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APPENDIX G

Section 1

Outfall 001, April 05, 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 001

Sampled: 04/05/06
Received: 04/05/06
Issued: 05/07/06 17:02

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 of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.*

SAMPLE CROSS REFERENCE

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

LABORATORY ID	CLIENT ID	MATRIX
IPD0419-01	Outfall 001	Water
IPD0419-02	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: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

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: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: ug/l									
Benzene	EPA 624	6D07007	0.28	2.0	ND	1	04/07/06	04/07/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6D07007	1.2	5.0	ND	1	04/07/06	04/07/06	
Carbon tetrachloride	EPA 624	6D07007	0.28	5.0	ND	1	04/07/06	04/07/06	
Chloroform	EPA 624	6D07007	0.33	2.0	ND	1	04/07/06	04/07/06	
1,1-Dichloroethane	EPA 624	6D07007	0.27	2.0	ND	1	04/07/06	04/07/06	
1,2-Dichloroethane	EPA 624	6D07007	0.28	2.0	ND	1	04/07/06	04/07/06	
1,1-Dichloroethene	EPA 624	6D07007	0.42	3.0	ND	1	04/07/06	04/07/06	
Ethylbenzene	EPA 624	6D07007	0.25	2.0	ND	1	04/07/06	04/07/06	
Tetrachloroethene	EPA 624	6D07007	0.32	2.0	ND	1	04/07/06	04/07/06	
Toluene	EPA 624	6D07007	0.36	2.0	ND	1	04/07/06	04/07/06	
1,1,1-Trichloroethane	EPA 624	6D07007	0.30	2.0	ND	1	04/07/06	04/07/06	
1,1,2-Trichloroethane	EPA 624	6D07007	0.30	2.0	ND	1	04/07/06	04/07/06	
Trichloroethene	EPA 624	6D07007	0.26	5.0	ND	1	04/07/06	04/07/06	
Trichlorofluoromethane	EPA 624	6D07007	0.34	5.0	ND	1	04/07/06	04/07/06	
Vinyl chloride	EPA 624	6D07007	0.26	5.0	ND	1	04/07/06	04/07/06	
Xylenes, Total	EPA 624	6D07007	0.90	4.0	ND	1	04/07/06	04/07/06	

Surrogate: Dibromofluoromethane (80-120%)

103 %

Surrogate: Toluene-d8 (80-120%)

95 %

Surrogate: 4-Bromofluorobenzene (80-120%)

98 %

Sample ID: IPD0419-02 (Trip Blank - Water)

Sampled: 04/05/06

Reporting Units: ug/l

Benzene	EPA 624	6D07007	0.28	2.0	ND	1	04/07/06	04/07/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6D07007	1.2	5.0	ND	1	04/07/06	04/07/06	
Carbon tetrachloride	EPA 624	6D07007	0.28	5.0	ND	1	04/07/06	04/07/06	
Chloroform	EPA 624	6D07007	0.33	2.0	ND	1	04/07/06	04/07/06	
1,1-Dichloroethane	EPA 624	6D07007	0.27	2.0	ND	1	04/07/06	04/07/06	
1,2-Dichloroethane	EPA 624	6D07007	0.28	2.0	ND	1	04/07/06	04/07/06	
1,1-Dichloroethene	EPA 624	6D07007	0.42	3.0	ND	1	04/07/06	04/07/06	
Ethylbenzene	EPA 624	6D07007	0.25	2.0	ND	1	04/07/06	04/07/06	
Tetrachloroethene	EPA 624	6D07007	0.32	2.0	ND	1	04/07/06	04/07/06	
Toluene	EPA 624	6D07007	0.36	2.0	ND	1	04/07/06	04/07/06	
1,1,1-Trichloroethane	EPA 624	6D07007	0.30	2.0	ND	1	04/07/06	04/07/06	
1,1,2-Trichloroethane	EPA 624	6D07007	0.30	2.0	ND	1	04/07/06	04/07/06	
Trichloroethene	EPA 624	6D07007	0.26	5.0	ND	1	04/07/06	04/07/06	
Trichlorofluoromethane	EPA 624	6D07007	0.34	5.0	ND	1	04/07/06	04/07/06	
Vinyl chloride	EPA 624	6D07007	0.26	5.0	ND	1	04/07/06	04/07/06	
Xylenes, Total	EPA 624	6D07007	0.90	4.0	ND	1	04/07/06	04/07/06	

Surrogate: Dibromofluoromethane (80-120%)

99 %

Surrogate: Toluene-d8 (80-120%)

94 %

Surrogate: 4-Bromofluorobenzene (80-120%)

98 %

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: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

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: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6D10085	1.6	4.7	ND	0.943	04/10/06	04/12/06	
2,4-Dinitrotoluene	EPA 625	6D10085	0.19	8.5	ND	0.943	04/10/06	04/12/06	
N-Nitrosodimethylamine	EPA 625	6D10085	0.094	7.5	ND	0.943	04/10/06	04/12/06	
Pentachlorophenol	EPA 625	6D10085	0.094	7.5	ND	0.943	04/10/06	04/12/06	
2,4,6-Trichlorophenol	EPA 625	6D10085	0.094	5.7	ND	0.943	04/10/06	04/12/06	
<i>Surrogate: 2-Fluorophenol (30-120%)</i>					60 %				
<i>Surrogate: Phenol-d6 (35-120%)</i>					77 %				
<i>Surrogate: 2,4,6-Tribromophenol (45-120%)</i>					78 %				
<i>Surrogate: Nitrobenzene-d5 (45-120%)</i>					78 %				
<i>Surrogate: 2-Fluorobiphenyl (45-120%)</i>					79 %				
<i>Surrogate: Terphenyl-d14 (45-120%)</i>					85 %				

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Michele Chamberlin
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MWH-Pasadena/Boeing
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Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0419-01 (Outfall 001 - Water) - cont.					Sampled: 04/05/06				
Reporting Units: ug/l									
alpha-BHC	EPA 608	6D11131	0.00095	0.0095	ND	0.952	04/11/06	04/12/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					66 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					63 %				

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Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0419-01 (Outfall 001 - Water) - cont.					Sampled: 04/05/06				
Reporting Units: mg/l									
Iron	EPA 200.7	6D07076	0.015	0.040	3.1	1	04/07/06	04/14/06	
Sample ID: IPD0419-01RE1 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: mg/l									
Iron	EPA 200.7	6D18081	0.015	0.040	2.7	1	04/07/06	04/19/06	
Sample ID: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: ug/l									
Copper	EPA 200.8	6D06057	0.25	2.0	4.4	1	04/06/06	04/06/06	
Lead	EPA 200.8	6D06057	0.040	1.0	4.1	1	04/06/06	04/06/06	
Mercury	EPA 245.1	6D06061	0.050	0.20	ND	1	04/06/06	04/06/06	
Sample ID: IPD0419-01RE1 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: ug/l									
Lead	EPA 200.8	6D07127	0.040	1.0	5.0	1	04/06/06	04/08/06	

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 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0419-01 (Outfall 001 - Water) - cont.					Sampled: 04/05/06				
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6D11088	0.30	0.50	0.84	1	04/11/06	04/11/06	
Biochemical Oxygen Demand	EPA 405.1	6D06068	0.59	2.0	2.6	1	04/06/06	04/11/06	
Chloride	EPA 300.0	6D06048	0.15	0.50	8.7	1	04/06/06	04/06/06	
Nitrate/Nitrite-N	EPA 300.0	6D06048	0.080	0.15	2.2	1	04/06/06	04/06/06	
Oil & Grease	EPA 413.1	6D06049	0.89	4.7	ND	1	04/06/06	04/06/06	
Sulfate	EPA 300.0	6D06048	0.45	0.50	23	1	04/06/06	04/06/06	
Surfactants (MBAS)	SM5540-C	6D05142	0.088	0.20	0.13	2	04/05/06	04/06/06	RL-1, J
Total Dissolved Solids	SM2540C	6D06066	10	10	160	1	04/06/06	04/06/06	
Total Suspended Solids	EPA 160.2	6D11091	10	10	35	1	04/11/06	04/11/06	
Sample ID: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	6D05133	0.10	0.10	ND	1	04/05/06	04/05/06	
Sample ID: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: NTU									
Turbidity	EPA 180.1	6D06110	0.080	2.0	50	2	04/06/06	04/06/06	
Sample ID: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6D05143	2.2	5.0	ND	1	04/05/06	04/06/06	
Perchlorate	EPA 314.0	6D07070	0.80	4.0	ND	1	04/07/06	04/07/06	
Sample ID: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6D06064	1.0	1.0	230	1	04/06/06	04/06/06	

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager



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

Project ID: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 001 (IPD0419-01) - Water	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	04/05/2006 13:19	04/05/2006 18:50	04/05/2006 20:30	04/05/2006 21:30
EPA 180.1	2	04/05/2006 13:19	04/05/2006 18:50	04/06/2006 13:15	04/06/2006 14:15
EPA 300.0	2	04/05/2006 13:19	04/05/2006 18:50	04/06/2006 09:30	04/06/2006 10:57
EPA 405.1	2	04/05/2006 13:19	04/05/2006 18:50	04/06/2006 15:00	04/11/2006 09:57
SM5540-C	2	04/05/2006 13:19	04/05/2006 18:50	04/05/2006 19:36	04/06/2006 00:03

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Quarterly Outfall 001
Report Number: IPD0419

Sampled: 04/05/06
Received: 04/05/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Limit	Qualifiers
Batch: 6D07007 Extracted: 04/07/06											
Blank Analyzed: 04/07/2006 (6D07007-BLK1)											
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	0.90	ug/l							
Surrogate: Dibromofluoromethane	24.7			ug/l	25.0		99	80-120			
Surrogate: Toluene-d8	23.5			ug/l	25.0		94	80-120			
Surrogate: 4-Bromofluorobenzene	24.4			ug/l	25.0		98	80-120			

LCS Analyzed: 04/07/2006 (6D07007-BS1)

Benzene	26.9	2.0	0.28	ug/l	25.0		108	65-120			
Carbon tetrachloride	28.1	5.0	0.28	ug/l	25.0		112	65-140			
Chloroform	27.2	2.0	0.33	ug/l	25.0		109	65-130			
1,1-Dichloroethane	26.6	2.0	0.27	ug/l	25.0		106	65-130			
1,2-Dichloroethane	27.8	2.0	0.28	ug/l	25.0		111	60-140			
1,1-Dichloroethene	25.8	3.0	0.42	ug/l	25.0		103	70-130			
Ethylbenzene	27.1	2.0	0.25	ug/l	25.0		108	70-125			
Tetrachloroethene	26.6	2.0	0.32	ug/l	25.0		106	65-125			
Toluene	25.2	2.0	0.36	ug/l	25.0		101	70-125			
1,1,1-Trichloroethane	26.8	2.0	0.30	ug/l	25.0		107	65-135			
1,1,2-Trichloroethane	29.0	2.0	0.30	ug/l	25.0		116	65-125			
Trichloroethene	25.5	5.0	0.26	ug/l	25.0		102	70-125			
Trichlorofluoromethane	26.5	5.0	0.34	ug/l	25.0		106	60-140			
Vinyl chloride	22.8	5.0	0.26	ug/l	25.0		91	50-130			
Surrogate: Dibromofluoromethane	26.1			ug/l	25.0		104	80-120			

Del Mar Analytical - Irvine
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Project Manager

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

Project ID: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06
Received: 04/05/06

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
Batch: 6D07007 Extracted: 04/07/06											
LCS Analyzed: 04/07/2006 (6D07007-BS1)											
Surrogate: Toluene-d8	24.1			ug/l	25.0		96	80-120			
Surrogate: 4-Bromofluorobenzene	24.7			ug/l	25.0		99	80-120			
Matrix Spike Analyzed: 04/07/2006 (6D07007-MS1) Source: IPD0421-01											
Benzene	23.4	2.0	0.28	ug/l	25.0	ND	94	60-125			
Carbon tetrachloride	24.3	5.0	0.28	ug/l	25.0	ND	97	65-140			
Chloroform	23.6	2.0	0.33	ug/l	25.0	ND	94	65-135			
1,1-Dichloroethane	23.1	2.0	0.27	ug/l	25.0	ND	92	60-130			
1,2-Dichloroethane	23.5	2.0	0.28	ug/l	25.0	ND	94	60-140			
1,1-Dichloroethene	21.9	3.0	0.42	ug/l	25.0	ND	88	60-135			
Ethylbenzene	24.2	2.0	0.25	ug/l	25.0	ND	97	65-130			
Tetrachloroethene	23.5	2.0	0.32	ug/l	25.0	ND	94	60-130			
Toluene	21.8	2.0	0.36	ug/l	25.0	ND	87	65-125			
1,1,1-Trichloroethane	23.2	2.0	0.30	ug/l	25.0	ND	93	65-140			
1,1,2-Trichloroethane	24.6	2.0	0.30	ug/l	25.0	ND	98	60-130			
Trichloroethene	21.7	5.0	0.26	ug/l	25.0	ND	87	60-125			
Trichlorofluoromethane	23.0	5.0	0.34	ug/l	25.0	ND	92	55-145			
Vinyl chloride	20.8	5.0	0.26	ug/l	25.0	ND	83	40-135			
Surrogate: Dibromofluoromethane	25.2			ug/l	25.0		101	80-120			
Surrogate: Toluene-d8	23.6			ug/l	25.0		94	80-120			
Surrogate: 4-Bromofluorobenzene	25.0			ug/l	25.0		100	80-120			
Matrix Spike Dup Analyzed: 04/07/2006 (6D07007-MSD1) Source: IPD0421-01											
Benzene	23.7	2.0	0.28	ug/l	25.0	ND	95	60-125	1	20	
Carbon tetrachloride	24.6	5.0	0.28	ug/l	25.0	ND	98	65-140	1	25	
Chloroform	23.4	2.0	0.33	ug/l	25.0	ND	94	65-135	1	20	
1,1-Dichloroethane	23.0	2.0	0.27	ug/l	25.0	ND	92	60-130	0	20	
1,2-Dichloroethane	24.0	2.0	0.28	ug/l	25.0	ND	96	60-140	2	20	
1,1-Dichloroethene	22.0	3.0	0.42	ug/l	25.0	ND	88	60-135	1	20	
Ethylbenzene	24.1	2.0	0.25	ug/l	25.0	ND	96	65-130	0	20	
Tetrachloroethene	23.6	2.0	0.32	ug/l	25.0	ND	94	60-130	0	20	
Toluene	21.9	2.0	0.36	ug/l	25.0	ND	88	65-125	1	20	
1,1,1-Trichloroethane	23.4	2.0	0.30	ug/l	25.0	ND	94	65-140	1	20	
1,1,2-Trichloroethane	25.2	2.0	0.30	ug/l	25.0	ND	101	60-130	2	25	
Trichloroethene	22.0	5.0	0.26	ug/l	25.0	ND	88	60-125	1	20	
Trichlorofluoromethane	22.5	5.0	0.34	ug/l	25.0	ND	90	55-145	2	25	

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MWH-Pasadena/Boeing
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Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06
Received: 04/05/06

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
Batch: 6D07007 Extracted: 04/07/06											
Matrix Spike Dup Analyzed: 04/07/2006 (6D07007-MSD1)						Source: IPD0421-01					
Vinyl chloride	20.6	5.0	0.26	ug/l	25.0	ND	82	40-135	1	30	
Surrogate: Dibromofluoromethane	25.0			ug/l	25.0		100	80-120			
Surrogate: Toluene-d8	23.7			ug/l	25.0		95	80-120			
Surrogate: 4-Bromofluorobenzene	24.8			ug/l	25.0		99	80-120			

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METHOD BLANK/QC DATA
ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Qualifiers
Batch: 6D10085 Extracted: 04/10/06										
Blank Analyzed: 04/12/2006 (6D10085-BLK1)										
Bis(2-ethylhexyl)phthalate	ND	5.0	1.7	ug/l						
2,4-Dinitrotoluene	ND	9.0	0.20	ug/l						
N-Nitrosodimethylamine	ND	8.0	0.10	ug/l						
Pentachlorophenol	ND	8.0	0.10	ug/l						
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l						
Surrogate: 2-Fluorophenol	11.6			ug/l	20.0		58	30-120		
Surrogate: Phenol-d6	13.8			ug/l	20.0		69	35-120		
Surrogate: 2,4,6-Tribromophenol	13.4			ug/l	20.0		67	45-120		
Surrogate: Nitrobenzene-d5	7.66			ug/l	10.0		77	45-120		
Surrogate: 2-Fluorobiphenyl	7.54			ug/l	10.0		75	45-120		
Surrogate: Terphenyl-d14	8.90			ug/l	10.0		89	45-120		
LCS Analyzed: 04/12/2006 (6D10085-BS1)										
Bis(2-ethylhexyl)phthalate	10.5	5.0	1.7	ug/l	10.0		105	60-130		M-NR1
2,4-Dinitrotoluene	8.82	9.0	0.20	ug/l	10.0		88	60-120		J
N-Nitrosodimethylamine	7.72	8.0	0.10	ug/l	10.0		77	40-120		J
Pentachlorophenol	8.76	8.0	0.10	ug/l	10.0		88	50-120		
2,4,6-Trichlorophenol	7.86	6.0	0.10	ug/l	10.0		79	60-120		
Surrogate: 2-Fluorophenol	12.3			ug/l	20.0		62	30-120		
Surrogate: Phenol-d6	13.5			ug/l	20.0		68	35-120		
Surrogate: 2,4,6-Tribromophenol	14.7			ug/l	20.0		74	45-120		
Surrogate: Nitrobenzene-d5	6.82			ug/l	10.0		68	45-120		
Surrogate: 2-Fluorobiphenyl	6.62			ug/l	10.0		66	45-120		
Surrogate: Terphenyl-d14	7.92			ug/l	10.0		79	45-120		
LCS Dup Analyzed: 04/12/2006 (6D10085-BSD1)										
Bis(2-ethylhexyl)phthalate	12.2	5.0	1.7	ug/l	10.0		122	60-130	15	20
2,4-Dinitrotoluene	10.7	9.0	0.20	ug/l	10.0		107	60-120	19	20
N-Nitrosodimethylamine	9.14	8.0	0.10	ug/l	10.0		91	40-120	17	20
Pentachlorophenol	9.64	8.0	0.10	ug/l	10.0		96	50-120	10	25
2,4,6-Trichlorophenol	8.16	6.0	0.10	ug/l	10.0		82	60-120	4	20
Surrogate: 2-Fluorophenol	12.0			ug/l	20.0		60	30-120		
Surrogate: Phenol-d6	14.2			ug/l	20.0		71	35-120		
Surrogate: 2,4,6-Tribromophenol	15.9			ug/l	20.0		80	45-120		
Surrogate: Nitrobenzene-d5	7.90			ug/l	10.0		79	45-120		
Surrogate: 2-Fluorobiphenyl	7.90			ug/l	10.0		79	45-120		

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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
Batch: 6D10085 Extracted: 04/10/06											
LCS Dup Analyzed: 04/12/2006 (6D10085-BSD1)											
Surrogate: Terphenyl-d14	8.82			ug/l	10.0		88	45-120			

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ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D11131 Extracted: 04/11/06											
Blank Analyzed: 04/12/2006 (6D11131-BLK1)											
alpha-BHC	ND	0.010	0.0010	ug/l							
Surrogate: Decachlorobiphenyl	0.419			ug/l	0.500		84	45-120			
Surrogate: Tetrachloro-m-xylene	0.366			ug/l	0.500		73	35-115			
LCS Analyzed: 04/12/2006 (6D11131-BS1)											
alpha-BHC	0.390	0.010	0.0010	ug/l	0.500		78	45-120			M-NR1
Surrogate: Decachlorobiphenyl	0.415			ug/l	0.500		83	45-120			
Surrogate: Tetrachloro-m-xylene	0.352			ug/l	0.500		70	35-115			
LCS Dup Analyzed: 04/12/2006 (6D11131-BSD1)											
alpha-BHC	0.392	0.010	0.0010	ug/l	0.500		78	45-120	1	30	
Surrogate: Decachlorobiphenyl	0.422			ug/l	0.500		84	45-120			
Surrogate: Tetrachloro-m-xylene	0.365			ug/l	0.500		73	35-115			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
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Batch: 6D06057 Extracted: 04/06/06

Blank Analyzed: 04/06/2006 (6D06057-BLK1)

Copper	ND	2.0	0.25	ug/l							
Lead	0.0709	1.0	0.040	ug/l							J

LCS Analyzed: 04/06/2006 (6D06057-BS1)

Copper	78.8	2.0	0.25	ug/l	80.0		98	85-115			
Lead	77.8	1.0	0.040	ug/l	80.0		97	85-115			

Matrix Spike Analyzed: 04/06/2006 (6D06057-MS1)

					Source: IPD0059-01						
Copper	64.4	2.0	0.25	ug/l	80.0	1.3	79	70-130			
Lead	66.7	1.0	0.040	ug/l	80.0	0.23	83	70-130			

Matrix Spike Analyzed: 04/06/2006 (6D06057-MS2)

					Source: IPD0059-02						
Copper	76.1	2.0	0.25	ug/l	80.0	0.35	95	70-130			
Lead	77.3	1.0	0.040	ug/l	80.0	0.059	97	70-130			

Matrix Spike Dup Analyzed: 04/06/2006 (6D06057-MSD1)

					Source: IPD0059-01						
Copper	73.5	2.0	0.25	ug/l	80.0	1.3	90	70-130	13	20	
Lead	78.0	1.0	0.040	ug/l	80.0	0.23	97	70-130	16	20	

Batch: 6D06061 Extracted: 04/06/06

Blank Analyzed: 04/06/2006 (6D06061-BLK1)

Mercury	ND	0.20	0.050	ug/l							
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LCS Analyzed: 04/06/2006 (6D06061-BS1)

Mercury	8.10	0.20	0.050	ug/l	8.00		101	85-115			
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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D06061 Extracted: 04/06/06											
Matrix Spike Analyzed: 04/06/2006 (6D06061-MS1)						Source: IPD0320-01					
Mercury	8.34	0.20	0.050	ug/l	8.00	ND	104	70-130			
Matrix Spike Dup Analyzed: 04/06/2006 (6D06061-MSD1)						Source: IPD0320-01					
Mercury	8.17	0.20	0.050	ug/l	8.00	ND	102	70-130	2	20	
Batch: 6D07076 Extracted: 04/07/06											
Blank Analyzed: 04/14/2006 (6D07076-BLK1)											
Iron	ND	0.040	0.015	mg/l							
LCS Analyzed: 04/14/2006 (6D07076-BS1)											
Iron	0.513	0.040	0.015	mg/l	0.500		103	85-115			
Matrix Spike Analyzed: 04/14/2006 (6D07076-MS1)						Source: IPD0386-01					
Iron	1.08	0.040	0.015	mg/l	0.500	0.61	94	70-130			
Matrix Spike Analyzed: 04/14/2006 (6D07076-MS2)						Source: IPD0386-02					
Iron	0.536	0.040	0.015	mg/l	0.500	ND	107	70-130			
Matrix Spike Dup Analyzed: 04/14/2006 (6D07076-MSD1)						Source: IPD0386-01					
Iron	1.11	0.040	0.015	mg/l	0.500	0.61	100	70-130	3	20	
Batch: 6D07127 Extracted: 04/07/06											
Blank Analyzed: 04/07/2006 (6D07127-BLK1)											
Lead	ND	1.0	0.040	ug/l							

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D07127 Extracted: 04/07/06											
LCS Analyzed: 04/07/2006 (6D07127-BS1)											
Lead	91.6	1.0	0.040	ug/l	80.0		114	85-115			
Matrix Spike Analyzed: 04/08/2006 (6D07127-MS1)											
Lead	90.3	1.0	0.040	ug/l	80.0	0.24	113	70-130			
Matrix Spike Analyzed: 04/10/2006 (6D07127-MS2)											
Lead	84.9	1.0	0.040	ug/l	80.0	0.15	106	70-130			
Matrix Spike Dup Analyzed: 04/08/2006 (6D07127-MSD1)											
Lead	91.9	1.0	0.040	ug/l	80.0	0.24	115	70-130	2	20	
Batch: 6D18081 Extracted: 04/18/06											
Blank Analyzed: 04/19/2006 (6D18081-BLK1)											
Iron	0.0252	0.040	0.015	mg/l							J
LCS Analyzed: 04/19/2006 (6D18081-BS1)											
Iron	0.516	0.040	0.015	mg/l	0.500		103	85-115			
Matrix Spike Analyzed: 04/19/2006 (6D18081-MS1)											
Iron	0.569	0.040	0.015	mg/l	0.500	0.047	104	70-130			
Matrix Spike Analyzed: 04/19/2006 (6D18081-MS2)											
Iron	2.07	0.040	0.015	mg/l	0.500	1.6	94	70-130			
Matrix Spike Dup Analyzed: 04/19/2006 (6D18081-MSD1)											
Iron	0.538	0.040	0.015	mg/l	0.500	0.047	98	70-130	6	20	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D05142 Extracted: 04/05/06											
Blank Analyzed: 04/06/2006 (6D05142-BLK1)											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 04/06/2006 (6D05142-BS1)											
Surfactants (MBAS)	0.261	0.10	0.044	mg/l	0.250		104	90-110			
Matrix Spike Analyzed: 04/06/2006 (6D05142-MS1)											
						Source: IPD0205-01					
Surfactants (MBAS)	0.250	0.10	0.044	mg/l	0.250	ND	100	50-125			
Matrix Spike Dup Analyzed: 04/06/2006 (6D05142-MSD1)											
						Source: IPD0205-01					
Surfactants (MBAS)	0.250	0.10	0.044	mg/l	0.250	ND	100	50-125	0	20	
Batch: 6D05143 Extracted: 04/05/06											
Blank Analyzed: 04/06/2006 (6D05143-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 04/06/2006 (6D05143-BS1)											
Total Cyanide	196	5.0	2.2	ug/l	200		98	90-110			
Matrix Spike Analyzed: 04/06/2006 (6D05143-MS1)											
						Source: IPD0017-01					
Total Cyanide	191	5.0	2.2	ug/l	200	ND	96	70-115			
Matrix Spike Dup Analyzed: 04/06/2006 (6D05143-MSD1)											
						Source: IPD0017-01					
Total Cyanide	199	5.0	2.2	ug/l	200	ND	100	70-115	4	15	
Batch: 6D06048 Extracted: 04/06/06											
Blank Analyzed: 04/06/2006 (6D06048-BLK1)											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D06048 Extracted: 04/06/06											
LCS Analyzed: 04/06/2006 (6D06048-BS1)											
Chloride	4.78	0.50	0.15	mg/l	5.00		96	90-110			
Sulfate	9.63	0.50	0.45	mg/l	10.0		96	90-110			
Matrix Spike Analyzed: 04/06/2006 (6D06048-MS1) Source: IPD0419-01											
Chloride	13.5	0.50	0.15	mg/l	5.00	8.7	96	80-120			
Sulfate	33.2	0.50	0.45	mg/l	10.0	23	102	80-120			
Matrix Spike Dup Analyzed: 04/06/2006 (6D06048-MSD1) Source: IPD0419-01											
Chloride	13.7	0.50	0.15	mg/l	5.00	8.7	100	80-120	1	20	
Sulfate	33.9	0.50	0.45	mg/l	10.0	23	109	80-120	2	20	
Batch: 6D06049 Extracted: 04/06/06											
Blank Analyzed: 04/06/2006 (6D06049-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/06/2006 (6D06049-BS1) M-NR1											
Oil & Grease	15.9	5.0	0.94	mg/l	20.0		80	65-120			
LCS Dup Analyzed: 04/06/2006 (6D06049-BSD1)											
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120	19	20	
Batch: 6D06064 Extracted: 04/06/06											
Duplicate Analyzed: 04/06/2006 (6D06064-DUP1) Source: IPD0419-01											
Specific Conductance	224	1.0	1.0	umhos/cm		230			3	5	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D06066 Extracted: 04/06/06										
Blank Analyzed: 04/06/2006 (6D06066-BLK1)										
Total Dissolved Solids	ND	10	10	mg/l						
LCS Analyzed: 04/06/2006 (6D06066-BS1)										
Total Dissolved Solids	1000	10	10	mg/l	1000	100	90-110			
Duplicate Analyzed: 04/06/2006 (6D06066-DUP1)										
Total Dissolved Solids	156	10	10	mg/l		160		3	10	
Batch: 6D06068 Extracted: 04/06/06										
Blank Analyzed: 04/11/2006 (6D06068-BLK1)										
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l						
LCS Analyzed: 04/11/2006 (6D06068-BS1)										
Biochemical Oxygen Demand	206	100	30	mg/l	198	104	85-115			
LCS Dup Analyzed: 04/11/2006 (6D06068-BSD1)										
Biochemical Oxygen Demand	206	100	30	mg/l	198	104	85-115	0	20	
Batch: 6D06110 Extracted: 04/06/06										
Blank Analyzed: 04/06/2006 (6D06110-BLK1)										
Turbidity	0.0400	1.0	0.040	NTU						J
Duplicate Analyzed: 04/06/2006 (6D06110-DUP1)										
Turbidity	0.110	1.0	0.040	NTU		0.10		10	20	J

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Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D07070 Extracted: 04/07/06											
Blank Analyzed: 04/07/2006 (6D07070-BLK1)											
Perchlorate	0.920	4.0	0.80	ug/l							J
LCS Analyzed: 04/07/2006 (6D07070-BS1)											
Perchlorate	47.7	4.0	0.80	ug/l	50.0		95	85-115			
Matrix Spike Analyzed: 04/07/2006 (6D07070-MS1)											
						Source: IPD0225-01					
Perchlorate	52.5	4.0	0.80	ug/l	50.0	1.8	101	80-120			
Matrix Spike Dup Analyzed: 04/07/2006 (6D07070-MSD1)											
						Source: IPD0225-01					
Perchlorate	50.6	4.0	0.80	ug/l	50.0	1.8	98	80-120	4	20	
Batch: 6D11088 Extracted: 04/11/06											
Blank Analyzed: 04/11/2006 (6D11088-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 04/11/2006 (6D11088-BS1)											
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0		112	80-115			
Matrix Spike Analyzed: 04/11/2006 (6D11088-MS1)											
						Source: IPD0340-01					
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0	ND	112	70-120			
Matrix Spike Dup Analyzed: 04/11/2006 (6D11088-MSD1)											
						Source: IPD0340-01					
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0	ND	109	70-120	3	15	
Batch: 6D11091 Extracted: 04/11/06											
Blank Analyzed: 04/11/2006 (6D11091-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							

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: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D11091 Extracted: 04/11/06											
LCS Analyzed: 04/11/2006 (6D11091-BS1)											
Total Suspended Solids	972	10	10	mg/l	1000		97	85-115			
Duplicate Analyzed: 04/11/2006 (6D11091-DUP1)											
Total Suspended Solids	326	10	10	mg/l		340			4	10	

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 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
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 Pasadena, CA 91101
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Project ID: Quarterly Outfall 001

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Sampled: 04/05/06

Received: 04/05/06

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
IPD0419-01	413.1 Oil and Grease	Oil & Grease	mg/l	0	4.7	10.00
IPD0419-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0095	0.0100
IPD0419-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPD0419-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00
IPD0419-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.7	6.50
IPD0419-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.5	9.10
IPD0419-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	1.40	4.7	4.00
IPD0419-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.5	8.10
IPD0419-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.5	8.20
IPD0419-01	BOD	Biochemical Oxygen Demand	mg/l	2.60	2.0	20
IPD0419-01	Chloride - 300.0	Chloride	mg/l	8.70	0.50	150
IPD0419-01	Copper-200.8	Copper	ug/l	4.40	2.0	7.10
IPD0419-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	0.23	5.0	4.30
IPD0419-01	Iron-200.7	Iron	mg/l	3.10	0.040	0.30
IPD0419-01	Lead-200.8	Lead	ug/l	4.10	1.0	2.60
IPD0419-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.13	0.20	0.50
IPD0419-01	Mercury - 245.1	Mercury	ug/l	0.015	0.20	0.20
IPD0419-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	2.20	0.15	8.00
IPD0419-01	Perchlorate 314.0	Perchlorate	ug/l	0.41	4.0	6.00
IPD0419-01	Sulfate-300.0	Sulfate	mg/l	23	0.50	300
IPD0419-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	160	10	950
IPD0419-01RE1	Iron-200.7	Iron	mg/l	2.70	0.040	0.30
IPD0419-01RE1	Lead-200.8	Lead	ug/l	5.00	1.0	2.60
IPD0419-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPD0419-02	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00

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: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

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.
- RL-1** Reporting limit raised due to sample matrix effects.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	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 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
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

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: IPD0419-01

Analysis Performed: EDD + Level 4

Samples: IPD0419-01

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager



April 13, 2006

Alta Project I.D.: 27560

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 April 07, 2006 under your Project Name "IPD0419". 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. Thank you for choosing Alta as part of your analytical support team.

Sincerely,

Martha M. Maier
HRMS Services Director



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.



Section I: Sample Inventory Report

Date Received: 4/7/2006

Alta Lab. ID

Client Sample ID

27560-001

IPD0419-01

SECTION II

Method Blank					EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7918	Lab Sample:	0-MB001	Date Analyzed DB-5:	11-Apr-06	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	10-Apr-06						
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers	
2,3,7,8-TCDD	ND	0.000000788			IS 13C-2,3,7,8-TCDD	72.2	25 - 164		
1,2,3,7,8-PeCDD	ND	0.000000469			13C-1,2,3,7,8-PeCDD	73.0	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.00000114			13C-1,2,3,4,7,8-HxCDD	75.7	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.00000120			13C-1,2,3,6,7,8-HxCDD	67.3	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.00000113			13C-1,2,3,4,6,7,8-HpCDD	69.6	23 - 140		
1,2,3,4,6,7,8-HpCDD	ND	0.00000167			13C-OCDD	44.8	17 - 157		
OCDD	ND	0.0000150			13C-2,3,7,8-TCDF	77.0	24 - 169		
2,3,7,8-TCDF	ND	0.000000832			13C-1,2,3,7,8-PeCDF	72.9	24 - 185		
1,2,3,7,8-PeCDF	ND	0.000000866			13C-2,3,4,7,8-PeCDF	77.1	21 - 178		
2,3,4,7,8-PeCDF	ND	0.000000754			13C-1,2,3,4,7,8-HxCDF	70.7	26 - 152		
1,2,3,4,7,8-HxCDF	ND	0.000000479			13C-1,2,3,6,7,8-HxCDF	66.8	26 - 123		
1,2,3,6,7,8-HxCDF	ND	0.000000466			13C-2,3,4,6,7,8-HxCDF	70.2	28 - 136		
2,3,4,6,7,8-HxCDF	ND	0.000000465			13C-1,2,3,7,8,9-HxCDF	68.4	29 - 147		
1,2,3,7,8,9-HxCDF	ND	0.000000684			13C-1,2,3,4,6,7,8-HpCDF	61.1	28 - 143		
1,2,3,4,6,7,8-HpCDF	ND	0.000000806			13C-1,2,3,4,7,8,9-HpCDF	67.5	26 - 138		
1,2,3,4,7,8,9-HpCDF	ND	0.000000832			13C-OCDF	49.1	17 - 157		
OCDF	ND	0.00000337			CRS 37Cl-2,3,7,8-TCDD	86.2	35 - 197		
Totals					Footnotes				
Total TCDD	ND	0.000000788			a. Sample specific estimated detection limit.				
Total PeCDD	ND	0.00000120			b. Estimated maximum possible concentration.				
Total HxCDD	ND	0.00000116			c. Method detection limit.				
Total HpCDD	ND	0.00000167			d. Lower control limit - upper control limit.				
Total TCDF	ND	0.000000832							
Total PeCDF	ND	0.000000808							
Total HxCDF	ND	0.000000515							
Total HpCDF	ND	0.000000818							

Analyst: MAS

Approved By: William J. Luksemburg 13-Apr-2006 07:29

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	7918	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	10-Apr-06	Date Analyzed DB-5:	11-Apr-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	9.88	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	72.6	25 - 164	
1,2,3,7,8-PeCDD	50.0	49.8	35 - 71	13C-1,2,3,7,8-PeCDD	75.2	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	48.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	81.2	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	47.5	38 - 67	13C-1,2,3,6,7,8-HxCDD	76.4	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	45.8	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	77.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	49.2	35 - 70	13C-OCDD	50.8	17 - 157	
OCDD	100	99.7	78 - 144	13C-2,3,7,8-TCDF	75.2	24 - 169	
2,3,7,8-TCDF	10.0	9.58	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	79.0	24 - 185	
1,2,3,7,8-PeCDF	50.0	46.3	40 - 67	13C-2,3,4,7,8-PeCDF	78.4	21 - 178	
2,3,4,7,8-PeCDF	50.0	45.0	34 - 80	13C-1,2,3,4,7,8-HxCDF	78.1	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	48.1	36 - 67	13C-1,2,3,6,7,8-HxCDF	78.7	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	48.3	42 - 65	13C-2,3,4,6,7,8-HxCDF	77.3	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	46.7	35 - 78	13C-1,2,3,7,8,9-HxCDF	80.4	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	48.4	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	69.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	47.2	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	76.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	47.9	39 - 69	13C-OCDF	59.3	17 - 157	
OCDF	100	96.8	63 - 170	CRS 37Cl-2,3,7,8-TCDD	79.2	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 13-Apr-2006 07:29

Sample ID: IPD0419-01					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine		Matrix:	Aqueous	Lab Sample:	27560-001	Date Received:	7-Apr-06
Project:	IPD0419		Sample Size:	1.03 L	QC Batch No.:	7918	Date Extracted:	10-Apr-06
Date Collected:	5-Apr-06				Date Analyzed DB-5:	11-Apr-06	Date Analyzed DB-225:	NA
Time Collected:	1319							
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000918			IS 13C-2,3,7,8-TCDD	66.7	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000104			13C-1,2,3,7,8-PeCDD	65.2	25 - 181	
1,2,3,4,7,8-HxCDD	ND		0.00000112		13C-1,2,3,4,7,8-HxCDD	65.7	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000193			J	13C-1,2,3,6,7,8-HxCDD	63.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000193			13C-1,2,3,4,6,7,8-HpCDD	68.9	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000346				13C-OCDD	43.6	17 - 157	
OCDD	0.000357				13C-2,3,7,8-TCDF	67.5	24 - 169	
2,3,7,8-TCDF	ND	0.00000105			13C-1,2,3,7,8-PeCDF	66.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000951			13C-2,3,4,7,8-PeCDF	67.3	21 - 178	
2,3,4,7,8-PeCDF	0.00000106			J	13C-1,2,3,4,7,8-HxCDF	65.0	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000236			13C-1,2,3,6,7,8-HxCDF	62.4	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000126			13C-2,3,4,6,7,8-HxCDF	65.2	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000125			13C-1,2,3,7,8,9-HxCDF	68.0	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000938			13C-1,2,3,4,6,7,8-HpCDF	58.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000703			J	13C-1,2,3,4,7,8,9-HpCDF	65.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000163			13C-OCDF	49.0	17 - 157	
OCDF	0.0000185			J	CRS 37Cl-2,3,7,8-TCDD	82.3	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.000000918			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000104			b. Estimated maximum possible concentration.			
Total HxCDD	0.00000943		0.0000105		c. Method detection limit.			
Total HpCDD	0.0000737				d. Lower control limit - upper control limit.			
Total TCDF	ND	0.00000105						
Total PeCDF	0.00000180							
Total HxCDF	0.00000214		0.00000430					
Total HpCDF	0.0000221							

Analyst: MAS

Approved By: William J. Luksemburg 13-Apr-2006 07:29

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

Accrediting Authority	Certificate Number
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

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27560

Samples Arrival:	Date/Time 4/7/06 0900	Initials: CSB	Location: WR-2
Logged In:	Date/Time 4/10/06 0633	Initials: CSB	Location: WR-2 Shelf/Rack: C-3
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	1.0	Time: 0930	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 # 7914 3658 8280	✓		
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 ₂ S ₂ O ₃ Preservation Documented?	COC	Sample Container	None
Shipping Container	Alta	Client	Return
	Retain	Return	Dispose

Comments:

APPENDIX G

Section 2

Outfall 001, April 05, 2006
MEC^X Data Validation Reports



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 001

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPD0419

Prepared by
MEC^X, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001D.01
Sample Delivery Group: IPD0419
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: June 9, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x 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	IPD0419-01	27560-001	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 \pm 2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 1.0°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 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 03/22/2006 on instrument VG-5. 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 VER was 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 (0-7918-MB001) was extracted and analyzed with the sample in this SDG. No target compounds were detected in the method blank. No qualifications were required. 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 (0-7918-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 qualification of the site sample was 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. 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. An EMPC value for 1,2,3,4,7,8-HxCDD was qualified as an estimated nondetect, "UJ." No further qualifications were required.

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4MT73
 Task Order: 1261.001D.01
 SDG No.: IPD0419

No. of Analyses: 1

Laboratory: Del Mar Analytical
 Reviewer: P. Meeks
 Analysis/Method: Metals

Date: <u>June 5, 2006</u>
Reviewer's Signature <i>P. Meeks</i>

ACTION ITEMS^a	
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.,	Reanalysis results rejected in favor of original results.
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^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Sampling
Outfall 001

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPD0419

Prepared by

MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD0419
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: June 5, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Method 200.7 and 200.8*, 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 001	IPD04192-01	Water	200.7, 200.8

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. Outfall 001 was reanalyzed for iron and lead. As the laboratory did not append the MWH ID for the reanalyses with "RE1," the reviewer added this information to the Form I. 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 and ICP-MS metals. 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 and ICP-MS metals. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and the recoveries were considered to be acceptable. No qualifications were required.

2.4 BLANKS

Lead and iron were detected in the associated method blanks, but not at sufficient concentrations to require sample qualification. There were no other detects in the associated

method blanks or CCBs associated with the sample in this SDG. No qualifications were required.

2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were performed for the ICP analyses only. All recoveries were acceptable. No qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The ICP and ICP-MS recoveries were within the laboratory-established control limits of 85-115%. No qualifications were required.

2.7 LABORATORY DUPLICATES

No 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 or 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

For the target analytes analyzed by ICP-MS, the internal standards were within the method-specified control limits of 60-125%. No qualifications were required.

2.11 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. Per requests from MWH personnel, the laboratory reanalyzed sample Outfall 001 for iron and lead. As the reanalyses yielded results similar to the original results, the reanalyses, Outfall 011 RE1, were rejected, "R," in favor of the original results. 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.



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

Project ID: Quarterly Outfall 001
Report Number: IPD0419

Sampled: 04/05/06
Received: 04/05/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev Qual Qual Code	
Sample ID: IPD0419-01 (Outfall 001 - Water) - cont.					Sampled: 04/05/06					
Reporting Units: mg/l										
Iron	EPA 200.7	6D07076	0.015	0.040	3.1	1	04/07/06	04/14/06		
Sample ID: IPD0419-01RE1 (Outfall 001 - Water) <i>Outfall 001 RE1</i>					Sampled: 04/05/06					
Reporting Units: mg/l										
Iron	EPA 200.7	6D18081	0.015	0.040	2.7	1	04/07/06	04/19/06	R D	
Sample ID: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06					
Reporting Units: ug/l										
Copper	EPA 200.8	6D06057	0.25	2.0	4.4	1	04/06/06	04/06/06		
Lead	EPA 200.8	6D06057	0.040	1.0	4.1	1	04/06/06	04/06/06		
Mercury	EPA 245.1	6D06061	0.050	0.20	ND	1	04/06/06	04/06/06	*	
Sample ID: IPD0419-01RE1 (Outfall 001 - Water) <i>Outfall 001 RE1</i>					Sampled: 04/05/06					
Reporting Units: ug/l										
Lead	EPA 200.8	6D07127	0.040	1.0	5.0	1	04/06/06	04/08/06	R D	

* 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.

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4WC767
 Task Order: 1261.001D.01
 SDG No.: IPD0419

No. of Analyses: 1

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

Date: <u>June 6, 2006</u>
Reviewer's Signature <i>P. Meeks</i>

ACTION ITEMS ^a	
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.,	Qualification applied for CCV recovery.
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^b	_____

^a Subcontracted analytical laboratory is not meeting contract and/or method requirements.

^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.



DATA VALIDATION REPORT

NPDES Sampling
Outfall 001

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPD0419

Prepared by

MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD0419
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: June 6, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 120.1, 180.1, and 350.2*, 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 001	IPD0419-01	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 analyses were performed within the method specified holding times. No qualifications were required.

2.2 CALIBRATION

For turbidity and specific conductivity, the check standard recoveries were found to be acceptable. For ammonia, no information regarding the standardization of the titrant was provided; therefore, the ammonia LCS result was compared to the calibration control limits. As the ammonia LCS recovery was above the CCV control limits of 90-110%, at 112%, ammonia detected in Outfall 001 was qualified as estimated, "J." No further qualifications were required.

2.3 BLANKS

Turbidity was detected in the associated method blank, but not at sufficient concentration to qualify the site sample. There were no other 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 ammonia LCS recovery was within the laboratory-established control limits. LCS samples are not applicable to the turbidity and specific conductivity analyses. No qualifications were required.

2.5 LABORATORY DUPLICATES

Laboratory duplicate analyses were performed on Outfall 001 for turbidity only. The RPD was within the laboratory-established control limit of $\leq 5\%$. 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. Evaluation of the ammonia method accuracy was based on the LCS result. 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 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.



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

Project ID: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0419-01 (Outfall 001 - Water) - cont.					Sampled: 04/05/06				
Reporting Units: mg/l									Rev Qual
Ammonia-N (Distilled)	EPA 350.2	6D11088	0.30	0.50	0.84	1	04/11/06	04/11/06	J
Biochemical Oxygen Demand	EPA 405.1	6D06068	0.59	2.0	2.6	1	04/06/06	04/11/06	*
Chloride	EPA 300.0	6D06048	0.15	0.50	8.7	1	04/06/06	04/06/06	*
Nitrate/Nitrite-N	EPA 300.0	6D06048	0.080	0.15	2.2	1	04/06/06	04/06/06	*
Oil & Grease	EPA 413.1	6D06049	0.89	4.7	ND	1	04/06/06	04/06/06	*
Sulfate	EPA 300.0	6D06048	0.45	0.50	23	1	04/06/06	04/06/06	*
Surfactants (MBAS)	SM5540-C	6D05142	0.088	0.20	0.13	2	04/05/06	04/06/06	RL-1, J
Total Dissolved Solids	SM2540C	6D06066	10	10	160	1	04/06/06	04/06/06	*
Total Suspended Solids	EPA 160.2	6D11091	10	10	35	1	04/11/06	04/11/06	*
Sample ID: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: ml/hr									
Total Settleable Solids	EPA 160.5	6D05133	0.10	0.10	ND	1	04/05/06	04/05/06	*
Sample ID: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: NTU									
Turbidity	EPA 180.1	6D06110	0.080	2.0	50	2	04/06/06	04/06/06	*
Sample ID: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6D05143	2.2	5.0	ND	1	04/05/06	04/06/06	*
Perchlorate	EPA 314.0	6D07070	0.80	4.0	ND	1	04/07/06	04/07/06	*
Sample ID: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06				
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6D06064	1.0	1.0	230	1	04/06/06	04/06/06	*

* Analysis not validated

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4VO58
 Task Order: 1261.001D.01
 SDG No.: IPD0419

No. of Analyses: 2

Laboratory: Del Mar Analytical-Irvine
 Reviewer: L. Calvin
 Analysis/Method: Volatiles by Method 624

Date: <u>June 5, 2006</u>
Reviewer's Signature: <i>L. Calvin</i>

ACTION ITEMS^a	
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	_____
COMMENTS^b	Acceptable as reviewed.
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b 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 001

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPD0419

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD0419
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: June 5, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^X 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 001	IPD0419-01	Water	624
Trip Blank	IPD0419-02	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 3°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 preserved 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 dated 04/04/06 were associated with the sample analyses, one for trichlorotrifluoroethane only, and one for all remaining target compounds. The average RRFs were ≥ 0.05 , and the %RSDs were $\leq 35\%$ or r^2 values ≥ 0.995 for all target compounds listed on the sample result summary forms. The continuing calibrations associated with the sample analyses were dated 04/07/06. The RRFs were $\geq 0.05\%$ and the %Ds were within the QC limit of $\leq 20\%$ for all target compounds. No qualifications were required.

2.4 BLANKS

One method blank (6D07007-BLK1) was analyzed with this SDG. No target compounds were detected above the MDL 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 (6D07007-BS1) was analyzed with this SDG. All 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 001. No target compounds were detected above the MDL 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 ± 30 seconds for retention times. The internal standard areas 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.



Del Mar Analytical

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

Project ID: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

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: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06					
Reporting Units: ug/l										
Benzene	EPA 624	6D07007	0.28	2.0	ND	1	04/07/06	04/07/06	<i>rel qual</i> <i>qual</i> <i>code</i> ↓	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6D07007	1.2	5.0	ND	1	04/07/06	04/07/06		
Carbon tetrachloride	EPA 624	6D07007	0.28	5.0	ND	1	04/07/06	04/07/06		
Chloroform	EPA 624	6D07007	0.33	2.0	ND	1	04/07/06	04/07/06		
1,1-Dichloroethane	EPA 624	6D07007	0.27	2.0	ND	1	04/07/06	04/07/06		
1,2-Dichloroethane	EPA 624	6D07007	0.28	2.0	ND	1	04/07/06	04/07/06		
1,1-Dichloroethene	EPA 624	6D07007	0.42	3.0	ND	1	04/07/06	04/07/06		
Ethylbenzene	EPA 624	6D07007	0.25	2.0	ND	1	04/07/06	04/07/06		
Tetrachloroethene	EPA 624	6D07007	0.32	2.0	ND	1	04/07/06	04/07/06		
Toluene	EPA 624	6D07007	0.36	2.0	ND	1	04/07/06	04/07/06		
1,1,1-Trichloroethane	EPA 624	6D07007	0.30	2.0	ND	1	04/07/06	04/07/06		
1,1,2-Trichloroethane	EPA 624	6D07007	0.30	2.0	ND	1	04/07/06	04/07/06		
Trichloroethene	EPA 624	6D07007	0.26	5.0	ND	1	04/07/06	04/07/06		
Trichlorofluoromethane	EPA 624	6D07007	0.34	5.0	ND	1	04/07/06	04/07/06		
Vinyl chloride	EPA 624	6D07007	0.26	5.0	ND	1	04/07/06	04/07/06		
Xylenes, Total	EPA 624	6D07007	0.90	4.0	ND	1	04/07/06	04/07/06		
Surrogate: Dibromofluoromethane (80-120%)					103 %					
Surrogate: Toluene-d8 (80-120%)					95 %					
Surrogate: 4-Bromofluorobenzene (80-120%)					98 %					
Sample ID: IPD0419-02 (Trip Blank - Water)					Sampled: 04/05/06					
Reporting Units: ug/l										
Benzene	EPA 624	6D07007	0.28	2.0	ND	1	04/07/06	04/07/06	↓	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6D07007	1.2	5.0	ND	1	04/07/06	04/07/06		
Carbon tetrachloride	EPA 624	6D07007	0.28	5.0	ND	1	04/07/06	04/07/06		
Chloroform	EPA 624	6D07007	0.33	2.0	ND	1	04/07/06	04/07/06		
1,1-Dichloroethane	EPA 624	6D07007	0.27	2.0	ND	1	04/07/06	04/07/06		
1,2-Dichloroethane	EPA 624	6D07007	0.28	2.0	ND	1	04/07/06	04/07/06		
1,1-Dichloroethene	EPA 624	6D07007	0.42	3.0	ND	1	04/07/06	04/07/06		
Ethylbenzene	EPA 624	6D07007	0.25	2.0	ND	1	04/07/06	04/07/06		
Tetrachloroethene	EPA 624	6D07007	0.32	2.0	ND	1	04/07/06	04/07/06		
Toluene	EPA 624	6D07007	0.36	2.0	ND	1	04/07/06	04/07/06		
1,1,1-Trichloroethane	EPA 624	6D07007	0.30	2.0	ND	1	04/07/06	04/07/06		
1,1,2-Trichloroethane	EPA 624	6D07007	0.30	2.0	ND	1	04/07/06	04/07/06		
Trichloroethene	EPA 624	6D07007	0.26	5.0	ND	1	04/07/06	04/07/06		
Trichlorofluoromethane	EPA 624	6D07007	0.34	5.0	ND	1	04/07/06	04/07/06		
Vinyl chloride	EPA 624	6D07007	0.26	5.0	ND	1	04/07/06	04/07/06		
Xylenes, Total	EPA 624	6D07007	0.90	4.0	ND	1	04/07/06	04/07/06		
Surrogate: Dibromofluoromethane (80-120%)					99 %					
Surrogate: Toluene-d8 (80-120%)					94 %					
Surrogate: 4-Bromofluorobenzene (80-120%)					98 %					

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.

APPENDIX G

Section 3

Outfall 001, April 15, 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: Routine Outfall 001

Sampled: 04/15/06
Received: 04/15/06
Issued: 06/12/06 09:09

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 of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.*

CASE NARRATIVE

- SAMPLE RECEIPT: Samples were received intact, at 1°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: Enclosed are results for rush analyses only.

LABORATORY ID	CLIENT ID	MATRIX
IPD1607-01	Outfall 001	Water
IPD1607-02	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: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06

Received: 04/15/06

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: IPD1607-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6D22007	0.28	2.0	ND	1	04/22/06	04/22/06	
Carbon tetrachloride	EPA 624	6D22007	0.28	5.0	ND	1	04/22/06	04/22/06	
Chloroform	EPA 624	6D22007	0.33	2.0	ND	1	04/22/06	04/22/06	
1,1-Dichloroethane	EPA 624	6D22007	0.27	2.0	ND	1	04/22/06	04/22/06	
1,2-Dichloroethane	EPA 624	6D22007	0.28	2.0	ND	1	04/22/06	04/22/06	
1,1-Dichloroethene	EPA 624	6D22007	0.42	3.0	ND	1	04/22/06	04/22/06	
Ethylbenzene	EPA 624	6D22007	0.25	2.0	ND	1	04/22/06	04/22/06	
Tetrachloroethene	EPA 624	6D22007	0.32	2.0	ND	1	04/22/06	04/22/06	
Toluene	EPA 624	6D22007	0.36	2.0	ND	1	04/22/06	04/22/06	
1,1,1-Trichloroethane	EPA 624	6D22007	0.30	2.0	ND	1	04/22/06	04/22/06	
1,1,2-Trichloroethane	EPA 624	6D22007	0.30	2.0	ND	1	04/22/06	04/22/06	
Trichloroethene	EPA 624	6D22007	0.26	5.0	ND	1	04/22/06	04/22/06	
Trichlorofluoromethane	EPA 624	6D22007	0.34	5.0	ND	1	04/22/06	04/22/06	
Vinyl chloride	EPA 624	6D22007	0.26	5.0	ND	1	04/22/06	04/22/06	
Xylenes, Total	EPA 624	6D22007	0.90	4.0	ND	1	04/22/06	04/22/06	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					106 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					98 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					100 %				

Sample ID: IPD1607-02 (Trip Blank - Water)

Reporting Units: ug/l

Benzene	EPA 624	6D22007	0.28	2.0	ND	1	04/22/06	04/22/06	
Carbon tetrachloride	EPA 624	6D22007	0.28	5.0	ND	1	04/22/06	04/22/06	
Chloroform	EPA 624	6D22007	0.33	2.0	ND	1	04/22/06	04/22/06	
1,1-Dichloroethane	EPA 624	6D22007	0.27	2.0	ND	1	04/22/06	04/22/06	
1,2-Dichloroethane	EPA 624	6D22007	0.28	2.0	ND	1	04/22/06	04/22/06	
1,1-Dichloroethene	EPA 624	6D22007	0.42	3.0	ND	1	04/22/06	04/22/06	
Ethylbenzene	EPA 624	6D22007	0.25	2.0	ND	1	04/22/06	04/22/06	
Tetrachloroethene	EPA 624	6D22007	0.32	2.0	ND	1	04/22/06	04/22/06	
Toluene	EPA 624	6D22007	0.36	2.0	ND	1	04/22/06	04/22/06	
1,1,1-Trichloroethane	EPA 624	6D22007	0.30	2.0	ND	1	04/22/06	04/22/06	
1,1,2-Trichloroethane	EPA 624	6D22007	0.30	2.0	ND	1	04/22/06	04/22/06	
Trichloroethene	EPA 624	6D22007	0.26	5.0	ND	1	04/22/06	04/22/06	
Trichlorofluoromethane	EPA 624	6D22007	0.34	5.0	ND	1	04/22/06	04/22/06	
Vinyl chloride	EPA 624	6D22007	0.26	5.0	ND	1	04/22/06	04/22/06	
Xylenes, Total	EPA 624	6D22007	0.90	4.0	ND	1	04/22/06	04/22/06	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					105 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					98 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					98 %				

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: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06

Received: 04/15/06

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: IPD1607-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6D22047	1.6	4.7	1.7	0.943	04/22/06	05/11/06	B, J
2,4-Dinitrotoluene	EPA 625	6D22047	0.19	8.5	ND	0.943	04/22/06	05/11/06	
N-Nitrosodimethylamine	EPA 625	6D22047	0.094	7.5	ND	0.943	04/22/06	05/11/06	
Pentachlorophenol	EPA 625	6D22047	0.094	7.5	ND	0.943	04/22/06	05/11/06	
2,4,6-Trichlorophenol	EPA 625	6D22047	0.094	5.7	ND	0.943	04/22/06	05/11/06	
Surrogate: 2-Fluorophenol (30-120%)					59 %				
Surrogate: Phenol-d6 (35-120%)					60 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					92 %				
Surrogate: Nitrobenzene-d5 (45-120%)					65 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					74 %				
Surrogate: Terphenyl-d14 (45-120%)					103 %				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06

Received: 04/15/06

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1607-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
alpha-BHC	EPA 608	6D20122	0.00095	0.0095	ND	0.952	04/20/06	04/25/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					73 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					56 %				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06

Received: 04/15/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1607-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Iron	EPA 200.7	6D20095	0.015	0.040	1.8	1	04/20/06	04/26/06	
Sample ID: IPD1607-01RE1 (Outfall 001 - Water)									
Reporting Units: mg/l									
Iron	EPA 200.7	6D26117	0.015	0.040	3.5	1	04/26/06	04/27/06	
Sample ID: IPD1607-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Copper	EPA 200.8	6D17085	0.25	2.0	3.4	1	04/17/06	04/18/06	
Lead	EPA 200.8	6D17085	0.040	1.0	1.8	1	04/17/06	04/18/06	
Mercury	EPA 245.1	6D18075	0.050	0.20	ND	1	04/18/06	04/18/06	

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06

Received: 04/15/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1607-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6D18084	0.30	0.50	ND	1	04/18/06	04/18/06	
Biochemical Oxygen Demand	EPA 405.1	6D17072	0.59	2.0	3.0	1	04/17/06	04/22/06	
Chloride	EPA 300.0	6D15028	0.15	0.50	24	1	04/15/06	04/15/06	
Nitrate/Nitrite-N	EPA 300.0	6D15028	0.080	0.15	0.19	1	04/15/06	04/15/06	
Oil & Grease	EPA 413.1	6D18050	0.89	4.7	1.9	1	04/18/06	04/18/06	J
Sulfate	EPA 300.0	6D15028	2.2	2.5	63	5	04/15/06	04/15/06	
Surfactants (MBAS)	SM5540-C	6D17076	0.044	0.10	0.094	1	04/17/06	04/17/06	J
Total Dissolved Solids	SM2540C	6D18055	10	10	250	1	04/18/06	04/18/06	
Total Suspended Solids	EPA 160.2	6D20128	10	10	36	1	04/20/06	04/20/06	
Sample ID: IPD1607-01 (Outfall 001 - Water)									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	6D17056	0.10	0.10	ND	1	04/17/06	04/17/06	
Sample ID: IPD1607-01 (Outfall 001 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	6D15053	0.080	2.0	70	2	04/15/06	04/15/06	
Sample ID: IPD1607-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6D17101	2.2	5.0	ND	1	04/17/06	04/17/06	
Perchlorate	EPA 314.0	6D19069	0.80	4.0	ND	1	04/19/06	04/19/06	
Sample ID: IPD1607-01 (Outfall 001 - Water)									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6D18054	1.0	1.0	470	1	04/18/06	04/18/06	

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: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06

Received: 04/15/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 001 (IPD1607-01) - Water

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	04/15/2006 11:15	04/15/2006 15:20	04/17/2006 08:20	04/17/2006 08:20
EPA 180.1	2	04/15/2006 11:15	04/15/2006 15:20	04/15/2006 16:30	04/15/2006 17:00
EPA 300.0	2	04/15/2006 11:15	04/15/2006 15:20	04/15/2006 16:40	04/15/2006 16:54
EPA 405.1	2	04/15/2006 11:15	04/15/2006 15:20	04/17/2006 08:45	04/22/2006 15:15
SM5540-C	2	04/15/2006 11:15	04/15/2006 15:20	04/17/2006 09:30	04/17/2006 09:45

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: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06

Received: 04/15/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D22007 Extracted: 04/22/06										
Blank Analyzed: 04/22/2006 (6D22007-BLK1)										
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	0.90	ug/l						
Surrogate: Dibromofluoromethane	25.3			ug/l	25.0		101		80-120	
Surrogate: Toluene-d8	24.9			ug/l	25.0		100		80-120	
Surrogate: 4-Bromofluorobenzene	24.8			ug/l	25.0		99		80-120	

LCS Analyzed: 04/22/2006 (6D22007-BS1)

Benzene	21.2	2.0	0.28	ug/l	25.0		85		65-120	
Carbon tetrachloride	22.9	5.0	0.28	ug/l	25.0		92		65-140	
Chloroform	22.7	2.0	0.33	ug/l	25.0		91		65-130	
1,1-Dichloroethane	21.3	2.0	0.27	ug/l	25.0		85		65-130	
1,2-Dichloroethane	21.2	2.0	0.28	ug/l	25.0		85		60-140	
1,1-Dichloroethene	22.2	3.0	0.42	ug/l	25.0		89		70-130	
Ethylbenzene	23.4	2.0	0.25	ug/l	25.0		94		70-125	
Tetrachloroethene	23.7	2.0	0.32	ug/l	25.0		95		65-125	
Toluene	21.6	2.0	0.36	ug/l	25.0		86		70-125	
1,1,1-Trichloroethane	23.0	2.0	0.30	ug/l	25.0		92		65-135	
1,1,2-Trichloroethane	21.4	2.0	0.30	ug/l	25.0		86		65-125	
Trichloroethene	22.0	5.0	0.26	ug/l	25.0		88		70-125	
Trichlorofluoromethane	22.0	5.0	0.34	ug/l	25.0		88		60-140	
Vinyl chloride	18.3	5.0	0.26	ug/l	25.0		73		50-130	
Surrogate: Dibromofluoromethane	24.8			ug/l	25.0		99		80-120	
Surrogate: Toluene-d8	24.8			ug/l	25.0		99		80-120	

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Project ID: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06
Received: 04/15/06

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
Batch: 6D22007 Extracted: 04/22/06											
LCS Analyzed: 04/22/2006 (6D22007-BS1)											
Surrogate: 4-Bromofluorobenzene	24.5			ug/l	25.0		98	80-120			
Matrix Spike Analyzed: 04/22/2006 (6D22007-MS1) Source: IPD1867-13											
Benzene	21.4	2.0	0.28	ug/l	25.0	ND	86	60-125			
Carbon tetrachloride	23.3	5.0	0.28	ug/l	25.0	ND	93	65-140			
Chloroform	23.2	2.0	0.33	ug/l	25.0	ND	93	65-135			
1,1-Dichloroethane	21.4	2.0	0.27	ug/l	25.0	ND	86	60-130			
1,2-Dichloroethane	22.1	2.0	0.28	ug/l	25.0	ND	88	60-140			
1,1-Dichloroethene	21.1	3.0	0.42	ug/l	25.0	ND	84	60-135			
Ethylbenzene	22.9	2.0	0.25	ug/l	25.0	ND	92	65-130			
Tetrachloroethene	23.6	2.0	0.32	ug/l	25.0	ND	94	60-130			
Toluene	22.1	2.0	0.36	ug/l	25.0	ND	88	65-125			
1,1,1-Trichloroethane	23.3	2.0	0.30	ug/l	25.0	ND	93	65-140			
1,1,2-Trichloroethane	23.0	2.0	0.30	ug/l	25.0	ND	92	60-130			
Trichloroethene	21.9	5.0	0.26	ug/l	25.0	ND	88	60-125			
Trichlorofluoromethane	22.0	5.0	0.34	ug/l	25.0	ND	88	55-145			
Vinyl chloride	17.7	5.0	0.26	ug/l	25.0	ND	71	40-135			
Surrogate: Dibromofluoromethane	25.1			ug/l	25.0		100	80-120			
Surrogate: Toluene-d8	25.2			ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	24.2			ug/l	25.0		97	80-120			
Matrix Spike Dup Analyzed: 04/22/2006 (6D22007-MSD1) Source: IPD1867-13											
Benzene	21.3	2.0	0.28	ug/l	25.0	ND	85	60-125	1	20	
Carbon tetrachloride	22.9	5.0	0.28	ug/l	25.0	ND	92	65-140	2	25	
Chloroform	23.1	2.0	0.33	ug/l	25.0	ND	92	65-135	0	20	
1,1-Dichloroethane	21.3	2.0	0.27	ug/l	25.0	ND	85	60-130	1	20	
1,2-Dichloroethane	21.9	2.0	0.28	ug/l	25.0	ND	88	60-140	1	20	
1,1-Dichloroethene	18.9	3.0	0.42	ug/l	25.0	ND	76	60-135	11	20	
Ethylbenzene	22.7	2.0	0.25	ug/l	25.0	ND	91	65-130	1	20	
Tetrachloroethene	23.8	2.0	0.32	ug/l	25.0	ND	95	60-130	1	20	
Toluene	21.6	2.0	0.36	ug/l	25.0	ND	86	65-125	2	20	
1,1,1-Trichloroethane	23.3	2.0	0.30	ug/l	25.0	ND	93	65-140	0	20	
1,1,2-Trichloroethane	22.6	2.0	0.30	ug/l	25.0	ND	90	60-130	2	25	
Trichloroethene	21.8	5.0	0.26	ug/l	25.0	ND	87	60-125	1	20	
Trichlorofluoromethane	22.1	5.0	0.34	ug/l	25.0	ND	88	55-145	1	25	
Vinyl chloride	17.9	5.0	0.26	ug/l	25.0	ND	72	40-135	1	30	

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PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D22007 Extracted: 04/22/06											
Matrix Spike Dup Analyzed: 04/22/2006 (6D22007-MSD1)						Source: IPD1867-13					
Surrogate: Dibromofluoromethane	25.3			ug/l	25.0		101	80-120			
Surrogate: Toluene-d8	24.9			ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	24.8			ug/l	25.0		99	80-120			

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D22047 Extracted: 04/22/06										
Blank Analyzed: 04/26/2006-05/12/2006 (6D22047-BLK1)										
Bis(2-ethylhexyl)phthalate	1.72	5.0	1.7	ug/l						J
2,4-Dinitrotoluene	ND	9.0	0.20	ug/l						
N-Nitrosodimethylamine	ND	8.0	0.10	ug/l						
Pentachlorophenol	ND	8.0	0.10	ug/l						
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l						
Surrogate: 2-Fluorophenol	136			ug/l	200		68		30-120	
Surrogate: Phenol-d6	123			ug/l	200		62		35-120	
Surrogate: 2,4,6-Tribromophenol	199			ug/l	200		100		45-120	
Surrogate: Nitrobenzene-d5	53.8			ug/l	100		54		45-120	
Surrogate: 2-Fluorobiphenyl	65.0			ug/l	100		65		45-120	
Surrogate: Terphenyl-d14	71.4			ug/l	100		71		45-120	
LCS Analyzed: 04/26/2006 (6D22047-BS1)										
Surrogate: 2-Fluorophenol	136			ug/l	200		68		30-120	
Surrogate: Phenol-d6	27.1			ug/l	200		14		35-120	Z6
Surrogate: 2,4,6-Tribromophenol	170			ug/l	200		85		45-120	
Surrogate: Nitrobenzene-d5	67.6			ug/l	100		68		45-120	
Surrogate: 2-Fluorobiphenyl	81.3			ug/l	100		81		45-120	
Surrogate: Terphenyl-d14	105			ug/l	100		105		45-120	
LCS Dup Analyzed: 04/26/2006 (6D22047-BSD1)										
Surrogate: 2-Fluorophenol	118			ug/l	200		59		30-120	
Surrogate: Phenol-d6	124			ug/l	200		62		35-120	
Surrogate: 2,4,6-Tribromophenol	193			ug/l	200		96		45-120	
Surrogate: Nitrobenzene-d5	71.8			ug/l	100		72		45-120	
Surrogate: 2-Fluorobiphenyl	85.5			ug/l	100		86		45-120	
Surrogate: Terphenyl-d14	113			ug/l	100		113		45-120	

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ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D20122 Extracted: 04/20/06											
Blank Analyzed: 04/24/2006 (6D20122-BLK1)											
alpha-BHC	ND	0.010	0.0010	ug/l							
Surrogate: Decachlorobiphenyl	0.466			ug/l	0.500		93	45-120			
Surrogate: Tetrachloro-m-xylene	0.301			ug/l	0.500		60	35-115			
LCS Analyzed: 04/24/2006 (6D20122-BS1)											
alpha-BHC	0.425	0.010	0.0010	ug/l	0.500		85	45-120			M-NR1
Surrogate: Decachlorobiphenyl	0.451			ug/l	0.500		90	45-120			
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		70	35-115			
LCS Dup Analyzed: 04/24/2006 (6D20122-BSD1)											
alpha-BHC	0.455	0.010	0.0010	ug/l	0.500		91	45-120	7	30	
Surrogate: Decachlorobiphenyl	0.472			ug/l	0.500		94	45-120			
Surrogate: Tetrachloro-m-xylene	0.355			ug/l	0.500		71	35-115			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6D17085 Extracted: 04/17/06											
Blank Analyzed: 04/18/2006 (6D17085-BLK1)											
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
LCS Analyzed: 04/18/2006 (6D17085-BS1)											
Copper	78.9	2.0	0.25	ug/l	80.0		99	85-115			
Lead	81.5	1.0	0.040	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 04/18/2006 (6D17085-MS1) Source: IPD1578-01											
Copper	77.4	2.0	0.25	ug/l	80.0	1.2	95	70-130			
Lead	81.7	1.0	0.040	ug/l	80.0	0.14	102	70-130			
Matrix Spike Dup Analyzed: 04/18/2006 (6D17085-MSD1) Source: IPD1578-01											
Copper	76.4	2.0	0.25	ug/l	80.0	1.2	94	70-130	1	20	
Lead	81.6	1.0	0.040	ug/l	80.0	0.14	102	70-130	0	20	
Batch: 6D18075 Extracted: 04/18/06											
Blank Analyzed: 04/18/2006 (6D18075-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/18/2006 (6D18075-BS1)											
Mercury	8.21	0.20	0.050	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 04/18/2006 (6D18075-MS1) Source: IPD1634-02											
Mercury	8.34	0.20	0.050	ug/l	8.00	ND	104	70-130			
Matrix Spike Dup Analyzed: 04/18/2006 (6D18075-MSD1) Source: IPD1634-02											
Mercury	8.42	0.20	0.050	ug/l	8.00	ND	105	70-130	1	20	

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D20095 Extracted: 04/20/06											
Blank Analyzed: 04/24/2006 (6D20095-BLK1)											
Iron	ND	0.040	0.015	mg/l							
LCS Analyzed: 04/24/2006 (6D20095-BS1)											
Iron	0.521	0.040	0.015	mg/l	0.500		104	85-115			
Matrix Spike Analyzed: 04/24/2006 (6D20095-MS1)											
Iron	0.713	0.040	0.015	mg/l	0.500	0.24	95	70-130			
Matrix Spike Analyzed: 04/24/2006 (6D20095-MS2)											
Iron	0.599	0.040	0.015	mg/l	0.500	0.071	106	70-130			
Matrix Spike Dup Analyzed: 04/24/2006 (6D20095-MSD1)											
Iron	0.732	0.040	0.015	mg/l	0.500	0.24	98	70-130	3	20	
Batch: 6D26117 Extracted: 04/26/06											
Blank Analyzed: 04/26/2006 (6D26117-BLK1)											
Iron	ND	0.040	0.015	mg/l							
LCS Analyzed: 04/26/2006 (6D26117-BS1)											
Iron	0.511	0.040	0.015	mg/l	0.500		102	85-115			
Matrix Spike Analyzed: 04/26/2006 (6D26117-MS1)											
Iron	2.10	0.040	0.015	mg/l	0.500	1.6	100	70-130			
Matrix Spike Dup Analyzed: 04/26/2006 (6D26117-MSD1)											
Iron	2.10	0.040	0.015	mg/l	0.500	1.6	100	70-130	0	20	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D15028 Extracted: 04/15/06										
Blank Analyzed: 04/15/2006 (6D15028-BLK1)										
Chloride	ND	0.50	0.15	mg/l						
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l						
Sulfate	ND	0.50	0.45	mg/l						
LCS Analyzed: 04/15/2006 (6D15028-BS1)										
Chloride	4.82	0.50	0.15	mg/l	5.00		96		90-110	
Sulfate	10.1	0.50	0.45	mg/l	10.0		101		90-110	
Matrix Spike Analyzed: 04/15/2006 (6D15028-MS1) Source: IPD1578-01										
Chloride	10.4	0.50	0.15	mg/l	5.00	5.1	106		80-120	
Sulfate	18.8	0.50	0.45	mg/l	10.0	7.7	111		80-120	
Matrix Spike Dup Analyzed: 04/15/2006 (6D15028-MSD1) Source: IPD1578-01										
Chloride	10.1	0.50	0.15	mg/l	5.00	5.1	100		80-120	3 20
Sulfate	18.3	0.50	0.45	mg/l	10.0	7.7	106		80-120	3 20
Batch: 6D15053 Extracted: 04/15/06										
Blank Analyzed: 04/15/2006 (6D15053-BLK1)										
Turbidity	0.0400	1.0	0.040	NTU						J
Duplicate Analyzed: 04/15/2006 (6D15053-DUP1) Source: IPD1578-01										
Turbidity	1.11	1.0	0.040	NTU		1.1				1 20
Batch: 6D17072 Extracted: 04/17/06										
Blank Analyzed: 04/22/2006 (6D17072-BLK1)										
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l						

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D17072 Extracted: 04/17/06											
LCS Analyzed: 04/22/2006 (6D17072-BS1)											
Biochemical Oxygen Demand	208	100	30	mg/l	198		105	85-115			
LCS Dup Analyzed: 04/22/2006 (6D17072-BSD1)											
Biochemical Oxygen Demand	211	100	30	mg/l	198		107	85-115	1	20	
Batch: 6D17076 Extracted: 04/17/06											
Blank Analyzed: 04/17/2006 (6D17076-BLK1)											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 04/17/2006 (6D17076-BS1)											
Surfactants (MBAS)	0.249	0.10	0.044	mg/l	0.250		100	90-110			
Matrix Spike Analyzed: 04/17/2006 (6D17076-MS1)											
Surfactants (MBAS)	0.367	0.10	0.044	mg/l	0.250	0.094	109	50-125			
Matrix Spike Dup Analyzed: 04/17/2006 (6D17076-MSD1)											
Surfactants (MBAS)	0.391	0.10	0.044	mg/l	0.250	0.094	119	50-125	6	20	
Batch: 6D17101 Extracted: 04/17/06											
Blank Analyzed: 04/17/2006 (6D17101-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 04/17/2006 (6D17101-BS1)											
Total Cyanide	186	5.0	2.2	ug/l	200		93	90-110			

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Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D17101 Extracted: 04/17/06											
Matrix Spike Analyzed: 04/17/2006 (6D17101-MS1)						Source: IPD1138-01					
Total Cyanide	208	5.0	2.2	ug/l	200	ND	104	70-115			
Matrix Spike Dup Analyzed: 04/17/2006 (6D17101-MSD1)						Source: IPD1138-01					
Total Cyanide	172	5.0	2.2	ug/l	200	ND	86	70-115	19	15	R
Batch: 6D18050 Extracted: 04/18/06											
Blank Analyzed: 04/18/2006 (6D18050-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/18/2006 (6D18050-BS1)											
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120			M-NR1
LCS Dup Analyzed: 04/18/2006 (6D18050-BSD1)											
Oil & Grease	17.9	5.0	0.94	mg/l	20.0		90	65-120	7	20	
Batch: 6D18054 Extracted: 04/18/06											
Duplicate Analyzed: 04/18/2006 (6D18054-DUP1)						Source: IPD1326-01					
Specific Conductance	412	1.0	1.0	umhos/cm		420			2	5	
Batch: 6D18055 Extracted: 04/18/06											
Blank Analyzed: 04/18/2006 (6D18055-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							

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Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 6D18055 Extracted: 04/18/06</u>											
LCS Analyzed: 04/18/2006 (6D18055-BS1)											
Total Dissolved Solids	990	10	10	mg/l	1000		99	90-110			
Duplicate Analyzed: 04/18/2006 (6D18055-DUP1)											
Total Dissolved Solids	5080	10	10	mg/l		5100			0	10	
<u>Batch: 6D18084 Extracted: 04/18/06</u>											
Blank Analyzed: 04/18/2006 (6D18084-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 04/18/2006 (6D18084-BS1)											
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0		109	80-115			
Matrix Spike Analyzed: 04/18/2006 (6D18084-MS1)											
Ammonia-N (Distilled)	20.4	0.50	0.30	mg/l	10.0	9.2	112	70-120			
Matrix Spike Dup Analyzed: 04/18/2006 (6D18084-MSD1)											
Ammonia-N (Distilled)	19.6	0.50	0.30	mg/l	10.0	9.2	104	70-120	4	15	
<u>Batch: 6D19069 Extracted: 04/19/06</u>											
Blank Analyzed: 04/19/2006 (6D19069-BLK1)											
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 04/19/2006 (6D19069-BS1)											
Perchlorate	51.3	4.0	0.80	ug/l	50.0		103	85-115			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D19069 Extracted: 04/19/06											
Matrix Spike Analyzed: 04/19/2006 (6D19069-MS1)						Source: IPD1697-03					
Perchlorate	51.3	4.0	0.80	ug/l	50.0	2.1	98	80-120			
Matrix Spike Dup Analyzed: 04/19/2006 (6D19069-MSD1)						Source: IPD1697-03					
Perchlorate	52.9	4.0	0.80	ug/l	50.0	2.1	102	80-120	3	20	
Batch: 6D20128 Extracted: 04/20/06											
Blank Analyzed: 04/20/2006 (6D20128-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/20/2006 (6D20128-BS1)											
Total Suspended Solids	990	10	10	mg/l	1000		99	85-115			
Duplicate Analyzed: 04/20/2006 (6D20128-DUP1)						Source: IPD1603-01					
Total Suspended Solids	356	10	10	mg/l		350			2	10	

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: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06

Received: 04/15/06

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
IPD1607-01	413.1 Oil and Grease	Oil & Grease	mg/l	1.90	4.7	10.00
IPD1607-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0.00025	0.0095	0.0100
IPD1607-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPD1607-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00
IPD1607-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.7	6.50
IPD1607-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.5	9.10
IPD1607-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	1.70	4.7	4.00
IPD1607-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.5	8.10
IPD1607-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.5	8.20
IPD1607-01	BOD	Biochemical Oxygen Demand	mg/l	3.00	2.0	20
IPD1607-01	Chloride - 300.0	Chloride	mg/l	24	0.50	150
IPD1607-01	Copper-200.8	Copper	ug/l	3.40	2.0	7.10
IPD1607-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	1.60	5.0	5.00
IPD1607-01	Iron-200.7	Iron	mg/l	1.80	0.040	0.30
IPD1607-01	Lead-200.8	Lead	ug/l	1.80	1.0	2.60
IPD1607-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.094	0.10	0.50
IPD1607-01	Mercury - 245.1	Mercury	ug/l	0.047	0.20	0.20
IPD1607-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.19	0.15	8.00
IPD1607-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPD1607-01	Sulfate-300.0	Sulfate	mg/l	63	2.5	300
IPD1607-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	250	10	950
IPD1607-01RE1	Iron-200.7	Iron	mg/l	3.50	0.040	0.30
IPD1607-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPD1607-02	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00

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: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06
Received: 04/15/06

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated 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.
- 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.
- Z6** Surrogate recovery was below acceptance limits.
- 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.



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

Project ID: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06

Received: 04/15/06

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	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 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
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

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: IPD1607-01

Analysis Performed: EDD + Level 4

Samples: IPD1607-01

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager

Del Mar Analytical CHAIN OF CUSTODY FORM

Version 03/07/06

IPD1607

Client Name/Address:		Project:		ANALYSIS REQUIRED										Field readings:					
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Routine Outfall 001		Total Recoverable Metals: Cu, Pb, Hg, Fe*	Settleable Solids	VOCS 624 + xylenes	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5(20 degrees C)	Surfactants (MBAS)	C-, SO4, NO3+NO2-N, Perchlorate	Turbidity, TDS, TSS, Conductivity	Ammonia-N	Alpha BHC (608)	2,4,6 Trichlorophenol, 2,4-Dinitrofluorene, Bis(2-ethylhexyl)phthalate, NDMA, pentachlorophenol (EPA 625)	Temp = 57° pH = 7.1	Comments	
Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Sampling Date/Time	VOCS 624 + xylenes	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5(20 degrees C)	Surfactants (MBAS)	C-, SO4, NO3+NO2-N, Perchlorate	Turbidity, TDS, TSS, Conductivity	Ammonia-N	Alpha BHC (608)	2,4,6 Trichlorophenol, 2,4-Dinitrofluorene, Bis(2-ethylhexyl)phthalate, NDMA, pentachlorophenol (EPA 625)	Field readings:	Comments
Outfall 001	W	Poly-1L	1	HNO3	1A	4/15/06 11:15													24 TAT, *Fe Normal TAT
Outfall 001-Dup	W	Poly-1L	1	HNO3	1B														
Outfall 001	W	Poly-1L	1	None	2		X												24 TAT
Outfall 001	W	VOAs	3	HCl	3A, 3B, 3C		X												
Outfall 001	W	1L Amber	2	None	4A, 4B			X											
Outfall 001	W	1L Amber	2	HCl	5A, 5B			X											24 TAT
Outfall 001	W	Poly-500 ml	1	NaOH	6				X										24 TAT
Outfall 001	W	Poly-1L	1	None	7					X									
Outfall 001	W	Poly-500 ml	2	None	8A, 8B						X								
Outfall 001	W	Poly-500 ml	2	None	9A, 9B							X							
Outfall 001	W	Poly-500 ml	2	None	10A, 10B								X						
Outfall 001	W	Poly-500 ml	1	H2SO4	11														
Outfall 001	W	1L Amber	2	None	12A, 12B														
Outfall 001	W	1L Amber	2	None	13A, 13B	4/15/06 11:15													
Trip Blank	W	VOAs	3	HCl	14A, 14B, 14C		X												FR 1630
Relinquished By	Hays			Date/Time:	4/15/06 1310	Received By	[Signature]			Date/Time:	4/15/06 1310	Turn around Time: (check)	24 Hours	5 Days					
Relinquished By	[Signature]			Date/Time:	4/15/06 1520	Received By	[Signature]			Date/Time:	4/15/06 1520	48 Hours	10 Days						
Relinquished By	[Signature]			Date/Time:		Received By	[Signature]			Date/Time:		72 Hours	Normal						
										Perchlorate Only 72 Hours		Metals Only 72 Hours		Sample Integrity: (Check) Intact <input checked="" type="checkbox"/>		On Ice: <input type="checkbox"/>			



May 04, 2006

Alta Project I.D.: 27606

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 April 18, 2006 under your Project Name "IPD1607". 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. 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: 4/18/2006

Alta Lab. ID

Client Sample ID

27606-001

IPD1607-01

SECTION II

Method Blank		EPA Method 1613						
Matrix:	Aqueous	QC Batch No.:	7968	Lab Sample:	0-MB001			
Sample Size:	1.00 L	Date Extracted:	26-Apr-06	Date Analyzed DB-5:	2-May-06			
				Date Analyzed DB-225:	NA			
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000767			IS 13C-2,3,7,8-TCDD	77.8	25 - 161	
1,2,3,7,8-PeCDD	ND	0.000000968			13C-1,2,3,7,8-PeCDD	69.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000195			13C-1,2,3,4,7,8-HxCDD	78.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000219			13C-1,2,3,6,7,8-HxCDD	67.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000200			13C-1,2,3,4,6,7,8-HpCDD	62.1	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000273			13C-OCDD	42.7	17 - 157	
OCDD	ND	0.00000703			13C-2,3,7,8-TCDF	77.2	24 - 169	
2,3,7,8-TCDF	ND	0.000000483			13C-1,2,3,7,8-PeCDF	67.2	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000901			13C-2,3,4,7,8-PeCDF	66.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000876			13C-1,2,3,4,7,8-HxCDF	87.3	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000696			13C-1,2,3,6,7,8-HxCDF	85.4	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000446			13C-2,3,4,6,7,8-HxCDF	81.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000546			13C-1,2,3,7,8,9-HxCDF	69.8	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000922			13C-1,2,3,4,6,7,8-HpCDF	60.1	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000000818			13C-1,2,3,4,7,8,9-HpCDF	59.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000869			13C-OCDF	44.2	17 - 157	
OCDF	ND	0.00000249			CRS 37Cl-2,3,7,8-TCDD	89.1	35 - 197	
Totals								
Total TCDD	ND	0.000000767						
Total PeCDD	ND	0.000000968						
Total HxCDD	ND	0.00000205						
Total HpCDD	ND	0.00000273						
Total TCDF	ND	0.000000483						
Total PeCDF	ND	0.000000889						
Total HxCDF	ND	0.000000786						
Total HpCDF	ND	0.000000841						
Footnotes								
a. Sample specific estimated detection limit.								
b. Estimated maximum possible concentration.								
c. Method detection limit.								
d. Lower control limit - upper control limit.								

Analyst:

Approved By: William J. Luksemburg 03-May-2006 13:15

OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7968	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	26-Apr-06	Date Analyzed DB-5:	2-May-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	10.8	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	79.0	25 - 164
1,2,3,7,8-PeCDD	50.0	51.5	35 - 71	13C-1,2,3,7,8-PeCDD	71.2	25 - 181
1,2,3,4,7,8-HxCDD	50.0	53.1	35 - 82	13C-1,2,3,4,7,8-HxCDD	79.9	32 - 141
1,2,3,6,7,8-HxCDD	50.0	53.0	38 - 67	13C-1,2,3,6,7,8-HxCDD	66.6	28 - 130
1,2,3,7,8,9-HxCDD	50.0	51.6	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	63.6	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	55.1	35 - 70	13C-OCDD	44.0	17 - 157
OCDD	100	105	78 - 144	13C-2,3,7,8-TCDF	78.4	24 - 169
2,3,7,8-TCDF	10.0	10.7	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	65.0	24 - 185
1,2,3,7,8-PeCDF	50.0	54.8	40 - 67	13C-2,3,4,7,8-PeCDF	65.1	21 - 178
2,3,4,7,8-PeCDF	50.0	55.8	34 - 80	13C-1,2,3,4,7,8-HxCDF	87.5	26 - 152
1,2,3,4,7,8-HxCDF	50.0	52.6	36 - 67	13C-1,2,3,6,7,8-HxCDF	88.1	26 - 123
1,2,3,6,7,8-HxCDF	50.0	53.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	83.1	28 - 136
2,3,4,6,7,8-HxCDF	50.0	52.2	35 - 78	13C-1,2,3,7,8,9-HxCDF	66.3	29 - 147
1,2,3,7,8,9-HxCDF	50.0	52.6	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	62.0	28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	53.6	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	61.6	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	52.5	39 - 69	13C-OCDF	45.7	17 - 157
OCDF	100	110	63 - 170	CRS 37Cl-2,3,7,8-TCDD	95.0	35 - 197

Analyst: MAS

Approved By:

William J. Luksemburg 03-May-2006 13:15

Sample ID: IPD1607-01		EPA Method 1613						
Client Data		Sample Data		Laboratory Data				
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27606-001			
Project:	IPD1607	Sample Size:	1.02 L	Date Received:	18-Apr-06			
Date Collected:	15-Apr-06			Date Extracted:	26-Apr-06			
Time Collected:	1115			Date Analyzed DB-225:	NA			
				Date Analyzed DB-5:	2-May-06			
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000585			IS 13C-2,3,7,8-TCDD	82.6	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000846			13C-1,2,3,7,8-PeCDD	67.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000148			13C-1,2,3,4,7,8-HxCDD	82.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000153			13C-1,2,3,6,7,8-HxCDD	72.1	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000146			13C-1,2,3,4,6,7,8-HpCDD	82.5	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000106			J	13C-OCDD	60.6	17 - 157	
OCDD	0.0000874				13C-2,3,7,8-TCDF	81.1	24 - 169	
2,3,7,8-TCDF	ND	0.000000588			13C-1,2,3,7,8-PeCDF	68.7	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000921			13C-2,3,4,7,8-PeCDF	64.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000926			13C-1,2,3,4,7,8-HxCDF	87.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000590			13C-1,2,3,6,7,8-HxCDF	86.4	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000552			13C-2,3,4,6,7,8-HxCDF	82.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000636			13C-1,2,3,7,8,9-HxCDF	81.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000425			13C-1,2,3,4,6,7,8-HpCDF	81.8	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.0000227			J	13C-1,2,3,4,7,8,9-HpCDF	79.9	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000806			13C-OCDF	65.9	17 - 157	
OCDF	0.0000374			J	CRS 37Cl-2,3,7,8-TCDD	92.4	35 - 197	
Totals								
Total TCDD	ND	0.000000585						
Total PeCDD	ND	0.000000846						
Total HxCDD	ND	0.00000364						
Total HpCDD	0.0000214							
Total TCDF	ND	0.000000588						
Total PeCDF	ND	0.000000924						
Total HxCDF	0.00000119							
Total HpCDF	0.00000227		0.00000570					
Footnotes								
a. Sample specific estimated detection limit.								
b. Estimated maximum possible concentration.								
c. Method detection limit.								
d. Lower control limit - upper control limit.								

Analyst:

Approved By:

William J. Luksemburg 03-May-2006 13:15

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

Accrediting Authority	Certificate Number
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 # IPD1607

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="font-size: 2em; margin-left: 20px;">27606</div> <div style="font-size: 2em; margin-left: 20px;">0.3°C</div>

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

Analysis	Expiration	Comments
----------	------------	----------

Sample ID: IPD1607-01 Water	Sampled: 04/15/06 11:15	
1613-Dioxin-HR-Alta	04/22/06 11:15	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	05/13/06 11:15	Excel EDD email to pm, include Std logs for Lvl IV

Containers Supplied:
 1 L Amber (IPD1607-01G)
 1 L Amber (IPD1607-01H)

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	Samples Received On Ice: <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 at (temp): _____

<i>Eduardo Ruiz</i>	<i>4/17/06</i>		<i>Bethmar J. Benedict</i>	<i>4/19/06</i>	<i>0905</i>
Released By	Date	Time	Received By	Date	Time

Released By	Date	Time	Received By	Date	Time
-------------	------	------	-------------	------	------

Project 27606

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27606

Samples Arrival:	Date/Time <u>4/18/06 0905</u>	Initials: <u>UBB</u>	Location: <u>WR-2</u>			
			Shelf/Rack: _____			
Logged In:	Date/Time <u>4/18/06 1452</u>	Initials: <u>UBB</u>	Location: <u>WR-2</u>			
			Shelf/Rack: <u>C-2</u>			
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	<u>0.3°C</u>	Time:	<u>0935</u>	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 # <u>7903 9693 2436</u>			
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 ₂ S ₂ O ₃ Preservation Documented?		COC	Sample Container: <u>None</u>
Shipping Container	Alta	<u>Client</u>	Retain <u>Return</u> Dispose

Comments:

APPENDIX G

Section 4

Outfall 001, April 15, 2006

MEC^X Data Validation Reports



DATA VALIDATION REPORT

NPDES Monitoring Program Routine Outfall 001

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IPD1607

Prepared by

MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001D.01
Sample Delivery Group: IPD1607
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: July 5, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the *MEC^x 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	IPD1607-01	27606-001	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 below 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 0.3°C. The sample containers were not noted to be damaged or frozen during transportation; therefore, 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 03/22/2006 on instrument VG-5. 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 VER was 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 (0-7968-MB001) was extracted and analyzed with the sample in this SDG. No target compounds were 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 (0-7968-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 qualification of the site sample was 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. The 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.



DATA VALIDATION REPORT

NPDES Sampling
Outfall 001

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPD1607

Prepared by

MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPD1607
Project Manager: P. Costa
Matrix: Water
Analysis: Metals
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 1
Reviewer: P. Meeks
Date of Review: June 23, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Method 200.7*, 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 001	IPD1607-01	Water	200.7
Outfall 001 RE1	IPD1607-01RE1	Water	200.7

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 below the temperature limits of 4°C ±2°C, at 1°C; however, as the sample was not noted to be frozen or damaged, no qualifications were required. 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. Outfall 001 was reanalyzed for iron. As the laboratory did not append the MWH ID for the reanalysis with "RE1," the reviewer added this information to the Form I. 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. No qualifications were required.

2.2 ICP-MS TUNING

As the sample was not analyzed by ICP-MS, the tune criteria are not applicable.

2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP metals. The laboratory analyzed reporting limit check standards in association with the sample in this SDG. All recoveries were considered to be acceptable. No qualifications were required.

2.4 BLANKS

Iron was not detected in the method blanks or CCBs associated with the sample in this SDG. No 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. All recoveries were acceptable and no qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The ICP recoveries were within the laboratory-established control limits of 85-115%. No qualifications were required.

2.7 LABORATORY DUPLICATES

No 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 the LCS result. 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

As the sample was not analyzed by ICP-MS, the internal standard performance criteria are not applicable.

2.11 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 I were verified against the raw data. No transcription errors or calculation errors were noted.

Per a request from MWH personnel, the laboratory reanalyzed sample Outfall 001 for iron. The reanalysis result was approximately 2× larger than the original analysis result; however, as the method blanks, LCSs, ICVs, CCVs, and CCBs were equivalent and acceptable for both sets of analyses, the reviewer chose to reject the reanalysis, "R," Outfall 001 RE1, in favor of the original result. 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.



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

Project ID: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06
Received: 04/15/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev Qual	Qual Code
Sample ID: IPD1607-01 (Outfall 001 - Water) - cont.										
Reporting Units: mg/l										
Iron	EPA 200.7	6D20095	0.015	0.040	1.8	1	04/20/06	04/26/06		
Sample ID: IPD1607-01RE1 (Outfall 001 - Water) <i>Outfall 001 RE1</i>										
Reporting Units: mg/l										
Iron	EPA 200.7	6D26117	0.015	0.040	3.5	1	04/26/06	04/27/06	R	D
Sample ID: IPD1607-01 (Outfall 001 - Water)										
Reporting Units: ug/l										
Copper	EPA 200.8	6D17085	0.25	2.0	3.4	1	04/17/06	04/18/06	*	
Lead	EPA 200.8	6D17085	0.040	1.0	1.8	1	04/17/06	04/18/06	↓	
Mercury	EPA 245.1	6D18075	0.050	0.20	ND	1	04/18/06	04/18/06	↓	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

LEVEL IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4VO63
 Task Order: 1261.001D.01
 SDG No.: IPD1607

No. of Analyses: 2

Laboratory: Del Mar Analytical-Irvine
 Reviewer: L. Calvin
 Analysis/Method: Volatiles by Method 624

Date: <u>June 25, 2006</u>
Reviewer's Signature <i>L. Calvin</i>

ACTION ITEMS ^a	
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	_____
COMMENTS ^b	Acceptable as reviewed.
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b 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 001

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPD1607

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD1607
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: June 25, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC^X *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 001	IPD1607-01	Water	624
Trip Blank	IPD1607-02	Water	624

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The samples in this SDG were received at the laboratory below the temperature limits of 4°C ±2°C, at 1°C; however, as the samples were not noted to be frozen or damaged, no qualification was necessary. 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 preserved water samples were analyzed for all target compounds 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 sample analyses, dated 03/20/06. The average RRFs were ≥0.05, and the %RSDs were ≤35% or r^2 values ≥0.995 for all target compounds listed on the sample result summary forms. The continuing calibration associated with the sample analyses was dated 04/22/06. The %Ds for all target compounds were within the QC limit of ≤20%. No qualifications were required.

2.4 BLANKS

One method blank (6D22007-BLK1) was 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 (6D22007-BS1) was analyzed with this SDG. All recoveries were within the laboratory-established QC limits. No qualifications were required.

2.6 SURROGATE RECOVERY

Surrogate recoveries were within the laboratory QC limits of 80-120% for this SDG. 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

Sample Trip Blank was the trip blank associated with site sample Outfall 001. No target compounds were detected above the MDL 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 ± 30 seconds

for retention times. The internal standard areas 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.



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

Project ID: Routine Outfall 001

Report Number: IPD1607

Sampled: 04/15/06
 Received: 04/15/06

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: IPD1607-01 (Outfall 001 - Water)										
Reporting Units: ug/l										
Benzene	EPA 624	6D22007	0.28	2.0	ND	1	04/22/06	04/22/06	<i>rev qual</i> <i>qual</i> <i>code</i> ↓	
Carbon tetrachloride	EPA 624	6D22007	0.28	5.0	ND	1	04/22/06	04/22/06		
Chloroform	EPA 624	6D22007	0.33	2.0	ND	1	04/22/06	04/22/06		
1,1-Dichloroethane	EPA 624	6D22007	0.27	2.0	ND	1	04/22/06	04/22/06		
1,2-Dichloroethane	EPA 624	6D22007	0.28	2.0	ND	1	04/22/06	04/22/06		
1,1-Dichloroethene	EPA 624	6D22007	0.42	3.0	ND	1	04/22/06	04/22/06		
Ethylbenzene	EPA 624	6D22007	0.25	2.0	ND	1	04/22/06	04/22/06		
Tetrachloroethene	EPA 624	6D22007	0.32	2.0	ND	1	04/22/06	04/22/06		
Toluene	EPA 624	6D22007	0.36	2.0	ND	1	04/22/06	04/22/06		
1,1,1-Trichloroethane	EPA 624	6D22007	0.30	2.0	ND	1	04/22/06	04/22/06		
1,1,2-Trichloroethane	EPA 624	6D22007	0.30	2.0	ND	1	04/22/06	04/22/06		
Trichloroethene	EPA 624	6D22007	0.26	5.0	ND	1	04/22/06	04/22/06		
Trichlorofluoromethane	EPA 624	6D22007	0.34	5.0	ND	1	04/22/06	04/22/06		
Vinyl chloride	EPA 624	6D22007	0.26	5.0	ND	1	04/22/06	04/22/06		
Xylenes, Total	EPA 624	6D22007	0.90	4.0	ND	1	04/22/06	04/22/06		
Surrogate: Dibromofluoromethane (80-120%)					106 %					
Surrogate: Toluene-d8 (80-120%)					98 %					
Surrogate: 4-Bromofluorobenzene (80-120%)					100 %					
Sample ID: IPD1607-02 (Trip Blank - Water)										
Reporting Units: ug/l										
Benzene	EPA 624	6D22007	0.28	2.0	ND	1	04/22/06	04/22/06	↓	
Carbon tetrachloride	EPA 624	6D22007	0.28	5.0	ND	1	04/22/06	04/22/06		
Chloroform	EPA 624	6D22007	0.33	2.0	ND	1	04/22/06	04/22/06		
1,1-Dichloroethane	EPA 624	6D22007	0.27	2.0	ND	1	04/22/06	04/22/06		
1,2-Dichloroethane	EPA 624	6D22007	0.28	2.0	ND	1	04/22/06	04/22/06		
1,1-Dichloroethene	EPA 624	6D22007	0.42	3.0	ND	1	04/22/06	04/22/06		
Ethylbenzene	EPA 624	6D22007	0.25	2.0	ND	1	04/22/06	04/22/06		
Tetrachloroethene	EPA 624	6D22007	0.32	2.0	ND	1	04/22/06	04/22/06		
Toluene	EPA 624	6D22007	0.36	2.0	ND	1	04/22/06	04/22/06		
1,1,1-Trichloroethane	EPA 624	6D22007	0.30	2.0	ND	1	04/22/06	04/22/06		
1,1,2-Trichloroethane	EPA 624	6D22007	0.30	2.0	ND	1	04/22/06	04/22/06		
Trichloroethene	EPA 624	6D22007	0.26	5.0	ND	1	04/22/06	04/22/06		
Trichlorofluoromethane	EPA 624	6D22007	0.34	5.0	ND	1	04/22/06	04/22/06		
Vinyl chloride	EPA 624	6D22007	0.26	5.0	ND	1	04/22/06	04/22/06		
Xylenes, Total	EPA 624	6D22007	0.90	4.0	ND	1	04/22/06	04/22/06		
Surrogate: Dibromofluoromethane (80-120%)					105 %					
Surrogate: Toluene-d8 (80-120%)					98 %					
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.

Level IV



DATA VALIDATION REPORT

NPDES Sampling
Outfall 001

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPD1607

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD1607
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: July 5, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the *MEC^X 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, 180.1, 350.2, and 413.1*, 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 001	IPD1607-01	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 below the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$, at 1°C ; however, as the sample was not noted to be frozen or damaged, no qualifications were required. 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 analyses were performed within the method specified holding times. No qualifications were required.

2.2 CALIBRATION

For Oil and Grease, TDS, and TSS, balance calibration logs provided by the laboratory were reviewed and found to be acceptable. For turbidity and conductivity, the calibration check standards were acceptable. For ammonia, no information regarding the standardization of the titrant was provided; however, as the LCS recovery was within the CCV control limits of 90-110%, no qualifications were required. No qualifications were required.

2.3 BLANKS

There were no detects in the method blanks or CCBs of sufficient concentration to qualify the site sample. 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

No laboratory duplicate analyses were performed in association with the sample in 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 the sample in this SDG; therefore, no assessment was made with respect to this criterion. Evaluation of method accuracy was based on the 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 I were verified against the raw data. Oil and Grease detected below the reporting limit was qualified as estimated, "J," and annotated with a qualification code of "DNQ," in accordance with 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.



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

Project ID: Routine Outfall 001
Report Number: IPD1607

Sampled: 04/15/06
Received: 04/15/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	Qual Code
Sample ID: IPD1607-01 (Outfall 001 - Water) - cont.										
Reporting Units: mg/l										
Ammonia-N (Distilled)	EPA 350.2	6D18084	0.30	0.50	ND	1	04/18/06	04/18/06	U	
Biochemical Oxygen Demand	EPA 405.1	6D17072	0.59	2.0	3.0	1	04/17/06	04/22/06	*	
Chloride	EPA 300.0	6D15028	0.15	0.50	24	1	04/15/06	04/15/06	*	
Nitrate/Nitrite-N	EPA 300.0	6D15028	0.080	0.15	0.19	1	04/15/06	04/15/06	*	
Oil & Grease	EPA 413.1	6D18050	0.89	4.7	1.9	1	04/18/06	04/18/06	J J	DNQ
Sulfate	EPA 300.0	6D15028	2.2	2.5	63	5	04/15/06	04/15/06	*	
Surfactants (MBAS)	SM5540-C	6D17076	0.044	0.10	0.094	1	04/17/06	04/17/06	* J	
Total Dissolved Solids	SM2540C	6D18055	10	10	250	1	04/18/06	04/18/06		
Total Suspended Solids	EPA 160.2	6D20128	10	10	36	1	04/20/06	04/20/06		
Sample ID: IPD1607-01 (Outfall 001 - Water)										
Reporting Units: ml/l/hr										
Total Settleable Solids	EPA 160.5	6D17056	0.10	0.10	ND	1	04/17/06	04/17/06	*	
Sample ID: IPD1607-01 (Outfall 001 - Water)										
Reporting Units: NTU										
Turbidity	EPA 180.1	6D15053	0.080	2.0	70	2	04/15/06	04/15/06		
Sample ID: IPD1607-01 (Outfall 001 - Water)										
Reporting Units: ug/l										
Total Cyanide	EPA 335.2	6D17101	2.2	5.0	ND	1	04/17/06	04/17/06	*	
Perchlorate	EPA 314.0	6D19069	0.80	4.0	ND	1	04/19/06	04/19/06	*	
Sample ID: IPD1607-01 (Outfall 001 - Water)										
Reporting Units: umhos/cm										
Specific Conductance	EPA 120.1	6D18054	1.0	1.0	470	1	04/18/06	04/18/06		

* Analysis not validated

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.

LEVEL IV

IPD1607 <Page 6 of 22>

APPENDIX G

Section 5

Outfall 002, April 04, 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 002

Sampled: 04/04/06
Received: 04/04/06
Issued: 05/07/06 16:23

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, 12 pages, are included and are an integral part of this report. This entire report was reviewed and approved for release.

CASE NARRATIVE

- SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.
- HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the 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.

LABORATORY ID	CLIENT ID	MATRIX
IPD0254-01	Outfall 002	Water
IPD0254-02	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: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06

Received: 04/04/06

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: IPD0254-01 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: ug/l									
Benzene	EPA 624	6D05021	0.28	2.0	ND	1	04/05/06	04/05/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6D05021	1.2	5.0	ND	1	04/05/06	04/05/06	
Carbon tetrachloride	EPA 624	6D05021	0.28	5.0	ND	1	04/05/06	04/05/06	
Chloroform	EPA 624	6D05021	0.33	2.0	ND	1	04/05/06	04/05/06	
1,1-Dichloroethane	EPA 624	6D05021	0.27	2.0	ND	1	04/05/06	04/05/06	
1,2-Dichloroethane	EPA 624	6D05021	0.28	2.0	ND	1	04/05/06	04/05/06	
1,1-Dichloroethene	EPA 624	6D05021	0.42	3.0	ND	1	04/05/06	04/05/06	
Ethylbenzene	EPA 624	6D05021	0.25	2.0	ND	1	04/05/06	04/05/06	
Tetrachloroethene	EPA 624	6D05021	0.32	2.0	ND	1	04/05/06	04/05/06	
Toluene	EPA 624	6D05021	0.36	2.0	ND	1	04/05/06	04/05/06	
1,1,1-Trichloroethane	EPA 624	6D05021	0.30	2.0	ND	1	04/05/06	04/05/06	
1,1,2-Trichloroethane	EPA 624	6D05021	0.30	2.0	ND	1	04/05/06	04/05/06	
Trichloroethene	EPA 624	6D05021	0.26	5.0	0.86	1	04/05/06	04/05/06	J
Trichlorofluoromethane	EPA 624	6D05021	0.34	5.0	ND	1	04/05/06	04/05/06	
Vinyl chloride	EPA 624	6D05021	0.26	5.0	ND	1	04/05/06	04/05/06	
Xylenes, Total	EPA 624	6D05021	0.90	4.0	ND	1	04/05/06	04/05/06	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					97 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					102 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					97 %				

Sample ID: IPD0254-02 (Trip Blank - Water)

Sampled: 04/04/06

Reporting Units: ug/l

Benzene	EPA 624	6D05021	0.28	2.0	ND	1	04/05/06	04/05/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6D05021	1.2	5.0	ND	1	04/05/06	04/05/06	
Carbon tetrachloride	EPA 624	6D05021	0.28	5.0	ND	1	04/05/06	04/05/06	
Chloroform	EPA 624	6D05021	0.33	2.0	ND	1	04/05/06	04/05/06	
1,1-Dichloroethane	EPA 624	6D05021	0.27	2.0	ND	1	04/05/06	04/05/06	
1,2-Dichloroethane	EPA 624	6D05021	0.28	2.0	ND	1	04/05/06	04/05/06	
1,1-Dichloroethene	EPA 624	6D05021	0.42	3.0	ND	1	04/05/06	04/05/06	
Ethylbenzene	EPA 624	6D05021	0.25	2.0	ND	1	04/05/06	04/05/06	
Tetrachloroethene	EPA 624	6D05021	0.32	2.0	ND	1	04/05/06	04/05/06	
Toluene	EPA 624	6D05021	0.36	2.0	ND	1	04/05/06	04/05/06	
1,1,1-Trichloroethane	EPA 624	6D05021	0.30	2.0	ND	1	04/05/06	04/05/06	
1,1,2-Trichloroethane	EPA 624	6D05021	0.30	2.0	ND	1	04/05/06	04/05/06	
Trichloroethene	EPA 624	6D05021	0.26	5.0	ND	1	04/05/06	04/05/06	
Trichlorofluoromethane	EPA 624	6D05021	0.34	5.0	ND	1	04/05/06	04/05/06	
Vinyl chloride	EPA 624	6D05021	0.26	5.0	ND	1	04/05/06	04/05/06	
Xylenes, Total	EPA 624	6D05021	0.90	4.0	ND	1	04/05/06	04/05/06	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					99 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					101 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					96 %				

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: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06

Received: 04/04/06

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: IPD0254-01 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6D10085	1.6	4.7	ND	0.943	04/10/06	04/12/06	
2,4-Dinitrotoluene	EPA 625	6D10085	0.19	8.5	ND	0.943	04/10/06	04/12/06	
N-Nitrosodimethylamine	EPA 625	6D10085	0.094	7.5	ND	0.943	04/10/06	04/12/06	
Pentachlorophenol	EPA 625	6D10085	0.094	7.5	ND	0.943	04/10/06	04/12/06	
2,4,6-Trichlorophenol	EPA 625	6D10085	0.094	5.7	ND	0.943	04/10/06	04/12/06	
<i>Surrogate: 2-Fluorophenol (30-120%)</i>					65 %				
<i>Surrogate: Phenol-d6 (35-120%)</i>					77 %				
<i>Surrogate: 2,4,6-Tribromophenol (45-120%)</i>					76 %				
<i>Surrogate: Nitrobenzene-d5 (45-120%)</i>					78 %				
<i>Surrogate: 2-Fluorobiphenyl (45-120%)</i>					79 %				
<i>Surrogate: Terphenyl-d14 (45-120%)</i>					91 %				

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Michele Chamberlin
Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06
Received: 04/04/06

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0254-01 (Outfall 002 - Water) - cont.					Sampled: 04/04/06				
Reporting Units: ug/l									
alpha-BHC	EPA 608	6D10116	0.00097	0.0097	ND	0.971	04/10/06	04/11/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					72 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					61 %				

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Michele Chamberlin
Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06

Received: 04/04/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0254-01 (Outfall 002 - Water) - cont.					Sampled: 04/04/06				
Reporting Units: ug/l									
Copper	EPA 200.8	6D04150	0.25	2.0	7.4	1	04/04/06	04/05/06	
Lead	EPA 200.8	6D04150	0.040	1.0	6.9	1	04/04/06	04/05/06	
Mercury	EPA 245.1	6D05091	0.050	0.20	0.090	1	04/05/06	04/05/06	J
Sample ID: IPD0254-01RE1 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: ug/l									
Copper	EPA 200.8	6D06072	0.25	2.0	8.0	1	04/06/06	04/07/06	
Lead	EPA 200.8	6D06072	0.040	1.0	7.4	1	04/06/06	04/07/06	

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: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06

Received: 04/04/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0254-01 (Outfall 002 - Water) - cont.					Sampled: 04/04/06				
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6D05128	0.30	0.50	1.7	1	04/05/06	04/05/06	
Biochemical Oxygen Demand	EPA 405.1	6D05064	0.59	2.0	3.5	1	04/05/06	04/10/06	
Chloride	EPA 300.0	6D04136	0.15	0.50	15	1	04/04/06	04/05/06	
Nitrate/Nitrite-N	EPA 300.0	6D04136	0.080	0.15	0.44	1	04/04/06	04/05/06	
Oil & Grease	EPA 413.1	6D05046	0.90	4.8	ND	1	04/05/06	04/05/06	
Sulfate	EPA 300.0	6D04136	0.45	0.50	41	1	04/04/06	04/05/06	
Surfactants (MBAS)	SM5540-C	6D05142	0.088	0.20	0.19	2	04/05/06	04/06/06	RL-1, J
Total Dissolved Solids	SM2540C	6D05071	10	10	190	1	04/05/06	04/05/06	
Total Suspended Solids	EPA 160.2	6D07128	10	10	170	1	04/07/06	04/07/06	
Sample ID: IPD0254-01 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	6D04131	0.10	0.10	1.0	1	04/04/06	04/04/06	
Sample ID: IPD0254-01 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: NTU									
Turbidity	EPA 180.1	6D05115	0.20	5.0	100	5	04/05/06	04/05/06	
Sample ID: IPD0254-01 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6D04108	2.2	5.0	ND	1	04/04/06	04/06/06	
Perchlorate	EPA 314.0	6D06060	0.80	4.0	ND	1	04/06/06	04/06/06	
Sample ID: IPD0254-01 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6D05070	1.0	1.0	310	1	04/05/06	04/05/06	

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: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06
Received: 04/04/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 002 (IPD0254-01) - Water	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	04/04/2006 10:56	04/04/2006 18:05	04/04/2006 19:45	04/04/2006 20:45
EPA 180.1	2	04/04/2006 10:56	04/04/2006 18:05	04/05/2006 13:30	04/05/2006 14:30
EPA 300.0	2	04/04/2006 10:56	04/04/2006 18:05	04/04/2006 20:30	04/05/2006 00:37
EPA 405.1	2	04/04/2006 10:56	04/04/2006 18:05	04/05/2006 16:00	04/10/2006 15:00
SM5540-C	2	04/04/2006 10:56	04/04/2006 18:05	04/05/2006 19:36	04/06/2006 00:03

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: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06
Received: 04/04/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D05021 Extracted: 04/05/06										
Blank Analyzed: 04/05/2006 (6D05021-BLK1)										
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	23.2			ug/l	25.0		93		80-120	
Surrogate: Toluene-d8	25.0			ug/l	25.0		100		80-120	
Surrogate: 4-Bromofluorobenzene	24.2			ug/l	25.0		97		80-120	
LCS Analyzed: 04/05/2006 (6D05021-BS1)										
Benzene	23.2	2.0	0.28	ug/l	25.0		93		65-120	
Carbon tetrachloride	25.0	5.0	0.28	ug/l	25.0		100		65-140	
Chloroform	22.4	2.0	0.33	ug/l	25.0		90		65-130	
1,1-Dichloroethane	23.0	2.0	0.27	ug/l	25.0		92		65-130	
1,2-Dichloroethane	25.4	2.0	0.28	ug/l	25.0		102		60-140	
1,1-Dichloroethene	23.7	3.0	0.42	ug/l	25.0		95		70-130	
Ethylbenzene	26.2	2.0	0.25	ug/l	25.0		105		70-125	
Tetrachloroethene	25.2	2.0	0.32	ug/l	25.0		101		65-125	
Toluene	24.2	2.0	0.36	ug/l	25.0		97		70-125	
1,1,1-Trichloroethane	22.6	2.0	0.30	ug/l	25.0		90		65-135	
1,1,2-Trichloroethane	25.0	2.0	0.30	ug/l	25.0		100		65-125	
Trichloroethene	25.2	5.0	0.26	ug/l	25.0		101		70-125	
Trichlorofluoromethane	22.1	5.0	0.34	ug/l	25.0		88		60-140	
Vinyl chloride	18.1	5.0	0.26	ug/l	25.0		72		50-130	
Surrogate: Dibromofluoromethane	25.1			ug/l	25.0		100		80-120	

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MWH-Pasadena/Boeing
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 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06
 Received: 04/04/06

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
Batch: 6D05021 Extracted: 04/05/06											
LCS Analyzed: 04/05/2006 (6D05021-BS1)											
Surrogate: Toluene-d8	26.0			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	26.6			ug/l	25.0		106	80-120			
Matrix Spike Analyzed: 04/05/2006 (6D05021-MS1) Source: IPD0254-01											
Benzene	22.5	2.0	0.28	ug/l	25.0	ND	90	60-125			
Carbon tetrachloride	23.0	5.0	0.28	ug/l	25.0	ND	92	65-140			
Chloroform	22.7	2.0	0.33	ug/l	25.0	ND	91	65-135			
1,1-Dichloroethane	22.8	2.0	0.27	ug/l	25.0	ND	91	60-130			
1,2-Dichloroethane	25.7	2.0	0.28	ug/l	25.0	ND	103	60-140			
1,1-Dichloroethene	22.0	3.0	0.42	ug/l	25.0	ND	88	60-135			
Ethylbenzene	23.7	2.0	0.25	ug/l	25.0	ND	95	65-130			
Tetrachloroethene	22.0	2.0	0.32	ug/l	25.0	ND	88	60-130			
Toluene	23.0	2.0	0.36	ug/l	25.0	ND	92	65-125			
1,1,1-Trichloroethane	22.1	2.0	0.30	ug/l	25.0	ND	88	65-140			
1,1,2-Trichloroethane	26.1	2.0	0.30	ug/l	25.0	ND	104	60-130			
Trichloroethene	24.4	5.0	0.26	ug/l	25.0	0.86	94	60-125			
Trichlorofluoromethane	20.9	5.0	0.34	ug/l	25.0	ND	84	55-145			
Vinyl chloride	17.2	5.0	0.26	ug/l	25.0	ND	69	40-135			
Surrogate: Dibromofluoromethane	26.8			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.6			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			
Matrix Spike Dup Analyzed: 04/05/2006 (6D05021-MSD1) Source: IPD0254-01											
Benzene	25.3	2.0	0.28	ug/l	25.0	ND	101	60-125	12	20	
Carbon tetrachloride	27.0	5.0	0.28	ug/l	25.0	ND	108	65-140	16	25	
Chloroform	25.7	2.0	0.33	ug/l	25.0	ND	103	65-135	12	20	
1,1-Dichloroethane	25.9	2.0	0.27	ug/l	25.0	ND	104	60-130	13	20	
1,2-Dichloroethane	27.7	2.0	0.28	ug/l	25.0	ND	111	60-140	7	20	
1,1-Dichloroethene	25.6	3.0	0.42	ug/l	25.0	ND	102	60-135	15	20	
Ethylbenzene	27.3	2.0	0.25	ug/l	25.0	ND	109	65-130	14	20	
Tetrachloroethene	26.4	2.0	0.32	ug/l	25.0	ND	106	60-130	18	20	
Toluene	26.3	2.0	0.36	ug/l	25.0	ND	105	65-125	13	20	
1,1,1-Trichloroethane	25.8	2.0	0.30	ug/l	25.0	ND	103	65-140	15	20	
1,1,2-Trichloroethane	27.5	2.0	0.30	ug/l	25.0	ND	110	60-130	5	25	
Trichloroethene	27.9	5.0	0.26	ug/l	25.0	0.86	108	60-125	13	20	
Trichlorofluoromethane	24.8	5.0	0.34	ug/l	25.0	ND	99	55-145	17	25	

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Report Number: IPD0254

Sampled: 04/04/06

Received: 04/04/06

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
Batch: 6D05021 Extracted: 04/05/06											
Matrix Spike Dup Analyzed: 04/05/2006 (6D05021-MSD1)						Source: IPD0254-01					
Vinyl chloride	20.2	5.0	0.26	ug/l	25.0	ND	81	40-135	16	30	
Surrogate: Dibromofluoromethane	26.8			ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.4			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.6			ug/l	25.0		106	80-120			

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Limit	Qualifiers
Batch: 6D10085 Extracted: 04/10/06											
Blank Analyzed: 04/12/2006 (6D10085-BLK1)											
Bis(2-ethylhexyl)phthalate	ND	5.0	1.7	ug/l							
2,4-Dinitrotoluene	ND	9.0	0.20	ug/l							
N-Nitrosodimethylamine	ND	8.0	0.10	ug/l							
Pentachlorophenol	ND	8.0	0.10	ug/l							
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l							
Surrogate: 2-Fluorophenol	11.6			ug/l	20.0		58	30-120			
Surrogate: Phenol-d6	13.8			ug/l	20.0		69	35-120			
Surrogate: 2,4,6-Tribromophenol	13.4			ug/l	20.0		67	45-120			
Surrogate: Nitrobenzene-d5	7.66			ug/l	10.0		77	45-120			
Surrogate: 2-Fluorobiphenyl	7.54			ug/l	10.0		75	45-120			
Surrogate: Terphenyl-d14	8.90			ug/l	10.0		89	45-120			
LCS Analyzed: 04/12/2006 (6D10085-BS1)											
Bis(2-ethylhexyl)phthalate	10.5	5.0	1.7	ug/l	10.0		105	60-130			
2,4-Dinitrotoluene	8.82	9.0	0.20	ug/l	10.0		88	60-120			J
N-Nitrosodimethylamine	7.72	8.0	0.10	ug/l	10.0		77	40-120			J
Pentachlorophenol	8.76	8.0	0.10	ug/l	10.0		88	50-120			
2,4,6-Trichlorophenol	7.86	6.0	0.10	ug/l	10.0		79	60-120			
Surrogate: 2-Fluorophenol	12.3			ug/l	20.0		62	30-120			
Surrogate: Phenol-d6	13.5			ug/l	20.0		68	35-120			
Surrogate: 2,4,6-Tribromophenol	14.7			ug/l	20.0		74	45-120			
Surrogate: Nitrobenzene-d5	6.82			ug/l	10.0		68	45-120			
Surrogate: 2-Fluorobiphenyl	6.62			ug/l	10.0		66	45-120			
Surrogate: Terphenyl-d14	7.92			ug/l	10.0		79	45-120			
LCS Dup Analyzed: 04/12/2006 (6D10085-BSD1)											
Bis(2-ethylhexyl)phthalate	12.2	5.0	1.7	ug/l	10.0		122	60-130	15	20	
2,4-Dinitrotoluene	10.7	9.0	0.20	ug/l	10.0		107	60-120	19	20	
N-Nitrosodimethylamine	9.14	8.0	0.10	ug/l	10.0		91	40-120	17	20	
Pentachlorophenol	9.64	8.0	0.10	ug/l	10.0		96	50-120	10	25	
2,4,6-Trichlorophenol	8.16	6.0	0.10	ug/l	10.0		82	60-120	4	20	
Surrogate: 2-Fluorophenol	12.0			ug/l	20.0		60	30-120			
Surrogate: Phenol-d6	14.2			ug/l	20.0		71	35-120			
Surrogate: 2,4,6-Tribromophenol	15.9			ug/l	20.0		80	45-120			
Surrogate: Nitrobenzene-d5	7.90			ug/l	10.0		79	45-120			
Surrogate: 2-Fluorobiphenyl	7.90			ug/l	10.0		79	45-120			

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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
Batch: 6D10085 Extracted: 04/10/06											
LCS Dup Analyzed: 04/12/2006 (6D10085-BSD1)											
Surrogate: Terphenyl-d14	8.82			ug/l	10.0		88	45-120			

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ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D10116 Extracted: 04/10/06											
Blank Analyzed: 04/11/2006 (6D10116-BLK1)											
alpha-BHC	ND	0.010	0.0010	ug/l							
Surrogate: Decachlorobiphenyl	0.427			ug/l	0.500		85	45-120			
Surrogate: Tetrachloro-m-xylene	0.377			ug/l	0.500		75	35-115			
LCS Analyzed: 04/11/2006 (6D10116-BS1)											
alpha-BHC	0.371	0.010	0.0010	ug/l	0.500		74	45-120			M-NR1
Surrogate: Decachlorobiphenyl	0.412			ug/l	0.500		82	45-120			
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		70	35-115			
LCS Dup Analyzed: 04/11/2006 (6D10116-BSD1)											
alpha-BHC	0.388	0.010	0.0010	ug/l	0.500		78	45-120	4	30	
Surrogate: Decachlorobiphenyl	0.418			ug/l	0.500		84	45-120			
Surrogate: Tetrachloro-m-xylene	0.373			ug/l	0.500		75	35-115			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D04150 Extracted: 04/04/06											
Blank Analyzed: 04/05/2006 (6D04150-BLK1)											
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
LCS Analyzed: 04/05/2006 (6D04150-BS1)											
Copper	79.2	2.0	0.25	ug/l	80.0		99	85-115			
Lead	80.9	1.0	0.040	ug/l	80.0		101	85-115			
Matrix Spike Analyzed: 04/05/2006 (6D04150-MS1) Source: IPD0254-01											
Copper	82.0	2.0	0.25	ug/l	80.0	7.4	93	70-130			
Lead	85.8	1.0	0.040	ug/l	80.0	6.9	99	70-130			
Matrix Spike Dup Analyzed: 04/05/2006 (6D04150-MSD1) Source: IPD0254-01											
Copper	80.7	2.0	0.25	ug/l	80.0	7.4	92	70-130	2	20	
Lead	85.5	1.0	0.040	ug/l	80.0	6.9	98	70-130	0	20	
Batch: 6D05091 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05091-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/05/2006 (6D05091-BS1)											
Mercury	7.98	0.20	0.050	ug/l	8.00		100	85-115			
Matrix Spike Analyzed: 04/05/2006 (6D05091-MS1) Source: IPD0241-01											
Mercury	8.57	0.20	0.050	ug/l	8.00	0.060	106	70-130			
Matrix Spike Dup Analyzed: 04/05/2006 (6D05091-MSD1) Source: IPD0241-01											
Mercury	8.73	0.20	0.050	ug/l	8.00	0.060	108	70-130	2	20	

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D06072 Extracted: 04/06/06											
Blank Analyzed: 04/06/2006 (6D06072-BLK1)											
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
LCS Analyzed: 04/06/2006 (6D06072-BS1)											
Copper	81.8	2.0	0.25	ug/l	80.0		102	85-115			
Lead	81.3	1.0	0.040	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 04/06/2006 (6D06072-MS1) Source: IPD0061-03											
Copper	79.0	2.0	0.25	ug/l	80.0	ND	99	70-130			
Lead	80.0	1.0	0.040	ug/l	80.0	ND	100	70-130			
Matrix Spike Analyzed: 04/07/2006 (6D06072-MS2) Source: IPD0061-04											
Copper	79.2	2.0	0.25	ug/l	80.0	1.3	97	70-130			
Lead	79.5	1.0	0.040	ug/l	80.0	0.060	99	70-130			
Matrix Spike Dup Analyzed: 04/07/2006 (6D06072-MSD1) Source: IPD0061-03											
Copper	76.0	2.0	0.25	ug/l	80.0	ND	95	70-130	4	20	
Lead	77.5	1.0	0.040	ug/l	80.0	ND	97	70-130	3	20	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D04108 Extracted: 04/04/06											
Blank Analyzed: 04/06/2006 (6D04108-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 04/06/2006 (6D04108-BS1)											
Total Cyanide	195	5.0	2.2	ug/l	200		98	90-110			
Matrix Spike Analyzed: 04/06/2006 (6D04108-MS1)											
						Source: IPD0066-01					
Total Cyanide	194	5.0	2.2	ug/l	200	ND	97	70-115			
Matrix Spike Dup Analyzed: 04/06/2006 (6D04108-MSD1)											
						Source: IPD0066-01					
Total Cyanide	198	5.0	2.2	ug/l	200	ND	99	70-115	2	15	
Batch: 6D04136 Extracted: 04/04/06											
Blank Analyzed: 04/04/2006 (6D04136-BLK1)											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
LCS Analyzed: 04/04/2006 (6D04136-BS1)											
Chloride	4.76	0.50	0.15	mg/l	5.00		95	90-110			
Sulfate	9.53	0.50	0.45	mg/l	10.0		95	90-110			
Matrix Spike Analyzed: 04/04/2006 (6D04136-MS1)											
						Source: IPD0234-12					
Chloride	109	5.0	1.5	mg/l	50.0	66	86	80-120			
Sulfate	268	5.0	4.5	mg/l	100	180	88	80-120			
Matrix Spike Dup Analyzed: 04/04/2006 (6D04136-MSD1)											
						Source: IPD0234-12					
Chloride	106	5.0	1.5	mg/l	50.0	66	80	80-120	3	20	
Sulfate	258	5.0	4.5	mg/l	100	180	78	80-120	4	20	M2

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6D05046 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05046-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/05/2006 (6D05046-BS1)											
Oil & Grease	16.4	5.0	0.94	mg/l	20.0		82	65-120			M-NR1
LCS Dup Analyzed: 04/05/2006 (6D05046-BSD1)											
Oil & Grease	16.5	5.0	0.94	mg/l	20.0		82	65-120	1	20	
Batch: 6D05064 Extracted: 04/05/06											
Blank Analyzed: 04/10/2006 (6D05064-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 04/10/2006 (6D05064-BS1)											
Biochemical Oxygen Demand	226	100	30	mg/l	198		114	85-115			
LCS Dup Analyzed: 04/10/2006 (6D05064-BSD1)											
Biochemical Oxygen Demand	226	100	30	mg/l	198		114	85-115	0	20	
Batch: 6D05070 Extracted: 04/05/06											
Duplicate Analyzed: 04/05/2006 (6D05070-DUP1)											
Specific Conductance	21.3	1.0	1.0	umhos/cm		Source: IPD0242-01	21		1	5	
Batch: 6D05071 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05071-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							

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Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D05071 Extracted: 04/05/06											
LCS Analyzed: 04/05/2006 (6D05071-BS1)											
Total Dissolved Solids	998	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 04/05/2006 (6D05071-DUP1) Source: IPD0242-01											
Total Dissolved Solids	16.0	10	10	mg/l		18			12	10	R-4
Batch: 6D05115 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05115-BLK1)											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 04/05/2006 (6D05115-DUP1) Source: IPD0239-01											
Turbidity	18.5	1.0	0.040	NTU		18			3	20	
Batch: 6D05128 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05128-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 04/05/2006 (6D05128-BS1)											
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0		109	80-115			
Matrix Spike Analyzed: 04/05/2006 (6D05128-MS1) Source: IPD0105-01											
Ammonia-N (Distilled)	11.8	0.50	0.30	mg/l	10.0	1.4	104	70-120			
Matrix Spike Dup Analyzed: 04/05/2006 (6D05128-MSD1) Source: IPD0105-01											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	1.4	101	70-120	3	15	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D05142 Extracted: 04/05/06											
Blank Analyzed: 04/06/2006 (6D05142-BLK1)											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 04/06/2006 (6D05142-BS1)											
Surfactants (MBAS)	0.261	0.10	0.044	mg/l	0.250		104	90-110			
Matrix Spike Analyzed: 04/06/2006 (6D05142-MS1)											
						Source: IPD0205-01					
Surfactants (MBAS)	0.250	0.10	0.044	mg/l	0.250	ND	100	50-125			
Matrix Spike Dup Analyzed: 04/06/2006 (6D05142-MSD1)											
						Source: IPD0205-01					
Surfactants (MBAS)	0.250	0.10	0.044	mg/l	0.250	ND	100	50-125	0	20	
Batch: 6D06060 Extracted: 04/06/06											
Blank Analyzed: 04/06/2006 (6D06060-BLK1)											
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 04/06/2006 (6D06060-BS1)											
Perchlorate	46.7	4.0	0.80	ug/l	50.0		93	85-115			
Matrix Spike Analyzed: 04/06/2006 (6D06060-MS1)											
						Source: IPD0173-01					
Perchlorate	78.3	4.0	0.80	ug/l	50.0	30	97	80-120			
Matrix Spike Dup Analyzed: 04/06/2006 (6D06060-MSD1)											
						Source: IPD0173-01					
Perchlorate	78.4	4.0	0.80	ug/l	50.0	30	97	80-120	0	20	
Batch: 6D07128 Extracted: 04/07/06											
Blank Analyzed: 04/07/2006 (6D07128-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							

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: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06

Received: 04/04/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D07128 Extracted: 04/07/06											
LCS Analyzed: 04/07/2006 (6D07128-BS1)											
Total Suspended Solids	975	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 04/07/2006 (6D07128-DUP1)											
Total Suspended Solids	64.0	10	10	mg/l		67			5	10	

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Project Manager



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Project ID: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06

Received: 04/04/06

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
IPD0254-01	413.1 Oil and Grease	Oil & Grease	mg/l	0	4.8	10.00
IPD0254-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0097	0.0100
IPD0254-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPD0254-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0.86	5.0	5.00
IPD0254-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.7	6.50
IPD0254-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.5	9.10
IPD0254-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.98	4.7	4.00
IPD0254-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.5	8.10
IPD0254-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.5	8.20
IPD0254-01	BOD	Biochemical Oxygen Demand	mg/l	3.50	2.0	20
IPD0254-01	Chloride - 300.0	Chloride	mg/l	15	0.50	150
IPD0254-01	Copper-200.8	Copper	ug/l	7.40	2.0	7.10
IPD0254-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	-1	5.0	4.30
IPD0254-01	Lead-200.8	Lead	ug/l	6.90	1.0	2.60
IPD0254-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.19	0.20	0.50
IPD0254-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.44	0.15	8.00
IPD0254-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPD0254-01	Sulfate-300.0	Sulfate	mg/l	41	0.50	300
IPD0254-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	190	10	950
IPD0254-01RE1	Copper-200.8	Copper	ug/l	8.00	2.0	7.10
IPD0254-01RE1	Lead-200.8	Lead	ug/l	7.40	1.0	2.60
IPD0254-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPD0254-02	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00

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: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06
Received: 04/04/06

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.
- 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-4** Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- RL-1** Reporting limit raised due to sample matrix effects.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

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 002

Report Number: IPD0254

Sampled: 04/04/06

Received: 04/04/06

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Liquid	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 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
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

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: IPD0254-01

Analysis Performed: EDD + Level 4

Samples: IPD0254-01

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager

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IPD0254

Del Mar Analytical Version 3/1/06 CHAIN OF CUSTODY FORM

Client Name/Address:		Project:		Boeing-SSFL NPDES Routine Outfall 002 Quarterly MC 4/5/04				
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project Manager: Bronwyn Kelly		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515				
Sampler: Rick Brito ROSEN BRUNO SO		Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #
Outfall 002	W	Poly-1 liter	1			4-4-06 10:56	HNO3	1A
Outfall 002-Dup	W	Poly-1 liter	1				HNO3	1B
Outfall 002	W	Poly-1 liter	1				None	2
Outfall 002	W	VOAS	3				HCl	3A, 3B, 3C
Outfall 002	W	Glass-Amber	2				None	4A, 4B
Outfall 002	W	1L Amber	2				HCl	5A, 5B
Outfall 002	W	Poly-500 ml	1				NaOH	6
Outfall 002	W	Poly-1 liter	1				None	7
Outfall 002	W	Poly-500 ml	2				None	8A, 8B
Outfall 002	W	Poly-500 ml	2				None	9A, 9B
Outfall 002	W	Poly-500 ml	2				None	10A, 10B
Outfall 002	W	Poly-500 ml	1				H2SO4	11
Outfall 002	W	1L Amber	2				None	12A, 12B
Outfall 002	W	1L Amber	2				None	13A, 13B
Trip Blank	W	VOAS	3				HCl	14A, 14B, 14C

Relinquished By	Date/Time	Received By	Date/Time
<i>[Signature]</i>	4-4-06 1445	<i>[Signature]</i>	4-4-06 1445
Relinquished By	Date/Time	Received By	Date/Time
May	9-4-06 1805		
Relinquished By	Date/Time	Received By	Date/Time

ANALYSIS REQUIRED		Field readings:
Turn around Time: (check)	24 Hours	Temp = 58°
	48 Hours	pH = 7.6
	72 Hours	
Perchlorate Only 72 Hours		
Metals Only 72 Hours		
Sample Integrity: (Check)	Intact	
On Ice:		



April 18, 2006

Alta Project I.D.: 27548

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 April 06, 2006 under your Project Name "IPD0254". 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. 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 NELAC 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: 4/6/2006

Alta Lab. ID

Client Sample ID

27548-001

IPD0254-01

SECTION II

Method Blank					EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7910	Lab Sample:	0-MB001	Date Analyzed DB-5:	11-Apr-06	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	9-Apr-06						
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers	
2,3,7,8-TCDD	ND	0.000000628			IS 13C-2,3,7,8-TCDD	74.5	25 - 164		
1,2,3,7,8-PeCDD	ND	0.000000450			13C-1,2,3,7,8-PeCDD	71.4	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.000000804			13C-1,2,3,4,7,8-HxCDD	74.6	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.000000867			13C-1,2,3,6,7,8-HxCDD	70.7	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.000000808			13C-1,2,3,4,6,7,8-HpCDD	75.4	23 - 140		
1,2,3,4,6,7,8-HpCDD	ND	0.00000111			13C-OCDD	55.5	17 - 157		
OCDD	0.00000259			J	13C-2,3,7,8-TCDF	77.3	24 - 169		
2,3,7,8-TCDF	ND	0.000000346			13C-1,2,3,7,8-PeCDF	73.3	24 - 185		
1,2,3,7,8-PeCDF	ND	0.000000474			13C-2,3,4,7,8-PeCDF	72.6	21 - 178		
2,3,4,7,8-PeCDF	ND	0.000000453			13C-1,2,3,4,7,8-HxCDF	74.5	26 - 152		
1,2,3,4,7,8-HxCDF	ND	0.000000436			13C-1,2,3,6,7,8-HxCDF	66.9	26 - 123		
1,2,3,6,7,8-HxCDF	ND	0.000000334			13C-2,3,4,6,7,8-HxCDF	71.8	28 - 136		
2,3,4,6,7,8-HxCDF	ND	0.000000326			13C-1,2,3,7,8,9-HxCDF	70.0	29 - 147		
1,2,3,7,8,9-HxCDF	ND	0.000000456			13C-1,2,3,4,6,7,8-HpCDF	66.9	28 - 143		
1,2,3,4,6,7,8-HpCDF	ND	0.000000395			13C-1,2,3,4,7,8,9-HpCDF	72.4	26 - 138		
1,2,3,4,7,8,9-HpCDF	ND	0.000000424			13C-OCDF	56.7	17 - 157		
OCDF	ND	0.00000136			CRS 37Cl-2,3,7,8-TCDD	84.0	35 - 197		
Totals					Footnotes				
Total TCDD	ND	0.000000628			a. Sample specific estimated detection limit.				
Total PeCDD	ND	0.000000450			b. Estimated maximum possible concentration.				
Total HxCDD	ND	0.000000828			c. Method detection limit.				
Total HpCDD	ND	0.00000111			d. Lower control limit - upper control limit.				
Total TCDF	ND	0.000000346							
Total PeCDF	ND	0.000000463							
Total HxCDF	ND	0.000000473							
Total HpCDF	ND	0.000000408							

Analyst: MAS

Approved By: William J. Luksemburg 12-Apr-2006 09:56

NPDES - 167

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	7910	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	9-Apr-06	Date Analyzed DB-5:	10-Apr-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	11.0	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	76.2	25 - 164	
1,2,3,7,8-PeCDD	50.0	53.6	35 - 71	13C-1,2,3,7,8-PeCDD	73.8	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	53.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	79.3	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	53.2	38 - 67	13C-1,2,3,6,7,8-HxCDD	72.2	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	53.8	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	77.9	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	54.0	35 - 70	13C-OCDD	51.6	17 - 157	
OCDD	100	107	78 - 144	13C-2,3,7,8-TCDF	78.6	24 - 169	
2,3,7,8-TCDF	10.0	10.9	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	74.4	24 - 185	
1,2,3,7,8-PeCDF	50.0	54.1	40 - 67	13C-2,3,4,7,8-PeCDF	75.4	21 - 178	
2,3,4,7,8-PeCDF	50.0	54.3	34 - 80	13C-1,2,3,4,7,8-HxCDF	78.7	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	53.4	36 - 67	13C-1,2,3,6,7,8-HxCDF	75.6	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	52.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	75.6	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	51.8	35 - 78	13C-1,2,3,7,8,9-HxCDF	75.1	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	52.7	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	68.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	52.6	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	75.5	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	52.6	39 - 69	13C-OCDF	56.6	17 - 157	
OCDF	100	105	63 - 170	CRS 37Cl-2,3,7,8-TCDD	87.2	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 12-Apr-2006 09:56

Sample ID: IPD0254-01					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine		Matrix:	Aqueous	Lab Sample:	27548-001	Date Received:	6-Apr-06
Project:	IPD0254		Sample Size:	1.03 L	QC Batch No.:	7910	Date Extracted:	9-Apr-06
Date Collected:	4-Apr-06				Date Analyzed DB-5:	11-Apr-06	Date Analyzed DB-225:	NA
Time Collected:	1056							
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000744			IS 13C-2,3,7,8-TCDD	62.3	25 - 164	
1,2,3,7,8-PeCDD	ND		0.00000115		13C-1,2,3,7,8-PeCDD	55.8	25 - 181	
1,2,3,4,7,8-HxCDD	0.00000299			J	13C-1,2,3,4,7,8-HxCDD	59.2	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000721			J	13C-1,2,3,6,7,8-HxCDD	55.0	28 - 130	
1,2,3,7,8,9-HxCDD	0.00000518			J	13C-1,2,3,4,6,7,8-HpCDD	62.7	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.000179				13C-OCDD	52.4	17 - 157	
OCDD	0.00189			B	13C-2,3,7,8-TCDF	64.6	24 - 169	
2,3,7,8-TCDF	0.00000121			J	13C-1,2,3,7,8-PeCDF	56.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000124			13C-2,3,4,7,8-PeCDF	57.7	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000104			13C-1,2,3,4,7,8-HxCDF	57.9	26 - 152	
1,2,3,4,7,8-HxCDF	0.00000147			J	13C-1,2,3,6,7,8-HxCDF	47.7	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000137			13C-2,3,4,6,7,8-HxCDF	56.2	28 - 136	
2,3,4,6,7,8-HxCDF	0.00000153			J	13C-1,2,3,7,8,9-HxCDF	57.9	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000913			13C-1,2,3,4,6,7,8-HpCDF	55.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.0000330				13C-1,2,3,4,7,8,9-HpCDF	60.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	0.00000259			J	13C-OCDF	51.8	17 - 157	
OCDF	0.000116				CRS 37Cl-2,3,7,8-TCDD	84.8	35 - 197	
Totals					Footnotes			
Total TCDD	ND		0.00000143		a. Sample specific estimated detection limit.			
Total PeCDD	0.0000112		0.0000168		b. Estimated maximum possible concentration.			
Total HxCDD	0.0000674				c. Method detection limit.			
Total HpCDD	0.000358				d. Lower control limit - upper control limit.			
Total TCDF	0.00000780							
Total PeCDF	0.00000367		0.00000548					
Total HxCDF	0.0000329							
Total HpCDF	0.000102							

Analyst: MAS

Approved By: William J. Luksemburg 12-Apr-2006 09:56

NPDES - 169

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

Accrediting Authority	Certificate Number
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
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 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 # IPD0254

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:

Alta Analytical - SUB 27548
 1104 Windfield Way
 El Dorado Hills, CA 95762
 Phone : (916) 933-1640
 Fax: (916) 673-0106 1.8°C

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

Analysis	Expiration	Comments
Sample ID: IPD0254-01 Water	Sampled: 04/04/06 10:56	Instant Notification
1613-Dioxin-HR-Alta	04/11/06 10:56	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	05/02/06 10:56	Excel EDD email to pm, Include Std logs for Lvl IV

Containers Supplied:
 1 L Amber (IPD0254-01G)
 1 L Amber (IPD0254-01H)

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: 4/5/06 Time: _____~~ Received By: *Bethmaria J. Benedict* Date: 4/6/06 Time: 0850

Released By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27548

Samples Arrival:	Date/Time <u>4/6/06 0850</u>	Initials: <u>VB/B</u>	Location: <u>WR-2</u>
			Shelf/Rack: _____
Logged In:	Date/Time <u>4/6/06 0955</u>	Initials: <u>VB/B</u>	Location: <u>WR-2</u>
			Shelf/Rack: <u>C-3</u>
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	<u>1.8°C</u>	Time: <u>0900</u>	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 # <u>7920 6313 8160</u>	✓		
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 ₂ S ₂ O ₃ Preservation Documented?		COC	Sample Container
			None
Shipping Container	Alta	Client	Retain
			Return
			Dispose

Comments:

APPENDIX G

Section 6

Outfall 002, April 04, 2006

MEC^X Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4DF91
 Task Order: 1261.001D.01
 SDG No.: IPD0254

No. of Analyses: 1

Laboratory: Alta Analytical
 Reviewer: K. Shadowlight
 Analysis/Method: Dioxins

Date: <u>June 5, 2006</u>
Reviewer's Signature <u>P. Meeks for K. Shadowlight</u>

ACTION ITEMS^a	
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.,	Qualification applied for an unconfirmed detect, detects below the reporting limit and for EMPC values.
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^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b 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 002

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPD0254

Prepared by
MEC^X, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001D.01
Sample Delivery Group: IPD0254
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: June 5, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x 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 002	IPD0254-01	27548-001	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 within the temperature limits at 2°C. 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 03/22/2006 on instrument VG-5. 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 VER was 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 (0-7910-MB001) was extracted and analyzed with the sample in this SDG. Target compound OCDD was detected in the method blank at a concentration below the laboratory calibration level. OCDD was also detected in the site sample; however, the detect in the sample exceeded five times the concentration reported in the method blank and required no qualification. There were no other target compounds detected in the method blank. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7910-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 qualification of the site sample was 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. A confirmation analysis for the 2,3,7,8-TCDF detect in sample Outfall 002 was not performed by the laboratory as required by Method 1613; therefore,

the detect for 2,3,7,8-TCDF was qualified as estimated, "J," in the site sample. Any 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. Any reported estimated maximum possible concentration (EMPC) was qualified as an estimated nondetect, "UJ." No further qualifications were required.

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4MT82
 Task Order: 1261.001D.021
 SDG No.: IPD0254

No. of Analyses: 1

Laboratory: Del Mar Analytical
 Reviewer: P. Meeks
 Analysis/Method: Metals

Date: <u>June 6, 2006</u>
Reviewer's Signature <i>P. Meeks</i>

ACTION ITEMS^a	
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.,	Reanalyses rejected in favor of original results.
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^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Sampling
Outfall 002

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPD0254

Prepared by

MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD0254
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: June 6, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC^X *Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, EPA Method 200.8, 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 002	IPD0254-01	Water	200.8

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 \pm 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. Outfall 002 was reanalyzed for copper and lead. As the laboratory did not append the MWH ID for the reanalyses with "RE1," the reviewer added this information to the Form I. 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. 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. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and the recoveries were considered to be acceptable. No qualifications were required.

2.4 BLANKS

There were no detects in the method blanks or CCBs associated with the sample in this SDG. No 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. Copper, which is not spiked into the ICSA solution, was detected above the reporting limit in the ICSA. The reviewer checked the sample analysis for the presence of known interferents. None were noted at concentrations that would require sample qualification. All recoveries were acceptable and no qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The ICP-MS recoveries were within the laboratory-established control limits of 85-115%. No qualifications were required.

2.7 LABORATORY DUPLICATES

No 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

MS/MSD analyses were performed on Outfall 002 for the ICP-MS analytes. All recoveries and both RPDs were within the laboratory established control limits. 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 analytes analyzed by ICP-MS, the internal standards were within the method-specified control limits of 60-125%. No qualifications were required.

2.11 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 I were verified against the raw data. No transcription errors or calculation errors were noted.

Per a request from MWH personnel, the laboratory reanalyzed sample Outfall 002 for copper and lead. As the reanalyses yielded results similar to the original results, the reanalyses, Outfall 002 RE1, were rejected, "R," in favor of the original results. 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.



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

Project ID: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06

Received: 04/04/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
Sample ID: IPD0254-01 (Outfall 002 - Water) - cont.					Sampled: 04/04/06				Rev Qual	Qual Code
Reporting Units: ug/l										
Copper	EPA 200.8	6D04150	0.25	2.0	7.4	1	04/04/06	04/05/06		
Lead	EPA 200.8	6D04150	0.040	1.0	6.9	1	04/04/06	04/05/06		
Mercury	EPA 245.1	6D05091	0.050	0.20	0.090	1	04/05/06	04/05/06	* J	
Sample ID: IPD0254-01RE1 (Outfall 002 - Water) Outfall 002 RE1					Sampled: 04/04/06					
Reporting Units: ug/l										
Copper	EPA 200.8	6D06072	0.25	2.0	8.0	1	04/06/06	04/07/06	R D	
Lead	EPA 200.8	6D06072	0.040	1.0	7.4	1	04/06/06	04/07/06	R D	

*Analysis not validated

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

LEVEL IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4VO60
 Task Order: 1261.001D.01
 SDG No.: IPD0254

No. of Analyses: 2

Laboratory: Del Mar Analytical
 Reviewer: L. Calvin
 Analysis/Method: Dioxins

Date: <u>June 5, 2006</u>
Reviewer's Signature <i>P. Marks for L. Calvin</i>

ACTION ITEMS^a	
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.,	Qualification applied for a detect 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	_____
COMMENTS^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b 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 002

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPD0254

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD0254
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: June 5, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^X 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	IPD0254-01	Water	624
Trip Blank	IPD0254-02	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 3°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 preserved 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 sample analyses, dated 03/16/06 (trichlorotrifluoroethane only) and 03/28/06 (all remaining target compounds). The average RRFs were ≥0.05, and the %RSDs were ≤35% or r^2 values ≥0.995 for all target compounds listed on the sample result summary forms. The continuing calibrations associated with the sample analyses were dated 04/05/06. The RRFs were ≥0.05% and the %Ds were within the QC limit of ≤20% for all target compounds. No qualifications were required.

2.4 BLANKS

One method blank (6D05021-BLK1) was analyzed with this SDG. No target compounds were detected above the MDL 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 (6D05021-BS1) was analyzed with this SDG. All 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 002. All recoveries and RPDs were within the laboratory-established 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.

2.8 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 002. No target compounds were detected above the MDL 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 ± 30 seconds for retention times. The internal standard areas 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. Any detects reported between the MDL and the reporting limit were qualified as estimated, "J," and denoted with the "DNQ" qualifier code in accordance with the NPDES permit. No further 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.



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

Project ID: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06
Received: 04/04/06

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: IPD0254-01 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: ug/l									
Benzene	EPA 624	6D05021	0.28	2.0	ND	1	04/05/06	04/05/06	U
Trichlorotrifluoroethane (Freon 113)	EPA 624	6D05021	1.2	5.0	ND	1	04/05/06	04/05/06	U
Carbon tetrachloride	EPA 624	6D05021	0.28	5.0	ND	1	04/05/06	04/05/06	U
Chloroform	EPA 624	6D05021	0.33	2.0	ND	1	04/05/06	04/05/06	U
1,1-Dichloroethane	EPA 624	6D05021	0.27	2.0	ND	1	04/05/06	04/05/06	U
1,2-Dichloroethane	EPA 624	6D05021	0.28	2.0	ND	1	04/05/06	04/05/06	U
1,1-Dichloroethene	EPA 624	6D05021	0.42	3.0	ND	1	04/05/06	04/05/06	U
Ethylbenzene	EPA 624	6D05021	0.25	2.0	ND	1	04/05/06	04/05/06	U
Tetrachloroethene	EPA 624	6D05021	0.32	2.0	ND	1	04/05/06	04/05/06	U
Toluene	EPA 624	6D05021	0.36	2.0	ND	1	04/05/06	04/05/06	U
1,1,1-Trichloroethane	EPA 624	6D05021	0.30	2.0	ND	1	04/05/06	04/05/06	U
1,1,2-Trichloroethane	EPA 624	6D05021	0.30	2.0	ND	1	04/05/06	04/05/06	U
Trichloroethene	EPA 624	6D05021	0.26	5.0	0.86	1	04/05/06	04/05/06	J J
Trichlorofluoromethane	EPA 624	6D05021	0.34	5.0	ND	1	04/05/06	04/05/06	U
Vinyl chloride	EPA 624	6D05021	0.26	5.0	ND	1	04/05/06	04/05/06	U
Xylenes, Total	EPA 624	6D05021	0.90	4.0	ND	1	04/05/06	04/05/06	U
Surrogate: Dibromofluoromethane (80-120%)					97 %				
Surrogate: Toluene-d8 (80-120%)					102 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					97 %				
Sample ID: IPD0254-02 (Trip Blank - Water)					Sampled: 04/04/06				
Reporting Units: ug/l									
Benzene	EPA 624	6D05021	0.28	2.0	ND	1	04/05/06	04/05/06	U
Trichlorotrifluoroethane (Freon 113)	EPA 624	6D05021	1.2	5.0	ND	1	04/05/06	04/05/06	U
Carbon tetrachloride	EPA 624	6D05021	0.28	5.0	ND	1	04/05/06	04/05/06	U
Chloroform	EPA 624	6D05021	0.33	2.0	ND	1	04/05/06	04/05/06	U
1,1-Dichloroethane	EPA 624	6D05021	0.27	2.0	ND	1	04/05/06	04/05/06	U
1,2-Dichloroethane	EPA 624	6D05021	0.28	2.0	ND	1	04/05/06	04/05/06	U
1,1-Dichloroethene	EPA 624	6D05021	0.42	3.0	ND	1	04/05/06	04/05/06	U
Ethylbenzene	EPA 624	6D05021	0.25	2.0	ND	1	04/05/06	04/05/06	U
Tetrachloroethene	EPA 624	6D05021	0.32	2.0	ND	1	04/05/06	04/05/06	U
Toluene	EPA 624	6D05021	0.36	2.0	ND	1	04/05/06	04/05/06	U
1,1,1-Trichloroethane	EPA 624	6D05021	0.30	2.0	ND	1	04/05/06	04/05/06	U
1,1,2-Trichloroethane	EPA 624	6D05021	0.30	2.0	ND	1	04/05/06	04/05/06	U
Trichloroethene	EPA 624	6D05021	0.26	5.0	ND	1	04/05/06	04/05/06	U
Trichlorofluoromethane	EPA 624	6D05021	0.34	5.0	ND	1	04/05/06	04/05/06	U
Vinyl chloride	EPA 624	6D05021	0.26	5.0	ND	1	04/05/06	04/05/06	U
Xylenes, Total	EPA 624	6D05021	0.90	4.0	ND	1	04/05/06	04/05/06	U
Surrogate: Dibromofluoromethane (80-120%)					99 %				
Surrogate: Toluene-d8 (80-120%)					101 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					96 %				

rev
qual
qual
Decode

J J DNR

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

Level IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4WC85
 Task Order: 1261.001D.01
 SDG No.: IPD0254

No. of Analyses: 1

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

Date: <u>June 6, 2006</u>
Reviewer's Signature 

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



DATA VALIDATION REPORT

NPDES Sampling
Outfall 002

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPD0254

Prepared by

MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD0254
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: May 6, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 120.1, 180.1, and 350.2*, 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 002	IPD0254-01	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 analyses were performed within the method specified holding times. No qualifications were required.

2.2 CALIBRATION

For turbidity and specific conductivity, the check standard recoveries were found to be acceptable. For ammonia, no information regarding the standardization of the titrant was provided; therefore, the ammonia LCS result was compared to the calibration control limits. As the ammonia LCS recovery was within the CCV control limits, 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 ammonia LCS recovery was within the laboratory-established control limits. LCS samples are not applicable to the turbidity and specific conductivity analyses. No qualifications were required.

2.5 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in 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 the sample in this SDG; therefore, no assessment was made with respect to this criterion. Evaluation of the ammonia method accuracy was based on the LCS result. 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 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.



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

Project ID: Quarterly Outfall 002

Report Number: IPD0254

Sampled: 04/04/06

Received: 04/04/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0254-01 (Outfall 002 - Water) - cont.					Sampled: 04/04/06				Rev Qual
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6D05128	0.30	0.50	1.7	1	04/05/06	04/05/06	
Biochemical Oxygen Demand	EPA 405.1	6D05064	0.59	2.0	3.5	1	04/05/06	04/10/06	*
Chloride	EPA 300.0	6D04136	0.15	0.50	15	1	04/04/06	04/05/06	
Nitrate/Nitrite-N	EPA 300.0	6D04136	0.080	0.15	0.44	1	04/04/06	04/05/06	
Oil & Grease	EPA 413.1	6D05046	0.90	4.8	ND	1	04/05/06	04/05/06	
Sulfate	EPA 300.0	6D04136	0.45	0.50	41	1	04/04/06	04/05/06	
Surfactants (MBAS)	SM5540-C	6D05142	0.088	0.20	0.19	2	04/05/06	04/06/06	RL-1, J
Total Dissolved Solids	SM2540C	6D05071	10	10	190	1	04/05/06	04/05/06	
Total Suspended Solids	EPA 160.2	6D07128	10	10	170	1	04/07/06	04/07/06	
Sample ID: IPD0254-01 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	6D04131	0.10	0.10	1.0	1	04/04/06	04/04/06	*
Sample ID: IPD0254-01 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: NTU									
Turbidity	EPA 180.1	6D05115	0.20	5.0	100	5	04/05/06	04/05/06	
Sample ID: IPD0254-01 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6D04108	2.2	5.0	ND	1	04/04/06	04/06/06	*
Perchlorate	EPA 314.0	6D06060	0.80	4.0	ND	1	04/06/06	04/06/06	*
Sample ID: IPD0254-01 (Outfall 002 - Water)					Sampled: 04/04/06				
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6D05070	1.0	1.0	310	1	04/05/06	04/05/06	

* Analysis not validated

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

LEVEL IV

APPENDIX G

Section 7

Outfall 002, April 11, 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: Routine Outfall 002

Sampled: 04/11/06
Received: 04/12/06
Revised: 06/19/06 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 of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.*

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.
HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report. Due to laboratory oversight, the extraction of the EPA 625 analysis was performed past the method specified holding time.
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: The report was revised to add Total Xylenes to the BS/MS/MSD to the QC.

LABORATORY ID	CLIENT ID	MATRIX
IPD1227-01	Outfall 002	Water
IPD1227-02	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: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06

Received: 04/12/06

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: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6D17002	0.28	2.0	ND	1	04/17/06	04/17/06	
Carbon tetrachloride	EPA 624	6D17002	0.28	5.0	ND	1	04/17/06	04/17/06	
Chloroform	EPA 624	6D17002	0.33	2.0	ND	1	04/17/06	04/17/06	
1,1-Dichloroethane	EPA 624	6D17002	0.27	2.0	ND	1	04/17/06	04/17/06	
1,2-Dichloroethane	EPA 624	6D17002	0.28	2.0	ND	1	04/17/06	04/17/06	M1
1,1-Dichloroethene	EPA 624	6D17002	0.42	3.0	ND	1	04/17/06	04/17/06	
Ethylbenzene	EPA 624	6D17002	0.25	2.0	ND	1	04/17/06	04/17/06	
Tetrachloroethene	EPA 624	6D17002	0.32	2.0	ND	1	04/17/06	04/17/06	
Toluene	EPA 624	6D17002	0.36	2.0	ND	1	04/17/06	04/17/06	
1,1,1-Trichloroethane	EPA 624	6D17002	0.30	2.0	ND	1	04/17/06	04/17/06	
1,1,2-Trichloroethane	EPA 624	6D17002	0.30	2.0	ND	1	04/17/06	04/17/06	
Trichloroethene	EPA 624	6D17002	0.26	5.0	ND	1	04/17/06	04/17/06	
Trichlorofluoromethane	EPA 624	6D17002	0.34	5.0	ND	1	04/17/06	04/17/06	
Vinyl chloride	EPA 624	6D17002	0.26	5.0	ND	1	04/17/06	04/17/06	
Xylenes, Total	EPA 624	6D17002	0.90	4.0	ND	1	04/17/06	04/17/06	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					108 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					105 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					108 %				

Sample ID: IPD1227-02 (Trip Blank - Water)

Reporting Units: ug/l

Benzene	EPA 624	6D17002	0.28	2.0	ND	1	04/17/06	04/17/06	
Carbon tetrachloride	EPA 624	6D17002	0.28	5.0	ND	1	04/17/06	04/17/06	
Chloroform	EPA 624	6D17002	0.33	2.0	ND	1	04/17/06	04/17/06	
1,1-Dichloroethane	EPA 624	6D17002	0.27	2.0	ND	1	04/17/06	04/17/06	
1,2-Dichloroethane	EPA 624	6D17002	0.28	2.0	ND	1	04/17/06	04/17/06	
1,1-Dichloroethene	EPA 624	6D17002	0.42	3.0	ND	1	04/17/06	04/17/06	
Ethylbenzene	EPA 624	6D17002	0.25	2.0	ND	1	04/17/06	04/17/06	
Tetrachloroethene	EPA 624	6D17002	0.32	2.0	ND	1	04/17/06	04/17/06	
Toluene	EPA 624	6D17002	0.36	2.0	ND	1	04/17/06	04/17/06	
1,1,1-Trichloroethane	EPA 624	6D17002	0.30	2.0	ND	1	04/17/06	04/17/06	
1,1,2-Trichloroethane	EPA 624	6D17002	0.30	2.0	ND	1	04/17/06	04/17/06	
Trichloroethene	EPA 624	6D17002	0.26	5.0	ND	1	04/17/06	04/17/06	
Trichlorofluoromethane	EPA 624	6D17002	0.34	5.0	ND	1	04/17/06	04/17/06	
Vinyl chloride	EPA 624	6D17002	0.26	5.0	ND	1	04/17/06	04/17/06	
Xylenes, Total	EPA 624	6D17002	0.90	4.0	ND	1	04/17/06	04/17/06	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					103 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					106 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					111 %				

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: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06
Received: 04/12/06

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: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6D19072	1.6	4.8	ND	0.952	04/19/06	04/25/06	H4
2,4-Dinitrotoluene	EPA 625	6D19072	0.19	8.6	ND	0.952	04/19/06	04/25/06	
N-Nitrosodimethylamine	EPA 625	6D19072	0.095	7.6	ND	0.952	04/19/06	04/25/06	
Pentachlorophenol	EPA 625	6D19072	0.095	7.6	ND	0.952	04/19/06	04/25/06	
2,4,6-Trichlorophenol	EPA 625	6D19072	0.095	5.7	ND	0.952	04/19/06	04/25/06	
Surrogate: 2-Fluorophenol (30-120%)					68 %				
Surrogate: Phenol-d6 (35-120%)					72 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					81 %				
Surrogate: Nitrobenzene-d5 (45-120%)					74 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					71 %				
Surrogate: Terphenyl-d14 (45-120%)					74 %				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06

Received: 04/12/06

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1227-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
alpha-BHC	EPA 608	6D17091	0.00094	0.0094	ND	0.943	04/17/06	04/18/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					86 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					58 %				

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Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06
Received: 04/12/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1227-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Copper	EPA 200.8	6D13067	0.25	2.0	2.3	1	04/13/06	04/15/06	B
Lead	EPA 200.8	6D13067	0.040	1.0	0.11	1	04/13/06	04/15/06	B, J
Mercury	EPA 245.1	6D13068	0.050	0.20	ND	1	04/13/06	04/13/06	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06

Received: 04/12/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1227-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6D13122	0.30	0.50	ND	1	04/13/06	04/13/06	
Biochemical Oxygen Demand	EPA 405.1	6D13078	0.59	2.0	0.75	1	04/13/06	04/18/06	J
Chloride	EPA 300.0	6D12138	1.5	5.0	31	10	04/12/06	04/12/06	
Nitrate/Nitrite-N	EPA 300.0	6D12138	0.080	0.15	ND	1	04/12/06	04/12/06	
Oil & Grease	EPA 413.1	6D13054	0.89	4.7	5.5	1	04/13/06	04/13/06	
Sulfate	EPA 300.0	6D12138	4.5	5.0	140	10	04/12/06	04/12/06	
Surfactants (MBAS)	SM5540-C	6D13003	0.044	0.10	0.061	1	04/13/06	04/13/06	J
Total Dissolved Solids	SM2540C	6D13076	10	10	430	1	04/13/06	04/13/06	
Total Suspended Solids	EPA 160.2	6D15042	10	10	ND	1	04/15/06	04/15/06	
Sample ID: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	6D13058	0.10	0.10	ND	1	04/13/06	04/13/06	
Sample ID: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	6D13084	0.040	1.0	0.91	1	04/13/06	04/13/06	J
Sample ID: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6D13102	2.2	5.0	ND	1	04/13/06	04/14/06	
Perchlorate	EPA 314.0	6D17066	0.80	4.0	ND	1	04/17/06	04/18/06	
Sample ID: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6D13071	1.0	1.0	720	1	04/13/06	04/13/06	

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: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06

Received: 04/12/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 002 (IPD1227-01) - Water	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	04/11/2006 11:42	04/12/2006 19:55	04/13/2006 07:43	04/13/2006 07:45
EPA 180.1	2	04/11/2006 11:42	04/12/2006 19:55	04/13/2006 08:45	04/13/2006 10:00
EPA 300.0	2	04/11/2006 11:42	04/12/2006 19:55	04/12/2006 22:00	04/12/2006 23:46
EPA 405.1	2	04/11/2006 11:42	04/12/2006 19:55	04/13/2006 09:10	04/18/2006 11:15
SM5540-C	2	04/11/2006 11:42	04/12/2006 19:55	04/13/2006 03:03	04/13/2006 04:56

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: Routine Outfall 002
Report Number: IPD1227

Sampled: 04/11/06
Received: 04/12/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D17002 Extracted: 04/17/06										
Blank Analyzed: 04/17/2006 (6D17002-BLK1)										
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	0.90	ug/l						
Surrogate: Dibromofluoromethane	26.1			ug/l	25.0		104		80-120	
Surrogate: Toluene-d8	26.5			ug/l	25.0		106		80-120	
Surrogate: 4-Bromofluorobenzene	27.4			ug/l	25.0		110		80-120	

LCS Analyzed: 04/17/2006 (6D17002-BS1)

Benzene	22.3	2.0	0.28	ug/l	25.0		89		65-120	
Carbon tetrachloride	31.2	5.0	0.28	ug/l	25.0		125		65-140	
Chloroform	26.4	2.0	0.33	ug/l	25.0		106		65-130	
1,1-Dichloroethane	23.1	2.0	0.27	ug/l	25.0		92		65-130	
1,2-Dichloroethane	33.4	2.0	0.28	ug/l	25.0		134		60-140	
1,1-Dichloroethene	21.2	3.0	0.42	ug/l	25.0		85		70-130	
Ethylbenzene	27.1	2.0	0.25	ug/l	25.0		108		70-125	
Tetrachloroethene	24.7	2.0	0.32	ug/l	25.0		99		65-125	
Toluene	23.8	2.0	0.36	ug/l	25.0		95		70-125	
1,1,1-Trichloroethane	28.4	2.0	0.30	ug/l	25.0		114		65-135	
1,1,2-Trichloroethane	25.4	2.0	0.30	ug/l	25.0		102		65-125	
Trichloroethene	24.8	5.0	0.26	ug/l	25.0		99		70-125	
Trichlorofluoromethane	26.8	5.0	0.34	ug/l	25.0		107		60-140	
Vinyl chloride	19.9	5.0	0.26	ug/l	25.0		80		50-130	
Xylenes, Total	78.8	4.0	0.90	ug/l	75.0		105		70-125	
Surrogate: Dibromofluoromethane	26.5			ug/l	25.0		106		80-120	

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PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D17002 Extracted: 04/17/06											
LCS Analyzed: 04/17/2006 (6D17002-BS1)											
Surrogate: Toluene-d8	27.4			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	29.5			ug/l	25.0		118	80-120			
Matrix Spike Analyzed: 04/17/2006 (6D17002-MS1) Source: IPD1227-01											
Benzene	23.4	2.0	0.28	ug/l	25.0	ND	94	60-125			
Carbon tetrachloride	33.5	5.0	0.28	ug/l	25.0	ND	134	65-140			
Chloroform	27.9	2.0	0.33	ug/l	25.0	ND	112	65-135			
1,1-Dichloroethane	23.9	2.0	0.27	ug/l	25.0	ND	96	60-130			
1,2-Dichloroethane	35.2	2.0	0.28	ug/l	25.0	ND	141	60-140			MI
1,1-Dichloroethene	21.3	3.0	0.42	ug/l	25.0	ND	85	60-135			
Ethylbenzene	28.0	2.0	0.25	ug/l	25.0	ND	112	65-130			
Tetrachloroethene	25.3	2.0	0.32	ug/l	25.0	ND	101	60-130			
Toluene	24.6	2.0	0.36	ug/l	25.0	ND	98	65-125			
1,1,1-Trichloroethane	30.0	2.0	0.30	ug/l	25.0	ND	120	65-140			
1,1,2-Trichloroethane	26.3	2.0	0.30	ug/l	25.0	ND	105	60-130			
Trichloroethene	25.9	5.0	0.26	ug/l	25.0	ND	104	60-125			
Trichlorofluoromethane	28.4	5.0	0.34	ug/l	25.0	ND	114	55-145			
Vinyl chloride	20.4	5.0	0.26	ug/l	25.0	ND	82	40-135			
Xylenes, Total	77.0	4.0	0.90	ug/l	75.0	ND	103	60-130			
Surrogate: Dibromofluoromethane	26.9			ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	30.1			ug/l	25.0		120	80-120			
Matrix Spike Dup Analyzed: 04/17/2006 (6D17002-MSD1) Source: IPD1227-01											
Benzene	23.4	2.0	0.28	ug/l	25.0	ND	94	60-125	0	20	
Carbon tetrachloride	32.9	5.0	0.28	ug/l	25.0	ND	132	65-140	2	25	
Chloroform	27.3	2.0	0.33	ug/l	25.0	ND	109	65-135	2	20	
1,1-Dichloroethane	23.8	2.0	0.27	ug/l	25.0	ND	95	60-130	0	20	
1,2-Dichloroethane	34.3	2.0	0.28	ug/l	25.0	ND	137	60-140	3	20	
1,1-Dichloroethene	21.9	3.0	0.42	ug/l	25.0	ND	88	60-135	3	20	
Ethylbenzene	28.6	2.0	0.25	ug/l	25.0	ND	114	65-130	2	20	
Tetrachloroethene	26.1	2.0	0.32	ug/l	25.0	ND	104	60-130	3	20	
Toluene	24.9	2.0	0.36	ug/l	25.0	ND	100	65-125	1	20	
1,1,1-Trichloroethane	29.5	2.0	0.30	ug/l	25.0	ND	118	65-140	2	20	
1,1,2-Trichloroethane	26.0	2.0	0.30	ug/l	25.0	ND	104	60-130	1	25	
Trichloroethene	25.8	5.0	0.26	ug/l	25.0	ND	103	60-125	0	20	

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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
Batch: 6D17002 Extracted: 04/17/06											
Matrix Spike Dup Analyzed: 04/17/2006 (6D17002-MSD1)						Source: IPD1227-01					
Trichlorofluoromethane	28.4	5.0	0.34	ug/l	25.0	ND	114	55-145	0	25	
Vinyl chloride	20.9	5.0	0.26	ug/l	25.0	ND	84	40-135	2	30	
Xylenes, Total	80.8	4.0	0.90	ug/l	75.0	ND	108	60-130	5	20	
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	27.3			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	29.8			ug/l	25.0		119	80-120			

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Qualifiers
Batch: 6D19072 Extracted: 04/19/06										
Blank Analyzed: 04/24/2006 (6D19072-BLK1)										
Bis(2-ethylhexyl)phthalate	2.66	5.0	1.7	ug/l						J
2,4-Dinitrotoluene	ND	9.0	0.20	ug/l						
N-Nitrosodimethylamine	ND	8.0	0.10	ug/l						
Pentachlorophenol	ND	8.0	0.10	ug/l						
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l						
Surrogate: 2-Fluorophenol	14.0			ug/l	20.0		70	30-120		
Surrogate: Phenol-d6	15.3			ug/l	20.0		76	35-120		
Surrogate: 2,4,6-Tribromophenol	16.3			ug/l	20.0		82	45-120		
Surrogate: Nitrobenzene-d5	7.92			ug/l	10.0		79	45-120		
Surrogate: 2-Fluorobiphenyl	8.12			ug/l	10.0		81	45-120		
Surrogate: Terphenyl-d14	8.06			ug/l	10.0		81	45-120		
LCS Analyzed: 04/24/2006 (6D19072-BS1)										
Bis(2-ethylhexyl)phthalate	12.1	5.0	1.7	ug/l	10.0		121	60-130		M-NR1
2,4-Dinitrotoluene	8.74	9.0	0.20	ug/l	10.0		87	60-120		J
N-Nitrosodimethylamine	7.00	8.0	0.10	ug/l	10.0		70	40-120		J
Pentachlorophenol	7.38	8.0	0.10	ug/l	10.0		74	50-120		J
2,4,6-Trichlorophenol	8.30	6.0	0.10	ug/l	10.0		83	60-120		
Surrogate: 2-Fluorophenol	12.3			ug/l	20.0		62	30-120		
Surrogate: Phenol-d6	13.4			ug/l	20.0		67	35-120		
Surrogate: 2,4,6-Tribromophenol	15.3			ug/l	20.0		76	45-120		
Surrogate: Nitrobenzene-d5	6.44			ug/l	10.0		64	45-120		
Surrogate: 2-Fluorobiphenyl	6.66			ug/l	10.0		67	45-120		
Surrogate: Terphenyl-d14	7.18			ug/l	10.0		72	45-120		
LCS Dup Analyzed: 04/24/2006 (6D19072-BSD1)										
Bis(2-ethylhexyl)phthalate	12.1	5.0	1.7	ug/l	10.0		121	60-130	0	20
2,4-Dinitrotoluene	9.50	9.0	0.20	ug/l	10.0		95	60-120	8	20
N-Nitrosodimethylamine	7.52	8.0	0.10	ug/l	10.0		75	40-120	7	20
Pentachlorophenol	5.94	8.0	0.10	ug/l	10.0		59	50-120	22	25
2,4,6-Trichlorophenol	8.62	6.0	0.10	ug/l	10.0		86	60-120	4	20
Surrogate: 2-Fluorophenol	12.0			ug/l	20.0		60	30-120		
Surrogate: Phenol-d6	13.6			ug/l	20.0		68	35-120		
Surrogate: 2,4,6-Tribromophenol	15.6			ug/l	20.0		78	45-120		
Surrogate: Nitrobenzene-d5	7.06			ug/l	10.0		71	45-120		
Surrogate: 2-Fluorobiphenyl	7.42			ug/l	10.0		74	45-120		

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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
Batch: 6D19072 Extracted: 04/19/06											
LCS Dup Analyzed: 04/24/2006 (6D19072-BSD1)											
Surrogate: Terphenyl-d14	7.32			ug/l	10.0		73	45-120			

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ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D17091 Extracted: 04/17/06											
Blank Analyzed: 04/18/2006 (6D17091-BLK1)											
alpha-BHC	ND	0.010	0.0010	ug/l							
Surrogate: Decachlorobiphenyl	0.357			ug/l	0.500		71	45-120			
Surrogate: Tetrachloro-m-xylene	0.276			ug/l	0.500		55	35-115			
LCS Analyzed: 04/18/2006 (6D17091-BS1)											
alpha-BHC	0.447	0.010	0.0010	ug/l	0.500		89	45-120			M-NR1
Surrogate: Decachlorobiphenyl	0.410			ug/l	0.500		82	45-120			
Surrogate: Tetrachloro-m-xylene	0.393			ug/l	0.500		79	35-115			
LCS Dup Analyzed: 04/18/2006 (6D17091-BSD1)											
alpha-BHC	0.398	0.010	0.0010	ug/l	0.500		80	45-120	12	30	
Surrogate: Decachlorobiphenyl	0.389			ug/l	0.500		78	45-120			
Surrogate: Tetrachloro-m-xylene	0.297			ug/l	0.500		59	35-115			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D13067 Extracted: 04/13/06											
Blank Analyzed: 04/15/2006 (6D13067-BLK1)											
Copper	0.298	2.0	0.25	ug/l							J
Lead	0.0781	1.0	0.040	ug/l							J
LCS Analyzed: 04/15/2006 (6D13067-BS1)											
Copper	76.5	2.0	0.25	ug/l	80.0		96	85-115			
Lead	77.1	1.0	0.040	ug/l	80.0		96	85-115			
Matrix Spike Analyzed: 04/15/2006 (6D13067-MS1) Source: IPD1055-01											
Copper	70.4	2.0	0.25	ug/l	80.0	0.87	87	70-130			
Lead	73.6	1.0	0.040	ug/l	80.0	0.27	92	70-130			
Matrix Spike Dup Analyzed: 04/15/2006 (6D13067-MSD1) Source: IPD1055-01											
Copper	73.7	2.0	0.25	ug/l	80.0	0.87	91	70-130	5	20	
Lead	77.7	1.0	0.040	ug/l	80.0	0.27	97	70-130	5	20	
Batch: 6D13068 Extracted: 04/13/06											
Blank Analyzed: 04/13/2006 (6D13068-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/13/2006 (6D13068-BS1)											
Mercury	8.26	0.20	0.050	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 04/13/2006 (6D13068-MS1) Source: IPD0955-05											
Mercury	8.23	0.20	0.050	ug/l	8.00	ND	103	70-130			
Matrix Spike Dup Analyzed: 04/13/2006 (6D13068-MSD1) Source: IPD0955-05											
Mercury	8.23	0.20	0.050	ug/l	8.00	ND	103	70-130	0	20	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D12138 Extracted: 04/12/06											
Blank Analyzed: 04/12/2006 (6D12138-BLK1)											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
LCS Analyzed: 04/12/2006 (6D12138-BS1)											
Chloride	4.94	0.50	0.15	mg/l	5.00		99	90-110			M-3
Sulfate	10.1	0.50	0.45	mg/l	10.0		101	90-110			M-3
Batch: 6D13003 Extracted: 04/13/06											
Blank Analyzed: 04/13/2006 (6D13003-BLK1)											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 04/13/2006 (6D13003-BS1)											
Surfactants (MBAS)	0.236	0.10	0.044	mg/l	0.250		94	90-110			
Matrix Spike Analyzed: 04/13/2006 (6D13003-MS1)											
						Source: IPD1033-01					
Surfactants (MBAS)	0.241	0.10	0.044	mg/l	0.250	ND	96	50-125			
Matrix Spike Dup Analyzed: 04/13/2006 (6D13003-MSD1)											
						Source: IPD1033-01					
Surfactants (MBAS)	0.242	0.10	0.044	mg/l	0.250	ND	97	50-125	0	20	
Batch: 6D13054 Extracted: 04/13/06											
Blank Analyzed: 04/13/2006 (6D13054-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							

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Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6D13054 Extracted: 04/13/06											
LCS Analyzed: 04/13/2006 (6D13054-BS1)											
Oil & Grease	16.0	5.0	0.94	mg/l	20.0		80	65-120			M-NR1
LCS Dup Analyzed: 04/13/2006 (6D13054-BSD1)											
Oil & Grease	16.8	5.0	0.94	mg/l	20.0		84	65-120	5	20	
Batch: 6D13071 Extracted: 04/13/06											
Duplicate Analyzed: 04/13/2006 (6D13071-DUP1)											
Specific Conductance	449	1.0	1.0	umhos/cm		Source: IPD1055-01 450			0	5	
Batch: 6D13076 Extracted: 04/13/06											
Blank Analyzed: 04/13/2006 (6D13076-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/13/2006 (6D13076-BS1)											
Total Dissolved Solids	994	10	10	mg/l	1000		99	90-110			
Duplicate Analyzed: 04/13/2006 (6D13076-DUP1)											
Total Dissolved Solids	250	10	10	mg/l		Source: IPD1055-01 250			0	10	
Batch: 6D13078 Extracted: 04/13/06											
Blank Analyzed: 04/18/2006 (6D13078-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D13078 Extracted: 04/13/06											
LCS Analyzed: 04/18/2006 (6D13078-BS1)											
Biochemical Oxygen Demand	203	100	30	mg/l	198		103	85-115			
LCS Dup Analyzed: 04/18/2006 (6D13078-BSD1)											
Biochemical Oxygen Demand	205	100	30	mg/l	198		104	85-115	1	20	
Batch: 6D13084 Extracted: 04/13/06											
Blank Analyzed: 04/13/2006 (6D13084-BLK1)											
Turbidity	0.0400	1.0	0.040	NTU							J
Duplicate Analyzed: 04/13/2006 (6D13084-DUP1)											
Turbidity	0.600	1.0	0.040	NTU		Source: IPD1174-01 0.64			6	20	J
Batch: 6D13102 Extracted: 04/13/06											
Blank Analyzed: 04/14/2006 (6D13102-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 04/14/2006 (6D13102-BS1)											
Total Cyanide	188	5.0	2.2	ug/l	200		94	90-110			
Matrix Spike Analyzed: 04/14/2006 (6D13102-MS1)											
Total Cyanide	193	5.0	2.2	ug/l	200	Source: IPD0421-01 ND	96	70-115			
Matrix Spike Dup Analyzed: 04/14/2006 (6D13102-MSD1)											
Total Cyanide	187	5.0	2.2	ug/l	200	Source: IPD0421-01 ND	94	70-115	3	15	

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06

Received: 04/12/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D13122 Extracted: 04/13/06											
Blank Analyzed: 04/13/2006 (6D13122-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 04/13/2006 (6D13122-BS1)											
Ammonia-N (Distilled)	10.6	0.50	0.30	mg/l	10.0		106	80-115			
Matrix Spike Analyzed: 04/13/2006 (6D13122-MS1)											
Ammonia-N (Distilled)	10.6	0.50	0.30	mg/l	10.0	ND	106	70-120			
Matrix Spike Dup Analyzed: 04/13/2006 (6D13122-MSD1)											
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0	ND	109	70-120	3	15	
Batch: 6D15042 Extracted: 04/15/06											
Blank Analyzed: 04/15/2006 (6D15042-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/15/2006 (6D15042-BS1)											
Total Suspended Solids	969	10	10	mg/l	1000		97	85-115			
Duplicate Analyzed: 04/15/2006 (6D15042-DUP1)											
Total Suspended Solids	290	10	10	mg/l		290			0	10	
Batch: 6D17066 Extracted: 04/17/06											
Blank Analyzed: 04/17/2006 (6D17066-BLK1)											
Perchlorate	ND	4.0	0.80	ug/l							

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: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06

Received: 04/12/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D17066 Extracted: 04/17/06											
LCS Analyzed: 04/17/2006 (6D17066-BS1)											
Perchlorate	49.4	4.0	0.80	ug/l	50.0		99	85-115			
Matrix Spike Analyzed: 04/17/2006 (6D17066-MS1) Source: IPD1634-14											
Perchlorate	48.3	4.0	0.80	ug/l	50.0	3.2	90	80-120			
Matrix Spike Dup Analyzed: 04/17/2006 (6D17066-MSD1) Source: IPD1634-14											
Perchlorate	48.1	4.0	0.80	ug/l	50.0	3.2	90	80-120	0	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: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06

Received: 04/12/06

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
IPD1227-01	413.1 Oil and Grease	Oil & Grease	mg/l	5.50	4.7	10.00
IPD1227-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0094	0.0100
IPD1227-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPD1227-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0.14	5.0	5.00
IPD1227-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.7	6.50
IPD1227-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.6	9.10
IPD1227-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.55	4.8	4.00
IPD1227-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.6	8.10
IPD1227-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.6	8.20
IPD1227-01	BOD	Biochemical Oxygen Demand	mg/l	0.75	2.0	20
IPD1227-01	Chloride - 300.0	Chloride	mg/l	31	5.0	150
IPD1227-01	Copper-200.8	Copper	ug/l	2.30	2.0	7.10
IPD1227-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	-1	5.0	5.00
IPD1227-01	Lead-200.8	Lead	ug/l	0.11	1.0	2.60
IPD1227-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.061	0.10	0.50
IPD1227-01	Mercury - 245.1	Mercury	ug/l	0	0.20	0.20
IPD1227-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.052	0.15	8.00
IPD1227-01	Perchlorate 314.0	Perchlorate	ug/l	0.68	4.0	6.00
IPD1227-01	Sulfate-300.0	Sulfate	mg/l	140	5.0	300
IPD1227-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	430	10	950
IPD1227-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPD1227-02	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00

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: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06
Received: 04/12/06

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- H4** Sample was extracted past holding time, but analyzed within analysis holding time.
- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- 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

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.

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IPD1227 <Page 21 of 22>



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

Project ID: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06

Received: 04/12/06

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	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 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
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

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: IPD1227-01

Analysis Performed: EDD + Level 4

Samples: IPD1227-01

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager

Del Mar Analytical

Version 3/1/06

IPD1227

Client Name/Address:		Project:		ANALYSIS REQUIRED												Field readings:					
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Routine Outfall 002		Total Recoverable Metals: Cu, Pb, Hg,	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	Ammonia-N	2,4,6 Trichlorophenol, 2,4-Dinitrotoene, Bis(2-ethylhexyl)phthalate, NDMA, pentachlorophenol (EPA 625)	Temp = 60°					
Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Sampling Date/Time	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515	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	Ammonia-N	2,4,6 Trichlorophenol, 2,4-Dinitrotoene, Bis(2-ethylhexyl)phthalate, NDMA, pentachlorophenol (EPA 625)	Temp = 60°				
Outfall 002	W	Poly-1 liter	1	HNO3	1A	4/11/06 11:42															
Outfall 002-Dup	W	Poly-1 liter	1	HNO3	1B																
Outfall 002	W	Poly-1 liter	1	None	2																
Outfall 002	W	VOAs	3	HCl	3A, 3B, 3C			X													
Outfall 002	W	Glass-Amber	2	None	4A, 4B			X													
Outfall 002	W	1L Amber	2	HCl	5A, 5B			X													
Outfall 002	W	Poly-500 ml	1	NaOH	6			X													
Outfall 002	W	Poly-1 liter	1	None	7				X												
Outfall 002	W	Poly-500 ml	2	None	8A, 8B					X											
Outfall 002	W	Poly-500 ml	2	None	9A, 9B						X										
Outfall 002	W	Poly-500 ml	2	None	10A, 10B							X									
Outfall 002	W	Poly-500 ml	1	H2SO4	11								X								
Outfall 002	W	1L Amber	2	None	12A, 12B									X							
Outfall 002	W	1L Amber	2	None	13A, 13B										X						
Trip Blank	W	VOAs	3	HCl	14A, 14B, 14C																
Relinquished By		Date/Time		Received By		Date/Time		Turn around Time: (check)		24 Hours		5 Days		48 Hours		10 Days		72 Hours		Normal	
B. King		4/11/06 10:40		B.D. Keenan		4/12/06 16:40		Perchlorate Only 72 Hours		Metals Only 72 Hours		Sample Integrity: (Check) Intact		On Ice: <input checked="" type="checkbox"/>							
Relinquished By		Date/Time		Received By		Date/Time		Perchlorate Only 72 Hours		Metals Only 72 Hours		Sample Integrity: (Check) Intact		On Ice: <input checked="" type="checkbox"/>							
B.D. Keenan		4/12/06 19:55		A.C. U		4-12-06 19:55															



April 26, 2006

Alta Project I.D.: 27594

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 April 14, 2006 under your Project Name "IPD1227". 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. 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 NELAC 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: **4/14/2006**

Alta Lab. ID

Client Sample ID

27594-001

IPD1227-01

SECTION II

Method Blank		EPA Method 1613						
Matrix:	Aqueous	QC Batch No.:	7951	Lab Sample:	0-MB001			
Sample Size:	1.00 L	Date Extracted:	20-Apr-06	Date Analyzed DB-5:	24-Apr-06			
				Date Analyzed DB-225:	NA			
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000103			IS 13C-2,3,7,8-TCDD	69.9	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000112			13C-1,2,3,7,8-PeCDD	62.3	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000217			13C-1,2,3,4,7,8-HxCDD	67.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000206			13C-1,2,3,6,7,8-HxCDD	74.6	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000202			13C-1,2,3,4,6,7,8-HpCDD	72.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000235			13C-OCDD	55.2	17 - 157	
OCDD	ND	0.00000532			13C-2,3,7,8-TCDF	75.5	24 - 169	
2,3,7,8-TCDF	ND	0.00000121			13C-1,2,3,7,8-PeCDF	64.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000198			13C-2,3,4,7,8-PeCDF	66.5	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000190			13C-1,2,3,4,7,8-HxCDF	66.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000649			13C-1,2,3,6,7,8-HxCDF	76.1	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000602			13C-1,2,3,6,7,8-HxCDF	74.8	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000650			13C-2,3,4,6,7,8-HxCDF	67.9	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000103			13C-1,2,3,7,8,9-HxCDF	62.5	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000122			13C-1,2,3,4,6,7,8-HpCDF	56.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000155			13C-OCDF	47.8	17 - 157	
OCDF	ND	0.00000560			CRS 37Cl-2,3,7,8-TCDD	83.1	35 - 197	
Totals								
Total TCDD	ND	0.00000103						
Total PeCDD	ND	0.00000112						
Total HxCDD	ND	0.00000207						
Total HpCDD	ND	0.00000235						
Total TCDF	ND	0.00000121						
Total PeCDF	ND	0.00000194						
Total HxCDF	ND	0.000000713						
Total HpCDF	ND	0.00000136						

Footnotes

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

Analyst: MAS
 Approved By: Martha M. Maier
 Date: 26-Apr-2006 15:24

OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7951	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	20-Apr-06	Date Analyzed DB-5:	24-Apr-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	10.2	6.7 - 15.8	<u>IS</u> 13C-2,3,7,8-TCDD	56.3	25 - 164
1,2,3,7,8-PeCDD	50.0	49.1	35 - 71	13C-1,2,3,7,8-PeCDD	52.2	25 - 181
1,2,3,4,7,8-HxCDD	50.0	50.2	35 - 82	13C-1,2,3,4,7,8-HxCDD	52.6	32 - 141
1,2,3,6,7,8-HxCDD	50.0	49.2	38 - 67	13C-1,2,3,6,7,8-HxCDD	57.7	28 - 130
1,2,3,7,8,9-HxCDD	50.0	52.0	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	51.6	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	51.5	35 - 70	13C-OCDD	36.7	17 - 157
OCDD	100	101	78 - 144	13C-2,3,7,8-TCDF	61.9	24 - 169
2,3,7,8-TCDF	10.0	9.66	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	52.3	24 - 185
1,2,3,7,8-PeCDF	50.0	46.2	40 - 67	13C-2,3,4,7,8-PeCDF	56.1	21 - 178
2,3,4,7,8-PeCDF	50.0	47.5	34 - 80	13C-1,2,3,4,7,8-HxCDF	49.5	26 - 152
1,2,3,4,7,8-HxCDF	50.0	48.7	36 - 67	13C-1,2,3,6,7,8-HxCDF	56.3	26 - 123
1,2,3,6,7,8-HxCDF	50.0	49.6	42 - 65	13C-2,3,4,6,7,8-HxCDF	56.6	28 - 136
2,3,4,6,7,8-HxCDF	50.0	48.7	35 - 78	13C-1,2,3,7,8,9-HxCDF	57.2	29 - 147
1,2,3,7,8,9-HxCDF	50.0	48.1	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	46.0	28 - 143
1,2,3,4,6,7,8,9-HpCDF	50.0	51.4	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	49.7	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	50.4	39 - 69	13C-OCDF	40.6	17 - 157
OCDF	100	104	63 - 170	<u>CRS</u> 37Cl-2,3,7,8-TCDD	67.5	35 - 197

Analyst: MAS

Approved By: Martha M. Maier 26-Apr-2006 15:24

EPA Method 1613

Sample ID: IPD1227-01

Client Data
 Name: Del Mar Analytical, Irvine
 Project: IPD1227
 Date Collected: 11-Apr-06
 Time Collected: 1142

Sample Data
 Matrix: Aqueous
 Sample Size: 0.998 L

Laboratory Data
 Lab Sample: 27594-001
 QC Batch No.: 7951
 Date Analyzed DB-5: 24-Apr-06
 Date Received: 14-Apr-06
 Date Extracted: 20-Apr-06
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000153			13C-2,3,7,8-TCDD	64.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000143			13C-1,2,3,7,8-PeCDD	58.1	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000284			13C-1,2,3,4,7,8-HxCDD	66.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000282			13C-1,2,3,6,7,8-HxCDD	71.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000272			13C-1,2,3,4,6,7,8-HpCDD	79.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000560			13C-OCDD	59.4	17 - 157	
OCDD	0.0000122			J	13C-2,3,7,8-TCDF	68.1	24 - 169	
2,3,7,8-TCDF	ND	0.00000161			13C-1,2,3,7,8-PeCDF	61.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000193			13C-2,3,4,7,8-PeCDF	59.4	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000187			13C-2,3,4,7,8-HxCDF	69.6	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000988			13C-1,2,3,4,7,8-HxCDF	74.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000985			13C-1,2,3,6,7,8-HxCDF	71.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000109			13C-2,3,4,6,7,8-HxCDF	69.6	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000153			13C-1,2,3,7,8,9-HxCDF	70.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000174			13C-1,2,3,4,6,7,8-HpCDF	72.7	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000188			13C-1,2,3,4,7,8,9-HpCDF	64.5	17 - 157	
OCDF	ND	0.00000440			13C-OCDF	84.3	35 - 197	

Totals

Total TCDD	ND	0.00000153						
Total PeCDD	ND	0.00000143						
Total HxCDD	ND	0.00000279						
Total HpCDD	ND	0.00000560						
Total TCDF	ND	0.00000161						
Total PeCDF	ND	0.00000190						
Total HxCDF	ND	0.00000113						
Total HpCDF	ND	0.00000180						

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

Analyst: MAS
 Approved By: Martha M. Maier
 26-Apr-2006 15:24

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

Accrediting Authority	Certificate Number
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

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27594

Samples Arrival:	Date/Time 4/14/06 0900	Initials: UBB	Location: WR-2
			Shelf/Rack: _____
Logged In:	Date/Time 4/14/06 0955	Initials: UBB	Location: WR-2
			Shelf/Rack: C-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°C	Time: 0905	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 #	7908 8600 3313		
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 ₂ S ₂ O ₃ Preservation Documented?		COC	Sample Container <input checked="" type="radio"/> None
Shipping Container	Alta	<input checked="" type="radio"/> Client	Retain <input checked="" type="radio"/> Return <input type="radio"/> Dispose

Comments:

APPENDIX G

Section 8

Outfall 002, April 11, 2006

MEC^X Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID B4DF95
 Task Order 1261.001D.01
 SDG No. IPD1227
 No. of Analyses 1

Laboratory Alta Analytical
 Reviewer E. Wessling
 Analysis/Method Dioxins/Furans

Date: June 26, 2006
 Reviewer's Signature E. Wessling

ACTION ITEMS ^a	
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: - the result between the RL and the MDL was estimated
COMMENTS ^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b 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 002

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPD1227

Prepared by
MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001D.01
Sample Delivery Group: IPD1227
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: June 26, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^X 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 002	IPD1227-01	27594-001	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 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 03/22/2006 on instrument VG-5. 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 VER was 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 (0-7951-MB001) was extracted and analyzed with the sample in this SDG. No target compounds were detected in the method blank. No qualifications were required. 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 (0-7951-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 qualification of the site sample was 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. The detect below the laboratory lower calibration level was qualified as estimated, "J." This "J" value was annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No further qualifications were required.

Sample ID: **IPD1227-01** *outfall 002*

EPA Method 1613

Client Data		Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27594-001	Date Received:	14-Apr-06
Project:	IPD1227	Sample Size:	0.998 L	QC Batch No.:	7951	Date Extracted:	20-Apr-06
Date Collected:	11-Apr-06			Date Analyzed DB-5:	24-Apr-06	Date Analyzed DB-225:	NA
Time Collected:	1142						

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000153			<u>IS</u> 13C-2,3,7,8-TCDD	64.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000143			13C-1,2,3,7,8-PeCDD	58.1	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000284			13C-1,2,3,4,7,8-HxCDD	66.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000282			13C-1,2,3,6,7,8-HxCDD	71.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000272			13C-1,2,3,4,6,7,8-HpCDD	79.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000560			13C-OCDD	59.4	17 - 157	
OCDD	0.0000122			J	13C-2,3,7,8-TCDF	68.1	24 - 169	
2,3,7,8-TCDF	ND	0.00000161			13C-1,2,3,7,8-PeCDF	61.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000193			13C-2,3,4,7,8-PeCDF	59.4	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000187			13C-1,2,3,4,7,8-HxCDF	69.6	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000988			13C-1,2,3,6,7,8-HxCDF	74.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000985			13C-2,3,4,6,7,8-HxCDF	71.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000109			13C-1,2,3,7,8,9-HxCDF	69.6	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000153			13C-1,2,3,4,6,7,8-HpCDF	70.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000174			13C-1,2,3,4,7,8,9-HpCDF	72.7	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000188			13C-OCDF	64.5	17 - 157	
OCDF	ND	0.00000440			<u>CRS</u> 37Cl-2,3,7,8-TCDD	84.3	35 - 197	

Totals				Footnotes			
Total TCDD	ND	0.00000153		a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000143		b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000279		c. Method detection limit.			
Total HpCDD	ND	0.00000560		d. Lower control limit - upper control limit.			
Total TCDF	ND	0.00000161					
Total PeCDF	ND	0.00000190					
Total HxCDF	ND	0.00000113					
Total HpCDF	ND	0.00000180					

Analyst: MAS

Approved By: Martha M. Maier 26-Apr-2006 15:24

Level IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4MT84
 Task Order: 1261.001D.01
 SDG No.: IPD1227

No. of Analyses: 1

Laboratory: Del Mar Analytical
 Reviewer: P. Meeks
 Analysis/Method: Metals

Date: <u>June 23, 2006</u>
Reviewer's Signature 

ACTION ITEMS^a	
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 applied for reporting limit check standard recovery, method blank detects, and possible interference.
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^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Sampling
Outfall 002

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPD1227

Prepared by

MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD1227
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: June 23, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for ICP and 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 002	IPD1227-01	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 $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 3°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-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 85-115% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG. The opening mercury 0.2 ppb reporting limit check standard was recovered at 63%; therefore, nondetected mercury in Outfall 002 was qualified as an estimated nondetect, "UJ." All other recoveries were considered to be acceptable. No further qualifications were required.

2.4 BLANKS

Lead was detected in method blank 6D13067 at 0.0781 µg/L; therefore, lead detected in Outfall 002 was qualified as an estimated nondetect, "UJ." Copper was also detected in the method blank; however, copper detected in the site sample was at a level greater than five times the amount detected in the method blank and no qualifications were required. Mercury was reported in method blank 6D13068-BLK1 at -0.0937 µ/L and in the bracketing CCBs at -0.070 µg/L; therefore, nondetected mercury in Outfall 002 was qualified as estimated, "UJ." There were no other detects in the method blanks or CCBs associated with the sample in this SDG. 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. Copper was detected in the ICSA at greater than 2x the reporting limit of 2.0 µg/L. The reviewer checked the raw data for the sample result and determined that the amount of calcium present in the sample was large enough to potentially cause interference; therefore, copper detected in Outfall 002 was qualified as an estimated detect, "J." All recoveries were acceptable and no further qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

All recoveries were within the laboratory-established control limits of 85-115%. No qualifications were required.

2.7 LABORATORY DUPLICATES

No 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 the 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 analytes analyzed by ICP-MS, the internal standards were within the method-specified control limits of 60-125%. No qualifications were required.

2.11 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 I were verified against the raw data. No transcription errors or calculation errors were noted.

The laboratory reported mercury as nondetected; however, during the review of the raw data, the reviewer noted that the result was a negative value, the absolute value of which was larger than the MDL. Due to this result and the negative results noted in the method blank and CCBs (see section 2.4), the reviewer raised the mercury MDL to the highest level of interference noted, 0.094 µg/L. 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.



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

Project ID: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06
 Received: 04/12/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	Qual Code
Sample ID: IPD1227-01 (Outfall 002 - Water) - cont.										
Reporting Units: ug/l										
Copper	EPA 200.8	6D13067	0.25	2.0	2.3	1	04/13/06	04/15/06	J B	I
Lead	EPA 200.8	6D13067	0.040	1.0	0.11	1	04/13/06	04/15/06	UJ B, J	B
Mercury	EPA 245.1	6D13068	0.050 0.094	0.20	ND	1	04/13/06	04/13/06	UJ	\$, *3

LEVEL IV

PM 6/23/00

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.



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 002

ANALYSIS: PESTICIDES

SAMPLE DELIVERY GROUP: IPD1227

Prepared by

MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD1227
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: June 25, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^X 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 002	IPD1227-01	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 3°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 ± 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 03/16/06 associated with site sample in this SDG. The initial calibration consisted of six point calibrations for all pesticide target compounds on two analytical columns. For this SDG, alpha-BHC was the only target compound of interest. The r^2 value was ≥ 0.995 for alpha-BHC on the primary analytical column (Channel A) and the %RSD was within the EPA Method 608 QC limit of $\leq 10\%$ on the secondary column (Channel B). 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 both analytical columns. No qualifications were required.

2.3.3 Continuing Calibration

Sample Outfall 002 was bracketed by one beginning and two ending continuing calibrations. The %Ds for alpha-BHC were within the Method QC limit of $\leq 15\%$ on both columns for the beginning calibration. The %Ds exceeded 15% on the secondary column in both ending calibrations. The nondetect result for alpha-BHC in Outfall 002 was qualified as estimated, "UJ." No further 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 (6D17091-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 (6D17091-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 $\leq 30\%$. No qualifications were required.

2.6 SURROGATE RECOVERY

Surrogate recoveries were within the laboratory-established QC limits for the sample in this SDG. 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 bench sheet, 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. The laboratory provided an overlay of the sample chromatograms and the pesticide standard for identification purposes, and 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 limit was supported by the low point of the initial calibration and the laboratory MDL. No qualifications were required.



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

Project ID: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06
Received: 04/12/06

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1227-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
alpha-BHC	EPA 608	6D17091	0.00094	0.0094	ND	0.943	04/17/06	04/18/06	rel qual code
Surrogate: Decachlorobiphenyl (45-120%)					86 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					58 %				

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.

Level IV



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 002

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPD1227

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD1227
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: June 25, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^X 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	IPD1227-01	Water	624
Trip Blank	IPD1227-02	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 3°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 preserved water samples were analyzed for all target compounds 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 sample analyses, dated 03/28/06. The average RRFs were ≥ 0.05 , and the %RSDs were $\leq 35\%$ or r^2 values ≥ 0.995 for all target compounds listed on the sample result summary forms. The continuing calibration associated with the sample analyses was dated 04/17/06. The %Ds exceeded the QC limit of $\leq 20\%$ for carbon tetrachloride, 1,2-dichloroethane, and trichlorofluoromethane. Nondetect results for the aforementioned compounds were qualified as estimated, "UJ," in sample Outfall 002. Sample Trip Blank was a field QC sample and required no qualification for the %D outliers. No further qualifications were required.

2.4 BLANKS

One method blank (6D17002-BLK1) was 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 (6D17002-BS1) was analyzed with this SDG. All recoveries were within the laboratory-established QC limits. No qualifications were required.

2.6 SURROGATE RECOVERY

Surrogate recoveries were within the laboratory QC limits of 80-120% for this SDG. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on sample Outfall 002 for this SDG. All recoveries were within the laboratory-established QC limits, with the exception of the recovery above the QC limits for 1,2-dichloroethane in the MS only. All 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 002. No target compounds were detected above the MDL 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 ± 30 seconds for retention times. The internal standard areas 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.

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

Project ID: Routine Outfall 002

Report Number: IPD1227

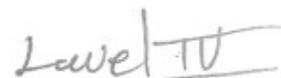
 Sampled: 04/11/06
 Received: 04/12/06

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: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6D17002	0.28	2.0	ND	1	04/17/06	04/17/06	u
Carbon tetrachloride	EPA 624	6D17002	0.28	5.0	ND	1	04/17/06	04/17/06	u
Chloroform	EPA 624	6D17002	0.33	2.0	ND	1	04/17/06	04/17/06	u
1,1-Dichloroethane	EPA 624	6D17002	0.27	2.0	ND	1	04/17/06	04/17/06	u
1,2-Dichloroethane	EPA 624	6D17002	0.28	2.0	ND	1	04/17/06	04/17/06	u
1,1-Dichloroethene	EPA 624	6D17002	0.42	3.0	ND	1	04/17/06	04/17/06	u
Ethylbenzene	EPA 624	6D17002	0.25	2.0	ND	1	04/17/06	04/17/06	u
Tetrachloroethene	EPA 624	6D17002	0.32	2.0	ND	1	04/17/06	04/17/06	u
Toluene	EPA 624	6D17002	0.36	2.0	ND	1	04/17/06	04/17/06	u
1,1,1-Trichloroethane	EPA 624	6D17002	0.30	2.0	ND	1	04/17/06	04/17/06	u
1,1,2-Trichloroethane	EPA 624	6D17002	0.30	2.0	ND	1	04/17/06	04/17/06	u
Trichloroethene	EPA 624	6D17002	0.26	5.0	ND	1	04/17/06	04/17/06	u
Trichlorofluoromethane	EPA 624	6D17002	0.34	5.0	ND	1	04/17/06	04/17/06	u
Vinyl chloride	EPA 624	6D17002	0.26	5.0	ND	1	04/17/06	04/17/06	u
Xylenes, Total	EPA 624	6D17002	0.90	4.0	ND	1	04/17/06	04/17/06	u
Surrogate: Dibromofluoromethane (80-120%)					108 %				
Surrogate: Toluene-d8 (80-120%)					105 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					108 %				
Sample ID: IPD1227-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6D17002	0.28	2.0	ND	1	04/17/06	04/17/06	u
Carbon tetrachloride	EPA 624	6D17002	0.28	5.0	ND	1	04/17/06	04/17/06	u
Chloroform	EPA 624	6D17002	0.33	2.0	ND	1	04/17/06	04/17/06	u
1,1-Dichloroethane	EPA 624	6D17002	0.27	2.0	ND	1	04/17/06	04/17/06	u
1,2-Dichloroethane	EPA 624	6D17002	0.28	2.0	ND	1	04/17/06	04/17/06	u
1,1-Dichloroethene	EPA 624	6D17002	0.42	3.0	ND	1	04/17/06	04/17/06	u
Ethylbenzene	EPA 624	6D17002	0.25	2.0	ND	1	04/17/06	04/17/06	u
Tetrachloroethene	EPA 624	6D17002	0.32	2.0	ND	1	04/17/06	04/17/06	u
Toluene	EPA 624	6D17002	0.36	2.0	ND	1	04/17/06	04/17/06	u
1,1,1-Trichloroethane	EPA 624	6D17002	0.30	2.0	ND	1	04/17/06	04/17/06	u
1,1,2-Trichloroethane	EPA 624	6D17002	0.30	2.0	ND	1	04/17/06	04/17/06	u
Trichloroethene	EPA 624	6D17002	0.26	5.0	ND	1	04/17/06	04/17/06	u
Trichlorofluoromethane	EPA 624	6D17002	0.34	5.0	ND	1	04/17/06	04/17/06	u
Vinyl chloride	EPA 624	6D17002	0.26	5.0	ND	1	04/17/06	04/17/06	u
Xylenes, Total	EPA 624	6D17002	0.90	4.0	ND	1	04/17/06	04/17/06	u
Surrogate: Dibromofluoromethane (80-120%)					103 %				
Surrogate: Toluene-d8 (80-120%)					106 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					111 %				

 Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 002

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP IPD1227

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD1227
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: June 25, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^X 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 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 002	IPD1227-01	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 3°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 one day beyond the seven-day holding time from the date of collection; therefore, all results were qualified as estimated nondetects, "UJ," in sample Outfall 002. The sample was analyzed within 40 days of extraction. No further 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 03/22/06 was associated with the sample in this SDG. The %RSDs for all target compounds were $\leq 35\%$. An initial calibration verification (ICV) was analyzed following the initial calibration, with %Ds for all target compounds within the QC limit of $\leq 20\%$. The continuing calibration associated with the sample was analyzed 04/24/06. The %Ds for all target compounds were within the QC limit of $\leq 20\%$. No qualifications were required.

2.4 BLANKS

One method blank (6D19072-BLK1) was extracted and analyzed with this SDG. Target compound bis(2-ethylhexyl)phthalate was detected between the MDL and the reporting limit at 2.66 µg/L in the method blank; however, bis(2-ethylhexyl)phthalate was not detected in the associated sample. No other target compounds were detected above the MDL in the method blank. Review of the method blank raw data indicated no false positive or false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6D19072-BS1/BSD1) was extracted and analyzed with this SDG. All recoveries and RPDs were within the laboratory-established QC limits. No qualifications were required.

2.6 SURROGATE RECOVERY

Surrogate recoveries for the sample were within the laboratory QC limits. 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.

2.8.2 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 standard: -50%/+100% for internal standard areas and ± 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 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.

2.11 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. Results were reported in $\mu\text{g/L}$ (ppb). 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.

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

Project ID: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06

Received: 04/12/06

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: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6D19072	1.6	4.8	ND	0.952	04/19/06	04/25/06	new qual H4 qual code
2,4-Dinitrotoluene	EPA 625	6D19072	0.19	8.6	ND	0.952	04/19/06	04/25/06	WT
N-Nitrosodimethylamine	EPA 625	6D19072	0.095	7.6	ND	0.952	04/19/06	04/25/06	H
Pentachlorophenol	EPA 625	6D19072	0.095	7.6	ND	0.952	04/19/06	04/25/06	
2,4,6-Trichlorophenol	EPA 625	6D19072	0.095	5.7	ND	0.952	04/19/06	04/25/06	
Surrogate: 2-Fluorophenol (30-120%)					68 %				
Surrogate: Phenol-d6 (35-120%)					72 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					81 %				
Surrogate: Nitrobenzene-d5 (45-120%)					74 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					71 %				
Surrogate: Terphenyl-d14 (45-120%)					74 %				

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

Level IV

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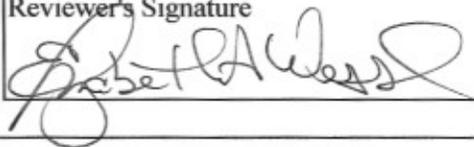
CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID B4WPC7
 Task Order 1261.001D.01
 SDG No. IPD1227

No. of Analyses 1

Laboratory Del Mar
 Reviewer E. Wessling
 Analysis/Method General Chemistry

Date: June 26, 2006
 Reviewer's Signature


ACTION ITEMS ^a	
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: - the result between the RL and the MDL was estimated - Calibration outliers
COMMENTS ^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Sampling
Outfall 002

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPD1227

Prepared by

MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPD1227
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: June 26, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 120.1, 160.2, 160.5, 180.1, 300.0, 314.0, 350.2, 405.1 and 413.1* and *Standard Methods for the Examination of Water and Wastewater Method SM2540-C and SM5540-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 002	IPD1227-01	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 $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ at 3°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 analyses were performed within the method specified holding times. No qualifications were required.

2.2 CALIBRATION

For all applicable analyses, the initial calibration correlation coefficients were ≥ 0.995 and the ICV and CCV recoveries were within the control limits of 90-110% with the exception of the perchlorate analysis. The opening 4 ppb CCV was recovered at 89%; therefore, the nondetect for perchlorate in the site sample was qualified as an estimated nondetect, UJ." For those methods requiring weight determinations, balance calibration logs were reviewed and found to be acceptable. For ammonia, no information regarding the standardization of the titrant was provided; therefore, the LCS recovery was evaluated to determine calibration compliance. As the LCS was within control, no qualifications were deemed necessary. No further qualifications were required.

2.3 BLANKS

There were no detects in the method blanks or CCBs associated with the sample analyses at levels sufficient to require site sample qualification. 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 (BOD, total recoverable hydrocarbons, and oil and grease only) recoveries and RPDs were within the laboratory-established control limits. No qualifications were required.

2.5 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.

2.6 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. Evaluation of all method accuracy and precision (for BOD, total recoverable hydrocarbons, and oil and grease) was based on LCS or LCS/LCSD 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. Detects below the reporting limit were qualified as estimated, "J," and annotated with "DNQ" in accordance with 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
 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: Routine Outfall 002

Report Number: IPD1227

Sampled: 04/11/06
 Received: 04/12/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1227-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6D13122	0.30	0.50	ND	1	04/13/06	04/13/06	u
Biochemical Oxygen Demand Chloride	EPA 405.1	6D13078	0.59	2.0	0.75	1	04/13/06	04/18/06	J J DNR
Nitrate/Nitrite-N	EPA 300.0	6D12138	1.5	5.0	31	10	04/12/06	04/12/06	u
Oil & Grease	EPA 300.0	6D12138	0.080	0.15	ND	1	04/12/06	04/12/06	u
Sulfate	EPA 413.1	6D13054	0.89	4.7	5.5	1	04/13/06	04/13/06	u
Surfactants (MBAS)	EPA 300.0	6D12138	4.5	5.0	140	10	04/12/06	04/12/06	u
Total Dissolved Solids	SM5540-C	6D13003	0.044	0.10	0.061	1	04/13/06	04/13/06	J J DNR
Total Suspended Solids	SM2540C	6D13076	10	10	430	1	04/13/06	04/13/06	u
	EPA 160.2	6D15042	10	10	ND	1	04/15/06	04/15/06	u
Sample ID: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: ml/hr									
Total Settleable Solids	EPA 160.5	6D13058	0.10	0.10	ND	1	04/13/06	04/13/06	u
Sample ID: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	6D13084	0.040	1.0	0.91	1	04/13/06	04/13/06	J J DNR
Sample ID: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6D13102	2.2	5.0	ND	1	04/13/06	04/14/06	u
Perchlorate	EPA 314.0	6D17066	0.80	4.0	ND	1	04/17/06	04/18/06	u C
Sample ID: IPD1227-01 (Outfall 002 - Water)									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6D13071	1.0	1.0	720	1	04/13/06	04/13/06	u

LEVEL III

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

APPENDIX G

Section 9

Outfall 003, April 04, 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: Routine Outfall 003

Sampled: 04/04/06
Received: 04/04/06
Issued: 05/07/06 16:53

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 of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.*

SAMPLE CROSS REFERENCE

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

LABORATORY ID
IPD0259-01

CLIENT ID
Outfall 003

MATRIX
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: Routine Outfall 003

Report Number: IPD0259

Sampled: 04/04/06

Received: 04/04/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0259-01 (Outfall 003 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	6D05074	0.050	2.0	0.28	1	04/05/06	04/05/06	J
Cadmium	EPA 200.8	6D05074	0.025	1.0	ND	1	04/05/06	04/05/06	
Copper	EPA 200.8	6D05074	0.25	2.0	9.5	1	04/05/06	04/05/06	
Lead	EPA 200.8	6D05074	0.040	1.0	0.45	1	04/05/06	04/05/06	J
Mercury	EPA 245.1	6D05091	0.050	0.20	0.065	1	04/05/06	04/05/06	J
Thallium	EPA 200.8	6D05074	0.15	1.0	ND	1	04/05/06	04/05/06	

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPD0259

Sampled: 04/04/06

Received: 04/04/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0259-01 (Outfall 003 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6D04136	0.15	0.50	26	1	04/04/06	04/05/06	
Nitrate/Nitrite-N	EPA 300.0	6D04136	0.080	0.15	0.23	1	04/04/06	04/05/06	
Oil & Grease	EPA 413.1	6D05046	0.90	4.8	ND	1	04/05/06	04/05/06	
Sulfate	EPA 300.0	6D04136	4.5	5.0	59	10	04/04/06	04/05/06	
Total Dissolved Solids	SM2540C	6D05071	10	10	350	1	04/05/06	04/05/06	
Total Suspended Solids	EPA 160.2	6D07128	10	10	ND	1	04/07/06	04/07/06	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPD0259

Sampled: 04/04/06

Received: 04/04/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 003 (IPD0259-01) - Water EPA 300.0	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
	2	04/04/2006 08:20	04/04/2006 18:05	04/04/2006 20:30	04/05/2006 03:11

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPD0259

Sampled: 04/04/06

Received: 04/04/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6D05074 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05074-BLK1)											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.025	ug/l							
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.15	ug/l							
LCS Analyzed: 04/05/2006 (6D05074-BS1)											
Antimony	82.1	2.0	0.050	ug/l	80.0		103	85-115			
Cadmium	81.4	1.0	0.025	ug/l	80.0		102	85-115			
Copper	81.3	2.0	0.25	ug/l	80.0		102	85-115			
Lead	81.4	1.0	0.040	ug/l	80.0		102	85-115			
Thallium	81.3	1.0	0.15	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 04/05/2006 (6D05074-MS1) Source: IPD0082-01											
Antimony	86.4	2.0	0.050	ug/l	80.0	0.12	108	70-130			
Cadmium	80.4	1.0	0.025	ug/l	80.0	0.12	100	70-130			
Copper	88.8	2.0	0.25	ug/l	80.0	14	94	70-130			
Lead	76.5	1.0	0.040	ug/l	80.0	0.23	95	70-130			
Thallium	76.5	1.0	0.15	ug/l	80.0	ND	96	70-130			
Matrix Spike Analyzed: 04/05/2006 (6D05074-MS2) Source: IPD0289-01											
Antimony	82.4	2.0	0.050	ug/l	80.0	ND	103	70-130			
Cadmium	80.9	1.0	0.025	ug/l	80.0	ND	101	70-130			
Copper	81.6	2.0	0.25	ug/l	80.0	0.61	101	70-130			
Lead	82.9	1.0	0.040	ug/l	80.0	ND	104	70-130			
Thallium	82.7	1.0	0.15	ug/l	80.0	ND	103	70-130			
Matrix Spike Dup Analyzed: 04/05/2006 (6D05074-MSD1) Source: IPD0082-01											
Antimony	87.0	2.0	0.050	ug/l	80.0	0.12	109	70-130	1	20	
Cadmium	81.2	1.0	0.025	ug/l	80.0	0.12	101	70-130	1	20	
Copper	89.2	2.0	0.25	ug/l	80.0	14	94	70-130	0	20	
Lead	77.0	1.0	0.040	ug/l	80.0	0.23	96	70-130	1	20	
Thallium	77.3	1.0	0.15	ug/l	80.0	ND	97	70-130	1	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: Routine Outfall 003

Report Number: IPD0259

Sampled: 04/04/06

Received: 04/04/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D05091 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05091-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/05/2006 (6D05091-BS1)											
Mercury	7.98	0.20	0.050	ug/l	8.00		100	85-115			
Matrix Spike Analyzed: 04/05/2006 (6D05091-MS1)											
						Source: IPD0241-01					
Mercury	8.57	0.20	0.050	ug/l	8.00	0.060	106	70-130			
Matrix Spike Dup Analyzed: 04/05/2006 (6D05091-MSD1)											
						Source: IPD0241-01					
Mercury	8.73	0.20	0.050	ug/l	8.00	0.060	108	70-130	2	20	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPD0259

Sampled: 04/04/06

Received: 04/04/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D04136 Extracted: 04/04/06											
Blank Analyzed: 04/04/2006 (6D04136-BLK1)											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
LCS Analyzed: 04/04/2006 (6D04136-BS1)											
Chloride	4.76	0.50	0.15	mg/l	5.00		95	90-110			
Sulfate	9.53	0.50	0.45	mg/l	10.0		95	90-110			
Matrix Spike Analyzed: 04/04/2006 (6D04136-MS1)											
						Source: IPD0234-12					
Chloride	109	5.0	1.5	mg/l	50.0	66	86	80-120			
Sulfate	268	5.0	4.5	mg/l	100	180	88	80-120			
Matrix Spike Dup Analyzed: 04/04/2006 (6D04136-MSD1)											
						Source: IPD0234-12					
Chloride	106	5.0	1.5	mg/l	50.0	66	80	80-120	3	20	
Sulfate	258	5.0	4.5	mg/l	100	180	78	80-120	4	20	M2
Batch: 6D05046 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05046-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/05/2006 (6D05046-BS1)											
Oil & Grease	16.4	5.0	0.94	mg/l	20.0		82	65-120			M-NR1
LCS Dup Analyzed: 04/05/2006 (6D05046-BSD1)											
Oil & Grease	16.5	5.0	0.94	mg/l	20.0		82	65-120	1	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: Routine Outfall 003

Report Number: IPD0259

Sampled: 04/04/06

Received: 04/04/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6D05071 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05071-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/05/2006 (6D05071-BS1)											
Total Dissolved Solids	998	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 04/05/2006 (6D05071-DUP1)											
Total Dissolved Solids	16.0	10	10	mg/l		Source: IPD0242-01 18			12	10	R-4
Batch: 6D07128 Extracted: 04/07/06											
Blank Analyzed: 04/07/2006 (6D07128-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/07/2006 (6D07128-BS1)											
Total Suspended Solids	975	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 04/07/2006 (6D07128-DUP1)											
Total Suspended Solids	64.0	10	10	mg/l		Source: IPD0270-01 67			5	10	

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: Routine Outfall 003

Report Number: IPD0259

Sampled: 04/04/06

Received: 04/04/06

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
IPD0259-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.19	4.8	15
IPD0259-01	Antimony-200.8	Antimony	ug/l	0.28	2.0	6.00
IPD0259-01	Cadmium-200.8	Cadmium	ug/l	0	1.0	4.00
IPD0259-01	Chloride - 300.0	Chloride	mg/l	26	0.50	150
IPD0259-01	Copper-200.8	Copper	ug/l	9.50	2.0	14
IPD0259-01	Lead-200.8	Lead	ug/l	0.45	1.0	5.20
IPD0259-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.23	0.15	10.00
IPD0259-01	Sulfate-300.0	Sulfate	mg/l	59	5.0	250
IPD0259-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	350	10	850
IPD0259-01	Thallium-200.8	Thallium	ug/l	0	1.0	2.00

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: Routine Outfall 003

Report Number: IPD0259

Sampled: 04/04/06

Received: 04/04/06

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.
- 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-4** Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- 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

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

Project ID: Routine Outfall 003

Report Number: IPD0259

Sampled: 04/04/06
 Received: 04/04/06

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Liquid	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
EPA 905.0	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.testamericainc.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: IPD0259-01

Analysis Performed: EDD + Level 4
 Samples: IPD0259-01

Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Level 4 + EDD
 Samples: IPD0259-01

Analysis Performed: Strontium 90
 Samples: IPD0259-01

Del Mar Analytical - Irvine

Michele Chamberlin
 Project Manager

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IPD0259

Del Mar Analytical CHAIN OF CUSTODY FORM

Version 03/6/06

Client Name/Address:		Project:		ANALYSIS REQUIRED										Field readings:		
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Routine Outfall 003 Stormwater at RMHF		Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cl-, SO4, NO3+NO2-N	TDS, TSS	SR-90 (905.0)						Temp = 57.4 pH = 7.5	
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #								Comments		
Outfall 003	W	1L Poly	1	4/1/06 9:20	HNO3	1A	X									
Outfall 003-Dup	W	1L Poly	1		HNO3	1B	X									
Outfall 003	W	1L Amber	2		None	2A, 2B										
Outfall 003	W	1L Amber	2		HCl	3A, 3B	X									
Outfall 003	W	Poly-500 ml	2		None	4A, 4B		X								
Outfall 003	W	Poly-500 ml	2		None	5A, 5B		X								
Outfall 003	W	Poly-1 gal	1	4/1/06 6:20	None	6A, 6B		X								unfiltered and unpreserved analysis
Relinquished By: <i>Robert Brown</i>		Date/Time: 4/1/06 1445		Received By: <i>[Signature]</i>		Date/Time: 4/1/06 1445									Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal <input checked="" type="checkbox"/>	
Relinquished By: <i>[Signature]</i>		Date/Time: 4/1/06 1805		Received By: <i>[Signature]</i>		Date/Time: 4/1/06 1805									Perchlorate Only 72 Hours _____ Metals Only 72 Hours _____	
Relinquished By: _____		Date/Time: _____		Received By: _____		Date/Time: _____									Sample Integrity: (Check) Intact <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/> 4°C	

[Signature]
2045

Edward Perry 4/1/06 1805



April 27, 2006

Ms. Michele Chamberlin
Project Manager
Del Mar Analytical
17461 Derian Avenue, Suite 100
Irvine, CA 92614

Reference: Del Mar Analytical Project No. IPD0259
Eberline Services NELAP Cert #01120CA (exp. 01/31/07)
Eberline Services Report R604023-8677

Dear Ms. Chamberlin:

Enclosed are results from the analysis of one water sample received at Eberline Services on April 6, 2006. The sample was analyzed according to the accompanying Del Mar Analytical Subcontract Order Form. The requested analysis was strontium-90 (Sr-90, EPA905.0). The sample was neither filtered nor preserved. The QC LCS, blank analysis, and duplicate analysis results were within the limits defined in Eberline Services Quality Control Procedures Manual. Analyses that involve the yielding of an analytical tracer or carrier, such as Sr-90, do not require a matrix spike analysis to be performed.

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

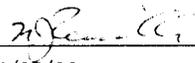
Analytical Services
2030 Wright Avenue
P.O. Box 4040
Richmond, California 94804-0040
(510) 235-2633 Fax (510) 235-0438
Toll Free (800) 841-5487
www.eberline.com

Eberline Services

ANALYSIS RESULTS

SDG <u>8677</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R604023-01</u>	Contract <u>PROJECT# IPD0259</u>
Received Date <u>04/06/06</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>
1PD0259-01	8677-001	04/04/06	04/18/06	Sr-90	3.76 ± 0.47	pCi/L	0.395

Certified by <u></u>
Report Date <u>04/27/06</u>
Page 1

Eberline Services

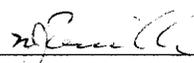
QC RESULTS

SDG <u>8677</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R604023-01</u>	Contract <u>PROJECT# IPD0259</u>
Received Date <u>04/06/06</u>	Matrix <u>WATER</u>

Lab

<u>Sample ID</u>	<u>Nuclide</u>	<u>Results</u>	<u>Units</u>	<u>Amount Added</u>	<u>MDA</u>	<u>Evaluation</u>
<u>LCS</u>						
8677-002	Sr-90	9.52 ± 0.52	pCi/Smpl	9.81	0.206	97% recovery
<u>BLANK</u>						
8677-003	Sr-90	0.036 ± 0.20	pCi/Smpl	NA	0.457	<MDA

<u>DUPLICATES</u>				<u>ORIGINALS</u>				
<u>Sample ID</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>Sample ID</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>RPD (Tot)</u>	<u>Eval</u>
8677-004	Sr-90	2.76 ± 0.42	0.402	8677-001	3.76 ± 0.47	0.395	31	36 satis.

Certified by <u></u> Report Date <u>04/27/06</u> Page 2
--



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 # IPD0259

<p style="text-align: center;">SENDING LABORATORY:</p> <p>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 style="text-align: center;">RECEIVING LABORATORY:</p> <p>Eberline Services 2030 Wright Avenue Richmond, CA 94804 Phone : (510) 235-2633 Fax: (510) 235-0438</p>
---	---

Standard TAT is requested unless specific due date is requested => **Due Date:** _____ **Initials:** _____

Analysis	Expiration	Comments
Sample ID: IPD0259-01 Water	Sampled: 04/04/06 08:20	
Level 4 + EDD-OUT	05/02/06 08:20	**LEVEL IV QC, ACCESS 7 EDD**
Strontium 90-O	04/04/07 08:20	905.0, sub to Eberline

Containers Supplied:
 1 gal Poly (IPD0259-01K)

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):	_____	

4/5/06

	Date	Time		Date	Time
Released By	Date	Time	Received By	Date	Time



April 18, 2006

Alta Project I.D.: 27552

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 April 06, 2006 under your Project Name "IPD0259". 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. 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: 4/6/2006

Alta Lab. ID

Client Sample ID

27552-001

IPD0259-01

SECTION II

Method Blank					EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7910	Lab Sample:	0-MB001	Date Analyzed DB-5:	11-Apr-06	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	9-Apr-06						
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers	
2,3,7,8-TCDD	ND	0.000000628			IS 13C-2,3,7,8-TCDD	74.5	25 - 164		
1,2,3,7,8-PeCDD	ND	0.000000450			13C-1,2,3,7,8-PeCDD	71.4	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.000000804			13C-1,2,3,4,7,8-HxCDD	74.6	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.000000867			13C-1,2,3,6,7,8-HxCDD	70.7	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.000000808			13C-1,2,3,4,6,7,8-HpCDD	75.4	23 - 140		
1,2,3,4,6,7,8-HpCDD	ND	0.00000111			13C-OCDD	55.5	17 - 157		
OCDD	0.00000259			J	13C-2,3,7,8-TCDF	77.3	24 - 169		
2,3,7,8-TCDF	ND	0.000000346			13C-1,2,3,7,8-PeCDF	73.3	24 - 185		
1,2,3,7,8-PeCDF	ND	0.000000474			13C-2,3,4,7,8-PeCDF	72.6	21 - 178		
2,3,4,7,8-PeCDF	ND	0.000000453			13C-1,2,3,4,7,8-HxCDF	74.5	26 - 152		
1,2,3,4,7,8-HxCDF	ND	0.000000436			13C-1,2,3,6,7,8-HxCDF	66.9	26 - 123		
1,2,3,6,7,8-HxCDF	ND	0.000000334			13C-2,3,4,6,7,8-HxCDF	71.8	28 - 136		
2,3,4,6,7,8-HxCDF	ND	0.000000326			13C-1,2,3,7,8,9-HxCDF	70.0	29 - 147		
1,2,3,7,8,9-HxCDF	ND	0.000000456			13C-1,2,3,4,6,7,8-HpCDF	66.9	28 - 143		
1,2,3,4,6,7,8-HpCDF	ND	0.000000395			13C-1,2,3,4,7,8,9-HpCDF	72.4	26 - 138		
1,2,3,4,7,8,9-HpCDF	ND	0.000000424			13C-OCDF	56.7	17 - 157		
OCDF	ND	0.00000136			CRS 37Cl-2,3,7,8-TCDD	84.0	35 - 197		
Totals					Footnotes				
Total TCDD	ND	0.000000628			a. Sample specific estimated detection limit.				
Total PeCDD	ND	0.000000450			b. Estimated maximum possible concentration.				
Total HxCDD	ND	0.000000828			c. Method detection limit.				
Total HpCDD	ND	0.00000111			d. Lower control limit - upper control limit.				
Total TCDF	ND	0.000000346							
Total PeCDF	ND	0.000000463							
Total HxCDF	ND	0.000000473							
Total HpCDF	ND	0.000000408							

Analyst: MAS

Approved By: William J. Luksemburg 12-Apr-2006 09:57

NPDES - 312

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	7910	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	9-Apr-06	Date Analyzed DB-5:	10-Apr-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	11.0	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	76.2	25 - 164	
1,2,3,7,8-PeCDD	50.0	53.6	35 - 71	13C-1,2,3,7,8-PeCDD	73.8	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	53.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	79.3	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	53.2	38 - 67	13C-1,2,3,6,7,8-HxCDD	72.2	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	53.8	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	77.9	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	54.0	35 - 70	13C-OCDD	51.6	17 - 157	
OCDD	100	107	78 - 144	13C-2,3,7,8-TCDF	78.6	24 - 169	
2,3,7,8-TCDF	10.0	10.9	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	74.4	24 - 185	
1,2,3,7,8-PeCDF	50.0	54.1	40 - 67	13C-2,3,4,7,8-PeCDF	75.4	21 - 178	
2,3,4,7,8-PeCDF	50.0	54.3	34 - 80	13C-1,2,3,4,7,8-HxCDF	78.7	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	53.4	36 - 67	13C-1,2,3,6,7,8-HxCDF	75.6	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	52.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	75.6	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	51.8	35 - 78	13C-1,2,3,7,8,9-HxCDF	75.1	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	52.7	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	68.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	52.6	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	75.5	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	52.6	39 - 69	13C-OCDF	56.6	17 - 157	
OCDF	100	105	63 - 170	CRS 37Cl-2,3,7,8-TCDD	87.2	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 12-Apr-2006 09:57

Sample ID: IPD0259-01					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine		Matrix:	Aqueous	Lab Sample:	27552-001	Date Received:	6-Apr-06
Project:	IPD0259		Sample Size:	1.03 L	QC Batch No.:	7910	Date Extracted:	9-Apr-06
Date Collected:	4-Apr-06				Date Analyzed DB-5:	11-Apr-06	Date Analyzed DB-225:	NA
Time Collected:	0820							
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000465			IS 13C-2,3,7,8-TCDD	58.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000681			13C-1,2,3,7,8-PeCDD	53.6	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000129			13C-1,2,3,4,7,8-HxCDD	54.5	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000125			13C-1,2,3,6,7,8-HxCDD	50.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000123			13C-1,2,3,4,6,7,8-HpCDD	51.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000273			J	13C-OCDD	38.1	17 - 157	
OCDD	0.0000200			J,B	13C-2,3,7,8-TCDF	59.3	24 - 169	
2,3,7,8-TCDF	ND	0.00000665			13C-1,2,3,7,8-PeCDF	54.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000536			13C-2,3,4,7,8-PeCDF	53.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000499			13C-1,2,3,4,7,8-HxCDF	54.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000493			13C-1,2,3,6,7,8-HxCDF	46.7	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000543			13C-2,3,4,6,7,8-HxCDF	51.6	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000511			13C-1,2,3,7,8,9-HxCDF	51.7	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000710			13C-1,2,3,4,6,7,8-HpCDF	48.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000155			13C-1,2,3,4,7,8,9-HpCDF	50.4	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000430			13C-OCDF	40.2	17 - 157	
OCDF	ND	0.00000409			CRS 37Cl-2,3,7,8-TCDD	87.5	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.00000465			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000681			b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000126			c. Method detection limit.			
Total HpCDD	0.00000273		0.00000504		d. Lower control limit - upper control limit.			
Total TCDF	ND	0.00000665						
Total PeCDF	ND	0.00000518						
Total HxCDF	ND		0.00000163					
Total HpCDF	ND	0.00000161						

Analyst: MAS

Approved By: William J. Luksemburg 12-Apr-2006 09:57

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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

Accrediting Authority	Certificate Number
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 # IPD0259

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:

Alta Analytical - SUB
 1104 Windfield Way *27552*
 El Dorado Hills, CA 95762
 Phone : (916) 933-1640
 Fax: (916) 673-0106 *1.8°C*

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

Analysis	Expiration	Comments
Sample ID: IPD0259-01 Water	Sampled: 04/04/06 08:20	
1613-Dioxin-HR-Alta	04/11/06 08:20	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	05/02/06 08:20	Excel EDD email to pm, Include Std logs for Lvl IV

Containers Supplied:
 1 L Amber (IPD0259-01C)
 1 L Amber (IPD0259-01D)

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): _____

4/15/06

Released By: _____ Date: _____ Time: _____ Received By: *Bettina J. Benedict* Date: *4/10/06* Time: *0850*

Released By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27552

Samples Arrival:	Date/Time <u>4/6/06 0850</u>	Initials: <u>VB</u>	Location: <u>WR-2</u>
			Shelf/Rack: _____
Logged In:	Date/Time <u>4/6/06 1016</u>	Initials: <u>VB</u>	Location: <u>WR-2</u>
			Shelf/Rack: <u>C-3</u>
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	<u>1.8°C</u>	Time: <u>0900</u>	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 # <u>7920 6313 8160</u>			
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 ₂ S ₂ O ₃ Preservation Documented?		COC	Sample Container
		None	
Shipping Container	Alta	<input checked="" type="radio"/> Client	Retain
		<input checked="" type="radio"/> Return	Dispose

Comments:

APPENDIX G

Section 10

Outfall 003, April 04, 2006

MEC^X Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4DF77
 Task Order 1261.001D.01
 SDG No. IPD0259

No. of Analyses 1

Laboratory Alta
 Reviewer K. Shadowlight

Date: <u>May 21, 2006</u>
Reviewer's Signature <i>K. Shadowlight</i>

Analysis/Method Dioxin/Furan by Method 1613

ACTION ITEMS ^a	
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	_____
COMMENTS ^b	_____
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b 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 003

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPD0259

Prepared by
MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001D.01
Sample Delivery Group: IPD0259
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: May 21, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x 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 003	IPD0259-01	27552-001	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 within the temperature limits at 2°C. 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.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7910-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 qualification of the site sample was 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." These "J" values were annotated with the

qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. Any reported estimated maximum possible concentration (EMPC) was qualified as an estimated nondetect, "UJ." No further qualifications were required.

EPA Method 1613

Sample ID: IPD0259-01 *Outfall 003*

Client Data
 Name: Del Mar Analytical, Irvine
 Project: IPD0259
 Date Collected: 4-Apr-06
 Time Collected: 0820

Sample Data
 Matrix: Aqueous
 Sample Size: 1.03 L

Laboratory Data
 Lab Sample: 27552-001
 QC Batch No.: 7910
 Date Analyzed DB-5: 11-Apr-06
 Date Received: 6-Apr-06
 Date Extracted: 9-Apr-06
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000465			IS 13C-2,3,7,8-TCDD	58.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000681			13C-1,2,3,7,8-PeCDD	53.6	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000129			13C-1,2,3,4,7,8-HxCDD	54.5	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000125			13C-1,2,3,6,7,8-HxCDD	50.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000123			13C-1,2,3,4,6,7,8-HpCDD	51.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000273			J	13C-OCDD	38.1	17 - 157	
OCDD	0.0000200			J,B	13C-2,3,7,8-TCDF	59.3	24 - 169	
2,3,7,8-TCDF	ND	0.000000665			13C-1,2,3,7,8-PeCDF	54.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000536			13C-2,3,4,7,8-PeCDF	53.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000499			13C-1,2,3,4,7,8-HxCDF	54.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000493			13C-1,2,3,6,7,8-HxCDF	46.7	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000543			13C-2,3,4,6,7,8-HxCDF	51.6	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000511			13C-1,2,3,7,8,9-HxCDF	51.7	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000710			13C-1,2,3,4,6,7,8-HpCDF	48.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000155			13C-1,2,3,4,7,8,9-HpCDF	50.4	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000430			13C-OCDF	40.2	17 - 157	
OCDF	ND	0.000000409			CRS 37Cl-2,3,7,8-TCDD	87.5	35 - 197	

Totals	Footnotes							
Total TCDD	ND	0.000000465						a. Sample specific estimated detection limit.
Total PeCDD	ND	0.000000681						b. Estimated maximum possible concentration.
Total HxCDD	ND	0.00000126						c. Method detection limit.
Total HpCDD	0.00000273		0.000000504					d. Lower control limit - upper control limit.
Total TCDF	ND	0.000000665						
Total PeCDF	ND	0.000000518						
Total HxCDF	ND	0.000000163						
Total HpCDF	ND	0.00000161						

Approved By: William J. Luksemburg 12-Apr-2006 09:57

Analyst: MAS

Level III

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^X
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4RA5
 Task Order: 1261.001D.01
 SDG No.: IPD0259

No. of Analyses: 1

Laboratory: Del Mar Analytical
 Reviewer: P. Meeks
 Analysis/Method: Radionuclides

Date: <u>May 18, 2006</u>
Reviewer's Signature <i>P. Meeks</i>

ACTION ITEMS^a	
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 exceeded holding time.
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^b	_____
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	

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 $4\pm 2^{\circ}\text{C}$. No temperature information was provided by Eberline, the subcontract laboratory; however, as it is not necessary to chill radiological samples, no qualifications were required. The sample was noted to have been received intact and in good condition.

According to the Los Angeles Regional Water Quality Control Board's (LARWQCB) guidance letter dated 01/12/05, unfiltered samples should not be preserved and filtered aliquots should be preserved after filtration. The sample in this SDG was not preserved or filtered. No qualifications were required.

2.1.2 Chain of Custody

The original COC was signed and dated by field and laboratory personnel and the transfer COC was signed by personnel from both laboratories. Eberline did not list the MWH ID on the Form I; therefore, the reviewer edited the Form I to reflect this ID. No qualifications were required.

2.1.3 Holding Times

The sample was analyzed beyond the five day holding time for unpreserved samples; therefore, strontium detected in the sample was qualified as estimated, "J." No further qualifications were required.

2.2 CALIBRATION

The laboratory calibration information included the standard certificates and applicable preparation/dilutions logs for NIST-traceability. The strontium chemical yield was at least 75% and was considered acceptable. No further qualifications were required.

2.3 BLANKS

No measurable activity was detected in the method blank, therefore, no qualifications were necessary.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

An aqueous blank spike was analyzed in association with the sample in this SDG. The blank spike result was within the 3-sigma limits. No qualifications were necessary.

2.5 LABORATORY DUPLICATES

The laboratory performed a duplicate analysis on Outfall 003. The results was within the 3-sigma limit. No qualifications were necessary.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Analyses that involve the yielding of an analytical tracer do not require matrix spike analyses; therefore, no strontium matrix spike was performed. No qualifications were required.

2.7 SAMPLE RESULT VERIFICATION

An EPA Level IV review was performed for the sample in this SDG. The sample result and MDA reported on the sample result form were verified against the raw data and no calculation or transcription errors were noted. No qualifications were necessary.

2.8 FIELD QC SAMPLES

Field QC samples were evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated 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 samples in this SDG.



DATA VALIDATION REPORT

NPDES Sampling
Outfall 003

ANALYSIS: RADIONUCLIDES

SAMPLE DELIVERY GROUP: IPD0259

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPD0259
Project Manager: P. Costa
Matrix: Water
Analysis: Radionuclides
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: P. Meeks
Date of Review: May 18, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *EPA Prescribed Procedures for Measurements of Radioactivity in Drinking Water, Method 905.0 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	Del Mar ID	Eberline ID	Matrix	COC Method
Outfall 003	IPD0259-01	8677-001	water	905.0

Eberline Services

ANALYSIS RESULTS

SDG <u>8677</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R604023-01</u>	Contract <u>PROJECT# IPD0259</u>
Received Date <u>04/06/06</u>	Matrix <u>WATER</u>

Client	Lab							Rev	Qual
Sample ID	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	Qual	Code
<u>Outfall 003</u> 1PD0259-01	8677-001	04/04/06	04/18/06	Sr-90	3.76 ± 0.47	pCi/L	0.395	J	H

Certified by <u><i>[Signature]</i></u>
Report Date <u>04/27/06</u>
Page 1

APPENDIX G

Section 11

Outfall 003, April 11, 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: Routine Outfall 003

Sampled: 04/11/06
Received: 04/12/06
Issued: 05/10/06 19:50

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 of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.*

SAMPLE CROSS REFERENCE

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

LABORATORY ID
IPD1229-01

CLIENT ID
Outfall 003

MATRIX
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: Routine Outfall 003

Report Number: IPD1229

Sampled: 04/11/06

Received: 04/12/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1229-01 (Outfall 003 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	6D13067	0.050	2.0	0.23	1	04/13/06	04/15/06	J
Cadmium	EPA 200.8	6D13067	0.025	1.0	0.030	1	04/13/06	04/15/06	J
Copper	EPA 200.8	6D13067	0.25	2.0	1.4	1	04/13/06	04/15/06	B, J
Lead	EPA 200.8	6D13067	0.040	1.0	0.073	1	04/13/06	04/15/06	B, J
Mercury	EPA 245.1	6D13068	0.050	0.20	ND	1	04/13/06	04/13/06	
Thallium	EPA 200.8	6D13067	0.15	1.0	ND	1	04/13/06	04/15/06	

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPD1229

Sampled: 04/11/06
Received: 04/12/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1229-01 (Outfall 003 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6D12138	0.15	0.50	24	1	04/12/06	04/13/06	
Nitrate/Nitrite-N	EPA 300.0	6D12138	0.080	0.15	ND	1	04/12/06	04/13/06	
Oil & Grease	EPA 413.1	6D14054	0.90	4.8	1.1	1	04/14/06	04/14/06	J
Sulfate	EPA 300.0	6D12138	0.45	0.50	48	1	04/12/06	04/13/06	
Total Dissolved Solids	SM2540C	6D13076	10	10	390	1	04/13/06	04/13/06	
Total Suspended Solids	EPA 160.2	6D15045	10	10	ND	1	04/15/06	04/17/06	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPD1229

Sampled: 04/11/06

Received: 04/12/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 003 (IPD1229-01) - Water EPA 300.0	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
	2	04/11/2006 09:05	04/12/2006 19:55	04/12/2006 22:00	04/13/2006 00:35

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPD1229

Sampled: 04/11/06

Received: 04/12/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6D13067 Extracted: 04/13/06											
Blank Analyzed: 04/15/2006 (6D13067-BLK1)											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.025	ug/l							
Copper	0.298	2.0	0.25	ug/l							J
Lead	0.0781	1.0	0.040	ug/l							J
Thallium	ND	1.0	0.15	ug/l							
LCS Analyzed: 04/15/2006 (6D13067-BS1)											
Antimony	72.6	2.0	0.050	ug/l	80.0		91	85-115			
Cadmium	75.9	1.0	0.025	ug/l	80.0		95	85-115			
Copper	76.5	2.0	0.25	ug/l	80.0		96	85-115			
Lead	77.1	1.0	0.040	ug/l	80.0		96	85-115			
Thallium	77.1	1.0	0.15	ug/l	80.0		96	85-115			
Matrix Spike Analyzed: 04/15/2006 (6D13067-MS1) Source: IPD1055-01											
Antimony	74.6	2.0	0.050	ug/l	80.0	0.060	93	70-130			
Cadmium	74.7	1.0	0.025	ug/l	80.0	0.031	93	70-130			
Copper	70.4	2.0	0.25	ug/l	80.0	0.87	87	70-130			
Lead	73.6	1.0	0.040	ug/l	80.0	0.27	92	70-130			
Thallium	76.0	1.0	0.15	ug/l	80.0	0.17	95	70-130			
Matrix Spike Dup Analyzed: 04/15/2006 (6D13067-MSD1) Source: IPD1055-01											
Antimony	78.3	2.0	0.050	ug/l	80.0	0.060	98	70-130	5	20	
Cadmium	79.0	1.0	0.025	ug/l	80.0	0.031	99	70-130	6	20	
Copper	73.7	2.0	0.25	ug/l	80.0	0.87	91	70-130	5	20	
Lead	77.7	1.0	0.040	ug/l	80.0	0.27	97	70-130	5	20	
Thallium	80.6	1.0	0.15	ug/l	80.0	0.17	101	70-130	6	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: Routine Outfall 003

Report Number: IPD1229

Sampled: 04/11/06

Received: 04/12/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D13068 Extracted: 04/13/06											
Blank Analyzed: 04/13/2006 (6D13068-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/13/2006 (6D13068-BS1)											
Mercury	8.26	0.20	0.050	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 04/13/2006 (6D13068-MS1)											
						Source: IPD0955-05					
Mercury	8.23	0.20	0.050	ug/l	8.00	ND	103	70-130			
Matrix Spike Dup Analyzed: 04/13/2006 (6D13068-MSD1)											
						Source: IPD0955-05					
Mercury	8.23	0.20	0.050	ug/l	8.00	ND	103	70-130	0	20	

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Michele Chamberlin
Project Manager



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

Project ID: Routine Outfall 003

Report Number: IPD1229

Sampled: 04/11/06

Received: 04/12/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D12138 Extracted: 04/12/06										
Blank Analyzed: 04/12/2006 (6D12138-BLK1)										
Chloride	ND	0.50	0.15	mg/l						
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l						
Sulfate	ND	0.50	0.45	mg/l						
LCS Analyzed: 04/12/2006 (6D12138-BS1)										
Chloride	4.94	0.50	0.15	mg/l	5.00		99	90-110		M-3
Sulfate	10.1	0.50	0.45	mg/l	10.0		101	90-110		M-3
Batch: 6D13076 Extracted: 04/13/06										
Blank Analyzed: 04/13/2006 (6D13076-BLK1)										
Total Dissolved Solids	ND	10	10	mg/l						
LCS Analyzed: 04/13/2006 (6D13076-BS1)										
Total Dissolved Solids	994	10	10	mg/l	1000		99	90-110		
Duplicate Analyzed: 04/13/2006 (6D13076-DUP1)										
Total Dissolved Solids	250	10	10	mg/l		Source: IPD1055-01			0	10
Batch: 6D14054 Extracted: 04/14/06										
Blank Analyzed: 04/14/2006 (6D14054-BLK1)										
Oil & Grease	ND	5.0	0.94	mg/l						
LCS Analyzed: 04/14/2006 (6D14054-BS1)										
Oil & Grease	19.1	5.0	0.94	mg/l	20.0		96	65-120		

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: Routine Outfall 003

Report Number: IPD1229

Sampled: 04/11/06

Received: 04/12/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D14054 Extracted: 04/14/06											
LCS Dup Analyzed: 04/14/2006 (6D14054-BSD1)											
Oil & Grease	17.7	5.0	0.94	mg/l	20.0		88	65-120	8	20	
Matrix Spike Analyzed: 04/14/2006 (6D14054-MS1)											
Oil & Grease	18.3	4.7	0.89	mg/l	18.9	ND	97	65-120			
Matrix Spike Dup Analyzed: 04/14/2006 (6D14054-MSD1)											
Oil & Grease	17.4	4.7	0.89	mg/l	18.9	ND	92	65-120	5	25	
Batch: 6D15045 Extracted: 04/15/06											
Blank Analyzed: 04/17/2006 (6D15045-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/17/2006 (6D15045-BS1)											
Total Suspended Solids	988	10	10	mg/l	1000		99	85-115			
Duplicate Analyzed: 04/17/2006 (6D15045-DUP1)											
Total Suspended Solids	192	10	10	mg/l		190			1	10	

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: Routine Outfall 003

Report Number: IPD1229

Sampled: 04/11/06

Received: 04/12/06

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
IPD1229-01	413.1 Oil and Grease	Oil & Grease	mg/l	1.10	4.8	15
IPD1229-01	Antimony-200.8	Antimony	ug/l	0.23	2.0	6.00
IPD1229-01	Cadmium-200.8	Cadmium	ug/l	0.030	1.0	4.00
IPD1229-01	Chloride - 300.0	Chloride	mg/l	24	0.50	150
IPD1229-01	Copper-200.8	Copper	ug/l	1.40	2.0	14
IPD1229-01	Lead-200.8	Lead	ug/l	0.073	1.0	5.20
IPD1229-01	Mercury - 245.1	Mercury	ug/l	0	0.20	0.20
IPD1229-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.031	0.15	10.00
IPD1229-01	Sulfate-300.0	Sulfate	mg/l	48	0.50	250
IPD1229-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	390	10	850
IPD1229-01	Thallium-200.8	Thallium	ug/l	0.039	1.0	2.00

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPD1229

Sampled: 04/11/06
Received: 04/12/06

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated 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.
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- 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

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NPDES - 346
IPD1229 <Page 10 of 11>



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

Project ID: Routine Outfall 003

Report Number: IPD1229

Sampled: 04/11/06

Received: 04/12/06

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
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.testamericainc.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: IPD1229-01

Analysis Performed: EDD + Level 4

Samples: IPD1229-01

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager

Del Mar Analytical CHAIN OF CUSTODY FORM

Version 03/6/06

IPD1229

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

Project:
**Boeing-SSFL NPDES
 Routine Outfall 003**
 Stormwater at RMHF

Project Manager: **Bronwyn Kelly**
 Phone Number:
 (626) 568-6691
 Fax Number:
 (626) 568-6515

Sampler: *Bronwyn Kelly*

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	ANALYSIS REQUIRED						Field readings: Temp = 74 pH = 7.4	Comments
							Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg, Tl	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cl-, SO4, NO3+NO2-N	TDS, TSS	SR-90 (905.0)		
Outfall 003	W	1L Poly	1	4/11/06 4:15	HNO3	1A	X							
Outfall 003-Dup	W	1L Poly	1		HNO3	1B	X							
Outfall 003	W	1L Amber	2		None	2A, 2B		X						
Outfall 003	W	1L Amber	2		HCl	3A, 3B			X					
Outfall 003	W	Poly-500 ml	2		None	4A, 4B				X				
Outfall 003	W	Poly-500 ml	2		None	5A, 5B					X			
Outfall 003	W	Poly-1 gal	1	4/11/06 6:25	None	6A, 6B					X			unfiltered and unpreserved analysis

Relinquished By <i>Bronwyn Kelly</i>	Date/Time: 4/11/06 1640	Received By <i>BD Lee</i>	Date/Time: 4/12/06 1640
Relinquished By <i>BD Lee</i>	Date/Time: 4/11/06 1955	Received By	Date/Time:
Relinquished By	Date/Time:	Received By <i>Julie</i>	Date/Time: 4-12-06 1955

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 Ice: 30

2300



April 27, 2006

Alta Project I.D.: 27596

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 April 14, 2006 under your Project Name "IPD1229". 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. 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: 4/14/2006

Alta Lab. ID

Client Sample ID

27596-001

IPD1229-01

SECTION II

Method Blank					EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7951	Lab Sample:	0-MB001	Date Analyzed DB-5:	24-Apr-06	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	20-Apr-06						
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers	
2,3,7,8-TCDD	ND	0.00000103			IS 13C-2,3,7,8-TCDD	69.9	25 - 164		
1,2,3,7,8-PeCDD	ND	0.00000112			13C-1,2,3,7,8-PeCDD	62.3	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.00000217			13C-1,2,3,4,7,8-HxCDD	67.3	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.00000206			13C-1,2,3,6,7,8-HxCDD	74.6	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.00000202			13C-1,2,3,4,6,7,8-HpCDD	72.0	23 - 140		
1,2,3,4,6,7,8-HpCDD	ND	0.00000235			13C-OCDD	55.2	17 - 157		
OCDD	ND	0.00000532			13C-2,3,7,8-TCDF	75.5	24 - 169		
2,3,7,8-TCDF	ND	0.00000121			13C-1,2,3,7,8-PeCDF	64.4	24 - 185		
1,2,3,7,8-PeCDF	ND	0.00000198			13C-2,3,4,7,8-PeCDF	66.5	21 - 178		
2,3,4,7,8-PeCDF	ND	0.00000190			13C-1,2,3,4,7,8-HxCDF	66.2	26 - 152		
1,2,3,4,7,8-HxCDF	ND	0.000000649			13C-1,2,3,6,7,8-HxCDF	76.1	26 - 123		
1,2,3,6,7,8-HxCDF	ND	0.000000602			13C-2,3,4,6,7,8-HxCDF	74.8	28 - 136		
2,3,4,6,7,8-HxCDF	ND	0.000000650			13C-1,2,3,7,8,9-HxCDF	67.9	29 - 147		
1,2,3,7,8,9-HxCDF	ND	0.00000103			13C-1,2,3,4,6,7,8-HpCDF	62.5	28 - 143		
1,2,3,4,6,7,8-HpCDF	ND	0.00000122			13C-1,2,3,4,7,8,9-HpCDF	56.6	26 - 138		
1,2,3,4,7,8,9-HpCDF	ND	0.00000155			13C-OCDF	47.8	17 - 157		
OCDF	ND	0.00000560			CRS 37Cl-2,3,7,8-TCDD	83.1	35 - 197		
Totals					Footnotes				
Total TCDD	ND	0.00000103			a. Sample specific estimated detection limit.				
Total PeCDD	ND	0.00000112			b. Estimated maximum possible concentration.				
Total HxCDD	ND	0.00000207			c. Method detection limit.				
Total HpCDD	ND	0.00000235			d. Lower control limit - upper control limit.				
Total TCDF	ND	0.00000121							
Total PeCDF	ND	0.00000194							
Total HxCDF	ND	0.000000713							
Total HpCDF	ND	0.00000136							

Analyst: MAS

Approved By: William J. Luksemburg 27-Apr-2006 09:51

NPDES - 352

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	7951	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	20-Apr-06	Date Analyzed DB-5:	24-Apr-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	10.2	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	56.3	25 - 164	
1,2,3,7,8-PeCDD	50.0	49.1	35 - 71	13C-1,2,3,7,8-PeCDD	52.2	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	50.2	35 - 82	13C-1,2,3,4,7,8-HxCDD	52.6	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	49.2	38 - 67	13C-1,2,3,6,7,8-HxCDD	57.7	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	52.0	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	51.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	51.5	35 - 70	13C-OCDD	36.7	17 - 157	
OCDD	100	101	78 - 144	13C-2,3,7,8-TCDF	61.9	24 - 169	
2,3,7,8-TCDF	10.0	9.66	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	52.3	24 - 185	
1,2,3,7,8-PeCDF	50.0	46.2	40 - 67	13C-2,3,4,7,8-PeCDF	56.1	21 - 178	
2,3,4,7,8-PeCDF	50.0	47.5	34 - 80	13C-1,2,3,4,7,8-HxCDF	49.5	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	48.7	36 - 67	13C-1,2,3,6,7,8-HxCDF	56.3	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	49.6	42 - 65	13C-2,3,4,6,7,8-HxCDF	56.6	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	48.7	35 - 78	13C-1,2,3,7,8,9-HxCDF	57.2	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	48.1	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	46.0	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	51.4	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	49.7	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	50.4	39 - 69	13C-OCDF	40.6	17 - 157	
OCDF	100	104	63 - 170	CRS 37Cl-2,3,7,8-TCDD	67.5	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 27-Apr-2006 09:51

Sample ID: IPD1229-01					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine		Matrix:	Aqueous	Lab Sample:	27596-001	Date Received:	14-Apr-06
Project:	IPD1229		Sample Size:	1.00 L	QC Batch No.:	7951	Date Extracted:	20-Apr-06
Date Collected:	11-Apr-06				Date Analyzed DB-5:	24-Apr-06	Date Analyzed DB-225:	NA
Time Collected:	0905							
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000837			IS 13C-2,3,7,8-TCDD	62.9	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000123			13C-1,2,3,7,8-PeCDD	60.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000285			13C-1,2,3,4,7,8-HxCDD	62.8	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000289			13C-1,2,3,6,7,8-HxCDD	66.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000277			13C-1,2,3,4,6,7,8-HpCDD	71.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000377			13C-OCDD	54.4	17 - 157	
OCDD	0.0000113			J	13C-2,3,7,8-TCDF	67.4	24 - 169	
2,3,7,8-TCDF	ND	0.00000123			13C-1,2,3,7,8-PeCDF	62.2	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000173			13C-2,3,4,7,8-PeCDF	62.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000165			13C-1,2,3,4,7,8-HxCDF	59.1	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000899			13C-1,2,3,6,7,8-HxCDF	64.1	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000859			13C-2,3,4,6,7,8-HxCDF	66.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000918			13C-1,2,3,7,8,9-HxCDF	66.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000127			13C-1,2,3,4,6,7,8-HpCDF	61.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000111			13C-1,2,3,4,7,8,9-HpCDF	62.5	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000113			13C-OCDF	53.9	17 - 157	
OCDF	ND	0.00000383			CRS 37Cl-2,3,7,8-TCDD	72.6	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.00000837			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000123			b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000284			c. Method detection limit.			
Total HpCDD	ND	0.00000377			d. Lower control limit - upper control limit.			
Total TCDF	ND	0.00000123						
Total PeCDF	ND	0.00000169						
Total HxCDF	ND	0.000000975						
Total HpCDF	ND	0.00000185						

Analyst: MAS

Approved By: William J. Luksemburg 27-Apr-2006 09:51

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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

Accrediting Authority	Certificate Number
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

SUBCONTRACT ORDER - PROJECT # IPD1229

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:
 Alta Analytical - SUB
 1104 Windfield Way
 El Dorado Hills, CA 95762
 Phone : (916) 933-1640
 Fax: (916) 673-0106

27596
OC

Standard TAT is requested unless specific due date is requested => **Due Date:** _____ **Initials:** _____

Analysis	Expiration	Comments
Sample ID: IPD1229-01 Water	Sampled: 04/11/06 09:05	
1613-Dioxin-HR-Alta	04/18/06 09:05	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	05/09/06 09:05	Excel EDD email to pm, Include Std logs for Lvl IV
Containers Supplied:		
1 L Amber (IPD1229-01C)		
1 L Amber (IPD1229-01D)		

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: Col-Cl Date: 4/13/06 Time: _____ Received By: Bethma J. Bonedict Date: 4/14/06 Time: 0900

Released By _____ Date _____ Time _____ Received By _____ Date _____ Time _____

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27596

Samples Arrival:	Date/Time 4/14/06 0900	Initials: UBLB	Location: WR-2			
			Shelf/Rack: _____			
Logged In:	Date/Time 4/14/06 1009	Initials: UBLB	Location: WR-2			
			Shelf/Rack: C-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°C	Time:	0905	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 #	7908 86003313		
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 ₂ S ₂ O ₃ Preservation Documented?		COC	Sample Container <input checked="" type="radio"/> None
Shipping Container	Alta	<input checked="" type="radio"/> Client	Retain <input checked="" type="radio"/> Return <input type="radio"/> Dispose

Comments:

Chain of Custody Anomaly/Sample Acceptance Form

Client: Del Mar Analytical, Irvine
Contact: Michele Chamberlin
Fax Number: 949-2603297

Project Number 27596
Date Received: Apr 14 2006
Documented by/date: JCB 4/14/06

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank You. (Fax # 916-673-0106)

The following information or item is needed to proceed with analysis:

- Complete Chain-of-Custody, Test Method Requested, Analyte List Requested, Preservative, Sample Identification, Sample Collection Date / Time, Collector's Name, Sample Type, Sample Location

The following anomalies were noted. Authorization is needed to proceed with the analysis.

Table with columns: Anomaly, Temperature outside, Samples Affected, Ice present?, Yes, No. Includes handwritten entries like 'IPD1229-01 received 2 bottles' and 'one of 2 bottles received was broken upon receipt.'

Client Authorization

Proceed With Analysis: YES NO Signature and Date [Handwritten Signature] 4/17/06

Client Comments/Instructions: 2nd bottle not needed for analysis

APPENDIX G

Section 12

Outfall 003, April 11, 2006

MEC^X Data Validation Reports



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 003

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPD1229

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001D.01
Sample Delivery Group: IPD1229
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: May 21, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x 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 003	IPD1229-01	27596-001	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 frozen, no qualifications were required. According to the Alta laboratory login sheet, one of the two bottles provided for this sample was received broken; however, as there was sufficient sample available for analysis, no further action was required. 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 03/22/2006 on instrument VG-5. 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 VER was 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 (0-7951-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 (0-7951-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 qualification of the site sample was 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." 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: IPD1229-01		IPD 1229		Del Mar Analytical, Irvine		Sample Data		Laboratory Data		EPA Method 1613			
Client Data		Sample Data		Aquous		Matrix:		Lab Sample:		Date Received:			
Name:	Del Mar Analytical, Irvine	Matrix:	Aquous	Sample Size:	1.00 L	Lab Sample:	27596-001	Date Received:	14-Apr-06	QC Batch No.:	7951	Date Extracted:	20-Apr-06
Date Collected:	11-Apr-06	Sample Size:	1.00 L			Date Analyzed DB-5:	24-Apr-06	Date Analyzed DB-225:	NA				
Time Collected:	0905												
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers					
2,3,7,8-TCDD	ND	0.00000837			IS 13C-2,3,7,8-TCDD	62.9	25 - 164						
1,2,3,7,8-PeCDD	ND	0.00000123			13C-1,2,3,7,8-PeCDD	60.4	25 - 181						
1,2,3,4,7,8-HxCDD	ND	0.00000285			13C-1,2,3,4,7,8-HxCDD	62.8	32 - 141						
1,2,3,6,7,8-HxCDD	ND	0.00000289			13C-1,2,3,6,7,8-HxCDD	66.8	28 - 130						
1,2,3,7,8,9-HxCDD	ND	0.00000277			13C-1,2,3,4,6,7,8-HpCDD	71.4	23 - 140						
1,2,3,4,6,7,8-HpCDD	ND	0.00000377			13C-OCDD	54.4	17 - 157						
OCDD	0.0000113			J	13C-2,3,7,8-TCDF	67.4	24 - 169						
2,3,7,8-TCDF	ND	0.00000123			13C-1,2,3,7,8-PeCDF	62.2	24 - 185						
1,2,3,7,8-PeCDF	ND	0.00000173			13C-2,3,4,7,8-PeCDF	62.0	21 - 178						
2,3,4,7,8-PeCDF	ND	0.00000165			13C-1,2,3,4,7,8-HxCDF	59.1	26 - 152						
1,2,3,4,7,8-HxCDF	ND	0.00000899			13C-1,2,3,6,7,8-HxCDF	64.1	26 - 123						
1,2,3,6,7,8-HxCDF	ND	0.00000859			13C-2,3,4,6,7,8-HxCDF	66.4	28 - 136						
2,3,4,6,7,8-HxCDF	ND	0.00000918			13C-1,2,3,7,8,9-HxCDF	66.3	29 - 147						
1,2,3,7,8,9-HxCDF	ND	0.00000127			13C-1,2,3,4,6,7,8-HpCDF	61.4	28 - 143						
1,2,3,4,6,7,8-HpCDF	ND	0.00000111			13C-1,2,3,4,7,8,9-HpCDF	62.5	26 - 138						
1,2,3,4,7,8,9-HpCDF	ND	0.00000113			13C-OCDF	53.9	17 - 157						
OCDF	ND	0.00000383			CRS 37Cl-2,3,7,8-TCDD	72.6	35 - 197						
Totals													
Total TCDD	ND	0.00000837											
Total PeCDD	ND	0.00000123											
Total HxCDD	ND	0.00000284											
Total HpCDD	ND	0.00000377											
Total TCDF	ND	0.00000123											
Total PeCDF	ND	0.00000169											
Total HxCDF	ND	0.00000975											
Total HpCDF	ND	0.00000185											
Footnotes													
a. Sample specific estimated detection limit.													
b. Estimated maximum possible concentration.													
c. Method detection limit.													
d. Lower control limit - upper control limit.													

Outfall 003

Rev [unclear]
[unclear]

[unclear]

Approved By: William J. Luksemburg 27-Apr-2006 09:51

Analyst: MAS

Level IV

APPENDIX G

Section 13

Outfall 004, April 04, 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: Routine Outfall 004

Sampled: 04/04/06
Received: 04/04/06
Issued: 04/30/06 20:41

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 of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.*

SAMPLE CROSS REFERENCE

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

LABORATORY ID
IPD0258-01

CLIENT ID
Outfall 004

MATRIX
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: Routine Outfall 004

Report Number: IPD0258

Sampled: 04/04/06

Received: 04/04/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0258-01 (Outfall 004 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	6D05074	0.050	2.0	0.34	1	04/05/06	04/05/06	J
Cadmium	EPA 200.8	6D05074	0.025	1.0	ND	1	04/05/06	04/05/06	
Copper	EPA 200.8	6D05074	0.25	2.0	4.4	1	04/05/06	04/05/06	
Lead	EPA 200.8	6D05074	0.040	1.0	0.99	1	04/05/06	04/05/06	J
Mercury	EPA 245.1	6D05091	0.050	0.20	0.14	1	04/05/06	04/05/06	J
Thallium	EPA 200.8	6D05074	0.15	1.0	ND	1	04/05/06	04/05/06	

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 004

Report Number: IPD0258

Sampled: 04/04/06

Received: 04/04/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0258-01 (Outfall 004 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6D04136	0.15	0.50	7.9	1	04/04/06	04/05/06	
Nitrate/Nitrite-N	EPA 300.0	6D04136	0.080	0.15	0.19	1	04/04/06	04/05/06	
Oil & Grease	EPA 413.1	6D05046	0.90	4.8	ND	1	04/05/06	04/05/06	
Sulfate	EPA 300.0	6D04136	0.45	0.50	1.9	1	04/04/06	04/05/06	
Total Dissolved Solids	SM2540C	6D05071	10	10	56	1	04/05/06	04/05/06	
Total Suspended Solids	EPA 160.2	6D07128	10	10	16	1	04/07/06	04/07/06	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 004

Report Number: IPD0258

Sampled: 04/04/06
Received: 04/04/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 004 (IPD0258-01) - Water EPA 300.0	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
	2	04/04/2006 09:20	04/04/2006 18:05	04/04/2006 20:30	04/05/2006 02:41

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Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 004

Report Number: IPD0258

Sampled: 04/04/06

Received: 04/04/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D05074 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05074-BLK1)											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.025	ug/l							
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.15	ug/l							
LCS Analyzed: 04/05/2006 (6D05074-BS1)											
Antimony	82.1	2.0	0.050	ug/l	80.0		103	85-115			
Cadmium	81.4	1.0	0.025	ug/l	80.0		102	85-115			
Copper	81.3	2.0	0.25	ug/l	80.0		102	85-115			
Lead	81.4	1.0	0.040	ug/l	80.0		102	85-115			
Thallium	81.3	1.0	0.15	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 04/05/2006 (6D05074-MS1) Source: IPD0082-01											
Antimony	86.4	2.0	0.050	ug/l	80.0	0.12	108	70-130			
Cadmium	80.4	1.0	0.025	ug/l	80.0	0.12	100	70-130			
Copper	88.8	2.0	0.25	ug/l	80.0	14	94	70-130			
Lead	76.5	1.0	0.040	ug/l	80.0	0.23	95	70-130			
Thallium	76.5	1.0	0.15	ug/l	80.0	ND	96	70-130			
Matrix Spike Analyzed: 04/05/2006 (6D05074-MS2) Source: IPD0289-01											
Antimony	82.4	2.0	0.050	ug/l	80.0	ND	103	70-130			
Cadmium	80.9	1.0	0.025	ug/l	80.0	ND	101	70-130			
Copper	81.6	2.0	0.25	ug/l	80.0	0.61	101	70-130			
Lead	82.9	1.0	0.040	ug/l	80.0	ND	104	70-130			
Thallium	82.7	1.0	0.15	ug/l	80.0	ND	103	70-130			
Matrix Spike Dup Analyzed: 04/05/2006 (6D05074-MSD1) Source: IPD0082-01											
Antimony	87.0	2.0	0.050	ug/l	80.0	0.12	109	70-130	1	20	
Cadmium	81.2	1.0	0.025	ug/l	80.0	0.12	101	70-130	1	20	
Copper	89.2	2.0	0.25	ug/l	80.0	14	94	70-130	0	20	
Lead	77.0	1.0	0.040	ug/l	80.0	0.23	96	70-130	1	20	
Thallium	77.3	1.0	0.15	ug/l	80.0	ND	97	70-130	1	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: Routine Outfall 004

Report Number: IPD0258

Sampled: 04/04/06

Received: 04/04/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D05091 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05091-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/05/2006 (6D05091-BS1)											
Mercury	7.98	0.20	0.050	ug/l	8.00		100	85-115			
Matrix Spike Analyzed: 04/05/2006 (6D05091-MS1)											
						Source: IPD0241-01					
Mercury	8.57	0.20	0.050	ug/l	8.00	0.060	106	70-130			
Matrix Spike Dup Analyzed: 04/05/2006 (6D05091-MSD1)											
						Source: IPD0241-01					
Mercury	8.73	0.20	0.050	ug/l	8.00	0.060	108	70-130	2	20	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 004

Report Number: IPD0258

Sampled: 04/04/06

Received: 04/04/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D04136 Extracted: 04/04/06										
Blank Analyzed: 04/04/2006 (6D04136-BLK1)										
Chloride	ND	0.50	0.15	mg/l						
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l						
Sulfate	ND	0.50	0.45	mg/l						
LCS Analyzed: 04/04/2006 (6D04136-BS1)										
Chloride	4.76	0.50	0.15	mg/l	5.00		95		90-110	
Sulfate	9.53	0.50	0.45	mg/l	10.0		95		90-110	
Matrix Spike Analyzed: 04/04/2006 (6D04136-MS1)										
						Source: IPD0234-12				
Chloride	109	5.0	1.5	mg/l	50.0	66	86		80-120	
Sulfate	268	5.0	4.5	mg/l	100	180	88		80-120	
Matrix Spike Dup Analyzed: 04/04/2006 (6D04136-MSD1)										
						Source: IPD0234-12				
Chloride	106	5.0	1.5	mg/l	50.0	66	80	3	80-120	20
Sulfate	258	5.0	4.5	mg/l	100	180	78	4	80-120	20 M2
Batch: 6D05046 Extracted: 04/05/06										
Blank Analyzed: 04/05/2006 (6D05046-BLK1)										
Oil & Grease	ND	5.0	0.94	mg/l						
LCS Analyzed: 04/05/2006 (6D05046-BS1)										
Oil & Grease	16.4	5.0	0.94	mg/l	20.0		82		65-120	M-NR1
LCS Dup Analyzed: 04/05/2006 (6D05046-BSD1)										
Oil & Grease	16.5	5.0	0.94	mg/l	20.0		82	1	65-120	20

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 Michele Chamberlin
 Project Manager



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

Project ID: Routine Outfall 004

Report Number: IPD0258

Sampled: 04/04/06

Received: 04/04/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D05071 Extracted: 04/05/06											
Blank Analyzed: 04/05/2006 (6D05071-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/05/2006 (6D05071-BS1)											
Total Dissolved Solids	998	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 04/05/2006 (6D05071-DUP1)											
Total Dissolved Solids	16.0	10	10	mg/l		18			12	10	R-4
Source: IPD0242-01											
Batch: 6D07128 Extracted: 04/07/06											
Blank Analyzed: 04/07/2006 (6D07128-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/07/2006 (6D07128-BS1)											
Total Suspended Solids	975	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 04/07/2006 (6D07128-DUP1)											
Total Suspended Solids	64.0	10	10	mg/l		67			5	10	
Source: IPD0270-01											

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Michele Chamberlin
Project Manager



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

Project ID: Routine Outfall 004

Report Number: IPD0258

Sampled: 04/04/06

Received: 04/04/06

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
IPD0258-01	413.1 Oil and Grease	Oil & Grease	mg/l	-1	4.8	15
IPD0258-01	Antimony-200.8	Antimony	ug/l	0.34	2.0	6.00
IPD0258-01	Cadmium-200.8	Cadmium	ug/l	0.0040	1.0	4.00
IPD0258-01	Chloride - 300.0	Chloride	mg/l	7.90	0.50	150
IPD0258-01	Copper-200.8	Copper	ug/l	4.40	2.0	14
IPD0258-01	Lead-200.8	Lead	ug/l	0.99	1.0	5.20
IPD0258-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.19	0.15	10.00
IPD0258-01	Sulfate-300.0	Sulfate	mg/l	1.90	0.50	250
IPD0258-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	56	10	850
IPD0258-01	Thallium-200.8	Thallium	ug/l	0	1.0	2.00

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 004

Report Number: IPD0258

Sampled: 04/04/06
Received: 04/04/06

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.
- 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-4** Due to the low levels of analyte in the sample, the duplicate RPD calculation does not provide useful information.
- 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

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NPDES - 380
IPD0258 <Page 10 of 11>



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

Project ID: Routine Outfall 004

Report Number: IPD0258

Sampled: 04/04/06

Received: 04/04/06

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Liquid	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
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.testamericainc.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: IPD0258-01

Analysis Performed: EDD + Level 4

Samples: IPD0258-01

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager



April 12, 2006

Alta Project I.D.: 27551

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 April 06, 2006 under your Project Name "IPD0258". 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. 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 NELAC 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: 4/6/2006

Alta Lab. ID

Client Sample ID

27551-001

IPD0258-01

SECTION II

Method Blank					EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	7910	Lab Sample:	0-MB001			
Sample Size:	1.00 L	Date Extracted:	9-Apr-06	Date Analyzed DB-5:	11-Apr-06	Date Analyzed DB-225:	NA	
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000628			IS 13C-2,3,7,8-TCDD	74.5	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000450			13C-1,2,3,7,8-PeCDD	71.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.000000804			13C-1,2,3,4,7,8-HxCDD	74.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.000000867			13C-1,2,3,6,7,8-HxCDD	70.7	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.000000808			13C-1,2,3,4,6,7,8-HpCDD	75.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000111			13C-OCDD	55.5	17 - 157	
OCDD	0.00000259			J	13C-2,3,7,8-TCDF	77.3	24 - 169	
2,3,7,8-TCDF	ND	0.000000346			13C-1,2,3,7,8-PeCDF	73.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000474			13C-2,3,4,7,8-PeCDF	72.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000453			13C-1,2,3,4,7,8-HxCDF	74.5	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000436			13C-1,2,3,6,7,8-HxCDF	66.9	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000334			13C-2,3,4,6,7,8-HxCDF	71.8	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000326			13C-1,2,3,7,8,9-HxCDF	70.0	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000456			13C-1,2,3,4,6,7,8-HpCDF	66.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000000395			13C-1,2,3,4,7,8,9-HpCDF	72.4	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000424			13C-OCDF	56.7	17 - 157	
OCDF	ND	0.00000136			CRS 37Cl-2,3,7,8-TCDD	84.0	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.000000628			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.000000450			b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.000000828			c. Method detection limit.			
Total HpCDD	ND	0.00000111			d. Lower control limit - upper control limit.			
Total TCDF	ND	0.000000346						
Total PeCDF	ND	0.000000463						
Total HxCDF	ND	0.000000473						
Total HpCDF	ND	0.000000408						

Analyst: MAS

Approved By: William J. Luksemburg 12-Apr-2006 09:57

NPDES - 386

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	7910	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	9-Apr-06	Date Analyzed DB-5:	10-Apr-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	11.0	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	76.2	25 - 164	
1,2,3,7,8-PeCDD	50.0	53.6	35 - 71	13C-1,2,3,7,8-PeCDD	73.8	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	53.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	79.3	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	53.2	38 - 67	13C-1,2,3,6,7,8-HxCDD	72.2	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	53.8	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	77.9	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	54.0	35 - 70	13C-OCDD	51.6	17 - 157	
OCDD	100	107	78 - 144	13C-2,3,7,8-TCDF	78.6	24 - 169	
2,3,7,8-TCDF	10.0	10.9	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	74.4	24 - 185	
1,2,3,7,8-PeCDF	50.0	54.1	40 - 67	13C-2,3,4,7,8-PeCDF	75.4	21 - 178	
2,3,4,7,8-PeCDF	50.0	54.3	34 - 80	13C-1,2,3,4,7,8-HxCDF	78.7	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	53.4	36 - 67	13C-1,2,3,6,7,8-HxCDF	75.6	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	52.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	75.6	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	51.8	35 - 78	13C-1,2,3,7,8,9-HxCDF	75.1	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	52.7	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	68.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	52.6	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	75.5	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	52.6	39 - 69	13C-OCDF	56.6	17 - 157	
OCDF	100	105	63 - 170	CRS 37Cl-2,3,7,8-TCDD	87.2	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 12-Apr-2006 09:57

Sample ID: IPD0258-01					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine		Matrix:	Aqueous	Lab Sample:	27551-001	Date Received:	6-Apr-06
Project:	IPD0258		Sample Size:	1.03 L	QC Batch No.:	7910	Date Extracted:	9-Apr-06
Date Collected:	4-Apr-06				Date Analyzed DB-5:	11-Apr-06	Date Analyzed DB-225:	NA
Time Collected:	0920							
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000753			IS 13C-2,3,7,8-TCDD	55.6	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000766			13C-1,2,3,7,8-PeCDD	50.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000137			13C-1,2,3,4,7,8-HxCDD	54.3	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000201			J	13C-1,2,3,6,7,8-HxCDD	50.1	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000191			13C-1,2,3,4,6,7,8-HpCDD	55.2	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000724				13C-OCDD	43.4	17 - 157	
OCDD	0.00113			B	13C-2,3,7,8-TCDF	54.3	24 - 169	
2,3,7,8-TCDF	ND	0.000000571			13C-1,2,3,7,8-PeCDF	51.2	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000729			13C-2,3,4,7,8-PeCDF	49.2	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000714			13C-1,2,3,4,7,8-HxCDF	51.9	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000553			13C-1,2,3,6,7,8-HxCDF	47.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000572			13C-2,3,4,6,7,8-HxCDF	49.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000583			13C-1,2,3,7,8,9-HxCDF	49.4	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000816			13C-1,2,3,4,6,7,8-HpCDF	50.1	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000840			J	13C-1,2,3,4,7,8,9-HpCDF	51.9	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000110			13C-OCDF	44.5	17 - 157	
OCDF	0.0000303			J	CRS 37Cl-2,3,7,8-TCDD	91.7	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.000000753			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.000000766			b. Estimated maximum possible concentration.			
Total HxCDD	0.0000115				c. Method detection limit.			
Total HpCDD	0.000135				d. Lower control limit - upper control limit.			
Total TCDF	ND	0.000000571						
Total PeCDF	0.000000859							
Total HxCDF	0.00000829							
Total HpCDF	0.0000397							

Analyst: MAS

Approved By: William J. Luksemburg 12-Apr-2006 09:57

NPDES - 388

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

Accrediting Authority	Certificate Number
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 # IPD0258

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:

Alta Analytical - SUB
 1104 Windfield Way
 El Dorado Hills, CA 95762
 Phone : (916) 933-1640
 Fax: (916) 673-0106

27551
1.8°C

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

Analysis	Expiration	Comments
Sample ID: IPD0258-01 Water	Sampled: 04/04/06 09:20	
1613-Dioxin-HR-Alta	04/11/06 09:20	J flags, 17 congeners, no TEQ, ng/L, sub=Alta
EDD + Level 4	05/02/06 09:20	Excel EDD email to pm, Include Std logs for Lvl IV

Containers Supplied:
 1 L Amber (IPD0258-01C)
 1 L Amber (IPD0258-01D)

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): _____

4/5/06

Released By: _____ Date: _____ Time: _____ Received By: *Bethanna L. Benedict* Date: *4/6/06* Time: *0850*

Released By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27551

Samples Arrival:	Date/Time <u>4/6/06 0850</u>	Initials: <u>VB/B</u>	Location: <u>WR-2</u>			
			Shelf/Rack: _____			
Logged In:	Date/Time <u>4/6/06 1010</u>	Initials: <u>VB/B</u>	Location: <u>WR-2</u>			
			Shelf/Rack: <u>C-3</u>			
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	<u>1.8°C</u>	Time: <u>0900</u>	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 # <u>7920 6313 8160</u>	✓				
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 ₂ S ₂ O ₃ Preservation Documented?			<input checked="" type="radio"/> None		
Shipping Container	Alta	<input checked="" type="radio"/> Client	Retain	<input checked="" type="radio"/> Return	Dispose

Comments:

APPENDIX G

Section 14

Outfall 004, April 04, 2006

MEC^X Data Validation Reports

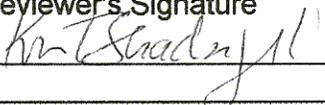
CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4DF79
 Task Order 1261.001D.01
 SDG No. IPD0258

No. of Analyses 1

Laboratory Alta
 Reviewer K. Shadowlight
 Analysis/Method Dioxin/Furan by Method 1613

Date: May 21, 2006
 Reviewer's Signature


ACTION ITEMS ^a	
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.,	Detects below the laboratory lower calibration level were qualified as estimated.
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 ^b	
<p>^a Subcontracted analytical laboratory is not meeting contract and/or method requirements.</p> <p>^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.</p>	



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 004

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPD0258

Prepared by
MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001D.01
Sample Delivery Group: IPD0258
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: May 21, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x 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 004	IPD0258-01	27551-001	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 within the temperature limits at 2°C. 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 03/22/2006 on instrument VG-5. 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 VER was 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 (0-7910-MB001) was extracted and analyzed with the sample in this SDG. Target compound OCDD was detected in the method blank at a concentration below the laboratory calibration level. OCDD was also detected in the site sample; however, the detect in the sample exceeded five times the concentration reported in the method blank and required no qualification. There were no other target compounds detected in the method blank. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7910-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 qualification of the site sample was 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." 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.

EPA Method 1613

Sample ID: **IPD0258-01** Outfall 004

Client Data		Sample Data		Laboratory Data				
Name: Del Mar Analytical, Irvine	Matrix: Aqueous	Lab Sample: 27551-001	Date Received: 6-Apr-06	QC Batch No.: 7910	Date Extracted: 9-Apr-06			
Project: IPD0258	Sample Size: 1.03 L	Date Analyzed DB-5: 11-Apr-06	Date Analyzed DB-225: NA					
Date Collected: 4-Apr-06								
Time Collected: 0920								
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000753			IS 13C-2,3,7,8-TCDD	55.6	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000766			13C-1,2,3,7,8-PeCDD	50.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0000137			13C-1,2,3,4,7,8-HxCDD	54.3	32 - 141	
1,2,3,6,7,8-HxCDD	0.0000201			J	13C-1,2,3,6,7,8-HxCDD	50.1	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0000191			13C-1,2,3,4,6,7,8-HpCDD	55.2	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000724				13C-OCDD	43.4	17 - 157	
OCDD	0.00113			B	13C-2,3,7,8-TCDF	54.3	24 - 169	
2,3,7,8-TCDF	ND	0.00000571			13C-1,2,3,7,8-PeCDF	51.2	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000729			13C-2,3,4,7,8-PeCDF	49.2	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000714			13C-1,2,3,4,7,8-HxCDF	51.9	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000553			13C-1,2,3,6,7,8-HxCDF	47.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000572			13C-2,3,4,6,7,8-HxCDF	49.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000583			13C-1,2,3,7,8,9-HxCDF	49.4	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000009816			13C-1,2,3,4,6,7,8-HpCDF	50.1	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000840			J	13C-1,2,3,4,7,8,9-HpCDF	51.9	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.0000110			13C-OCDF	44.5	17 - 157	
OCDF	0.0000303			J	CRS 37Cl-2,3,7,8-TCDD	91.7	35 - 197	
Totals								
Total TCDD	ND	0.00000753						
Total PeCDD	ND	0.00000766						
Total HxCDD	0.0000115							
Total HpCDD	0.000135							
Total TCDF	ND	0.00000571						
Total PeCDF	0.00000859							
Total HxCDF	0.00000829							
Total HpCDF	0.0000397							

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

Approved By: William J. Luksemburg 12-Apr-2006 09:57

Analyst: MAS

here it is

APPENDIX G

Section 15

Outfall 004, April 14, 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: Routine Outfall 004

Sampled: 04/14/06
Received: 04/14/06
Issued: 06/12/06 16:39

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 of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.*

SAMPLE CROSS REFERENCE

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

LABORATORY ID

IPD1549-01

CLIENT ID

Outfall 004

MATRIX

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: Routine Outfall 004

Report Number: IPD1549

Sampled: 04/14/06

Received: 04/14/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1549-01 (Outfall 004 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	6D20092	0.050	2.0	0.82	1	04/20/06	04/21/06	B, J
Cadmium	EPA 200.8	6D20092	0.025	1.0	0.23	1	04/20/06	04/21/06	J
Copper	EPA 200.8	6D20092	0.25	2.0	6.3	1	04/20/06	04/21/06	
Lead	EPA 200.8	6D20092	0.040	1.0	1.3	1	04/20/06	04/21/06	
Mercury	EPA 245.1	6D17063	0.050	0.20	0.082	1	04/17/06	04/17/06	J
Thallium	EPA 200.8	6D20092	0.15	1.0	0.20	1	04/20/06	04/21/06	J

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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MWH-Pasadena/Boeing
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Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Routine Outfall 004

Report Number: IPD1549

Sampled: 04/14/06

Received: 04/14/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1549-01 (Outfall 004 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6D14143	1.5	5.0	51	10	04/14/06	04/15/06	
Nitrate/Nitrite-N	EPA 300.0	6D14143	0.080	0.15	0.82	1	04/14/06	04/15/06	
Oil & Grease	EPA 413.1	6D18050	0.89	4.7	2.8	1	04/18/06	04/18/06	J
Sulfate	EPA 300.0	6D14143	0.45	0.50	22	1	04/14/06	04/15/06	
Total Dissolved Solids	SM2540C	6D18055	10	10	280	1	04/18/06	04/18/06	
Total Suspended Solids	EPA 160.2	6D19119	10	10	25	1	04/19/06	04/19/06	

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Project ID: Routine Outfall 004

Report Number: IPD1549

Sampled: 04/14/06

Received: 04/14/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 004 (IPD1549-01) - Water EPA 300.0	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
	2	04/14/2006 13:50	04/14/2006 17:45	04/14/2006 21:30	04/15/2006 00:53

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

Project ID: Routine Outfall 004

Report Number: IPD1549

Sampled: 04/14/06

Received: 04/14/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D17063 Extracted: 04/17/06											
Blank Analyzed: 04/17/2006 (6D17063-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/17/2006 (6D17063-BS1)											
Mercury	8.25	0.20	0.050	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 04/17/2006 (6D17063-MS1)											
						Source: IPD1477-13					
Mercury	8.39	0.20	0.050	ug/l	8.00	ND	105	70-130			
Matrix Spike Dup Analyzed: 04/17/2006 (6D17063-MSD1)											
						Source: IPD1477-13					
Mercury	8.52	0.20	0.050	ug/l	8.00	ND	106	70-130	2	20	
Batch: 6D20092 Extracted: 04/20/06											
Blank Analyzed: 04/21/2006 (6D20092-BLK1)											
Antimony	0.101	2.0	0.050	ug/l							J
Cadmium	ND	1.0	0.025	ug/l							
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.15	ug/l							
LCS Analyzed: 04/21/2006 (6D20092-BS1)											
Antimony	81.3	2.0	0.050	ug/l	80.0		102	85-115			
Cadmium	79.0	1.0	0.025	ug/l	80.0		99	85-115			
Copper	81.7	2.0	0.25	ug/l	80.0		102	85-115			
Lead	81.7	1.0	0.040	ug/l	80.0		102	85-115			
Thallium	82.2	1.0	0.15	ug/l	80.0		103	85-115			

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Project ID: Routine Outfall 004

Report Number: IPD1549

Sampled: 04/14/06

Received: 04/14/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D20092 Extracted: 04/20/06											
Matrix Spike Analyzed: 04/21/2006 (6D20092-MS1)						Source: IPD1586-01					
Antimony	85.4	2.0	0.050	ug/l	80.0	0.12	107	70-130			
Cadmium	77.8	1.0	0.025	ug/l	80.0	0.055	97	70-130			
Copper	83.2	2.0	0.25	ug/l	80.0	7.7	94	70-130			
Lead	78.1	1.0	0.040	ug/l	80.0	0.60	97	70-130			
Thallium	78.1	1.0	0.15	ug/l	80.0	ND	98	70-130			
Matrix Spike Analyzed: 04/21/2006 (6D20092-MS2)						Source: IPD1586-02					
Antimony	82.1	2.0	0.050	ug/l	80.0	0.098	103	70-130			
Cadmium	75.7	1.0	0.025	ug/l	80.0	0.058	95	70-130			
Copper	73.5	2.0	0.25	ug/l	80.0	1.5	90	70-130			
Lead	75.6	1.0	0.040	ug/l	80.0	0.13	94	70-130			
Thallium	76.0	1.0	0.15	ug/l	80.0	0.21	95	70-130			
Matrix Spike Dup Analyzed: 04/21/2006 (6D20092-MSD1)						Source: IPD1586-01					
Antimony	83.9	2.0	0.050	ug/l	80.0	0.12	105	70-130	2	20	
Cadmium	77.5	1.0	0.025	ug/l	80.0	0.055	97	70-130	0	20	
Copper	80.8	2.0	0.25	ug/l	80.0	7.7	91	70-130	3	20	
Lead	76.9	1.0	0.040	ug/l	80.0	0.60	95	70-130	2	20	
Thallium	77.5	1.0	0.15	ug/l	80.0	ND	97	70-130	1	20	

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Project ID: Routine Outfall 004

Report Number: IPD1549

Sampled: 04/14/06

Received: 04/14/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D14143 Extracted: 04/14/06										
Blank Analyzed: 04/14/2006 (6D14143-BLK1)										
Chloride	ND	0.50	0.15	mg/l						
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l						
Sulfate	ND	0.50	0.45	mg/l						
LCS Analyzed: 04/14/2006 (6D14143-BS1)										
Chloride	4.92	0.50	0.15	mg/l	5.00		98	90-110		M-3
Sulfate	9.93	0.50	0.45	mg/l	10.0		99	90-110		
Matrix Spike Analyzed: 04/14/2006 (6D14143-MS1)										
					Source: IPD1540-17					
Sulfate	18.4	0.50	0.45	mg/l	10.0	8.5	99	80-120		
Matrix Spike Dup Analyzed: 04/14/2006 (6D14143-MSD1)										
					Source: IPD1540-17					
Sulfate	18.4	0.50	0.45	mg/l	10.0	8.5	99	80-120	0	20
Batch: 6D18050 Extracted: 04/18/06										
Blank Analyzed: 04/18/2006 (6D18050-BLK1)										
Oil & Grease	ND	5.0	0.94	mg/l						
LCS Analyzed: 04/18/2006 (6D18050-BS1)										
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120		M-NR1
LCS Dup Analyzed: 04/18/2006 (6D18050-BSD1)										
Oil & Grease	17.9	5.0	0.94	mg/l	20.0		90	65-120	7	20
Batch: 6D18055 Extracted: 04/18/06										
Blank Analyzed: 04/18/2006 (6D18055-BLK1)										
Total Dissolved Solids	ND	10	10	mg/l						

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 004

Report Number: IPD1549

Sampled: 04/14/06

Received: 04/14/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6D18055 Extracted: 04/18/06											
LCS Analyzed: 04/18/2006 (6D18055-BS1)											
Total Dissolved Solids	990	10	10	mg/l	1000		99	90-110			
Duplicate Analyzed: 04/18/2006 (6D18055-DUP1)											
Total Dissolved Solids	5080	10	10	mg/l		5100			0	10	
Batch: 6D19119 Extracted: 04/19/06											
Blank Analyzed: 04/19/2006 (6D19119-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/19/2006 (6D19119-BS1)											
Total Suspended Solids	984	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 04/19/2006 (6D19119-DUP1)											
Total Suspended Solids	342	10	10	mg/l		340			1	10	

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Report Number: IPD1549

Sampled: 04/14/06

Received: 04/14/06

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
IPD1549-01	413.1 Oil and Grease	Oil & Grease	mg/l	2.80	4.7	15
IPD1549-01	Antimony-200.8	Antimony	ug/l	0.82	2.0	6.00
IPD1549-01	Cadmium-200.8	Cadmium	ug/l	0.23	1.0	4.00
IPD1549-01	Chloride - 300.0	Chloride	mg/l	51	5.0	150
IPD1549-01	Copper-200.8	Copper	ug/l	6.30	2.0	14
IPD1549-01	Lead-200.8	Lead	ug/l	1.30	1.0	5.20
IPD1549-01	Mercury - 245.1	Mercury	ug/l	0.082	0.20	0.20
IPD1549-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.82	0.15	10.00
IPD1549-01	Sulfate-300.0	Sulfate	mg/l	22	0.50	250
IPD1549-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	280	10	850
IPD1549-01	Thallium-200.8	Thallium	ug/l	0.20	1.0	2.00

Del Mar Analytical - Irvine
Michele Chamberlin
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MWH-Pasadena/Boeing
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Routine Outfall 004

Report Number: IPD1549

Sampled: 04/14/06
Received: 04/14/06

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated 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.
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- 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

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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NPDES - 414
IPD1549 <Page 10 of 11>



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

Project ID: Routine Outfall 004

Report Number: IPD1549

Sampled: 04/14/06

Received: 04/14/06

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
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.testamericainc.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: IPD1549-01

Analysis Performed: EDD + Level 4

Samples: IPD1549-01

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager

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Del Mar Analytical Version 03/1/06 CHAIN OF CUSTODY FORM

Client Name/Address: MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project: Boeing-SSFL NPDES Routine Outfall 004 Stormwater at SRE		ANALYSIS REQUIRED		Field readings: Temp = 59° pH = 7.9						
Project Manager: Bronwyn Kelly Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Total Recoverable Metals Sb, Cd, Cu, Pb, Hg, Tl		TCDD (and all congeners)		Oil & Grease (EPA 413.1)		Cl-, SO4, NO3+NO2-N		TDS, TSS		Comments
Sample Description Outfall 004	Sample Matrix W	Container Type Poly-1L	# of Cont. 1	Sampling Date/Time 4/14/06 13:00	Preservative HNO3	Bottle # 1A	X					
Outfall 004-Dup	W	Poly-1L	1	HNO3	1B	X						
Outfall 004	W	Glass-Amber	2	None	2A, 2B		X					
Outfall 004	W	Glass-Amber	2	HCl	3A, 3B			X				
Outfall 004	W	Poly-500 ml	2	None	4A, 4B			X				
Outfall 004	W	Poly-500 ml	2	None	5A, 5B			X				
Relinquished By <i>Barros</i>	Date/Time 4/14/06 1440	Received By <i>B. Steegle</i>	Date/Time 4/14/06 1440	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) Intact <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>						
Relinquished By <i>B. Steegle</i>	Date/Time 4/14/06 1745	Received By <i>Amey</i>	Date/Time 4/14/06 1745									
Relinquished By	Date/Time	Received By	Date/Time									



June 26, 2006

Alta Project I.D.: 27605

Ms. Michele Chamberlin
Del Mar Analytical, Irvine
17461 Derian Avenue, Suite 100
Irvine, CA 92614

Dear Ms. Chamberlin,

Enclosed are the amended results for the one aqueous sample received at Alta Analytical Laboratory on April 18, 2006 under your Project Name "IPD1549". 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 HpCDD total results for the method blank and the HxCDF total results for sample "IPD1549-01" were not correctly reported on the datasheets in the original report.

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. 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.



Alta Analytical Laboratory Inc.

1104 Windfield Way
El Dorado Hills, CA 95762

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

Section I: Sample Inventory Report

Date Received: 4/18/2006

Alta Lab. ID

Client Sample ID

27605-001

IPD1549-01

SECTION II

Method Blank		EPA Method 1613					
Matrix:	Aqueous	QC Batch No.:	7985	Lab Sample:	0-MB001		
Sample Size:	1.00 L	Date Extracted:	3-May-06	Date Analyzed DB-5:	5-May-06		
				Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000220		13C-2,3,7,8-TCDD	89.5	25 - 161	
1,2,3,7,8-PeCDD	ND	0.00000333		13C-1,2,3,7,8-PeCDD	77.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000535		13C-1,2,3,4,7,8-HxCDD	73.7	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000571		13C-1,2,3,6,7,8-HxCDD	77.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000558		13C-1,2,3,4,6,7,8-HpCDD	71.1	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND		0.00000257	13C-OCDD	53.0	17 - 157	
OCDD	0.0000290			13C-2,3,7,8-TCDF	93.0	24 - 169	J
2,3,7,8-TCDF	ND	0.00000224		13C-1,2,3,7,8-PeCDF	83.5	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000291		13C-2,3,4,7,8-PeCDF	84.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000269		13C-1,2,3,4,7,8-HxCDF	73.5	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000282		13C-1,2,3,6,7,8-HxCDF	73.9	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000251		13C-2,3,4,6,7,8-HxCDF	78.7	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000284		13C-1,2,3,7,8,9-HxCDF	74.1	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000471		13C-1,2,3,4,6,7,8-HpCDF	69.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000514		13C-1,2,3,4,7,8,9-HpCDF	70.4	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000554		13C-OCDF	54.7	17 - 157	
OCDF	0.0000233			CRS 37Cl-2,3,7,8-TCDD	99.7	35 - 197	J
Totals							
Total TCDD	ND	0.00000220					
Total PeCDD	ND	0.00000333					
Total HxCDD	ND	0.00000555					
Total HpCDD	ND		0.00000257				
Total TCDF	ND	0.00000224					
Total PeCDF	ND	0.00000280					
Total HxCDF	ND	0.00000322					
Total HpCDF	ND	0.00000534					

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: William J. Luksemburg 2-3-Jun-2006 15:40

OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7985	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	3-May-06	Date Analyzed DB-5:	4-May-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	9.76	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	81.7	25 - 164
1,2,3,7,8-PeCDD	50.0	50.9	35 - 71	13C-1,2,3,7,8-PeCDD	74.3	25 - 181
1,2,3,4,7,8-HxCDD	50.0	50.4	35 - 82	13C-1,2,3,4,7,8-HxCDD	75.5	32 - 141
1,2,3,6,7,8-HxCDD	50.0	52.2	38 - 67	13C-1,2,3,6,7,8-HxCDD	75.9	28 - 130
1,2,3,7,8,9-HxCDD	50.0	50.9	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	67.7	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	51.5	35 - 70	13C-OCDD	43.8	17 - 157
OCDD	100	106	78 - 144	13C-2,3,7,8-TCDF	89.0	24 - 169
2,3,7,8-TCDF	10.0	9.78	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	79.7	24 - 185
1,2,3,7,8-PeCDF	50.0	51.0	40 - 67	13C-2,3,4,7,8-PeCDF	78.8	21 - 178
2,3,4,7,8-PeCDF	50.0	50.0	34 - 80	13C-1,2,3,4,7,8-HxCDF	75.5	26 - 152
1,2,3,4,7,8-HxCDF	50.0	50.0	36 - 67	13C-1,2,3,6,7,8-HxCDF	72.3	26 - 123
1,2,3,6,7,8-HxCDF	50.0	50.8	42 - 65	13C-2,3,4,6,7,8-HxCDF	76.1	28 - 136
2,3,4,6,7,8-HxCDF	50.0	50.8	35 - 78	13C-1,2,3,7,8,9-HxCDF	74.0	29 - 147
1,2,3,7,8,9-HxCDF	50.0	50.0	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	67.4	28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	52.2	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	62.6	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	50.7	39 - 69	13C-OCDF	45.3	17 - 157
OCDF	100	103	63 - 170	CRS 37Cl-2,3,7,8-TCDD	103	35 - 197

Analyst: JMH

Approved By: William J. Luksemburg 06-May-2006 10:45

Sample ID: IPD1549-01		EPA Method 1613					
Client Data		Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27605-001		
Project:	IPD1549	Sample Size:	1.02 L	QC Batch No:	7985		
Date Collected:	14-Apr-06			Date Analyzed DB-5:	5-May-06		
Time Collected:	1350			Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000495			39.7	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000865			33.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000104			35.1	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000298			J	37.7	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000106			38.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000665				29.7	17 - 157	
OCDD	0.000997				37.7	24 - 169	
2,3,7,8-TCDF	ND	0.000000730		B	35.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000585			33.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000622			35.0	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000552			37.0	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000485			34.2	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000621			32.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000999			36.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000956			J	32.2	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000103			29.6	17 - 157	
OCDF	0.0000297			J,B	96.2	35 - 197	
Totals							
Total TCDD	ND	0.000000495					
Total PeCDD	ND	0.000000865					
Total HxCDD	0.0000172						
Total HpCDD	0.000134			B			
Total TCDF	ND	0.000000730					
Total PeCDF	ND	0.000000604					
Total HxCDF	0.0000104		0.0000112				
Total HpCDF	0.0000365						

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

Footnotes

Analyst: JMH
Approved By: William J. Luksemburg 23-Jun-2006 15:40

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

Accrediting Authority	Certificate Number
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 # IPD1549

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="font-size: 2em; margin-left: 100px;">27605</div> <div style="font-size: 2em; margin-left: 100px;">03°C</div>

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

Analysis	Expiration	Comments
Sample ID: IPD1549-01 Water Sampled: 04/14/06 13:50		
1613-Dioxin-HR-Alta	04/21/06 13:50	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	05/12/06 13:50	Excel EDD email to pm, Include Std logs for Lvl IV
Containers Supplied:		
1 L Amber (IPD1549-01C)		
1 L Amber (IPD1549-01D)		

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):	_____	

<i>Edward Ruiz</i>	4/17/06	Time	<i>Bethmaria Benedict</i>	4/18/06	0905
Released By	Date	Time	Received By	Date	Time
Released By	Date	Time	Received By	Date	Time

Project 27605

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27605

Samples Arrival:	Date/Time <u>4/18/06 0905</u>	Initials: <u>BBB</u>	Location: <u>WR-2</u>
Logged In:	Date/Time <u>4/18/06 1446</u>	Initials: <u>BBB</u>	Location: <u>WR-2</u>
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 <u>0.3°C</u>	Time: <u>0935</u>	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 # <u>7903 9693 2436</u>			
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 ₂ S ₂ O ₃ Preservation Documented?			None
Shipping Container	Alta	<input checked="" type="checkbox"/> Client	Retain
			<input checked="" type="checkbox"/> Return
			Dispose

Comments:

APPENDIX G

Section 16

Outfall 004, April 14, 2006

MEC^X Data Validation Reports



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 004

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPD1549

Prepared by
MEC^X, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001D.01
Sample Delivery Group: IPD1549
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: July 3, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x 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 004	IPD1549-01	27605-001	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 \pm 2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 0.3°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 04/11/2006 on instrument VG-9. 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 VER was 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 (0-7985-MB001) was extracted and analyzed with the sample in this SDG. Target compounds OCDD and OCDF were detected in the method blank. EMPC values for 1,2,3,4,6,7,8-HpCDD and total HpCDD were also detected in the method blank. Qualifications were not required because the values in the sample were greater than five times the amount in the blank. A review of the method blank raw data and chromatograms indicated no false positives or false negatives. The laboratory had an issue reporting the method blank results due to new software on a new instrument, VG-9. This problem was corrected and the data was reissued by the laboratory. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7985-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 qualification of the site sample was 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. 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. The laboratory had an issue reporting the site sample results due to new software on a new instrument, VG-9. This problem was corrected and the data was reissued by the laboratory. No further qualifications were required.

APPENDIX G

Section 17

Outfall 005, April 05, 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: Routine Outfall 005

Sampled: 04/05/06
Received: 04/05/06
Issued: 05/07/06 17:16

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 of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.*

CASE NARRATIVE

- SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.
- HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the 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.

LABORATORY ID
IPD0422-01

CLIENT ID
Outfall 005

MATRIX
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: Routine Outfall 005

Report Number: IPD0422

Sampled: 04/05/06

Received: 04/05/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0422-01 (Outfall 005 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	6D06072	0.050	2.0	0.36	1	04/06/06	04/07/06	J
Cadmium	EPA 200.8	6D06072	0.025	1.0	0.058	1	04/06/06	04/07/06	J
Copper	EPA 200.8	6D06072	0.25	2.0	5.4	1	04/06/06	04/07/06	
Lead	EPA 200.8	6D06072	0.040	1.0	1.2	1	04/06/06	04/07/06	
Mercury	EPA 245.1	6D06061	0.050	0.20	ND	1	04/06/06	04/06/06	
Thallium	EPA 200.8	6D06072	0.15	1.0	ND	1	04/06/06	04/07/06	

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: Routine Outfall 005

Report Number: IPD0422

Sampled: 04/05/06
Received: 04/05/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0422-01 (Outfall 005 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6D06048	1.5	5.0	33	10	04/06/06	04/06/06	
Nitrate/Nitrite-N	EPA 300.0	6D06048	0.80	1.5	23	10	04/06/06	04/06/06	
Oil & Grease	EPA 413.1	6D06049	0.90	4.8	ND	1	04/06/06	04/06/06	
Sulfate	EPA 300.0	6D06048	4.5	5.0	24	10	04/06/06	04/06/06	
Total Dissolved Solids	SM2540C	6D06066	10	10	330	1	04/06/06	04/06/06	
Total Suspended Solids	EPA 160.2	6D11091	10	10	33	1	04/11/06	04/11/06	

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: Routine Outfall 005

Report Number: IPD0422

Sampled: 04/05/06
Received: 04/05/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 005 (IPD0422-01) - Water EPA 300.0	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
	2	04/05/2006 07:50	04/05/2006 18:50	04/06/2006 09:30	04/06/2006 17:24

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: Routine Outfall 005

Report Number: IPD0422

Sampled: 04/05/06

Received: 04/05/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D06061 Extracted: 04/06/06											
Blank Analyzed: 04/06/2006 (6D06061-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/06/2006 (6D06061-BS1)											
Mercury	8.10	0.20	0.050	ug/l	8.00		101	85-115			
Matrix Spike Analyzed: 04/06/2006 (6D06061-MS1)											
Mercury	8.34	0.20	0.050	ug/l	8.00	ND	104	70-130			
Matrix Spike Dup Analyzed: 04/06/2006 (6D06061-MSD1)											
Mercury	8.17	0.20	0.050	ug/l	8.00	ND	102	70-130	2	20	
Batch: 6D06072 Extracted: 04/06/06											
Blank Analyzed: 04/06/2006-04/07/2006 (6D06072-BLK1)											
Antimony	ND	2.0	0.18	ug/l							
Cadmium	ND	1.0	0.015	ug/l							
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.075	ug/l							
LCS Analyzed: 04/06/2006-04/07/2006 (6D06072-BS1)											
Antimony	77.5	2.0	0.18	ug/l	80.0		97	85-115			
Cadmium	78.2	1.0	0.015	ug/l	80.0		98	85-115			
Copper	81.8	2.0	0.25	ug/l	80.0		102	85-115			
Lead	81.3	1.0	0.040	ug/l	80.0		102	85-115			
Thallium	78.4	1.0	0.075	ug/l	80.0		98	85-115			

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: Routine Outfall 005

Report Number: IPD0422

Sampled: 04/05/06

Received: 04/05/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D06072 Extracted: 04/06/06											
Matrix Spike Analyzed: 04/06/2006-04/07/2006 (6D06072-MS1)						Source: IPD0061-03					
Antimony	79.1	2.0	0.18	ug/l	80.0	ND	99	70-130			
Cadmium	77.5	1.0	0.015	ug/l	80.0	ND	97	70-130			
Copper	79.0	2.0	0.25	ug/l	80.0	ND	99	70-130			
Lead	80.0	1.0	0.040	ug/l	80.0	ND	100	70-130			
Thallium	81.7	1.0	0.075	ug/l	80.0	ND	102	70-130			
Matrix Spike Analyzed: 04/07/2006 (6D06072-MS2)						Source: IPD0061-04					
Antimony	78.7	2.0	0.18	ug/l	80.0	ND	98	70-130			
Cadmium	78.4	1.0	0.015	ug/l	80.0	ND	98	70-130			
Copper	79.2	2.0	0.25	ug/l	80.0	1.3	97	70-130			
Lead	79.5	1.0	0.040	ug/l	80.0	0.060	99	70-130			
Thallium	81.6	1.0	0.075	ug/l	80.0	ND	102	70-130			
Matrix Spike Dup Analyzed: 04/07/2006 (6D06072-MSD1)						Source: IPD0061-03					
Antimony	76.9	2.0	0.18	ug/l	80.0	ND	96	70-130	3	20	
Cadmium	76.0	1.0	0.015	ug/l	80.0	ND	95	70-130	2	20	
Copper	76.0	2.0	0.25	ug/l	80.0	ND	95	70-130	4	20	
Lead	77.5	1.0	0.040	ug/l	80.0	ND	97	70-130	3	20	
Thallium	79.2	1.0	0.075	ug/l	80.0	ND	99	70-130	3	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: Routine Outfall 005

Report Number: IPD0422

Sampled: 04/05/06

Received: 04/05/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D06048 Extracted: 04/06/06											
Blank Analyzed: 04/06/2006 (6D06048-BLK1)											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
LCS Analyzed: 04/06/2006 (6D06048-BS1)											
Chloride	4.78	0.50	0.15	mg/l	5.00		96	90-110			
Sulfate	9.63	0.50	0.45	mg/l	10.0		96	90-110			
Matrix Spike Analyzed: 04/06/2006 (6D06048-MS1)											
						Source: IPD0419-01					
Chloride	13.5	0.50	0.15	mg/l	5.00	8.7	96	80-120			
Sulfate	33.2	0.50	0.45	mg/l	10.0	23	102	80-120			
Matrix Spike Dup Analyzed: 04/06/2006 (6D06048-MSD1)											
						Source: IPD0419-01					
Chloride	13.7	0.50	0.15	mg/l	5.00	8.7	100	80-120	1	20	
Sulfate	33.9	0.50	0.45	mg/l	10.0	23	109	80-120	2	20	
Batch: 6D06049 Extracted: 04/06/06											
Blank Analyzed: 04/06/2006 (6D06049-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/06/2006 (6D06049-BS1)											
Oil & Grease	15.9	5.0	0.94	mg/l	20.0		80	65-120			M-NR1
LCS Dup Analyzed: 04/06/2006 (6D06049-BSD1)											
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120	19	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: Routine Outfall 005

Report Number: IPD0422

Sampled: 04/05/06

Received: 04/05/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6D06066 Extracted: 04/06/06											
Blank Analyzed: 04/06/2006 (6D06066-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/06/2006 (6D06066-BS1)											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 04/06/2006 (6D06066-DUP1)											
Total Dissolved Solids	156	10	10	mg/l		160			3	10	
Source: IPD0419-01											
Batch: 6D11091 Extracted: 04/11/06											
Blank Analyzed: 04/11/2006 (6D11091-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/11/2006 (6D11091-BS1)											
Total Suspended Solids	972	10	10	mg/l	1000		97	85-115			
Duplicate Analyzed: 04/11/2006 (6D11091-DUP1)											
Total Suspended Solids	326	10	10	mg/l		340			4	10	
Source: IPD0412-01											

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: Routine Outfall 005

Report Number: IPD0422

Sampled: 04/05/06

Received: 04/05/06

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
IPD0422-01	413.1 Oil and Grease	Oil & Grease	mg/l	0	4.8	15
IPD0422-01	Antimony-200.8	Antimony	ug/l	0.36	2.0	6.00
IPD0422-01	Cadmium-200.8	Cadmium	ug/l	0.058	1.0	4.00
IPD0422-01	Chloride - 300.0	Chloride	mg/l	33	5.0	150
IPD0422-01	Copper-200.8	Copper	ug/l	5.40	2.0	14
IPD0422-01	Lead-200.8	Lead	ug/l	1.20	1.0	5.20
IPD0422-01	Mercury - 245.1	Mercury	ug/l	0.022	0.20	0.20
IPD0422-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	23	1.5	10.00
IPD0422-01	Sulfate-300.0	Sulfate	mg/l	24	5.0	250
IPD0422-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	330	10	850
IPD0422-01	Thallium-200.8	Thallium	ug/l	0.031	1.0	2.00

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: Routine Outfall 005

Report Number: IPD0422

Sampled: 04/05/06

Received: 04/05/06

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

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.

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IPD0422 <Page 10 of 11>



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

Project ID: Routine Outfall 005

Report Number: IPD0422

Sampled: 04/05/06
Received: 04/05/06

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
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.testamericainc.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: IPD0422-01

Analysis Performed: EDD + Level 4
Samples: IPD0422-01

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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Del Mar Analytical CHAIN OF CUSTODY FORM

Version 03/01/06

IPD0422

Client Name/Address:		Project:		ANALYSIS REQUIRED					Field Readings:
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Routine Outfall 005 Stormwater at F/SDF-1		Total Recoverable Metals: Sp, Cd, Cu, Pb, Hg, Tl	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cl-, SO4, NO3+NO2-N	TDS, TSS	Temp = 77 pH = 7.2
Project Manager: Bronwyn Kelly Sampler: <i>[Signature]</i>		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Preservative	Bottle #				Comments
Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	HNO3	1A				
W	Poly-1L	1	4/5/06 0750	HNO3	1B				
W	Poly-1L	1		None	2A, 2B				
W	Glass-Amber	2		HCl	3A, 3B				
W	Glass-Amber	2		None	4A, 4B	X			
W	Poly-500 ml	2	4/5/06 0750	None	5A, 5B		X		
W	Poly-500 ml	2		None					
Relinquished By <i>[Signature]</i>	Date/Time: 4/5/06 1555	Received By <i>[Signature]</i>	Date/Time: 4-5-06 1555	Turn around Time: (check)					
Relinquished By <i>[Signature]</i>	Date/Time: 4-5-06 1850	Received By <i>[Signature]</i>	Date/Time: 4-5-06 1850	24 Hours	5 Days				
Relinquished By	Date/Time:	Received By	Date/Time:	48 Hours	10 Days				
Relinquished By	Date/Time:	Received By	Date/Time:	72 Hours	Normal				
				Perchlorate Only 72 Hours					
				Metals Only 72 Hours					
				Sample Integrity: (Check)	On Ice:				
				Intact	✓				

2040 @



April 13, 2006

Alta Project I.D.: 27562

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 April 07, 2006 under your Project Name "IPD0422". 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. Thank you for choosing Alta as part of your analytical support team.

Sincerely,

Martha M. Maier
HRMS Services Director



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.



Section I: Sample Inventory Report

Date Received: 4/7/2006

Alta Lab. ID

Client Sample ID

27562-001

IPD0422-01

SECTION II

Method Blank					EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7918	Lab Sample:	0-MB001	Date Analyzed DB-5:	11-Apr-06	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	10-Apr-06						
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers	
2,3,7,8-TCDD	ND	0.000000788			IS 13C-2,3,7,8-TCDD	72.2	25 - 164		
1,2,3,7,8-PeCDD	ND	0.000000469			13C-1,2,3,7,8-PeCDD	73.0	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.00000114			13C-1,2,3,4,7,8-HxCDD	75.7	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.00000120			13C-1,2,3,6,7,8-HxCDD	67.3	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.00000113			13C-1,2,3,4,6,7,8-HpCDD	69.6	23 - 140		
1,2,3,4,6,7,8-HpCDD	ND	0.00000167			13C-OCDD	44.8	17 - 157		
OCDD	ND	0.0000150			13C-2,3,7,8-TCDF	77.0	24 - 169		
2,3,7,8-TCDF	ND	0.000000832			13C-1,2,3,7,8-PeCDF	72.9	24 - 185		
1,2,3,7,8-PeCDF	ND	0.000000866			13C-2,3,4,7,8-PeCDF	77.1	21 - 178		
2,3,4,7,8-PeCDF	ND	0.000000754			13C-1,2,3,4,7,8-HxCDF	70.7	26 - 152		
1,2,3,4,7,8-HxCDF	ND	0.000000479			13C-1,2,3,6,7,8-HxCDF	66.8	26 - 123		
1,2,3,6,7,8-HxCDF	ND	0.000000466			13C-2,3,4,6,7,8-HxCDF	70.2	28 - 136		
2,3,4,6,7,8-HxCDF	ND	0.000000465			13C-1,2,3,7,8,9-HxCDF	68.4	29 - 147		
1,2,3,7,8,9-HxCDF	ND	0.000000684			13C-1,2,3,4,6,7,8-HpCDF	61.1	28 - 143		
1,2,3,4,6,7,8-HpCDF	ND	0.000000806			13C-1,2,3,4,7,8,9-HpCDF	67.5	26 - 138		
1,2,3,4,7,8,9-HpCDF	ND	0.000000832			13C-OCDF	49.1	17 - 157		
OCDF	ND	0.00000337			CRS 37Cl-2,3,7,8-TCDD	86.2	35 - 197		
Totals					Footnotes				
Total TCDD	ND	0.000000788			a. Sample specific estimated detection limit.				
Total PeCDD	ND	0.00000120			b. Estimated maximum possible concentration.				
Total HxCDD	ND	0.00000116			c. Method detection limit.				
Total HpCDD	ND	0.00000167			d. Lower control limit - upper control limit.				
Total TCDF	ND	0.000000832							
Total PeCDF	ND	0.000000808							
Total HxCDF	ND	0.000000515							
Total HpCDF	ND	0.000000818							

Analyst: MAS

Approved By: William J. Luksemburg 13-Apr-2006 07:30

NPDES - 454

OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	7918	Lab Sample:	0-OPR001		
Sample Size:	1.00 L	Date Extracted:	10-Apr-06	Date Analyzed DB-5:	11-Apr-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	9.88	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	72.6	25 - 164	
1,2,3,7,8-PeCDD	50.0	49.8	35 - 71	13C-1,2,3,7,8-PeCDD	75.2	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	48.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	81.2	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	47.5	38 - 67	13C-1,2,3,6,7,8-HxCDD	76.4	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	45.8	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	77.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	49.2	35 - 70	13C-OCDD	50.8	17 - 157	
OCDD	100	99.7	78 - 144	13C-2,3,7,8-TCDF	75.2	24 - 169	
2,3,7,8-TCDF	10.0	9.58	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	79.0	24 - 185	
1,2,3,7,8-PeCDF	50.0	46.3	40 - 67	13C-2,3,4,7,8-PeCDF	78.4	21 - 178	
2,3,4,7,8-PeCDF	50.0	45.0	34 - 80	13C-1,2,3,4,7,8-HxCDF	78.1	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	48.1	36 - 67	13C-1,2,3,6,7,8-HxCDF	78.7	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	48.3	42 - 65	13C-2,3,4,6,7,8-HxCDF	77.3	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	46.7	35 - 78	13C-1,2,3,7,8,9-HxCDF	80.4	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	48.4	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	69.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	47.2	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	76.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	47.9	39 - 69	13C-OCDF	59.3	17 - 157	
OCDF	100	96.8	63 - 170	CRS 37Cl-2,3,7,8-TCDD	79.2	35 - 197	

Analyst: MAS

Approved By: William J. Luksemburg 13-Apr-2006 07:30

Sample ID: IPD0422-01					EPA Method 1613			
Client Data			Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine		Matrix:	Aqueous	Lab Sample:	27562-001	Date Received:	7-Apr-06
Project:	IPD0422		Sample Size:	1.02 L	QC Batch No.:	7918	Date Extracted:	10-Apr-06
Date Collected:	5-Apr-06				Date Analyzed DB-5:	11-Apr-06	Date Analyzed DB-225:	NA
Time Collected:	0750							
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000103			IS 13C-2,3,7,8-TCDD	64.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000732			13C-1,2,3,7,8-PeCDD	65.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000208			13C-1,2,3,4,7,8-HxCDD	67.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000206			13C-1,2,3,6,7,8-HxCDD	64.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000200			13C-1,2,3,4,6,7,8-HpCDD	66.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000118			J	13C-OCDD	51.0	17 - 157	
OCDD	0.000262				13C-2,3,7,8-TCDF	62.9	24 - 169	
2,3,7,8-TCDF	ND	0.000000958			13C-1,2,3,7,8-PeCDF	67.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000111			13C-2,3,4,7,8-PeCDF	67.4	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000106			13C-1,2,3,4,7,8-HxCDF	66.9	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000616			13C-1,2,3,6,7,8-HxCDF	65.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000591			13C-2,3,4,6,7,8-HxCDF	65.7	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000615			13C-1,2,3,7,8,9-HxCDF	64.4	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000930			13C-1,2,3,4,6,7,8-HpCDF	59.8	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000218			13C-1,2,3,4,7,8,9-HpCDF	65.8	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000600			13C-OCDF	56.7	17 - 157	
OCDF	ND		0.00000221		CRS 37Cl-2,3,7,8-TCDD	91.4	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.00000385			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.000000732			b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000205			c. Method detection limit.			
Total HpCDD	0.0000241				d. Lower control limit - upper control limit.			
Total TCDF	ND	0.00000358						
Total PeCDF	ND	0.00000108						
Total HxCDF	ND	0.000000674						
Total HpCDF	ND	0.00000225						

Analyst: MAS

Approved By: William J. Luksemburg 13-Apr-2006 07:30

NPDES - 456

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

Accrediting Authority	Certificate Number
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

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27562

Samples Arrival:	Date/Time 4/7/06 0900	Initials: BSB	Location: WR-2
Logged In:	Date/Time 4/10/06 0710	Initials: BSB	Location: WR-2 Shelf/Rack: C-3
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	1.0	Time: 0930	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 # 7914 3658 8280	✓		
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 ₂ S ₂ O ₃ Preservation Documented?			None
Shipping Container	Alta	<input checked="" type="checkbox"/> Client	Retain
		<input checked="" type="checkbox"/> Return	Dispose

Comments:

APPENDIX G

Section 18

Outfall 005, April 05, 2006

MEC^X Data Validation Reports



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 005

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPD0422

Prepared by
MEC^X, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001D.01
Sample Delivery Group: IPD0422
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: June 9, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x 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 005	IPD0422-01	27562-001	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 \pm 2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 1.0°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 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 03/22/2006 on instrument VG-5. 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 VER was 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 (0-7918-MB001) was extracted and analyzed with the sample in this SDG. No target compounds were detected in the method blank. No qualifications were required. 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 (0-7918-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 qualification of the site sample was 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. A detect below the laboratory lower calibration level was qualified as estimated, "J." This "J" value was annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. An EMPC value for OCDF was qualified as an estimated nondetect, "UJ." No further qualifications were required.

Sample ID: IPD0422-01

Outfall 005

EPA Method 1613

Client Data

Name: Del Mar Analytical, Irvine
 Project: IPD0422
 Date Collected: 5-Apr-06
 Time Collected: 0750

Sample Data

Matrix: Aqueous
 Sample Size: 1.02 L

Laboratory Data

Lab Sample: 27562-001 Date Received: 7-Apr-06
 QC Batch No.: 7918 Date Extracted: 10-Apr-06
 Date Analyzed DB-5: 11-Apr-06 Date Analyzed DB-225: NA

Real Qual Conc
 U
 ↓
 J
 U
 ↓
 UJ
 *10
 U
 U
 U
 U
 U
 U

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.0000103			<u>IS</u> 13C-2,3,7,8-TCDD	64.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000732			13C-1,2,3,7,8-PeCDD	65.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.0000208			13C-1,2,3,4,7,8-HxCDD	67.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.0000206			13C-1,2,3,6,7,8-HxCDD	64.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0000200			13C-1,2,3,4,6,7,8-HpCDD	66.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000118			J	13C-OCDD	51.0	17 - 157	
OCDD	0.000262				13C-2,3,7,8-TCDF	62.9	24 - 169	
2,3,7,8-TCDF	ND	0.00000958			13C-1,2,3,7,8-PeCDF	67.9	24 - 185	
1,2,3,7,8-PeCDF	ND	0.0000111			13C-2,3,4,7,8-PeCDF	67.4	21 - 178	
2,3,4,7,8-PeCDF	ND	0.0000106			13C-1,2,3,4,7,8-HxCDF	66.9	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000616			13C-1,2,3,6,7,8-HxCDF	65.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000591			13C-2,3,4,6,7,8-HxCDF	65.7	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000615			13C-1,2,3,7,8,9-HxCDF	64.4	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000930			13C-1,2,3,4,6,7,8-HpCDF	59.8	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.0000218			13C-1,2,3,4,7,8,9-HpCDF	65.8	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000600			13C-OCDF	56.7	17 - 157	
OCDF	ND		0.00000221		<u>CRS</u> 37Cl-2,3,7,8-TCDD	91.4	35 - 197	

Totals				Footnotes				
Total TCDD	ND	0.0000385		a. Sample specific estimated detection limit. b. Estimated maximum possible concentration. c. Method detection limit. d. Lower control limit - upper control limit.				
Total PeCDD	ND	0.00000732						
Total HxCDD	ND	0.0000205						
Total HpCDD	0.0000241							
Total TCDF	ND	0.0000358						
Total PeCDF	ND	0.0000108						
Total HxCDF	ND	0.00000674						
Total HpCDF	ND	0.00000225						

Analyst: MAS

Approved By: William J. Luksemburg 13-Apr-2006 07:30

Level IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4WC71
 Task Order: 1261.001D.01
 SDG No.: IPD0422

No. of Analyses: 1

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

Date: <u>June 6, 2006</u>
Reviewer's Signature <i>P. Meeks</i>

ACTION ITEMS^a	
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	_____
COMMENTS^b	Acceptable as reviewed.
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Sampling
Outfall 005

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPD0422

Prepared by

MEC^x, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPD0422
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: June 6, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Method 300.0*, 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 005	IPD0422-01	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 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 holding times were assessed by comparing the date of collection with the dates of analysis. The analysis was performed within the method specified holding times. No qualifications were required.

2.2 CALIBRATION

The initial calibration correlation coefficients were ≥ 0.995 . Initial and continuing calibration information was acceptable with recoveries within the control limits of 90-110%. 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 LCS recoveries were within the laboratory-established control limits. The nitrate/nitrite LCS recovery was not reported on the summary form; however, the reviewer checked the raw data and verified that nitrate/nitrite was acceptably recovered. No qualifications were required.

2.5 LABORATORY DUPLICATES

No laboratory duplicate analyses were performed in association with the sample in 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 the sample in this SDG; therefore, no assessment was made with respect to this criterion. Evaluation of 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 results reported on the Form I were verified against the raw data. 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.



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

Project ID: Routine Outfall 005
Report Number: IPD0422

Sampled: 04/05/06
Received: 04/05/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0422-01 (Outfall 005 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6D06048	1.5	5.0	33	10	04/06/06	04/06/06	Rev Qual
Nitrate/Nitrite-N	EPA 300.0	6D06048	0.80	1.5	23	10	04/06/06	04/06/06	Qual Code
Oil & Grease	EPA 413.1	6D06049	0.90	4.8	ND	1	04/06/06	04/06/06	*
Sulfate	EPA 300.0	6D06048	4.5	5.0	24	10	04/06/06	04/06/06	*
Total Dissolved Solids	SM2540C	6D06066	10	10	330	1	04/06/06	04/06/06	*
Total Suspended Solids	EPA 160.2	6D11091	10	10	33	1	04/11/06	04/11/06	*

* Analysis not validated

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

LEVEL IV

APPENDIX G

Section 19

Outfall 005, April 15, 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: Routine Outfall 005

Sampled: 04/15/06
Received: 04/15/06
Issued: 06/12/06 10:45

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 of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.*

CASE NARRATIVE

- SAMPLE RECEIPT: Samples were received intact, at 1°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.

LABORATORY ID
IPD1608-01

CLIENT ID
Outfall 005

MATRIX
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: Routine Outfall 005

Report Number: IPD1608

Sampled: 04/15/06
Received: 04/15/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1608-01 (Outfall 005 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	6D20092	0.050	2.0	0.70	1	04/20/06	04/21/06	B, J
Cadmium	EPA 200.8	6D20092	0.025	1.0	0.15	1	04/20/06	04/21/06	J
Copper	EPA 200.8	6D20092	0.25	2.0	8.7	1	04/20/06	04/21/06	
Lead	EPA 200.8	6D20092	0.040	1.0	4.9	1	04/20/06	04/21/06	
Mercury	EPA 245.1	6D17063	0.050	0.20	ND	1	04/17/06	04/17/06	
Thallium	EPA 200.8	6D20092	0.15	1.0	ND	1	04/20/06	04/21/06	

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: Routine Outfall 005

Report Number: IPD1608

Sampled: 04/15/06
Received: 04/15/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1608-01 (Outfall 005 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6D15028	0.15	0.50	20	1	04/15/06	04/15/06	
Nitrate/Nitrite-N	EPA 300.0	6D15028	0.80	1.5	22	10	04/15/06	04/15/06	
Oil & Grease	EPA 413.1	6D18050	0.89	4.7	ND	1	04/18/06	04/18/06	
Sulfate	EPA 300.0	6D15028	0.45	0.50	14	1	04/15/06	04/15/06	
Total Dissolved Solids	SM2540C	6D18055	10	10	330	1	04/18/06	04/18/06	
Total Suspended Solids	EPA 160.2	6D20128	10	10	130	1	04/20/06	04/20/06	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 005

Report Number: IPD1608

Sampled: 04/15/06
Received: 04/15/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 005 (IPD1608-01) - Water EPA 300.0	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
	2	04/15/2006 09:10	04/15/2006 15:20	04/15/2006 16:40	04/15/2006 17:43

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: Routine Outfall 005

Report Number: IPD1608

Sampled: 04/15/06

Received: 04/15/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D17063 Extracted: 04/17/06											
Blank Analyzed: 04/17/2006 (6D17063-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/17/2006 (6D17063-BS1)											
Mercury	8.25	0.20	0.050	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 04/17/2006 (6D17063-MS1)											
						Source: IPD1477-13					
Mercury	8.39	0.20	0.050	ug/l	8.00	ND	105	70-130			
Matrix Spike Dup Analyzed: 04/17/2006 (6D17063-MSD1)											
						Source: IPD1477-13					
Mercury	8.52	0.20	0.050	ug/l	8.00	ND	106	70-130	2	20	
Batch: 6D20092 Extracted: 04/20/06											
Blank Analyzed: 04/21/2006 (6D20092-BLK1)											
Antimony	0.101	2.0	0.050	ug/l							J
Cadmium	ND	1.0	0.025	ug/l							
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.15	ug/l							
LCS Analyzed: 04/21/2006 (6D20092-BS1)											
Antimony	81.3	2.0	0.050	ug/l	80.0		102	85-115			
Cadmium	79.0	1.0	0.025	ug/l	80.0		99	85-115			
Copper	81.7	2.0	0.25	ug/l	80.0		102	85-115			
Lead	81.7	1.0	0.040	ug/l	80.0		102	85-115			
Thallium	82.2	1.0	0.15	ug/l	80.0		103	85-115			

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: Routine Outfall 005

Report Number: IPD1608

Sampled: 04/15/06

Received: 04/15/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6D20092 Extracted: 04/20/06											
Matrix Spike Analyzed: 04/21/2006 (6D20092-MS1)						Source: IPD1586-01					
Antimony	85.4	2.0	0.050	ug/l	80.0	0.12	107	70-130			
Cadmium	77.8	1.0	0.025	ug/l	80.0	0.055	97	70-130			
Copper	83.2	2.0	0.25	ug/l	80.0	7.7	94	70-130			
Lead	78.1	1.0	0.040	ug/l	80.0	0.60	97	70-130			
Thallium	78.1	1.0	0.15	ug/l	80.0	ND	98	70-130			
Matrix Spike Analyzed: 04/21/2006 (6D20092-MS2)						Source: IPD1586-02					
Antimony	82.1	2.0	0.050	ug/l	80.0	0.098	103	70-130			
Cadmium	75.7	1.0	0.025	ug/l	80.0	0.058	95	70-130			
Copper	73.5	2.0	0.25	ug/l	80.0	1.5	90	70-130			
Lead	75.6	1.0	0.040	ug/l	80.0	0.13	94	70-130			
Thallium	76.0	1.0	0.15	ug/l	80.0	0.21	95	70-130			
Matrix Spike Dup Analyzed: 04/21/2006 (6D20092-MSD1)						Source: IPD1586-01					
Antimony	83.9	2.0	0.050	ug/l	80.0	0.12	105	70-130	2	20	
Cadmium	77.5	1.0	0.025	ug/l	80.0	0.055	97	70-130	0	20	
Copper	80.8	2.0	0.25	ug/l	80.0	7.7	91	70-130	3	20	
Lead	76.9	1.0	0.040	ug/l	80.0	0.60	95	70-130	2	20	
Thallium	77.5	1.0	0.15	ug/l	80.0	ND	97	70-130	1	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: Routine Outfall 005

Report Number: IPD1608

Sampled: 04/15/06

Received: 04/15/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD RPD	Data Qualifiers
Batch: 6D15028 Extracted: 04/15/06										
Blank Analyzed: 04/15/2006 (6D15028-BLK1)										
Chloride	ND	0.50	0.15	mg/l						
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l						
Sulfate	ND	0.50	0.45	mg/l						
LCS Analyzed: 04/15/2006 (6D15028-BS1)										
Chloride	4.82	0.50	0.15	mg/l	5.00		96			90-110
Sulfate	10.1	0.50	0.45	mg/l	10.0		101			90-110
Matrix Spike Analyzed: 04/15/2006 (6D15028-MS1) Source: IPD1578-01										
Chloride	10.4	0.50	0.15	mg/l	5.00	5.1	106			80-120
Sulfate	18.8	0.50	0.45	mg/l	10.0	7.7	111			80-120
Matrix Spike Dup Analyzed: 04/15/2006 (6D15028-MSD1) Source: IPD1578-01										
Chloride	10.1	0.50	0.15	mg/l	5.00	5.1	100		3	20
Sulfate	18.3	0.50	0.45	mg/l	10.0	7.7	106		3	20
Batch: 6D18050 Extracted: 04/18/06										
Blank Analyzed: 04/18/2006 (6D18050-BLK1)										
Oil & Grease	ND	5.0	0.94	mg/l						
LCS Analyzed: 04/18/2006 (6D18050-BS1) M-NR1										
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96			65-120
LCS Dup Analyzed: 04/18/2006 (6D18050-BSD1)										
Oil & Grease	17.9	5.0	0.94	mg/l	20.0		90		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: Routine Outfall 005

Report Number: IPD1608

Sampled: 04/15/06

Received: 04/15/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6D18055 Extracted: 04/18/06											
Blank Analyzed: 04/18/2006 (6D18055-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/18/2006 (6D18055-BS1)											
Total Dissolved Solids	990	10	10	mg/l	1000		99	90-110			
Duplicate Analyzed: 04/18/2006 (6D18055-DUP1)											
Total Dissolved Solids	5080	10	10	mg/l		5100			0	10	
Source: IPD1326-01											
Batch: 6D20128 Extracted: 04/20/06											
Blank Analyzed: 04/20/2006 (6D20128-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/20/2006 (6D20128-BS1)											
Total Suspended Solids	990	10	10	mg/l	1000		99	85-115			
Duplicate Analyzed: 04/20/2006 (6D20128-DUP1)											
Total Suspended Solids	356	10	10	mg/l		350			2	10	
Source: IPD1603-01											

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: Routine Outfall 005

Report Number: IPD1608

Sampled: 04/15/06

Received: 04/15/06

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
IPD1608-01	413.1 Oil and Grease	Oil & Grease	mg/l	0	4.7	15
IPD1608-01	Antimony-200.8	Antimony	ug/l	0.70	2.0	6.00
IPD1608-01	Cadmium-200.8	Cadmium	ug/l	0.15	1.0	4.00
IPD1608-01	Chloride - 300.0	Chloride	mg/l	20	0.50	150
IPD1608-01	Copper-200.8	Copper	ug/l	8.70	2.0	14
IPD1608-01	Lead-200.8	Lead	ug/l	4.90	1.0	5.20
IPD1608-01	Mercury - 245.1	Mercury	ug/l	0.0080	0.20	0.20
IPD1608-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	22	1.5	10.00
IPD1608-01	Sulfate-300.0	Sulfate	mg/l	14	0.50	250
IPD1608-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	330	10	850
IPD1608-01	Thallium-200.8	Thallium	ug/l	0.100	1.0	2.00

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: Routine Outfall 005

Report Number: IPD1608

Sampled: 04/15/06
Received: 04/15/06

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated 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.
- 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

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.

NPDES - 488
IPD1608 <Page 10 of 11>



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

Project ID: Routine Outfall 005

Report Number: IPD1608

Sampled: 04/15/06

Received: 04/15/06

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
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.testamericainc.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: IPD1608-01

Analysis Performed: EDD + Level 4

Samples: IPD1608-01

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager

Del Mar Analytical Version 03/01/06 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 Routine Outfall 005 Stormwater at FSDF-1		TCDD (and all congeners) Oil & Grease (EPA 413.1) Cl-, SO4, NO3+NO2-N TDS, TSS		Temp = 58.1 pH = 7.0			
Project Manager: Bronwyn Kelly Sampler: <i>Bronwyn Kelly</i>		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Total Recoverable Metals: Sp, Cd, Cu, Pb, Hg, TI		Comments			
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #			
Outfall 005	W	Poly-1L	1	4/15/06 9:10	HNO3	1A	X		
Outfall 005-Dup	W	Poly-1L	1	↓	HNO3	1B	X		
Outfall 005	W	Glass-Amber	2		None	2A, 2B	X		
Outfall 005	W	Glass-Amber	2		HCl	3A, 3B	X		
Outfall 005	W	Poly-500 ml	2		None	4A, 4B	X		
Outfall 005	W	Poly-500 ml	2	4/15/06 9:10	None	5A, 5B	X		
Relinquished By	<i>Bronwyn Kelly</i>	Date/Time:	4/15/06	1310	Received By	<i>[Signature]</i>	Date/Time:	4-15-06	1310
Relinquished By	<i>[Signature]</i>	Date/Time:	4/15/06	1520	Received By	<i>[Signature]</i>	Date/Time:		
Relinquished By	<i>[Signature]</i>	Date/Time:			Received By	<i>[Signature]</i>	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) Intact <input checked="" type="checkbox"/> On Ice: <input type="checkbox"/>	



May 03, 2006

Alta Project I.D.: 27607

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 April 18, 2006 under your Project Name "IPD1608". 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. 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: 4/18/2006

Alta Lab. ID

Client Sample ID

27607-001

IPD1608-01

SECTION II

Method Blank		EPA Method 1613						
Matrix:	Aqueous	QC Batch No.:	7968	Lab Sample:	0-MB001			
Sample Size:	1.00 L	Date Extracted:	26-Apr-06	Date Analyzed DB-5:	2-May-06			
				Date Analyzed DB-225:	NA			
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000767			13C-2,3,7,8-TCDD	77.8	25 - 161	
1,2,3,7,8-PeCDD	ND	0.000000968			13C-1,2,3,7,8-PeCDD	69.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000195			13C-1,2,3,4,7,8-HxCDD	78.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000219			13C-1,2,3,6,7,8-HxCDD	67.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000200			13C-1,2,3,4,6,7,8-HpCDD	62.1	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000273			13C-OCDD	42.7	17 - 157	
OCDD	ND	0.00000703			13C-2,3,7,8-TCDF	77.2	24 - 169	
2,3,7,8-TCDF	ND	0.00000483			13C-1,2,3,7,8-PeCDF	67.2	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000901			13C-2,3,4,7,8-PeCDF	66.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000876			13C-1,2,3,4,7,8-HxCDF	87.3	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000696			13C-1,2,3,6,7,8-HxCDF	85.4	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000446			13C-2,3,4,6,7,8-HxCDF	81.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000546			13C-1,2,3,7,8,9-HxCDF	69.8	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000922			13C-1,2,3,4,6,7,8-HpCDF	60.1	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000818			13C-1,2,3,4,7,8,9-HpCDF	59.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000869			13C-OCDF	44.2	17 - 157	
OCDF	ND	0.00000249			CRS 37Cl-2,3,7,8-TCDD	89.1	35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.000000767			a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.000000968			b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000205			c. Method detection limit			
Total HpCDD	ND	0.00000273			d. Lower control limit - upper control limit			
Total TCDF	ND	0.00000483						
Total PeCDF	ND	0.00000889						
Total HxCDF	ND	0.00000786						
Total HpCDF	ND	0.00000841						

Analyst:

Approved By: William J. Luksemburg 03-May-2006 13:14

OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7968	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	26-Apr-06	Date Analyzed DB-5:	2-May-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	10.8	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	79.0	25 - 164
1,2,3,7,8-PeCDD	50.0	51.5	35 - 71	13C-1,2,3,7,8-PeCDD	71.2	25 - 181
1,2,3,4,7,8-HxCDD	50.0	53.1	35 - 82	13C-1,2,3,4,7,8-HxCDD	79.9	32 - 141
1,2,3,6,7,8-HxCDD	50.0	53.0	38 - 67	13C-1,2,3,6,7,8-HxCDD	66.6	28 - 130
1,2,3,7,8,9-HxCDD	50.0	51.6	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	63.6	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	55.1	35 - 70	13C-OCDD	44.0	17 - 157
OCDD	100	105	78 - 144	13C-2,3,7,8-TCDF	78.4	24 - 169
2,3,7,8-TCDF	10.0	10.7	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	65.0	24 - 185
1,2,3,7,8-PeCDF	50.0	54.8	40 - 67	13C-2,3,4,7,8-PeCDF	65.1	21 - 178
2,3,4,7,8-PeCDF	50.0	55.8	34 - 80	13C-1,2,3,4,7,8-HxCDF	87.5	26 - 152
1,2,3,4,7,8-HxCDF	50.0	52.6	36 - 67	13C-1,2,3,6,7,8-HxCDF	88.1	26 - 123
1,2,3,6,7,8-HxCDF	50.0	53.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	83.1	28 - 136
2,3,4,6,7,8-HxCDF	50.0	52.2	35 - 78	13C-1,2,3,7,8,9-HxCDF	66.3	29 - 147
1,2,3,7,8,9-HxCDF	50.0	52.6	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	62.0	28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	53.6	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	61.6	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	52.5	39 - 69	13C-OCDF	45.7	17 - 157
OCDF	100	110	63 - 170	CRS 37Cl-2,3,7,8-TCDD	95.0	35 - 197

Analyst: MAS

Approved By:

William J. Luksemburg 03-May-2006 13:14

Sample ID: IPDI608-01		EPA Method 1613					
Client Data		Sample Data		Laboratory Data			
Name	Del Mar Analytical, Irvine	Matrix	Aqueous	Lab Sample:	27607-001		
Project	IPDI608	Sample Size	1.02 L	QC Batch No.:	7968		
Date Collected:	15-Apr-06			Date Analyzed DB-5:	2-May-06		
Time Collected:	0910			Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000612		IS 13C-2,3,7,8-TCDD	93.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000757		13C-1,2,3,7,8-PeCDD	76.6	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000121		13C-1,2,3,4,7,8-HxCDD	95.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000177		13C-1,2,3,6,7,8-HxCDD	87.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000167		13C-1,2,3,4,6,7,8-HpCDD	93.3	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000278			13C-OCDD	71.5	17 - 157	
OCDD	0.000598			13C-2,3,7,8-TCDF	90.0	24 - 169	
2,3,7,8-TCDF	ND	0.000000717		13C-1,2,3,7,8-PeCDF	76.7	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000919		13C-2,3,4,7,8-PeCDF	72.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000934		13C-1,2,3,4,7,8-HxCDF	106	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000644		13C-1,2,3,6,7,8-HxCDF	103	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000563		13C-2,3,4,6,7,8-HxCDF	100	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000671		13C-1,2,3,7,8,9-HxCDF	94.1	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000994		13C-1,2,3,4,6,7,8-HpCDF	90.1	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000191			13C-1,2,3,4,7,8,9-HpCDF	93.2	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000926		13C-OCDF	75.8	17 - 157	
OCDF	ND		0.00000410	CRS 37CI-2,3,7,8-TCDD	102	35 - 197	
Totals							
Total TCDD	ND	0.000000612					
Total PeCDD	ND	0.00000176					
Total HxCDD	0.00000276		0.00000483				
Total HpCDD	0.0000594						
Total TCDF	ND	0.000000717					
Total PeCDF	ND	0.000000926					
Total HxCDF	0.00000154						
Total HpCDF	0.00000477						
Footnotes							
a. Sample specific estimated detection limit.							
b. Estimated maximum possible concentration.							
c. Method detection limit.							
d. Lower control limit - upper control limit.							

Analyst:

Approved By:

William J. Luksemburg 03-May-2006 13:14

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

Accrediting Authority	Certificate Number
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
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 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 # IPD1608

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;"> 27607 0.3°C </div>

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

Analysis	Expiration	Comments
Sample ID: IPD1608-01 Water	Sampled: 04/15/06 09:10	Instant Notification
1613-Dioxin-HR-Alta	04/22/06 09:10	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	05/13/06 09:10	Excel EDD email to pm, Include Std logs for Lvl IV

Containers Supplied:
 1 L Amber (IPD1608-01C)
 1 L Amber (IPD1608-01D)

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):	_____	

Edward [Signature] 4/17/06
 Bettina G. Benedict 4/18/06 0905
 Released By Date Time Received By Date Time

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