds and Aroclors 1016 and 1260 were within the Method QC limit of  $\leq 15\%$  for all calibrations on the primary column, with the exception of alpha-bhc on the primary column in the ending pesticide CCV. As the response was high, and alpha-bhc was not detected in the sample, no qualifications were assigned. No qualifications were required.

## 2.4 BLANKS

### 2.4.1 Instrument Blanks

An instrument blank was analyzed at the beginning of the analytical sequence. Cross-contamination was not evident in the instrument blank or the sample. No qualifications were necessary.

### 2.4.2 Method Blanks

One water method blank (6A22021-BLK1) was extracted and analyzed with this SDG. No pesticide target compounds or Aroclors were detected in the method blank. Review of the chromatograms from both channels showed no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two blank spike/blank spike duplicate pairs (6A22021-BS1/BSD1 for pesticides and 6A22021-BS2/BSD2 for Aroclors) were analyzed with this SDG. The recoveries for all pesticide compounds

DATA VALIDATION REPORT

and Aroclors 1016 and 1260 were within the laboratory-established QC limits, and all RPDs were within the QC limit of  $\leq 30\%$ . A representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## **2.6 SURROGATE RECOVERY**

Surrogate recoveries were within the laboratory-established QC limits for the sample in this SDG. The recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## **2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE**

MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy and precision were based on the blank spike/blank spike duplicate results. No qualifications were required.

## **2.8 SAMPLE CLEANUP PERFORMANCE**

According to the laboratory extraction benchsheets, no cleanups were performed on the water sample. No qualifications were required.

## **2.9 FIELD QC SAMPLES**

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

### **2.9.1 Field Blanks and Equipment Rinsates**

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### **2.9.2 Field Duplicates**

There were no field duplicate samples identified for this SDG.

## 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for pesticide target compounds and seven Aroclors by EPA Method 608. Compound identification is verified at a Level IV validation. The laboratory provided an overlay of the pesticide sample chromatogram and the pesticide standard for identification purposes. Review of chromatograms and retention times indicated no problems with compound identification for the sample in this SDG. No qualifications were required.

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont. Reporting Units: ug/l									
Aldrin	EPA 608	6A22021	0.029	0.096	ND	0.962	01/22/06	01/23/06	u
alpha-BHC	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	u
beta-BHC	EPA 608	6A22021	0.014	0.096	ND	0.962	01/22/06	01/23/06	u
delta-BHC	EPA 608	6A22021	0.019	0.19	ND	0.962	01/22/06	01/23/06	u
gamma-BHC (Lindane)	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	u
Chlordane	EPA 608	6A22021	0.19	0.96	ND	0.962	01/22/06	01/23/06	u
4,4'-DDD	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	u
4,4'-DDE	EPA 608	6A22021	0.024	0.096	ND	0.962	01/22/06	01/23/06	u
4,4'-DDT	EPA 608	6A22021	0.034	0.096	ND	0.962	01/22/06	01/23/06	u
Dieldrin	EPA 608	6A22021	0.014	0.096	ND	0.962	01/22/06	01/23/06	u
Endosulfan I	EPA 608	6A22021	0.014	0.096	ND	0.962	01/22/06	01/23/06	u
Endosulfan II	EPA 608	6A22021	0.038	0.096	ND	0.962	01/22/06	01/23/06	u
Endosulfan sulfate	EPA 608	6A22021	0.019	0.19	ND	0.962	01/22/06	01/23/06	u
Endrin	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	u
Endrin aldehyde	EPA 608	6A22021	0.043	0.096	ND	0.962	01/22/06	01/23/06	u
Endrin ketone	EPA 608	6A22021	0.019	0.096	ND	0.962	01/22/06	01/23/06	u
Heptachlor	EPA 608	6A22021	0.029	0.096	ND	0.962	01/22/06	01/23/06	u
Heptachlor epoxide	EPA 608	6A22021	0.029	0.096	ND	0.962	01/22/06	01/23/06	u
Methoxychlor	EPA 608	6A22021	0.034	0.096	ND	0.962	01/22/06	01/23/06	u
Toxaphene	EPA 608	6A22021	1.4	4.8	ND	0.962	01/22/06	01/23/06	u
Surrogate: Tetrachloro-m-xylene (35-115%)						78 %			
Surrogate: Decachlorobiphenyl (45-120%)						93 %			

val qual  
qual code

WC  
07-03-06

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

Level IV

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA1345 <Page 11 of 48>



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**TOTAL PCBS (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data	Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.										
Reporting Units: ug/l										
Aroclor 1016	EPA 608	6A22021	0.19	0.96	ND	0.962	01/22/06	01/23/06	u	see qual code
Aroclor 1221	EPA 608	6A22021	0.096	0.96	ND	0.962	01/22/06	01/23/06		
Aroclor 1232	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06		
Aroclor 1242	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06		
Aroclor 1248	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06		
Aroclor 1254	EPA 608	6A22021	0.24	0.96	ND	0.962	01/22/06	01/23/06		
Aroclor 1260	EPA 608	6A22021	0.38	0.96	ND	0.962	01/22/06	01/23/06		
Surrogate: Decachlorobiphenyl (45-120%)					99 %					

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

Level IV

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA1345 <Page 12 of 48>

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4SV19  
 Task Order: 1261.001D.01  
 SDG No.: IPA1345

No. of Analyses: 1

Laboratory: Del Mar Analytical  
 Reviewer: L. Calvin  
 Analysis/Method: Semivolatiles by Method 625

Date: <u>March 3, 2006</u>
Reviewer's Signature <i>L. Calvin</i>

ACTION ITEMS <sup>a</sup>	
1. Case Narrative Deficiencies	_____
2. Out of Scope Analyses	_____
3. Analyses Not Conducted	_____
4. Missing Hardcopy Deliverables	_____
5. Incorrect Hardcopy Deliverables	_____
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: -initial calibration $r^2$ outliers -BS/BSD recoveries below QC limits and <10% -BS/BSD RPD above QC limits -internal standard area below control limits -detects between MDL and reporting limit estimated
COMMENTS <sup>b</sup>	

<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements.  
<sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.





# DATA VALIDATION REPORT

NPDES Monitoring Program  
Outfall 012

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IPA1345

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPA1345  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Semivolatiles  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: L. Calvin  
Date of Review: March 3, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Levels C and D Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 625*, and the *National Functional Guidelines For Organic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPA1345-01	Water	625

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$  at  $5^{\circ}\text{C}$ . No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the analysis presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

The water sample was extracted within seven days of collection and analyzed within 40 days of extraction. No qualifications were required.

### 2.2 GC/MS TUNING

The DFTPP tunes analyzed at the beginning of each daily analytical sequence met the abundance criteria specified in EPA Method 625. No qualifications were required.

### 2.3 CALIBRATION

One initial calibration analyzed 01/13/06 was associated with the sample in this SDG. The %RSDs were  $\leq 35\%$  or  $r^2 \geq 0.995$  for all target compounds, with the exception of the  $r^2 < 0.995$  for 2,4-dinitrophenol. The nondetect result for 2,4-dinitrophenol was qualified as estimated, "UJ," in sample Outfall 012. The continuing calibration associated with the sample was analyzed 01/24/06. All %Ds were within the QC limit of  $\leq 20\%$ . No further qualifications were required.

## 2.4 BLANKS

One method blank (6A22022-BLK1) was extracted and analyzed with this SDG. No target compounds were detected above the MDLs in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6A22022-BS1/BSD1) was extracted and analyzed with this SDG. In both the BS and BSD, dimethylphthalate was recovered below 10%. Diethylphthalate was recovered just above 10% in the BS and below 10% in the BSD. Nondetects for both compounds were rejected, "R," in sample Outfall 012. The RPD for 3,3'-dichlorobenzidine exceeded the QC limit. The nondetect result was qualified as estimated, "UJ," in the sample. All remaining recoveries and RPDs were within the laboratory-established QC limits. The recoveries were calculated from the raw data and no calculation or transcription errors were found. No further qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy and precision was based on the blank spike and blank spike/blank spike duplicate results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

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

### 2.7.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### 2.7.2 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.8 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times for the sample were within the control limits established by the continuing calibration standards of -50%/+100% for internal standard areas and  $\pm 30$  seconds for retention times, with the exception of an area below the control limits but >25% for d12-perylene. Nondetect results for the associated target compounds, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene were qualified as estimated "UJ." The recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for semivolatile target compounds by EPA Method 625. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any detects between the MDL and the reporting limit were qualified as estimated, "J," and were annotated with the "DNQ" qualifier code by the reviewer. Results were reported in  $\mu\text{g/L}$  (ppb). No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6A22022	4.1	9.5	ND	0.952	01/22/06	01/25/06	u
Acenaphthylene	EPA 625	6A22022	3.0	9.5	4.6	0.952	01/22/06	01/25/06	J I DN Q
Aniline	EPA 625	6A22022	2.8	9.5	ND	0.952	01/22/06	01/25/06	u
Anthracene	EPA 625	6A22022	3.0	9.5	ND	0.952	01/22/06	01/25/06	u
Benzidine	EPA 625	6A22022	5.0	19	ND	0.952	01/22/06	01/25/06	u
Benzoic acid	EPA 625	6A22022	2.5	19	ND	0.952	01/22/06	01/25/06	u
Benzo(a)anthracene	EPA 625	6A22022	3.5	9.5	ND	0.952	01/22/06	01/25/06	u
Benzo(b)fluoranthene	EPA 625	6A22022	2.6	9.5	ND	0.952	01/22/06	01/25/06	u
Benzo(k)fluoranthene	EPA 625	6A22022	3.2	9.5	ND	0.952	01/22/06	01/25/06	u
Benzo(g,h,i)perylene	EPA 625	6A22022	5.0	9.5	ND	0.952	01/22/06	01/25/06	u
Benzo(a)pyrene	EPA 625	6A22022	3.3	9.5	ND	0.952	01/22/06	01/25/06	u
Benzyl alcohol	EPA 625	6A22022	2.4	19	ND	0.952	01/22/06	01/25/06	u
Bis(2-chloroethoxy)methane	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06	u
Bis(2-chloroethyl)ether	EPA 625	6A22022	4.2	9.5	ND	0.952	01/22/06	01/25/06	u
Bis(2-chloroisopropyl)ether	EPA 625	6A22022	4.4	9.5	ND	0.952	01/22/06	01/25/06	u
Bis(2-ethylhexyl)phthalate	EPA 625	6A22022	5.0	48	ND	0.952	01/22/06	01/25/06	u
4-Bromophenyl phenyl ether	EPA 625	6A22022	4.4	9.5	ND	0.952	01/22/06	01/25/06	u
Butyl benzyl phthalate	EPA 625	6A22022	3.3	19	ND	0.952	01/22/06	01/25/06	u
4-Chloroaniline	EPA 625	6A22022	5.7	9.5	ND	0.952	01/22/06	01/25/06	u
2-Chloronaphthalene	EPA 625	6A22022	3.8	9.5	ND	0.952	01/22/06	01/25/06	u
4-Chloro-3-methylphenol	EPA 625	6A22022	3.3	19	ND	0.952	01/22/06	01/25/06	u
2-Chlorophenol	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	u
4-Chlorophenyl phenyl ether	EPA 625	6A22022	2.9	9.5	ND	0.952	01/22/06	01/25/06	u
Chrysene	EPA 625	6A22022	2.7	9.5	ND	0.952	01/22/06	01/25/06	u
Dibenz(a,h)anthracene	EPA 625	6A22022	4.5	19	ND	0.952	01/22/06	01/25/06	u
Dibenzofuran	EPA 625	6A22022	2.5	9.5	ND	0.952	01/22/06	01/25/06	u
Di-n-butyl phthalate	EPA 625	6A22022	2.7	19	ND	0.952	01/22/06	01/25/06	u
1,3-Dichlorobenzene	EPA 625	6A22022	3.9	9.5	ND	0.952	01/22/06	01/25/06	u
1,4-Dichlorobenzene	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06	u
1,2-Dichlorobenzene	EPA 625	6A22022	4.3	9.5	ND	0.952	01/22/06	01/25/06	u
3,3-Dichlorobenzidine	EPA 625	6A22022	10	19	ND	0.952	01/22/06	01/25/06	u
2,4-Dichlorophenol	EPA 625	6A22022	3.9	9.5	ND	0.952	01/22/06	01/25/06	u
Diethyl phthalate	EPA 625	6A22022	3.0	9.5	ND	0.952	01/22/06	01/25/06	R L L
2,4-Dimethylphenol	EPA 625	6A22022	4.2	19	ND	0.952	01/22/06	01/25/06	u
Dimethyl phthalate	EPA 625	6A22022	3.4	9.5	ND	0.952	01/22/06	01/25/06	R L L
4,6-Dinitro-2-methylphenol	EPA 625	6A22022	4.9	19	ND	0.952	01/22/06	01/25/06	u
2,4-Dinitrophenol	EPA 625	6A22022	5.0	19	ND	0.952	01/22/06	01/25/06	u
2,4-Dinitrotoluene	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	u
2,6-Dinitrotoluene	EPA 625	6A22022	3.0	9.5	ND	0.952	01/22/06	01/25/06	u
Di-n-octyl phthalate	EPA 625	6A22022	4.5	19	ND	0.952	01/22/06	01/25/06	u
Fluoranthene	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06	u

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

Level 11

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA1345 <Page 9 of 48>



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data	Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont. Reporting Units: ug/l										
Fluorene	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06	u	
Hexachlorobenzene	EPA 625	6A22022	4.6	9.5	ND	0.952	01/22/06	01/25/06		
Hexachlorobutadiene	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06		
Hexachlorocyclopentadiene	EPA 625	6A22022	3.2	19	ND	0.952	01/22/06	01/25/06		
Hexachloroethane	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06		
Indeno(1,2,3-cd)pyrene	EPA 625	6A22022	5.1	19	ND	0.952	01/22/06	01/25/06	u	I
Isophorone	EPA 625	6A22022	3.5	9.5	ND	0.952	01/22/06	01/25/06	u	
2-Methylnaphthalene	EPA 625	6A22022	2.9	9.5	14	0.952	01/22/06	01/25/06	K	
2-Methylphenol	EPA 625	6A22022	3.5	9.5	ND	0.952	01/22/06	01/25/06	u	
4-Methylphenol	EPA 625	6A22022	3.6	9.5	ND	0.952	01/22/06	01/25/06	u	
Naphthalene	EPA 625	6A22022	4.3	9.5	17	0.952	01/22/06	01/25/06	X	
2-Nitroaniline	EPA 625	6A22022	3.7	19	ND	0.952	01/22/06	01/25/06	u	
3-Nitroaniline	EPA 625	6A22022	4.3	19	ND	0.952	01/22/06	01/25/06		
4-Nitroaniline	EPA 625	6A22022	4.7	19	ND	0.952	01/22/06	01/25/06		
Nitrobenzene	EPA 625	6A22022	4.0	19	ND	0.952	01/22/06	01/25/06		
2-Nitrophenol	EPA 625	6A22022	4.0	9.5	ND	0.952	01/22/06	01/25/06		
4-Nitrophenol	EPA 625	6A22022	6.3	19	ND	0.952	01/22/06	01/25/06		
N-Nitrosodiphenylamine	EPA 625	6A22022	3.8	9.5	ND	0.952	01/22/06	01/25/06		
N-Nitroso-di-n-propylamine	EPA 625	6A22022	3.4	9.5	ND	0.952	01/22/06	01/25/06		
Pentachlorophenol	EPA 625	6A22022	3.8	19	ND	0.952	01/22/06	01/25/06		
Phenanthrene	EPA 625	6A22022	3.1	9.5	ND	0.952	01/22/06	01/25/06		
Phenol	EPA 625	6A22022	3.8	9.5	ND	0.952	01/22/06	01/25/06		
Pyrene	EPA 625	6A22022	3.7	9.5	ND	0.952	01/22/06	01/25/06		
1,2,4-Trichlorobenzene	EPA 625	6A22022	4.2	9.5	ND	0.952	01/22/06	01/25/06		
2,4,5-Trichlorophenol	EPA 625	6A22022	3.4	19	ND	0.952	01/22/06	01/25/06		
2,4,6-Trichlorophenol	EPA 625	6A22022	3.9	19	ND	0.952	01/22/06	01/25/06		
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6A22022	4.8	19	ND	0.952	01/22/06	01/25/06		
N-Nitrosodimethylamine	EPA 625	6A22022	3.5	19	ND	0.952	01/22/06	01/25/06		
Surrogate: 2-Fluorophenol (30-120%)					57 %					
Surrogate: Phenol-d6 (35-120%)					76 %					
Surrogate: 2,4,6-Tribromophenol (45-120%)					75 %					
Surrogate: Nitrobenzene-d5 (45-120%)					110 %					
Surrogate: 2-Fluorobiphenyl (45-120%)					77 %					
Surrogate: Terphenyl-d14 (45-120%)					122 %					

self  
qual  
code

WAC  
7-28-06

Level IV

ZX

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

IPA1345 <Page 10 of 48>



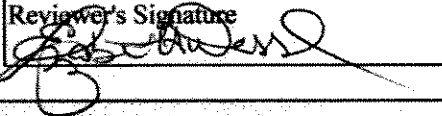
**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MECX, LLC  
 12260 East Vassar Drive  
 Suite 500  
 Lakewood, CO 80226

Package ID B4TF2  
 Task Order 1261.001D.01  
 SDG No. IPA1345

No. of Analyses 2

Laboratory Del Mar - Irvine  
 Reviewer E. Wessling  
 Analysis/Method TFH- 8015 (GRO and DRO)

Date: March 8, 2006  
 Reviewer's Signature  


ACTION ITEMS <sup>a</sup>	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis	Data acceptable as reviewed
Protocol, e.g.,	
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS <sup>b</sup>	
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

## NPDES Monitoring Program Outfall 012

ANALYSIS: Total Fuel Hydrocarbons

SAMPLE DELIVERY GROUP IPA1345

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPA1345  
Project Manager: P. Costa  
Matrix: Water  
Analysis: TFH  
QC Level: Level IV  
No. of Samples: 2  
No. of Reanalyses/Dilutions: 0  
Reviewer: E. Wessling  
Date of Review: March 8, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC<sup>X</sup> Data Validation Procedure for Total Fuel Hydrocarbons (DVP-8, Rev. 0), EPA Method 8015B, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPA1345-01	Water	8015B & 8015M
Outfall 012-Trip Blank	IPA1345-02	Water	8015B

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C at 5°C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the analyses presented in this SDG. As the samples were couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

The water samples were analyzed within seven days of collection for the volatile range hydrocarbon analysis and extracted within seven days of collection for the extractable hydrocarbons and analyzed within 40 days of extraction. No qualifications were required.

### 2.2 CALIBRATION

Three initial calibrations, one for volatile range organics and two for extractable range organics, were analyzed 01/07/06, 11/29/05 and 1/16/06; respectively, in association with the samples in this SDG. The %RSDs for target compounds were ≤20%. An initial calibration verification (ICV) was analyzed following the initial calibration, with %Ds for target compounds within the QC limits of ≤15%. Samples Outfall 012 and Outfall 012 Trip Blank were analyzed with bracketing continuing calibration verification samples with %Ds ≤15%. No qualifications were required.

### 2.3 BLANKS

Two method blanks (6A21021-BLK1 and 6A23088-BLK1) were analyzed and extracted and analyzed with this SDG. Target compounds were not detected above the MDLs in the method blanks. Review of the method blank raw data indicated no false negatives. No qualifications were required.

## 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two blank spike/blank spike duplicate pairs (6A21021-BS1/BSD1 and 6A23088-BS1/BSD1) were analyzed and extracted and analyzed with this SDG. All recoveries were within the laboratory-established QC limits, and the RPDs were within the QC limit of  $\leq 20\%$ . The recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.5 SURROGATE RECOVERY

All samples were fortified with the surrogate compound 4-BFB for volatile hydrocarbon analysis and n-octacosane for extractable hydrocarbon analysis. Surrogate recoveries were within the laboratory-established QC limits of 65-140% for volatile hydrocarbon analysis and 40-125% for extractable hydrocarbon sample analysis. A representative number of recoveries were calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the samples of this SDG. Evaluation of method accuracy and precision was based on the blank spike and blank spike/blank spike duplicate results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

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

### 2.7.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### 2.7.2 Trip Blanks

There was one trip blank analyzed with the volatile organic hydrocarbons, Outfall 012 Trip Blank which was free from target compound contamination. No qualification of the data was required.

Project: NPDES  
SDG: IPA1345  
Analysis: TFH

DATA VALIDATION REPORT

**2.7.3 Field Duplicates**

There were no field duplicate samples identified for this SDG.

**2.8 COMPOUND IDENTIFICATION**

The laboratory analyzed for target compounds GRO and DRO. Review of the sample chromatograms, retention times, and patterns indicated no problems with target compound identification. No qualifications were required.

**2.9 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS**

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low points of the initial calibrations and the laboratory MDLs. Results were reported in mg/L (ppm). No qualifications were required.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

## EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	6A23088	0.043	0.48	0.74	0.952	01/23/06	01/24/06	Rev. and and c.c.c.
Surrogate: n-Octacosane (40-125%)					95 %				

# LEVEL IV

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA1345 <Page 4 of 48>





17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual  Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont. Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6A21021	0.50	1.0	1.1	10	01/21/06	01/21/06	Ret. cap 0.1 case
Surrogate: 4-BFB (FID) (65-140%)					77 %				
Sample ID: IPA1345-02 (Trip Blank - Water) Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6A21021	0.050	0.10	ND	1	01/21/06	01/21/06	u
Surrogate: 4-BFB (FID) (65-140%)					79 %				

**LEVEL IV**

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA1345 <Page 5 of 48>


**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4VO21  
 Task Order: 1261.001D.01  
 SDG No.: IPA1345

No. of Analyses: 1

Laboratory: Del Mar Analytical  
 Reviewer: L. Calvin  
 Analysis/Method: 1,4-dioxane by Method 8260B

Date: March 3, 2006  
 Reviewer's Signature: 

ACTION ITEMS <sup>a</sup>	
Case Narrative	_____
Deficiencies	_____
2. Out of Scope Analyses	_____
3. Analyses Not Conducted	_____
4. Missing Hardcopy Deliverables	_____
5. Incorrect Hardcopy Deliverables	_____
6. Deviations from Analysis Protocol, e.g.,	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
COMMENTS <sup>b</sup>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Outfall 012

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPA1345

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001.01  
Sample Delivery Group: IPA1345  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Volatiles (1,4-dioxane)  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: L. Calvin  
Date of Review: March 3, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *SW-846 Method 8260B*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPA1345-01	Water	8260B

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , at  $5^{\circ}\text{C}$  at Del Mar – Irvine. The 1,4-dioxane analysis was subcontracted to Del Mar – Phoenix, and the sample was received below the temperature limits at  $1.6^{\circ}\text{C}$ . As the sample was not damaged or frozen, no qualification was necessary. According to the case narrative for this SDG, the sample was received intact, on ice, and properly preserved. Information regarding lack of headspace in the VOA vials was not provided. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC from the field to the laboratory was signed and dated by both field and laboratory personnel, and the transfer COC from Del Mar – Irvine to Del Mar – Phoenix was signed by personnel from both laboratories. As the sample was couriered directly from the field to the laboratory, custody seals were not required. Custody seals were present on the cooler upon receipt at Del Mar – Phoenix. No qualifications were required.

#### 2.1.3 Holding Times

The water sample was analyzed within 14 days of collection. No qualifications were required.

### 2.2 GC/MS TUNING

The BFB tunes met the abundance criteria specified in SW-846 Method 8260, and the sample was analyzed within 12 hours of the BFB injection time. No qualifications were required.

### 2.3 CALIBRATION

One initial calibration was associated with the sample in this SDG, dated 12/08/05. The average RRF for target compound 1,4-dioxane was  $\geq 0.05$  and the %RSD was  $\leq 15\%$ . The continuing calibration associated with the sample in this SDG was dated 01/24/06. The RRF for 1,4-dioxane was  $\geq 0.05$  and the %D was within the QC limit of  $\leq 20\%$ . The average RRF and %RSD in the initial calibration and RRF and %D in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

## 2.4 BLANKS

One method blank (P6A2418-BLK1) was analyzed with this SDG. Target compound 1,4-dioxane was not detected above the MDL in the method blank. Review of the method blank raw data indicated no false negative. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (P6A2418-BS1/BSD1) was analyzed with this SDG. The recoveries for 1,4-dioxane were within the QC limits of 70-130%, and the RPD was within the QC limit of  $\geq 20\%$ . The recoveries and RPD were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.6 SURROGATE RECOVERY

The surrogate recovery was within the laboratory QC limits of 80-120% for the sample in this SDG. The recovery was calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy and precision was based on the blank spike results. No qualifications were required.

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Trip Blanks

There was no trip blank sample associated with the sample in this SDG; however, as 1,4-dioxane was not detected in the sample, evaluation of possible trip blank contamination was not necessary. No qualifications were required.

### 2.8.2 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### 2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area count and retention time were within the control limits established by the continuing calibration standard: -50%/+100% for internal standard areas and  $\pm 30$  seconds for retention times. The recovery was checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for volatile target compound 1,4-dioxane by EPA Method 8260B. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limit for 1,4-dioxane was supported by the low point of the initial calibration and the laboratory MDL. No qualifications were required.

## 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

## 2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.





# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

## 1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B	P6A2418	0.49	1.0	ND	1	01/24/06	01/24/06	u
Surrogate: Dibromofluoromethane (70-130%)					96 %				

*ver  
qual  
qual  
code*

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*Lwel IV*

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

IPA1345 <Page 18 of 48>

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>a</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID B4VO22  
 Task Order 1261.001D.01  
 SDG No. IPA1345

No. of Analyses 2

Laboratory Del Mar Analytical  
 Reviewer L. Calvin  
 Analysis/Method Volatiles by Method 624

Date: March 3, 2006  
 Reviewer's Signature  


<b>ACTION ITEMS<sup>a</sup></b>	
1. Case Narrative Deficiencies	  
2. Out of Scope Analyses	  
3. Analyses Not Conducted	  
4. Missing Hardcopy Deliverables	  
5. Incorrect Hardcopy Deliverables	  
6. Deviations from Analysis	
Protocol, e.g.,	Qualifications were assigned for the following:
Holding Times	--continuing calibration %Ds >20%
GC/MS Tune/Inst. Performance	--detects between the MDL and reporting limit estimated
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
<b>COMMENTS<sup>b</sup></b>	
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Outfall 012

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPA1345

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001.01  
Sample Delivery Group: IPA1345  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Volatiles  
QC Level: Level IV  
No. of Samples: 2  
No. of Reanalyses/Dilutions: 0  
Reviewer: L. Calvin  
Date of Review: March 3, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 624*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPA1345-01	Water	624
Trip Blank	IPA1345-02	Water	624

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C, at 5°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved. Information regarding lack of headspace in the VOA vials was not provided. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

#### 2.1.3 Holding Times

The water samples were analyzed within 14 days of collection. No qualifications were required.

### 2.2 GC/MS TUNING

The BFB tune performed at the beginning of each daily analytical sequence met the abundance criteria specified in EPA Method 624. No qualifications were required.

### 2.3 CALIBRATION

Two initial calibrations were associated with the samples in this SDG, dated 08/30/05 (acrolein and acrylonitrile only) and 11/10/05 (all remaining target compounds). The average RRFs were ≥0.05, and the %RSDs were ≤35% or  $r^2 \geq 0.995$  for the target compounds listed on the sample result summary forms.

The continuing calibrations associated with the sample analyses were dated 01/18/06. The RRFs for all target compounds were ≥0.05 and all %Ds were within the QC limit of ≤20%, with the exception of %Ds for acrolein, acrylonitrile, and 2-chloroethyl vinyl ether. Nondetect results for the aforementioned compounds were qualified as estimated, "UJ," in sample Outfall 012. Sample Trip Blank was a field QC sample and required no qualification.

A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No further qualifications were required.

## 2.4 BLANKS

One method blank (6A18021-BLK1) was analyzed with this SDG. No target compounds were detected in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (6A18021-BS1) was analyzed with this SDG. The recovery for 1,1,2,2-tetrachloroethane was above the QC limits; however, the compound was not detected in the site sample of this SDG. The remaining recoveries were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.6 SURROGATE RECOVERY

Surrogate recoveries were within the laboratory QC limits of 80-120% for this SDG. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the site sample in this SDG. Evaluation of method accuracy was based on the blank spike results. No qualifications were required.

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with site sample Outfall 012. No target compounds were detected in the trip blank. No qualifications were required.

### 2.8.2 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### 2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times were within the control limits established by the continuing calibration standard: -50%/+100% for internal standard areas and  $\pm 30$  seconds for retention times, with the exception of a recovery below the control limits for internal standard difluorobenzene in sample Trip Blank. As the sample was a field QC sample, no qualifications were assigned. The recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for volatile target compounds by EPA Method 624. Review of the sample chromatograms, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. No qualifications were required.

## 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

## 2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.





17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6A18021	0.28	1.0	1.6	1	01/18/06	01/18/06	
Bromodichloromethane	EPA 624	6A18021	0.30	2.0	1.1	1	01/18/06	01/18/06	J JDNQ
Bromoform	EPA 624	6A18021	0.32	5.0	0.66	1	01/18/06	01/18/06	J J
Bromomethane	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	u
Carbon tetrachloride	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
Chlorobenzene	EPA 624	6A18021	0.36	2.0	ND	1	01/18/06	01/18/06	
Chloroethane	EPA 624	6A18021	0.40	5.0	ND	1	01/18/06	01/18/06	
Chloroform	EPA 624	6A18021	0.33	2.0	0.84	1	01/18/06	01/18/06	J JDNQ
Chloromethane	EPA 624	6A18021	0.30	5.0	ND	1	01/18/06	01/18/06	u
Dibromochloromethane	EPA 624	6A18021	0.28	2.0	1.3	1	01/18/06	01/18/06	J JDNQ
1,2-Dibromoethane (EDB)	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	u
1,2-Dichlorobenzene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
1,3-Dichlorobenzene	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
1,4-Dichlorobenzene	EPA 624	6A18021	0.37	2.0	ND	1	01/18/06	01/18/06	
1,1-Dichloroethane	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloroethane	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
1,1-Dichloroethene	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	
trans-1,2-Dichloroethene	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloropropane	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
cis-1,3-Dichloropropene	EPA 624	6A18021	0.22	2.0	ND	1	01/18/06	01/18/06	
trans-1,3-Dichloropropene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
Ethylbenzene	EPA 624	6A18021	0.25	2.0	ND	1	01/18/06	01/18/06	
Methylene chloride	EPA 624	6A18021	0.70	5.0	ND	1	01/18/06	01/18/06	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6A18021	0.32	5.0	ND	1	01/18/06	01/18/06	
1,1,2,2-Tetrachloroethane	EPA 624	6A18021	0.24	2.0	ND	1	01/18/06	01/18/06	L
Tetrachloroethene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	J
Toluene	EPA 624	6A18021	0.36	2.0	0.60	1	01/18/06	01/18/06	J JDNQ
1,1,1-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	u
1,1,2-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	J
Trichloroethene	EPA 624	6A18021	0.26	2.0	0.27	1	01/18/06	01/18/06	J JDNQ
Trichlorofluoromethane	EPA 624	6A18021	0.34	5.0	ND	1	01/18/06	01/18/06	u
1,2,3-Trichloropropane	EPA 624	6A18021	0.40	10	ND	1	01/18/06	01/18/06	
Vinyl chloride	EPA 624	6A18021	0.26	0.50	ND	1	01/18/06	01/18/06	
Di-isopropyl Ether (DIPE)	EPA 624	6A18021	0.25	5.0	ND	1	01/18/06	01/18/06	
Xylenes, Total	EPA 624	6A18021	0.90	4.0	ND	1	01/18/06	01/18/06	
tert-Butanol (TBA)	EPA 624	6A18021	3.1	25	ND	1	01/18/06	01/18/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A18021	1.2	5.0	ND	1	01/18/06	01/18/06	
Surrogate: Dibromofluoromethane (80-120%)					104 %				
Surrogate: Toluene-d8 (80-120%)					103 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					96 %				

rev  
qual  
code

L

Level IV

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA1345 <Page 6 of 48>



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6A18021	0.28	1.0	ND	1	01/18/06	01/18/06	<i>rel qual</i> <i>qual code</i> L ↓
Bromodichloromethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
Bromoform	EPA 624	6A18021	0.32	5.0	ND	1	01/18/06	01/18/06	
Bromomethane	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	
Carbon tetrachloride	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
Chlorobenzene	EPA 624	6A18021	0.36	2.0	ND	1	01/18/06	01/18/06	
Chloroethane	EPA 624	6A18021	0.40	5.0	ND	1	01/18/06	01/18/06	
Chloroform	EPA 624	6A18021	0.33	2.0	ND	1	01/18/06	01/18/06	
Chloromethane	EPA 624	6A18021	0.30	5.0	ND	1	01/18/06	01/18/06	
Dibromochloromethane	EPA 624	6A18021	0.28	2.0	ND	1	01/18/06	01/18/06	
1,2-Dibromoethane (EDB)	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichlorobenzene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
1,3-Dichlorobenzene	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
1,4-Dichlorobenzene	EPA 624	6A18021	0.37	2.0	ND	1	01/18/06	01/18/06	
1,1-Dichloroethane	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloroethane	EPA 624	6A18021	0.28	0.50	ND	1	01/18/06	01/18/06	
1,1-Dichloroethene	EPA 624	6A18021	0.42	5.0	ND	1	01/18/06	01/18/06	
trans-1,2-Dichloroethene	EPA 624	6A18021	0.27	2.0	ND	1	01/18/06	01/18/06	
1,2-Dichloropropane	EPA 624	6A18021	0.35	2.0	ND	1	01/18/06	01/18/06	
cis-1,3-Dichloropropene	EPA 624	6A18021	0.22	2.0	ND	1	01/18/06	01/18/06	
trans-1,3-Dichloropropene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
Ethylbenzene	EPA 624	6A18021	0.25	2.0	ND	1	01/18/06	01/18/06	
Methylene chloride	EPA 624	6A18021	0.70	5.0	ND	1	01/18/06	01/18/06	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6A18021	0.32	5.0	ND	1	01/18/06	01/18/06	
1,1,2,2-Tetrachloroethane	EPA 624	6A18021	0.24	2.0	ND	1	01/18/06	01/18/06	
Tetrachloroethene	EPA 624	6A18021	0.32	2.0	ND	1	01/18/06	01/18/06	
Toluene	EPA 624	6A18021	0.36	2.0	ND	1	01/18/06	01/18/06	
1,1,1-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
1,1,2-Trichloroethane	EPA 624	6A18021	0.30	2.0	ND	1	01/18/06	01/18/06	
Trichloroethene	EPA 624	6A18021	0.26	2.0	ND	1	01/18/06	01/18/06	
Trichlorofluoromethane	EPA 624	6A18021	0.34	5.0	ND	1	01/18/06	01/18/06	
1,2,3-Trichloropropane	EPA 624	6A18021	0.40	10	ND	1	01/18/06	01/18/06	
Vinyl chloride	EPA 624	6A18021	0.26	0.50	ND	1	01/18/06	01/18/06	
Di-isopropyl Ether (DIPE)	EPA 624	6A18021	0.25	5.0	ND	1	01/18/06	01/18/06	
Xylenes, Total	EPA 624	6A18021	0.90	4.0	ND	1	01/18/06	01/18/06	
tert-Butanol (TBA)	EPA 624	6A18021	3.1	25	ND	1	01/18/06	01/18/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A18021	1.2	5.0	ND	1	01/18/06	01/18/06	
Surrogate: Dibromofluoromethane (80-120%)					103 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					91 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*Level IV*

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

IPA1345 <Page 7 of 48>



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Alfa Outfall 012 - Annual Report Number: IPA1345	Sampled: 01/17/06 Received: 01/17/06
--	---	---

**PURGEABLES-- GC/MS (EPA 624)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA1345-01 (Outfall 012 - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6A18021	4.6	50	ND	1	01/18/06	01/18/06	rel qual u
Acrylonitrile	EPA 624	6A18021	0.70	50	ND	1	01/18/06	01/18/06	rel qual u
2-Chloroethyl vinyl ether	EPA 624	6A18021	1.8	5.0	ND	1	01/18/06	01/18/06	rel qual u
Surrogate: Dibromofluoromethane (80-120%)					104 %				
Surrogate: Toluene-d8 (80-120%)					105 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					96 %				
<b>Sample ID: IPA1345-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6A18021	4.6	50	ND	1	01/18/06	01/18/06	rel qual u
Acrylonitrile	EPA 624	6A18021	0.70	50	ND	1	01/18/06	01/18/06	rel qual u
2-Chloroethyl vinyl ether	EPA 624	6A18021	1.8	5.0	ND	1	01/18/06	01/18/06	rel qual u
Surrogate: Dibromofluoromethane (80-120%)					103 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					91 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*Level III*

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>s</sup>  
12269 East Vassar Drive  
Aurora, CO 80014

Package ID B4WCP1  
Task Order 1261.001D.01  
SDG No. IPA1345

No. of Analyses 1

Laboratory Del Mar Analytical  
Reviewer P. Meeks  
Analysis/Method General Minerals & Perchlorate

Date: March 7, 2006  
Reviewer's Signature  
*P. Meeks*

<b>ACTION ITEMS<sup>a</sup></b>																									
1. Case Narrative Deficiencies	  																								
2. Out of Scope Analyses	  																								
3. Analyses Not Conducted	  																								
4. Missing Hardcopy Deliverables	  																								
5. Incorrect Hardcopy Deliverables	  																								
6. Deviations from Analysis	<table border="1"> <tr> <td>Protocol, e.g.,</td> <td>Qualifications applied for an LCS recovery and detects below the reporting limit.</td> </tr> <tr> <td>Holding Times</td> <td></td> </tr> <tr> <td>GC/MS Tune/Inst. Performance</td> <td></td> </tr> <tr> <td>Calibration</td> <td></td> </tr> <tr> <td>Method blanks</td> <td></td> </tr> <tr> <td>Surrogates</td> <td></td> </tr> <tr> <td>Matrix Spike/Dup LCS</td> <td></td> </tr> <tr> <td>Field QC</td> <td></td> </tr> <tr> <td>Internal Standard Performance</td> <td></td> </tr> <tr> <td>Compound Identification</td> <td></td> </tr> <tr> <td>Quantitation</td> <td></td> </tr> <tr> <td>System Performance</td> <td></td> </tr> </table>	Protocol, e.g.,	Qualifications applied for an LCS recovery and detects below the reporting limit.	Holding Times		GC/MS Tune/Inst. Performance		Calibration		Method blanks		Surrogates		Matrix Spike/Dup LCS		Field QC		Internal Standard Performance		Compound Identification		Quantitation		System Performance	
Protocol, e.g.,	Qualifications applied for an LCS recovery and detects below the reporting limit.																								
Holding Times																									
GC/MS Tune/Inst. Performance																									
Calibration																									
Method blanks																									
Surrogates																									
Matrix Spike/Dup LCS																									
Field QC																									
Internal Standard Performance																									
Compound Identification																									
Quantitation																									
System Performance																									
<b>COMMENTS<sup>b</sup></b>																									
<p><sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements.</p> <p><sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.</p>																									



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 012

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPA1345

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>x</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPA1345  
Project Manager: P. Costa  
Matrix: Water  
Analysis: General Minerals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: March 7, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 160.1, 160.2, 160.5, 180.1, 335.2, 350.2, 405.1, 413.1, 314.0, and 418.1* and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPA1345-01	Water	General Minerals

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . No preservation problems were noted by the laboratory. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and all analyses presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analysis. All samples were analyzed within the method-specified holding times. No qualifications were required.

### 2.2 CALIBRATION

For the applicable analyses, the initial calibration correlation coefficients were  $\geq 0.995$  and the ICV and CCV recoveries were within the control limits of 90-110%. For ammonia, no information for the titrant standardization was provided; therefore, as the LCS recovery was above the calibration control limit of 110%, ammonia detected in Outfall 012 was qualified as estimated, "J." no qualifications were required. No further qualifications were required.

### 2.3 BLANKS

There were no detects in the method blanks or CCBs associated with the sample analyses. Raw data was reviewed to verify the blank data. No qualifications were required.



## 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The reported LCS recoveries were within the laboratory-established control limits. No qualifications were required.

## 2.5 LABORATORY DUPLICATES

A duplicate analysis was performed on Outfall 012 for turbidity only. The RPD was within the laboratory-established control limit of  $\leq 20\%$ . No qualifications were required.

## 2.6 MATRIX SPIKES

No MS/MSD or matrix spike analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criteria. Method accuracy was assessed based on LCS results. No qualifications were required.

## 2.7 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. Analytes reported by the laboratory between the MDL and reporting limit were qualified as estimated, "J," and annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No further qualifications were required.

## 2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

### 2.8.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



# Del Mar Analytical

17461 Dehan Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	6A18057	0.80	4.0	ND	1	01/18/06	01/18/06	U

LEVEL IV

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*

IPA1345 <Page 17 of 48>



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06

Received: 01/17/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers				
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.													
Reporting Units: NTU													
Turbidity	EPA 180.1	6A18109	0.040	1.0	30	1	01/18/06	01/18/06	<table border="1"> <tr> <td>Rev</td> <td>Qual</td> </tr> <tr> <td></td> <td>Code</td> </tr> </table>	Rev	Qual		Code
Rev	Qual												
	Code												

LEVEL IV

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*

IPA1345 <Page 16 of 48>



# Del Mar Analytical

17461 Donnan Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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) 798-1620 FAX (702) 798-1621

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
Received: 01/17/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev Qual	Qual Code
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.										
Reporting Units: ml/hr										
Total Settleable Solids	EPA 160.5	6A18046	0.10	0.10	ND	1	01/18/06	01/18/06	U	

LEVEL IV

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*

IPA1345 <Page 15 of 48>



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

**TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1345-01 (Outfall 012 - Water)									
Reporting Units: mg/l									
Total Recoverable Hydrocarbons	EPA 418.1	6A24041	0.34	1.1	2.2	1.11	01/24/06	01/24/06	Rev Qual   Qual Code

LEVEL IV

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*

IPA1345 <Page 3 of 48>



# Del Mar Analytical

17461 Dorian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - Annual

Report Number: IPA1345

Sampled: 01/17/06  
 Received: 01/17/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev Qual	Qual Code
Sample ID: IPA1345-01 (Outfall 012 - Water) - cont.										
Reporting Units: mg/l										
Ammonia-N (Distilled)	EPA 350.2	6A20097	0.30	0.50	0.84	1	01/20/06	01/20/06	J	R
Biochemical Oxygen Demand	EPA 405.1	6A18043	0.59	2.0	1.9	1	01/18/06	01/23/06	J J	DNQ
Total Cyanide	EPA 335.2	6A23128	0.0022	0.0050	0.0043	1	01/23/06	01/24/06	J J	J
Oil & Grease	EPA 413.1	6A19047	0.90	4.8	ND	1	01/19/06	01/19/06	U	
Total Dissolved Solids	SM2540C	6A20090	10	10	260	1	01/20/06	01/20/06		
Total Suspended Solids	EPA 160.2	6A19101	10	10	24	1	01/19/06	01/19/06		

LEVEL IV

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*

IPA1345 <Page 14 of 48>

# **APPENDIX G**

## **Section 43**

Outfall 018, January 02, 2006

Del Mar Analytical Laboratory Report



LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project: Quarterly Outfall 018

Sampled: 01/02/06  
Received: 01/02/06  
Issued: 01/26/06 14:25

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 Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. 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 Del Mar Analytical 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: Insufficient sample volume was used in the dilutions for the BOD analysis. The result reported is an estimated value of the concentration.

LABORATORY ID	CLIENT ID	MATRIX
IPA0017-01	Outfall 018	Water
IPA0017-02	Trip Blank	Water

Reviewed By:

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager





Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06  
Received: 01/02/06

### CORRECTIVE ACTION REPORT

Department: Extractions

Date: 01/18/2006

Method: EPA 625

Matrix: Water

QC Batch: 6A09061

**Identification and Definition of Problem:**

The percent recovery for the "L2"-qualified analytes in the Blank Spike Duplicate sample was below QC acceptance limits.

**Determination of the Cause of the Problem:**

A definitive cause for the QC failure has not been determined.

**Corrective Action Taken:**

All results reported for affected analytes are potentially biased low and can be considered estimates only.

Quality Assurance Approval: \_\_\_\_\_

Thong Vu

Date: 01/24/2006 05:18 PM

**Del Mar Analytical, Irvine**  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06  
 Received: 01/02/06

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA0017-01 (Outfall 018 - Water)</b>									
Reporting Units: ug/l									
Benzene	EPA 624	6A06010	0.28	2.0	ND	1	01/06/06	01/06/06	
Carbon tetrachloride	EPA 624	6A06010	0.28	5.0	ND	1	01/06/06	01/06/06	
Chloroform	EPA 624	6A06010	0.33	2.0	ND	1	01/06/06	01/06/06	
1,1-Dichloroethane	EPA 624	6A06010	0.27	2.0	ND	1	01/06/06	01/06/06	
1,2-Dichloroethane	EPA 624	6A06010	0.28	2.0	ND	1	01/06/06	01/06/06	
1,1-Dichloroethene	EPA 624	6A06010	0.42	3.0	ND	1	01/06/06	01/06/06	
Ethylbenzene	EPA 624	6A06010	0.25	2.0	ND	1	01/06/06	01/06/06	
Tetrachloroethene	EPA 624	6A06010	0.32	2.0	ND	1	01/06/06	01/06/06	
Toluene	EPA 624	6A06010	0.36	2.0	ND	1	01/06/06	01/06/06	
1,1,1-Trichloroethane	EPA 624	6A06010	0.30	2.0	ND	1	01/06/06	01/06/06	
1,1,2-Trichloroethane	EPA 624	6A06010	0.30	2.0	ND	1	01/06/06	01/06/06	
Trichloroethene	EPA 624	6A06010	0.26	5.0	ND	1	01/06/06	01/06/06	
Trichlorofluoromethane	EPA 624	6A06010	0.34	5.0	ND	1	01/06/06	01/06/06	
Vinyl chloride	EPA 624	6A06010	0.26	5.0	ND	1	01/06/06	01/06/06	
Xylenes, Total	EPA 624	6A06010	0.52	4.0	ND	1	01/06/06	01/06/06	
Surrogate: Dibromofluoromethane (80-120%)					104 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					95 %				
<b>Sample ID: IPA0017-01RE1 (Outfall 018 - Water)</b>									
Reporting Units: ug/l									
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A09010	1.2	5.0	ND	1	01/09/06	01/09/06	HS
Surrogate: Dibromofluoromethane (80-120%)					109 %				
Surrogate: Toluene-d8 (80-120%)					106 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					94 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA0017-02 (Trip Blank - Water)</b>									
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A05005	1.2	5.0	ND	1	01/05/06	01/05/06	
Carbon tetrachloride	EPA 624	6A05005	0.28	5.0	ND	1	01/05/06	01/05/06	
Chloroform	EPA 624	6A05005	0.33	2.0	ND	1	01/05/06	01/05/06	
1,1-Dichloroethane	EPA 624	6A05005	0.27	2.0	ND	1	01/05/06	01/05/06	
1,2-Dichloroethane	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	
1,1-Dichloroethene	EPA 624	6A05005	0.42	3.0	ND	1	01/05/06	01/05/06	
Ethylbenzene	EPA 624	6A05005	0.25	2.0	ND	1	01/05/06	01/05/06	
Tetrachloroethene	EPA 624	6A05005	0.32	2.0	ND	1	01/05/06	01/05/06	
Toluene	EPA 624	6A05005	0.36	2.0	ND	1	01/05/06	01/05/06	
1,1,1-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06	
1,1,2-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06	
Trichloroethene	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06	
Trichlorofluoromethane	EPA 624	6A05005	0.34	5.0	ND	1	01/05/06	01/05/06	
Vinyl chloride	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06	
Xylenes, Total	EPA 624	6A05005	0.52	4.0	ND	1	01/05/06	01/05/06	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					105 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					103 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					100 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06  
 Received: 01/02/06

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA0017-01 (Outfall 018 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Bis(2-ethylhexyl)phthalate	EPA 625	6A09061	1.2	5.3	2.7	1.05	01/09/06	01/12/06	B, J
2,4-Dinitrotoluene	EPA 625	6A09061	0.24	9.5	ND	1.05	01/09/06	01/12/06	L2
N-Nitrosodimethylamine	EPA 625	6A09061	0.23	8.4	ND	1.05	01/09/06	01/12/06	
Pentachlorophenol	EPA 625	6A09061	0.82	8.4	ND	1.05	01/09/06	01/12/06	L2
2,4,6-Trichlorophenol	EPA 625	6A09061	0.11	6.3	ND	1.05	01/09/06	01/12/06	
<i>Surrogate: 2-Fluorophenol (30-120%)</i>					55 %				
<i>Surrogate: Phenol-d6 (35-120%)</i>					70 %				
<i>Surrogate: 2,4,6-Tribromophenol (45-120%)</i>					80 %				
<i>Surrogate: Nitrobenzene-d5 (45-120%)</i>					76 %				
<i>Surrogate: 2-Fluorobiphenyl (45-120%)</i>					74 %				
<i>Surrogate: Terphenyl-d14 (45-120%)</i>					78 %				

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 018 Report Number: IPA0017	Sampled: 01/02/06 Received: 01/02/06
--	---	---

## ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA0017-01 (Outfall 018 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
alpha-BHC	EPA 608	6A06049	0.0010	0.010	ND	1.03	01/06/06	01/06/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					72 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					67 %				

**Del Mar Analytical, Irvine**  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06  
 Received: 01/02/06

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA0017-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: ug/l									
Copper	EPA 200.8	6A04084	0.49	2.0	6.1	1	01/04/06	01/05/06	
Lead	EPA 200.8	6A04084	0.13	1.0	3.4	1	01/04/06	01/05/06	
Mercury	EPA 245.1	6A03072	0.063	0.20	ND	1	01/03/06	01/03/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA0017-01 (Outfall 018 - Water) - cont.</b>									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A05098	0.30	0.50	ND	1	01/05/06	01/05/06	
Biochemical Oxygen Demand	EPA 405.1	6A03056	0.59	2.0	4.0	1	01/03/06	01/08/06	K
Chloride	EPA 300.0	6A03053	0.26	0.50	22	1	01/03/06	01/03/06	
Nitrate/Nitrite-N	EPA 300.0	6A03053	0.080	0.15	1.2	1	01/03/06	01/03/06	
Oil & Grease	EPA 413.1	6A06048	0.90	4.8	2.3	1	01/06/06	01/06/06	J
Sulfate	EPA 300.0	6A03053	0.18	0.50	52	1	01/03/06	01/03/06	
Surfactants (MBAS)	EPA 425.1	6A03114	0.044	0.10	0.096	1	01/03/06	01/03/06	J
Total Dissolved Solids	EPA 160.1	6A03093	10	10	250	1	01/03/06	01/03/06	
Total Suspended Solids	EPA 160.2	6A05110	10	10	49	1	01/05/06	01/05/06	
<b>Sample ID: IPA0017-01 (Outfall 018 - Water)</b>									
Reporting Units: ml/hr									
Total Settleable Solids	EPA 160.5	6A03069	0.10	0.10	ND	1	01/03/06	01/03/06	
<b>Sample ID: IPA0017-01 (Outfall 018 - Water)</b>									
Reporting Units: NTU									
Turbidity	EPA 180.1	6A04071	0.20	5.0	56	5	01/04/06	01/04/06	
<b>Sample ID: IPA0017-01 (Outfall 018 - Water)</b>									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6A05082	2.2	5.0	ND	1	01/05/06	01/05/06	
Perchlorate	EPA 314.0	6A03076	0.80	4.0	ND	1	01/03/06	01/03/06	
<b>Sample ID: IPA0017-01 (Outfall 018 - Water)</b>									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6A03095	1.0	1.0	400	1	01/03/06	01/03/06	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

## SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
<b>Sample ID: Outfall 018 (IPA0017-01) - Water</b>					
EPA 160.5	2	01/02/2006 09:00	01/02/2006 13:30	01/03/2006 09:17	01/03/2006 11:00
EPA 180.1	2	01/02/2006 09:00	01/02/2006 13:30	01/04/2006 08:00	01/04/2006 08:50
EPA 300.0	2	01/02/2006 09:00	01/02/2006 13:30	01/03/2006 09:00	01/03/2006 09:26
EPA 405.1	2	01/02/2006 09:00	01/02/2006 13:30	01/03/2006 08:22	01/08/2006 11:00
EPA 425.1	2	01/02/2006 09:00	01/02/2006 13:30	01/03/2006 20:47	01/03/2006 22:46

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*





# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (658) 505-8596 FAX (658) 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A05005 Extracted: 01/05/06</b>										
<b>Blank Analyzed: 01/05/2006 (6A05005-BLK1)</b>										
Benzene	ND	2.0	0.28	ug/l						
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l						
Carbon tetrachloride	ND	5.0	0.28	ug/l						
Chloroform	ND	2.0	0.33	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	3.0	0.42	ug/l						
Ethylbenzene	ND	2.0	0.25	ug/l						
Tetrachloroethene	ND	2.0	0.32	ug/l						
Toluene	ND	2.0	0.36	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	5.0	0.26	ug/l						
Trichlorofluoromethane	ND	5.0	0.34	ug/l						
Vinyl chloride	ND	5.0	0.26	ug/l						
Xylenes, Total	ND	4.0	0.52	ug/l						
Surrogate: Dibromofluoromethane	26.1			ug/l	25.0		104	80-120		
Surrogate: Toluene-d8	25.8			ug/l	25.0		103	80-120		
Surrogate: 4-Bromofluorobenzene	25.2			ug/l	25.0		101	80-120		
<b>LCS Analyzed: 01/05/2006 (6A05005-BS1)</b>										
Benzene	24.6	2.0	0.28	ug/l	25.0		98	65-120		
Carbon tetrachloride	25.1	5.0	0.28	ug/l	25.0		100	65-140		
Chloroform	24.2	2.0	0.33	ug/l	25.0		97	65-130		
1,1-Dichloroethane	24.4	2.0	0.27	ug/l	25.0		98	65-130		
1,2-Dichloroethane	23.3	2.0	0.28	ug/l	25.0		93	60-140		
1,1-Dichloroethene	23.8	3.0	0.42	ug/l	25.0		95	70-130		
Ethylbenzene	25.9	2.0	0.25	ug/l	25.0		104	70-125		
Tetrachloroethene	24.3	2.0	0.32	ug/l	25.0		97	65-125		
Toluene	24.1	2.0	0.36	ug/l	25.0		96	70-125		
1,1,1-Trichloroethane	24.5	2.0	0.30	ug/l	25.0		98	65-135		
1,1,2-Trichloroethane	22.1	2.0	0.30	ug/l	25.0		88	65-125		
Trichloroethene	25.4	5.0	0.26	ug/l	25.0		102	70-125		
Trichlorofluoromethane	20.5	5.0	0.34	ug/l	25.0		82	60-140		
Vinyl chloride	19.4	5.0	0.26	ug/l	25.0		78	50-130		
Surrogate: Dibromofluoromethane	26.1			ug/l	25.0		104	80-120		

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (619) 505-8596 FAX (619) 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A05005 Extracted: 01/05/06</b>											
<b>LCS Analyzed: 01/05/2006 (6A05005-BS1)</b>											
Surrogate: Toluene-d8	26.0			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	25.9			ug/l	25.0		104	80-120			
<b>Matrix Spike Analyzed: 01/05/2006 (6A05005-MS1)</b>											
<b>Source: IPA0009-01</b>											
Benzene	22.4	2.0	0.28	ug/l	25.0	ND	90	60-125			
Carbon tetrachloride	23.5	5.0	0.28	ug/l	25.0	ND	94	65-140			
Chloroform	23.1	2.0	0.33	ug/l	25.0	ND	92	65-135			
1,1-Dichloroethane	23.0	2.0	0.27	ug/l	25.0	ND	92	60-130			
1,2-Dichloroethane	21.2	2.0	0.28	ug/l	25.0	ND	85	60-140			
1,1-Dichloroethene	22.2	3.0	0.42	ug/l	25.0	ND	89	60-135			
Ethylbenzene	24.6	2.0	0.25	ug/l	25.0	ND	98	65-130			
Tetrachloroethene	22.5	2.0	0.32	ug/l	25.0	ND	90	60-130			
Toluene	22.1	2.0	0.36	ug/l	25.0	ND	88	65-125			
1,1,1-Trichloroethane	23.6	2.0	0.30	ug/l	25.0	ND	94	65-140			
1,1,2-Trichloroethane	19.7	2.0	0.30	ug/l	25.0	ND	79	60-130			
Trichloroethene	22.7	5.0	0.26	ug/l	25.0	ND	91	60-125			
Trichlorofluoromethane	20.0	5.0	0.34	ug/l	25.0	ND	80	55-145			
Vinyl chloride	18.3	5.0	0.26	ug/l	25.0	ND	73	40-135			
Surrogate: Dibromofluoromethane	27.3			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	26.1			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	26.8			ug/l	25.0		107	80-120			
<b>Matrix Spike Dup Analyzed: 01/05/2006 (6A05005-MSD1)</b>											
<b>Source: IPA0009-01</b>											
Benzene	22.0	2.0	0.28	ug/l	25.0	ND	88	60-125	2	20	
Carbon tetrachloride	22.4	5.0	0.28	ug/l	25.0	ND	90	65-140	5	25	
Chloroform	22.0	2.0	0.33	ug/l	25.0	ND	88	65-135	5	20	
1,1-Dichloroethane	22.0	2.0	0.27	ug/l	25.0	ND	88	60-130	4	20	
1,2-Dichloroethane	20.5	2.0	0.28	ug/l	25.0	ND	82	60-140	3	20	
1,1-Dichloroethene	21.5	3.0	0.42	ug/l	25.0	ND	86	60-135	3	20	
Ethylbenzene	23.5	2.0	0.25	ug/l	25.0	ND	94	65-130	5	20	
Tetrachloroethene	21.7	2.0	0.32	ug/l	25.0	ND	87	60-130	4	20	
Toluene	21.9	2.0	0.36	ug/l	25.0	ND	88	65-125	1	20	
1,1,1-Trichloroethane	22.2	2.0	0.30	ug/l	25.0	ND	89	65-140	6	20	
1,1,2-Trichloroethane	20.1	2.0	0.30	ug/l	25.0	ND	80	60-130	2	25	
Trichloroethene	21.6	5.0	0.26	ug/l	25.0	ND	86	60-125	5	20	
Trichlorofluoromethane	18.4	5.0	0.34	ug/l	25.0	ND	74	55-145	8	25	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A05005 Extracted: 01/05/06</b>											
<b>Matrix Spike Dup Analyzed: 01/05/2006 (6A05005-MSD1)</b>						<b>Source: IPA0009-01</b>					
Vinyl chloride	17.3	5.0	0.26	ug/l	25.0	ND	69	40-135	6	30	
Surrogate: Dibromofluoromethane	26.6			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.2			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	26.2			ug/l	25.0		105	80-120			
<b>Batch: 6A06010 Extracted: 01/06/06</b>											
<b>Blank Analyzed: 01/06/2006 (6A06010-BLK1)</b>											
Benzene	ND	2.0	0.28	ug/l							
Carbon tetrachloride	ND	5.0	0.28	ug/l							
Chloroform	ND	2.0	0.33	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	3.0	0.42	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	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	5.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Vinyl chloride	ND	5.0	0.26	ug/l							
Xylenes, Total	ND	4.0	0.52	ug/l							
Surrogate: Dibromofluoromethane	25.4			ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	26.3			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	24.0			ug/l	25.0		96	80-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A06010 Extracted: 01/06/06</b>											
<b>LCS Analyzed: 01/06/2006 (6A06010-BS1)</b>											
Benzene	25.8	2.0	0.28	ug/l	25.0		103	65-120			
Carbon tetrachloride	23.2	5.0	0.28	ug/l	25.0		93	65-140			
Chloroform	24.8	2.0	0.33	ug/l	25.0		99	65-130			
1,1-Dichloroethane	24.8	2.0	0.27	ug/l	25.0		99	65-130			
1,2-Dichloroethane	22.3	2.0	0.28	ug/l	25.0		89	60-140			
1,1-Dichloroethene	25.5	3.0	0.42	ug/l	25.0		102	70-130			
Ethylbenzene	26.5	2.0	0.25	ug/l	25.0		106	70-125			
Tetrachloroethene	24.3	2.0	0.32	ug/l	25.0		97	65-125			
Toluene	25.9	2.0	0.36	ug/l	25.0		104	70-125			
1,1,1-Trichloroethane	23.3	2.0	0.30	ug/l	25.0		93	65-135			
1,1,2-Trichloroethane	25.2	2.0	0.30	ug/l	25.0		101	65-125			
Trichloroethene	24.5	5.0	0.26	ug/l	25.0		98	70-125			
Trichlorofluoromethane	22.2	5.0	0.34	ug/l	25.0		89	60-140			
Vinyl chloride	20.6	5.0	0.26	ug/l	25.0		82	50-130			
Surrogate: Dibromofluoromethane	26.0			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	26.0			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	24.8			ug/l	25.0		99	80-120			

### Matrix Spike Analyzed: 01/06/2006 (6A06010-MS1)

Source: IOL2627-04

Benzene	26.8	2.0	0.28	ug/l	25.0	ND	107	60-125			
Carbon tetrachloride	23.8	5.0	0.28	ug/l	25.0	ND	95	65-140			
Chloroform	25.8	2.0	0.33	ug/l	25.0	ND	103	65-135			
1,1-Dichloroethane	26.0	2.0	0.27	ug/l	25.0	ND	104	60-130			
1,2-Dichloroethane	23.6	2.0	0.28	ug/l	25.0	ND	94	60-140			
1,1-Dichloroethene	25.8	3.0	0.42	ug/l	25.0	ND	103	60-135			
Ethylbenzene	34.4	2.0	0.25	ug/l	25.0	7.7	107	65-130			
Tetrachloroethene	24.9	2.0	0.32	ug/l	25.0	ND	100	60-130			
Toluene	27.4	2.0	0.36	ug/l	25.0	0.38	108	65-125			
1,1,1-Trichloroethane	24.4	2.0	0.30	ug/l	25.0	ND	98	65-140			
1,1,2-Trichloroethane	26.8	2.0	0.30	ug/l	25.0	ND	107	60-130			
Trichloroethene	25.1	5.0	0.26	ug/l	25.0	ND	100	60-125			
Trichlorofluoromethane	21.8	5.0	0.34	ug/l	25.0	ND	87	55-145			
Vinyl chloride	19.4	5.0	0.26	ug/l	25.0	ND	78	40-135			
Surrogate: Dibromofluoromethane	26.1			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	26.2			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	24.8			ug/l	25.0		99	80-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06  
 Received: 01/02/06

**METHOD BLANK/QC DATA**

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A06010 Extracted: 01/06/06</b>											
<b>Matrix Spike Dup Analyzed: 01/06/2006 (6A06010-MSD1)</b>						<b>Source: IOL2627-04</b>					
Benzene	25.9	2.0	0.28	ug/l	25.0	ND	104	60-125	3	20	
Carbon tetrachloride	23.0	5.0	0.28	ug/l	25.0	ND	92	65-140	3	25	
Chloroform	24.5	2.0	0.33	ug/l	25.0	ND	98	65-135	5	20	
1,1-Dichloroethane	24.6	2.0	0.27	ug/l	25.0	ND	98	60-130	6	20	
1,2-Dichloroethane	21.6	2.0	0.28	ug/l	25.0	ND	86	60-140	9	20	
1,1-Dichloroethene	24.4	3.0	0.42	ug/l	25.0	ND	98	60-135	6	20	
Ethylbenzene	33.3	2.0	0.25	ug/l	25.0	7.7	102	65-130	3	20	
Tetrachloroethene	24.6	2.0	0.32	ug/l	25.0	ND	98	60-130	1	20	
Toluene	26.6	2.0	0.36	ug/l	25.0	0.38	105	65-125	3	20	
1,1,1-Trichloroethane	23.4	2.0	0.30	ug/l	25.0	ND	94	65-140	4	20	
1,1,2-Trichloroethane	23.9	2.0	0.30	ug/l	25.0	ND	96	60-130	11	25	
Trichloroethene	24.5	5.0	0.26	ug/l	25.0	ND	98	60-125	2	20	
Trichlorofluoromethane	20.9	5.0	0.34	ug/l	25.0	ND	84	55-145	4	25	
Vinyl chloride	19.2	5.0	0.26	ug/l	25.0	ND	77	40-135	1	30	
Surrogate: Dibromofluoromethane	25.4			ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	26.2			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	24.2			ug/l	25.0		97	80-120			

**Batch: 6A09010 Extracted: 01/09/06**

**Blank Analyzed: 01/09/2006 (6A09010-BLKI)**

Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l							
Surrogate: Dibromofluoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.0			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	23.6			ug/l	25.0		94	80-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018  
 Report Number: IPA0017

Sampled: 01/02/06  
 Received: 01/02/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A09061 Extracted: 01/09/06</b>										
<b>Blank Analyzed: 01/11/2006 (6A09061-BLK1)</b>										
Bis(2-ethylhexyl)phthalate	2.20	5.0	1.1	ug/l						J
2,4-Dinitrotoluene	ND	9.0	0.23	ug/l						
N-Nitrosodimethylamine	ND	8.0	0.22	ug/l						
Pentachlorophenol	ND	8.0	0.78	ug/l						
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l						
Surrogate: 2-Fluorophenol	12.7			ug/l	20.0		64	30-120		
Surrogate: Phenol-d6	13.4			ug/l	20.0		77	35-120		
Surrogate: 2,4,6-Tribromophenol	17.5			ug/l	20.0		88	45-120		
Surrogate: Nitrobenzene-d5	8.74			ug/l	10.0		87	45-120		
Surrogate: 2-Fluorobiphenyl	8.20			ug/l	10.0		82	45-120		
Surrogate: Terphenyl-d14	7.84			ug/l	10.0		78	45-120		
<b>LCS Analyzed: 01/11/2006 (6A09061-BS1)</b>										
Bis(2-ethylhexyl)phthalate	9.16	5.0	1.1	ug/l	10.0		92	60-130		M-NR1
2,4-Dinitrotoluene	7.54	9.0	0.23	ug/l	10.0		75	60-120		J
N-Nitrosodimethylamine	6.72	8.0	0.22	ug/l	10.0		67	40-120		J
Pentachlorophenol	10.3	8.0	0.78	ug/l	10.0		103	50-120		
2,4,6-Trichlorophenol	7.32	6.0	0.10	ug/l	10.0		73	60-120		
Surrogate: 2-Fluorophenol	11.7			ug/l	20.0		58	30-120		
Surrogate: Phenol-d6	13.8			ug/l	20.0		69	35-120		
Surrogate: 2,4,6-Tribromophenol	16.3			ug/l	20.0		82	45-120		
Surrogate: Nitrobenzene-d5	7.76			ug/l	10.0		78	45-120		
Surrogate: 2-Fluorobiphenyl	7.22			ug/l	10.0		72	45-120		
Surrogate: Terphenyl-d14	6.74			ug/l	10.0		67	45-120		
<b>LCS Dup Analyzed: 01/11/2006 (6A09061-BSD1)</b>										
Bis(2-ethylhexyl)phthalate	7.56	5.0	1.1	ug/l	10.0		76	60-130	19	20
2,4-Dinitrotoluene	5.86	9.0	0.23	ug/l	10.0		59	60-120	25	20
N-Nitrosodimethylamine	5.38	8.0	0.22	ug/l	10.0		54	40-120	22	20
Pentachlorophenol	3.02	8.0	0.78	ug/l	10.0		30	50-120	109	25
2,4,6-Trichlorophenol	6.24	6.0	0.10	ug/l	10.0		62	60-120	16	20
Surrogate: 2-Fluorophenol	9.70			ug/l	20.0		48	30-120		
Surrogate: Phenol-d6	11.4			ug/l	20.0		57	35-120		
Surrogate: 2,4,6-Tribromophenol	14.0			ug/l	20.0		70	45-120		
Surrogate: Nitrobenzene-d5	6.04			ug/l	10.0		60	45-120		
Surrogate: 2-Fluorobiphenyl	5.76			ug/l	10.0		58	45-120		

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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) 503-8596 FAX (858) 503-9689  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

### METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting			Spike Level	Source		%REC		RPD	RPD Limit	Data Qualifiers
		Limit	MDL	Units		Result	%REC	Limits				
<b>Batch: 6A09061 Extracted: 01/09/06</b>												
<b>LCS Dup Analyzed: 01/11/2006 (6A09061-BSD1)</b>												
Surrogate: Terphenyl-d14	5.30			ug/l	10.0		53		45-120			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 018  Report Number: IPA0017	Sampled: 01/02/06 Received: 01/02/06
--	---	---

**METHOD BLANK/QC DATA**

**ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A06049 Extracted: 01/06/06</b>											
<b>Blank Analyzed: 01/06/2006 (6A06049-BLK1)</b>											
alpha-BHC	ND	0.010	0.0010	ug/l							
Surrogate: Decachlorobiphenyl	0.399			ug/l	0.500		80	45-120			
Surrogate: Tetrachloro-m-xylene	0.383			ug/l	0.500		77	35-115			
<b>LCS Analyzed: 01/06/2006 (6A06049-BS1)</b>											
alpha-BHC	0.438	0.010	0.0010	ug/l	0.500		88	45-120			M-NR1
Surrogate: Decachlorobiphenyl	0.423			ug/l	0.500		85	45-120			
Surrogate: Tetrachloro-m-xylene	0.395			ug/l	0.500		79	35-115			
<b>LCS Dup Analyzed: 01/09/2006 (6A06049-BSD1)</b>											
alpha-BHC	0.427	0.010	0.0010	ug/l	0.500		85	45-120	3	30	
Surrogate: Decachlorobiphenyl	0.422			ug/l	0.500		84	45-120			
Surrogate: Tetrachloro-m-xylene	0.379			ug/l	0.500		76	35-115			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (658) 505-8596 FAX (658) 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A03072 Extracted: 01/03/06</b>											
<b>Blank Analyzed: 01/03/2006 (6A03072-BLK1)</b>											
Mercury	ND	0.20	0.063	ug/l							
<b>LCS Analyzed: 01/03/2006 (6A03072-BS1)</b>											
Mercury	7.95	0.20	0.063	ug/l	8.00		99	85-115			
<b>Matrix Spike Analyzed: 01/03/2006 (6A03072-MS1)</b>											
Mercury	7.95	0.20	0.063	ug/l	8.00	ND	99	70-130			
<b>Matrix Spike Dup Analyzed: 01/03/2006 (6A03072-MSD1)</b>											
Mercury	8.00	0.20	0.063	ug/l	8.00	ND	100	70-130	1	20	
<b>Batch: 6A04084 Extracted: 01/04/06</b>											
<b>Blank Analyzed: 01/05/2006 (6A04084-BLK1)</b>											
Copper	0.321	2.0	0.25	ug/l							J
Lead	ND	1.0	0.040	ug/l							
<b>LCS Analyzed: 01/05/2006 (6A04084-BS1)</b>											
Copper	80.8	2.0	0.25	ug/l	80.0		101	85-115			
Lead	78.3	1.0	0.040	ug/l	80.0		98	85-115			
<b>Matrix Spike Analyzed: 01/05/2006 (6A04084-MS1)</b>											
Copper	102	2.0	0.25	ug/l	80.0	23	99	70-130			
Lead	84.3	1.0	0.040	ug/l	80.0	2.7	102	70-130			
<b>Matrix Spike Analyzed: 01/05/2006 (6A04084-MS2)</b>											
Copper	101	2.0	0.25	ug/l	80.0	18	104	70-130			
Lead	87.5	1.0	0.040	ug/l	80.0	1.8	107	70-130			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 018  Report Number: IPA0017	Sampled: 01/02/06 Received: 01/02/06
--	---	---

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A04084 Extracted: 01/04/06</b>											
<b>Matrix Spike Dup Analyzed: 01/05/2006 (6A04084-MSD1)</b>						<b>Source: IOL2694-49</b>					
Copper	101	2.0	0.25	ug/l	80.0	23	98	70-130	1	20	
Lead	83.9	1.0	0.040	ug/l	80.0	2.7	102	70-130	1	20	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (658) 505-8596 FAX (658) 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A03053 Extracted: 01/03/06</b>											
<b>Blank Analyzed: 01/03/2006 (6A03053-BLK1)</b>											
Chloride	ND	0.50	0.26	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.18	mg/l							
<b>LCS Analyzed: 01/03/2006 (6A03053-BS1)</b>											
Chloride	4.97	0.50	0.26	mg/l	5.00		99	90-110			
Sulfate	10.2	0.50	0.18	mg/l	10.0		102	90-110			
<b>Matrix Spike Analyzed: 01/03/2006 (6A03053-MS1) Source: IPA0016-01</b>											
Chloride	15.1	0.50	0.26	mg/l	5.00	10	102	80-120			
Sulfate	17.5	0.50	0.18	mg/l	10.0	7.2	103	80-120			
<b>Matrix Spike Dup Analyzed: 01/03/2006 (6A03053-MSD1) Source: IPA0016-01</b>											
Chloride	15.1	0.50	0.26	mg/l	5.00	10	102	80-120	0	20	
Sulfate	17.4	0.50	0.18	mg/l	10.0	7.2	102	80-120	1	20	
<b>Batch: 6A03056 Extracted: 01/03/06</b>											
<b>Blank Analyzed: 01/08/2006 (6A03056-BLK1)</b>											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
<b>LCS Analyzed: 01/08/2006 (6A03056-BS1)</b>											
Biochemical Oxygen Demand	208	100	30	mg/l	198		105	85-115			
<b>LCS Dup Analyzed: 01/08/2006 (6A03056-BSD1)</b>											
Biochemical Oxygen Demand	206	100	30	mg/l	198		104	85-115	1	20	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (658) 505-8596 FAX (658) 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 6A03076 Extracted: 01/03/06</u></b>											
<b>Blank Analyzed: 01/03/2006 (6A03076-BLK1)</b>											
Perchlorate	ND	4.0	0.80	ug/l							
<b>LCS Analyzed: 01/03/2006 (6A03076-BS1)</b>											
Perchlorate	49.4	4.0	0.80	ug/l	50.0		99	85-115			
<b>Matrix Spike Analyzed: 01/03/2006 (6A03076-MS1)</b>											
Perchlorate	50.5	4.0	0.80	ug/l	50.0	ND	101	80-120			
<b>Matrix Spike Dup Analyzed: 01/03/2006 (6A03076-MSD1)</b>											
Perchlorate	50.2	4.0	0.80	ug/l	50.0	ND	100	80-120	1	20	
<b><u>Batch: 6A03093 Extracted: 01/03/06</u></b>											
<b>Blank Analyzed: 01/03/2006 (6A03093-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/03/2006 (6A03093-BS1)</b>											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
<b>Duplicate Analyzed: 01/03/2006 (6A03093-DUP1)</b>											
Total Dissolved Solids	981	10	10	mg/l		980			0	10	
<b><u>Batch: 6A03095 Extracted: 01/03/06</u></b>											
<b>Duplicate Analyzed: 01/03/2006 (6A03095-DUP1)</b>											
Specific Conductance	920	1.0	1.0	umhos/cm		890			3	5	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06  
 Received: 01/02/06

**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A03114 Extracted: 01/03/06</b>											
<b>Blank Analyzed: 01/03/2006 (6A03114-BLK1)</b>											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
<b>LCS Analyzed: 01/03/2006 (6A03114-BS1)</b>											
Surfactants (MBAS)	0.275	0.10	0.044	mg/l	0.250		110	90-110			
<b>Matrix Spike Analyzed: 01/03/2006 (6A03114-MS1)</b>											
Surfactants (MBAS)	0.377	0.10	0.044	mg/l	0.250	0.096	112	50-125			
<b>Matrix Spike Dup Analyzed: 01/03/2006 (6A03114-MSD1)</b>											
Surfactants (MBAS)	0.342	0.10	0.044	mg/l	0.250	0.096	98	50-125	10	20	
<b>Batch: 6A04071 Extracted: 01/04/06</b>											
<b>Blank Analyzed: 01/04/2006 (6A04071-BLK1)</b>											
Turbidity	ND	1.0	0.040	NTU							
<b>Duplicate Analyzed: 01/04/2006 (6A04071-DUP1)</b>											
Turbidity	55.5	5.0	0.20	NTU		56			1	20	
<b>Batch: 6A05082 Extracted: 01/05/06</b>											
<b>Blank Analyzed: 01/05/2006 (6A05082-BLK1)</b>											
Total Cyanide	ND	5.0	2.2	ug/l							
<b>LCS Analyzed: 01/05/2006 (6A05082-BS1)</b>											
Total Cyanide	190	5.0	2.2	ug/l	200		95	90-110			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018  
 Report Number: IPA0017

Sampled: 01/02/06  
 Received: 01/02/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 6A05082 Extracted: 01/05/06</u></b>											
<b>Matrix Spike Analyzed: 01/05/2006 (6A05082-MS1)</b>					<b>Source: IPA0250-01</b>						
Total Cyanide	221	5.0	2.2	ug/l	200	97	62	70-115			M8
<b>Matrix Spike Dup Analyzed: 01/05/2006 (6A05082-MSD1)</b>					<b>Source: IPA0250-01</b>						
Total Cyanide	225	5.0	2.2	ug/l	200	97	64	70-115	2	15	M8
<b><u>Batch: 6A05098 Extracted: 01/05/06</u></b>											
<b>Blank Analyzed: 01/05/2006 (6A05098-BLK1)</b>											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
<b>LCS Analyzed: 01/05/2006 (6A05098-BS1)</b>											
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0		109	80-115			
<b>Matrix Spike Analyzed: 01/05/2006 (6A05098-MS1)</b>					<b>Source: IOL2366-01</b>						
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	ND	115	70-120			
<b>Matrix Spike Dup Analyzed: 01/05/2006 (6A05098-MSD1)</b>					<b>Source: IOL2366-01</b>						
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0	ND	112	70-120	3	15	
<b><u>Batch: 6A05110 Extracted: 01/05/06</u></b>											
<b>Blank Analyzed: 01/05/2006 (6A05110-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 01/05/2006 (6A05110-BS1)</b>											
Total Suspended Solids	965	10	10	mg/l	1000		96	85-115			

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06  
 Received: 01/02/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6A05110 Extracted: 01/05/06</b>											
<b>Duplicate Analyzed: 01/05/2006 (6A05110-DUP1)</b>						<b>Source: IPA0025-01</b>					
Total Suspended Solids	382	10	10	mg/l		380			1	10	
<b>Batch: 6A06048 Extracted: 01/06/06</b>											
<b>Blank Analyzed: 01/06/2006 (6A06048-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							
<b>LCS Analyzed: 01/06/2006 (6A06048-BS1)</b>											
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120			M-NR1
<b>LCS Dup Analyzed: 01/06/2006 (6A06048-BSD1)</b>											
Oil & Grease	19.6	5.0	0.94	mg/l	20.0		98	65-120	2	20	

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

### DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- HS** HS = Sample container contained headspace.
- 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.
- K** The sample dilutions set-up for the BOD analysis did not meet the oxygen depletion criteria of at least 2 mg/l. Therefore the reported result is an estimated value only.
- L2** Laboratory Control Sample recovery was below method control limits.
- M8** The MS and/or MSD were below the acceptance limits. See Blank Spike (LCS).
- M-NR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- R-2** The RPD exceeded the method control limit.
- R-7** LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical, Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*





17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06  
 Received: 01/02/06

### Certification Summary

#### Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 425.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X

*Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at [www.dmalabs.com](http://www.dmalabs.com).*

#### Subcontracted Laboratories

**Alta Analytical** NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta

Samples: IPA0017-01

Analysis Performed: EDD + Level 4

Samples: IPA0017-01

**Del Mar Analytical, Irvine**  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*

CHAIN OF CUSTODY FORM

Client Name/Address: MWH Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project: Boeing-SSFL NPDES Routine Outfall 018 R-2 Spillway		Project Manager: Bronwyn Kelly		Phone Number: (626) 568-6691		Fax Number: (626) 568-6515		Sampler: Rick Brown		Field readings: Temp = 57.7 pH = 7.26											
Sample Description		Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Buttle #	ANALYSIS REQUIRED					Comments										
Outfall 018	W	Poly-1L	1	1-2-06	HNO3	1A		Total Recoverable Metals: X	Settleable Solids	VOCs 624 + xylenes from	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5(20 degrees C)	Surfactants (MBAS)	Cl, SO4, NO3+NO2-N, Perchlorate T, Free Cl	Turbidity, TDS, TSS, Conductivity	Ammonia-N	2,4,6 Trichlorophenol, 2,4 Dinitrotoluene, Bis(2-ethylhexyl)phthalate, NDMA, Pentachlorophenol (EPA 625)				
Outfall 018-Dup	W	Poly-1L	1		HNO3	1B		X															
Outfall 018	W	Poly-1L	1		None	2																	
Outfall 018	W	VOAs	3		HCl	3A, 3B, 3C																	
Outfall 018	W	1L Amber	2		None	4A, 4B				X													
Outfall 018	W	1L Amber	2		HCl	5A, 5B					X												
Outfall 018	W	Poly-500 ml	1		NaOH	6																	
Outfall 018	W	Poly-1 L	1		None	7					X												
Outfall 018	W	Poly-500 ml	2		None	8A, 8B								X									
Outfall 018	W	Poly-500 ml	2		None	9A, 9B										X							
Outfall 018	W	Poly-500 ml	2		None	10A, 10B																	
Outfall 018	W	Poly-500 ml	1		H2SO4	11																	
Outfall 018	W	1L Amber	2		None	12A, 12B																	
Outfall 018	W	1L Amber	2		None	13A, 13B																	
Trip Blank	W	VOAs	3		HCl	15A, 15B, 15C																	
Relinquished By	Rick Brown		Date/Time	1-2-06	10:00	Received By	Rick Brown		Date/Time	1-2-06	10:00	Turn around Time: (check)		24 Hours	48 Hours	72 Hours	Perchlorate Only 72 Hours	Months Only 72 Hours	Sample Integrity: (Check) Intact	On Ice:			

<b>Client Name/Address:</b> MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		<b>Project:</b> Boeing-SSFL NPDES Routine Outfall 018 R-2 Spillway		<b>Phone Number:</b> (626) 568-6691 <b>Fax Number:</b> (626) 568-6515		
<b>Project Manager:</b> Bronwyn Kelly Sampler: Rick Barson						
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #
Outfall 018	W	Poly-1L	1	12/06/06	HNO3	1A
Outfall 018-Dup	W	Poly-1L	1		HNO3	1B
Outfall 018	W	Poly-1L	1		None	2
Outfall 018	W	VOAs	3		HCl	3A, 3B, 3C
Outfall 018	W	1L Amber	2		None	4A, 4B
Outfall 018	W	1L Amber	2		HCl	5A, 5B
Outfall 018	W	Poly-500 ml	1		NaOH	6
Outfall 018	W	Poly-1 L	1		None	7
Outfall 018	W	Poly-500 ml	2		None	8A, 8B
Outfall 018	W	Poly-500 ml	2		None	9A, 9B
Outfall 018	W	Poly-500 ml	2		None	10A, 10B
Outfall 018	W	Poly-500 ml	1		H2SO4	11
Outfall 018	W	1L Amber	2		None	12A, 12B
Outfall 018	W	1L Amber	2		None	13A, 13B
Trip Blank	W	VOAs	3		HCl	15A, 15B, 15C

Relinquished By: <i>Rick Barson</i>	Date/Time: 12-8-06 11:10	Received By: <i>Bronwyn Kelly</i>	Date/Time: 12/06/06 11:20
Relinquished By: <i>Bronwyn Kelly</i>	Date/Time: 12/06/06 13:30	Received By: <i>[Signature]</i>	Date/Time: 12/06/06 13:30

Total Recoverable Metals: Cu, Pb, Hg, X X X	Settleable Solids	VOCS 624 + xylenes	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5(20 degrees C)	Surfactants (MBAS)	Cl-, SO4, NO3+NO2-N, Perchlorate	Turbidity, TDS, TSS, Conductivity	Armonia-N	2,4,6 Trichlorophenol, 2,4 Dinitrofluorene, Bis(2-ethylhexyl)phthalate, NDMA, pentachlorophenol (EPA 625)	Field readings: Temp = 57.7 pH = 7.26	Comments
--	-------------------	--------------------	--------------------------	--------------------------	-----------------------------	--------------------	--------------------	----------------------------------	-----------------------------------	-----------	---	---	----------

Turn around Time: (check)	24 Hours	48 Hours	72 Hours	Perchlorate Only 72 Hours
Metals Only 72 Hours	_____	_____	_____	_____
Sample integrity: (Check) Intact	_____	_____	_____	_____



January 17, 2006

**Alta Project I.D.: 27131**

Ms. Michele Chamberlin  
Del Mar Analytical, Irvine  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on January 04, 2006 under your Project Name "IPA0017". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Alta's current certifications, and copies of the raw data (if requested).

Alta Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-933-1640 or by email at [mmaier@altalab.com](mailto:mmaier@altalab.com). Thank you for choosing Alta as part of your analytical support team.

Sincerely,

Martha M. Maier  
Director of HRMS Services



*Alta Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. This report should not be reproduced except in full without the written approval of ALTA.*



**Section I: Sample Inventory Report**

**Date Received: 1/4/2006**

Alta Lab. ID

Client Sample ID

27131-001

IPA0017-01

## SECTION II

Method Blank		EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	7632	Lab Sample:	0-MB001
Sample Size:	1.00 L	Date Extracted:	8-Jan-06	Date Analyzed DB-5:	11-Jan-06
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	%R	LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.000000671		84.0	25 - 164
1,2,3,7,8-PeCDD	ND	0.000000560		78.7	25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000149		81.9	32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000147		74.4	28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000145		75.6	23 - 140
1,2,3,4,6,7,8-HpCDD	ND	0.00000146		40.1	17 - 157
OCDD	ND	0.00000535		82.6	24 - 169
2,3,7,8-TCDF	ND	0.000000546		65.3	24 - 185
1,2,3,7,8-PeCDF	ND	0.00000112		71.3	21 - 178
2,3,4,7,8-PeCDF	ND	0.000000885		73.7	26 - 152
1,2,3,4,7,8-HxCDF	ND	0.000000511		70.0	26 - 123
1,2,3,6,7,8-HxCDF	ND	0.000000518		78.0	28 - 136
2,3,4,6,7,8-HxCDF	ND	0.000000522		79.2	29 - 147
1,2,3,7,8,9-HxCDF	ND	0.000000675		64.7	28 - 143
1,2,3,4,6,7,8-HpCDF	ND	0.000000764		76.3	26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.000000622		49.6	17 - 157
OCDF	ND	0.00000360		88.7	35 - 197
<b>Totals</b>					
Total TCDD	ND	0.000000671			
Total PeCDD	ND	0.000000560			
Total HxCDD	ND	0.00000147			
Total HpCDD	ND	0.00000146			
Total TCDF	ND	0.000000546			
Total PeCDF	ND	0.000000997			
Total HxCDF	ND	0.000000553			
Total HpCDF	ND	0.000000692			
<b>Footnotes</b>					
a. Sample specific estimated detection limit.					
b. Estimated maximum possible concentration.					
c. Method detection limit.					
d. Lower control limit - upper control limit.					

Analyst: JMH

Approved By: Martha M. Maier 17-Jan-2006 10:58

OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No:	7632	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	8-Jan-06	Date Analyzed DB-5:	11-Jan-06	
				Date Analyzed DB-225:	NA	
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	ICL-UCL
2,3,7,8-TCDD	10.0	8.44	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	66.2	25 - 164
1,2,3,7,8-PeCDD	50.0	48.8	35 - 71	13C-1,2,3,7,8-PeCDD	70.5	25 - 181
1,2,3,4,7,8-HxCDD	50.0	48.8	35 - 82	13C-1,2,3,4,7,8-HxCDD	68.7	32 - 141
1,2,3,6,7,8-HxCDD	50.0	46.7	38 - 67	13C-1,2,3,6,7,8-HxCDD	65.6	28 - 130
1,2,3,7,8,9-HxCDD	50.0	48.7	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	70.6	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	47.2	35 - 70	13C-OCDD	49.9	17 - 157
OCDD	100	95.4	78 - 144	13C-2,3,7,8-TCDF	62.9	24 - 169
2,3,7,8-TCDF	10.0	9.58	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	63.1	24 - 185
1,2,3,7,8-PeCDF	50.0	46.6	40 - 67	13C-2,3,4,7,8-PeCDF	64.2	21 - 178
2,3,4,7,8-PeCDF	50.0	48.4	34 - 80	13C-1,2,3,4,7,8-HxCDF	65.4	26 - 152
1,2,3,4,7,8-HxCDF	50.0	47.6	36 - 67	13C-1,2,3,6,7,8-HxCDF	63.8	26 - 123
1,2,3,6,7,8-HxCDF	50.0	48.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	67.9	28 - 136
2,3,4,6,7,8-HxCDF	50.0	47.3	35 - 78	13C-1,2,3,7,8,9-HxCDF	70.4	29 - 147
1,2,3,7,8,9-HxCDF	50.0	47.3	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	63.1	28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	48.5	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	70.1	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	48.4	39 - 69	13C-OCDF	56.4	17 - 157
OCDF	100	97.7	63 - 170	CRS 37Cl-2,3,7,8-TCDD	81.7	35 - 197

Analyst: JMH

Approved By: Martha M. Maier 17-Jan-2006 10:58



Sample ID: IPA0017-01		EPA Method 1613			
Client Data		Sample Data		Laboratory Data	
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27131-001
Project:	IPA0017	Sample Size:	0.922 L	QC Batch No.:	7632
Date Collected:	2-Jan-06			Date Analyzed DB-5:	12-Jan-06
Time Collected:	0900			Date Analyzed DB-225:	NA
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	%R LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.000000987			76.6 25 - 164
1,2,3,7,8-PeCDD	0.00000194			J	82.5 25 - 181
1,2,3,4,7,8-HxCDD	ND		0.00000309		81.4 32 - 141
1,2,3,6,7,8-HxCDD	ND		0.00000666		75.8 28 - 130
1,2,3,7,8,9-HxCDD	0.00000655			J	80.1 23 - 140
1,2,3,4,6,7,8-HpCDD	0.000184				49.4 17 - 157
OCDD	0.00179				75.3 24 - 169
2,3,7,8-TCDF	ND	0.00000108			74.5 24 - 185
1,2,3,7,8-PeCDF	ND	0.00000235			76.4 21 - 178
2,3,4,7,8-PeCDF	ND	0.00000216			75.1 26 - 152
1,2,3,4,7,8-HxCDF	ND	0.00000138			72.3 26 - 123
1,2,3,6,7,8-HxCDF	ND	0.00000134			78.0 28 - 136
2,3,4,6,7,8-HxCDF	ND	0.00000147			81.0 29 - 147
1,2,3,7,8,9-HxCDF	ND	0.00000191			70.7 28 - 143
1,2,3,4,6,7,8-HpCDF	0.0000283				80.6 26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.00000375			59.1 17 - 157
OCDF	0.000134				77.0 35 - 197
<b>Totals</b>					
Total TCDD	0.00000192				
Total PeCDD	0.00000958		0.0000150		
Total HxCDD	0.0000495		0.0000603		
Total HpCDD	0.000355				
Total TCDF	0.00000314				
Total PeCDF	0.00000219				
Total HxCDF	0.0000217				
Total HpCDF	0.0000770				
<b>Footnotes</b>					
a. Sample specific estimated detection limit.					
b. Estimated maximum possible concentration.					
c. Method detection limit.					
d. Lower control limit - upper control limit.					

Analyst: JMH

Approved By: Martha M. Maier 17-Jan-2006 10:58

## APPENDIX

## DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
E	The reported value exceeds the calibration range of the instrument.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical interference
J	The amount detected is below the Lower Calibration Limit of the instrument.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated Detection Limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that corresponds to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

## CERTIFICATIONS

<b>Accrediting Authority</b>	<b>Certificate Number</b>
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q



17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9586 Fax (619) 505-9689  
 9530 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

## SUBCONTRACT ORDER - PROJECT # IPA0017

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106 <div style="text-align: right; font-size: 2em; font-family: cursive;">             27131              0.9°C           </div>

Standard TAT is requested unless specific due date is requested => Due Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Analysis	Expiration	Comments
Sample ID: IPA0017-01 Water	Sampled: 01/02/06 09:00	Instant Notification
1613-Dioxin-HR-Alta	01/09/06 09:00	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	01/30/06 09:00	Excel EDD email to pm, Include Std logs for Lvl IV
Containers Supplied:		
1 L Amber (IPA0017-01G)		
1 L Amber (IPA0017-01H)		

SAMPLE INTEGRITY:					
All containers intact:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Sample labels/COC agree:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Custody Seals Present:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Samples Preserved Properly:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received On Ice:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received at (temp):	_____	

Released By		Date	Time	Received By	Date	Time
		1/3/06		Bettina J. Benedict	1/4/06	0935
Released By		Date	Time	Received By	Date	Time

**SAMPLE LOG-IN CHECKLIST**

Alta Project #: 27131

Samples Arrival:	Date/Time 1/4/06 0935	Initials: PAB	Location: WR-2
Logged In:	Date/Time 1/4/06 1502	Initials: PAB	Location: WR-2
Delivered By:	<u>FedEx</u> UPS	Cal	DHL Hand Delivered Other
Preservation:	<u>Ice</u> Blue Ice	Dry Ice	None
Temp °C	0.9	Time: 0940	Thermometer ID: DT-20

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk # 7924 7903 4161	✓		
Sample Container Intact?	✓		✓
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?		COC	Sample Container <u>None</u>
Shipping Container	Alta	<u>Client</u> Retain	<u>Return</u> Dispose

Comments:

# **APPENDIX G**

## **Section 44**

Outfall 018, January 02, 2006

AMEC Data Validation Reports

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MECX, LLC  
 12260 East Vassar Drive  
 Suite 500  
 Lakewood, CO 80226

Package ID B4DF31  
 Task Order 1261.001D.01  
 SDG No. IPA0017

No. of Analyses 1

Laboratory Alta Analytical  
 Reviewer E. Wessling  
 Analysis/Method Dioxins/Furans by 1613

Date: February 20, 2006  
 Reviewer's Signature 

ACTION ITEMS <sup>a</sup>	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: - results between the RL and the MDL were estimated -EMPC values were qualified as estimated nondetects
COMMENTS <sup>b</sup>	

<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements.

<sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.





# DATA VALIDATION REPORT

NPDES Monitoring Program  
Routine Outfall 018

ANALYSIS: DIOXINS/FURANS  
SAMPLE DELIVERY GROUP: IPA0017

Prepared by  
MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
Contract Task Order: 1261.001.01  
Sample Delivery Group: IPA0017  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Dioxins/Furans  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: E. Wessling  
Date of Review: February 20, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 018	IPA0017-01	27131-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 0.9°C. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the samples were couriered directly to Del Mar Analytical-Irvine, custody seals were not required. Custody seals were present on the coolers from Del Mar to Alta; however no sample custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

#### 2.1.3 Holding Times

The samples were extracted and analyzed within a year of collection. No qualifications were required.

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%. No qualifications were required.

#### 2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

The initial calibration was analyzed 12/30/2005 on instrument VG-7. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs  $\leq 20\%$  for the 16 native compounds (calibration by isotope dilution) and  $\leq 35\%$  for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

### 2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

## 2.4 BLANKS

One method blank (0-7632-MB001) was extracted and analyzed with the sample in this SDG. No compounds were reported in the method blank associated with the site sample. A review of the method blank raw data and chromatograms indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7632-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in this SDG. Evaluation of method accuracy was based on the OPR results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

### 2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

## 2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

## 2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," by the laboratory. These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. Any reported EMPC was qualified as an estimated nondetect, "UJ." No further qualifications were required.

**EPA Method 1613**

Sample ID: **IPA0017-01** *02/11/018*

**Client Data**  
 Name: **Del Mar Analytical, Irvine**  
 Project: **IPA0017**  
 Date Collected: **2-Jan-06**  
 Time Collected: **0900**

**Sample Data**  
 Matrix: **Aqueous**  
 Sample Size: **0.922 L**

**Laboratory Data**  
 Lab Sample: **27131-001**  
 QC Batch No.: **7632**  
 Date Analyzed DB-S: **12-Jan-06**

Date Received: **4-Jan-06**  
 Date Extracted: **8-Jan-06**  
 Date Analyzed DB-225: **NA**

Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000987			IS 13C-2,3,7,8-TCDD	76.6	25 - 164	
1,2,3,7,8-PeCDD	0.0000194			J	13C-1,2,3,7,8-PeCDD	82.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND		0.00000309		13C-1,2,3,4,7,8-HxCDD	81.4	32 - 141	
1,2,3,6,7,8-HxCDD	ND		0.00000666		13C-1,2,3,6,7,8-HxCDD	75.8	28 - 130	
1,2,3,7,8,9-HxCDD	0.00000655			J	13C-1,2,3,4,6,7,8-HpCDD	80.1	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.000184				13C-OCDD	49.4	17 - 157	
OCDD	0.00179				13C-2,3,7,8-TCDF	75.3	24 - 169	
2,3,7,8-TCDF	ND	0.00000108			13C-1,2,3,7,8-PeCDF	74.5	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000235			13C-2,3,4,7,8-PeCDF	76.4	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000216			13C-1,2,3,4,7,8-HxCDF	75.1	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000138			13C-1,2,3,6,7,8-HxCDF	72.3	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000134			13C-2,3,4,6,7,8-HxCDF	78.0	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000147			13C-1,2,3,7,8,9-HxCDF	81.0	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000191			13C-1,2,3,4,6,7,8-HpCDF	70.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.0000283				13C-1,2,3,4,7,8,9-HpCDF	80.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000375			13C-OCDF	59.1	17 - 157	
OCDF	0.000134				CRS 37C1-2,3,7,8-TCDD	77.0	35 - 197	

**Totals**

Total TCDD	0.00000192			
Total PeCDD	0.00000958		0.0000150	
Total HxCDD	0.0000495		0.0000603	
Total HpCDD	0.000355			
Total TCDF	0.00000314			
Total PeCDF	0.00000219			
Total HxCDF	0.0000217			
Total HpCDF	0.0000770			

**Footnotes**  
 a. Sample specific estimated detection limit.  
 b. Estimated maximum possible concentration.  
 c. Method detection limit.  
 d. Lower control limit - upper control limit.

*Rev 2*  
*02/11/018*

*DNQ*  
*410*  
*410*  
*DNQ*

*u*  
*u*  
*u*

Analyst: **JMH** Approved By: **Martha M. Maier** 17-Jan-2006 10:58

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MECX, LLC  
 12260 East Vassar Drive  
 Suite 500  
 Lakewood, CO 80226

Package ID B4MT12  
 Task Order 1261.001D.01  
 SDG No. 1PA00187

No. of Analyses 1

Laboratory Del Mar Analytical  
 Reviewer P. Marks  
 Analysis/Method Metals

Date: February 17, 2006  
 Reviewer's Signature  
P. Marks

ACTION ITEMS <sup>a</sup>	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis	<u>Qualifications were assigned for the following:</u>
Protocol, e.g.,	
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS <sup>b</sup>	<u>Acceptable as reviewed.</u>
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	





# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 018

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPA0017

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPA0017  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Metals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: February 17, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Methods 200.8 and 245.1*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 018	IPA0017-01	Water	200.8, 245.1

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the sample and analyses presented in this SDG. No sample qualifications were required.

#### 2.1.3 Holding Times

The date of collection recorded on the COC and the dates of analyses recorded in the raw data documented that the sample analyses were performed within the specified holding times of six months for the ICP-MS metals and 28-days for mercury. No qualifications were required.

### 2.2 ICP-MS TUNING

The method-specified tune criteria were met and no qualifications were required.

### 2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP-MS metals and 80-120% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and all recoveries were acceptable. No qualifications were required.

### 2.4 BLANKS

The method blank and CCB results were nondetects at the reporting limit or were at concentrations insufficient to qualify the site sample. No further qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/JAB)

ICSA and ICSAB analyses were included in the raw data for the ICP-MS analyses. Lead, which is not present in the ICSA or ICSAB, was detected in both the ICSA and the ICSAB; however, as the wastewater method (EPA SW-846 6020) lists no known interferents for lead, no qualifications were required. The recoveries were within the control limits and no qualifications were required.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The ICP-MS and mercury LCS recoveries were within the laboratory-established control limits of 85-115%. No qualifications were required.

## 2.7 LABORATORY DUPLICATES

No MS/MSD or laboratory duplicate analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.8 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was evaluated based on LCS results. No qualifications were required.

## 2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

## 2.10 INTERNAL STANDARDS PERFORMANCE

For the target compounds analyzed by ICP-MS, the ICP-MS internal standards were within established control limits. No qualifications were required.

## 2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the samples in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

## 2.12 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples.

### 2.12.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 5484 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06  
 Received: 01/02/06

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0017-01 (Outfall 018 - Water) - cont.									
Reporting Units: ug/l									
Copper	EPA 200.8	6A04084	0.49	2.0	6.1	1	01/04/06	01/05/06	Rev Qual   Qual Code
Lead	EPA 200.8	6A04084	0.13	1.0	3.4	1	01/04/06	01/05/06	
Mercury	EPA 245.1	6A03072	0.063	0.20	ND	1	01/03/06	01/03/06	U

LEVEL IV

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA0017 <Page 7 of 26>







# DATA VALIDATION REPORT

NPDES Monitoring Program  
Routine Outfall 018

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPA0017

Prepared by

MEC<sup>X</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPA0017  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Perchlorate  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: K. Shadowlight  
Date of Review: February 18, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Perchlorate (DVP-14, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 314.0*, and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 018	IPA0017-01	Water	314.0

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . The analysis does not require preservation and no preservation was noted by the field. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and analysis presented in this SDG. As the sample was couriered directly from the site to the laboratory, custody seals were not necessary. No sample qualifications were required.

#### 2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the date of analysis. The 28-day analytical holding time for perchlorate was met. No qualifications were required.

### 2.2 CALIBRATION

The initial calibration correlation coefficients were  $\geq 0.995$ . The ICV, ICCS, and CCVs had acceptable recoveries within the control limits of 90-110%. The IPC-MA was recovered within the method control limits of 80-120%. No qualifications were required.

### 2.3 BLANKS

There were no detects in the associated method blank or CCBs. Raw data was reviewed to verify the blank data. No qualifications were required.

### 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample recovery was within the method-established control limits of 85-115%. Raw data was reviewed to verify the values reported for the LCS recovery. No qualifications were required.

## 2.5 LABORATORY DUPLICATES

No MS/MSD or duplicate analyses were performed in association with this SDG; therefore, no assessment was made with respect to this criterion.

## 2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was based on LCS results. No qualifications were required.

## 2.7 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample result reported on the Form I was verified against the raw data. No transcription errors or calculation errors were noted. No qualifications were required.

## 2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

### 2.8.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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

MWH-Pasadena/Boeing Project ID: Quarterly Outfall 018
300 North Lake Avenue, Suite 1200 Report Number: IPA0017
Pasadena, CA 91101 Attention: Bronwyn Kelly
Sampled: 01/02/06
Received: 01/02/06

INORGANICS

Table with columns: Analyte, Method, Batch, MDL Limit, Reporting Limit, Sample Result, Dilution Factor, Date Extracted, Date Analyzed, Data Qualifiers. Includes rows for Ammonia-N, Biochemical Oxygen Demand, Chloride, Nitrate/Nitrite-N, Oil & Grease, Sulfate, Surfactants (MBAS), Total Dissolved Solids, Total Suspended Solids, Total Settleable Solids, Turbidity, Total Cyanide, Perchlorate, and Specific Conductance.

Handwritten notes: 'Per Qual' and 'Qual code' with arrows pointing to specific rows in the table.

\* analysis not validated
level III

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA0017 <Page 8 of 26>

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4PP2  
 Task Order: 1261.001D.01  
 SDG No.: IPA0017

No. of Analyses: 1  
 Date: February 16, 2006  
 Reviewer's Signature: *L. Calvin*

Laboratory: Del Mar Analytical  
 Reviewer: L. Calvin  
 Analysis/Method: Pesticides by Method 608

<b>ACTION ITEMS<sup>a</sup></b>	
<b>1. Case Narrative Deficiencies</b>	_____
<b>2. Out of Scope Analyses</b>	_____
<b>3. Analyses Not Conducted</b>	_____
<b>4. Missing Hardcopy Deliverables</b>	_____
<b>5. Incorrect Hardcopy Deliverables</b>	_____
<b>6. Deviations from Analysis Protocol, e.g.,</b>	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

## NPDES Monitoring Program Quarterly Outfall 018

ANALYSIS: PESTICIDES

SAMPLE DELIVERY GROUP: IPA0017

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014



## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>x</sup> Project Number: 1261.001.01  
Sample Delivery Group: IPA0017  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Pesticides  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: L. Calvin  
Date of Review: February 16, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Volatile Organics (DVP-4, Rev. 2)*, *EPA Method 608*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 018	IPA0017-01	Water	608

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , at  $4^{\circ}\text{C}$ . According to the case narrative for this SDG, the sample was received intact and on ice. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. As the sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

#### 2.1.3 Holding Times

The water sample was extracted within seven days of sample collection and analyzed within 40 days of extraction. No qualifications were required.

### 2.2 PESTICIDES INSTRUMENT PERFORMANCE

No resolution check standards or breakdown check standards are required by Method 608 for pesticides, and according to the raw data provided, a resolution check standard was not analyzed by the laboratory. The laboratory did analyze a breakdown check standard with the breakdown for individual components (4,4-DDT and endrin)  $\leq 20\%$  and  $\leq 30\%$  for the total, as suggested in the National Functional Guidelines. A review of the raw data indicated that the analytical run time was of sufficient length to provide adequate standard separation. The two analytical columns used in the analyses were within the guidelines specified in the methods.

According to the laboratory SOP and the initial calibration raw data, the retention time windows are  $\pm 0.10$  minutes for both surrogates and target compound calibration standards. A review of the raw data indicated that the laboratory retention time criteria were met for the surrogates and pesticide calibration standards. No qualifications were required.

### 2.3 CALIBRATION

#### 2.3.1 Analytical Sequence

Based on the data provided, the analytical sequences were in accordance with the requirements of Method 608. No qualifications were required.

### 2.3.2 Initial Calibration

There was one initial calibration dated 12/29/05 associated with site sample in this SDG. The initial calibration consisted of six point calibrations for all pesticide target compounds on two analytical columns. The laboratory provided an overlay of the sample chromatogram and the pesticide standard for identification purposes. For this SDG, alpha-BHC was the only target compound of interest. The %RSD for alpha-BHC was within the EPA Method 608 QC limit of  $\leq 10\%$  on the primary analytical column (Channel A) and the  $r^2$  value was  $\geq 0.995$  on the secondary column (Channel B). As alpha-BHC was not detected in the sample and all results were reported from Channel A, the secondary column was not further evaluated. An ICV was analyzed immediately following the initial calibration and the %D for target compound alpha-BHC was within the QC limits of  $\leq 15\%$  on the primary analytical column. The %RSD and ICV %D were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

### 2.3.3 Continuing Calibration

Sample Outfall 018 was bracketed by two continuing calibrations. The %Ds for alpha-BHC were within the Method QC limit of  $\leq 15\%$  for both calibrations. The %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

## 2.4 BLANKS

### 2.4.1 Instrument Blanks

An instrument blank was analyzed at the beginning of the analytical sequence. Cross-contamination was not evident in the instrument blank or the sample. No qualifications were necessary.

### 2.4.2 Method Blanks

One water method blank (6A06049-BLK1) was extracted and analyzed with this SDG. Target compound alpha-BHC was not detected in the method blank. Review of the chromatograms from both channels showed no false negative. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6A06049-BS1/BSD1) was extracted and analyzed with this SDG. The recoveries for alpha-BHC were within the laboratory-established QC limits and the RPD was  $\leq 30\%$ . The recoveries and RPD for alpha-BHC were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.6 SURROGATE RECOVERY

Surrogate recoveries were within the laboratory-established QC limits for the sample in this SDG. The recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy and precision were based on the blank spike/blank spike duplicate results. No qualifications were required.

## 2.8 SAMPLE CLEANUP PERFORMANCE

According to the laboratory extraction benchsheets, no cleanups were performed on the water sample. No qualifications were required.

## 2.9 FIELD QC SAMPLES

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

### 2.9.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### 2.9.2 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for pesticide target compound alpha-BHC by EPA Method 608. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for the sample in this SDG. No qualifications were required.

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. No qualifications were required.

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06  
 Received: 01/02/06

**ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0017-01 (Outfall 018 - Water) - cont.									
Reporting Units: ug/l									
alpha-BHC	EPA 608	6A06049	0.0010	0.010	ND	1.03	01/06/06	01/06/06	u
Surrogate: Decachlorobiphenyl (45-120%)					72 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					67 %				

*Handwritten:* VCU, Qual, Code

*Handwritten:* Level IV

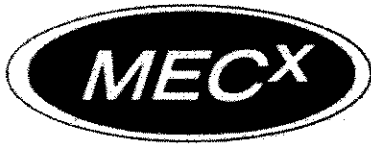
Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*

IPA0017 <Page 6 of 26>







# DATA VALIDATION REPORT

NPDES Monitoring Program  
Quarterly Outfall 018

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP IPA0017

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001.01  
Sample Delivery Group: IPA0017  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Semivolatiles  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: L. Calvin  
Date of Review: February 16, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MECX Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 625*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 018	IPA0017-01	Water	625

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C at 4°C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the analysis presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

The water sample was extracted within seven days of collection and analyzed within 40 days of extraction. No qualifications were required.

### 2.2 GC/MS TUNING

The DFTPP tune performed at the beginning of each daily analytical sequence met the abundance criteria specified in EPA Method 625. No qualifications were required.

### 2.3 CALIBRATION

One initial calibration was associated with the sample, dated 12/22/05. The average RRFs were ≥0.05 for all target compounds. The %RSDs were ≤35% or  $r^2$  values ≥0.995 for all target compounds listed on the sample summary report. The continuing calibration associated with the sample in this SDG was dated 01/12/06. The RRFs for all target compounds were ≥0.05 and the %Ds were ≤20%. A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

## 2.4 BLANKS

One method blank (6A09061-BLK1) was extracted and analyzed with this SDG. Target compound bis(2-ethylhexyl)phthalate was detected between the MDL and the reporting limit in the method blank. Target compound bis(2-ethylhexyl)phthalate was also detected in the site sample. The result for bis(2-ethylhexyl)phthalate, was qualified as a nondetect, "U," at the reporting limit. Review of the method blank raw data indicated no false positives or false negatives. No further qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6A09061-BS1/BSD1) was extracted and analyzed with this SDG. The recoveries for 2,4-dinitrotoluene and pentachlorophenol were below QC limits but  $\geq 10\%$  in the blank spike duplicate only. The RPDs for 2,4-dinitrotoluene, n-nitrosodimethylamine, and pentachlorophenol exceeded the QC limit of 20%; therefore, the nondetect results for the aforementioned target compounds were qualified as estimated, "UJ," in the site sample. The remaining recoveries and RPDs were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No further qualifications were required.

## 2.6 SURROGATE RECOVERY

Surrogate recoveries for the sample were within the laboratory QC limits. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy and precision was based on the blank spike/blank spike duplicate results. No qualifications were required.

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### 2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times for the sample were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and  $\pm 30$  seconds for retention times. A representative number of recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for five semivolatile target compounds by EPA Method 625. Review of the sample chromatograms, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. No qualifications were required.

## 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

## 2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 018 Report Number: IPA0017	Sampled: 01/02/06 Received: 01/02/06
--	---	---

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0017-01 (Outfall 018 - Water)									
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6A09061	1.2	5.3	2.7	1.05	01/09/06	01/12/06	u, B, J, B
2,4-Dinitrotoluene	EPA 625	6A09061	0.24	9.5	ND	1.05	01/09/06	01/12/06	L2 *5
N-Nitrosodimethylamine	EPA 625	6A09061	0.23	8.4	ND	1.05	01/09/06	01/12/06	
Pentachlorophenol	EPA 625	6A09061	0.82	8.4	ND	1.05	01/09/06	01/12/06	L2
2,4,6-Trichlorophenol	EPA 625	6A09061	0.11	6.3	ND	1.05	01/09/06	01/12/06	u
Surrogate: 2-Fluorophenol (30-120%)					55 %				
Surrogate: Phenol-d6 (35-120%)					70 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					80 %				
Surrogate: Nitrobenzene-d5 (45-120%)					76 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					74 %				
Surrogate: Terphenyl-d14 (45-120%)					78 %				

*JAC  
7-16-06*

*Level IV*

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

IPA0017 <Page 5 of 26>

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>X</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4VO13  
 Task Order: 1261.001D.01  
 SDG No.: IPA0017

No. of Analyses: 1

Laboratory: Del Mar Analytical  
 Reviewer: L. Calvin  
 Analysis/Method: Volatiles by Method 624

Date: February 16, 2006  
 Reviewer's Signature: *L. Calvin*

ACTION ITEMS <sup>a</sup>	
1. Case Narrative Deficiencies	_____ _____
2. Out of Scope Analyses	_____ _____
3. Analyses Not Conducted	_____ _____
4. Missing Hardcopy Deliverables	_____ _____
5. Incorrect Hardcopy Deliverables	_____ _____
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: -headspace in a VOA vial used for analysis _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____
<b>COMMENTS<sup>b</sup></b>	_____ _____ _____ _____ _____
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	





# DATA VALIDATION REPORT

## NPDES Monitoring Program Quarterly Outfall 018

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPA0017

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001.01  
Sample Delivery Group: IPA0017  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Volatiles  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: L. Calvin  
Date of Review: February 16, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 624*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 018	IPA0017-01	Water	624
Trip Blank	IPA0017-02	Water	624

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C, at 4°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved. The narrative noted headspace was present in the VOA vial used for analysis of 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113) in site sample Outfall 018. The nondetect result for Freon 113 was qualified as estimated, "UJ." No further qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

#### 2.1.3 Holding Times

The water samples were analyzed within 14 days of collection. No qualifications were required.

### 2.2 GC/MS TUNING

The BFB tune performed at the beginning of each daily analytical sequence met the abundance criteria specified in EPA Method 624. No qualifications were required.

### 2.3 CALIBRATION

Four initial calibrations were associated with the samples in this SDG, dated 08/30/05 and 10/19/05 (Freon 113 only), and 12/29/05 and 01/09/06 (for remaining target compounds). The average RRFs were  $\geq 0.05$  for all target compounds. The %RSDs were  $\leq 35\%$  for the target compounds listed on the sample summary forms. The continuing calibrations associated with the sample analyses were dated 01/05/06, 01/06/06, and 01/09/06. The RRFs for all target compounds were  $\geq 0.05$  and all %Ds were within the QC limit of  $\leq 20\%$ . A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

## 2.4 BLANKS

Three method blanks (6A05005-BLK1, 6A06010-BLK1, and 6A09010-BLK1) were analyzed with this SDG. No target compounds were detected in the method blanks. Review of the method blank raw data indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two blank spikes (6A05005-BS1 and 6A06010-BS1) were analyzed with this SDG. The reviewer noted the site sample did not have an associated blank spike for Freon 113. The recoveries for the blank spikes provided were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.6 SURROGATE RECOVERY

Surrogate recoveries were within the laboratory QC limits of 80-120% for this SDG. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the site sample of this SDG. Evaluation of method accuracy was based on the blank spike results. No qualifications were required.

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with site sample Outfall 018. No target compounds were detected in the trip blank. No qualifications were required.

### 2.8.2 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples identified for this SDG. No qualifications were required.

### 2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times were within the control limits established by the continuing calibration standards: -50%/+100% for internal standard areas and  $\pm 30$  seconds for retention times. A representative number of recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for volatile target compounds by EPA Method 624. Review of the sample chromatograms, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. No qualifications were required.

## 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG. No qualifications were required.

## 2.13 SYSTEM PERFORMANCE

Review of the raw data indicated no problems with system performance. No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 018 Report Number: IPA0017	Sampled: 01/02/06 Received: 01/02/06
--	---	---

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPA0017-01 (Outfall 018 - Water)</b>									
Reporting Units: ug/l									
Benzene	EPA 624	6A06010	0.28	2.0	ND	1	01/06/06	01/06/06	u
Carbon tetrachloride	EPA 624	6A06010	0.28	5.0	ND	1	01/06/06	01/06/06	
Chloroform	EPA 624	6A06010	0.33	2.0	ND	1	01/06/06	01/06/06	
1,1-Dichloroethane	EPA 624	6A06010	0.27	2.0	ND	1	01/06/06	01/06/06	
1,2-Dichloroethane	EPA 624	6A06010	0.28	2.0	ND	1	01/06/06	01/06/06	
1,1-Dichloroethene	EPA 624	6A06010	0.42	3.0	ND	1	01/06/06	01/06/06	
Ethylbenzene	EPA 624	6A06010	0.25	2.0	ND	1	01/06/06	01/06/06	
Tetrachloroethene	EPA 624	6A06010	0.32	2.0	ND	1	01/06/06	01/06/06	
Toluene	EPA 624	6A06010	0.36	2.0	ND	1	01/06/06	01/06/06	
1,1,1-Trichloroethane	EPA 624	6A06010	0.30	2.0	ND	1	01/06/06	01/06/06	
1,1,2-Trichloroethane	EPA 624	6A06010	0.30	2.0	ND	1	01/06/06	01/06/06	
Trichloroethene	EPA 624	6A06010	0.26	5.0	ND	1	01/06/06	01/06/06	
Trichlorofluoromethane	EPA 624	6A06010	0.34	5.0	ND	1	01/06/06	01/06/06	
Vinyl chloride	EPA 624	6A06010	0.26	5.0	ND	1	01/06/06	01/06/06	
Xylenes, Total	EPA 624	6A06010	0.52	4.0	ND	1	01/06/06	01/06/06	
Surrogate: Dibromofluoromethane (80-120%)					104 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					95 %				
<b>Sample ID: IPA0017-01RE1 (Outfall 018 - Water)</b>									
Reporting Units: ug/l									
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A09010	1.2	5.0	ND	1	01/09/06	01/09/06	u
Surrogate: Dibromofluoromethane (80-120%)					109 %				
Surrogate: Toluene-d8 (80-120%)					106 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					94 %				

Level IV

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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 (619) 505-8596 FAX (619) 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 018 Report Number: IPA0017	Sampled: 01/02/06 Received: 01/02/06
--	---	---

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
Sample ID: IPA0017-02 (Trip Blank - Water)										
Reporting Units: ug/l										
Benzene	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	<i>rev. qual code</i> u ↓	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A05005	1.2	5.0	ND	1	01/05/06	01/05/06		
Carbon tetrachloride	EPA 624	6A05005	0.28	5.0	ND	1	01/05/06	01/05/06		
Chloroform	EPA 624	6A05005	0.33	2.0	ND	1	01/05/06	01/05/06		
1,1-Dichloroethane	EPA 624	6A05005	0.27	2.0	ND	1	01/05/06	01/05/06		
1,2-Dichloroethane	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06		
1,1-Dichloroethene	EPA 624	6A05005	0.42	3.0	ND	1	01/05/06	01/05/06		
Ethylbenzene	EPA 624	6A05005	0.25	2.0	ND	1	01/05/06	01/05/06		
Tetrachloroethene	EPA 624	6A05005	0.32	2.0	ND	1	01/05/06	01/05/06		
Toluene	EPA 624	6A05005	0.36	2.0	ND	1	01/05/06	01/05/06		
1,1,1-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06		
1,1,2-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06		
Trichloroethene	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06		
Trichlorofluoromethane	EPA 624	6A05005	0.34	5.0	ND	1	01/05/06	01/05/06		
Vinyl chloride	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06		
Xylenes, Total	EPA 624	6A05005	0.52	4.0	ND	1	01/05/06	01/05/06		
Surrogate: Dibromofluoromethane (80-120%)					105 %					
Surrogate: Toluene-d8 (80-120%)					103 %					
Surrogate: 4-Bromofluorobenzene (80-120%)					100 %					

*Level IV*

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA0017 <Page 4 of 26>



**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MECX, LLC  
 12260 East Vassar Drive  
 Suite 500  
 Lakewood, CO 80226

Package ID B4WC3  
 Task Order 1261.001D.01  
 SDG No. IPA0017

No. of Analyses 1

Laboratory Del Mar - Irvine

Date: February 17, 2006

Reviewer E. Wessling

Reviewer's Signature 

Analysis/Method General Minerals

<b>ACTION ITEMS<sup>a</sup></b>	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: - results between the RL and the MDL were estimated - BOD results did not meet method specific oxygen depletion criterion
<b>COMMENTS<sup>b</sup></b>	
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 018

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPA0017

Prepared by

MEC<sup>x</sup>, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPA0017  
Project Manager: P. Costa  
Matrix: Water  
Analysis: General Minerals  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: E. Wessling  
Date of Review: February 17, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the MEC<sup>X</sup> *Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 120.1, 160.1, 160.2, 160.5, 180.1, 300.0, 335.2, 350.2, 405.1, and 413.1* and *Standard Methods for the Examination of Water and Wastewater Method SM2540-C*, and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: NPDES  
SDG: IPA0102  
Analysis: Gen. Min.

DATA VALIDATION REPORT

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 018	IPA0017-01	Water	General Minerals

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . No preservation problems were noted by the laboratory. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and all analyses presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary.

#### 2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analysis. All samples were analyzed within the method specified holding times. No qualifications were required.

### 2.2 CALIBRATION

For all applicable analyses, the initial calibration correlation coefficients were  $\geq 0.995$  and the ICV and CCV recoveries were within the control limits of 90-110%. For those methods requiring weight determinations, balance calibration logs were reviewed and found to be acceptable. No qualifications were required.

### 2.3 BLANKS

There were no detects in the method blanks or CCBs associated with the sample analyses. Raw data was reviewed to verify the blank data. No qualifications were required.

### 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The reported LCS recoveries were within the laboratory-established control limits. No LCS recovery was listed for nitrate; however, the reviewer checked the raw data and found that nitrate was spiked into the LCS and was recovered acceptably. No qualifications were required.

## 2.5 LABORATORY DUPLICATES

Duplicate analyses were performed on Outfall 018 for MBAS and turbidity only. The RPDs were less than the laboratory control limit of  $\leq 20\%$  for MBAS and turbidity. No qualifications were required.

## 2.6 MATRIX SPIKES

MS/MSD analysis was performed on Outfall 018 for MBAS only. MBAS was recovered within the laboratory established control limits (50-125%); therefore, no qualifications were required. Evaluation of method accuracy was based on LCS results for all other analyses. No further qualifications were required.

## 2.7 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. Sample Outfall 018 did not meet the BOD method specified oxygen depletion rate of 2 mg/L. The sample result was qualified as estimated, "J." Results reported by the laboratory between the MDL and reporting limit were qualified as estimated, "J," and annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No further qualifications were required.

## 2.8 FIELD QC SAMPLES

Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

### 2.8.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018

Report Number: IPA0017

Sampled: 01/02/06

Received: 01/02/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data	Qualifiers
Sample ID: IPA0017-01 (Outfall 018 - Water) - cont. Reporting Units: mg/l										
Ammonia-N (Distilled)	EPA 350.2	6A05098	0.30	0.50	ND	1	01/05/06	01/05/06	u	
Biochemical Oxygen Demand	EPA 405.1	6A03056	0.59	2.0	4.0	1	01/03/06	01/08/06	J X	Raw and code
Chloride	EPA 300.0	6A03053	0.26	0.50	22	1	01/03/06	01/03/06		
Nitrate/Nitrite-N	EPA 300.0	6A03053	0.080	0.15	1.2	1	01/03/06	01/03/06		
Oil & Grease	EPA 413.1	6A06048	0.90	4.8	2.3	1	01/06/06	01/06/06	J Y	DNR
Sulfate	EPA 300.0	6A03053	0.18	0.50	52	1	01/03/06	01/03/06		
Surfactants (MBAS)	EPA 425.1	6A03114	0.044	0.10	0.096	1	01/03/06	01/03/06	J Y	DNR
Total Dissolved Solids	EPA 160.1	6A03093	10	10	250	1	01/03/06	01/03/06		
Total Suspended Solids	EPA 160.2	6A05110	10	10	49	1	01/05/06	01/05/06		
Sample ID: IPA0017-01 (Outfall 018 - Water) Reporting Units: ml/hr										
Total Settleable Solids	EPA 160.5	6A03069	0.10	0.10	ND	1	01/03/06	01/03/06	u	
Sample ID: IPA0017-01 (Outfall 018 - Water) Reporting Units: NTU										
Turbidity	EPA 180.1	6A04071	0.20	5.0	56	5	01/04/06	01/04/06		
Sample ID: IPA0017-01 (Outfall 018 - Water) Reporting Units: ug/l										
Total Cyanide	EPA 335.2	6A05082	2.2	5.0	ND	1	01/05/06	01/05/06	u	
Perchlorate	EPA 314.0	6A03076	0.80	4.0	ND	1	01/03/06	01/03/06		
Sample ID: IPA0017-01 (Outfall 018 - Water) Reporting Units: umhos/cm										
Specific Conductance	EPA 120.1	6A03095	1.0	1.0	400	1	01/03/06	01/03/06		

\* Analysis Not Validated  
 I

LEVEL IV

Del Mar Analytical, Irvine  
 Michele Chamberlin  
 Project Manager

EAW  
 2/17/06

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

IPA0017 <Page 8 of 26>

## **APPENDIX G**

### **Section 45**

Outfall 001, February 28, 2006

Del Mar Analytical Laboratory Report





**LABORATORY REPORT**

Prepared For: MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project: Annual Outfall 001

Sampled: 02/28/06  
Received: 02/28/06  
Issued: 03/21/06 18:49

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 Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. 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
IPB2637-01	Outfall 001	Water
IPB2637-02	Trip Blank	Water

Reviewed By:

*Michele Chamberlin*

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

### CORRECTIVE ACTION REPORT

Department: Extractions

Date: 03/10/2006

Method: EPA 625

Matrix: Water

QC Batch: 6C06060

#### Identification and Definition of Problem:

BS/BSD recoveries were below the acceptance limits for Benzoic Acid (ND/ND, 30-125%), Dimethyl phthalate (36%/44%, 60-120%), and Benzidine (ND/ND, 20-180%).

#### Determination of the Cause of the Problem:

Benzidine is known to be a problematic compound. According to the EPA, it can be subject to oxidative losses during solvent extraction and its chromatographic behavior is poor. Benzidine failure is typical of the low level method. Less than optimal extraction technique is the likely cause for the failure of benzoic acid and dimethyl phthalate.

#### Corrective Action Taken:

All results reported for Benzoic Acid, Dimethyl phthalate and Benzidine are potentially biased low and can be considered estimates only and are flagged with L2 qualifier.

Quality Assurance Approval:

Dave Dawes

Date: 03/28/2006 11:40 AM

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

**TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water)</b>									
<b>Reporting Units: mg/l</b>									
Total Recoverable Hydrocarbons	EPA 418.1	6C06047	0.31	1.0	ND	1	03/06/06	03/06/06	

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1074 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 378-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

**EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01RE1 (Outfall 001 - Water) - cont.</b>									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	6C07098	0.042	0.47	ND	0.943	03/07/06	03/07/06	
Surrogate: n-Octacosane (40-125%)					66 %				

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 9830 South 31st 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

**VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.</b>									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6C06046	0.050	0.10	ND	1	03/06/06	03/06/06	
Surrogate: 4-BFB (FID) (65-140%)					89 %				

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Benzene	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	
Bromodichloromethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/03/06	
Bromoform	EPA 624	6C02019	0.32	5.0	ND	1	03/02/06	03/03/06	
Bromomethane	EPA 624	6C02019	0.42	5.0	ND	1	03/02/06	03/03/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C02019	1.2	5.0	ND	1	03/02/06	03/03/06	
Carbon tetrachloride	EPA 624	6C02019	0.28	5.0	ND	1	03/02/06	03/03/06	
Chlorobenzene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/03/06	
Chloroethane	EPA 624	6C02019	0.40	5.0	ND	1	03/02/06	03/03/06	
Chloroform	EPA 624	6C02019	0.33	2.0	ND	1	03/02/06	03/03/06	
<b>Chloromethane</b>	EPA 624	6C02019	0.30	5.0	<b>0.41</b>	1	03/02/06	03/03/06	J
Dibromochloromethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	
1,2-Dichlorobenzene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/03/06	
1,3-Dichlorobenzene	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/03/06	
1,4-Dichlorobenzene	EPA 624	6C02019	0.37	2.0	ND	1	03/02/06	03/03/06	
1,1-Dichloroethane	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/03/06	
1,2-Dichloroethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	
1,1-Dichloroethene	EPA 624	6C02019	0.32	3.0	ND	1	03/02/06	03/03/06	
trans-1,2-Dichloroethene	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/03/06	
1,2-Dichloropropane	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/03/06	
cis-1,3-Dichloropropene	EPA 624	6C02019	0.22	2.0	ND	1	03/02/06	03/03/06	
trans-1,3-Dichloropropene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/03/06	
Ethylbenzene	EPA 624	6C02019	0.25	2.0	ND	1	03/02/06	03/03/06	
Methylene chloride	EPA 624	6C02019	0.70	5.0	ND	1	03/02/06	03/03/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C02019	0.24	2.0	ND	1	03/02/06	03/03/06	L
Tetrachloroethene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/03/06	
Toluene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/03/06	
1,1,1-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/03/06	
1,1,2-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/03/06	
Trichloroethene	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/03/06	
Trichlorofluoromethane	EPA 624	6C02019	0.34	5.0	ND	1	03/02/06	03/03/06	
Vinyl chloride	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/03/06	
Xylenes, Total	EPA 624	6C02019	0.52	4.0	ND	1	03/02/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					110 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					90 %				

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-02 (Trip Blank - Water)</b>									
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/02/06	
Bromodichloromethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/02/06	
Bromoform	EPA 624	6C02019	0.32	5.0	ND	1	03/02/06	03/02/06	
Bromomethane	EPA 624	6C02019	0.42	5.0	ND	1	03/02/06	03/02/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C02019	1.2	5.0	ND	1	03/02/06	03/02/06	
Carbon tetrachloride	EPA 624	6C02019	0.28	5.0	ND	1	03/02/06	03/02/06	
Chlorobenzene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/02/06	
Chloroethane	EPA 624	6C02019	0.40	5.0	ND	1	03/02/06	03/02/06	
Chloroform	EPA 624	6C02019	0.33	2.0	ND	1	03/02/06	03/02/06	
Chloromethane	EPA 624	6C02019	0.30	5.0	ND	1	03/02/06	03/02/06	
Dibromochloromethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichlorobenzene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/02/06	
1,3-Dichlorobenzene	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/02/06	
1,4-Dichlorobenzene	EPA 624	6C02019	0.37	2.0	ND	1	03/02/06	03/02/06	
1,1-Dichloroethane	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloroethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/02/06	
1,1-Dichloroethene	EPA 624	6C02019	0.32	3.0	ND	1	03/02/06	03/02/06	
trans-1,2-Dichloroethene	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloropropane	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/02/06	
cis-1,3-Dichloropropene	EPA 624	6C02019	0.22	2.0	ND	1	03/02/06	03/02/06	
trans-1,3-Dichloropropene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/02/06	
Ethylbenzene	EPA 624	6C02019	0.25	2.0	ND	1	03/02/06	03/02/06	
Methylene chloride	EPA 624	6C02019	0.70	5.0	ND	1	03/02/06	03/02/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C02019	0.24	2.0	ND	1	03/02/06	03/02/06	L
Tetrachloroethene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/02/06	
Toluene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/02/06	
1,1,1-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/02/06	
1,1,2-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/02/06	
Trichloroethene	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/02/06	
Trichlorofluoromethane	EPA 624	6C02019	0.34	5.0	ND	1	03/02/06	03/02/06	
Vinyl chloride	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/02/06	
Xylenes, Total	EPA 624	6C02019	0.52	4.0	ND	1	03/02/06	03/02/06	
Surrogate: Dibromofluoromethane (80-120%)					108 %				
Surrogate: Toluene-d8 (80-120%)					109 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					98 %				

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

**PURGEABLES-- GC/MS (EPA 624)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6C02019	4.6	50	ND	1	03/02/06	03/03/06	
Acrylonitrile	EPA 624	6C02019	0.70	50	ND	1	03/02/06	03/03/06	
2-Chloroethyl vinyl ether	EPA 624	6C02019	1.8	5.0	ND	1	03/02/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					110 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					90 %				
<b>Sample ID: IPB2637-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6C02019	4.6	50	ND	1	03/02/06	03/02/06	
Acrylonitrile	EPA 624	6C02019	0.70	50	ND	1	03/02/06	03/02/06	
2-Chloroethyl vinyl ether	EPA 624	6C02019	1.8	5.0	ND	1	03/02/06	03/02/06	
Surrogate: Dibromofluoromethane (80-120%)					108 %				
Surrogate: Toluene-d8 (80-120%)					109 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					98 %				

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

**PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water)</b>									
Reporting Units: ug/l									
1,2-Dichloro-1,1,2-trifluoroethane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/03/06	
Cyclohexane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/03/06	
<b>Sample ID: IPB2637-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
1,2-Dichloro-1,1,2-trifluoroethane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/02/06	
Cyclohexane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/02/06	

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

## ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acenaphthene	EPA 625	6C06060	0.095	0.48	ND	0.952	03/06/06	03/09/06	
Acenaphthylene	EPA 625	6C06060	0.095	0.48	ND	0.952	03/06/06	03/09/06	
Aniline	EPA 625	6C06060	2.8	9.5	ND	0.952	03/06/06	03/09/06	
Anthracene	EPA 625	6C06060	0.079	0.48	ND	0.952	03/06/06	03/09/06	
Benzidine	EPA 625	6C06060	3.0	4.8	ND	0.952	03/06/06	03/10/06	L2
Benzoic acid	EPA 625	6C06060	3.5	19	ND	0.952	03/06/06	03/09/06	L2
Benzo(a)anthracene	EPA 625	6C06060	0.036	4.8	ND	0.952	03/06/06	03/09/06	
Benzo(a)pyrene	EPA 625	6C06060	0.13	1.9	ND	0.952	03/06/06	03/09/06	
Benzo(b)fluoranthene	EPA 625	6C06060	0.048	1.9	ND	0.952	03/06/06	03/09/06	
Benzo(g,h,i)perylene	EPA 625	6C06060	0.056	4.8	ND	0.952	03/06/06	03/09/06	
Benzo(k)fluoranthene	EPA 625	6C06060	0.050	0.48	ND	0.952	03/06/06	03/09/06	
Benzyl alcohol	EPA 625	6C06060	0.20	4.8	ND	0.952	03/06/06	03/09/06	
Bis(2-chloroethoxy)methane	EPA 625	6C06060	0.069	0.48	ND	0.952	03/06/06	03/09/06	
Bis(2-chloroethyl)ether	EPA 625	6C06060	0.080	0.48	ND	0.952	03/06/06	03/09/06	
Bis(2-chloroisopropyl)ether	EPA 625	6C06060	0.10	0.48	ND	0.952	03/06/06	03/09/06	
Bis(2-ethylhexyl)phthalate	EPA 625	6C06060	1.0	4.8	ND	0.952	03/06/06	03/09/06	
4-Bromophenyl phenyl ether	EPA 625	6C06060	0.11	0.95	ND	0.952	03/06/06	03/09/06	
<b>Butyl benzyl phthalate</b>	EPA 625	6C06060	0.32	4.8	<b>0.34</b>	0.952	03/06/06	03/09/06	J
4-Chloroaniline	EPA 625	6C06060	0.19	1.9	ND	0.952	03/06/06	03/09/06	
2-Chloronaphthalene	EPA 625	6C06060	0.056	0.48	ND	0.952	03/06/06	03/09/06	
4-Chloro-3-methylphenol	EPA 625	6C06060	0.32	1.9	ND	0.952	03/06/06	03/09/06	
4-Chlorophenyl phenyl ether	EPA 625	6C06060	0.053	0.48	ND	0.952	03/06/06	03/09/06	
2-Chlorophenol	EPA 625	6C06060	0.11	0.95	ND	0.952	03/06/06	03/09/06	
Chrysene	EPA 625	6C06060	0.069	0.48	ND	0.952	03/06/06	03/09/06	
Dibenz(a,h)anthracene	EPA 625	6C06060	0.079	0.48	ND	0.952	03/06/06	03/09/06	
Dibenzofuran	EPA 625	6C06060	0.071	0.48	ND	0.952	03/06/06	03/09/06	
Di-n-butyl phthalate	EPA 625	6C06060	0.25	1.9	ND	0.952	03/06/06	03/09/06	
1,2-Dichlorobenzene	EPA 625	6C06060	0.10	0.48	ND	0.952	03/06/06	03/09/06	
1,3-Dichlorobenzene	EPA 625	6C06060	0.12	0.48	ND	0.952	03/06/06	03/09/06	
1,4-Dichlorobenzene	EPA 625	6C06060	0.048	0.48	ND	0.952	03/06/06	03/09/06	
3,3-Dichlorobenzidine	EPA 625	6C06060	0.89	4.8	ND	0.952	03/06/06	03/09/06	
2,4-Dichlorophenol	EPA 625	6C06060	0.20	1.9	ND	0.952	03/06/06	03/09/06	
Diethyl phthalate	EPA 625	6C06060	0.11	0.95	ND	0.952	03/06/06	03/09/06	
2,4-Dimethylphenol	EPA 625	6C06060	0.30	1.9	ND	0.952	03/06/06	03/09/06	
Dimethyl phthalate	EPA 625	6C06060	0.077	0.48	ND	0.952	03/06/06	03/09/06	L2
4,6-Dinitro-2-methylphenol	EPA 625	6C06060	0.36	4.8	ND	0.952	03/06/06	03/09/06	
2,4-Dinitrophenol	EPA 625	6C06060	2.6	4.8	ND	0.952	03/06/06	03/09/06	
2,4-Dinitrotoluene	EPA 625	6C06060	0.22	4.8	ND	0.952	03/06/06	03/09/06	
2,6-Dinitrotoluene	EPA 625	6C06060	0.23	4.8	ND	0.952	03/06/06	03/09/06	
Di-n-octyl phthalate	EPA 625	6C06060	0.16	4.8	ND	0.952	03/06/06	03/09/06	

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
1,2-Diphenylhydrazine/Azobenzen e	EPA 625	6C06060	0.083	0.95	<b>0.095</b>	0.952	03/06/06	03/09/06	J
Fluoranthene	EPA 625	6C06060	0.085	0.48	ND	0.952	03/06/06	03/09/06	
Fluorene	EPA 625	6C06060	0.071	0.48	ND	0.952	03/06/06	03/09/06	
Hexachlorobenzene	EPA 625	6C06060	0.12	0.95	ND	0.952	03/06/06	03/09/06	
Hexachlorobutadiene	EPA 625	6C06060	0.36	1.9	ND	0.952	03/06/06	03/09/06	
Hexachlorocyclopentadiene	EPA 625	6C06060	1.7	4.8	ND	0.952	03/06/06	03/09/06	
Hexachloroethane	EPA 625	6C06060	0.49	2.9	ND	0.952	03/06/06	03/09/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6C06060	0.18	1.9	ND	0.952	03/06/06	03/09/06	
<b>Isophorone</b>	EPA 625	6C06060	0.056	0.95	<b>0.095</b>	0.952	03/06/06	03/09/06	J
2-Methylnaphthalene	EPA 625	6C06060	0.12	0.95	ND	0.952	03/06/06	03/09/06	
2-Methylphenol	EPA 625	6C06060	0.27	1.9	ND	0.952	03/06/06	03/09/06	
4-Methylphenol	EPA 625	6C06060	0.19	4.8	ND	0.952	03/06/06	03/09/06	
Naphthalene	EPA 625	6C06060	0.12	0.95	ND	0.952	03/06/06	03/09/06	
2-Nitroaniline	EPA 625	6C06060	0.17	4.8	ND	0.952	03/06/06	03/09/06	
3-Nitroaniline	EPA 625	6C06060	0.33	4.8	ND	0.952	03/06/06	03/09/06	
4-Nitroaniline	EPA 625	6C06060	0.47	4.8	ND	0.952	03/06/06	03/09/06	
Nitrobenzene	EPA 625	6C06060	0.095	0.95	ND	0.952	03/06/06	03/09/06	
2-Nitrophenol	EPA 625	6C06060	0.22	1.9	ND	0.952	03/06/06	03/09/06	
4-Nitrophenol	EPA 625	6C06060	0.70	4.8	ND	0.952	03/06/06	03/09/06	
N-Nitrosodimethylamine	EPA 625	6C06060	0.21	1.9	ND	0.952	03/06/06	03/09/06	
N-Nitroso-di-n-propylamine	EPA 625	6C06060	0.17	1.9	ND	0.952	03/06/06	03/09/06	
N-Nitrosodiphenylamine	EPA 625	6C06060	0.073	0.95	ND	0.952	03/06/06	03/09/06	
Pentachlorophenol	EPA 625	6C06060	0.74	1.9	ND	0.952	03/06/06	03/09/06	
Phenanthrene	EPA 625	6C06060	0.068	0.48	ND	0.952	03/06/06	03/09/06	
Phenol	EPA 625	6C06060	0.13	0.95	ND	0.952	03/06/06	03/09/06	
Pyrene	EPA 625	6C06060	0.056	0.48	ND	0.952	03/06/06	03/09/06	
1,2,4-Trichlorobenzene	EPA 625	6C06060	0.095	0.95	ND	0.952	03/06/06	03/09/06	
2,4,5-Trichlorophenol	EPA 625	6C06060	0.071	1.9	ND	0.952	03/06/06	03/09/06	
2,4,6-Trichlorophenol	EPA 625	6C06060	0.095	0.95	ND	0.952	03/06/06	03/09/06	
Surrogate: 2-Fluorophenol (35-120%)					62 %				
Surrogate: Phenol-d6 (45-120%)					71 %				
Surrogate: 2,4,6-Tribromophenol (50-125%)					77 %				
Surrogate: Nitrobenzene-d5 (45-120%)					80 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					69 %				
Surrogate: Terphenyl-d14 (45-135%)					75 %				

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aldrin	EPA 608	6C05031	0.029	0.096	ND	0.962	03/05/06	03/06/06	
alpha-BHC	EPA 608	6C05031	0.00047	0.0096	ND	0.962	03/05/06	03/06/06	
beta-BHC	EPA 608	6C05031	0.014	0.096	ND	0.962	03/05/06	03/06/06	
delta-BHC	EPA 608	6C05031	0.019	0.19	ND	0.962	03/05/06	03/06/06	
gamma-BHC (Lindane)	EPA 608	6C05031	0.019	0.096	ND	0.962	03/05/06	03/06/06	
Chlordane	EPA 608	6C05031	0.19	0.96	ND	0.962	03/05/06	03/06/06	
4,4'-DDD	EPA 608	6C05031	0.019	0.096	ND	0.962	03/05/06	03/06/06	
4,4'-DDE	EPA 608	6C05031	0.024	0.096	ND	0.962	03/05/06	03/06/06	
4,4'-DDT	EPA 608	6C05031	0.034	0.096	ND	0.962	03/05/06	03/06/06	
Dieldrin	EPA 608	6C05031	0.014	0.096	ND	0.962	03/05/06	03/06/06	
Endosulfan I	EPA 608	6C05031	0.014	0.096	ND	0.962	03/05/06	03/06/06	
Endosulfan II	EPA 608	6C05031	0.038	0.096	ND	0.962	03/05/06	03/06/06	
Endosulfan sulfate	EPA 608	6C05031	0.019	0.19	ND	0.962	03/05/06	03/06/06	
Endrin	EPA 608	6C05031	0.019	0.096	ND	0.962	03/05/06	03/06/06	
Endrin aldehyde	EPA 608	6C05031	0.043	0.096	ND	0.962	03/05/06	03/06/06	
Endrin ketone	EPA 608	6C05031	0.019	0.096	ND	0.962	03/05/06	03/06/06	
Heptachlor	EPA 608	6C05031	0.029	0.096	ND	0.962	03/05/06	03/06/06	
Heptachlor epoxide	EPA 608	6C05031	0.029	0.096	ND	0.962	03/05/06	03/06/06	
Methoxychlor	EPA 608	6C05031	0.034	0.096	ND	0.962	03/05/06	03/06/06	
Toxaphene	EPA 608	6C05031	1.4	4.8	ND	0.962	03/05/06	03/06/06	
Surrogate: Decachlorobiphenyl (45-120%)									69 %
Surrogate: Tetrachloro-m-xylene (35-120%)									68 %

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

**TOTAL PCBS (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aroclor 1016	EPA 608	6C05031	0.19	0.96	ND	0.962	03/05/06	03/06/06	
Aroclor 1221	EPA 608	6C05031	0.096	0.96	ND	0.962	03/05/06	03/06/06	
Aroclor 1232	EPA 608	6C05031	0.24	0.96	ND	0.962	03/05/06	03/06/06	
Aroclor 1242	EPA 608	6C05031	0.24	0.96	ND	0.962	03/05/06	03/06/06	
Aroclor 1248	EPA 608	6C05031	0.24	0.96	ND	0.962	03/05/06	03/06/06	
Aroclor 1254	EPA 608	6C05031	0.24	0.96	ND	0.962	03/05/06	03/06/06	
Aroclor 1260	EPA 608	6C05031	0.38	0.96	ND	0.962	03/05/06	03/06/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					<i>111 %</i>				

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

**METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.</b>									
Reporting Units: mg/l									
Barium	EPA 200.7	6B28151	0.0028	0.010	<b>0.044</b>	1	02/28/06	03/01/06	
Boron	EPA 200.7	6B28151	0.0080	0.050	<b>0.080</b>	1	02/28/06	03/01/06	
Iron	EPA 200.7	6B28151	0.0088	0.040	<b>1.4</b>	1	02/28/06	03/01/06	

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

**METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01RE1 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Iron	EPA 200.7	6C20082	0.015	0.040	1.1	1	03/20/06	03/21/06	B-1

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

**METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8	6B28152	0.18	2.0	0.25	1	02/28/06	03/01/06	J
Arsenic	EPA 200.7	6B28151	3.8	5.0	ND	1	02/28/06	03/01/06	
Beryllium	EPA 200.7	6B28151	0.62	2.0	ND	1	02/28/06	03/01/06	
Cadmium	EPA 200.8	6B28152	0.015	1.0	0.093	1	02/28/06	03/01/06	B, J
Chromium	EPA 200.7	6B28151	0.68	5.0	1.9	1	02/28/06	03/01/06	J
Cobalt	EPA 200.7	6B28151	2.0	10	ND	1	02/28/06	03/01/06	
Copper	EPA 200.8	6B28152	0.49	2.0	3.5	1	02/28/06	03/01/06	
Lead	EPA 200.8	6B28152	0.13	1.0	2.1	1	02/28/06	03/01/06	
Manganese	EPA 200.7	6B28151	3.2	20	62	1	02/28/06	03/01/06	
Mercury	EPA 245.1	6C01088	0.063	0.20	ND	1	03/01/06	03/01/06	
Nickel	EPA 200.7	6B28151	2.0	10	2.5	1	02/28/06	03/01/06	J
Selenium	EPA 200.8	6B28152	N/A	2.0	ND	1	02/28/06	03/01/06	
Silver	EPA 200.8	6B28152	0.089	1.0	ND	1	02/28/06	03/01/06	
Thallium	EPA 200.8	6B28152	0.075	1.0	0.10	1	02/28/06	03/01/06	J
Vanadium	EPA 200.7	6B28151	3.0	10	5.0	1	02/28/06	03/01/06	J
Zinc	EPA 200.7	6B28151	3.7	20	7.1	1	02/28/06	03/01/06	J

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 9630 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001  Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01RE1 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Manganese	EPA 200.7	6C20082	7.0	20	60	1	03/20/06	03/20/06	

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.</b>									
<b>Reporting Units: mg/l</b>									
Ammonia-N (Distilled)	EPA 350.2	6C05021	0.30	0.50	<b>2.0</b>	1	03/05/06	03/05/06	
Biochemical Oxygen Demand	EPA 405.1	6C01114	0.59	2.0	<b>2.6</b>	1	03/01/06	03/06/06	
Chloride	EPA 300.0	6C01049	1.3	2.5	<b>32</b>	5	03/01/06	03/01/06	
Fluoride	EPA 300.0	6C01049	0.10	0.50	<b>0.29</b>	1	03/01/06	03/01/06	J
Nitrate/Nitrite-N	EPA 300.0	6C01049	0.072	0.26	<b>2.2</b>	1	03/01/06	03/01/06	
Oil & Grease	EPA 413.1	6C01070	0.89	4.7	ND	1	03/01/06	03/01/06	
Residual Chlorine	EPA 330.5	6B28145	0.10	0.10	ND	1	02/28/06	02/28/06	
Sulfate	EPA 300.0	6C01049	0.90	2.5	<b>70</b>	5	03/01/06	03/01/06	
Surfactants (MBAS)	SM5540-C	6C01108	0.044	0.10	<b>0.062</b>	1	03/01/06	03/01/06	J
Total Dissolved Solids	SM2540C	6C02076	10	10	<b>300</b>	1	03/02/06	03/02/06	
Total Organic Carbon	EPA 415.1	6C02064	0.25	1.0	<b>13</b>	1	03/01/06	03/01/06	
Total Suspended Solids	EPA 160.2	6C05025	10	10	<b>23</b>	1	03/05/06	03/05/06	

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001  
Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.</b>									
<b>Reporting Units: ml/hr</b>									
Total Settleable Solids	EPA 160.5	6B28095	0.10	0.10	ND	1	02/28/06	02/28/06	

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.</b>									
Reporting Units: NTU									
Turbidity	EPA 180.1	6C01122	0.040	1.0	22	1	03/01/06	03/01/06	

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6B28158	2.2	5.0	7.3	1	02/28/06	03/01/06	
Perchlorate	EPA 314.0	6C02068	0.80	4.0	ND	1	03/02/06	03/03/06	

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01RE1 (Outfall 001 - Water) - cont.</b>									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6C13106	2.2	5.0	3.1	1	02/28/06	03/13/06	B, J

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001  
Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.</b>									
<b>Reporting Units: umhos/cm</b>									
<b>Specific Conductance</b>	EPA 120.1	6C02074	1.0	1.0	<b>520</b>	1	03/02/06	03/02/06	

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

**1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.</b>									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B	P6C0311	0.49	1.0	<b>0.56</b>	1	03/03/06	03/04/06	J
Surrogate: Dibromofluoromethane (70-130%)					115 %				

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

## SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
<b>Sample ID: Outfall 001 (IPB2637-01) - Water</b>					
EPA 160.5	2	02/28/2006 13:45	02/28/2006 18:35	02/28/2006 18:30	02/28/2006 19:30
EPA 180.1	2	02/28/2006 13:45	02/28/2006 18:35	03/01/2006 15:15	03/01/2006 16:15
EPA 300.0	2	02/28/2006 13:45	02/28/2006 18:35	03/01/2006 08:00	03/01/2006 12:32
EPA 330.5	1	02/28/2006 13:45	02/28/2006 18:35	02/28/2006 20:45	02/28/2006 21:00
EPA 405.1	2	02/28/2006 13:45	02/28/2006 18:35	03/01/2006 14:15	03/06/2006 14:00
EPA 624	3	02/28/2006 13:45	02/28/2006 18:35	03/02/2006 00:00	03/03/2006 03:09
SM5540-C	2	02/28/2006 13:45	02/28/2006 18:35	03/01/2006 14:29	03/01/2006 15:25
<b>Sample ID: Trip Blank (IPB2637-02) - Water</b>					
EPA 624	3	02/28/2006 15:45	02/28/2006 18:35	03/02/2006 00:00	03/02/2006 21:39

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

**METHOD BLANK/QC DATA**

**TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06047 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C06047-BLK1)</b>											
Total Recoverable Hydrocarbons	ND	1.0	0.31	mg/l							
<b>LCS Analyzed: 03/06/2006 (6C06047-BS1)</b>											
Total Recoverable Hydrocarbons	4.47	1.0	0.31	mg/l	5.00		89	65-120			M-NR1
<b>LCS Dup Analyzed: 03/06/2006 (6C06047-BSD1)</b>											
Total Recoverable Hydrocarbons	4.11	1.0	0.31	mg/l	5.00		82	65-120	8	20	

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

**METHOD BLANK/QC DATA**

**EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C07098 Extracted: 03/07/06</b>											
<b>Blank Analyzed: 03/07/2006 (6C07098-BLK1)</b>											
EFH (C13 - C22)	ND	0.50	0.045	mg/l							
EFH (C13 - C40)	ND	0.50	0.045	mg/l							
Surrogate: n-Octacosane	0.142			mg/l	0.200		71	40-125			
<b>LCS Analyzed: 03/07/2006 (6C07098-BS1)</b>											
EFH (C13 - C40)	0.504	0.50	0.045	mg/l	0.750		67	40-120			M-NR1
Surrogate: n-Octacosane	0.146			mg/l	0.200		73	40-125			
<b>LCS Dup Analyzed: 03/07/2006 (6C07098-BSD1)</b>											
EFH (C13 - C40)	0.540	0.50	0.045	mg/l	0.750		72	40-120	7	25	
Surrogate: n-Octacosane	0.153			mg/l	0.200		76	40-125			

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06046 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C06046-BLK1)</b>											
GRO (C4 - C12)	ND	0.10	0.050	mg/l							
Surrogate: 4-BFB (FID)	0.00732			mg/l	0.0100		73	65-140			
<b>LCS Analyzed: 03/06/2006 (6C06046-BS1)</b>											
GRO (C4 - C12)	0.827	0.10	0.050	mg/l	0.800		103	65-140			
Surrogate: 4-BFB (FID)	0.0414			mg/l	0.0300		138	65-140			
<b>Matrix Spike Analyzed: 03/06/2006 (6C06046-MS1) Source: IPB2637-01</b>											
GRO (C4 - C12)	0.208	0.10	0.050	mg/l	0.220	ND	95	60-145			
Surrogate: 4-BFB (FID)	0.0115			mg/l	0.0100		115	65-140			
<b>Matrix Spike Dup Analyzed: 03/06/2006 (6C06046-MSD1) Source: IPB2637-01</b>											
GRO (C4 - C12)	0.216	0.10	0.050	mg/l	0.220	ND	98	60-145	4	20	
Surrogate: 4-BFB (FID)	0.0117			mg/l	0.0100		117	65-140			

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02019-BLK1)</b>											
Benzene	ND	2.0	0.28	ug/l							
Benzene	ND	1.0	0.28	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							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l							
Carbon tetrachloride	ND	5.0	0.28	ug/l							
Carbon tetrachloride	ND	0.50	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							
Chloroform	ND	2.0	0.33	ug/l							
Chloromethane	ND	5.0	0.30	ug/l							
Dibromochloromethane	ND	2.0	0.28	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							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	2.0	0.28	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	5.0	0.42	ug/l							
1,1-Dichloroethene	ND	3.0	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							
cis-1,3-Dichloropropene	ND	2.0	0.22	ug/l							
trans-1,3-Dichloropropene	ND	2.0	0.32	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Methylene chloride	1.16	5.0	0.70	ug/l							J
1,1,2,2-Tetrachloroethane	ND	2.0	0.24	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	ug/l							
Toluene	ND	2.0	0.36	ug/l							

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001  Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

**METHOD BLANK/QC DATA**

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02019-BLK1)</b>											
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND	5.0	0.26	ug/l							
Trichloroethene	ND	2.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Vinyl chloride	ND	5.0	0.26	ug/l							
Vinyl chloride	ND	0.50	0.26	ug/l							
Xylenes, Total	ND	4.0	0.52	ug/l							
Xylenes, Total	ND	4.0	0.90	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l							
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		110	80-120			
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		96	80-120			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		96	80-120			
<b>LCS Analyzed: 03/02/2006 (6C02019-BS1)</b>											
Benzene	26.3	2.0	0.28	ug/l	25.0		105	70-120			
Benzene	26.3	1.0	0.28	ug/l	25.0		105	65-120			
Bromodichloromethane	25.5	2.0	0.30	ug/l	25.0		102	65-135			
Bromoform	21.8	5.0	0.32	ug/l	25.0		87	50-130			
Bromomethane	23.1	5.0	0.42	ug/l	25.0		92	60-140			
Carbon tetrachloride	24.8	0.50	0.28	ug/l	25.0		99	65-140			
Carbon tetrachloride	24.8	5.0	0.28	ug/l	25.0		99	70-140			
Chlorobenzene	26.0	2.0	0.36	ug/l	25.0		104	70-125			
Chloroethane	26.1	5.0	0.40	ug/l	25.0		104	55-140			
Chloroform	26.0	2.0	0.33	ug/l	25.0		104	65-130			
Chloroform	26.0	2.0	0.33	ug/l	25.0		104	75-130			
Chloromethane	23.7	5.0	0.30	ug/l	25.0		95	40-140			
Dibromochloromethane	25.8	2.0	0.28	ug/l	25.0		103	65-140			
1,2-Dichlorobenzene	27.1	2.0	0.32	ug/l	25.0		108	70-120			
1,3-Dichlorobenzene	24.9	2.0	0.35	ug/l	25.0		100	70-125			

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>LCS Analyzed: 03/02/2006 (6C02019-BS1)</b>											
1,4-Dichlorobenzene	24.3	2.0	0.37	ug/l	25.0		97	70-125			
1,1-Dichloroethane	26.0	2.0	0.27	ug/l	25.0		104	65-130			
1,1-Dichloroethane	26.0	2.0	0.27	ug/l	25.0		104	70-135			
1,2-Dichloroethane	26.0	2.0	0.28	ug/l	25.0		104	60-150			
1,2-Dichloroethane	26.0	0.50	0.28	ug/l	25.0		104	60-140			
1,1-Dichloroethene	28.5	3.0	0.32	ug/l	25.0		114	75-135			
1,1-Dichloroethene	28.5	5.0	0.42	ug/l	25.0		114	70-130			
trans-1,2-Dichloroethene	27.9	2.0	0.27	ug/l	25.0		112	65-130			
1,2-Dichloropropane	26.7	2.0	0.35	ug/l	25.0		107	65-125			
cis-1,3-Dichloropropene	26.2	2.0	0.22	ug/l	25.0		105	70-130			
trans-1,3-Dichloropropene	26.9	2.0	0.32	ug/l	25.0		108	65-130			
Ethylbenzene	26.1	2.0	0.25	ug/l	25.0		104	70-125			
Ethylbenzene	26.1	2.0	0.25	ug/l	25.0		104	80-120			
Methylene chloride	28.2	5.0	0.70	ug/l	25.0		113	60-130			
1,1,2,2-Tetrachloroethane	36.9	2.0	0.24	ug/l	25.0		148	55-130			L
Tetrachloroethene	25.7	2.0	0.32	ug/l	25.0		103	75-125			
Tetrachloroethene	25.7	2.0	0.32	ug/l	25.0		103	65-125			
Toluene	25.6	2.0	0.36	ug/l	25.0		102	75-120			
Toluene	25.6	2.0	0.36	ug/l	25.0		102	70-125			
1,1,1-Trichloroethane	23.6	2.0	0.30	ug/l	25.0		94	65-135			
1,1,1-Trichloroethane	23.6	2.0	0.30	ug/l	25.0		94	75-140			
1,1,2-Trichloroethane	29.4	2.0	0.30	ug/l	25.0		118	70-125			
1,1,2-Trichloroethane	29.4	2.0	0.30	ug/l	25.0		118	65-125			
Trichloroethene	26.7	2.0	0.26	ug/l	25.0		107	70-125			
Trichloroethene	26.7	5.0	0.26	ug/l	25.0		107	80-120			
Trichlorofluoromethane	23.0	5.0	0.34	ug/l	25.0		92	60-140			
Trichlorofluoromethane	23.0	5.0	0.34	ug/l	25.0		92	65-145			
Vinyl chloride	25.2	5.0	0.26	ug/l	25.0		101	50-130			
Vinyl chloride	25.2	0.50	0.26	ug/l	25.0		101	50-130			
Surrogate: Dibromofluoromethane	27.8			ug/l	25.0		111	80-120			
Surrogate: Dibromofluoromethane	27.8			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		108	80-120			

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001 Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

**METHOD BLANK/QC DATA**

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Matrix Spike Analyzed: 03/02/2006 (6C02019-MS1)</b>						<b>Source: IPB2639-01</b>					
Benzene	26.1	2.0	0.28	ug/l	25.0	ND	104	70-120			
Benzene	26.1	1.0	0.28	ug/l	25.0	ND	104	60-125			
Bromodichloromethane	25.1	2.0	0.30	ug/l	25.0	ND	100	65-135			
Bromoform	18.2	5.0	0.32	ug/l	25.0	ND	73	50-135			
Bromomethane	21.9	5.0	0.42	ug/l	25.0	ND	88	50-145			
Carbon tetrachloride	24.9	0.50	0.28	ug/l	25.0	ND	100	65-140			
Carbon tetrachloride	24.9	5.0	0.28	ug/l	25.0	ND	100	70-145			
Chlorobenzene	25.7	2.0	0.36	ug/l	25.0	ND	103	70-125			
Chloroethane	25.6	5.0	0.40	ug/l	25.0	ND	102	50-140			
Chloroform	25.6	2.0	0.33	ug/l	25.0	ND	102	65-135			
Chloroform	25.6	2.0	0.33	ug/l	25.0	ND	102	70-135			
Chloromethane	23.5	5.0	0.30	ug/l	25.0	ND	94	35-140			
Dibromochloromethane	24.0	2.0	0.28	ug/l	25.0	ND	96	60-140			
1,2-Dichlorobenzene	25.9	2.0	0.32	ug/l	25.0	ND	104	70-125			
1,3-Dichlorobenzene	24.0	2.0	0.35	ug/l	25.0	ND	96	70-125			
1,4-Dichlorobenzene	23.4	2.0	0.37	ug/l	25.0	ND	94	70-125			
1,1-Dichloroethane	25.6	2.0	0.27	ug/l	25.0	ND	102	60-130			
1,1-Dichloroethane	25.6	2.0	0.27	ug/l	25.0	ND	102	65-135			
1,2-Dichloroethane	25.8	0.50	0.28	ug/l	25.0	ND	103	60-140			
1,2-Dichloroethane	25.8	2.0	0.28	ug/l	25.0	ND	103	60-150			
1,1-Dichloroethene	27.2	5.0	0.42	ug/l	25.0	ND	109	60-135			
1,1-Dichloroethene	27.2	3.0	0.32	ug/l	25.0	ND	109	65-140			
trans-1,2-Dichloroethene	26.6	2.0	0.27	ug/l	25.0	ND	106	60-135			
1,2-Dichloropropane	26.6	2.0	0.35	ug/l	25.0	ND	106	60-125			
cis-1,3-Dichloropropene	25.8	2.0	0.22	ug/l	25.0	ND	103	65-135			
trans-1,3-Dichloropropene	26.4	2.0	0.32	ug/l	25.0	ND	106	65-140			
Ethylbenzene	25.7	2.0	0.25	ug/l	25.0	ND	103	65-130			
Ethylbenzene	25.7	2.0	0.25	ug/l	25.0	ND	103	70-130			
Methylene chloride	25.9	5.0	0.70	ug/l	25.0	ND	104	55-130			
1,1,2,2-Tetrachloroethane	35.2	2.0	0.24	ug/l	25.0	ND	141	55-140			MI
Tetrachloroethene	25.1	2.0	0.32	ug/l	25.0	ND	100	60-130			
Tetrachloroethene	25.1	2.0	0.32	ug/l	25.0	ND	100	70-130			
Toluene	25.5	2.0	0.36	ug/l	25.0	ND	102	70-120			
Toluene	25.5	2.0	0.36	ug/l	25.0	ND	102	65-125			
1,1,1-Trichloroethane	23.2	2.0	0.30	ug/l	25.0	ND	93	65-140			

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





MWH-Pasadena/Boeing
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06
Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Table with 12 columns: Analyte, Result, Reporting Limit, MDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Data Qualifiers

Batch: 6C02019 Extracted: 03/02/06

Matrix Spike Analyzed: 03/02/2006 (6C02019-MS1)

Source: IPB2639-01

Table listing various analytes such as 1,1,1-Trichloroethane, Trichloroethene, and various surrogates with their corresponding results and limits.

Matrix Spike Dup Analyzed: 03/02/2006 (6C02019-MSD1)

Source: IPB2639-01

Table listing various analytes such as Benzene, Bromodichloromethane, and various chlorobenzenes with their corresponding results and limits.

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001  
 Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

**METHOD BLANK/QC DATA**

**PURGEABLES BY GC/MS (EPA 624)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02019-MSD1)</b>						<b>Source: IPB2639-01</b>					
1,2-Dichloroethane	23.0	2.0	0.28	ug/l	25.0	ND	92	60-150	11	20	
1,1-Dichloroethene	29.2	5.0	0.42	ug/l	25.0	ND	117	60-135	7	20	
1,1-Dichloroethene	29.2	3.0	0.32	ug/l	25.0	ND	117	65-140	7	20	
trans-1,2-Dichloroethene	28.2	2.0	0.27	ug/l	25.0	ND	113	60-135	6	20	
1,2-Dichloropropane	26.0	2.0	0.35	ug/l	25.0	ND	104	60-125	2	20	
cis-1,3-Dichloropropene	24.5	2.0	0.22	ug/l	25.0	ND	98	65-135	5	20	
trans-1,3-Dichloropropene	23.0	2.0	0.32	ug/l	25.0	ND	92	65-140	14	25	
Ethylbenzene	27.0	2.0	0.25	ug/l	25.0	ND	108	70-130	5	20	
Ethylbenzene	27.0	2.0	0.25	ug/l	25.0	ND	108	65-130	5	20	
Methylene chloride	26.8	5.0	0.70	ug/l	25.0	ND	107	55-130	3	20	
1,1,2,2-Tetrachloroethane	25.7	2.0	0.24	ug/l	25.0	ND	103	55-140	31	30	R-3
Tetrachloroethene	26.4	2.0	0.32	ug/l	25.0	ND	106	60-130	5	20	
Tetrachloroethene	26.4	2.0	0.32	ug/l	25.0	ND	106	70-130	5	20	
Toluene	26.5	2.0	0.36	ug/l	25.0	ND	106	65-125	4	20	
Toluene	26.5	2.0	0.36	ug/l	25.0	ND	106	70-120	4	20	
1,1,1-Trichloroethane	24.3	2.0	0.30	ug/l	25.0	ND	97	75-140	5	20	
1,1,1-Trichloroethane	24.3	2.0	0.30	ug/l	25.0	ND	97	65-140	5	20	
1,1,2-Trichloroethane	23.6	2.0	0.30	ug/l	25.0	ND	94	60-130	17	25	
1,1,2-Trichloroethane	23.6	2.0	0.30	ug/l	25.0	ND	94	60-135	17	25	
Trichloroethene	29.1	5.0	0.26	ug/l	25.0	2.4	107	70-125	3	20	
Trichloroethene	29.1	2.0	0.26	ug/l	25.0	2.4	107	60-125	3	20	
Trichlorofluoromethane	24.3	5.0	0.34	ug/l	25.0	ND	97	55-145	9	25	
Trichlorofluoromethane	24.3	5.0	0.34	ug/l	25.0	ND	97	55-145	9	25	
Vinyl chloride	25.6	5.0	0.26	ug/l	25.0	ND	102	40-135	7	30	
Vinyl chloride	25.6	0.50	0.26	ug/l	25.0	ND	102	40-135	7	30	
Surrogate: Dibromofluoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Dibromofluoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### PURGEABLES-- GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02019-BLK1)</b>											
Acrolein	ND	50	4.6	ug/l							
Acrylonitrile	ND	50	0.70	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		96	80-120			
<b>LCS Analyzed: 03/02/2006 (6C02019-BS1)</b>											
2-Chloroethyl vinyl ether	17.8	5.0	1.8	ug/l	25.0		71	25-170			
Surrogate: Dibromofluoromethane	27.8			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		108	80-120			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02019-MS1)</b>						<b>Source: IPB2639-01</b>					
2-Chloroethyl vinyl ether	21.2	5.0	1.8	ug/l	25.0	ND	85	25-170			
Surrogate: Dibromofluoromethane	28.1			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	28.1			ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	26.7			ug/l	25.0		107	80-120			
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02019-MSD1)</b>						<b>Source: IPB2639-01</b>					
2-Chloroethyl vinyl ether	8.66	5.0	1.8	ug/l	25.0	ND	35	25-170	84	25	R
Surrogate: Dibromofluoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001  
Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

**METHOD BLANK/QC DATA**

**PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02019-BLK1)</b>											
1,2-Dichloro-1,1,2-trifluoroethane	ND	2.5	N/A	ug/l							
Cyclohexane	ND	2.5	N/A	ug/l							

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/09/2006 (6C06060-BLK1)</b>											
Acenaphthene	ND	0.50	0.10	ug/l							
Acenaphthylene	ND	0.50	0.10	ug/l							
Aniline	ND	10	2.9	ug/l							
Anthracene	ND	0.50	0.083	ug/l							
Benzidine	ND	5.0	3.2	ug/l							
Benzoic acid	ND	20	3.7	ug/l							
Benzo(a)anthracene	ND	5.0	0.038	ug/l							
Benzo(a)pyrene	ND	2.0	0.14	ug/l							
Benzo(b)fluoranthene	ND	2.0	0.050	ug/l							
Benzo(g,h,i)perylene	ND	5.0	0.059	ug/l							
Benzo(k)fluoranthene	ND	0.50	0.053	ug/l							
Benzyl alcohol	ND	5.0	0.21	ug/l							
Bis(2-chloroethoxy)methane	ND	0.50	0.072	ug/l							
Bis(2-chloroethyl)ether	ND	0.50	0.084	ug/l							
Bis(2-chloroisopropyl)ether	ND	0.50	0.11	ug/l							
Bis(2-ethylhexyl)phthalate	ND	5.0	1.1	ug/l							
4-Bromophenyl phenyl ether	ND	1.0	0.12	ug/l							
Butyl benzyl phthalate	ND	5.0	0.34	ug/l							
4-Chloroaniline	ND	2.0	0.20	ug/l							
2-Chloronaphthalene	ND	0.50	0.059	ug/l							
4-Chloro-3-methylphenol	ND	2.0	0.34	ug/l							
4-Chlorophenyl phenyl ether	ND	0.50	0.056	ug/l							
2-Chlorophenol	ND	1.0	0.12	ug/l							
Chrysene	ND	0.50	0.072	ug/l							
Dibenz(a,h)anthracene	ND	0.50	0.083	ug/l							
Dibenzofuran	ND	0.50	0.075	ug/l							
Di-n-butyl phthalate	ND	2.0	0.26	ug/l							
1,2-Dichlorobenzene	ND	0.50	0.11	ug/l							
1,3-Dichlorobenzene	ND	0.50	0.13	ug/l							
1,4-Dichlorobenzene	ND	0.50	0.050	ug/l							
3,3-Dichlorobenzidine	ND	5.0	0.93	ug/l							
2,4-Dichlorophenol	ND	2.0	0.21	ug/l							
Diethyl phthalate	ND	1.0	0.12	ug/l							
2,4-Dimethylphenol	ND	2.0	0.31	ug/l							
Dimethyl phthalate	ND	0.50	0.081	ug/l							

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/09/2006 (6C06060-BLK1)</b>											
4,6-Dinitro-2-methylphenol	ND	5.0	0.38	ug/l							
2,4-Dinitrophenol	ND	5.0	2.7	ug/l							
2,4-Dinitrotoluene	ND	5.0	0.23	ug/l							
2,6-Dinitrotoluene	ND	5.0	0.24	ug/l							
Di-n-octyl phthalate	ND	5.0	0.17	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	1.0	0.087	ug/l							
Fluoranthene	ND	0.50	0.089	ug/l							
Fluorene	ND	0.50	0.075	ug/l							
Hexachlorobenzene	ND	1.0	0.13	ug/l							
Hexachlorobutadiene	ND	2.0	0.38	ug/l							
Hexachlorocyclopentadiene	ND	5.0	1.8	ug/l							
Hexachloroethane	ND	3.0	0.51	ug/l							
Indeno(1,2,3-cd)pyrene	ND	2.0	0.19	ug/l							
Isophorone	ND	1.0	0.059	ug/l							
2-Methylnaphthalene	ND	1.0	0.13	ug/l							
2-Methylphenol	ND	2.0	0.28	ug/l							
4-Methylphenol	ND	5.0	0.20	ug/l							
Naphthalene	ND	1.0	0.13	ug/l							
2-Nitroaniline	ND	5.0	0.18	ug/l							
3-Nitroaniline	ND	5.0	0.35	ug/l							
4-Nitroaniline	ND	5.0	0.49	ug/l							
Nitrobenzene	ND	1.0	0.10	ug/l							
2-Nitrophenol	ND	2.0	0.23	ug/l							
4-Nitrophenol	ND	5.0	0.73	ug/l							
N-Nitrosodimethylamine	ND	2.0	0.22	ug/l							
N-Nitroso-di-n-propylamine	ND	2.0	0.18	ug/l							
N-Nitrosodiphenylamine	ND	1.0	0.077	ug/l							
Pentachlorophenol	ND	2.0	0.78	ug/l							
Phenanthrene	ND	0.50	0.071	ug/l							
Phenol	ND	1.0	0.14	ug/l							
Pyrene	ND	0.50	0.059	ug/l							
1,2,4-Trichlorobenzene	ND	1.0	0.10	ug/l							
2,4,5-Trichlorophenol	ND	2.0	0.075	ug/l							
2,4,6-Trichlorophenol	ND	1.0	0.10	ug/l							
Surrogate: 2-Fluorophenol	14.2			ug/l	20.0		71	35-120			

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/09/2006 (6C06060-BLK1)</b>											
Surrogate: Phenol-d6	14.6			ug/l	20.0		73	45-120			
Surrogate: 2,4,6-Tribromophenol	16.4			ug/l	20.0		82	50-125			
Surrogate: Nitrobenzene-d5	7.76			ug/l	10.0		78	45-120			
Surrogate: 2-Fluorobiphenyl	6.74			ug/l	10.0		67	45-120			
Surrogate: Terphenyl-d14	7.50			ug/l	10.0		75	45-135			
<b>LCS Analyzed: 03/09/2006 (6C06060-BS1)</b>											
Acenaphthene	7.90	0.50	0.10	ug/l	10.0		79	55-120			
Acenaphthylene	8.44	0.50	0.10	ug/l	10.0		84	55-120			
Aniline	7.02	10	2.9	ug/l	10.0		70	30-120			J
Anthracene	8.74	0.50	0.083	ug/l	10.0		87	60-120			
Benzidine	ND	5.0	3.2	ug/l	10.0			20-180			L2
Benzoic acid	ND	20	3.7	ug/l	10.0			30-125			L2
Benzo(a)anthracene	9.48	5.0	0.038	ug/l	10.0		95	65-120			
Benzo(a)pyrene	10.3	2.0	0.14	ug/l	10.0		103	55-125			
Benzo(b)fluoranthene	11.0	2.0	0.050	ug/l	10.0		110	50-125			
Benzo(g,h,i)perylene	12.0	5.0	0.059	ug/l	10.0		120	35-160			
Benzo(k)fluoranthene	10.1	0.50	0.053	ug/l	10.0		101	50-125			
Benzyl alcohol	7.00	5.0	0.21	ug/l	10.0		70	40-130			
Bis(2-chloroethoxy)methane	7.98	0.50	0.072	ug/l	10.0		80	55-120			
Bis(2-chloroethyl)ether	7.26	0.50	0.084	ug/l	10.0		73	50-120			
Bis(2-chloroisopropyl)ether	7.70	0.50	0.11	ug/l	10.0		77	50-120			
Bis(2-ethylhexyl)phthalate	10.0	5.0	1.1	ug/l	10.0		100	65-125			
4-Bromophenyl phenyl ether	8.36	1.0	0.12	ug/l	10.0		84	55-125			
Butyl benzyl phthalate	10.6	5.0	0.34	ug/l	10.0		106	60-125			
4-Chloroaniline	7.00	2.0	0.20	ug/l	10.0		70	55-120			
2-Chloronaphthalene	7.24	0.50	0.059	ug/l	10.0		72	60-120			
4-Chloro-3-methylphenol	9.26	2.0	0.34	ug/l	10.0		93	60-120			
4-Chlorophenyl phenyl ether	8.04	0.50	0.056	ug/l	10.0		80	55-120			
2-Chlorophenol	7.00	1.0	0.12	ug/l	10.0		70	45-120			
Chrysene	9.24	0.50	0.072	ug/l	10.0		92	65-120			
Dibenz(a,h)anthracene	11.0	0.50	0.083	ug/l	10.0		110	40-160			
Dibenzofuran	7.64	0.50	0.075	ug/l	10.0		76	60-120			
Di-n-butyl phthalate	9.46	2.0	0.26	ug/l	10.0		95	65-125			
1,2-Dichlorobenzene	6.56	0.50	0.11	ug/l	10.0		66	40-120			
1,3-Dichlorobenzene	6.48	0.50	0.13	ug/l	10.0		65	40-120			

M-NR1

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001  Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>LCS Analyzed: 03/09/2006 (6C06060-BS1)</b>											<b>M-NR1</b>
1,4-Dichlorobenzene	6.50	0.50	0.050	ug/l	10.0		65	40-120			
3,3-Dichlorobenzidine	8.90	5.0	0.93	ug/l	10.0		89	50-170			
2,4-Dichlorophenol	7.36	2.0	0.21	ug/l	10.0		74	55-120			
Diethyl phthalate	7.08	1.0	0.12	ug/l	10.0		71	60-120			
2,4-Dimethylphenol	7.40	2.0	0.31	ug/l	10.0		74	35-120			
Dimethyl phthalate	3.64	0.50	0.081	ug/l	10.0		36	60-120			L2
4,6-Dinitro-2-methylphenol	7.74	5.0	0.38	ug/l	10.0		77	55-120			
2,4-Dinitrophenol	6.30	5.0	2.7	ug/l	10.0		63	40-140			
2,4-Dinitrotoluene	8.12	5.0	0.23	ug/l	10.0		81	60-140			
2,6-Dinitrotoluene	7.88	5.0	0.24	ug/l	10.0		79	65-125			
Di-n-octyl phthalate	8.70	5.0	0.17	ug/l	10.0		87	60-130			
1,2-Diphenylhydrazine/Azobenzene	7.70	1.0	0.087	ug/l	10.0		77	60-120			
Fluoranthene	9.46	0.50	0.089	ug/l	10.0		95	55-125			
Fluorene	8.10	0.50	0.075	ug/l	10.0		81	60-120			
Hexachlorobenzene	8.70	1.0	0.13	ug/l	10.0		87	50-120			
Hexachlorobutadiene	7.32	2.0	0.38	ug/l	10.0		73	45-120			
Hexachlorocyclopentadiene	7.00	5.0	1.8	ug/l	10.0		70	10-130			
Hexachloroethane	6.46	3.0	0.51	ug/l	10.0		65	40-120			
Indeno(1,2,3-cd)pyrene	11.5	2.0	0.19	ug/l	10.0		115	35-150			
Isophorone	8.94	1.0	0.059	ug/l	10.0		89	55-120			
2-Methylnaphthalene	8.32	1.0	0.13	ug/l	10.0		83	50-120			
2-Methylphenol	7.04	2.0	0.28	ug/l	10.0		70	45-120			
4-Methylphenol	7.00	5.0	0.20	ug/l	10.0		70	45-120			
Naphthalene	7.92	1.0	0.13	ug/l	10.0		79	50-120			
2-Nitroaniline	7.90	5.0	0.18	ug/l	10.0		79	60-130			
3-Nitroaniline	6.74	5.0	0.35	ug/l	10.0		67	50-140			
4-Nitroaniline	6.76	5.0	0.49	ug/l	10.0		68	45-160			
Nitrobenzene	7.84	1.0	0.10	ug/l	10.0		78	50-120			
2-Nitrophenol	7.40	2.0	0.23	ug/l	10.0		74	55-120			
4-Nitrophenol	6.38	5.0	0.73	ug/l	10.0		64	50-135			
N-Nitrosodimethylamine	7.38	2.0	0.22	ug/l	10.0		74	40-120			
N-Nitroso-di-n-propylamine	7.84	2.0	0.18	ug/l	10.0		78	50-120			
N-Nitrosodiphenylamine	7.82	1.0	0.077	ug/l	10.0		78	60-120			
Pentachlorophenol	7.98	2.0	0.78	ug/l	10.0		80	50-125			
Phenanthrene	8.64	0.50	0.071	ug/l	10.0		86	55-120			

**Del Mar Analytical - Irvine**  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*





MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>LCS Analyzed: 03/09/2006 (6C06060-BS1)</b>											<b>M-NR1</b>
Phenol	7.12	1.0	0.14	ug/l	10.0		71	45-120			
Pyrene	9.30	0.50	0.059	ug/l	10.0		93	50-120			
1,2,4-Trichlorobenzene	7.38	1.0	0.10	ug/l	10.0		74	50-120			
2,4,5-Trichlorophenol	7.50	2.0	0.075	ug/l	10.0		75	60-120			
2,4,6-Trichlorophenol	7.90	1.0	0.10	ug/l	10.0		79	60-120			
Surrogate: 2-Fluorophenol	10.9			ug/l	20.0		54	35-120			
Surrogate: Phenol-d6	12.1			ug/l	20.0		60	45-120			
Surrogate: 2,4,6-Tribromophenol	13.6			ug/l	20.0		68	50-125			
Surrogate: Nitrobenzene-d5	7.08			ug/l	10.0		71	45-120			
Surrogate: 2-Fluorobiphenyl	6.30			ug/l	10.0		63	45-120			
Surrogate: Terphenyl-d14	7.26			ug/l	10.0		73	45-135			
<b>LCS Dup Analyzed: 03/09/2006 (6C06060-BSD1)</b>											
Acenaphthene	8.18	0.50	0.10	ug/l	10.0		82	55-120	3	20	
Acenaphthylene	8.82	0.50	0.10	ug/l	10.0		88	55-120	4	20	
Aniline	7.34	10	2.9	ug/l	10.0		73	30-120	4	25	J
Anthracene	9.64	0.50	0.083	ug/l	10.0		96	60-120	10	20	
Benzidine	ND	5.0	3.2	ug/l	10.0			20-180		35	L2
Benzoic acid	ND	20	3.7	ug/l	10.0			30-125		30	L2
Benzo(a)anthracene	10.5	5.0	0.038	ug/l	10.0		105	65-120	10	20	
Benzo(a)pyrene	11.5	2.0	0.14	ug/l	10.0		115	55-125	11	25	
Benzo(b)fluoranthene	12.1	2.0	0.050	ug/l	10.0		121	50-125	10	25	
Benzo(g,h,i)perylene	13.1	5.0	0.059	ug/l	10.0		131	35-160	9	25	
Benzo(k)fluoranthene	11.3	0.50	0.053	ug/l	10.0		113	50-125	11	20	
Benzyl alcohol	7.60	5.0	0.21	ug/l	10.0		76	40-130	8	20	
Bis(2-chloroethoxy)methane	7.82	0.50	0.072	ug/l	10.0		78	55-120	2	20	
Bis(2-chloroethyl)ether	7.42	0.50	0.084	ug/l	10.0		74	50-120	2	20	
Bis(2-chloroisopropyl)ether	7.96	0.50	0.11	ug/l	10.0		80	50-120	3	20	
Bis(2-ethylhexyl)phthalate	11.3	5.0	1.1	ug/l	10.0		113	65-125	12	20	
4-Bromophenyl phenyl ether	8.82	1.0	0.12	ug/l	10.0		88	55-125	5	25	
Butyl benzyl phthalate	11.1	5.0	0.34	ug/l	10.0		111	60-125	5	20	
4-Chloroaniline	7.62	2.0	0.20	ug/l	10.0		76	55-120	8	25	
2-Chloronaphthalene	7.56	0.50	0.059	ug/l	10.0		76	60-120	4	20	
4-Chloro-3-methylphenol	9.84	2.0	0.34	ug/l	10.0		98	60-120	6	25	
4-Chlorophenyl phenyl ether	8.50	0.50	0.056	ug/l	10.0		85	55-120	6	20	
2-Chlorophenol	7.00	1.0	0.12	ug/l	10.0		70	45-120	0	25	

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager



MWH-Pasadena/Boeing
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06
Received: 02/28/06

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Table with columns: Analyte, Result, Reporting Limit, MDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Data Qualifiers. Includes a list of analytes such as Chrysene, Dibenz(a,h)anthracene, etc.

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

**METHOD BLANK/QC DATA**

**ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>LCS Dup Analyzed: 03/09/2006 (6C06060-BSD1)</b>											
4-Nitrophenol	6.44	5.0	0.73	ug/l	10.0	64	50-135	1	25		
N-Nitrosodimethylamine	7.48	2.0	0.22	ug/l	10.0	75	40-120	1	20		
N-Nitroso-di-n-propylamine	8.20	2.0	0.18	ug/l	10.0	82	50-120	4	20		
N-Nitrosodiphenylamine	8.64	1.0	0.077	ug/l	10.0	86	60-120	10	20		
Pentachlorophenol	8.50	2.0	0.78	ug/l	10.0	85	50-125	6	25		
Phenanthrene	9.56	0.50	0.071	ug/l	10.0	96	55-120	10	20		
Phenol	7.22	1.0	0.14	ug/l	10.0	72	45-120	1	25		
Pyrene	10.2	0.50	0.059	ug/l	10.0	102	50-120	9	25		
1,2,4-Trichlorobenzene	7.26	1.0	0.10	ug/l	10.0	73	50-120	2	20		
2,4,5-Trichlorophenol	7.22	2.0	0.075	ug/l	10.0	72	60-120	4	20		
2,4,6-Trichlorophenol	7.64	1.0	0.10	ug/l	10.0	76	60-120	3	20		
Surrogate: 2-Fluorophenol	10.7			ug/l	20.0	54	35-120				
Surrogate: Phenol-d6	12.0			ug/l	20.0	60	45-120				
Surrogate: 2,4,6-Tribromophenol	13.7			ug/l	20.0	68	50-125				
Surrogate: Nitrobenzene-d5	7.24			ug/l	10.0	72	45-120				
Surrogate: 2-Fluorobiphenyl	6.58			ug/l	10.0	66	45-120				
Surrogate: Terphenyl-d14	7.58			ug/l	10.0	76	45-135				

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C05031-BLK1)</b>											
Aldrin	ND	0.10	0.030	ug/l							
alpha-BHC	ND	0.010	0.0010	ug/l							
alpha-BHC	ND	0.10	0.020	ug/l							
beta-BHC	ND	0.10	0.015	ug/l							
delta-BHC	ND	0.20	0.020	ug/l							
gamma-BHC (Lindane)	ND	0.10	0.020	ug/l							
Chlordane	ND	1.0	0.20	ug/l							
4,4'-DDD	ND	0.10	0.020	ug/l							
4,4'-DDE	ND	0.10	0.025	ug/l							
4,4'-DDT	ND	0.10	0.035	ug/l							
Dieldrin	ND	0.10	0.015	ug/l							
Endosulfan I	ND	0.10	0.015	ug/l							
Endosulfan II	ND	0.10	0.040	ug/l							
Endosulfan sulfate	ND	0.20	0.020	ug/l							
Endrin	ND	0.10	0.020	ug/l							
Endrin aldehyde	ND	0.10	0.045	ug/l							
Endrin ketone	ND	0.10	0.020	ug/l							
Heptachlor	ND	0.10	0.030	ug/l							
Heptachlor epoxide	ND	0.10	0.030	ug/l							
Methoxychlor	ND	0.10	0.035	ug/l							
Toxaphene	ND	5.0	1.5	ug/l							
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		70	35-115			
Surrogate: Decachlorobiphenyl	0.455			ug/l	0.500		91	45-120			
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		70	35-115			
Surrogate: Decachlorobiphenyl	0.455			ug/l	0.500		91	45-120			

### LCS Analyzed: 03/06/2006 (6C05031-BS1)

M-NR1

Aldrin	0.389	0.10	0.030	ug/l	0.500		78	35-120			
alpha-BHC	0.434	0.10	0.020	ug/l	0.500		87	45-120			
alpha-BHC	0.434	0.010	0.0010	ug/l	0.500		87	45-120			
beta-BHC	0.426	0.10	0.015	ug/l	0.500		85	50-120			
delta-BHC	0.435	0.20	0.020	ug/l	0.500		87	50-120			
gamma-BHC (Lindane)	0.423	0.10	0.020	ug/l	0.500		85	40-120			
4,4'-DDD	0.438	0.10	0.020	ug/l	0.500		88	55-120			
4,4'-DDE	0.419	0.10	0.025	ug/l	0.500		84	50-120			
4,4'-DDT	0.458	0.10	0.035	ug/l	0.500		92	55-120			

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite T00, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>											
<b>LCS Analyzed: 03/06/2006 (6C05031-BS1)</b>											M-NR1
Dieldrin	0.431	0.10	0.015	ug/l	0.500		86	50-120			
Endosulfan I	0.406	0.10	0.015	ug/l	0.500		81	50-120			
Endosulfan II	0.421	0.10	0.040	ug/l	0.500		84	55-120			
Endosulfan sulfate	0.429	0.20	0.020	ug/l	0.500		86	60-120			
Endrin	0.449	0.10	0.020	ug/l	0.500		90	55-120			
Endrin aldehyde	0.410	0.10	0.045	ug/l	0.500		82	55-120			
Endrin ketone	0.429	0.10	0.020	ug/l	0.500		86	55-120			
Heptachlor	0.393	0.10	0.030	ug/l	0.500		79	40-115			
Heptachlor epoxide	0.409	0.10	0.030	ug/l	0.500		82	50-120			
Methoxychlor	0.435	0.10	0.035	ug/l	0.500		87	55-120			
Surrogate: Tetrachloro-m-xylene	0.361			ug/l	0.500		72	35-115			
Surrogate: Decachlorobiphenyl	0.412			ug/l	0.500		82	45-120			
Surrogate: Tetrachloro-m-xylene	0.361			ug/l	0.500		72	35-115			
Surrogate: Decachlorobiphenyl	0.412			ug/l	0.500		82	45-120			
<b>LCS Dup Analyzed: 03/06/2006 (6C05031-BSD1)</b>											
Aldrin	0.372	0.10	0.030	ug/l	0.500		74	35-120	4	30	
alpha-BHC	0.413	0.10	0.020	ug/l	0.500		83	45-120	5	30	
alpha-BHC	0.413	0.010	0.0010	ug/l	0.500		83	45-120	5	30	
beta-BHC	0.413	0.10	0.015	ug/l	0.500		83	50-120	3	30	
delta-BHC	0.425	0.20	0.020	ug/l	0.500		85	50-120	2	30	
gamma-BHC (Lindane)	0.406	0.10	0.020	ug/l	0.500		81	40-120	4	30	
4,4'-DDD	0.422	0.10	0.020	ug/l	0.500		84	55-120	4	30	
4,4'-DDE	0.411	0.10	0.025	ug/l	0.500		82	50-120	2	30	
4,4'-DDT	0.450	0.10	0.035	ug/l	0.500		90	55-120	2	30	
Dieldrin	0.424	0.10	0.015	ug/l	0.500		85	50-120	2	30	
Endosulfan I	0.397	0.10	0.015	ug/l	0.500		79	50-120	2	30	
Endosulfan II	0.415	0.10	0.040	ug/l	0.500		83	55-120	1	30	
Endosulfan sulfate	0.426	0.20	0.020	ug/l	0.500		85	60-120	1	30	
Endrin	0.434	0.10	0.020	ug/l	0.500		87	55-120	3	30	
Endrin aldehyde	0.404	0.10	0.045	ug/l	0.500		81	55-120	1	30	
Endrin ketone	0.424	0.10	0.020	ug/l	0.500		85	55-120	1	30	
Heptachlor	0.377	0.10	0.030	ug/l	0.500		75	40-115	4	30	
Heptachlor epoxide	0.398	0.10	0.030	ug/l	0.500		80	50-120	3	30	
Methoxychlor	0.434	0.10	0.035	ug/l	0.500		87	55-120	0	30	
Surrogate: Tetrachloro-m-xylene	0.339			ug/l	0.500		68	35-115			

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3397  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>											
<b>LCS Dup Analyzed: 03/06/2006 (6C05031-BSD1)</b>											
Surrogate: Decachlorobiphenyl	0.407			ug/l	0.500		81	45-120			
Surrogate: Tetrachloro-m-xylene	0.339			ug/l	0.500		68	35-115			
Surrogate: Decachlorobiphenyl	0.407			ug/l	0.500		81	45-120			

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001  Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

## METHOD BLANK/QC DATA

### TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C05031-BLK1)</b>											
Aroclor 1016	ND	1.0	0.20	ug/l							
Aroclor 1221	ND	1.0	0.10	ug/l							
Aroclor 1232	ND	1.0	0.25	ug/l							
Aroclor 1242	ND	1.0	0.25	ug/l							
Aroclor 1248	ND	1.0	0.25	ug/l							
Aroclor 1254	ND	1.0	0.25	ug/l							
Aroclor 1260	ND	1.0	0.40	ug/l							
Surrogate: Decachlorobiphenyl	0.512			ug/l	0.500		102	45-120			
<b>LCS Analyzed: 03/06/2006 (6C05031-BS2)</b>											
Aroclor 1016	3.60	1.0	0.20	ug/l	4.00		90	45-115			M-NRI
Aroclor 1260	3.91	1.0	0.40	ug/l	4.00		98	55-115			
Surrogate: Decachlorobiphenyl	0.458			ug/l	0.500		92	45-120			
<b>LCS Dup Analyzed: 03/06/2006 (6C05031-BSD2)</b>											
Aroclor 1016	3.74	1.0	0.20	ug/l	4.00		94	45-115	4	30	
Aroclor 1260	3.99	1.0	0.40	ug/l	4.00		100	55-115	2	25	
Surrogate: Decachlorobiphenyl	0.550			ug/l	0.500		110	45-120			

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001  Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B28151 Extracted: 02/28/06</b>											
<b>Blank Analyzed: 03/01/2006 (6B28151-BLK1)</b>											
Arsenic	ND	5.0	3.8	ug/l							
Barium	ND	0.010	0.0028	mg/l							
Beryllium	ND	2.0	0.62	ug/l							
Boron	ND	0.050	0.0080	mg/l							
Chromium	ND	5.0	0.68	ug/l							
Cobalt	ND	10	2.0	ug/l							
Iron	ND	0.040	0.0088	mg/l							
Manganese	3.55	20	3.2	ug/l							J
Nickel	ND	10	2.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	3.7	ug/l							

<b>LCS Analyzed: 03/01/2006 (6B28151-BS1)</b>											
Arsenic	515	5.0	3.8	ug/l	500		103	85-115			
Barium	0.489	0.010	0.0028	mg/l	0.500		98	85-115			
Beryllium	502	2.0	0.62	ug/l	500		100	85-115			
Boron	0.497	0.050	0.0080	mg/l	0.500		99	85-115			
Chromium	514	5.0	0.68	ug/l	500		103	85-115			
Cobalt	507	10	2.0	ug/l	500		101	85-115			
Iron	0.527	0.040	0.0088	mg/l	0.500		105	85-115			
Manganese	516	20	3.2	ug/l	500		103	85-115			
Nickel	504	10	2.0	ug/l	500		101	85-115			
Vanadium	506	10	3.0	ug/l	500		101	85-115			
Zinc	492	20	3.7	ug/l	500		98	85-115			

<b>Matrix Spike Analyzed: 03/01/2006 (6B28151-MS1)</b>					<b>Source: IPB2637-01</b>						
Arsenic	529	5.0	3.8	ug/l	500	ND	106	70-130			
Barium	0.537	0.010	0.0028	mg/l	0.500	0.044	99	70-130			
Beryllium	505	2.0	0.62	ug/l	500	ND	101	70-130			
Boron	0.618	0.050	0.0080	mg/l	0.500	0.080	108	70-130			
Chromium	506	5.0	0.68	ug/l	500	1.9	101	70-130			
Cobalt	496	10	2.0	ug/l	500	ND	99	70-130			
Iron	1.87	0.040	0.0088	mg/l	0.500	1.4	94	70-130			
Manganese	563	20	3.2	ug/l	500	62	100	70-130			
Nickel	492	10	2.0	ug/l	500	2.5	98	70-130			
Vanadium	512	10	3.0	ug/l	500	5.0	101	70-130			

**Del Mar Analytical - Irvine**  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*





# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B28151 Extracted: 02/28/06</b>											
<b>Matrix Spike Analyzed: 03/01/2006 (6B28151-MS1)</b>						<b>Source: IPB2637-01</b>					
Zinc	496	20	3.7	ug/l	500	7.1	98	70-130			
<b>Matrix Spike Dup Analyzed: 03/01/2006 (6B28151-MSD1)</b>						<b>Source: IPB2637-01</b>					
Arsenic	534	5.0	3.8	ug/l	500	ND	107	70-130	1	20	
Barium	0.536	0.010	0.0028	mg/l	0.500	0.044	98	70-130	0	20	
Beryllium	513	2.0	0.62	ug/l	500	ND	103	70-130	2	20	
Boron	0.621	0.050	0.0080	mg/l	0.500	0.080	108	70-130	1	20	
Chromium	516	5.0	0.68	ug/l	500	1.9	103	70-130	2	20	
Cobalt	501	10	2.0	ug/l	500	ND	100	70-130	1	20	
Iron	1.95	0.040	0.0088	mg/l	0.500	1.4	110	70-130	4	20	
Manganese	585	20	3.2	ug/l	500	62	105	70-130	4	20	
Nickel	498	10	2.0	ug/l	500	2.5	99	70-130	1	20	
Vanadium	517	10	3.0	ug/l	500	5.0	102	70-130	1	20	
Zinc	501	20	3.7	ug/l	500	7.1	99	70-130	1	20	

**Batch: 6B28152 Extracted: 02/28/06**

**Blank Analyzed: 03/01/2006 (6B28152-BLK1)**

Antimony	ND	2.0	0.18	ug/l							
Cadmium	0.0520	1.0	0.015	ug/l							J
Copper	ND	2.0	0.49	ug/l							
Lead	ND	1.0	0.13	ug/l							
Selenium	ND	2.0	N/A	ug/l							
Silver	ND	1.0	0.089	ug/l							
Thallium	ND	1.0	0.075	ug/l							

**LCS Analyzed: 03/01/2006 (6B28152-BS1)**

Antimony	87.9	2.0	0.18	ug/l	80.0		110	85-115			
Cadmium	86.5	1.0	0.015	ug/l	80.0		108	85-115			
Copper	82.2	2.0	0.49	ug/l	80.0		103	85-115			
Lead	83.3	1.0	0.13	ug/l	80.0		104	85-115			
Selenium	86.7	2.0	N/A	ug/l	80.0		108	85-115			
Silver	86.5	1.0	0.089	ug/l	80.0		108	85-115			
Thallium	84.8	1.0	0.075	ug/l	80.0		106	85-115			

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001 Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
---------	--------	-----------------	-----	-------	-------------	---------------	-----------	-------------	-----	-----------	-----------------

**Batch: 6B28152 Extracted: 02/28/06**

**Matrix Spike Analyzed: 03/01/2006 (6B28152-MS1)**

**Source: IPB2637-01**

Antimony	88.5	2.0	0.18	ug/l	80.0	0.25	110	70-130			
Cadmium	83.9	1.0	0.015	ug/l	80.0	0.093	105	70-130			
Copper	82.7	2.0	0.49	ug/l	80.0	3.5	99	70-130			
Lead	82.1	1.0	0.13	ug/l	80.0	2.1	100	70-130			
Selenium	83.8	2.0	N/A	ug/l	80.0	1.7	103	70-130			
Silver	73.0	1.0	0.089	ug/l	80.0	ND	91	70-130			
Thallium	81.7	1.0	0.075	ug/l	80.0	0.10	102	70-130			

**Matrix Spike Dup Analyzed: 03/01/2006 (6B28152-MSD1)**

**Source: IPB2637-01**

Antimony	88.9	2.0	0.18	ug/l	80.0	0.25	111	70-130	1	20	
Cadmium	85.4	1.0	0.015	ug/l	80.0	0.093	107	70-130	2	20	
Copper	81.9	2.0	0.49	ug/l	80.0	3.5	98	70-130	1	20	
Lead	81.9	1.0	0.13	ug/l	80.0	2.1	100	70-130	0	20	
Selenium	84.9	2.0	N/A	ug/l	80.0	1.7	104	70-130	1	20	
Silver	71.4	1.0	0.089	ug/l	80.0	ND	89	70-130	2	20	
Thallium	82.1	1.0	0.075	ug/l	80.0	0.10	102	70-130	1	20	

**Batch: 6C01088 Extracted: 03/01/06**

**Blank Analyzed: 03/01/2006 (6C01088-BLK1)**

Mercury	ND	0.20	0.063	ug/l							
---------	----	------	-------	------	--	--	--	--	--	--	--

**LCS Analyzed: 03/01/2006 (6C01088-BS1)**

Mercury	8.14	0.20	0.063	ug/l	8.00		102	85-115			
---------	------	------	-------	------	------	--	-----	--------	--	--	--

**Matrix Spike Analyzed: 03/01/2006 (6C01088-MS1)**

**Source: IPB2130-01**

Mercury	8.03	0.20	0.063	ug/l	8.00	ND	100	70-130			
---------	------	------	-------	------	------	----	-----	--------	--	--	--

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

**METHOD BLANK/QC DATA**

**METALS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C01088 Extracted: 03/01/06</b>											
<b>Matrix Spike Dup Analyzed: 03/01/2006 (6C01088-MSD1)</b>						<b>Source: IPB2130-01</b>					
Mercury	7.95	0.20	0.063	ug/l	8.00	ND	99	70-130	1	20	
<b>Batch: 6C20082 Extracted: 03/20/06</b>											
<b>Blank Analyzed: 03/20/2006-03/21/2006 (6C20082-BLK1)</b>											
Iron	0.0552	0.040	0.015	mg/l							B-1
Manganese	ND	20	7.0	ug/l							
<b>LCS Analyzed: 03/20/2006 (6C20082-BS1)</b>											
Iron	0.537	0.040	0.015	mg/l	0.500		107	85-115			
Manganese	501	20	7.0	ug/l	500		100	85-115			
<b>Matrix Spike Analyzed: 03/20/2006 (6C20082-MS1)</b>						<b>Source: IPC1775-03</b>					
Iron	0.504	0.040	0.015	mg/l	0.500	ND	101	70-130			
Manganese	478	20	7.0	ug/l	500	ND	96	70-130			
<b>Matrix Spike Dup Analyzed: 03/20/2006 (6C20082-MSD1)</b>						<b>Source: IPC1775-03</b>					
Iron	0.505	0.040	0.015	mg/l	0.500	ND	101	70-130	0	20	
Manganese	483	20	7.0	ug/l	500	ND	97	70-130	1	20	

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B28145 Extracted: 02/28/06</b>										
<b>Duplicate Analyzed: 02/28/2006 (6B28145-DUP1)</b>										
Residual Chlorine	ND	0.10	0.10	mg/l		ND			20	
<b>Batch: 6B28158 Extracted: 02/28/06</b>										
<b>Blank Analyzed: 03/01/2006 (6B28158-BLK1)</b>										
Total Cyanide	ND	5.0	2.2	ug/l						
<b>LCS Analyzed: 03/01/2006 (6B28158-BS1)</b>										
Total Cyanide	202	5.0	2.2	ug/l	200		101	90-110		
<b>LCS Dup Analyzed: 03/01/2006 (6B28158-BSD1)</b>										
Total Cyanide	210	5.0	2.2	ug/l	200		105	90-110	4	10
<b>Batch: 6C01049 Extracted: 03/01/06</b>										
<b>Blank Analyzed: 03/01/2006 (6C01049-BLK1)</b>										
Chloride	ND	0.50	0.26	mg/l						
Fluoride	ND	0.50	0.10	mg/l						
Nitrate/Nitrite-N	ND	0.26	0.072	mg/l						
Sulfate	ND	0.50	0.18	mg/l						
<b>LCS Analyzed: 03/01/2006 (6C01049-BS1)</b>										
Chloride	5.02	0.50	0.26	mg/l	5.00		100	90-110		
Fluoride	5.08	0.50	0.10	mg/l	5.00		102	90-110		
Sulfate	10.3	0.50	0.18	mg/l	10.0		103	90-110		

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C01049 Extracted: 03/01/06</b>											
<b>Matrix Spike Analyzed: 03/01/2006 (6C01049-MS1)</b>						<b>Source: IPB2641-01</b>					
Chloride	28.9	0.50	0.26	mg/l	5.00	24	98	80-120			
Fluoride	5.04	0.50	0.10	mg/l	5.00	0.27	95	80-120			
Sulfate	42.7	0.50	0.18	mg/l	10.0	35	77	80-120			M2
<b>Matrix Spike Dup Analyzed: 03/01/2006 (6C01049-MSD1)</b>						<b>Source: IPB2641-01</b>					
Chloride	28.9	0.50	0.26	mg/l	5.00	24	98	80-120	0	20	
Fluoride	5.08	0.50	0.10	mg/l	5.00	0.27	96	80-120	1	20	
Sulfate	43.5	0.50	0.18	mg/l	10.0	35	85	80-120	2	20	
<b>Batch: 6C01070 Extracted: 03/01/06</b>											
<b>Blank Analyzed: 03/01/2006 (6C01070-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							
<b>LCS Analyzed: 03/01/2006 (6C01070-BS1)</b>											
Oil & Grease	15.2	5.0	0.94	mg/l	20.0		76	65-120			M-NRI
<b>LCS Dup Analyzed: 03/01/2006 (6C01070-BSD1)</b>											
Oil & Grease	16.9	5.0	0.94	mg/l	20.0		84	65-120	11	20	
<b>Batch: 6C01108 Extracted: 03/01/06</b>											
<b>Blank Analyzed: 03/01/2006 (6C01108-BLK1)</b>											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
<b>LCS Analyzed: 03/01/2006 (6C01108-BS1)</b>											
Surfactants (MBAS)	0.258	0.10	0.044	mg/l	0.250		103	90-110			

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001  
 Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C01108 Extracted: 03/01/06</b>											
<b>Matrix Spike Analyzed: 03/01/2006 (6C01108-MS1)</b>						<b>Source: IPB2639-01</b>					
Surfactants (MBAS)	0.343	0.10	0.044	mg/l	0.250	ND	137	50-125			MI
<b>Matrix Spike Dup Analyzed: 03/01/2006 (6C01108-MSD1)</b>						<b>Source: IPB2639-01</b>					
Surfactants (MBAS)	0.336	0.10	0.044	mg/l	0.250	ND	134	50-125	2	20	MI
<b>Batch: 6C01114 Extracted: 03/01/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C01114-BLK1)</b>											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
<b>LCS Analyzed: 03/06/2006 (6C01114-BS1)</b>											
Biochemical Oxygen Demand	190	100	30	mg/l	198		96	85-115			
<b>LCS Dup Analyzed: 03/06/2006 (6C01114-BSD1)</b>											
Biochemical Oxygen Demand	188	100	30	mg/l	198		95	85-115	1	20	
<b>Batch: 6C01122 Extracted: 03/01/06</b>											
<b>Blank Analyzed: 03/01/2006 (6C01122-BLK1)</b>											
Turbidity	ND	1.0	0.040	NTU							
<b>Duplicate Analyzed: 03/01/2006 (6C01122-DUP1)</b>						<b>Source: IPB2571-01</b>					
Turbidity	4.96	1.0	0.040	NTU		4.9			1	20	
<b>Batch: 6C02064 Extracted: 03/01/06</b>											
<b>Blank Analyzed: 03/01/2006 (6C02064-BLK1)</b>											
Total Organic Carbon	ND	1.0	0.25	mg/l							

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001  Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 6C02064 Extracted: 03/01/06</u></b>											
<b>LCS Analyzed: 03/01/2006 (6C02064-BS1)</b>											
Total Organic Carbon	10.3	1.0	0.25	mg/l	10.0		103	90-110			
<b>Matrix Spike Analyzed: 03/01/2006 (6C02064-MS1)</b>											
Total Organic Carbon	8.69	1.0	0.25	mg/l	5.00	3.7	100	80-120			
<b>Matrix Spike Dup Analyzed: 03/01/2006 (6C02064-MSD1)</b>											
Total Organic Carbon	8.83	1.0	0.25	mg/l	5.00	3.7	103	80-120	2	20	
<b><u>Batch: 6C02068 Extracted: 03/02/06</u></b>											
<b>Blank Analyzed: 03/02/2006 (6C02068-BLK1)</b>											
Perchlorate	ND	4.0	0.80	ug/l							
<b>LCS Analyzed: 03/02/2006 (6C02068-BS1)</b>											
Perchlorate	51.6	4.0	0.80	ug/l	50.0		103	85-115			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02068-MS1)</b>											
Perchlorate	53.2	4.0	0.80	ug/l	50.0	3.5	99	80-120			
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02068-MSD1)</b>											
Perchlorate	54.3	4.0	0.80	ug/l	50.0	3.5	102	80-120	2	20	
<b><u>Batch: 6C02074 Extracted: 03/02/06</u></b>											
<b>Duplicate Analyzed: 03/02/2006 (6C02074-DUP1)</b>											
Specific Conductance	220	1.0	1.0	umhos/cm		220			0	5	

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001 Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02076 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02076-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 03/02/2006 (6C02076-BS1)</b>											
Total Dissolved Solids	998	10	10	mg/l	1000		100	90-110			
<b>Duplicate Analyzed: 03/02/2006 (6C02076-DUP1)</b>											
Total Dissolved Solids	641	10	10	mg/l		Source: IPB2487-01 650			1	10	
<b>Batch: 6C05021 Extracted: 03/05/06</b>											
<b>Blank Analyzed: 03/05/2006 (6C05021-BLK1)</b>											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
<b>LCS Analyzed: 03/05/2006 (6C05021-BS1)</b>											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0		115	80-115			
<b>Matrix Spike Analyzed: 03/05/2006 (6C05021-MS1)</b>											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	0.56	109	70-120			
<b>Matrix Spike Dup Analyzed: 03/05/2006 (6C05021-MSD1)</b>											
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0	0.56	106	70-120	3	15	
<b>Batch: 6C05025 Extracted: 03/05/06</b>											
<b>Blank Analyzed: 03/05/2006 (6C05025-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.





# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001  
Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05025 Extracted: 03/05/06</b>											
<b>LCS Analyzed: 03/05/2006 (6C05025-BS1)</b>											
Total Suspended Solids	982	10	10	mg/l	1000		98	85-115			
<b>Duplicate Analyzed: 03/05/2006 (6C05025-DUP1) Source: IPB2641-01</b>											
Total Suspended Solids	69.0	10	10	mg/l		69			0	10	
<b>Batch: 6C13106 Extracted: 03/13/06</b>											
<b>Blank Analyzed: 03/13/2006 (6C13106-BLK1)</b>											
Total Cyanide	2.70	5.0	2.2	ug/l							J
<b>LCS Analyzed: 03/13/2006 (6C13106-BS1)</b>											
Total Cyanide	198	5.0	2.2	ug/l	200		99	90-110			
<b>Matrix Spike Analyzed: 03/13/2006 (6C13106-MS1) Source: IPC0544-01</b>											
Total Cyanide	185	5.0	2.2	ug/l	200	ND	92	70-115			
<b>Matrix Spike Analyzed: 03/13/2006 (6C13106-MS2) Source: IPC0545-02</b>											
Total Cyanide	171	5.0	2.2	ug/l	200	2.9	84	70-115			
<b>Matrix Spike Analyzed: 03/13/2006 (6C13106-MS3) Source: IPC0548-01</b>											
Total Cyanide	172	5.0	2.2	ug/l	200	2.3	85	70-115			
<b>Matrix Spike Dup Analyzed: 03/13/2006 (6C13106-MSD1) Source: IPC0544-01</b>											
Total Cyanide	187	5.0	2.2	ug/l	200	ND	94	70-115	1	15	
<b>Matrix Spike Dup Analyzed: 03/13/2006 (6C13106-MSD2) Source: IPC0545-02</b>											
Total Cyanide	161	5.0	2.2	ug/l	200	2.9	79	70-115	6	15	

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Denian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C13106 Extracted: 03/13/06</b>											
<b>Matrix Spike Dup Analyzed: 03/13/2006 (6C13106-MSD3)</b>						<b>Source: IPC0548-01</b>					
Total Cyanide	178	5.0	2.2	ug/l	200	2.3	88	70-115	3	15	

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

METHOD BLANK/QC DATA

1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: P6C0311 Extracted: 03/03/06</b>											
<b>Blank Analyzed: 03/03/2006 (P6C0311-BLK1)</b>											
1,4-Dioxane	ND	1.0	0.49	ug/l							
Surrogate: Dibromofluoromethane	1.10			ug/l	1.00		110	70-130			
<b>LCS Analyzed: 03/03/2006 (P6C0311-BS1)</b>											
1,4-Dioxane	9.54	1.0	0.49	ug/l	10.0		95	70-130			
Surrogate: Dibromofluoromethane	1.08			ug/l	1.00		108	70-130			
<b>LCS Dup Analyzed: 03/03/2006 (P6C0311-BSD1)</b>											
1,4-Dioxane	8.45	1.0	0.49	ug/l	10.0		84	70-130	12	20	
Surrogate: Dibromofluoromethane	1.06			ug/l	1.00		106	70-130			
<b>Matrix Spike Analyzed: 03/03/2006 (P6C0311-MS1) Source: PPB0885-01</b>											
1,4-Dioxane	9.27	1.0	0.49	ug/l	10.0	0.66	86	65-125			
Surrogate: Dibromofluoromethane	1.10			ug/l	1.00		110	70-130			
<b>Matrix Spike Dup Analyzed: 03/03/2006 (P6C0311-MSD1) Source: PPB0885-01</b>											
1,4-Dioxane	10.9	1.0	0.49	ug/l	10.0	0.66	102	65-125	16	20	
Surrogate: Dibromofluoromethane	1.11			ug/l	1.00		111	70-130			

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

**Compliance Check**

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPB2637-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.47	4.7	10.00
IPB2637-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0096	0.0100
IPB2637-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPB2637-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00
IPB2637-01	625+NDMA, LL	2,4,6-Trichlorophenol	ug/l	0	0.95	6.50
IPB2637-01	625+NDMA, LL	2,4-Dinitrotoluene	ug/l	0	4.8	9.10
IPB2637-01	625+NDMA, LL	Bis(2-ethylhexyl)phthalate	ug/l	0.36	4.8	4.00
IPB2637-01	625+NDMA, LL	N-Nitrosodimethylamine	ug/l	0	1.9	8.10
IPB2637-01	625+NDMA, LL	Pentachlorophenol	ug/l	0	1.9	8.20
IPB2637-01	Antimony-200.8	Antimony	ug/l	0.25	2.0	6.00
IPB2637-01	Arsenic-200.7	Arsenic	ug/l	2.70	5.0	50
IPB2637-01	Barium-200.7	Barium	mg/l	0.044	0.010	1.00
IPB2637-01	Beryllium-200.7	Beryllium	ug/l	0.025	2.0	4.00
IPB2637-01	BOD	Biochemical Oxygen Demand	mg/l	2.60	2.0	20
IPB2637-01	Cadmium-200.8	Cadmium	ug/l	0.093	1.0	2.00
IPB2637-01	Chloride - 300.0	Chloride	mg/l	32	2.5	150
IPB2637-01	Chlorine, Residual	Residual Chlorine	mg/l	0.050	0.10	0.100
IPB2637-01	Chromium-200.7	Chromium	ug/l	1.90	5.0	8.10
IPB2637-01	Copper-200.8	Copper	ug/l	3.50	2.0	7.10
<b>IPB2637-01</b>	<b>Cyanide-335.2 5ppb</b>	<b>Total Cyanide</b>	<b>ug/l</b>	<b>7.30</b>	<b>5.0</b>	<b>4.30</b>
IPB2637-01	Fluoride-300.0	Fluoride	mg/l	0.29	0.50	1.60
<b>IPB2637-01</b>	<b>Iron-200.7</b>	<b>Iron</b>	<b>mg/l</b>	<b>1.40</b>	<b>0.040</b>	<b>0.30</b>
IPB2637-01	Lead-200.8	Lead	ug/l	2.10	1.0	2.60
<b>IPB2637-01</b>	<b>Manganese-200.7</b>	<b>Manganese</b>	<b>ug/l</b>	<b>62</b>	<b>20</b>	<b>50</b>
IPB2637-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.062	0.10	0.50
IPB2637-01	Mercury - 245.1	Mercury	ug/l	0.051	0.20	0.20
IPB2637-01	Nickel-200.7	Nickel	ug/l	2.50	10	35
IPB2637-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	2.20	0.26	8.00
IPB2637-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPB2637-01	Selenium-200.8	Selenium	ug/l	1.70	2.0	4.10
IPB2637-01	Settleable Solids	Total Settleable Solids	ml/l/hr	0	0.10	0.100
IPB2637-01	Silver-200.8	Silver	ug/l	0.027	1.0	2.00
IPB2637-01	Sulfate-300.0	Sulfate	mg/l	70	2.5	300
IPB2637-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	300	10	950
IPB2637-01	Thallium-200.8	Thallium	ug/l	0.100	1.0	2.00
<b>IPB2637-01</b>	<b>TSS - EPA 160.2</b>	<b>Total Suspended Solids</b>	<b>mg/l</b>	<b>23</b>	<b>10</b>	<b>15</b>
IPB2637-01	Zinc-200.7	Zinc	ug/l	7.10	20	54
IPB2637-01RE1	Cyanide-335.2 5ppb	Total Cyanide	ug/l	3.10	5.0	4.30
<b>IPB2637-01RE1</b>	<b>Iron-200.7</b>	<b>Iron</b>	<b>mg/l</b>	<b>1.10</b>	<b>0.040</b>	<b>0.30</b>
<b>IPB2637-01RE1</b>	<b>Manganese-200.7</b>	<b>Manganese</b>	<b>ug/l</b>	<b>60</b>	<b>20</b>	<b>50</b>

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

### Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPB2637-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPB2637-02	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*



MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

## DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- B-1** Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.
- 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.
- L2** Laboratory Control Sample recovery was below method control limits.
- 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-NR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- R** The RPD exceeded the method control limit due to sample matrix effects. The individual analyte QA/QC recoveries, however, were within acceptance limits.
- R-3** The RPD exceeded the method control 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

## ADDITIONAL COMMENTS

### For TICs:

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

### For 1,2-Diphenylhydrazine:

The result for 1,2-Diphenylhydrazine is based upon the reading of its breakdown product, Azobenzene.

### For GRO (C4-C12):

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

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

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

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 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

MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
 Received: 02/28/06

### Certification Summary

#### Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
Calculation	Water	X	X
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 330.5	Water	X	X
EPA 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 415.1	Water	X	X
EPA 418.1	Water	X	X
EPA 608	Water	X	X
EPA 624 (MOD.)	Water		X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8015B	Water	X	X
EPA 8260B	Water	X	X
EPA 8315 Mod.	Water		
EPA 900.0	Water		
EPA 905.0	Water		
EPA 906.0	Water		
Haz Waste Scree	Water		
Level 4	Water		
SM2540C	Water	X	X
SM5540-C	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at [www.testamericainc.com](http://www.testamericainc.com)

#### Subcontracted Laboratories

**Alfa Analytical** NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413  
 1104 Windfield Way - El Dorado Hills, CA 95762

**Del Mar Analytical - Irvine**  
 Michele Chamberlin  
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.



# Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297  
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
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

MWH-Pasadena/Boeing  
300 North Lake Avenue, Suite 1200  
Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06  
Received: 02/28/06

**Alta Analytical** *NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413*

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta  
Samples: IPB2637-01

Analysis Performed: Level 4 + EDD  
Samples: IPB2637-01

**Aquatic Testing Laboratories-SUB** *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chronic  
Samples: IPB2637-01

Analysis Performed: Bioassay-Acute 96hr  
Samples: IPB2637-01

**Del Mar Analytical - Phoenix** *NELAC Cert #01109CA, California Cert #2446, Arizona Cert #AZ0426, Nevada Cert #AZ-907*

9830 S. 51st Street, Suite B-120 - Phoenix, AZ 85044

Method Performed: EPA 8260B  
Samples: IPB2637-01

**Eberline Services**

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: EDD + Level 4  
Samples: IPB2637-01

Analysis Performed: Gross Alpha  
Samples: IPB2637-01

Analysis Performed: Gross Beta  
Samples: IPB2637-01

Analysis Performed: Radium, Combined  
Samples: IPB2637-01

Analysis Performed: Strontium 90  
Samples: IPB2637-01

Analysis Performed: Tritium  
Samples: IPB2637-01

**Truesdail Laboratories-SUB** *California Cert #1237*

14201 Franklin Avenue - Tustin, CA 92680

Analysis Performed: Hydrazine  
Samples: IPB2637-01

**Del Mar Analytical - Irvine**

Michele Chamberlin  
Project Manager

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.*





17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689  
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3820 Fax (702) 798-3821

## SUBCONTRACT ORDER - PROJECT # IPB2637

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Del Mar Analytical - Phoenix 9830 S. 51st Street, Suite B-120 Phoenix, AZ 85044 Phone : (480) 785-0043 Fax: (480) 785-0851

Analysis	Expiration	Due	Comments
Sample ID: IPB2637-01 Water	03/14/06 13:45	03/09/06 12:00	Instant Notification
Dioxane-8260B-out	03/28/06 13:45	03/09/06 12:00	sub to DMAP, J flags
Level 4 Data Package - Phoenix	03/28/06 13:45	03/09/06 12:00	Boeing, TAT= 17 days from receipt at Phoenix
<b>Containers Supplied:</b>			
40 ml VOA w/HCL (IPB2637-01AA)			
40 ml VOA w/HCL (IPB2637-01AB)			
40 ml VOA w/HCL (IPB2637-01Z)			

PPC 0068-01

### SAMPLE INTEGRITY:

All containers intact:  Yes  No     
 Sample labels/COC agree:  Yes  No     
 Samples Received On Ice:  Yes  No  
 Custody Seals Present:  Yes  No     
 Samples Preserved Properly:  Yes  No     
 Samples Received at (temp): 2.0°C

~~Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_~~     
 Received By: Fed-Ex 3.1.06 Date: 3/2/06 Time: 09:40  
 Released By: FEDEX Date: \_\_\_\_\_ Time: \_\_\_\_\_     
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

IPB2637

Del Mar Analytical Version 01/24/06 CHAIN OF CUSTODY FORM

Client Name/Address: <b>MWH-Pasadena</b> 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project: <b>Boeing-SSFL NPDES</b> <b>Annual Outfall 001</b>																		
Project Manager: <b>Bronwyn Kelly</b>		Phone Number: (626) 568-6691																		
Sampler: <i>Kenya &amp; Bronwyn</i>		Fax Number: (626) 568-6515																		
Sample Description	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, B, Ba, Fe, Mn, Sb, As, Be, Cd, Cr, Ni, Se, Ag, Tl, Zn, Co, V	Settleable Solids	VOCS 624 + Xylenes + Freon 113, Freon 123A, Cyclohexane	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5 (20 degrees C)	Surfactants (MBAS)	Cl-, SO4, NO3+NO2-N, F, Perchlorate	Turbidity, TDS, TSS, Conductivity	Ammonia-N	2,4,6 Trichlorophenol, 2,4-Dinitrotoluene, Bis(2-ethylhexyl)phthalate, NDMA, penta-chlorophenol (EPA 628) + PP	Field readings: Temp = 7.1 pH = 7.6	Comments	
Outfall 001	Poly-1L	1	2/27/06 1345	HNO3	1A	X													24 TAT	
Outfall 001-Dup	Poly-1L	1		HNO3	1B	X													24 TAT	
Outfall 001	Poly-1L	1		None	2		X													
Outfall 001	VOAS	5		HCl	3A, 3B, 3C, 3D, 3E			X												
Outfall 001	1L Amber	2		None	4A, 4B				X											
Outfall 001	1L Amber	2		HCL	5A, 5B					X									24 TAT	
Outfall 001	Poly-500 ml	1		NaOH	6						X								24 TAT	
Outfall 001	Poly-1L	1		None	7							X								
Outfall 001	Poly-500 ml	2		None	8A, 8B								X							
Outfall 001	Poly-500 ml	2		None	9A, 9B									X						
Outfall 001	Poly-500 ml	2		None	10A, 10B										X					
Outfall 001	Poly-500 ml	1		H2SO4	11															
Outfall 001	1L Amber	2		None	12A, 12B															
Outfall 001	1L Amber	2		None	13A, 13B															
Trip Blank	VOAS	3		HCL	14A, 14B, 14C															
Relinquished By <i>Ken Brown</i>	Date/Time: 2/27/06 1345	Received By <i>L. Kelly</i>	Date/Time: 2/27/06 1545																	
Relinquished By <i>L. Kelly</i>	Date/Time: 2/28/06 1835	Received By <i>John U</i>	Date/Time: 2/28/06 1835																	
Relinquished By	Date/Time:	Received By	Date/Time:																	
				Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____																
				Perchlorate Only 72 Hours _____																
				Metals Only 72 Hours _____																
				Sample integrity: (Check) <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>																

Del Mar Analytical Version 01/24/06 CHAIN OF CUSTODY FORM

Client Name/Address:		Project:		ANALYSIS REQUIRED										Comments				
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Annual Outfall 001		Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Total Organic Carbon	Total Residual Chlorine	Gross Alpha, Gross Beta, Tritium (906.0), Sr-90 (905.0), Total Combined Radium 226 & Radium 228	PCBs	TPH = all fuels, gas, diesel and jet fuel, modified 8015 and 418.1	Monomethylhydrazine	Acute and Chronic toxicity	VOCs 624 +A+A+2CVE	
Project Manager: Bronwyn Kelly Phone Number: (626) 568-6691 Fax Number: (626) 568-6515 Sampler: <i>George &amp; Brown</i>		Sampling Date/Time: 2/28/06 / 1345		Outfall 001	W	VOAs	3	HCl	15A, 15B, 15C	X								
Outfall 001	W	VOAs	2	HCl	16A, 16B													
Outfall 001	W	Poly-150 ml	1	None	17					X								
Outfall 001	W	2.5 Gal Cube Amber VOAs	1	None	18A, 25A, 25B, 25C						X						<ul style="list-style-type: none"> <li>Analyze for Total Combined RA-228 &amp; RA-228 only if Gross Alpha/Beta &gt; 15pCi/L.</li> <li>Presence 2.5 Gal Cube with HNO3 at lab.</li> </ul>	
Outfall 001	W	1L Amber	2	None	19A, 19B						X							
Outfall 001	W	VOAs	3	HCl	20A, 20B, 20C, 20D, 20E, 20F, 20G								X					
Outfall 001	W	1L Amber	2	None	21A, 21B									X				
Outfall 001	W	1 Gal	2	None	22A, 22B													
Outfall 001	W	VOAs	3	None	23A, 23B, 23C												X	
Trip Blank	W	VOAs	3	None	24A, 24B, 24C												X	
Relinquished By	Date/Time: 12/28/06 1545		Received By: <i>[Signature]</i>		Date/Time: 12/28/06 1545												Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal <input checked="" type="checkbox"/>	
Relinquished By	Date/Time: 2/28/06 1835		Received By: <i>[Signature]</i>		Date/Time: 2-28-06 1835												Metals Only 72 Hours _____ Perchlorate Only 72 Hours _____ Sample Integrity: (Check) <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>	



March 08, 2006

**Alta Project I.D.: 27350**

Ms. Michele Chamberlin  
Del Mar Analytical, Irvine  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on March 02, 2006 under your Project Name "IPB2637". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

The following report consists of a Sample Inventory (Section I), Analytical Results (Section II) and the Appendix, which contains the chain-of-custody, a list of data qualifiers and abbreviations, Alta's current certifications, and copies of the raw data (if requested).

Alta Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-933-1640 or by email at [mmaier@altalab.com](mailto:mmaier@altalab.com). Thank you for choosing Alta as part of your analytical support team.

Sincerely,

Martha M. Maier  
Director of HRMS Services



**Section I: Sample Inventory Report**

**Date Received: 3/2/2006**

Alta Lab. ID

Client Sample ID

27350-001

IPB2637-01

**SECTION II**

Method Blank				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	7807	Lab Sample:	0-MB001	Date Analyzed DB-5:	7-Mar-06
Sample Size:	1.00 L	Date Extracted:	5-Mar-06	Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.00000119			IS 13C-2,3,7,8-1CDD	82.1	25 - 164
1,2,3,7,8-PeCDD	ND	0.00000130			13C-1,2,3,7,8-PeCDD	84.5	25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000161			13C-1,2,3,4,7,8-HxCDD	82.1	32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000170			13C-1,2,3,6,7,8-HxCDD	81.9	28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000161			13C-1,2,3,4,6,7,8-HpCDD	79.4	23 - 140
1,2,3,4,6,7,8-HpCDD	ND	0.00000167			13C-OCDD	54.4	17 - 157
OCDD	ND	0.00000485			13C-2,3,7,8-TCDF	85.8	24 - 169
2,3,7,8-TCDF	ND	0.00000138			13C-1,2,3,7,8-PeCDF	89.7	24 - 185
1,2,3,7,8-PeCDF	ND	0.00000126			13C-2,3,4,7,8-PeCDF	92.9	21 - 178
2,3,4,7,8-PeCDF	ND	0.00000115			13C-1,2,3,4,7,8-HxCDF	82.7	26 - 152
1,2,3,4,7,8-HxCDF	ND	0.000000677			13C-1,2,3,6,7,8-HxCDF	82.0	26 - 123
1,2,3,6,7,8-HxCDF	ND	0.000000623			13C-2,3,4,6,7,8-HxCDF	83.9	28 - 136
2,3,4,6,7,8-HxCDF	ND	0.000000697			13C-1,2,3,7,8,9-HxCDF	77.1	29 - 147
1,2,3,7,8,9-HxCDF	ND	0.000000951			13C-1,2,3,4,6,7,8-HpCDF	71.7	28 - 143
1,2,3,4,6,7,8-HpCDF	ND	0.000000890			13C-1,2,3,4,7,8,9-HpCDF	80.8	26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.000000780			13C-OCDF	59.4	17 - 157
OCDF	ND	0.00000335			CRS 37Cl-2,3,7,8-TCDD	90.3	35 - 197
<b>Totals</b>							
Total TCDD	ND	0.00000119					
Total PeCDD	ND	0.00000130					
Total HxCDD	ND	0.00000164					
Total HpCDD	ND	0.00000167					
Total TCDF	ND	0.00000138					
Total PeCDF	ND	0.00000120					
Total HxCDF	ND	0.000000725					
Total HpCDF	ND	0.000000836					

**Footnotes**

a. Sample specific estimated detection limit.  
b. Estimated maximum possible concentration.  
c. Method detection limit.  
d. Lower control limit - upper control limit.

Analyst: JMH      Approved By: Martha M. Maier      08-Mar-2006 11:59

OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7807	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	5-Mar-06	Date Analyzed DB-5:	7-Mar-06	
				Date Analyzed DB-225:	NA	
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	10.0	11.1	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	77.8	25 - 164
1,2,3,7,8-PeCDD	50.0	56.7	35 - 71	13C-1,2,3,7,8-PeCDD	81.0	25 - 181
1,2,3,4,7,8-HxCDD	50.0	54.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	74.4	32 - 141
1,2,3,6,7,8-HxCDD	50.0	53.3	38 - 67	13C-1,2,3,6,7,8-HxCDD	76.6	28 - 130
1,2,3,7,8,9-HxCDD	50.0	52.4	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	74.2	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	55.2	35 - 70	13C-OCDD	52.1	17 - 157
OCDD	100	109	78 - 144	13C-2,3,7,8-TCDF	78.6	24 - 169
2,3,7,8-TCDF	10.0	11.2	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	84.3	24 - 185
1,2,3,7,8-PeCDF	50.0	55.2	40 - 67	13C-2,3,4,7,8-PeCDF	87.3	21 - 178
2,3,4,7,8-PeCDF	50.0	56.1	34 - 80	13C-1,2,3,4,7,8-HxCDF	76.8	26 - 152
1,2,3,4,7,8-HxCDF	50.0	55.2	36 - 67	13C-1,2,3,6,7,8-HxCDF	76.9	26 - 123
1,2,3,6,7,8-HxCDF	50.0	56.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	76.3	28 - 136
2,3,4,6,7,8-HxCDF	50.0	56.4	35 - 78	13C-1,2,3,7,8,9-HxCDF	69.6	29 - 147
1,2,3,7,8,9-HxCDF	50.0	54.9	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	70.6	28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	55.1	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	74.0	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	55.0	39 - 69	13C-OCDF	57.0	17 - 157
OCDF	100	105	63 - 170	CIRS 37Cl-2,3,7,8-TCDD	94.1	35 - 197

Analyst: JMH  
 Approved By: Martha M. Maier  
 08-Mar-2006 11:59



Sample ID: IPB2637-01		EPA Method 1613					
Client Data		Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27350-001		
Project:	IPB2637	Sample Size:	1.01 L	QC Batch No.:	7807		
Date Collected:	28-Feb-06			Date Analyzed:	7-Mar-06		
Time Collected:	1345			Date Analyzed:	DH-225		
					NA		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000107		IS 13C-2,3,7,8-TCDD	88.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000914		13C-1,2,3,7,8-PeCDD	91.1	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000287		13C-1,2,3,4,7,8-HxCDD	82.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000291		13C-1,2,3,6,7,8-HxCDD	84.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000280		13C-1,2,3,4,6,7,8-HpCDD	77.3	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000185			13C-OCDD	44.6	17 - 157	
OCDD	0.000147			13C-2,3,7,8-TCDF	91.9	24 - 169	
2,3,7,8-TCDF	ND	0.00000129		13C-1,2,3,7,8-PeCDF	98.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000995		13C-2,3,4,7,8-PeCDF	98.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000917		13C-1,2,3,4,7,8-HxCDF	75.1	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000800		13C-1,2,3,6,7,8-HxCDF	75.4	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000786		13C-2,3,4,6,7,8-HxCDF	78.8	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000848		13C-1,2,3,7,8,9-HxCDF	82.0	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000103		13C-1,2,3,4,6,7,8-HpCDF	68.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND		0.000000322	13C-1,2,3,4,7,8,9-HpCDF	82.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000115		13C-OCDF	52.6	17 - 157	
OCDF	0.00000993			CRS 37Cl-2,3,7,8-TCDD	94.2	35 - 197	
<b>Totals</b>							
Total TCDD	ND	0.00000107					
Total PeCDD	ND	0.000000914					
Total HxCDD	ND	0.00000286					
Total HpCDD	0.0000387						
Total TCDF	ND	0.00000129					
Total PeCDF	ND	0.000000956					
Total HxCDF	0.00000166						
Total HpCDF	ND		0.00000805				

**Footnotes**  
a. Sample specific estimated detection limit.  
b. Estimated maximum possible concentration.  
c. Method detection limit.  
d. Lower control limit - upper control limit.

Analyst: JMH  
Approved By: Martha M. Maier  
08-Mar-2006 11:59

**APPENDIX**

## DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
E	The reported value exceeds the calibration range of the instrument.
H	The signal-to-noise ratio is greater than 10:1.
I	Chemical interference
J	The amount detected is below the Lower Calibration Limit of the instrument.
*	See Cover Letter
Conc.	Concentration
DL	Sample-specific estimated Detection Limit
MDL	The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero in the matrix tested.
EMPC	Estimated Maximum Possible Concentration
NA	Not applicable
RL	Reporting Limit – concentrations that corresponds to low calibration point
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

**CERTIFICATIONS**

<b>Accrediting Authority</b>	<b>Certificate Number</b>
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of Oklahoma	D9919
State of Oregon	CA200001-002
State of Pennsylvania	68-00490
State of South Carolina	87002001
State of Tennessee	02996
State of Texas	TX247-2005A
U.S. Army Corps of Engineers	
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q



17401 Camino Real, Suite 100, Irvine, CA 92614 Ph (949) 261-1046 Fax (949) 261-1046  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4657 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9599  
 9630 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3520 Fax (702) 798-3621

## SUBCONTRACT ORDER - PROJECT # IPB2637

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Alta Analytical 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106 <div style="text-align: right; font-size: 1.5em; margin-top: 10px;">             27350              1.3°C           </div>

Standard TAT is requested unless specific due date is requested => Due Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Analysis	Expiration	Comments
<b>Sample ID: IPB2637-01</b> <b>Water</b> <b>Sampled: 02/28/06 13:45</b> 1613-Dioxin-HR-Alta    03/07/06 13:45 Level 4 + EDD-OUT    03/28/06 13:45		<b>Instant Notification</b> J flags, 17 congeners, no TEQ, ug/L, sub=Alta <b>**LEVEL IV QC, ACCESS 7 EDD**</b>
<b>Containers Supplied:</b> 1 L Amber (IPB2637-01I) 1 L Amber (IPB2637-01J)		

SAMPLE INTEGRITY:					
All containers intact:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Sample labels/COC agree:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Custody Seals Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Samples Preserved Property:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received On Ice::	<input type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received at (temp):	_____	

Released By	Date	Time	Received By	Date	Time
<i>[Signature]</i>	<i>Feb - Ev</i>	<i>3.01.06</i>	<i>Bethina Benedict</i>	<i>3/8/06</i>	<i>0850</i>
Released By	Date	Time	Received By	Date	Time

### SAMPLE LOG-IN CHECKLIST

Alta Project #: 27350

Samples Arrival:	Date/Time 3/2/06 0850	Initials: WZAB	Location: WR-2
Logged In:	Date/Time 3/2/06 1323	Initials: WZAB	Location: WR-2
Delivered By:	<u>FedEx</u>	UPS	Cal
			DHL
			Hand Delivered
			Other
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice
			None
Temp °C	1.3°C	Time:	1020
		Thermometer ID:	DT-20

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?			✓
Shipping Documentation Present?	✓		
Airbill	✓		
Trk #	7918 7571 6263		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?		COC	Sample Container
			None
Shipping Container	Alta	Client	Return
		Retain	Dispose

Comments:

# LABORATORY REPORT



*"dedicated to providing quality aquatic toxicity testing"*

4350 Transport Street, Unit 107  
Ventura, CA 93003  
(805) 650-0546 FAX (805) 650-0756  
CA DOHS ELAP Cert. No.: 1775

**Date:** March 8, 2006  
**Client:** Del Mar Analytical, Irvine  
17461 Derian Ave., Suite 100  
Irvine, CA 92614  
Attn: Michele Chamberlin

**Laboratory No.:** A-06030111-001  
**Sample ID.:** IPB2637-01

**Sample Control:** The sample was received by ATL within the recommended hold time, in a chilled state, and with the chain of custody record attached.

Date Sampled: 02/28/06  
Date Received: 03/01/06  
Temp. Received: 2°C  
Chlorine (TRC): 0.0 mg/l  
Date Tested: 03/01/06 to 03/07/06

**Sample Analysis:** The following analyses were performed on your sample:

Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0),  
*Ceriodaphnia dubia* Survival and Reproduction Test (EPA Method 1002).

Attached are the test data generated from the analysis of your sample.

## Result Summary:

<b>Acute:</b>	<u>Survival</u>	<u>TUa</u>
Fathead Minnow:	100%	0.0
<b>Chronic:</b>	<u>NOEC</u>	<u>TUc</u>
<i>Ceriodaphnia</i> Survival:	100%	1.0
<i>Ceriodaphnia</i> Reproduction:	100%	1.0

**Quality Control:** Reviewed and approved by:

  
Joseph A. LeMay  
Laboratory Director

**FATHEAD MINNOW PERCENT SURVIVAL TEST**  
**EPA Method 2000.0**



Lab No.: A-06030111-001  
 Client/ID: Del Mar - IPB2637-01

Start Date: 03/01/2006

**TEST SUMMARY**

Species: *Pimephales promelas*.  
 Age: 13 (1-14) days.  
 Regulations: NPDES.  
 Test solution volume: 250 ml.  
 Feeding: prior to renewal at 48 hrs.  
 Number of replicates: 2.  
 Dilution water: Moderately hard reconstituted water.  
 Photoperiod: 16/8 hrs light/dark.

Source: In-laboratory Culture.  
 Test type: Static-Renewal.  
 Test Protocol: EPA-821-R-02-012.  
 Endpoints: Percent Survival at 96 hrs.  
 Test chamber: 600 ml beakers.  
 Temperature: 20 +/- 1°C.  
 Number of fish per chamber: 10.  
 QA/QC Batch No.: RT-060301.

**TEST DATA**

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	20.4	8.9	7.9	0	0	R 1200
	100%	19.5	8.3	7.6	0	0	
24 Hr	Control	19.2	8.0	7.7	0	0	R 1100
	100%	19.0	8.2	7.9	0	0	
48 Hr	Control	19.3	7.4	7.6	0	0	R 1230
	100%	19.2	7.6	7.4	0	0	
Renewal	Control	19.5	8.4	7.8	0	0	R 1300
	100%	19.3	9.2	7.4	0	0	
72 Hr	Control	19.4	8.0	7.6	0	0	R 1100
	100%	19.1	8.1	7.9	0	0	
96 Hr	Control	19.4	7.9	7.6	0	0	R 1130
	100%	19.2	8.2	7.9	0	0	

**Comments:**

Sample as received: Chlorine: 0.0 mg/l; pH: 7.6; Conductivity: 445 umho; Temp: 2°C;  
 DO: 8.3 mg/l; Alkalinity: 107 mg/l; Hardness: 180 mg/l; NH<sub>3</sub>-N: 0.4 mg/l.  
 Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / No  
 Control: Alkalinity: 54 mg/l; Hardness: 94 mg/l; Conductivity: 325 umho.  
 Test solution aerated (not to exceed 100 bubbles/min) to maintain DO >4.0 mg/l? Yes / No  
 Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.

**RESULTS**

Percent Survival In:	Control: <u>100</u> %	100% Sample: <u>100</u> %
----------------------	-----------------------	---------------------------



**CERIODAPHNIA CHRONIC BIOASSAY  
EPA METHOD 1002.0**



Lab No.: A-06030111  
Client/ID: Del Mar IPB2637-01 Outfall 001

Date Tested: 03/01/06 to 03/07/06

**TEST SUMMARY**

Test type: Daily static-renewal.  
Species: *Ceriodaphnia dubia*.  
Age: < 24 hrs; all released within 8 hrs.  
Test vessel size: 30 ml.  
Number of test organisms per vessel: 1.  
Temperature: 25 +/- 1°C.  
Dilution water: Mod. hard reconstituted (MHRW).  
QA/QC Batch No.: RT-060301.

Endpoints: Survival and Reproduction.  
Source: In-laboratory culture.  
Food: .1 ml YTC, algae per day.  
Test solution volume: 15 ml.  
Number of replicates: 10.  
Photoperiod: 16/8 hrs. light/dark cycle.  
Test duration: 6 days.  
Statistics: ToxCalc computer program.

**RESULTS SUMMARY**

Sample Concentration	Percent Survival	Mean Number of Young Per Female
Control	100%	21.8
6.25%	100%	26.7
12.5%	100%	27.3
25%	100%	27.4
50%	100%	28.2
100%	100%	27.1

No concentration statistically significantly less than control at P = 0.05 level.  
\*\* Reproduction data from concentrations greater than survival NOEC are excluded from statistical analysis.

**CHRONIC TOXICITY**

Parameter	Survival	Growth
NOEC	100%	100%
TUc	1.0	1.0

**QA/QC TEST ACCEPTABILITY**

Parameter	Result
Control survival ≥ 80%	Pass (100% survival)
≥ 15 young per surviving control female	Pass (21.8 young)
≥ 60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD < 47% for reproduction; if > 47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 12.8%)
Statistically significantly different concentrations relative difference > 13%	NA - No stat. sig. diff. concentrations
Concentration response relationship acceptable	Pass (no response at conc. tested)

**Ceriodaphnia Survival and Reproduction Test-Survival Day 6**

Start Date: 01 Mar-06 15:00 Test ID: 6030111c Sample ID: Del Mar IPB2637 Outfall 001  
 End Date: 07 Mar-06 16:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SRW2-industrial stormwater  
 Sample Date: 28 Feb-06 00:00 Protocol: EPAF 91 Test Species: CD-Ceriodaphnia dubia  
 Comments:

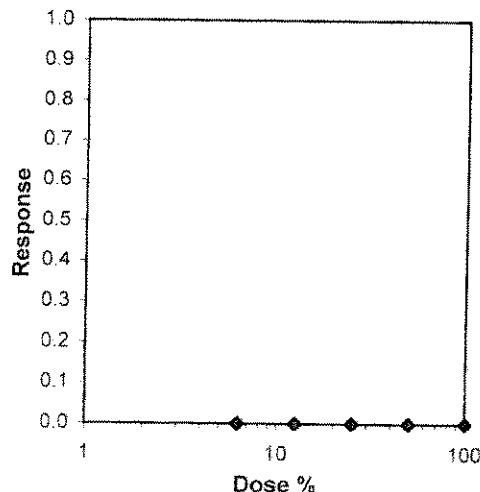
Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
50	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Conc-%	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Isotonic	
									Mean	N-Mean
D-Control	1.0000	1.0000	0	10	10	10			1.0000	1.0000
6.25	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
12.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
25	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
50	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
100	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1

**Log-Logit Interpolation (80 Resamples)**

Point	%	SE	95% CL	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



**Ceriodaphnia Survival and Reproduction Test-Reproduction**

Start Date: 01 Mar-06 15:00 Test ID: 6030111c Sample ID: Del Mar IPB2637 Outfall 001  
 End Date: 07 Mar-06 16:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SRW2-Industrial stormwater  
 Sample Date: 28 Feb-06 00:00 Protocol: EPAF 91 Test Species: CD-Ceriodaphnia dubia  
 Comments:

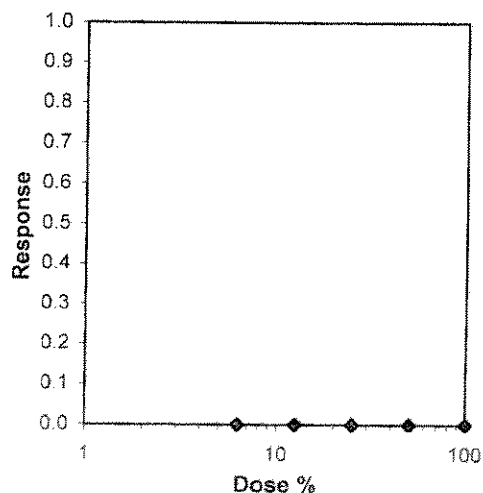
Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	20.000	17.000	25.000	24.000	24.000	23.000	23.000	25.000	22.000	15.000
6.25	23.000	26.000	26.000	29.000	26.000	33.000	27.000	26.000	25.000	26.000
12.5	26.000	30.000	26.000	29.000	27.000	29.000	25.000	28.000	26.000	27.000
25	25.000	26.000	28.000	31.000	29.000	33.000	22.000	25.000	27.000	28.000
50	26.000	27.000	27.000	35.000	25.000	30.000	27.000	26.000	32.000	27.000
100	26.000	26.000	28.000	30.000	26.000	26.000	27.000	30.000	25.000	27.000

Conc-%	Transform: Untransformed							t-Stat	1-Tailed Critical	MSD	Isotonic	
	Mean	N-Mean	Mean	Min	Max	CV%	N				Mean	N-Mean
D-Control	21.800	1.0000	21.800	15.000	25.000	15.713	10				26.417	1.0000
6.25	26.700	1.2248	26.700	23.000	33.000	9.995	10	-4.022	2.287	2.786	26.417	1.0000
12.5	27.300	1.2523	27.300	25.000	30.000	5.994	10	-4.515	2.287	2.786	26.417	1.0000
25	27.400	1.2569	27.400	22.000	33.000	11.567	10	-4.597	2.287	2.786	26.417	1.0000
50	28.200	1.2936	28.200	25.000	35.000	11.189	10	-5.254	2.287	2.786	26.417	1.0000
100	27.100	1.2431	27.100	25.000	30.000	6.379	10	-4.351	2.287	2.786	26.417	1.0000

Auxiliary Tests		Statistic	Critical	Skew	Kurt						
Kolmogorov D Test indicates normal distribution (p > 0.01)		0.83073	1.035	0.26094	0.75082						
Bartlett's Test indicates equal variances (p = 0.16)		7.89115	15.0863								
Hypothesis Test (1-tail, 0.05)		NOEC	LOEC	ChV	TU	MSDu	MSB	MSE	F-Stat	F-Prob	df
Dunnett's Test		100	>100		1	2.78568	53.5767	7.42037	7.22021	3.1E-05	5, 54

**Linear Interpolation (80 Resamples)**

Point	%	SE	95% CL	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



# CERIODAPHNIA DUBIA CHRONIC BIOASSAY

## Reproduction and Survival Raw Data Sheet



Lab No.: A-006030111-001  
 Client ID: Del Mar IPB2637-01

Start Date: 03/01/2006

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	<i>Ln</i>
	2	0	0	0	0	0	0	0	0	0	0	0	10	<i>Ln</i>
	3	4	4	3	0	0	0	4	3	0	0	18	10	<i>Ln</i>
	4	8	7	7	4	5	4	0	0	4	5	44	10	<i>Ln</i>
	5	0	0	0	8	9	8	7	9	8	7	56	10	<i>Ln</i>
	6	8	6	15	12	10	11	12	13	10	3	100	10	<i>Ln</i>
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	20	17	25	24	24	23	23	25	22	15	218	10	<i>Ln</i>
6.25%	1	0	0	0	0	0	0	0	0	0	0	10	<i>Ln</i>	
	2	0	0	0	0	0	0	0	0	0	0	10	<i>Ln</i>	
	3	4	4	4	8	3	0	3	4	3	4	37	10	<i>Ln</i>
	4	0	0	8	0	8	10	8	7	8	0	49	10	<i>Ln</i>
	5	9	8	14	9	15	11	16	0	14	8	104	10	<i>Ln</i>
	6	10	14	10	12	(13)	12	(11)	15	(10)	14	77	10	<i>Ln</i>
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	23	26	26	29	26	33	27	26	25	26	267	10	<i>Ln</i>
12.5%	1	0	0	0	0	0	0	0	0	0	0	10	<i>Ln</i>	
	2	0	0	0	0	0	0	0	0	0	0	10	<i>Ln</i>	
	3	3	4	4	4	0	6	0	0	3	3	27	10	<i>Ln</i>
	4	8	10	0	0	5	0	5	6	8	0	42	10	<i>Ln</i>
	5	15	16	8	9	10	9	9	8	15	9	108	10	<i>Ln</i>
	6	(14)	(15)	14	16	12	14	11	14	(10)	15	96	10	<i>Ln</i>
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	26	30	26	29	27	29	25	28	26	27	273	10	<i>Ln</i>

Note: Fourth broods (circled) are not counted in data analysis.

# CERIODAPHNIA DUBIA CHRONIC BIOASSAY

## Reproduction and Survival Raw Data Sheet



Lab No.: A-006030111-001  
 Client ID: Del Mar IPB2637-01

Start Date: 03/01/2006

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
25%	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	4	4	3	0	5	6	2	3	4	0	31 <del>8</del>	10	R
	4	0	8	10	6	0	0	0	0	8	6	38	10	J
	5	8	14	15	12	12	13	8	9	15	10	116	10	J
	6	13	(16)	(14)	13	12	14	12	13	(13)	12	89	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	25	26	28	31	29	33	22	25	27	28	260 <sup>24</sup> <del>28</del>	10	J
50%	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	3	4	4	9	6	4	4	3	0	4	41	10	R
	4	8	9	9	0	0	8	7	8	9	0	58	10	J
	5	15	14	14	10	8	18	16	15	11	10	131	10	J
	6	(14)	(15)	(15)	16	11	(9)	(14)	(12)	12	13	52	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	26	27	27	35	25	30	27	26	32	27	282	10	R
100%	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	4	2	3	5	2	3	0	0	2	0	21	10	R
	4	7	8	10	0	8	9	7	6	8	3	66	10	J
	5	15	16	15	12	16	14	8	7	15	9	127	10	J
	6	(15)	(16)	(12)	13	(14)	(11)	12	17	(14)	15	57	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	26	26	28	30	26	26	27	30	25	27	271	10	R

Note: Fourth broods (circled) are not counted in data analysis.

# CERIODAPHNIA DUBIA CHRONIC BIOASSAY

## Water Chemistries Raw Data Sheet



Lab No.: A-006030111-001  
 Client ID: Del Mar IPB2637-01

Start Date: 03/01/2006

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst Initials:		PM	PM	RM	RM	RM	RM	RM	J	RM	J	RM	RM	-	-
Time of Readings:		1500	1500	1500	1500	1500	1630	1630	1500	1500	1400	1400	1600	-	-
Control	DO	8.0	7.9	8.0	7.9	8.3	7.9	8.1	7.8	8.0	7.8	8.0	7.9	-	-
	pH	7.7	7.9	8.0	8.0	7.8	8.0	7.9	8.0	7.9	8.0	7.7	8.0	-	-
	Temp	25.9	25.2	25.8	25.6	25.7	25.2	25.8	24.8	25.4	25.0	25.3	25.6	-	-
6.25%	DO	8.0	7.6	8.1	7.9	8.4	7.9	8.2	7.8	8.1	7.7	8.0	8.0	-	-
	pH	7.7	8.0	7.9	8.0	7.7	8.0	7.9	8.0	7.9	8.0	7.6	8.0	-	-
	Temp	25.9	25.2	25.8	25.6	25.6	25.2	25.8	25.1	25.2	25.0	24.7	25.6	-	-
12.5%	DO	8.0	7.4	8.1	7.9	8.4	7.9	8.3	7.7	8.2	7.8	8.4	8.0	-	-
	pH	7.7	8.0	7.8	8.0	7.7	8.0	7.8	7.9	7.8	8.0	7.7	8.0	-	-
	Temp	25.8	25.1	25.7	25.6	25.5	25.2	25.7	24.9	25.0	25.1	24.6	25.6	-	-
25%	DO	8.1	7.1	8.2	7.9	8.5	7.8	8.3	7.8	8.3	7.7	8.5	7.9	-	-
	pH	7.6	8.1	7.7	8.0	7.6	8.0	7.8	7.9	7.8	8.1	7.8	8.0	-	-
	Temp	25.7	25.1	25.7	25.6	25.3	25.1	25.5	25.1	24.9	25.0	24.4	25.7	-	-
50%	DO	8.2	7.2	8.4	8.0	8.7	7.8	8.4	7.7	8.4	7.7	8.5	7.8	-	-
	pH	7.5	8.1	7.6	8.0	7.5	8.1	7.8	8.1	7.8	8.0	7.8	8.0	-	-
	Temp	25.5	25.1	25.5	25.6	25.1	25.1	25.2	25.0	24.8	25.1	24.2	25.7	-	-
100%	DO	8.5	7.2	8.8	8.0	9.1	7.7	8.7	7.9	8.6	7.6	8.6	7.7	-	-
	pH	7.5	8.0	7.6	8.1	7.4	8.2	7.7	8.1	7.7	8.1	7.7	8.1	-	-
	Temp	25.0	25.2	25.3	25.6	24.8	25.1	24.8	24.8	24.7	25.1	24.2	25.7	-	-

Source of Neonates											
Replicate:	A	B	C	D	E	F	G	H	I	J	
Brood ID:	A1	A2	A3	B1	B2	B3	C1	C2	C3	D1	

Additional Parameters	Control	100% Effluent
Conductivity	325	495
Alkalinity	54	107
Hardness	94	180
Chlorine (TRC)	0	0
Ammonia (NH <sub>3</sub> -N)	0.2	0.4



1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite B05, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689  
 9630 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

## SUBCONTRACT ORDER - PROJECT # IPB2637

**SENDING LABORATORY:**

Del Mar Analytical, Irvine  
 17461 Derian Avenue, Suite 100  
 Irvine, CA 92614  
 Phone: (949) 261-1022  
 Fax: (949) 261-1228  
 Project Manager: Michele Chamberlin

**RECEIVING LABORATORY:**

Aquatic Testing Laboratories-SUB  
 4350 Transport Street, Unit 107  
 Ventura, CA 93003  
 Phone : (805) 650-0546  
 Fax: (805) 650-0756

Standard TAT is requested unless specific due date is requested => Due Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Analysis	Expiration	Comments
<b>Sample ID: IPB2637-01</b>	<b>Water</b>	<b>Sampled: 02/28/06 13:45</b>
Bioassay-7 dy Chrnic	03/02/06 01:45	<b>Instant Nofication</b>
Bioassay-Acute 96hr	03/02/06 01:45	Cerio, EPA/821-R02-013, Sub to AqTox Labs FH minnow, EPA/821-R02-012, Sub to AqTox Labs
<b>Containers Supplied:</b>		
1 gal Poly (IPB2637-01AU)		
1 gal Poly (IPB2637-01AV)		

**SAMPLE INTEGRITY:**

All containers intact:  Yes  No      Sample labels/COC agree:  Yes  No      Samples Received On Ice:  Yes  No  
 Custody Seals Present:  Yes  No      Samples Preserved Properly:  Yes  No      Samples Received at (temp): 2°C

<del>Released By</del>	<del>Date</del>	<del>Time</del>	<del>Received By</del>	<del>Date</del>	<del>Time</del>
<i>[Signature]</i>	3/06	1020	<i>[Signature]</i>	3-1-6	1020
Released By	Date	Time	Received By	Date	Time

**FATHEAD MINNOW ACUTE**  
**Method 2000.0**  
**Reference Toxicant - SDS**



QA/QC Batch No.: RT-060301

**TEST SUMMARY**

Species: *Pimephales promelas*.  
 Age: 13 days old.  
 Regulations: NPDES.  
 Test chamber volume: 250 ml.  
 Feeding: Prior to renewal at 48 hrs.  
 Temperature: 20 +/- 1°C.  
 Number of replicates: 2.  
 Dilution water: MHSF.

Source: In-lab culture.  
 Test type: Static-Renewal.  
 Test Protocol: EPA-821-R-02-012.  
 Endpoints: LC50 at 96 hrs.  
 Test chamber: 600 ml glass beakers.  
 Aeration: None.  
 Number of organisms per chamber: 10.  
 Photoperiod: 16/8 hrs light/dark.

**TEST DATA**

Date/Time: Analyst:	INITIAL			24 Hr					48 Hr				
	<u>3-1-06 1200</u>			<u>3-2-06 1100</u>					<u>3-3-06 1300</u>				
	<u>[Signature]</u>			<u>[Signature]</u>					<u>[Signature]</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	<u>20.4</u>	<u>8.9</u>	<u>7.9</u>	<u>19.8</u>	<u>7.8</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>20.0</u>	<u>7.1</u>	<u>7.6</u>	<u>0</u>	<u>0</u>
1.0 mg/l	<u>20.4</u>	<u>8.9</u>	<u>7.9</u>	<u>19.7</u>	<u>7.7</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>20.0</u>	<u>7.0</u>	<u>7.6</u>	<u>0</u>	<u>0</u>
2.0 mg/l	<u>20.5</u>	<u>9.0</u>	<u>7.9</u>	<u>19.7</u>	<u>7.4</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>20.0</u>	<u>6.9</u>	<u>7.5</u>	<u>0</u>	<u>0</u>
4.0 mg/l	<u>20.5</u>	<u>9.1</u>	<u>7.9</u>	<u>19.7</u>	<u>7.7</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>20.0</u>	<u>6.6</u>	<u>7.5</u>	<u>0</u>	<u>0</u>
8.0 mg/l	<u>20.5</u>	<u>9.1</u>	<u>7.9</u>	<u>19.7</u>	<u>5.3</u>	<u>7.2</u>	<u>10</u>	<u>10</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Date/Time: Analyst:	RENEWAL			72 Hr					96 Hr				
	<u>3-3-06 1300</u>			<u>3-4-06 1100</u>					<u>3-5-06 1130</u>				
	<u>[Signature]</u>			<u>[Signature]</u>					<u>[Signature]</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	<u>19.8</u>	<u>9.0</u>	<u>7.8</u>	<u>19.5</u>	<u>7.9</u>	<u>7.6</u>	<u>0</u>	<u>0</u>	<u>19.9</u>	<u>7.5</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
1.0 mg/l	<u>19.8</u>	<u>9.0</u>	<u>7.8</u>	<u>19.6</u>	<u>8.3</u>	<u>7.6</u>	<u>0</u>	<u>0</u>	<u>19.9</u>	<u>7.6</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
2.0 mg/l	<u>19.8</u>	<u>9.1</u>	<u>7.8</u>	<u>19.6</u>	<u>8.3</u>	<u>7.6</u>	<u>0</u>	<u>0</u>	<u>19.8</u>	<u>7.6</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
4.0 mg/l	<u>19.9</u>	<u>9.1</u>	<u>7.8</u>	<u>19.6</u>	<u>7.7</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>19.8</u>	<u>7.6</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
8.0 mg/l	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

**Comments:**

Control: Alkalinity: 54 mg/l; Hardness: 94 mg/l; Conductivity: 325 umho.  
 SDS: Alkalinity: 53 mg/l; Hardness: 94 mg/l; Conductivity: 330 umho.



**Acute Fish Test-96 Hr Survival**

Start Date: 01 Mar-06 12:00	Test ID: RT-060301f	Sample ID: REF-Ref Toxicant
End Date: 05 Mar-06 11:30	Lab ID: CAATL-Aquatic Testing Labs	Sample Type: SDS-Sodium dodecyl sulfate
Sample Date: 01 Mar-06 00:00	Protocol: EPAA 91-EPA Acute	Test Species: PP-Pimephales promelas

Conc-mg/L	1	2
D-Control	1.0000	1.0000
1	1.0000	1.0000
2	1.0000	1.0000
4	1.0000	1.0000
8	0.0000	0.0000

Conc-mg/L	Mean	N-Mean	Transform: Arcsin Square Root				N	Number Resp	Total Number
			Mean	Min	Max	CV%			
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
4	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	0	20

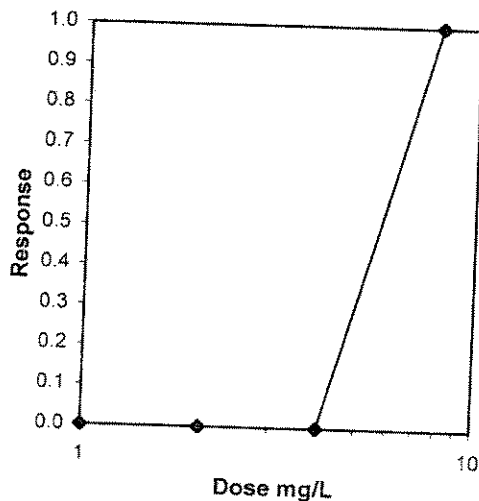
**Auxiliary Tests**

Normality of the data set cannot be confirmed  
 Equality of variance cannot be confirmed

Statistic	Critical	Skew	Kurt
-----------	----------	------	------

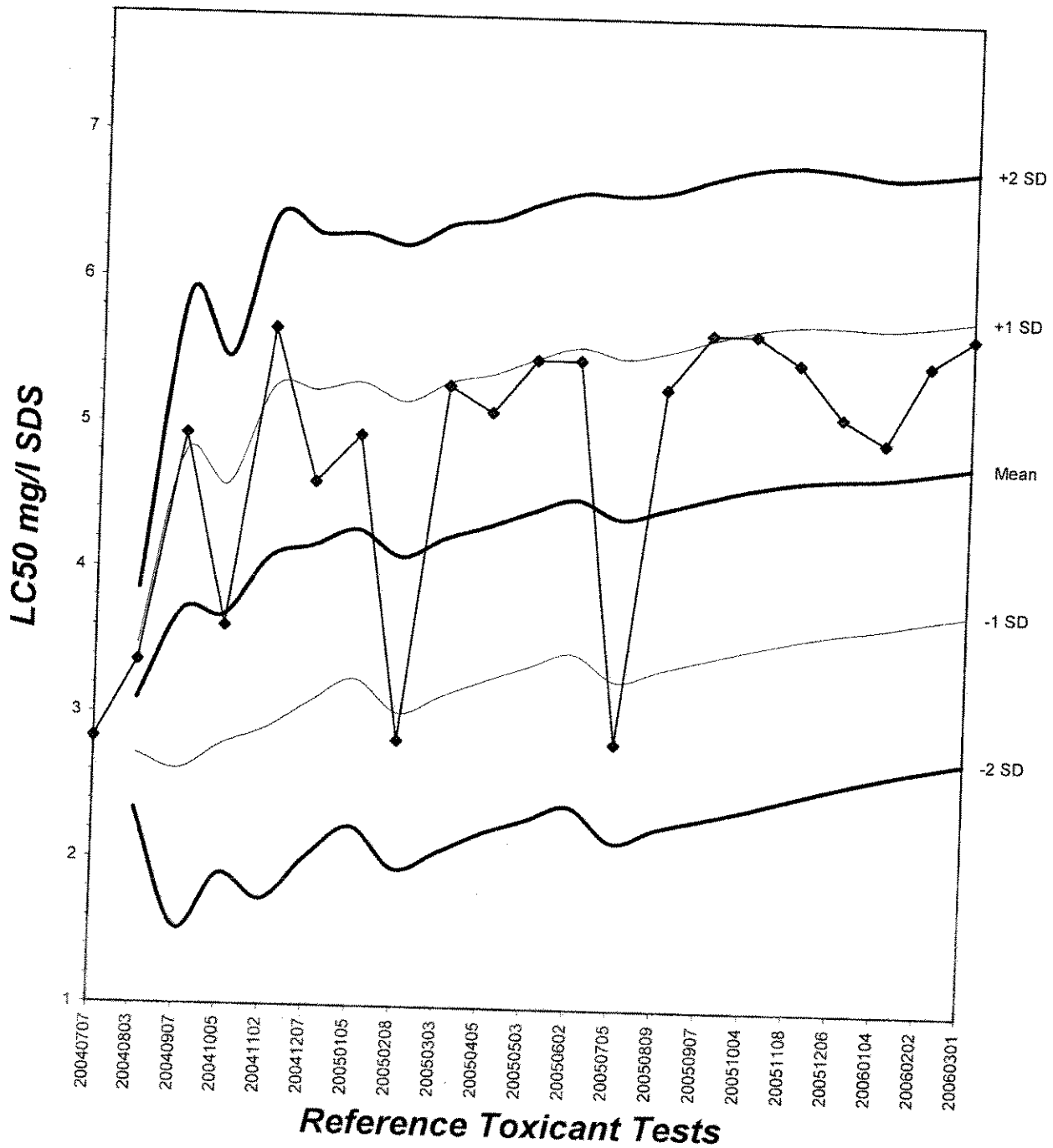
**Graphical Method**

Trim Level	EC50
0.0%	5.6569



# Fathead Minnow Acute Laboratory Control Chart

CV% = 21.3



# TEST ORGANISM LOG

FATHEAD MINNOW - LARVAL  
(*Pimephales promelas*)



QA/QC BATCH NO.: RT-060301

SOURCE: In-Lab Culture

DATE HATCHED: 2-16-06

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

# MORTALITIES 48 HOURS PRIOR TO  
TO USE IN TESTING: 0

DATES USED IN LAB: 3/1/0  
to  
1/1

AVERAGE FISH WEIGHT: 0.006 gm

TEST LOADING LIMITS: 0.65 gm/liter

200 ml test solution volume = 0.013 gm mean fish weight limit

250 ml test solution volume = 0.016 gm mean fish weight limit

## ACCLIMATION WATER QUALITY:

Temp.: 20.4 °C      pH: 7.7      Ammonia: 0.2 mg/l NH<sub>3</sub>-N

DO: 2.8 mg/l      Alkalinity: 54 mg/l      Hardness: 92 mg/l

READINGS RECORDED BY: [Signature]      DATE: 3-5-06

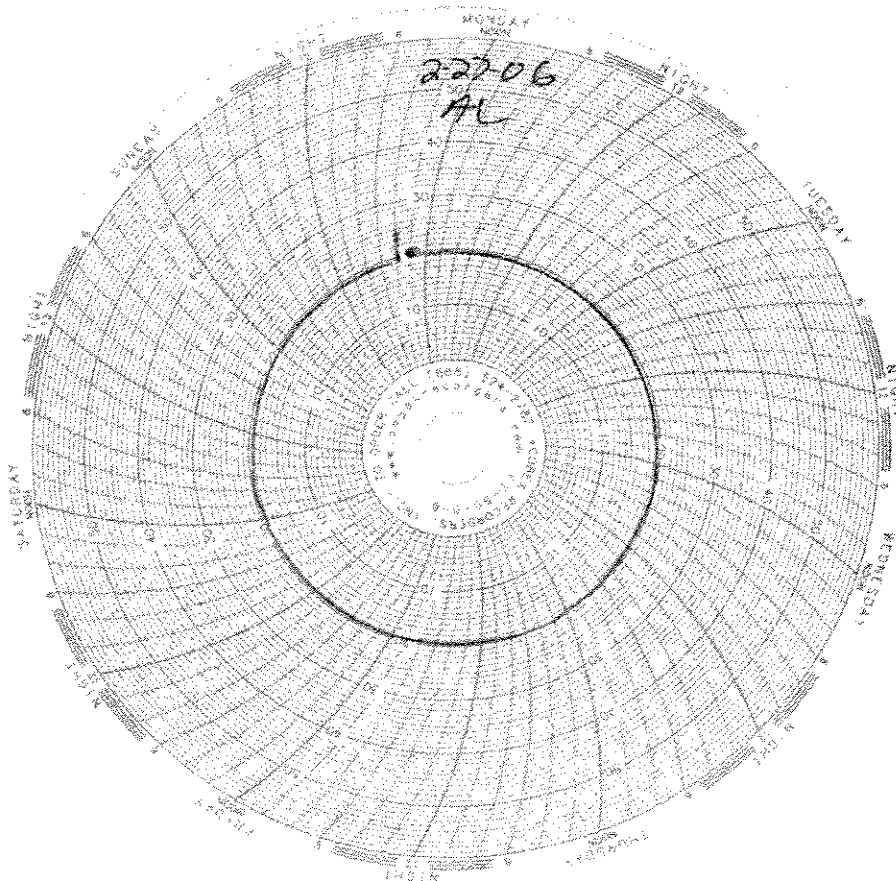


# Laboratory Temperature Chart

**QA/QC Batch No: RT-060301**

**Date Tested: 03/01/06 to 03/05/06**

**Acceptable Range: 20 $\pm$ 1 $^{\circ}$ C**



**CERIODAPHNIA CHRONIC BIOASSAY**  
**EPA METHOD 1002.0**  
**REFERENCE TOXICANT - NaCl**



QA/QC Batch No.: RT-060301

Date Tested: 03/01/06 to 03/07/06

**TEST SUMMARY**

Test type: Daily static-renewal.  
 Species: *Ceriodaphnia dubia*.  
 Age: < 24 hrs; all released within 8 hrs.  
 Test vessel size: 30 ml.  
 Number of test organisms per vessel: 1.  
 Temperature: 25 +/- 1°C.  
 Dilution water: Mod. hard reconstituted (MHRW).  
 Reference Toxicant: Sodium chloride (NaCl).

Endpoints: Survival and Reproduction.  
 Source: In-laboratory culture.  
 Food: .1 ml YTC, algae per day.  
 Test solution volume: 20 ml.  
 Number of replicates: 10.  
 Photoperiod: 16/8 hrs. light/dark cycle.  
 Test duration: 6 days.  
 Statistics: ToxCalc computer program.

**RESULTS SUMMARY**

Sample Concentration	Percent Survival		Mean Number of Young Per Female	
Control	100%		21.0	
0.5 g/l	100%		22.4	
1.0 g/l	100%		17.8	*
2.0 g/l	100%		2.4	*
4.0 g/l	0%	*	0	**

\* Statistically significantly less than control at P = 0.05 level  
 \*\* Reproduction data from concentrations greater than survival NOEC are excluded from statistical analysis.

**CHRONIC TOXICITY**

Survival LC50	2.8 g/l
Reproduction IC25	1.10 g/l

**QA/QC TEST ACCEPTABILITY**

Parameter	Result
Control survival ≥ 80%	Pass (100% Survival)
≥ 15 young per surviving control female	Pass (21.0 young)
≥ 60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD < 47% for reproduction	Pass (PMSD = 8.3%)
Stat. sig. diff. conc. relative difference > 13%	Pass (Stat. sig. diff. conc. = 15.2%)
Concentration response relationship acceptable	Pass (Response curve normal)

**Ceriodaphnia Survival and Reproduction Test-Survival Day 6**

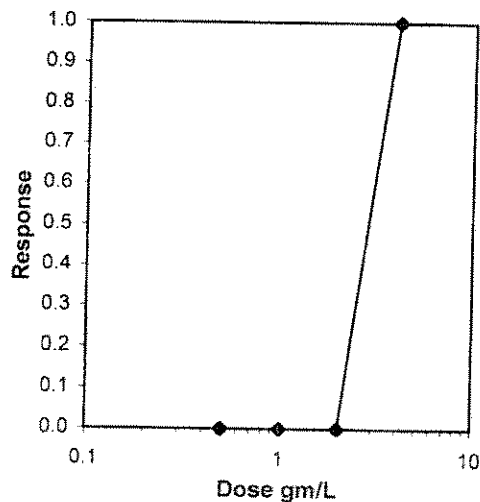
Start Date: 01 Mar-06 14:00 Test ID: RT-060301c Sample ID: REF-Ref Toxicant  
 End Date: 07 Mar-06 16:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: NACL-Sodium chloride  
 Sample Date: 01 Mar-06 00:00 Protocol: EPAF 91 Test Species: CD-Ceriodaphnia dubia  
 Comments:

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Conc-gm/L	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
D-Control	1.0000	1.0000	0	10	10	10			0	10
0.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
1	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
2	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
4	0.0000	0.0000	10	0	10	10			10	10

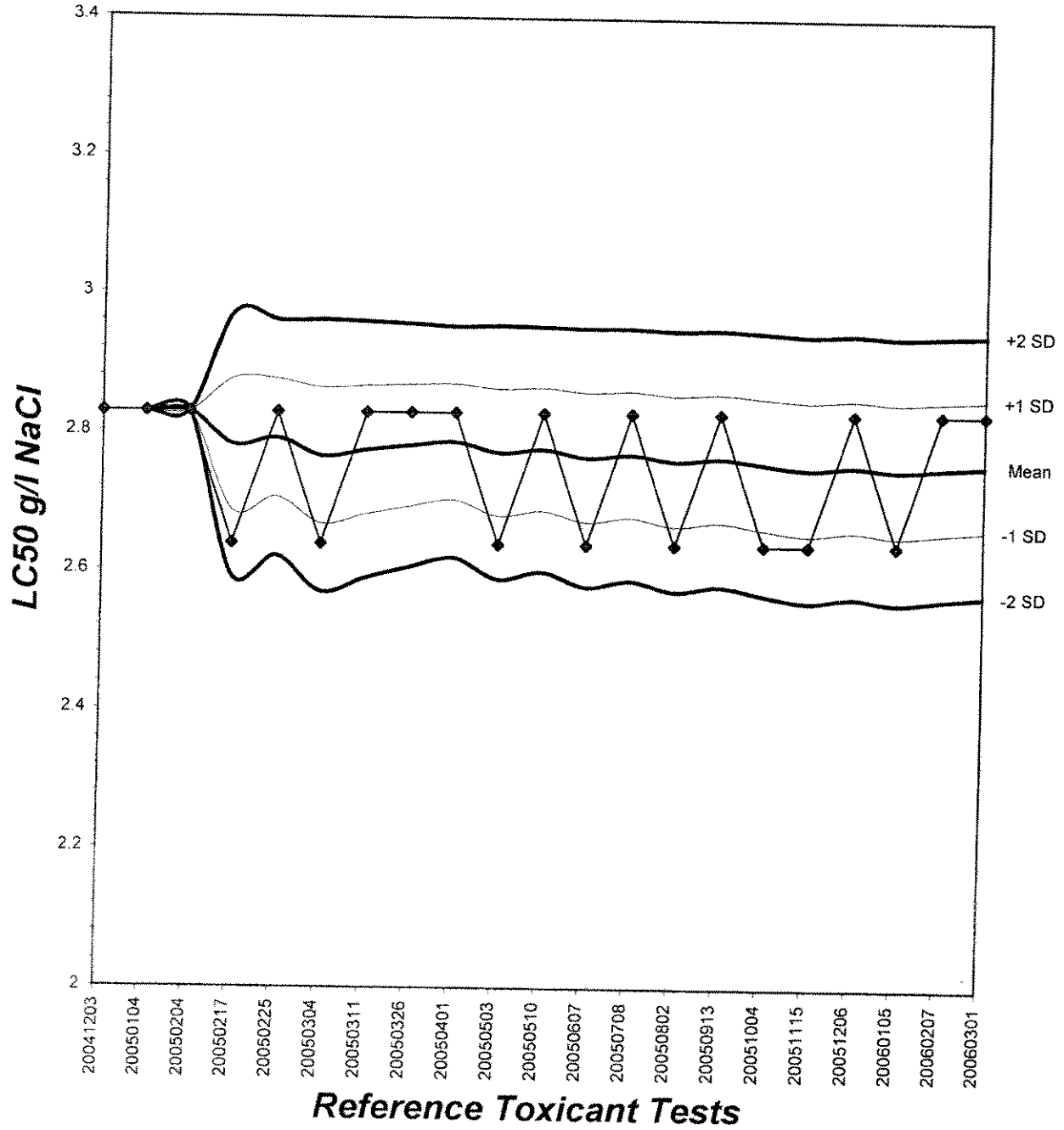
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	2	>4		

Trim Level	EC50	Graphical Method
0.0%	2.8284	



# Ceriodaphnia Chronic Survival Laboratory Control Chart

CV% = 3.4



**Ceriodaphnia Survival and Reproduction Test-Reproduction**

Start Date: 01 Mar-06 14:00 Test ID: RT-060301c Sample ID: REF-Ref Toxicant  
 End Date: 07 Mar-06 16:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: NACL-Sodium chloride  
 Sample Date: 01 Mar-06 00:00 Protocol: EPAF 91 Test Species: CD-Ceriodaphnia dubia  
 Comments:

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	20.000	22.000	19.000	18.000	20.000	21.000	26.000	22.000	22.000	20.000
0.5	22.000	20.000	20.000	24.000	23.000	24.000	25.000	23.000	22.000	21.000
1	19.000	18.000	20.000	15.000	19.000	20.000	16.000	14.000	20.000	17.000
2	2.000	2.000	2.000	2.000	4.000	3.000	2.000	2.000	2.000	3.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

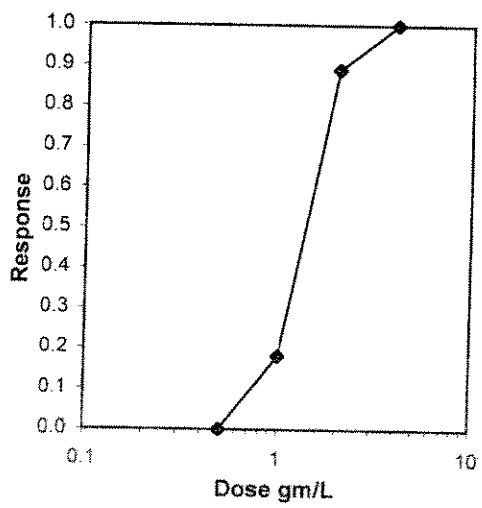
Conc-gm/L	Transform: Untransformed							1-Tailed			Isotonic	
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	21.000	1.0000	21.000	18.000	26.000	10.529	10				21.700	1.0000
0.5	22.400	1.0667	22.400	20.000	25.000	7.646	10	-1.726	2.137	1.733	21.700	1.0000
*1	17.800	0.8476	17.800	14.000	20.000	12.365	10	3.946	2.137	1.733	17.800	0.8203
*2	2.400	0.1143	2.400	2.000	4.000	29.134	10	22.934	2.137	1.733	2.400	0.1106
4	0.000	0.0000	0.000	0.000	0.000	0.000	10				0.000	0.0000

**Auxiliary Tests**

	Statistic	Critical	Skew	Kurt						
Shapiro-Wilk's Test indicates normal distribution ( $p > 0.01$ )	0.97953	0.919	0.2143	0.71232						
Bartlett's Test indicates equal variances ( $p = 0.01$ )	10.6394	11.3449								
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSB	MSE	F-Stat	F-Prob	df
Dunnett's Test	0.5	1	0.70711		1.73291	847.067	3.28889	257.554	2.3E-24	3, 36

**Linear Interpolation (80 Resamples)**

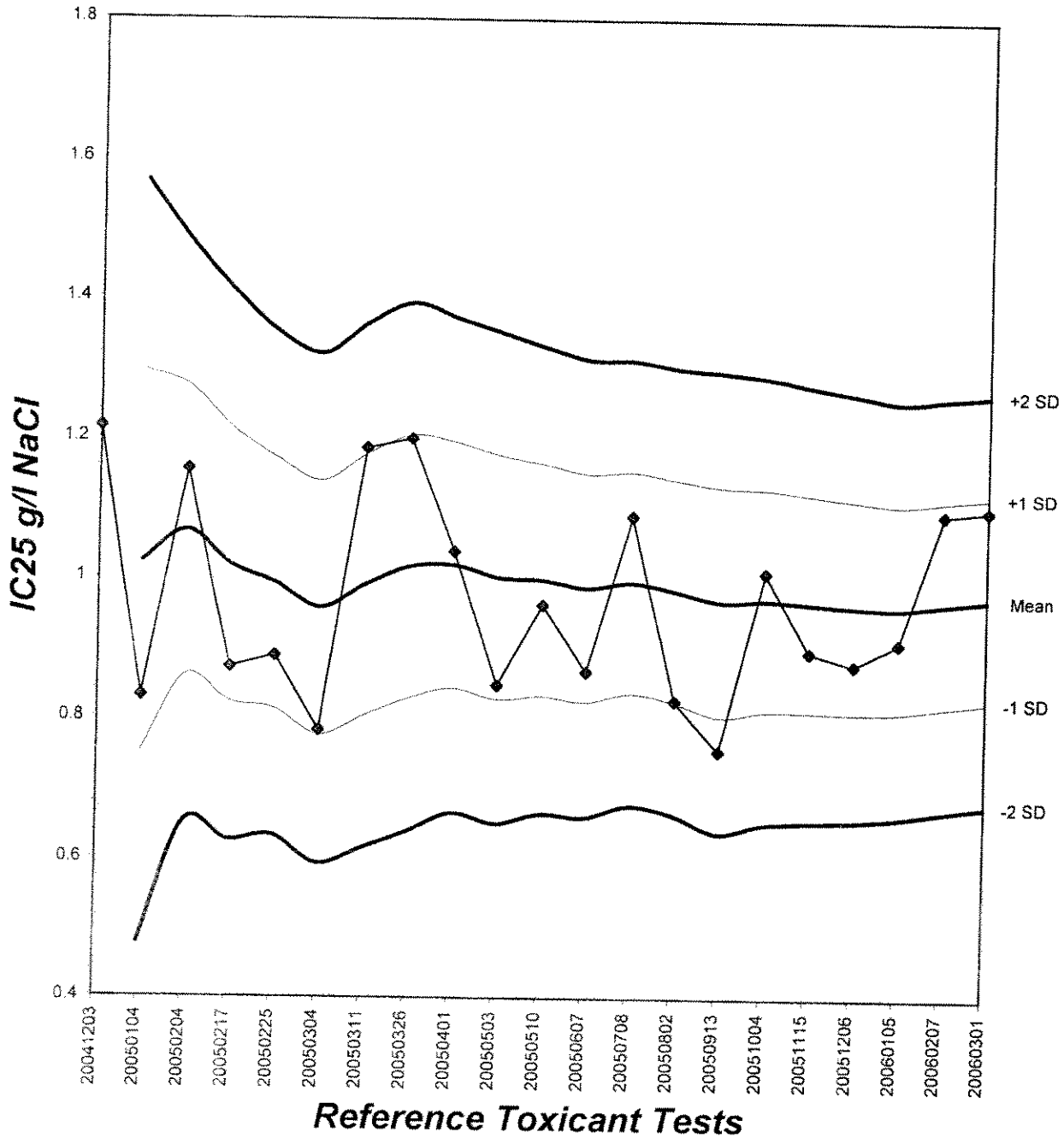
Point	gm/L	SE	95% CL	Skew
IC05	0.6391	0.0359	0.5587 0.7148	0.5339
IC10	0.7782	0.0612	0.7030 0.9295	1.5066
IC15	0.9173	0.0675	0.8164 1.0435	0.5242
IC20	1.0286	0.0507	0.9218 1.1083	-0.0551
IC25	1.0990	0.0414	1.0199 1.1731	0.2340
IC40	1.3104	0.0319	1.2476 1.3675	0.1691
IC50	1.4513	0.0260	1.3973 1.4971	0.0934





# Ceriodaphnia Chronic Reproduction Laboratory Control Chart

CV% = 15.1



**CERIODAPHNIA DUBIA CHRONIC BIOASSAY**  
**Reference Toxicant - NaCl**  
**Reproduction and Survival Raw Data Sheet**



QA/QC No.: RT-060301

Start Date: 03/01/2006

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	4	3	3	5	0	4	4	3	4	0	30	10	R
	4	0	0	0	0	5	0	0	0	0	4	9	10	J
	5	8	9	8	6	7	8	9	9	7	8	79	10	M
	6	8	10	8	7	8	9	13	10	11	8	92	10	R
	7	0	-	-	-	-	-	-	-	-	-	-	-	-
	Total	20	22	19	18	20	21	26	22	22	20	220	10	R
0.5 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	3	2	0	4	4	4	3	4	4	3	31	10	R
	4	0	0	5	0	0	0	0	0	0	0	5	10	J
	5	8	7	7	8	9	8	9	9	8	7	80	10	M
	6	11	11	8	12	10	12	13	10	10	11	108	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	22	20	20	24	23	24	25	23	22	21	224	10	R
1.0 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	0	0	4	3	2	4	0	3	0	3	19	10	R
	4	3	3	0	0	0	4	0	4	0	14	10	J	
	5	6	4	4	4	6	4	3	4	6	4	47	10	M
	6	10	9	12	8	11	12	9	7	10	10	98	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	19	18	20	15	19	20	16	14	20	17	178	10	R

Note: Fourth broods (circled) are not counted in data analysis.

**CERIODAPHNIA DUBIA CHRONIC BIOASSAY**  
**Reference Toxicant - NaCl**  
**Reproduction and Survival Raw Data Sheet**



QA/QC No.: RT-060301

Start Date: 03/01/2006

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
2.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	0	0	0	0	0	0	0	0	0	0	0	10	R
	4	0	0	0	0	2	3	0	2	0	0	7	10	R
	5	2	2	2	2	0	0	2	0	2	3	15	10	R
	6	0	0	0	0	2	0	0	0	0	0	2	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	2	2	2	2	4	3	2	2	2	3	24	10	R
4.0 g/l	1	X	X	X	X	X	X	X	X	X	0	0	R	
	2	-	-	-	-	-	-	-	-	-	-	-	-	
	3	-	-	-	-	-	-	-	-	-	-	-	-	
	4	-	-	-	-	-	-	-	-	-	-	-	-	
	5	-	-	-	-	-	-	-	-	-	-	-	-	
	6	-	-	-	-	-	-	-	-	-	-	-	-	
	7	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	0	0	0	0	0	0	0	0	0	0	0	0	R

Note: Fourth broods (circled) are not counted in data analysis.

# CERIODAPHNIA DUBIA CHRONIC BIOASSAY

Reference Toxicant - NaCl  
Water Chemistries Raw Data Sheet



QA/QC No.: RT-060301

Start Date: 03/01/2006

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst Initials:		Rm	Rm	Rm	Rm	Rm	Rm	Rm	J	R	J	R	R	—	—
Time of Readings:		1400	1500	1500	1500	1500	1600	1600	1400	1400	1330	1330	1600	—	—
Control	DO	8.1	7.8	8.0	8.2	8.4	8.0	8.1	7.8	8.1	8.1	8.0	8.0	—	—
	pH	7.8	7.9	8.0	8.0	7.8	7.8	7.8	7.5	7.9	7.8	7.6	7.7	—	—
	Temp	25.8	25.5	25.8	25.3	25.6	25.2	25.8	25.1	25.6	24.9	25.9	25.8	—	—
0.5 g/l	DO	8.1	7.9	8.0	8.3	8.4	8.0	8.1	7.7	8.1	8.1	7.8	8.0	—	—
	pH	7.8	7.9	8.0	8.0	7.8	7.9	7.8	7.9	7.8	7.9	7.8	7.8	—	—
	Temp	25.8	25.5	25.9	25.3	25.7	25.2	25.9	25.2	25.6	25.0	25.3	25.7	—	—
1.0 g/l	DO	8.1	7.9	8.0	8.3	8.4	7.9	8.1	7.9	8.1	7.7	8.0	7.9	—	—
	pH	7.8	7.9	8.0	8.0	7.8	7.9	7.9	7.9	7.9	7.9	7.8	7.8	—	—
	Temp	25.8	25.5	25.9	25.3	25.7	25.2	25.9	25.0	25.8	25.7	25.4	25.7	—	—
2.0 g/l	DO	8.1	8.0	7.9	8.2	8.3	7.9	8.0	7.8	8.0	7.8	8.0	7.9	—	—
	pH	7.9	7.9	8.0	8.0	7.8	7.9	7.9	7.8	7.9	7.8	7.8	7.8	—	—
	Temp	25.8	25.5	26.0	25.3	25.8	25.2	26.0	25.2	25.8	25.6	25.4	25.7	—	—
4.0 g/l	DO	8.1	8.0	—	—	—	—	—	—	—	—	—	—	—	—
	pH	7.8	7.9	—	—	—	—	—	—	—	—	—	—	—	—
	Temp	25.7	25.5	—	—	—	—	—	—	—	—	—	—	—	—

Additional Parameters	Control	High Concentration (4.0 g/l)
Conductivity	325	6340
Alkalinity	54	55
Hardness	94	93
Ammonia (NH <sub>3</sub> -N)	0.2	0.2

### Source of Neonates

Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	E1	E2	G6	H4	H5	H6	I4	I6	J4	J2

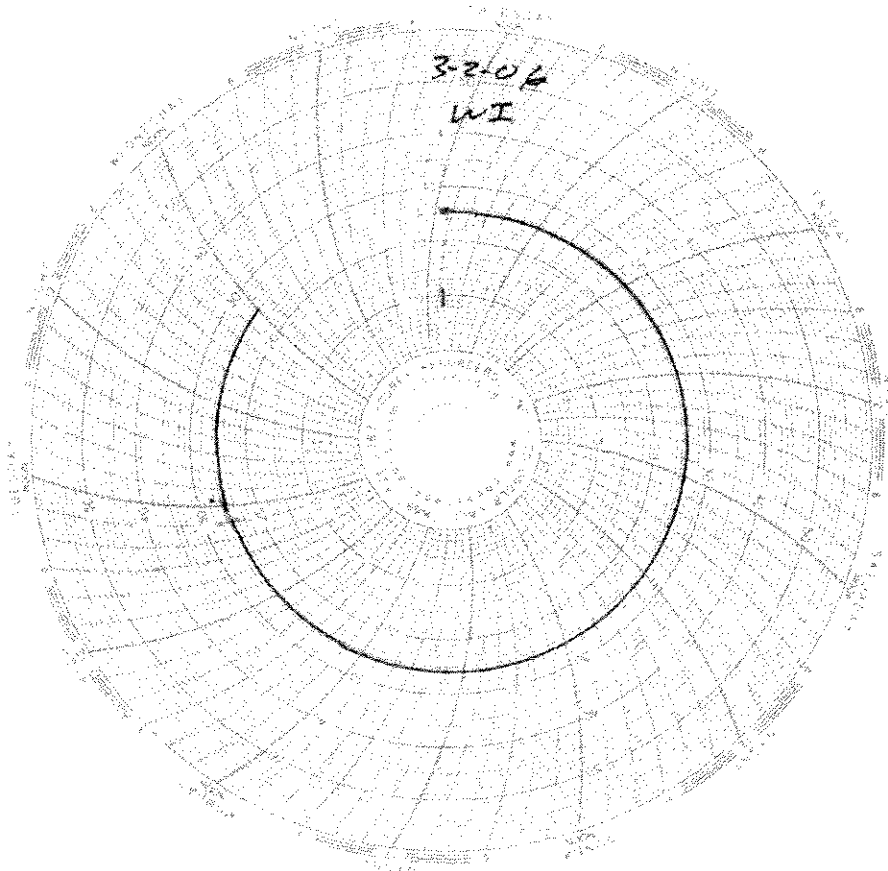


# *Laboratory Temperature Chart*

*QA/QC Batch No: RT-060301*

*Date Tested: 03/01/06 to 03/07/06*

*Acceptable Range: 25+/- 1°C*





**EBERLINE**  
SERVICES

March 13, 2006

Ms. Michele Chamberlin  
Project Manager  
Del Mar Analytical  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614

Reference: Del Mar Analytical Project No. IPB2637  
Eberline Services NELAP Cert #01120CA (exp. 01/31/07)  
Eberline Services Report R603014-8660

Dear Ms. Chamberlin:

Enclosed are results from the analysis of one water sample received at Eberline Services on March 2, 2006. The sample was analyzed according to the accompanying Del Mar Analytical Subcontract Order Form. The requested analysis was gross alpha/gross beta (EPA900.0). The batch QC LCS, blank analysis, duplicate analysis, and matrix spike results were within the limits defined in Eberline Services Quality Control Procedures Manual. No problems were encountered during the requested analysis.

Please call me if you have any questions concerning this report.

Regards,

Melissa Mannion  
Senior Program Manager

MCM/njv


Enclosure: Report  
Subcontract Form  
Receipt checklist  
Invoice

Analytical Services  
2030 Wright Avenue  
P.O. Box 4040  
Richmond, California 94804-0040  
(510) 235-2633 Fax (510) 235-0438  
Toll Free (800) 841-5487  
www.eberline.com **NPDES 1474**

Eberline Services  
ANALYSIS RESULTS

SDG <u>8650</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603014-01</u>	Contract <u>PROJECT# IPB2637</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab						
<u>Sample ID</u>	<u>Sample ID</u>	<u>Collected</u>	<u>Analyzed</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>Units</u>	<u>MDA</u>
IPB2637-01	8660-001	02/28/06	03/06/06	GrossAlpha	2.64 ± 1.7	pCi/L	1.95
			03/06/06	Gross Beta	7.69 ± 1.6	pCi/L	2.06

Certified by <u></u>
Report Date <u>03/12/06</u>
Page 1

Eberline Services

QC RESULTS

SDG <u>8660</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603014-01</u>	Contract <u>PROJECT# IPB2637</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

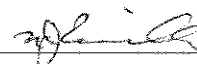
Lab	Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
<u>LCS</u>							
	8660-002	GrossAlpha	9.57 ± 1.3	pCi/Smpl	10.2	0.635	94% recovery
		Gross Beta	9.53 ± 0.77	pCi/Smpl	9.81	0.609	97% recovery
<u>BLANK</u>							
	8660-003	GrossAlpha	-0.067 ± 0.23	pCi/Smpl	NA	0.513	<MDA
		Gross Beta	0.130 ± 0.31	pCi/Smpl	NA	0.548	<MDA

<u>DUPLICATES</u>			
Sample ID	Nuclide	Results ± 2σ	MDA
8660-004	GrossAlpha	1.33 ± 1.5	2.25
	Gross Beta	7.77 ± 1.8	2.37

<u>ORIGINALS</u>					
Sample ID	Results ± 2σ	MDA	RPD (Tot)	3σ	Eval
8660-001	2.64 ± 1.7	1.95	66	177	satis.
	7.69 ± 1.6	2.06	1	63	satis.

<u>SPIKED SAMPLE</u>			
Sample ID	Nuclide	Results ± 2σ	MDA
8660-005	GrossAlpha	92.9 ± 7.9	1.88
	Gross Beta	79.8 ± 3.9	1.99

<u>ORIGINAL SAMPLE</u>					
Sample ID	Results ± 2σ	MDA	Added	%Recv	
8660-001	2.64 ± 1.7	1.95	76.5	118	
	7.69 ± 1.6	2.06	70.3	103	

Certified by   
 Report Date 03/12/06  
 Page 2





1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689  
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

## SUBCONTRACT ORDER - PROJECT # IPB2637

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Eberline Services 2030 Wright Avenue Richmond, CA 94804 Phone : (510) 235-2633 Fax: (510) 235-0438

Standard TAT is requested unless specific due date is requested => Due Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Analysis	Expiration	Comments
<b>Sample ID: IPB2637-01 Water</b>	<b>Sampled: 02/28/06 13:45</b>	<b>Instant Notification</b>
EDD + Level 4	03/28/06 13:45	Excel EDD email to pm, Include Std logs for Lvl IV
Gross Alpha-O	02/28/07 13:45	900.0, IF RESULT > 15 pCi/L, run Radium 226 & 228
Gross Beta-O	02/28/07 13:45	900.0, IF RESULT > 50 pCi/L, run Radium 226 & 228
Radium, Combined-O	02/28/07 13:45	HOLD for Gross Alpha/Beta result; EPA 903.1 & 904.0
Strontium 90-O	02/28/07 13:45	905.0
Tritium-O	02/28/07 13:45	906

**Containers Supplied:**

- 2.5 gal Poly (IPB2637-01AF)
- 40 ml Amber Voa Vial (IPB2637-01AG)
- 40 ml Amber Voa Vial (IPB2637-01AH)
- 40 ml Amber Voa Vial (IPB2637-01AI)

SAMPLE INTEGRITY:					
All containers intact:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Sample labels/COC agree:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Custody Seals Present:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Samples Preserved Properly:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
			Samples Received On Ice:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
			Samples Received at (temp):	_____	

~~Released By~~ \_\_\_\_\_ ~~Date~~ 3/1/06 ~~Time~~ 1700
   
 Released By MTW
   
 Date 03/02/06
   
 Time 9:30

Released By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received By \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_



# TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

14201 FRANKLIN AVENUE  
TUSTIN, CALIFORNIA 92780-7008  
(714) 730-6239 · FAX (714) 730-6462  
www.truesdail.com

## Del Mar Analytical

Laboratory Number: 952266

Project Name: IPB2637



Prepared for:

**Michele Chamberlin  
Del Mar Analytical  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614**

Prepared by:

Truesdail Laboratories, Inc.  
Tustin, CA 92780

March 20, 2006

# TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

March 20, 2006

14201 FRANKLIN AVENUE  
TUSTIN, CALIFORNIA 92780-7008  
(714) 730-6239 · FAX (714) 730-6462  
www.truesdail.com

*Client:* Del Mar Analytical  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614

*Attention:* Michele Chamberlin

*Project Name:* IPB2637

*Truesdail Project:* 952266

*Date Received:* 03/01/06

## Samples Cross-reference

<u>Truesdail ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Time Sampled</u>	<u>Analysis Requested</u>
952266-1	IPB2637-01	Water	02/28/06	1345	Hydrazines by EPA 8315M

Respectfully Submitted,  
TRUESDAIL LABORATORIES, INC.

*K. R. P. Iyer*

K.R.P. Iyer  
Quality Control/Quality Assurance Officer

*Xuan Huong Dang*

Xuan Huong Dang  
Project Manager

# TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

March 20, 2006

14201 FRANKLIN AVENUE  
TUSTIN, CALIFORNIA 92780-7008  
(714) 730-6239 · FAX (714) 730-6462  
www.truesdail.com

*Client:* Del Mar Analytical  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614  
*Attention:* Michele Chamberlin

*Project Name:* IPB2637  
*Date Received:* 03/01/06

*Truesdail Project:* 952266

## Case Narrative

*Sample Receipt* The sample was received in good condition and no anomalies were noted during check-in. The sample was kept in a refrigerator until analysis. Thereafter, it is being kept in ambient storage for an additional 2 months before disposal.

*Analysis* The analysis was performed as requested on the chain-of-custody.

*Quality Control* The analytical results for each batch of samples performed include a minimum of one set of laboratory control sample/laboratory control sample duplicate (LCS/LCSD), one matrix spike (MS) and a reagent blank (Method blank). Any exceptions or problems would be noted in the "comments" section.

*Comments* The test results in this report meet all quality assurance requirements set forth by the method specification and all quality control recoveries were within the laboratory acceptance limits. No anomalies or nonconformance events occurred during the course of analysis.

On 3/20/06, client called to add a Level IV Data Package to the project. Since the request was made after the analysis was completed, the normal procedure for logging-in for Level IV was not followed. However, the data package for this project is completed as per the requirement.

Respectfully Submitted,  
TRUESDAIL LABORATORIES, INC.

K. R. P. Iyer  
K.R.P. Iyer  
Quality Control/Quality Assurance Officer

Xuan Huong Dang  
Xuan Huong Dang  
Project Manager



**Client:** Del Mar Analytical  
17461 Derian Ave., Suite 100  
Irvine, CA 92614

# REPORT

**Laboratory No:** 952266  
**Report Date:** March 20, 2006  
**Sampling Date:** February 28, 2006  
**Receiving Date:** March 1, 2006  
**Extraction Date:** March 1, 2006  
**Analysis Date:** March 3, 2006  
**Units:** µg/L  
**Dilution Factor:** 1  
**Reported By:** JS

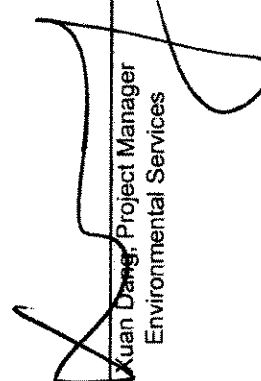
**Attention:** Michele Chamberlin  
**Sample:** Liquid / 1 Sample  
**Project Name:** IPB2637  
**P.O. Number:** IPB2637  
**Method Number:** 8315 (Modified)  
**Investigation:** Hydrazines in Liquid

## Analytical Results

Sample ID	Sample Description	Monomethyl		Unsymmetrical Dimethyl		Hydrazine
		Hydrazine	Hydrazine	Hydrazine	Hydrazine	
705657-MB	Method Blank	ND	ND	ND	ND	ND
952266	IPB2637-01	ND	ND	ND	ND	ND
MDL		1.2	0.27	0.39	0.39	1.0
PQL		5.0	5.0	5.0	5.0	1.0

MDL: Method Detection Limit, ug/L  
PQL: Practical Quantitation Limit, ug/L  
ND: Not Detected at or above the MDL value.  
N/A: Not Applicable

Note: Results based on detector #1 (UV=365nm) data.

  
Juan Diego, Project Manager  
Environmental Services



14201 FRANKLIN AVENUE TUSTIN CALIFORNIA 92780-7008  
(714) 730-6239 FAX (714) 730-6462 www.itvsdall.com

**Client:** Del Mar Analytical  
17461 Dertan Ave., Suite 100  
Irvine, CA 92614

**Client Contact:** Michele Chamberlin  
**Sample:** Liquid / 1 Sample  
**Sample ID:** IPB2637  
**P. O. Number:** IPB2637  
**Method Number:** 8315 (Modified)  
**Run Batch No.:** Extraction: 3434; Analysis: 455  
**Investigation:** Hydrazines in Liquid

## REPORT

**QC Lab. No.:** 705657  
**Project Lab. No.:** 952266  
**Spiked Sample ID:** 952267  
**Report Date:** March 20, 2006  
**Sampling Date:** February 28, 2006  
**Receiving Date:** March 1, 2006  
**Extraction Date:** March 1, 2006  
**Analysis Date:** March 3, 2006  
**Units:** µg/L  
**Reported By:** JS

### Quality Control/Quality Assurance Calibration Report

Parameter	Theoretical Value		Measured Value		% Rec.		Control Limits		Flag
	Value	Value	Value	Value	%	Rec.	Value	Value	
Monomethyl Hydrazine	50.0	50.0	46.8	46.8	93.6	93.6	85-115	85-115	PASS
u-Dimethyl Hydrazine	50.0	50.0	50.3	50.3	101	101	85-115	85-115	PASS
Hydrazine	10.0	10.0	10.2	10.2	102	102	85-115	85-115	PASS

### Quality Control/Quality Assurance Spikes Report

Parameter	Spiked Conc.		Recovered Concentration		Percent Recovery (%)		MSD % D		Accuracy Control Limits	
	MS	MSD	MS	MSD	MS	MSD	MS	MSD	%D	% Rec.
Monomethyl Hydrazine	50.0	29.1	36.0	0.0	58.2	71.9	21.2%	PASS	23.4	11-134
u-Dimethyl Hydrazine	50.0	47.5	49.0	0.0	94.9	98.1	3.28%	PASS	10.5	42-109
Hydrazine	10.0	8.81	9.30	0.0	88.1	93.0	5.40%	PASS	32.9	37-128

ICV: Initial Calibration Verification  
QCS: Quality Control Standard  
LCS: Laboratory Control Spike  
MS: Matrix Spike  
%D: Percent Difference  
Flag: "Pass" if within Control Limits, otherwise "Fail"

Note: Results based on detector #1 (UV=365nm) data.

Xian Dang, Project Manager  
Environmental Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from these laboratories.



1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689  
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

**952266**  
**SUBCONTRACT ORDER - PROJECT # IPB2637**

**SENDING LABORATORY:**  
 Del Mar Analytical, Irvine  
 17461 Derian Avenue, Suite 100  
 Irvine, CA 92614  
 Phone: (949) 261-1022  
 Fax: (949) 261-1228  
 Project Manager: Michele Chamberlin

**RECEIVING LABORATORY:**  
 Truesdail Laboratories-SUB  
 14201 Franklin Avenue  
 Tustin, CA 92680  
 Phone : (714) 730-6239  
 Fax: (714) 730-6462

Standard TAT is requested unless specific due date is requested => Due Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Analysis	Expiration	Comments
Sample ID: IPB2637-01 Water Hydrazine-OUT	Sampled: 02/28/06 13:45 03/03/06 13:45	Instant Notification Sub Truesdail for Monomethylhydrazine, J flags

**Containers Supplied:**  
 1 L Amber (IPB2637-01AS)  
 1 L Amber (IPB2637-01AT)

Rec'd 03/03/06  
 s6b 952266

**For Sample Conditions  
 See Form Attached**

**SAMPLE INTEGRITY:**

All containers intact:  Yes  No      Sample labels/COC agree:  Yes  No      Samples Received On Ice:  Yes  No  
 Custody Seals Present:  Yes  No      Samples Preserved Properly:  Yes  No      Samples Received at (temp): \_\_\_\_\_

Released By: *[Signature]* Date: 03/01/06 Time: 06:50      Received By: *[Signature]* Date: 03/01/06 Time: 06:50  
 Released By: *[Signature]* Date: 03/01/06 Time: 07:28      Received By: *[Signature]* Date: 3/01/06 Time: 7:28





1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-6867 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 800, San Diego, CA 92123 Ph (619) 800-9036 Fax (619) 505-9689  
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0651  
 2020 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-9420 Fax (702) 798-3421

**SUBCONTRACT ORDER - PROJECT # IPB2637**

**SENDING LABORATORY:**  
 Del Mar Analytical, Irvine  
 17461 Derian Avenue, Suite 100  
 Irvine, CA 92614  
 Phone: (949) 261-1022  
 Fax: (949) 261-1228  
 Project Manager: Michele Chamberlin

**RECEIVING LABORATORY:**  
 Truesdail Laboratories-SUB  
 14201 Franklin Avenue  
 Tustin, CA 92680  
 Phone: (714) 730-6239  
 Fax: (714) 730-6462

Standard TAT is requested unless specific due date is requested => Due Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Analysis	Expiration	Comments
Sample ID: IPB2637-01 Water Hydrazine-OUT Containers Supplied: 1 L Amber (IPB2637-01AS) 1 L Amber (IPB2637-01AT)	Sampled: 02/28/06 13:45 03/03/06 13:45	Instant Notification Sub Truesdail for Monomethylhydrazine, J flags

*\* 1 L Amber IV Data Package*

*\* reversed etrolaco NC*

**SAMPLE INTEGRITY:**

All containers intact:  Yes  No  
 Sample labels/COC agree:  Yes  No  
 Samples Received On Icon:  Yes  No  
 Custody Seals Present:  Yes  No  
 Samples Preserved Properly:  Yes  No  
 Samples Received at (temp): \_\_\_\_\_

Released By: *Emilio Acuna* Date: *03/01/06 06:50* Time: \_\_\_\_\_  
 Received By: *Stacy Lee* Date: *03/01/06 06:50* Time: \_\_\_\_\_  
 Released By: *Emilio Acuna* Date: *03/01/06 07:25* Time: \_\_\_\_\_  
 Received By: *Stacy Lee* Date: *03/01/06 7:25* Time: \_\_\_\_\_



# Sample Integrity & Analysis Discrepancy Form

Client: Del Mar

Lab # 952266

Date Delivered: 3/6/06 Time: 7:27 By:  Mail  Field Service  Client

1. Was a Chain of Custody received and signed?  Yes  No  N/A
2. Does Customer require an acknowledgement of the COC?  Yes  No  N/A
3. Are there any special requirements or notes on the COC?  Yes  No  N/A
4. If a letter was sent with the COC, does it match the COC?  Yes  No  N/A
5. Were all requested analyses understood and acceptable?  Yes  No  N/A
6. Were samples received in a chilled condition?  
Temperature (if yes)? 4°C  Yes  No  N/A
7. Were samples received intact  
(i.e. broken bottles, leaks, air bubbles, etc.)?  Yes  No  N/A
8. Were sample custody seals intact?  Yes  No  N/A
9. Does the number of samples received agree with COC?  Yes  No  N/A
10. Did sample labels correspond with the client ID's?  Yes  No  N/A
11. Did sample labels indicate proper preservation?  
Preserved by:  Truesdail  Client  Yes  No  N/A
12. Were samples pH checked? pH = \_\_\_\_\_  Yes  No  N/A
13. Were all analyses within holding time at time of receipt?  
If not, notify the Project Manager.  Yes  No  N/A
14. Have Project due dates been checked and accepted?  
Turn Around Time (TAT):  RUSH  Std  Yes  No  N/A
15. **Sample Matrix:**  Liquid  Drinking Water  Ground Water  Waste Water  
 Sludge  Soil  Wipe  Paint  Solid  Other water
16. Comments \_\_\_\_\_
17. Sample Check-In completed by Truesdail Log-In/Receiving: J Brown

## **APPENDIX G**

### **Section 46**

Outfall 001, February 28, 2006  
AMEC Data Validation Reports





# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 001

ANALYSIS: DIOXINS/FURANS  
SAMPLE DELIVERY GROUP: IPB2637

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
Contract Task Order: 1261.001.01  
Sample Delivery Group: IPB2637  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Dioxins/Furans  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: K. Shadowlight  
Date of Review: April 4, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 001	IPB2637-01	27350-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

#### 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 1°C. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

#### 2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the sample was couriered directly to Del Mar Analytical-Irvine, custody seals were not required. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

#### 2.1.3 Holding Times

The sample was extracted and analyzed within one year of collection. No qualifications were required.

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%. No qualifications were required.

#### 2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.



## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

The initial calibration was analyzed 01/12/2006 on instrument VG-7. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs  $\leq 20\%$  for the 16 native compounds (calibration by isotope dilution) and  $\leq 35\%$  for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

### 2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

## 2.4 BLANKS

One method blank (0-7807-MB001) was extracted and analyzed with the sample in this SDG. There were no target compounds detected in the method blank. A review of the method blank raw data and chromatograms indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7807-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in this SDG. Evaluation of method accuracy was based on the OPR results. No qualifications were required.

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

### 2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

## 2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

## 2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any reported estimated maximum possible concentration (EMPC) was qualified as an estimated nondetect, "UJ." Detects below the laboratory lower calibration level were qualified as estimated, "J." These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No further qualifications were required.

Client Data		Sample Data		Laboratory Data	
Sample ID: <b>IPB2637-01</b>	<b>Outfall 001</b>	Del Mar Analytical, Irvine IPB2637	Matrix: Aqueous	Lab Sample: 27350-001	Date Received: 2-Mar-06
Date Collected: 28-Feb-06	Time Collected: 1345	Sample Size: 1.01 L		QC Batch No.: 7807	Date Extracted: 5-Mar-06
				Date Analyzed DB-5: 7-Mar-06	Date Analyzed DB-225: NA
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.00000107		IS 13C-2,3,7,8-TCDD	88.0 25 - 164
1,2,3,7,8-PeCDD	ND	0.000000914		13C-1,2,3,7,8-PeCDD	91.1 25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000287		13C-1,2,3,4,7,8-HxCDD	82.6 32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000291		13C-1,2,3,6,7,8-HxCDD	84.3 28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000280		13C-1,2,3,4,6,7,8-HpCDD	77.3 23 - 140
1,2,3,4,6,7,8-HpCDD	0.0000185			13C-OCDD	44.6 17 - 157
OCDD	0.000147		J	13C-2,3,7,8-TCDF	91.9 24 - 169
2,3,7,8-TCDF	ND	0.00000129		13C-1,2,3,7,8-PeCDF	98.3 24 - 185
1,2,3,7,8-PeCDF	ND	0.000000995		13C-2,3,4,7,8-PeCDF	98.6 21 - 178
2,3,4,7,8-PeCDF	ND	0.000000917		13C-1,2,3,4,7,8-HxCDF	75.1 26 - 152
1,2,3,4,7,8-HxCDF	ND	0.000000800		13C-1,2,3,6,7,8-HxCDF	75.4 26 - 123
1,2,3,6,7,8-HxCDF	ND	0.000000786		13C-2,3,4,6,7,8-HxCDF	78.8 28 - 136
2,3,4,6,7,8-HxCDF	ND	0.000000848		13C-1,2,3,7,8,9-HxCDF	82.0 29 - 147
1,2,3,7,8,9-HxCDF	ND	0.00000103		13C-1,2,3,4,6,7,8-HpCDF	68.4 28 - 143
1,2,3,4,6,7,8-HpCDF	ND	0.00000322		13C-1,2,3,4,7,8,9-HpCDF	82.1 26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.00000115		13C-OCDF	52.6 17 - 157
OCDF	0.00000993		J	CRS 37Cl-2,3,7,8-TCDD	94.2 35 - 197
<b>Totals</b>					
Total TCDD	ND	0.00000107			
Total PeCDD	ND	0.000000914			
Total HxCDD	ND	0.00000286			
Total HpCDD	0.0000387				
Total TCDF	ND	0.00000129			
Total PeCDF	ND	0.000000956			
Total HxCDF	0.00000166				
Total HpCDF	ND	0.00000805			

**Footnotes**  
a. Sample specific estimated detection limit.  
b. Estimated maximum possible concentration.  
c. Method detection limit.  
d. Lower control limit - upper control limit.

Analyst: JMH  
Approved By: Martha M. Maier  
08-Mar-2006 11:59

Project 27350  
Level III

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

MEC<sup>x</sup>  
 12269 East Vassar Drive  
 Aurora, CO 80014

Package ID: B4HZ1  
 Task Order: 1261.001D.01  
 SDG No.: Multiple

No. of Analyses: 4

Laboratory: Truesdail Laboratory  
 Reviewer: P. Meeks  
 Analysis/Method: Hydrazines

Date: <u>April 10, 2006</u>
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
1. Case Narrative Deficiencies	_____
2. Out of Scope Analyses	_____
3. Analyses Not Conducted	_____
4. Missing Hardcopy Deliverables	_____
5. Incorrect Hardcopy Deliverables	_____
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	_____
<b>COMMENTS<sup>b</sup></b>	Acceptable as reviewed.
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	