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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 Project: Quarterly Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

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

Michele Chamberdin

Project Manager



Pasadena, CA 91101

Project ID: Quarterly Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04/05/06 Report Number: IPD0419 Received: 04/05/06

Attention: Bronwyn Kelly

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 - Wa	ater)				Sample	ed: 04/05/0	06		
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 - Wa	ater)				Sample	ed: 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	0%)				99 %				
Surrogate: Toluene-d8 (80-120%)					94 %				
Surrogate: 4-Bromofluorobenzene (80-120	%)				98 %				

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



Project ID: Quarterly Outfall 001

300 North Lake Avenue, Suite 1200

Report Number: IPD0419 Sampled: 04/05/06
Received: 04/05/06

Attention: Bronwyn Kelly

Pasadena, CA 91101

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 - Wate	er)				Sample	ed: 04/05/0	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	
Surrogate: 2-Fluorophenol (30-120%)					60 %				
Surrogate: Phenol-d6 (35-120%)					77 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					78 %				
Surrogate: Nitrobenzene-d5 (45-120%)					78 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					79 %				
Surrogate: Terphenyl-d14 (45-120%)					85 %				



Pasadena, CA 91101

Project ID: Quarterly Outfall 001

300 North Lake Avenue, Suite 1200

Report Number: IPD0419 Sampled: 04/05/06
Received: 04/05/06

Attention: Bronwyn Kelly

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 - Wate				Sample	d: 04/05/0)6			
Reporting Units: ug/l									
alpha-BHC	EPA 608	6D11131	0.00095	0.0095	ND	0.952	04/11/06	04/12/06	
Surrogate: Decachlorobiphenyl (45-120%)					66 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					63 %				



Pasadena, CA 91101

Project ID: Quarterly Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04/05/06

Report Number: IPD0419 Received: 04/05/06

Attention: Bronwyn Kelly

		_							
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. Reporting Units: mg/l					Sample	ed: 04/05/0	06		
Iron	EPA 200.7	6D07076	0.015	0.040	3.1	1	04/07/06	04/14/06	
Sample ID: IPD0419-01RE1 (Outfall 0 Reporting Units: mg/l	01 - Water)				Sample	ed: 04/05/0	06		
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 0			Sample	ed: 04/05/0	06				
Reporting Units: ug/l									
Lead	EPA 200.8	6D07127	0.040	1.0	5.0	1	04/06/06	04/08/06	



Pasadena, CA 91101

Project ID: Quarterly Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04/05/06 Report Number: IPD0419 Received: 04/05/06

Attention: Bronwyn Kelly

		1111	711371	1100					
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0419-01 (Outfall 001 - W	ater) - cont.				Sample	ed: 04/05/0	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 - W	ater)				Sample	ed: 04/05/0	06		
Reporting Units: ml/l/hr	DD 1 4 60 5	CD 0 7 1 2 2	0.40	0.40			0.410.710.6	0.410.710.6	
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 - W Reporting Units: NTU	ater)				Sample	ed: 04/05/0	06		
Turbidity	EPA 180.1	6D06110	0.080	2.0	50	2	04/06/06	04/06/06	
Sample ID: IPD0419-01 (Outfall 001 - W Reporting Units: ug/l	ater)				Sample	ed: 04/05/0	06		
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) Reporting Units: umhos/cm					Sample	ed: 04/05/0	06		
Specific Conductance	EPA 120.1	6D06064	1.0	1.0	230	1	04/06/06	04/06/06	



Project ID: Quarterly Outfall 001

Report Number: IPD0419

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Sampled: 04/05/06 Received: 04/05/06

Attention: Bronwyn Kelly

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 001 (IPD0419-01) - Wate	Hold Time (in days) r	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

Sampled: 04/05/06

Received: 04/05/06



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Quarterly Outfall 001

Report Number: IPD0419

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
·		Limit	WIDE	Chits	Level	Result	70REC	Limits	III D	Limit	Quanners
Batch: 6D07007 Extracted: 04/07/00	<u>) </u>										
Blank Analyzed: 04/07/2006 (6D07007-E	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-BS	1)										
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				<i>3</i> ··							

Michele Chamberlin Project Manager



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	RPD Limit	Data Qualifiers
Batch: 6D07007 Extracted: 04/07/06	S										
Batch. OBO7007 Extracted. 01/07/00	<u></u>										
LCS Analyzed: 04/07/2006 (6D07007-BS	51)										
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 (6D0)7007-MS1)				Sou	rce: IPD(0421-01				
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-M	ISD1)			Sou	rce: IPD(0421-01				
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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Michele Chamberlin Project Manager



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Quarterly Outfall 001

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

Report Number: IPD0419

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result		%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D07007 Extracted: 04/07/00	<u>5</u>										
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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Report Number: IPD0419

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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	RPD Limit	Data Qualifiers
•		Limit	MIDL	Omits	Levei	Result	/OKEC	Limits	KI D	Limit	Quanners
Batch: 6D10085 Extracted: 04/10/0	<u>6</u>										
Blank Analyzed: 04/12/2006 (6D10085-	DI 1/1)										
Bis(2-ethylhexyl)phthalate	ND	5.0	1.7	ug/l							
2.4-Dinitrotoluene	ND ND	9.0	0.20	ug/l ug/l							
N-Nitrosodimethylamine	ND	8.0	0.20	ug/l 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	0.0	0.10	ug/l	20.0		58	30-120			
Surrogate: Phenol-d6	13.8			ug/l ug/l	20.0		69	35-120			
Surrogate: 2,4,6-Tribromophenol	13.4			ug/l ug/l	20.0		67	45-120			
Surrogate: Nitrobenzene-d5	7.66			ug/l ug/l	10.0		77	45-120			
Surrogate: 2-Fluorobiphenyl	7.54			ug/l ug/l	10.0		75	45-120			
Surrogate: Terphenyl-d14	8.90			ug/l ug/l	10.0		89	45-120			
Surroguie. Terphenyi u14	0.70			ug/i	10.0		07	43 120			
LCS Analyzed: 04/12/2006 (6D10085-B	S1)										M-NR1
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 (6D100	85-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			
				-							

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Quarterly Outfall 001

Sampled: 04/05/06

Report Number: IPD0419

Received: 04/05/06

METHOD BLANK/QC DATA

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

Reporting Spike Source %REC RPD Data

Analyte Result Limit MDL Units Level Result %REC Limits RPD Limit 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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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

A I 4 .	D14	Reporting	MDI	11	Spike	Source	0/ DEC	%REC	DDD	RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D11131 Extracted: 04/11/06	<u> </u>										
Blank Analyzed: 04/12/2006 (6D11131-B	SLK1)										
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-BS	1)										M-NR1
alpha-BHC	0.390	0.010	0.0010	ug/l	0.500		78	45-120			
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 (6D1113	1-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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D06057 Extracted: 04/06/06											
	_										
Blank Analyzed: 04/06/2006 (6D06057-B	LK1)										
Copper	ND	2.0	0.25	ug/l							
Lead	0.0709	1.0	0.040	ug/l							J
LCS Analyzed: 04/06/2006 (6D06057-BS	1)										
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 (6D0	6057-MS1)				Sou	rce: IPD(0059-01				
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 (6D0	6057-MS2)				Sou	rce: IPD(0059-02				
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-M	SD1)			Sou	rce: IPD(0059-01				
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-B	LK1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/06/2006 (6D06061-BS	1)										
Mercury	8.10	0.20	0.050	ug/l	8.00		101	85-115			



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METHOD BLANK/QC DATA

	-	Reporting			Spike	Source	0	%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D06061 Extracted: 04/06/06	_										
M 4 : 6 : 1 A 1 1 1 04/06/2006 (CD0	(0(1 MG1)				e.	IDD	220.01				
Matrix Spike Analyzed: 04/06/2006 (6D0	8.34	0.20	0.050	υα/I	8.00	rce: IPD(104	70-130			
Mercury	8.34	0.20	0.050	ug/l	8.00	ND	104	/0-130			
Matrix Spike Dup Analyzed: 04/06/2006	(6D06061-MS	5D1)			Sou	rce: IPD(0320-01				
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-B	LK1)										
Iron	ND	0.040	0.015	mg/l							
LCS Analyzed: 04/14/2006 (6D07076-BS	1)										
Iron	0.513	0.040	0.015	mg/l	0.500		103	85-115			
Matrix Spike Analyzed: 04/14/2006 (6D0	7076-MS1)				Sou	rce: IPD(386-01				
Iron	1.08	0.040	0.015	mg/l	0.500	0.61	94	70-130			
Matrix Spike Analyzed: 04/14/2006 (6D0	7076-MS2)				Sou	rce: IPD(386-02				
Iron	0.536	0.040	0.015	mg/l	0.500	ND	107	70-130			
Matrix Spike Dup Analyzed: 04/14/2006	(6D07076-MS	5D1)			Sou	rce: IPD(386-01				
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-B	LK1)										
Lead	ND	1.0	0.040	ug/l							



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METHOD BLANK/QC DATA

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
·		Limit	MIDL	Units	Levei	Kesuit	/OKEC	Lillits	ΚID	Lillit	Quanners
Batch: 6D07127 Extracted: 04/07/06	-										
LCS Analyzed: 04/07/2006 (6D07127-BS1	1)										
Lead	91.6	1.0	0.040	ug/l	80.0		114	85-115			
Matrix Spike Analyzed: 04/08/2006 (6D0'	7127-MS1)				Sou	rce: IPD(703-01				
Lead	90.3	1.0	0.040	ug/l	80.0	0.24	113	70-130			
Matrix Spike Analyzed: 04/10/2006 (6D0'	7127-MS2)				Sou	rce: IPD(339-01				
Lead	84.9	1.0	0.040	ug/l	80.0	0.15	106	70-130			
Matrix Spike Dup Analyzed: 04/08/2006	(6D07127-M	SD1)			Sou	rce: IPD(703-01				
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-Bl	LK1)										
Iron	0.0252	0.040	0.015	mg/l							J
LCS Analyzed: 04/19/2006 (6D18081-BS1	1)										
Iron	0.516	0.040	0.015	mg/l	0.500		103	85-115			
Matrix Spike Analyzed: 04/19/2006 (6D1	8081-MS1)				Sou	rce: IPD1	209-01				
Iron	0.569	0.040	0.015	mg/l	0.500	0.047	104	70-130			
Matrix Spike Analyzed: 04/19/2006 (6D1)	8081-MS2)				Sou	rce: IPD1	1155-02				
Iron	2.07	0.040	0.015	mg/l	0.500	1.6	94	70-130			
Matrix Spike Dup Analyzed: 04/19/2006	(6D18081-M	SD1)			Sou	rce: IPD1	209-01				
Iron	0.538	0.040	0.015	mg/l	0.500	0.047	98	70-130	6	20	



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METHOD BLANK/QC DATA

INORGANICS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D05142 Extracted: 04/05/06											
Blank Analyzed: 04/06/2006 (6D05142-B	,			_							
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 04/06/2006 (6D05142-BS	1)										
Surfactants (MBAS)	0.261	0.10	0.044	mg/l	0.250		104	90-110			
Matrix Spike Analyzed: 04/06/2006 (6D0	5142-MS1)				Sou	rce: IPD(0205-01				
Surfactants (MBAS)	0.250	0.10	0.044	mg/l	0.250	ND	100	50-125			
Matrix Spike Dup Analyzed: 04/06/2006	(6D05142-MS	D 1)			Sou	rce: IPD()205-01				
Surfactants (MBAS)	0.250	0.10	0.044	mg/l	0.250	ND	100	50-125	0	20	
Batch: 6D05143 Extracted: 04/05/06											
Daten. 0D05145 Extracted. 04/05/00	_										
Blank Analyzed: 04/06/2006 (6D05143-B	LK1)										
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 04/06/2006 (6D05143-BS	1)										
Total Cyanide	196	5.0	2.2	ug/l	200		98	90-110			
Matrix Spike Analyzed: 04/06/2006 (6D0	51/3_MS1)				Sou	rce: IPD(0017-01				
Total Cyanide	191	5.0	2.2	ug/l	200	ND	96	70-115			
•	(CD 0 #4 42 3 #50										
Matrix Spike Dup Analyzed: 04/06/2006	(6D05143-MS 199	D1) 5.0	2.2	/I		rce: IPD(70-115	4	15	
Total Cyanide	199	5.0	2.2	ug/l	200	ND	100	/0-115	4	15	
Batch: 6D06048 Extracted: 04/06/06	_										
Dlank Analyzadi 04/06/2006 (ED06040 D	I I/1)										
Blank Analyzed: 04/06/2006 (6D06048-B Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.30	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
				-							

Del Mar Analytical - Irvine Michele Chamberlin Project Manager



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METHOD BLANK/QC DATA

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D06048 Extracted: 04/06/06	_										
LCS Analyzed: 04/06/2006 (6D06048-BS											
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 (6D0	6048-MS1)				Sou	rce: IPD(0419-01				
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-M	SD1)			Sou	rce: IPD(0419-01				
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-B	LK1)										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/06/2006 (6D06049-BS	1)										M-NR1
Oil & Grease	15.9	5.0	0.94	mg/l	20.0		80	65-120			
LCS Dup Analyzed: 04/06/2006 (6D0604	9-BSD1)										
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120	19	20	
Batch: 6D06064 Extracted: 04/06/06	<u>'</u>										
B. P. J.	4 DUD4)					IDD.	2410.01				
Duplicate Analyzed: 04/06/2006 (6D0606					Sou	rce: IPD()419-01			_	
Specific Conductance	224	1.0	1.0	umhos/cm		230			3	5	



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METHOD BLANK/QC DATA

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D06066 Extracted: 04/06/06	<u>.</u>										
Blank Analyzed: 04/06/2006 (6D06066-B	LK1)										
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/06/2006 (6D06066-BS	1)										
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 04/06/2006 (6D0606	6-DUP1)				Sou	rce: IPD(419-01				
Total Dissolved Solids	156	10	10	mg/l		160			3	10	
Batch: 6D06068 Extracted: 04/06/06	<u>.</u>										
Blank Analyzed: 04/11/2006 (6D06068-B	LK1)										
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 04/11/2006 (6D06068-BS	1)										
Biochemical Oxygen Demand	206	100	30	mg/l	198		104	85-115			
LCS Dup Analyzed: 04/11/2006 (6D0606	8-BSD1)										
Biochemical Oxygen Demand	206	100	30	mg/l	198		104	85-115	0	20	
Batch: 6D06110 Extracted: 04/06/06	<u>-</u>										
Blank Analyzed: 04/06/2006 (6D06110-B	LK1)										
Turbidity	0.0400	1.0	0.040	NTU							J
Duplicate Analyzed: 04/06/2006 (6D0611	0-DUP1)				Sour	rce: IPD(464-01				
Turbidity	0.110	1.0	0.040	NTU		0.10			10	20	J



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METHOD BLANK/QC DATA

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D07070 Extracted: 04/07/06	_										
Blank Analyzed: 04/07/2006 (6D07070-Bl Perchlorate	L K1) 0.920	4.0	0.80	ug/l							J
LCS Analyzed: 04/07/2006 (6D07070-BS)											
Perchlorate	47.7	4.0	0.80	ug/l	50.0		95	85-115			
Matrix Spike Analyzed: 04/07/2006 (6D0	7070-MS1)				Sour	rce: IPD(225-01				
Perchlorate	52.5	4.0	0.80	ug/l	50.0	1.8	101	80-120			
Matrix Spike Dup Analyzed: 04/07/2006	(6D07070-M	SD1)			Sou	rce: IPD(225-01				
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-Bl	LK1)										
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 04/11/2006 (6D11088-BS)	1)										
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0		112	80-115			
Matrix Spike Analyzed: 04/11/2006 (6D1	1088-MS1)				Sou	rce: IPD(340-01				
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-M	SD1)			Sou	rce: IPD(340-01				
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-Bl	LK1)										
Total Suspended Solids	ND	10	10	mg/l							



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	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 (6D1109)	l-DUP1)				Sou	rce: IPD(0412-01				
Total Suspended Solids	326	10	10	mg/l		340			4	10	



Pasadena, CA 91101

Project ID: Quarterly Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04/05/06 Report Number: IPD0419 Received: 04/05/06

Attention: Bronwyn Kelly

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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	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

Sampled: 04/05/06



MWH-Pasadena/Boeing

Project ID: Quarterly Outfall 001

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPD0419 Received: 04/05/06

Attention: Bronwyn Kelly

DATA QUALIFIERS AND DEFINITIONS

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.

There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike

Duplicate.

M-NR1

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



Pasadena, CA 91101

Project ID: Quarterly Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04/05/06 Report Number: IPD0419 Received: 04/05/06

Attention: Bronwyn Kelly

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 D) hod dI

Ω	el Mar	Anal	ytical \	/ersion	Del Mar Analytical version 03/07/06 CHAIN O		F CUSTODY FORM	λQ	<u> </u>	R						O(Pa	Page 1 of 1	
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)			į		Boeing-SSFL NPDES	. NPDES	1			<u> </u>		(5							Field readings	
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r a -	Project Manager: Bronwyn Kelly	ager: B	ronwyn K	elly	Phone Number	ier:				uoo E					ST ,2			ei8 ,er halate,	PK= 74	
رن ا	Sampler: Barrega. R. B. 1995 . R.	Barrya	66		(626) 568-6515 (626) 568-6515	15		Pb, Hg, F	leable So	s bns) (& Grease	tot) abini 	factants (SO4, NC	Didity,TD nductivity	N-sinom	ha BHC (olichlo hitrotoluer hitrotoluer hitrotoloroph hitrotoloroph	Comments	
	Sample	Sample	Container	Cont.	Sampling Date/Time	Preservative	Bottle *	Cu,		10T				neq	Tur			niCl (rite neq	1	
10	Outfall 001	*	Poly-1L	-		HNO3	14	×											24 TAI. *Fe Normai TAT	- 1
100	Outfall 001-	3	Poly-1L	-		HNO3	18	×											24 TAT	
10	Outfall 001	3	Poly-1L	-		None	2		×								-			1
10	Outfall 001	×	VOAs	၉		HCI	3A, 3B, 3C		×								1			ł
0	Outfall 001	3	1L Amber	2		None	4A, 4B			×		-					+			-
	Outfall 001	3	1L Amber	2		HCI	5A, 5B				×						1		24 TAT	- 1
	Outfall 001	3	Poly-500 ml	-		NaOH	9					×							24 TAT	l
پر	Outfall 001	3	Poly-1L	+		None	7						×							
	Outfall 001	3	Poly-500 ml	2		None	8A, 8B						×							- 1
	Outfall 001	3	Poly-500 ml	2		None	9A, 9B							×						1
	Outfall 001	3	Poly-500 ml	2		None	10A, 10B								×					1
1	Outfall 001	3	Poly-500	-		H2SO4	11									×				- 1
1	Outfall 001	3	1L Amber	2	>	None	12A, 12B						-			_	×			}
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l	Trip Blank	8	VOAs	8	1.0	HG.	14A, 14B, 14C,			×						-				1
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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

Marthe Marer



Also Analytical Laboratory certifies that the veport 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

NPDES - 31

Project 27560 Page 3 of 245

Method Blank EPA Method 1613								
Matrix: Aqueo	ous	QC Batch No.: 7918	Lab Sample: 0-MB001					
Sample Size: 1.00) L	Date Extracted: 10-Apr-06	Date Analyzed DB-5: 11-Apr-06	Date Ana	lyzed DB-225: NA			
1.00	<i>5</i> L	2 10 11pr 00	Batte i many zeu BB st. Ti Tipi oo	Dute 1 IIIu	1,200 00 220. 1111			
Analyte	Conc. (ug/L)	DL ^a EMPC ^b Qualifie	rs Labeled Standard	%R	LCL-UCL ^d Qualifiers			
2,3,7,8-TCDD	ND	0.00000788	<u>IS</u> 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	0.0000120	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	0.0000167	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	0.00000832	13C-1,2,3,7,8-PeCDF	72.9	24 - 185			
1,2,3,7,8-PeCDF	ND	0.00000866	13C-2,3,4,7,8-PeCDF	77.1	21 - 178			
2,3,4,7,8-PeCDF	ND	0.00000754	13C-1,2,3,4,7,8-HxCDF	70.7	26 - 152			
1,2,3,4,7,8-HxCDF	ND	0.00000479	13C-1,2,3,6,7,8-HxCDF	66.8	26 - 123			
1,2,3,6,7,8-HxCDF	ND	0.00000466	13C-2,3,4,6,7,8-HxCDF	70.2	28 - 136			
2,3,4,6,7,8-HxCDF	ND	0.00000465	13C-1,2,3,7,8,9-HxCDF	68.4	29 - 147			
1,2,3,7,8,9-HxCDF	ND	0.00000684	13C-1,2,3,4,6,7,8-HpCDF	61.1	28 - 143			
1,2,3,4,6,7,8-HpCDF	ND	0.00000806	13C-1,2,3,4,7,8,9-HpCDF	67.5	26 - 138			
1,2,3,4,7,8,9-HpCDF	ND	0.00000832	13C-OCDF	49.1	17 - 157			
OCDF	ND	0.00000337	<u>CRS</u> 37Cl-2,3,7,8-TCDD	86.2	35 - 197			
Totals			Footnotes					
Total TCDD	ND	0.00000788	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	0.0000167	d. Lower control limit - upper control limit.					
Total TCDF	ND	0.000000832						
Total PeCDF	ND	0.00000808						
Total HxCDF	ND	0.000000515						
Total HpCDF	ND	0.00000818						

Analyst: MAS William J. Luksemburg 13-Apr-2006 07:29

OPR Results	EPA Method 1613					
Matrix: Aqueous Sample Size: 1.00 L	_	C Batch No.: ate Extracted:	7918 10-Apr-06	Lab Sample: 0-OPR001 Date Analyzed DB-5: 11-Apr-06	Date Analyze	d DB-225: NA
Analyte	Spike Conc. Co	onc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	10.0	9.88	6.7 - 15.8	<u>IS</u> 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 William J. Luksemburg 13-Apr-2006 07:29

Sample ID:	IPD0419-0	01								EPA N	Method 1613
Client Data				Sample Data		Lab	oratory Data				
Name: Del Mar Analytical, Irvine			Matrix:	Aqueous	Lab Sample: 27560-00		27560-001	Date Received:		7-Apr-06	
Project: Date Collected:	Project: IPD0419 Date Collected: 5-Apr-06			Sample Size:	1.03 L	QC Batch No.:		7918	Date Extracted:		10-Apr-06
Time Collected:	1319					Date	e Analyzed DB-5:	11-Apr-06	Date An	alyzed DB-225:	NA
Analyte	Conc.	(ug/L)	DL a	EMPC ^b	Qualifiers		Labeled Stan	ıdard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD		ND	0.0000009	18		<u>IS</u>	13C-2,3,7,8-T0	CDD	66.7	25 - 164	
1,2,3,7,8-PeCD	D	ND	0.0000010)4			13C-1,2,3,7,8-	PeCDD	65.2	25 - 181	
1,2,3,4,7,8-HxC	CDD	ND		0.00000)112		13C-1,2,3,4,7,8	8-HxCDD	65.7	32 - 141	
1,2,3,6,7,8-HxC	CDD	0.00000193			J		13C-1,2,3,6,7,8	8-HxCDD	63.9	28 - 130	
1,2,3,7,8,9-HxC	CDD	ND	0.0000019	3			13C-1,2,3,4,6,7	7,8-HpCDD	68.9	23 - 140	
1,2,3,4,6,7,8-Hp	CDD	0.0000346					13C-OCDD		43.6	17 - 157	
OCDD		0.000357					13C-2,3,7,8-T0	CDF	67.5	24 - 169	
2,3,7,8-TCDF		ND	0.0000010	5			13C-1,2,3,7,8-	PeCDF	66.3	24 - 185	
1,2,3,7,8-PeCD	F	ND	0.0000009	51			13C-2,3,4,7,8-	PeCDF	67.3	21 - 178	
2,3,4,7,8-PeCD	F	0.00000106			J		13C-1,2,3,4,7,	8-HxCDF	65.0	26 - 152	
1,2,3,4,7,8-HxC	CDF	ND	0.0000023	6			13C-1,2,3,6,7,	8-HxCDF	62.4	26 - 123	
1,2,3,6,7,8-HxC	CDF	ND	0.0000012	6			13C-2,3,4,6,7,	8-HxCDF	65.2	28 - 136	
2,3,4,6,7,8-HxC	CDF	ND	0.0000012	.5			13C-1,2,3,7,8,9	9-HxCDF	68.0	29 - 147	
1,2,3,7,8,9-HxC	CDF	ND	0.0000009	38			13C-1,2,3,4,6,7	7,8-HpCDF	58.4	28 - 143	
1,2,3,4,6,7,8-Hp	CDF	0.00000703			J		13C-1,2,3,4,7,	8,9-HpCDF	65.1	26 - 138	
1,2,3,4,7,8,9-Hp	CDF	ND	0.0000016	63			13C-OCDF		49.0	17 - 157	
OCDF		0.0000185			J	CRS	37Cl-2,3,7,8-T	CDD	82.3	35 - 197	
Totals						Fo	otnotes				
Total TCDD		ND	0.0000009	18		a. S	ample specific estima	ated detection limit.			
Total PeCDD		ND	0.0000010)4		b. E	stimated maximum p	ossible concentration.			
Total HxCDD		0.00000943		0.00001	105	c. M	lethod detection limit				
Total HpCDD		0.0000737				d. L	ower control limit - u	pper control limit.			
Total TCDF		ND	0.0000010	5							
Total PeCDF		0.00000180									
Total HxCDF		0.00000214		0.00000	0430						
Total HpCDF		0.0000221									

Analyst: MAS William J. Luksemburg 13-Apr-2006 07:29

APPENDIX

NPDES - 35

Project 27560 Page 7 of 245

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		



Released By

Project 27560

Date

Time

Received By

17461 Derian Ave. Suite 100, Irvine, CA 92614
1014 E. Cooley Dr., Suite A, Colton, CA 92324
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123

2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120

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

Ph (619) 505-9596 Ph (480) 785-0043

Ph (949) 261-1022

Ph (909) 370-4667

Fax (909) 370-1046 Fax (619) 505-9689 Fax (480) 785-0851

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Page 10 of 245

Date

Fax (949) 261-1228

Ph (480) 785-0043 Fax (480) 785-0851 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPD0419

. 5		TROUBET # HDUI	- /
SENDING Del Mar Analytical - Irvine 17461 Derian Avenue. Suite Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Cha		RECEIVING LABOR Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762 Phone:(916) 933-1640 Fax: (916) 673-0106	ATORY: 560 °C
Standard TAT is requested	unless specific due date is requested	=> Due Date:	Initials:
Analysis	Expiration	Comments	
Sample ID: IPD0419-01 Wate 1613-Dioxin-HR-Alta EDD + Level 4	er Sampled: 04/05/06 13:19 04/12/06 13:19 05/03/06 13:19	Instant Nofication J flags,17 congeners,no TEQ,ug/L,sub=Alta Excel EDD email to pm,Include Std logs for Ly	1 IV
Containers Supplied: 1 L Amber (IPD0419-01G) 1 L Amber (IPD0419-01H)		·	
	CANON E		
	SAMPLE	INTEGRITY:	
All containers intact: Yes Custody Seals Present: Yes	□ No Sample labels/COC agree: □ No Samples Preserved Properly:	☐ Yes ☐ No Samples Received On Ic ☐ Yes ☐ No Samples Received at (text)	
Released By	Date Time	thing Brediet 4 Received By Date	1/7/06 0900 Time

SAMPLE LOG-IN CHECKLIST

Alta Project #: _	27560	

	Date/Time		Initials	s:	Locat	ion: WR -	7
Samples Arrival:	4/7/06	0900	B	IB	Shelf/	Rack:	
	Date/Time		Initial	s:	Locat	ion: \mathcal{W}'	2-2
Logged In:	Logged In: 4/10/06 0633 ASB		SB	Shelf/Rack: 1-3			
Delivered By:	FedEx UF	PS	Cal	DHL		Hand elivered	Other
Preservation:	Ice	Blue	lce	Dry lo	е	No	ne
Temp °C . O	Time	e: 09,	30		Thern	nometer ID	: DT-20

		YES,	NO	NA
Adequate Sample Volume Received?		V		
Holding Time Acceptable?	w	V		
Shipping Container(s) Intact?		/		
Shipping Custody Seals Intact?		V.		
Shipping Documentation Present?		V		
Airbill Trk # 7914 3458 8280		V		
Sample Container Intact?				
Sample Custody Seals Intact?			,	V
Chain of Custody / Sample Documentation Present?				-
COC Anomaly/Sample Acceptance Form completed?			V	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				V
Na ₂ S ₂ O ₃ Preservation Documented? COC	nple ainer	No	ne	
Shipping Container Alta (Client) Retain	Ret	turn	Disp	oose
Comments:		\supset		

APPENDIX G

Section 2

Outfall 001, April 05, 2006

MECX Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA MECX, LLC Package ID B4DF88 Task Order __1261.001D.01 12260 East Vassar Drive Suite 500 SDG No. IPD0419 No. of Analyses 1 Lakewood, CO 80226 Date: June 9, 2006 Laboratory Alta Analytical Reviewer's Signature Reviewer E. Wessling Analysis/Method Dioxins/Furans **ACTION ITEMS^a** . Case Narrative Deficiencies 2. Out of Scope Analyses Analyses Not Conducted 4. Missing Hardcopy Deliverables 5. Incorrect Hardcopy Deliverables **Deviations from Analysis** Qualifications were assigned for the following: - results between the RL and the MDL were estimated Protocol, e.g., - EMPC values qualified as estimated nondetects. 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 001

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IPD0419

Prepared by

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

 SDG:
 IPD0419

 DATA VALIDATION REPORT
 Analysis:
 D/F

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

qualification code since the data had already been rejected.

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

B4DF88 1 Revision Q__

NPDES IPD0419 Project: SDG: Analysis: DATA VALIDATION REPORT D/F

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 001	IPD0419-01	27560-001	Water	1613

NPDES Project: SDG: IPD0419 DATA VALIDATION REPORT Analysis: D/F

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 1.0°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.

 Project:
 NPDES

 SDG:
 IPD0419

 DATA VALIDATION REPORT
 Analysis:
 D/F

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 ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤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.

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NPDES Project: SDG: IPD0419 DATA VALIDATION REPORT Analysis: D/F

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.

المحتا	Project: IPD0- Date Collected: 5-Apr			Sample Data Matrix: Sample Size:	Aqueous 1.03 L	Laboratory Data Lab Sample: QC Batch No.: Date Analyzed DB-5:	27560-001 7918 11-Apr-06	Date Re Date Ex		7-Apr-06 10-Apr-06 NA
Cod	Analyte C	onc. (ug/L)	DL a	EMPC ^b	Qualifiers	Labeled Standa	rd	%R	LCL-UCLd	Qualifiers
	2,3,7,8-TCDD	ND	0.0000009	18		IS 13C-2,3,7,8-TCD	D	66.7	25 - 164	
	1,2,3,7,8-PeCDD	ND	0.0000010)4		13C-1,2,3,7,8-Pe	CDD	65.2	25 - 181	
×19	1,2,3,4,7,8-HxCDD	ND		0.00000	112	13C-1,2,3,4,7,8-E	IxCDD	65.7	32 - 141	
DNG		0.0000019	3		J	13C-1,2,3,6,7,8-F	IxCDD	63.9	28 - 130	
V.1-	1,2,3,7,8,9-HxCDD	ND	0.0000019	3.		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	- 1650 - 4		7 WE:	13C-2,3,7,8-TCD	F	67.5	24 - 169	100 26-
	2,3,7,8-TCDF	ND	0.0000010	5		13C-1,2,3,7,8-Pet	CDF	66.3	24 - 185	
	1,2,3,7,8-PeCDF	ND	0.0000009	51		13C-2,3,4,7,8-Per		67.3	21 - 178	To administra
DNQ	2,3,4,7,8-PeCDF	0.0000010			J	13C-1,2,3,4,7,8-F	A. Control of the Con	65.0	26 - 152	the transfer of the process
.	1,2,3,4,7,8-HxCDF	ND	0.0000023	6		13C-1,2,3,6,7,8-F		62.4	26 - 123	
	1,2,3,6,7,8-HxCDF	ND	0.0000012	6		13C-2,3,4,6,7,8-H		65.2	28 - 136	
	2,3,4,6,7,8-HxCDF	ND	0.0000012	5		13C-1,2,3,7,8,9-H		68.0	29 - 147	
	1,2,3,7,8,9-HxCDF	ND	0.0000009	38	,,,,	13C-1,2,3,4,6,7,8		58.4	28 - 143	
DWQ	The state of the s	0.0000070	acres 1 a	1000 100		13C-1,2,3,4,7,8,9	7 1 T	65.1	26 - 138	it - Pende
	1,2,3,4,7,8,9-HpCDF	ND	0.0000016			13C-OCDF		49.0	17 - 157	
DNQ	The state of the s	0.0000185	mer e	7 :	`` ;	CRS 37C1-2,3,7,8-TCD	D D	82.3	35 - 197	
	Totals					Footnotes				
	Total TCDD	ND	0.0000009	18		a. Sample specific estimated	detection limit.			
	Total PeCDD	ND	0.0000010	4		b. Estimated maximum poss	ble concentration.			
	Total HxCDD	0.00000943	3	0.000010	05	c. Method detection limit.				
	Total HpCDD	0.0000737				d. Lower control limit - uppe	r control limit.	ej.	***. ·	
	Total TCDF	ND	0.0000010	5						
	Total PeCDF	0.00000180)					100		1788/119.4%
	Total HxCDF	0.00000214	4	0.000004	130					
	Total HpCDF	0.0000221	(1911 M THE T 1		\$	far to a				

Analyst: MAS

Approved By:

*******DRAFT*****

Level IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC,	X		Package ID:	B4MT73
12269	9 East Vassar Drive		Task Order:	1261.001D.01
Auror	a, CO 80014		SDG No.:	IPD0419
			No. of Analyses:	1
	Laboratory: Del Mar A	nalytical	Date: June 5,	2006
	Reviewer: P. Meeks		Reviewer's Sig	gnature
/	Analysis/Method: Metals		- I V- Mu	
ACTIO	ON ITEMS ^a			
. (Case Narrative			
	Deficiencies			
2. (Out of Scope Analyses			
3.	Analyses Not Conducted			
	Missing Hardcopy			
	Deliverables			
	ncorrect Hardcopy		ann garanatta ann an a	
	Deliverables			
	Deviations from Analysis	Reanalysis results reject	cted in favor of original	results.
	Protocol, e.g.,	the control of the first part of a things at most are not as of the area of the area of the artists of control or and a control or a		
	Holding Times			
	GC/MS Tune/Inst. Performance			
	Calibration	-		
	lethod blanks			
	Surrogates			
	/latrix Spike/Dup LCS			
	Field QC			
	nternal Standard Performance			
	Compound Identification			
	Quantitation			
	System Performance			
COM	MENTS ^b			
a Cub	contracted analytical laboratory is not r	mooting contract and/or mathe	1 roquiromente	
	rences in protocol have been adopted			quired.



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

NPDES

SDG: Analysis: IPD0419 Metals

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:

DATA VALIDATION REPORT

P. Meeks Reviewer:

Date of Review:

June 5, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MECX 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.

Project: NPDES SDG: IPD0419 Analysis: Metals

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPD04192-01	Water	200.7, 200.8

Metals

Analysis:

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

DATA VALIDATION REPORT

Following are findings associated with sample management:

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 reviewed 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

NPDES

SDG: Analysis: IPD0419 Metals

DATA VALIDATION REPORT

required.

2.5

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

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.

Revision 0

B4MT73 4

NPDES - 54

Project: SDG: NPDES IPD0419

Analysis:

Metals

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

DATA VALIDATION REPORT

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.



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

Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Report Number: IPD0419

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

PD0419

METALS

		_								
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifie	ers
Sample ID: IPD0419-01 (Outfall 001 - W	Vater) - cont.				Sample	ed: 04/05/0	06		lev Ival	Code
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 00	1 - Water) Oot-	11 001 R	El		Sample	ed: 04/05/0	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 - W	Vater)				Sample	ed: 04/05/0	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 00	1 - Water) Out	- 11 001 R	El		Sample	ed: 04/05/0	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



CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID: B4WC7§7

MEC ^X		Package ID:	B4WC767
12269 East Vassar Drive		Task Order:	
Aurora, CO 80014		SDG No.:	IPD0419
raioia, o o o o o o		No. of Analyses:	1
Laboratory: Del Mar	Analytical	Date: June 6	5, 2006
Reviewer: P. Meeks		Reviewer's S	ignature
Analysis/Method: General	Minerals	P. Mes	
ACTION ITEMS ^a			
. Case Narrative			
Deficiencies			
			and the second s
2. Out of Scope Analyses			
3. Analyses Not Conducted			
4. Missing Hardcopy			**************************************
Deliverables			
5. Incorrect Hardcopy			
Deliverables	·		
	0 15 15 -	lied for CCV/roccychy	Entre I and the second
6. Deviations from Analysis	Qualification appl	lied for CCV recovery.	A CONTRACT OF THE PROPERTY OF
Protocol, e.g.,			
Holding Times	2 Julijaliana Water was wall or me	And the second s	
GC/MS Tune/Inst. Performance			
Calibration			a distance and a second
Method blanks			
Surrogates			44
Matrix Spike/Dup LCS		and the second s	· · · · · · · · · · · · · · · · · · ·
Field QC			
Internal Standard Performance	а — при сероне при сероне по		And the state of t
Compound Identification			
Quantitation	· · · · · · · · · · · · · · · · · · ·		
System Performance	G-0		
COMMENTS ^b			
		The state of the s	
			A-111
^a Subcontracted analytical laboratory is r	not meeting contract and/o	or method requirements.	
b Differences in protocol have been adop	oted by the laboratory but	no action against the laboratory	s 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
 Project:
 NPDES

 SDG:
 IPD0419

 DATA VALIDATION REPORT
 Analysis:
 Gen. Min.

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^{\times} 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.

 Project:
 NPDES

 SDG:
 IPD0419

 DATA VALIDATION REPORT
 Analysis:
 Gen. Min.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPD0419-01	Water	General Minerals

 Project:
 NPDES

 SDG:
 IPD0419

 DATA VALIDATION REPORT
 Analysis:
 Gen. Min.

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 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.

Project: NPDES SDG: IPD0419

DATA VALIDATION REPORT SDG: IPD0419
Analysis: Gen. Min.

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 ≤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.

B4WC77 4 Revision 0





MWH-Pasadena/Boeing

Project ID: Quarterly Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly •

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers	3
Sample ID: IPD0419-01 (Outfall 001 - Water) - cont. Reporting Units: mg/l				Sampled: 04/05/06				Control	Rev	Qu
Ammonia-N (Distilled)	EPA 350.2	6D11088	0.30	0.50	0.84	1	04/11/06	04/11/06	J	X
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	des units and a second	
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	V	
Sample ID: IPD0419-01 (Outfall 001 - Reporting Units: ml/l/hr Total Settleable Solids	Water) EPA 160.5	6D05133	0.10	0.10	Sample ND	ed: 04/05/0	04/05/06	04/05/06	*	
Sample ID: IPD0419-01 (Outfall 001 - Reporting Units: NTU Turbidity	Water) EPA 180.1	6D06110	0.080	2.0	Sample 50	ed: 04/05/ 0	04/06/06	04/06/06		
Sample ID: IPD0419-01 (Outfall 001 - Water) Reporting Units: ug/l			0.000	2.0		ed: 04/05/0	,	0 1/ 00/ 00		
Total Cyanide	EPA 335.2	6D05143	2.2	5.0	ND	1	04/05/06	04/06/06	-X	
Perchlorate	EPA 314.0	6D07070	0.80	4.0	ND	1	04/07/06	04/07/06	X	
Sample ID: IPD0419-01 (Outfall 001 - Reporting Units: umhos/cm Specific Conductance	Water) EPA 120.1	6D06064	1.0	1.0	Sample	ed: 04/05/0	04/06/06	04/06/06		
Special Conductance	DI /1 120.1	020004	1.0	1.0	al D U		0.17.007.00	0-1/00/00	neugi-amministrative production production production production and the control of the control	

* Analysis not validated

Del Mar Analytical - IrvineMichele Chamberlin
Project Manager

LEVEL IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

ME	c^{x}		Package ID:	B4VO58				
122	69 East Vassar Drive		Task Order: _1261.001D.01					
Aur	ora, CO 80014			IPD0419				
			No. of Analyses:	2				
	Laboratory: Del Mar	Analytical-Irvine	Date: June 5	5, 2006				
	Reviewer: L. Calvin		Reviewer's S	ign a ture				
	Analysis/Method: Volatiles	by Method 624		alviu				
								
ACT	TION ITEMS ^a							
	Case Narrative							
	Deficiencies							

2.	Out of Scope Analyses							
3.	Analyses Not Conducted							
4.	Missing Hardcopy							
٦.	Deliverables							
	Deliverables							
5.	Incorrect Hardcopy							
	Deliverables							
				The state of the s				
6.	Deviations from Analysis							
	Protocol, e.g.,							
	Holding Times							
	GC/MS Tune/Inst. Performance							
	Calibration							
	Method blanks							
	Surrogates							
	Matrix Spike/Dup LCS							
	Field QC		The state of the s					
	Internal Standard Performance							
	Compound Identification							
	Quantitation							
	System Performance							
CON	MMENTS ^b	Acceptable as reviewed	d.					
^a Sı	^a Subcontracted analytical laboratory is not meeting contract and/or method requirements.							
	fferences in protocol have been adopted l			ed.				



DATA VALIDATION REPORT

NPDES Monitoring Program Quarterly Outfall 001

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPD0419

Prepared by

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

Project: SDG: NPDES IPD0419

Analysis:

VOCs

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

DATA VALIDATION REPORT

1261.001D.01

Sample Delivery Group:

IPD0419

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Volatiles

QC Level:

Level IV

No. of Samples:

2

0

No. of Reanalyses/Dilutions:

L. Calvin

Reviewer: 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.

NPDES IPD0419

SDG: Analysis:

VOCs

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPD0419-01	Water	624
Trip Blank	IPD0419-02	Water	624

DATA VALIDATION REPORT

NPDES IPD0419

SDG: Analysis:

VOCs

DATA VALIDATION REPORT

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 $\pm 2^{\circ}$ 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.

NPDES IPD0419

DATA VALIDATION REPORT

SDG: Analysis:

VOCs

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.

Project: SDG: NPDES

Analysis:

IPD0419 VOCs

DATA VALIDATION REPORT

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: Quarterly Outfall 001

Report Number: IPD0419

Sampled: 04/05/06

Received: 04/05/06

PURGEABLES BY GC/MS (EPA 624)

			MDL	Reporting	Sample		Date	Date		ata
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qua	lifiers
Sample ID: IPD0419-01 (Outfall 001 - Water)					Sampled: 04/05/06			gual grande		
Reporting Units: ug/l					2.77		0.107/01	7		100
Benzene	EPA 624	6D07007	0.28	2.0	ND	1	04/07/06	04/07/06	K	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6D07007	1.2	5.0	ND	1	04/07/06	04/07/06	A STATE OF THE STA	
Carbon tetrachloride	EPA 624	6D07007	0.28	5.0	ND	1	04/07/06	04/07/06		General State of the State of t
Chloroform	EPA 624	6D07007	0.33	2.0	ND	1	04/07/06	04/07/06	DESCRIPTION OF THE PERSON OF T	
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	1/	
Xylenes, Total	EPA 624	6D07007	0.90	4.0	ND	1	04/07/06	04/07/06	V	
Surrogate: Dibromofluoromethane (80-1	20%)				103 %				٠	
Surrogate: Toluene-d8 (80-120%)					95 %					
Surrogate: 4-Bromofluorobenzene (80-12	20%)				98 %					
Sample ID: IPD0419-02 (Trip Blank - V	Water)				Sample	ed: 04/05/	0 6			
Reporting Units: ug/l										
Benzene	EPA 624	6D07007	0.28	2.0	ND	1	04/07/06	04/07/06	4	
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	are continued as	
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	V	
Surrogate: Dibromofluoromethane (80-1	20%)				99 %					
Surrogate: Toluene-d8 (80-120%)					94%					
Surrogate: 4-Bromofluorobenzene (80-1.	20%)				98 %					

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager LevelII

APPENDIX G

Section 3

Outfall 001, April 15, 2006 Del Mar Analytical Laboratory Report



LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

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 IDCLIENT IDMATRIXIPD1607-01Outfall 001WaterIPD1607-02Trip BlankWater

Reviewed By:

Del Mar Analytical - IrvineMichele Chamberlin

Michele Chamberdin

Project Manager

Sampled: 04/15/06



MWH-Pasadena/Boeing

Pasadena, CA 91101

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Report Number: IPD1607 Received: 04/15/06

Attention: Bronwyn Kelly

PURGEABLES BY GC/MS (EPA 624)

Sample ID: IPD1607-01 (Outfall 001 - Water) Sample ID: IPD1607-01 (Outfall 001 - Water) Supporting Units: ug/1	Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Reporting Units: ug/l Benzene EPA 624 6D22007 0.28 2.0 ND 1 04/22/06	•	`							v	
Benzene	-	r)								
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-Dichloroethane EPA 624 6D22007 0.25 2.0 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 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 0.26 5.0		EDA 624	6D22007	0.29	2.0	ND	1	04/22/06	04/22/06	
Chloroform										
1,1-Dichloroethane										
1,2-Dichloroethane										
The Dichloroethene	-									
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 Trichloroethane EPA 624 6D22007 0.26 5.0 ND 1 04/22/06 04/22/06 Trichloroethane EPA 624 6D22007 0.26 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 Surrogate: Dibromofluoromethane (80-120%) FA 624 6D22007 0.90 4.0										
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 Trichloroethane 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%) Surrogate: Dibromofluoromethane (80-120%) 100 %<	-									
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 Trichloroethane 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 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%) Surrogate: 4-Bromofluorobenzene (80-120%) Surrogate: 4-Bromofluorobenzene (80-120%) 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 Chloroform EPA 624 6D22007 0.37 2.0 ND 1 04/22/06 04/22/06	-									
1,1,1-Trichloroethane										
1,1,2-Trichloroethane										
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%) Surrogate: Toluene-d8 (80-120%) Surrogate: 4-Bromofluorobenzene (80-120%) 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 Chloroform EPA 624 6D22007 0.27 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										
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%) IO6 % 106 % 100 % <td></td>										
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%) I06 % 106 % 106 % 100 % Surrogate: 4-Bromofluorobenzene (80-120%) I00 % 100 % 100 % 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										
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 %	Vinyl chloride	EPA 624			5.0	ND	1	04/22/06	04/22/06	
Surrogate: Toluene-d8 (80-120%) 98 % Surrogate: 4-Bromofluorobenzene (80-120%) 100 % Sample ID: IPD1607-02 (Trip Blank - Water) Reporting Units: ug/I 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	Xylenes, Total	EPA 624	6D22007	0.90	4.0	ND	1	04/22/06	04/22/06	
Surrogate: 4-Bromofluorobenzene (80-120%) Sample ID: IPD1607-02 (Trip Blank - Water) Reporting Units: ug/I 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	· · · · · · · · · · · · · · · · · · ·									
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	Surrogate: Toluene-d8 (80-120%)					98 %				
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	Surrogate: 4-Bromofluorobenzene (80-120%)					100 %				
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	Sample ID: IPD1607-02 (Trip Blank - Water	•)								
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	Reporting Units: ug/l									
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		EPA 624	6D22007	0.28			1		04/22/06	
1,1-Dichloroethane EPA 624 6D22007 0.27 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	
1.2-Dichloroethane EPA 624 6D22007 0.28 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	
19 2 1 10 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1	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	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	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	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	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	1,1,1-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	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	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	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



Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Report Number: IPD1607 Sampled: 04/15/06
Received: 04/15/06

Attention: Bronwyn Kelly

Pasadena, CA 91101

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	er)								
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 %				



Pasadena, CA 91101

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04/15/06

Report Number: IPD1607

Received: 04/15/06

Attention: Bronwyn Kelly

ORGANOCHLORINE PESTICIDES (EPA 608)

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



Pasadena, CA 91101

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04/15/06

Report Number: IPD1607

Received: 04/15/06

Attention: Bronwyn Kelly

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1607-01 (Outfall 001 - Wa	ter) - 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 - Wa		0D20117	0.015	0.010	5. 5	1	01/20/00	01/2//00	
Reporting Units: ug/l	ŕ								
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	



Pasadena, CA 91101

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04/15/06 Report Number: IPD1607 Received: 04/15/06

Attention: Bronwyn Kelly

		11.10	711071	1105					
			MDL	Reporting	Sample		Date	Date	Data
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: IPD1607-01 (Outfall 001 - W	/ater) - 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 - W	/ater)								
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 - W	/ater)								
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 - W	/ater)								
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 - W	ater)								
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6D18054	1.0	1.0	470	1	04/18/06	04/18/06	



Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Sampled: 04/15/06 Report Number: IPD1607 Received: 04/15/06

Attention: Bronwyn Kelly

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



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)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D22007 Extracted: 04/22/0)6										
December of East week of February	, , , , , , , , , , , , , , , , , , , 										
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-B	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	0.20	ug/l	25.0		88	60-140			
Vinyl chloride	18.3	5.0	0.34	ug/l ug/l	25.0		73	50-140			
Surrogate: Dibromofluoromethane	24.8	5.0	0.20	ug/l ug/l	25.0		99	80-120			
Surrogate: Toluene-d8	24.8			ug/l ug/l	25.0		99 99	80-120			
9	27.0			ug/i	43.0		77	00-120			
Del Mar Analytical - Irvine											

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D22007 Extracted: 04/22/06	S										
Datch. OD 22007 Extracted. 04/22/00	<u>, </u>										
LCS Analyzed: 04/22/2006 (6D22007-BS	1)										
Surrogate: 4-Bromofluorobenzene	24.5			ug/l	25.0		98	80-120			
Matrix Spike Analyzed: 04/22/2006 (6D2	22007-MS1)				Sou	rce: IPD1	867-13				
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-M	ISD1)			Sou	rce: IPD1	867-13				
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	
Del Man Analytical Invine											

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



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)

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

Batch: 6D22007 Extracted: 04/22/06

Matrix Spike Dup Analyzed: 04/22/2	006 (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

Sampled: 04/15/06



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Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 001

Report Number: IPD1607 Received: 04/15/06

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D22047 Extracted: 04/22/06	<u>;</u>										
Blank Analyzed: 04/26/2006-05/12/2006	•	*									
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-BS	1)										M-NR1
Surrogate: 2-Fluorophenol	136			ug/l	200		68	30-120			
Surrogate: Phenol-d6	27.1			ug/l	200		14	35-120			<i>Z6</i>
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 (6D2204	7-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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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D20122 Extracted: 04/20/06	<u>-</u>										
Blank Analyzed: 04/24/2006 (6D20122-B	LK1)										
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-BS	1)										M-NR1
alpha-BHC	0.425	0.010	0.0010	ug/l	0.500		85	45-120			
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 (6D2012	2-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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METHOD BLANK/QC DATA

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D17085 Extracted: 04/17/06	<u>-</u>										
Blank Analyzed: 04/18/2006 (6D17085-B	LK1)										
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
LCS Analyzed: 04/18/2006 (6D17085-BS	1)										
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 (6D1	7085-MS1)				Sou	rce: IPD1	1578-01				
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-MS	SD1)			Sou	rce: IPD1	1578-01				
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-B	LK1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/18/2006 (6D18075-BS)	1)										
Mercury	8.21	0.20	0.050	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 04/18/2006 (6D1	8075-MS1)				Sou	rce: IPD1	1634-02				
Mercury	8.34	0.20	0.050	ug/l	8.00	ND	104	70-130			
Matrix Spike Dup Analyzed: 04/18/2006	(6D18075-MS	SD1)			Sou	rce: IPD1	1634-02				
Mercury	8.42	0.20	0.050	ug/l	8.00	ND	105	70-130	1	20	



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METHOD BLANK/QC DATA

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D20095 Extracted: 04/20/06	<u>-</u>										
Blank Analyzed: 04/24/2006 (6D20095-B	LK1)										
Iron	ND	0.040	0.015	mg/l							
LCS Analyzed: 04/24/2006 (6D20095-BS	1)										
Iron	0.521	0.040	0.015	mg/l	0.500		104	85-115			
Matrix Spike Analyzed: 04/24/2006 (6D2	0095-MS1)				Sou	rce: IPD1	1689-01				
Iron	0.713	0.040	0.015	mg/l	0.500	0.24	95	70-130			
Matrix Spike Analyzed: 04/24/2006 (6D2	0095-MS2)				Sou	rce: IPD1	1493-01				
Iron	0.599	0.040	0.015	mg/l	0.500	0.071	106	70-130			
Matrix Spike Dup Analyzed: 04/24/2006	(6D20095-MS	D1)			Sou	rce: IPD1	1689-01				
Iron	0.732	0.040	0.015	mg/l	0.500	0.24	98	70-130	3	20	
Batch: 6D26117 Extracted: 04/26/06	<u>-</u> _										
Blank Analyzed: 04/26/2006 (6D26117-B	LK1)										
Iron	ND	0.040	0.015	mg/l							
LCS Analyzed: 04/26/2006 (6D26117-BS	1)										
Iron	0.511	0.040	0.015	mg/l	0.500		102	85-115			
Matrix Spike Analyzed: 04/26/2006 (6D2	6117-MS1)				Sou	rce: IPD2	2468-03				
Iron	2.10	0.040	0.015	mg/l	0.500	1.6	100	70-130			
Matrix Spike Dup Analyzed: 04/26/2006	(6D26117-MS	D 1)			Sou	rce: IPD2	2468-03				
Iron	2.10	0.040	0.015	mg/l	0.500	1.6	100	70-130	0	20	



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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Batch: 6D15028 Extracted: 04/15/06							,,,,,,,				C
Daten. 0D13026 Extracted. 04/13/00	=										
Blank Analyzed: 04/15/2006 (6D15028-Bl	LK1)										
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-BS)	1)										
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 (6D1:	5028-MS1)				Sou	rce: IPD1	1578-01				
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-M	SD1)			Sou	rce: IPD1	1578-01				
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-Bl	LK1)										
Turbidity	0.0400	1.0	0.040	NTU							J
Duplicate Analyzed: 04/15/2006 (6D1505)	3-DUP1)				Sou	rce: IPD	1578-01				
Turbidity	1.11	1.0	0.040	NTU		1.1			1	20	
Batch: 6D17072 Extracted: 04/17/06	_										
Blank Analyzed: 04/22/2006 (6D17072-Bl	LK1)										
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							

Del Mar Analytical - Irvine Michele Chamberlin Project Manager



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

METHOD BLANK/QC DATA

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D17072 Extracted: 04/17/06	_										
	_										
LCS Analyzed: 04/22/2006 (6D17072-BS)	1)										
Biochemical Oxygen Demand	208	100	30	mg/l	198		105	85-115			
LCS Dup Analyzed: 04/22/2006 (6D17072	2-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-B	LK1)										
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 04/17/2006 (6D17076-BS)	1)										
Surfactants (MBAS)	0.249	0.10	0.044	mg/l	0.250		100	90-110			
Matrix Spike Analyzed: 04/17/2006 (6D1	7076-MS1)				Sou	rce: IPD1	1607-01				
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-MS	SD1)			Sou	rce: IPD1	1607-01				
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											
Date of Trace	=										
Blank Analyzed: 04/17/2006 (6D17101-B	LK1)										
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 04/17/2006 (6D17101-BS)	1)										
Total Cyanide	186	5.0	2.2	ug/l	200		93	90-110			



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METHOD BLANK/QC DATA

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D17101 Extracted: 04/17/06	_										
	_										
Matrix Spike Analyzed: 04/17/2006 (6D1	7101-MS1)				Sou	rce: IPD1	138-01				
Total Cyanide	208	5.0	2.2	ug/l	200	ND	104	70-115			
Matrix Spike Dup Analyzed: 04/17/2006	(6D17101-M	SD1)			Sou	rce: IPD1	138-01				
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-B	LK1)										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/18/2006 (6D18050-BS)	1)										M-NR1
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120			
LCS Dup Analyzed: 04/18/2006 (6D18050	0-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 (6D1805)	,				Sou	rce: IPD1	326-01			_	
Specific Conductance	412	1.0	1.0	umhos/cm		420			2	5	
Batch: 6D18055 Extracted: 04/18/06	_										
Blank Analyzed: 04/18/2006 (6D18055-Bl	LK1)										
Total Dissolved Solids	ND	10	10	mg/l							



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METHOD BLANK/QC DATA

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D18055 Extracted: 04/18/06											
	_										
LCS Analyzed: 04/18/2006 (6D18055-BS)	1)										
Total Dissolved Solids	990	10	10	mg/l	1000		99	90-110			
Duplicate Analyzed: 04/18/2006 (6D1805)	5-DUP1)				Sou	rce: IPD1	1326-01				
Total Dissolved Solids	5080	10	10	mg/l		5100			0	10	
Batch: 6D18084 Extracted: 04/18/06	_										
	_										
Blank Analyzed: 04/18/2006 (6D18084-B	LK1)										
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 04/18/2006 (6D18084-BS)	1)										
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0		109	80-115			
Matrix Spike Analyzed: 04/18/2006 (6D1	8084-MS1)				Sou	rce: IPD(0657-11				
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-MS	D1)			Sou	rce: IPD(0657-11				
Ammonia-N (Distilled)	19.6	0.50	0.30	mg/l	10.0	9.2	104	70-120	4	15	
Batch: 6D19069 Extracted: 04/19/06	_										
	_										
Blank Analyzed: 04/19/2006 (6D19069-B	LK1)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 04/19/2006 (6D19069-BS)	1)										
Perchlorate	51.3	4.0	0.80	ug/l	50.0		103	85-115			



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METHOD BLANK/QC DATA

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D19069 Extracted: 04/19/06	-										
Matrix Spike Analyzed: 04/19/2006 (6D19	9069-MS1)				Sou	rce: IPD1	697-03				
Perchlorate	51.3	4.0	0.80	ug/l	50.0	2.1	98	80-120			
Matrix Spike Dup Analyzed: 04/19/2006	(6D19069-MS	D1)			Sou	rce: IPD1	697-03				
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-Bl	LK1)										
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/20/2006 (6D20128-BS1	1)										
Total Suspended Solids	990	10	10	mg/l	1000		99	85-115			
Duplicate Analyzed: 04/20/2006 (6D2012	8-DUP1)				Sou	rce: IPD1	603-01				
Total Suspended Solids	356	10	10	mg/l		350			2	10	



Pasadena, CA 91101

Project ID: Routine Outfall 001

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Attention: Bronwyn Kelly

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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	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

Sampled: 04/15/06



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 001

Report Number: IPD1607 Received: 04/15/06

DATA QUALIFIERS AND DEFINITIONS

B Analyte was detected in the associated	ciated Method Blank.
---	----------------------

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



Pasadena, CA 91101

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04/15/06
Report Number: IPD1607 Received: 04/15/06

Attention: Bronwyn Kelly

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

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Page 1 of 1		Field readings:	Temp = 5%	pH= 7.1	Commente		24 TAT, *Fe Normal TAT	24 TAT				24 TAT	24 TAT							f.K	630							7, /
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Del Mar Analytical Version 03/07/06 CHAIN OF	Project:	Boeing-SSFL NPDES Routine Outfall 001		Phone Number: (626) 568-6691 Fax Number:	(626) 568-6515	Sampling Date/Time	4/15/04												>	4/15/06		į	Date/IIme:	115/06 1510 Nate/Time:	1506 154	Date/Time:		
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Del Mar	Client Name/Address:	MWH-Pasadena	300 North Lake Avenue, Pasadena, CA 91101	Project Manager: Bronwyn Kelly Sampler:	-	Sample Description	Outfall 001	Outfall 001- Dup	Outfall 001	Outfall 001	Outfall 001	Outfall 001	Outfail 001	Outfall 001	Outfall 001	Outfall 001	Trip Blank		relinduished by	/ May S Relinquished By	Z	Relinquished						



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



Alia 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



Section I: Sample Inventory Report Date Received: 4/18/2006

Alta Lab. ID

Client Sample ID

27606-001

IPD1607-01

SECTION II

Page 3 of 235 Project 27606

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 EM	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 - 164
1,2,3,7,8-PeCDD ND	0.000000068		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	0.000000001		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	0.000000000		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	0.00000249		CRS 37CI-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	0.000000068		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	0.000000483			
Total PeCDF ND	0.000000889			
Total HxCDF ND	0.000000786			
Total HpCDF ND	0.000000841			

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

OPR Results					EPA Method 1613	13
Matrix: Aqueous Sample Size. 1.00 L		QC Batch No.: Date Extracted:	7968 26-Apr-06	Lab Sample: 0-OPR001 Date Analyzed DB-5: 2-May-06	Date Analyzed DB-225:	< z
Analyte	Spike Conc. Conc. (n	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R LCL-UCL	
2,3,7,8-TCDD	10.0	10.8	6.7 - 15.8	<u>IS</u> 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 - 68	13C-OCDF	45.7 17 - 157	
OCDF	100	110	63 - 170	CRS 37CI-2,3,7,8-TCDD	95.0 35 - 197	

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

Analyst: MAS

Sample ID: IPD1	IPD1607-01						EPA	EPA Method 1613
Client Data Name: Project: Date Collected: Fine Collected: 15-Apr-0	Del Mar Analytical, Irvine IPD1607 15-Apr-06 1115		Sample Data Matrix. Sample Stze:	Aqueous 1.02 L	Laboratory Data Lab Sample: OC Batch No.: Date Analyzed DB-5;	27606-001 7968 2-May-06	Date Received. Date Extracted: Date Analyzed DB-225:	18-Apr-06 26-Apr-06 NA
Analyte	Conc. (ug/L)	DI, a	EMPC ^b	Qualifiers	Labeled Standard	lard	%R LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ON	0.000000585	85		IS 13C-2,3.7,8-TCDD	DD	82.6 25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000846	46		13C-1,2,3,7,8-PeCDD	eCDD	67.7 25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000148	8		13C-1,2,3,4,7,8-HxCDD	-HxCDD	82.6 32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000153	3		13C-1,2,3,6,7,8-HxCDD	-HxCDD	72.1 28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000146	9		13C-1,2,3,4,6,7,8-HpCDD	,8-UpCDD	82.5 23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000106			<u> </u>	13C-OCDD		60.6 17 - 157	
OCDD	0.0000874				13C-2,3,7,8-TCDF	DF	81.1 24 - 169	
2,3,7,8-TCDF	ND	0.000000588	88		13C-1,2,3,7,8-PeCDF	•CDF	68.7 24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000921	21		13C-2,3,4,7,8-PeCDF	eCDF	64.0 21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000926	26		13C-1,2,3,4,7,8-HxCDF	-HxCDF	87.2 26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000590	06		13C-1,2,3,6,7,8-HxCDF	-HxCDF	86.4 26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000552	52		13C-2,3,4,6,7,8-HxCDF	-HxCDF	82.9 28 - 136	
2,3,4,6,7,8-HxCDF	ND ON T	0.000000636	36		13C-1,2,3,7,8,9-HxCDF	-HxCDF	81.3 29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000425	25		13C-1,2,3,4,6,7,8-HpCDF	,8-HpCDF	81.8 28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000227			ſ	13C-1,2,3,4,7,8,9-HpCDF	,9-HpCDF	79.9 26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000806	90		13C-OCDF		65.9 17 - 157	
OCDF	0.00000374				CRS 37Cl-2,3,7,8-TCDD	CDD	92.4 35 - 197	
Totals					Footnotes			
Total TCDD	ND	0.0000000585	85		a. Sample specific estimated detection limit.	ed detection limit.		
Total PeCDD	QN of	0.000000846	46		b. Estimated maximum possible concentration.	ssible concentration.		
Total HxCDD	ND	0.00000364	4		c. Method detection limit.			
Total HpCDD	0.0000214			-	d. Lower control limit - upper control limit.	oper control limit.		
Total TCDF	ND	0.000000588	88					
Total PeCDF	ND	0.000000924	24	<i>*</i>	٠.			
Total HxCDF	0.00000119			-				
Total HpCDF	0.00000227	A Paris Control of the Control of th	0.00000570	70				

APPENDIX

Page 7 of 235 Project 27606

DATA QUALIFIERS & ABBREVIATIONS

This compound was also detected in the method blank.

D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
Е	The reported value exceeds the calibration range of the instrument.
Н	The signal-to-noise ratio is greater than 10:1.
1	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

EMPC Estimated Maximum Possible Concentration

than zero in the matrix tested.

NA Not applicable

В

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.

Project 27606

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 1014 E. Cooley Dr., Suite A, Colton, CA 92324 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123

9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120

Ph (949) 261-1022 Fax (949) 261-1228 Ph (909) 370-4667 Ph (619) 505-9596 Ph (480) 785-0043 Fax (480) 785-0851 Fax (702) 798-3621 Ph (702) 798-3620

SUBCONTRACT ORDER - PROJECT # IPD1607

Analysis Expiration Comments Comments Expiration Comments	SEN Del Mar Analytical - Irv .7461 Derian Avenue. S rvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Miche	Suite 100	RECEIVING LABORATORY: Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762 Phone :(916) 933-1640 Fax: (916) 673-0106				
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)	1613-Dioxin-HR-Alta EDD + Level 4 Containers Supplied: 1 L Amber (IPD1607-016	04/22/06 11:15 05/13/06 11:15					

				SA	MPLE I	NTEGRI	TY:			
All containers intact:		□ No □ No		ple labels/COC ples Preserved P	_	☐ Yes ☐ Yes	□ No	Samples Reco	eived On Ice:: eived at (temp):	☐ Yes ☐ No
Elyande	Rie	in	4/17/0	6	Bei	tunac	7.6	medicf	4/18/06	0905
Released By			Date	Time	Re	eceived E	ý		Daté	Time
Released By			Date	Time	Re	eceived E	у		Date	Time

SAMPLE LOG-IN CHECKLIST

Alta Project #:	27606				_			
	Date/Time		Initials	:	Loca	rtion: ん	R- (7
Samples Arrival:	4/18/06	0905	Box	\mathcal{B}	Shel	f/Rack:		
	Date/Time	/ 0	Initials	: , ,	Loca	ition: U	JR-2	}
Logged In:	4/18/06	1452	B	B	Shel	f/Rack:(
Delivered By:	FedEx U	PS	Cal	DHL		Hand Delivered	Ot	her
Preservation:	(lce)	Blue	lce	Dry lo	се	1	lone	
Temp $^{\circ}$ C \mathcal{D} . \mathcal{J}	Tim	ne: 09	35		Ther	mometer i	D: DT-	-20
		mmmm	mmm	mmmm			7	
						YES	NO	NA
Adequate Sample	Volume Received	?				V	/	
Holding Time Acce	eptable?					V		
Shipping Containe	r(s) Intact?					V		
Shipping Custody	Seals Intact?					V		
Shipping Documer	ntation Present?				~	V		
Airbill	Trk# 790	03969	1324	<i>436</i>		V		
Sample Container	V							
Sample Custody S			/					
Chain of Custody	V		1					
COC Anomaly/Sai	mple Acceptance l	Form comp	leted?				V	
If Chlorinated or D	rinking Water San	nples, Acce	eptable F	reservatio	n?			V
Na ₂ S ₂ O ₃ Preserva	tion Documented?	>		. coc		Sample Container	No	ne
Shipping Containe	er	Alta	Client	Retair		Return	Disp	ose

Project 27606

Comments:

APPENDIX G

Section 4

Outfall 001, April 15, 2006

MECX Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA MECX, LLC Package ID <u>B4DF100</u> 12260 East Vassar Drive Task Order __1261.001D.01 Suite 500 SDG No. IPD1607 Lakewood, CO 80226 No. of Analyses 1 Laboratory Alta Analytical Date: July 5, 2006 Reviewer E. Wessling Reviewer's Signature Analysis/Method Dioxins/Furans ACTION ITEMS^a Case Narrative Deficiencies 2. Out of Scope Analyses Analyses Not Conducted 4. Missing Hardcopy Deliverables Incorrect Hardcopy Deliverables **Deviations from Analysis** Qualifications were assigned for the following: Protocol, e.g., - the results between the RL and the MDL were 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 ^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: 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:

o

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.

Project: SDG:

Analysis:

NPDES IPD1607 D/F

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 001	IPD1607-01	27606-001	Water	1613

Project: SDG: Analysis: NPDES IPD1607 D/F

DATA VALIDATION REPORT

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.

Project: SDG: NPDES IPD1607 D/F

DATA VALIDATION REPORT

SDG: Analysis:

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 ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤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.

Project: SDG: Analysis: NPDES IPD1607 D/F

DATA VALIDATION REPORT

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.

٩	Name: Del Mar Analytical, Irvine Project: IPD1607 Date Collected: 15-Apr-06 Time Collected: 1115			Sample Data Matrix: Sample Size:	Aqueous 1.02 L	Laboratory Date Lab Sample: QC Batch No.: Date Analyzed D		27606-001 7968 2-May-06		exceived: stracted: salyzed DB-225:	18-Apr-06 26-Apr-06 NA
25	Analyte	Conc. (ug/L)	DL a	EMPC ^b	Qualifiers	Labelee	d Standa	ırd	%R	LCL-UCLd	Qualifiers
	2,3,7,8-TCDD	ND	0.000000	585		<u>IS</u> 13C-2,3,	7,8-TCE	D	82.6	25 - 164	
	1,2,3,7,8-PeCDD	ND	0.000000	846		13C-1,2,	3,7,8-Pe	CDD	67.7	25 - 181	
	1,2,3,4,7,8-HxCDD	ND	0.000001	48		13C-1,2,	3,4,7,8-1	HxCDD	82.6	32 - 141	
	1,2,3,6,7,8-HxCDD	ND	0.000001	53		13C-1,2,	3,6,7,8-1	HxCDD	72.1	28 - 130	
	1,2,3,7,8,9-HxCDD	ND	0.000001	46		13C-1,2,	3,4,6,7,8	-HpCDD	82.5	23 - 140	
P	1,2,3,4,6,7,8-HpCDD	0.0000106			J	13C-OC	DD		60.6	17 - 157	
	OCDD	0.0000874				13C-2,3,	7,8-TCD	F	81.1	24 - 169	
	2,3,7,8-TCDF	ND	0.000000	588		13C-1,2,	3,7,8-Pe	CDF	68.7	24 - 185	
	1,2,3,7,8-PeCDF	ND	0.000000	921		13C-2,3,	4,7,8-Pe	CDF	64.0	21 - 178	
	2,3,4,7,8-PeCDF	ND	0.000000	926		13C-1,2,	3,4,7,8-I	IxCDF	87.2	26 - 152	
	1,2,3,4,7,8-HxCDF	ND	0.000000	590		13C-1,2,	3,6,7,8-I	IxCDF	86.4	26 - 123	
	1,2,3,6,7,8-HxCDF	ND	0.000000	552		13C-2,3,	4,6,7,8-I	IxCDF	82.9	28 - 136	
	2,3,4,6,7,8-HxCDF	ND	0.000000	636		13C-1,2,	3,7,8,9-I	IxCDF	81.3	29 - 147	
	1,2,3,7,8,9-HxCDF	ND	0.000000	425		13C-1,2,	3,4,6,7,8	-HpCDF	81.8	28 - 143	
19	1,2,3,4,6,7,8-HpCDF	0.00000227			J	13C-1,2,	3,4,7,8,9	-HpCDF	79.9	26 - 138	
	1,2,3,4,7,8,9-HpCDF	ND	0.000000	806		13C-OCI			65.9	17 - 157	
10	OCDF	0.00000374			J	CRS 37Cl-2,3	,7,8-TCI	DD	92.4	35 - 197	
	Totals					Footnotes					
	Total TCDD	ND	0.000000	585		a. Sample specific	estimated	detection limit.			
	Total PeCDD	ND	0.000000	846		b. Estimated maxi	imum possi	ble concentration.			
	Total HxCDD	ND	0.000003	64		c. Method detection	on limit.				
	Total HpCDD	0.0000214				d. Lower control l	limit - uppe	r control limit.			
	Total TCDF	ND	0.000000	588							
	Total PeCDF	ND	0.000000	924							
	Total HxCDF	0.00000119									
	Total HpCDF	0.00000227		0.000005	570						

Analyst:

Approved By:

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

Levelix

4

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4

U

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID: B4MT87

	tog East Vassar Drive	Task Order: 1261.001D.01
Aur	ora, CO 80014	SDG No.: IPD1607
		No. of Analyses: 1
	Laboratory: Del Mar	Analytical Date: June 23, 2006
	Reviewer: P. Meeks	
	Analysis/Method: Metals	Pato MOS
	Allarysis/Wethod. Wetals	Favo 11005
AC	TION ITEMS ^a	
	Case Narrative	
	Deficiencies	
2.	Out of Scope Analyses	
3.	Analyses Not Conducted	
	. manyoto mot oomaaotoa	
4.	Missing Hardcopy	
	Deliverables	
5.	Incorrect Hardcopy	
	Deliverables	
6.	Deviations from Analysis	Reanalysis rejected in favor of original result.
	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	
cor	System Performance MMENTS ^b	
COI		
* S	MMENTS ^b ubcontracted analytical laboratory is not	meeting contract and/or method requirements. d by the laboratory but no action against the laboratory is required.

MECX



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

Project: SDG: NPDES IPD1607

Analysis:

Metals

1. INTRODUCTION

Task Order Title:

NPDES Sampling

MECX Project Number:

DATA VALIDATION REPORT

1261.001D.01

Sample Delivery Group:

IPD1607

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Metals

QC Level:

Level IV

No. of Samples:

oles: 1

1

No. of Reanalyses/Dilutions: 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.

NPDES

SDG: Analysis:

IPD1607 Metals

DATA VALIDATION REPORT

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

Metals

Analysis:

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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.

Project: SDG: NPDES

Analysis:

IPD1607 Metals

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.

B4MT87

Revision 0

Project: SDG: NPDES IPD1607

DATA VALIDATION REPORT

SDG: IPD1607 Analysis: Metals

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.



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

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly 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		ers
Sample ID: IPD1607-01 (Outfall 00 Reporting Units: mg/l	01 - Water) - cont.								Rav Qual	Code
Iron	EPA 200.7	6D20095	0.015	0.040	1.8	1	04/20/06	04/26/06		
Sample ID: IPD1607-01RE1 (Outfa Reporting Units: mg/l	all 001 - Water) Out	Full Oo1	REI							
ron	EPA 200.7	6D26117	0.015	0.040	3.5	1	04/26/06	04/27/06	R	D
Sample ID: IPD1607-01 (Outfall 00	01 - Water)									
Reporting Units: ug/l										
Copper	EPA 200.8	6D17085	0.25	2.0	3.4	1	04/17/06	04/18/06	X	
Lead	EPA 200.8	6D17085	0.040	1.0	1.8	1	04/17/06	04/18/06	î	1
Mercury	EPA 245.1	6D18075	0.050	0.20	ND	1	04/18/06	04/18/06	1	

Del Mar Analytical - Irvine Michele Chamberlin Project Manager LEVE 1 IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC	×	Package ID: _B	4VO63
1226	69 East Vassar Drive	Task Order: 1	
Auro	ora, CO 80014	SDG No.: _IF	PD1607
		No. of Analyses: 2	
	Laboratory: Del Mar A	nalytical-Irvine Date: June 25, 2	2006
	Reviewer: L. Calvin	Reviewer's Sign	atuffe .
	Analysis/Method: Volatiles b	y Method 624	luru
407	ION ITEMO		7
	ION ITEMS ^a Case Narrative		
	Deficiencies		
	Deliciencies		
2.	Out of Scope Analyses		
3.	Analyses Not Conducted		
4.	Missing Hardcopy Deliverables		
5.	Incorrect Hardcopy		
2000	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		
COL	MMENTS ^b	Acceptable as reviewed.	
	MINICIAIO	Acceptable as reviewed.	
<u> </u>			
		eting contract and/or method requirements, y 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

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

NPDES

SDG:

IPD1607

Analysis:

VOCs

1. INTRODUCTION

Task Order Title:

NPDES

MECX Project Number:

DATA VALIDATION REPORT

1261.001D.01

Sample Delivery Group:

IPD1607

P. Costa

Project Manager: 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.

NPDES

SDG: Analysis: IPD1607 VOCs

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPD1607-01	Water	624
Trip Blank	IPD1607-02	Water	624

DATA VALIDATION REPORT

NPDES IPD1607

SDG: Analysis:

VOCs

DATA VALIDATION REPORT

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 \geq 0.05, and the %RSDs were \leq 35% or r² values \geq 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 \leq 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.

NPDES IPD1607

SDG:

Analysis:

VOCs

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

DATA VALIDATION REPORT

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

Project: **NPDES** SDG: IPD1607

Analysis: **VOCs**

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.

COMPOUND IDENTIFICATION 2.10

DATA VALIDATION REPORT

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.

SYSTEM PERFORMANCE 2.13

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



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Project ID: Routine Outfall 001

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPD1607

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

PURGEABLES BY GC/MS (EPA 624)

		CENTRE			,			
Analyte	Method	Datab	MDL	Reporting	Sample	Dilution	Date	Date Data
Mayte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed Qualifiers
Sample ID: IPD1607-01 (Outfall 001 - Water	er)							aval qual de
Reporting Units: ug/l								agual 80 cod
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 V
Surrogate: Dibromofluoromethane (80-120%)	5)				106 %			
Surrogate: Toluene-d8 (80-120%)					98 %			
Surrogate: 4-Bromofluorobenzene (80-120%))				100 %			
Sample ID: IPD1607-02 (Trip Blank - Water	er)							
Reporting Units: ug/l								
Benzene	EPA 624	6D22007	0.28	2.0	ND	1	04/22/06	04/22/06 LL
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 V
Surrogate: Dibromofluoromethane (80-120%)					105 %	े	- 17 EE 00	
Surrogate: Toluene-d8 (80-120%)					98 %			
Surrogate: 4-Bromofluorobenzene (80-120%)				98 %			

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^	Package ID: B4WC62
12269 East Vassar Drive	Task Order: 1261.001D.01
Aurora, CO 80014	SDG No.: IPD1607
	No. of Analyses: 1
-	Analytical Date: July 5, 2006
Reviewer: P. Meek	
Analysis/Method: General	Minerals P. Me
ACTION ITEMS ^a	
. Case Narrative	
Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy	
Deliverables	
Incorrect Hardcopy	
Deliverables	
6. Deviations from Analysis	Qualification applied for a detect below the reporting limit.
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	
	not meeting contract and/or method requirements.
b Differences in protocol have been adop	sted by the laboratory but no action against the laboratory is required.



DATA VALIDATION REPORT

NPDES Sampling Outfall 001

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPD1607

Prepared by

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

NPDES

SDG: Analysis: IPD1607 Gen. Min.

1. INTRODUCTION

Task Order Title:

NPDES Sampling

MECX Project Number:

DATA VALIDATION REPORT

1261.001D.01

Sample Delivery Group:

IPD1607

Project Manager:

P. Costa

Matrix:

Water

Analysis:

General Minerals

QC Level:

Reviewer:

Level IV

de Ector.

Level IV

No. of Samples:

1

No. of Reanalyses/Dilutions:

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.

NPDES

SDG: Analysis: IPD1607 Gen. Min.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPD1607-01	Water	General Minerals

DATA VALIDATION REPORT

DATA VALIDATION REPORT

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 $4^{\circ}C \pm 2^{\circ}C$, at $1^{\circ}C$; 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.

NPDES

SDG: Analysis:

IPD1607 Gen. Min.

DATA VALIDATION REPORT

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.

B4WC62

Revision 0



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 001

Report Number: IPD1607

Sampled: 04/15/06

Received: 04/15/06

INORGANICS

			MDL	Reporting	Sample	Dilution	Date	Date	Data	
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed		rs
Sample ID: IPD1607-01 (Outfall 001	- Water) - cont.								Reu	1 Qual
Reporting Units: mg/l	,								Qual	(ode
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	X.	
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	71	DNQ
Sulfate	EPA 300.0	6D15028	2.2	2.5	63	5	04/15/06	04/15/06	X	
Surfactants (MBAS)	SM5540-C	6D17076	0.044	0.10	0.094	1	04/17/06	04/17/06	*1	
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	X	
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	X	
Perchlorate	EPA 314.0	6D19069	0.80	4.0	ND	1	04/19/06	04/19/06	X	
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

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 Project: Quarterly Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

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 - IrvineMichele Chamberlin

Michele Chamberdin

Project Manager



Pasadena, CA 91101

Project ID: Quarterly Outfall 002

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Report Number: IPD0254 Received: 04/04/06

Attention: Bronwyn Kelly

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 - Wa	ater)				Sample	ed: 04/04/0	06		
Reporting Units: ug/l	,				ошри				
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	
Surrogate: Dibromofluoromethane (80-120%)					97 %				
Surrogate: Toluene-d8 (80-120%)					102 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					97 %				
Sample ID: IPD0254-02 (Trip Blank - Wa	ater)				Sample	ed: 04/04/0	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	
Surrogate: Dibromofluoromethane (80-120	0%)				99 %				
Surrogate: Toluene-d8 (80-120%)					101 %				
Surrogate: 4-Bromofluorobenzene (80-120	%)				96 %				

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



Project ID: Quarterly Outfall 002

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Report Number: IPD0254 Received: 04/04/06

Attention: Bronwyn Kelly

Pasadena, CA 91101

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		
Surrogate: 2-Fluorophenol (30-120%)					65 %					
Surrogate: Phenol-d6 (35-120%)					77 %					
Surrogate: 2,4,6-Tribromophenol (45-120%)					76 %					
Surrogate: Nitrobenzene-d5 (45-120%)					78 %					
Surrogate: 2-Fluorobiphenyl (45-120%)					79 %					
Surrogate: Terphenyl-d14 (45-120%)					91 %					



Pasadena, CA 91101

Project ID: Quarterly Outfall 002

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Report Number: IPD0254 Received: 04/04/06

Attention: Bronwyn Kelly

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		
Surrogate: Decachlorobiphenyl (45-120%)					72 %					
Surrogate: Tetrachloro-m-xylene (35-115%)					61 %					



Pasadena, CA 91101

Project ID: Quarterly Outfall 002

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Report Number: IPD0254 Received: 04/04/06

Attention: Bronwyn Kelly

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		



Project ID: Quarterly Outfall 002

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06
Report Number: IPD0254 Received: 04/04/06

Attention: Bronwyn Kelly

Pasadena, CA 91101

		1111	MOM	IICS					
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0254-01 (Outfall 002 - W	ater) - cont.				Sample	ed: 04/04/0	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 - W Reporting Units: ml/l/hr	ater)				Sample	ed: 04/04/0	06		
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 - W Reporting Units: NTU	ater)				Sample	ed: 04/04/0	06		
Turbidity	EPA 180.1	6D05115	0.20	5.0	100	5	04/05/06	04/05/06	
Sample ID: IPD0254-01 (Outfall 002 - W Reporting Units: ug/l	ater)				Sample	ed: 04/04/0	06		
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 - W Reporting Units: umhos/cm	ater)				Sample	ed: 04/04/0	06		
Specific Conductance	EPA 120.1	6D05070	1.0	1.0	310	1	04/05/06	04/05/06	



Project ID: Quarterly Outfall 002

Report Number: IPD0254

300 North Lake Avenue, Suite 1200

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

Pasadena, CA 91101 Attention: Bronwyn Kelly

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 002 (IPD0254-01) - Wa	Hold Time (in days) ter	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

Sampled: 04/04/06



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Quarterly Outfall 002

Report Number: IPD0254 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: 04/05/0	<u>06</u>										
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-E	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			
Del Mar Analytical - Irvine											

Michele Chamberlin Project Manager



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 Limit	Data Qualifiers
Batch: 6D05021 Extracted: 04/05/06	5										
Batch: 0D05021 Extracted: 04/05/00	<u>) </u>										
LCS Analyzed: 04/05/2006 (6D05021-BS	1)										
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 (6D0)5021-MS1)				Sou	rce: IPD()254-01				
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-M	ISD1)			Sou	rce: IPD(0254-01				
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	

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Quarterly Outfall 002

Report Number: IPD0254

Reporting

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

RPD

Data

%REC

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Spike

Source

Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D05021 Extracted: 04/05/06	_										
Matrix Spike Dup Analyzed: 04/05/2006	(6D05021-MSI	D1)			Sou	rce: IPD(0254-01				
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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Report Number: IPD0254

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

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
•		Lillit	MIDL	Cints	Level	Result	70KEC	Limits	KI D	Limit	Quanners
Batch: 6D10085 Extracted: 04/10/0	<u>6</u>										
Blank Analyzed: 04/12/2006 (6D10085-I	DI 1/1)										
Bis(2-ethylhexyl)phthalate	ND	5.0	1.7	ug/l							
2.4-Dinitrotoluene	ND ND	9.0	0.20	ug/I ug/l							
N-Nitrosodimethylamine	ND	8.0	0.20	ug/l 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	0.0	0.10	ug/l ug/l	20.0		58	30-120			
Surrogate: Phenol-d6	13.8			ug/l ug/l	20.0		69	35-120			
Surrogate: 2,4,6-Tribromophenol	13.4			ug/l ug/l	20.0		67	45-120			
Surrogate: Nitrobenzene-d5	7.66			ug/l ug/l	10.0		77	45-120			
Surrogate: 2-Fluorobiphenyl	7.54			ug/l ug/l	10.0		75	45-120			
Surrogate: Terphenyl-d14	8.90			ug/l ug/l	10.0		89	45-120			
Surrogue. Terphenyi u14	0.70			ug/i	10.0		07	43 120			
LCS Analyzed: 04/12/2006 (6D10085-BS	S1)										
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 (6D100	85-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			
				_							

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Quarterly Outfall 002

Sampled: 04/04/06

Report Number: IPD0254 Received: 04/04/06

METHOD BLANK/QC DATA

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

%REC RPD Data Reporting Spike Source Limit Analyte Result MDL Units Level Result %REC Limits **RPD** Limit 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



300 North Lake Avenue, Suite 1200

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Report Number: IPD0254

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

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D10116 Extracted: 04/10/06	<u> </u>										
Blank Analyzed: 04/11/2006 (6D10116-B	LK1)										
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-BS	1)										M-NR1
alpha-BHC	0.371	0.010	0.0010	ug/l	0.500		74	45-120			
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 (6D1011	6-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			



300 North Lake Avenue, Suite 1200

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Report Number: IPD0254

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: 6D04150 Extracted: 04/04/06	-										
Blank Analyzed: 04/05/2006 (6D04150-Bl	LK1)										
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
LCS Analyzed: 04/05/2006 (6D04150-BS1	1)										
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 (6D04	4150-MS1)				Sou	rce: IPD0	254-01				
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-MS	5 D 1)			Sou	rce: IPD0	254-01				
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-Bl	LK1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/05/2006 (6D05091-BS1	1)										
Mercury	7.98	0.20	0.050	ug/l	8.00		100	85-115			
Matrix Spike Analyzed: 04/05/2006 (6D0	5091-MS1)				Sou	rce: IPD0	241-01				
Mercury	8.57	0.20	0.050	ug/l	8.00	0.060	106	70-130			
Matrix Spike Dup Analyzed: 04/05/2006	(6D05091-MS	5D1)			Sou	rce: IPD0	241-01				
Mercury	8.73	0.20	0.050	ug/l	8.00	0.060	108	70-130	2	20	



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METHOD BLANK/QC DATA

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D06072 Extracted: 04/06/06	-										
Blank Analyzed: 04/06/2006 (6D06072-Bl	LK1)										
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
LCS Analyzed: 04/06/2006 (6D06072-BS1	1)										
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 (6D0	6072-MS1)				Sour	rce: IPD(061-03				
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 (6D0	6072-MS2)				Sou	rce: IPD(061-04				
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-M	SD1)			Sou	rce: IPD(061-03				
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	



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

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-B	LK1)										
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 04/06/2006 (6D04108-BS)	1)										
Total Cyanide	195	5.0	2.2	ug/l	200		98	90-110			
Matrix Spike Analyzed: 04/06/2006 (6D0-	4108-MS1)				Sou	rce: IPD0	066-01				
Total Cyanide	194	5.0	2.2	ug/l	200	ND	97	70-115			
Matrix Spike Dup Analyzed: 04/06/2006	(6D04108-M	SD1)			Sou	rce: IPD0	066-01				
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-Bl	LK1)										
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-BS)	1)										
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 (6D0-	4136-MS1)				Sou	rce: IPD0	234-12				
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-M	SD1)			Sou	rce: IPD0	234-12				
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



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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D05046 Extracted: 04/05/06	<u>-</u>										
Blank Analyzed: 04/05/2006 (6D05046-B	LK1)										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/05/2006 (6D05046-BS	1)										M-NR1
Oil & Grease	16.4	5.0	0.94	mg/l	20.0		82	65-120			
LCS Dup Analyzed: 04/05/2006 (6D05046	6-BSD1)										
Oil & Grease	16.5	5.0	0.94	mg/l	20.0		82	65-120	1	20	
Batch: 6D05064 Extracted: 04/05/06	<u>-</u>										
Blank Analyzed: 04/10/2006 (6D05064-B	LK1)										
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 04/10/2006 (6D05064-BS	1)										
Biochemical Oxygen Demand	226	100	30	mg/l	198		114	85-115			
LCS Dup Analyzed: 04/10/2006 (6D0506	4-BSD1)										
Biochemical Oxygen Demand	226	100	30	mg/l	198		114	85-115	0	20	
Batch: 6D05070 Extracted: 04/05/06	<u>-</u>										
Duplicate Analyzed: 04/05/2006 (6D0507	0-DUP1)				Sou	rce: IPD(0242-01				
Specific Conductance	21.3	1.0	1.0	umhos/cm		21			1	5	
Batch: 6D05071 Extracted: 04/05/06	_										
Blank Analyzed: 04/05/2006 (6D05071-B	LK1)										
Total Dissolved Solids	ND	10	10	mg/l							



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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Oualifiers
Batch: 6D05071 Extracted: 04/05/06		Linne	MDL	Cints	Level	Result	/UKLC	Limits	M D	Limit	Quanners
Battii. 0D030/1 Extracted. 04/03/00	<u>_</u>										
LCS Analyzed: 04/05/2006 (6D05071-BS	1)										
Total Dissolved Solids	998	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 04/05/2006 (6D0507	1-DUP1)				Sou	rce: IPD(0242-01				
Total Dissolved Solids	16.0	10	10	mg/l		18			12	10	R-4
Batch: 6D05115 Extracted: 04/05/06	<u>.</u>										
	_										
Blank Analyzed: 04/05/2006 (6D05115-B											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 04/05/2006 (6D0511	5-DUP1)				Sou	rce: IPD	0239-01				
Turbidity	18.5	1.0	0.040	NTU		18			3	20	
Batch: 6D05128 Extracted: 04/05/06	<u>.</u>										
Dissila Assalssa da 04/05/2007 (CD05129 D	1 1/1)										
Blank Analyzed: 04/05/2006 (6D05128-B Ammonia-N (Distilled)	ND	0.50	0.30	ma/l							
Allillollia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 04/05/2006 (6D05128-BS	,										
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0		109	80-115			
Matrix Spike Analyzed: 04/05/2006 (6D0	5128-MS1)				Sou	rce: IPD	0105-01				
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-M	(ISD1)			Sou	rce: IPD)105-01				
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	1.4	101	70-120	3	15	



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D05142 Extracted: 04/05/06	=										
Blank Analyzed: 04/06/2006 (6D05142-B	[I Z1)										
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
, ,		0.10	0.011	1119/1							
LCS Analyzed: 04/06/2006 (6D05142-BS)											
Surfactants (MBAS)	0.261	0.10	0.044	mg/l	0.250		104	90-110			
Matrix Spike Analyzed: 04/06/2006 (6D0	5142-MS1)				Sou	rce: IPD(205-01				
Surfactants (MBAS)	0.250	0.10	0.044	mg/l	0.250	ND	100	50-125			
Matrix Spike Dup Analyzed: 04/06/2006	(6D05142-M	SD1)			Sou	rce: IPD(205-01				
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-B	LK1)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 04/06/2006 (6D06060-BS)	1)										
Perchlorate	46.7	4.0	0.80	ug/l	50.0		93	85-115			
Matrix Spike Analyzed: 04/06/2006 (6D0	6060-MS1)				Sou	rce: IPD(173-01				
Perchlorate	78.3	4.0	0.80	ug/l	50.0	30	97	80-120			
Matrix Spike Dup Analyzed: 04/06/2006	(6D06060-M	SD1)			Sou	rce: IPD(173-01				
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-B	LK1)										
Total Suspended Solids	ND	10	10	mg/l							



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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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D07128 Extracted: 04/07/06	_										
LCS Analyzed: 04/07/2006 (6D07128-BS1	D										
Total Suspended Solids	975	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 04/07/2006 (6D0712	8-DUP1)				Sou	rce: IPD(270-01				
Total Suspended Solids	64.0	10	10	mg/l		67			5	10	



Pasadena, CA 91101

Project ID: Quarterly Outfall 002

300 North Lake Avenue, Suite 1200

Report Number: IPD0254 Sampled: 04/04/06
Received: 04/04/06

Attention: Bronwyn Kelly

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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	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

Sampled: 04/04/06



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Report Number: IPD0254 Received: 04/04/06

Attention: Bronwyn Kelly

DATA QUALIFIERS AND DEFINITIONS

Project ID: Quarterly Outfall 002

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



Project ID: Quarterly Outfall 002

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Pasadena, CA 91101 Report Number: IPD0254 Received: 04/04/06

Attention: Bronwyn Kelly

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

Comments Field readings: [PD0254 Page 1 of 24 TAT 24 TAT Temp = 58 24 TAT 24 TAT 7010 Normal Sample Integrity: (Check) Intact On Ice: 10 Days Turn around Time: (check)
24 Hours 5 Days Perchlorate Only 72 Hours pentachlorophenol (EPA 625) ethylhexyl)phthalate, NDMA, Metals Only 72 Hours × Dinitrotoluene, Bis(2-2.4,6 Trichlorophenol, 2,4 × Alpha BHC (608) 72 Hours 48 Hours ANALYSIS REQUIRED × **M-sinommA** Conductivity × Turbidity, TDS, TSS, Shhi Perchlorate \times CF' 204' NO3+NO5-N' × Surfactants (MBAS) × BOD5(20 degrees C) Cyanide (total recoverable) × Oil & Grease (EPA 413.1) Date/Time: TCDD (snd all congeners) WY Date/Time: Date/Time ククトゥ × Del Mar Analytical version 3/1/06 CHAIN OF CUSTODY FORM ۸OCs 624 + xylenes التروديم × × × Settleable Solids Ca, Pb, Hg, \times Total Recoverable Metals: 13A, 13B 14A, 14B, 10A, 10B 86 3A, 3B, 3C 4A, 4B 88 <u>m</u> ₹ 8 Preservative Bottle ξÀ æ, Granterly me 415100 Received By Received By Received By Project: Boeing-SSFL NPDES Routine Outfall 002 H2S04 HN03 NaOH None None None None None None None None 덮 닺 Phone Number: (626) 568-6691 (626) 568-6515 Fax Number: 95:01 γ- γ- ο ε Date/Time: //Ψ Sampling Date/Time 90 mb # of Cont. RUBEN BINABSO Sampler: P.c & Bit. 961 Project Manager: Bronwyn Kelly 300 North Lake Avenue, Suite 1200 2 ന α Container Type Poly-500 ml Poly-500 ml 1L Amber 1L Amber Poly-500 ml 1L Amber Poly-500 ml Poly-500 VOAs Glass-Amber Poly-1 liter Poly-1 liter Poly-1 liter VOAs Poly-1 liter Ē Client Name/Address: Sample Matrix MWH-Pasadena Pasadena, CA 91101 ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ Relinquished By ≥ Relinguished By Relinquished By Sample Description Outfall 002 Trip Blank Outfall 002 Outfall 002. Outfall 002 Outfall 002 Outfall 002 Outfall 002 Outfall 002



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

NPDES - 166

Method Blan	ık					1				EPA Method 161
Matrix:	Aqueous		QC Batch No.:	79	010	Lab	Sample:	0-MB001		
Sample Size:	1.00 L		Date Extracted	: 9-	Apr-06	Date	Analyzed DB-5:	11-Apr-06	Date An	alyzed DB-225: NA
					•		•	-		·
Analyte	Conc. (u	ıg/L)	DL a	EMPC b	Qualifiers		Labeled Standa	rd	%R	LCL-UCL ^d Qualifiers
2,3,7,8-TCDD		ND	0.000000628			<u>IS</u>	13C-2,3,7,8-TCI	DD	74.5	25 - 164
1,2,3,7,8-PeCD	DD	ND	0.000000450				13C-1,2,3,7,8-Pe	CDD	71.4	25 - 181
1,2,3,4,7,8-Hx	CDD	ND	0.000000804				13C-1,2,3,4,7,8-l	HxCDD	74.6	32 - 141
1,2,3,6,7,8-Hx	CDD	ND	0.000000867				13C-1,2,3,6,7,8-l	HxCDD	70.7	28 - 130
1,2,3,7,8,9-Hx	CDD	ND	0.000000808				13C-1,2,3,4,6,7,8	3-HpCDD	75.4	23 - 140
1,2,3,4,6,7,8-H	IpCDD	ND	0.00000111				13C-OCDD		55.5	17 - 157
OCDD		0.0000025	i9		J		13C-2,3,7,8-TCI)F	77.3	24 - 169
2,3,7,8-TCDF		ND	0.000000346				13C-1,2,3,7,8-Pe	CDF	73.3	24 - 185
1,2,3,7,8-PeCD)F	ND	0.000000474				13C-2,3,4,7,8-Pe	CDF	72.6	21 - 178
2,3,4,7,8-PeCD	OF	ND	0.000000453				13C-1,2,3,4,7,8-I	HxCDF	74.5	26 - 152
1,2,3,4,7,8-Hx	CDF	ND	0.000000436				13C-1,2,3,6,7,8-l	HxCDF	66.9	26 - 123
1,2,3,6,7,8-Hx	CDF	ND	0.000000334				13C-2,3,4,6,7,8-l	HxCDF	71.8	28 - 136
2,3,4,6,7,8-Hx	CDF	ND	0.000000326				13C-1,2,3,7,8,9-1	HxCDF	70.0	29 - 147
1,2,3,7,8,9-Hx	CDF	ND	0.000000456				13C-1,2,3,4,6,7,8	8-HpCDF	66.9	28 - 143
1,2,3,4,6,7,8-H	IpCDF	ND	0.000000395				13C-1,2,3,4,7,8,9	9-HpCDF	72.4	26 - 138
1,2,3,4,7,8,9-H		ND	0.000000424				13C-OCDF		56.7	17 - 157
OCDF	•	ND	0.00000136			CRS	37Cl-2,3,7,8-TCl	DD	84.0	35 - 197
Totals						Foot	enotes			
Total TCDD		ND	0.000000628			a. San	nple specific estimated of	letection limit.		
Total PeCDD		ND	0.000000450				imated maximum possib			
Total HxCDD		ND	0.000000828				thod detection limit.			
Total HpCDD		ND	0.00000111			d. Lov	wer 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 William J. Luksemburg 12-Apr-2006 09:56 **NPDES - 167** Approved By:

OPR Results					EPA	Method 1613
Matrix: Aqueous Sample Size: 1.00 L		OC Batch No.: Date Extracted:	7910 9-Apr-06	Lab Sample: 0-OPR001 Date Analyzed DB-5: 10-Apr-06	Date Analyze	d DB-225: NA
Analyte	Spike Conc. C	onc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	10.0	11.0	6.7 - 15.8	<u>IS</u> 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 William J. Luksemburg 12-Apr-2006 09:56

Sample ID:	IPD0254-01									EPA I	Method 1613
Client Data	Dal Man Ana	latical Imina		Sample Data			oratory Data				
Name: Project:	Del Mar Ana IPD0254	lytical, Irvine		Matrix:	Aqueous		Sample:	27548-001	Date Re		6-Apr-06
Date Collected:	4-Apr-06			Sample Size:	1.03 L	`	Batch No.:	7910	Date Ex		9-Apr-06
Time Collected:	1056					Date	Analyzed DB-5:	11-Apr-06		alyzed DB-225:	NA
Analyte	Conc. (ug/L)	DL a	EMPC ^b	Qualifiers		Labeled Stan	dard	%R	LCL-UCL ^d	Oualifiers
2,3,7,8-TCDD		ND	0.000000	744		<u>IS</u>	13C-2,3,7,8-TC	CDD	62.3	25 - 164	
1,2,3,7,8-PeCD	D	ND		0.00000	115		13C-1,2,3,7,8-l	PeCDD	55.8	25 - 181	
1,2,3,4,7,8-HxC	CDD	0.00000299			J		13C-1,2,3,4,7,8	8-HxCDD	59.2	32 - 141	
1,2,3,6,7,8-HxC	CDD	0.00000721			J		13C-1,2,3,6,7,8	8-HxCDD	55.0	28 - 130	
1,2,3,7,8,9-HxC	CDD	0.00000518			J		13C-1,2,3,4,6,7	7,8-HpCDD	62.7	23 - 140	
1,2,3,4,6,7,8-H ₁	pCDD	0.000179					13C-OCDD		52.4	17 - 157	
OCDD		0.00189			В		13C-2,3,7,8-TO	CDF	64.6	24 - 169	
2,3,7,8-TCDF		0.00000121			J		13C-1,2,3,7,8-l	PeCDF	56.9	24 - 185	
1,2,3,7,8-PeCD	F	ND	0.000001	24			13C-2,3,4,7,8-l	PeCDF	57.7	21 - 178	
2,3,4,7,8-PeCD	F	ND	0.000001	04			13C-1,2,3,4,7,8	8-HxCDF	57.9	26 - 152	
1,2,3,4,7,8-HxC	CDF	0.00000147			J		13C-1,2,3,6,7,8	8-HxCDF	47.7	26 - 123	
1,2,3,6,7,8-HxC	CDF	ND	0.000001	37			13C-2,3,4,6,7,8	8-HxCDF	56.2	28 - 136	
2,3,4,6,7,8-HxC	CDF	0.00000153			J		13C-1,2,3,7,8,9	9-HxCDF	57.9	29 - 147	
1,2,3,7,8,9-HxC	CDF	ND	0.000000	913			13C-1,2,3,4,6,7	7,8-HpCDF	55.9	28 - 143	
1,2,3,4,6,7,8-H ₁	pCDF	0.0000330					13C-1,2,3,4,7,8	3,9-HpCDF	60.1	26 - 138	
1,2,3,4,7,8,9-H ₁	pCDF	0.00000259			J		13C-OCDF		51.8	17 - 157	
OCDF		0.000116				CRS	37Cl-2,3,7,8-T	CDD	84.8	35 - 197	
Totals						Foo	otnotes				
Total TCDD		ND		0.00000	143	a. Sa	mple specific estima	ted detection limit.			
Total PeCDD		0.0000112		0.00001	68	b. E	stimated maximum p	ossible concentration.			
Total HxCDD		0.0000674				c. M	ethod detection limit				
Total HpCDD		0.000358				d. L	ower control limit - u	pper control limit.			
Total TCDF		0.00000780									
Total PeCDF		0.00000367		0.00000	548						
Total HxCDF		0.0000329									
Total HpCDF		0.000102									

Analyst: MAS William J. Luksemburg 12-Apr-2006 09:56

APPENDIX

NPDES - 170

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 1014 E. Cooley Dr., Suite A, Colton, CA 92324 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123

9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620

Ph (949) 261-1022

Ph (619) 505-9596

Fax (619) 505-9689

Fax (949) 261-1228

Ph (480) 785-0043 Fax (480) 785-0851 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPD0254

SENDING LABORATORY:	RECEIVING LABORATORY:						
Del Mar Analytical - Irvine 17461 Derian Avenue. Suite 100 Irvine, CA 92614	Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762						
Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Phone :(916) 933-1640 Fax: (916) 673-0106						
Standard TAT is requested unless specific due date is requested => Due Date:							
Analysis Expiration	Comments						

Sample ID: IPD0254-01	Water Sampled: 04/04/06 10:56	Instant Nofication	
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 (IPD0254-01	G)		
1 L Amber (IPD0254-01	H)	<u> </u>	

	*						
			S	AMPLE INTEGRI	гү:		
All containers intact: Custody Seals Present:	☐ Yes ☐ Yes	□ No □ No	Sample labels/CO	-	□ No □ No	Samples Received On Ice:: Samples Received at (temp):	☐ Yes ☐ No
1			4/5/06	Bother	ra A. Be	nodist \$16/06	5 0850
Released By			Date Time	Received B	<i>y</i> /	Date	Time
Released By			Date Time	Received B	у	Date	NPDES - 173 Time

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27548	
-----------------------	--

	Date/Time		Initial	s:	Locat	ion: WK	2-2	
Samples Arrival:	4/6/06	6 08E	50 48	LB	Shelf/	Rack:		
	Date/Time		Initia	ls:	Locat	ion: WR	-2	
Logged In:	4/6/06	0955	5 B	SB	Shelf/Rack: C-3		-3	
Delivered By:	FedEx	UPS	Cal	DHL		Hand Other		
Preservation:	Ice) E	Blue Ice		ce None		ne	
Temp °C /.	800	Time: 0900				Thermometer ID: DT-20		

					YEŞ.	NO	NA
Adequate Sample Volume Received?)				V		
Holding Time Acceptable?					V		
Shipping Container(s) Intact?					V		
Shipping Custody Seals Intact?				• .	V		
Shipping Documentation Present?					V		
Airbill Trk# 79	20 6	5313	8160		/		
Sample Container Intact?					V		
Sample Custody Seals Intact?							V
Chain of Custody / Sample Documentation Present?					V		
COC Anomaly/Sample Acceptance Form completed?						<u> </u>	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?							V
Na ₂ S ₂ O ₃ Preservation Documented?			COC	San Cont	•	No	ne
Shipping Container	Alta	Client	Retain	Ret	urn	Disp	ose

Comments:

APPENDIX G

Section 6

Outfall 002, April 04, 2006

MECX Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC ^X			Package ID:	B4DF91		
12269 East Vassar Drive			_	1261.001D.01		
Aurora, CO 80014			SDG No.:	IPD0254		
•		No.	of Analyses:	1		
Laboratory: Alta Anal	ytical		Date: June 5	, 2006		
Reviewer: K. Shado			Reviewer's Si	gnature		
Analysis/Method: Dioxins			P. Marks of	or K. Shadowlight		
				7		
ACTION ITEMS ^a						
. Case Narrative						
Deficiencies						
2. Out of Scope Analyses	A STATE OF THE STA					
	And delicated the second secon					
3. Analyses Not Conducted				anada ka		
		A				
	Water Anna Park					
4. Missing Hardcopy						
Deliverables				and the state of t		
5. Incorrect Hardcopy			***************************************			
Deliverables						
Benverables						
6. Deviations from Analysis	Qualification applied for	an u	nconfirmed dete	ct, detects below the		
Protocol, e.g.,	reporting limit and for El					
Holding Times				Annual Annual Control of the Control		
GC/MS Tune/Inst. Performance			A COMPANY OF THE PARTY OF THE P			
Calibration				A Marine		
Method blanks						
Surrogates						
Matrix Spike/Dup LCS						
Field QC						
Internal Standard Performance	ALCOHOLOGICA CONTRACTOR CONTRACTO					
Compound Identification						
Quantitation						
System Performance			Allowed to the second s			
COMMENTS ^b						
			1100 P. 100 P. 1			
				Address to the second s		
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

Project: **NPDES** SDG: IPD0254 DATA VALIDATION REPORT Analysis: D/F

1. INTRODUCTION

Task Order Title: **NPDES**

Contract Task Order: 1261.001D.01 Sample Delivery Group: IPD0254 Project Manager: P. Costa

> Matrix: Water

Dioxins/Furans Analysis:

QC Level: Level IV

No. of Samples:

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.

Revision 0 NPDES - 178

NPDES IPD0254 Project: SDG: Analysis: DATA VALIDATION REPORT D/F

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 002	IPD0254-01	27548-001	Water	1613

 Project:
 NPDES

 SDG:
 IPD0254

 DATA VALIDATION REPORT
 Analysis:
 D/F

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.

NPDES Project: SDG: IPD0254 DATA VALIDATION REPORT Analysis: D/F

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 ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤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.

 Project:
 NPDES

 SDG:
 IPD0254

 DATA VALIDATION REPORT
 Analysis:
 D/F

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,

Project: NPDES SDG: IPD0254

DATA VALIDATION REPORT Analysis: D/F

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.

7	2.1	Project: IP	el Mar Analytical, Irvine D0254 Apr-06 56		Sample Data Matrix: Sample Size:	Aqueous 1.03 L	Laboratory Data Lab Sample: QC Batch No.: Date Analyzed DB-5:	27548-001 7910 11-Apr-06	Date Rec Date Ext Date Ana		6-Apr-06 9-Apr-06 NA
9	(este	Analyte	Conc. (ug/L)	DL a	$EMPC^{b}$	Qualifiers	Labeled Stand	lard	%R	LCL-UCLd	Oualifiers
	1,	2,3,7,8-TCDD	ND	0.0000007	44		<u>IS</u> 13C-2,3,7,8-TC	DD	62.3	25 - 164	
2	X10	1,2,3,7,8-PeCDD	ND		0.000001	15	13C-1,2,3,7,8-P	eCDD	55.8	25 - 181	
	DNG	1,2,3,4,7,8-HxCDD	0.00000299			J	13C-1,2,3,4,7,8	-HxCDD	59.2	32 - 141	
	1	1,2,3,6,7,8-HxCDD	0.00000721			J	13C-1,2,3,6,7,8	-HxCDD	55.0	28 - 130	
	1	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-HpCDI	0.000179				13C-OCDD		52.4	17 - 157	
		OCDD 😁	0.00189			В	13C-2,3,7,8-TC	DF	64.6	24 - 169	
	X10,DN	2,3,7,8-TCDF	0.00000121			J	13C-1,2,3,7,8-P	eCDF	56.9	24 - 185	
		1,2,3,7,8-PeCDF	ND	0.0000012	4		13C-2,3,4,7,8-P	eCDF	57.7	21 - 178	
		2,3,4,7,8-PeCDF	ND	0.0000010	4		13C-1,2,3,4,7,8-	-HxCDF	57.9	26 - 152	
	PND	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	0.0000013	7		13C-2,3,4,6,7,8-	-HxCDF	56.2	28 - 136	
	PNG	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	0.0000009	13		13C-1,2,3,4,6,7,	8-HpCDF	55.9	28 - 143	
		1,2,3,4,6,7,8-HpCDH	0.0000330				13C-1,2,3,4,7,8,	9-HpCDF	60.1	26 - 138	
-	DNG	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-TC	DD	84.8	35 - 197	
		Totals					Footnotes				
5	X10	Total TCDD	ND		0.0000014	43	a. Sample specific estimate	ed detection limit.			
		Total PeCDD	0.0000112		0.000016	8	b. Estimated maximum pos	ssible concentration.			
	\	Total HxCDD	0.0000674				c. Method detection limit.				
		Total HpCDD	0.000358				d. Lower control limit - up	per control limit.			
		Total TCDF	0.00000780								
		Total PeCDF	0.00000367		0.0000054	48					
		Total HxCDF	0.0000329	e contractory (1997) is a first distance to the separate (1994) (1999)		and - 1000 man on the State of	- 1000 (1000 - 1	en en como en esta de la companio d	*		
	-	Total HpCDF	0.000102								

Analyst: MAS

Approved By:

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

Lovel TV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

ME	c ^x			Package ID:	B4MT82
122	69 East Vassar Drive				1261.001D.021
Aur	ora, CO 80014			SDG No.:	IPD0254
			No.	of Analyses:	1
	Laboratory: Del Mar A	nalytical		Date: June 6	, 2006
	Reviewer: P. Meeks			Reviewer's Si	gnature
	Analysis/Method: Metals			1.11/100	2
ACT	TION ITEMS ^a				
	Case Narrative				
	Deficiencies			40-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	
2.	Out of Scope Analyses				
2	Analyses Not Conducted				
3.	Analyses Not Conducted				
4.	Missing Hardcopy				
٦.	Deliverables				
5.	Incorrect Hardcopy				
	Deliverables				,
6.	Deviations from Analysis	Reanalyses rejected in f	avor	of original result	S.
	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				
CON	MMENTS ^b	<u> </u>			
	MACON CONTRACTOR CONTR				
^a Sı	ubcontracted analytical laboratory is not	meeting contract and/or method	requir	ements.	
	fferences in protocol have been adopted				equired.



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

SDG: Analysis: Metals

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

> P. Meeks Reviewer:

June 6, 2006 Date of Review:

The samples listed in Table 1 were validated based on the guidelines outlined in the MECX 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.

Project: SDG: NPDES IPD0254

Analysis:

Metals

Table 1. Sample Identification

DATA VALIDATION REPORT

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPD0254-01	Water	200.8

Project: SDG: NPDES

Analysis:

Metals

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

DATA VALIDATION REPORT

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 $\pm 2^{\circ}$ 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.

B4MT82 3 Revision 0

Project: SDG: NPDES IPD0254

SDG: Analysis:

Metals

2.4 BLANKS

DATA VALIDATION REPORT

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

B4MT82

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.

Revision 0 NPDES - 190

Project:

NPDES IPD0254

SDG: Analysis:

Metals

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

DATA VALIDATION REPORT

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.



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

Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

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	-	
Sample ID: IPD0254-01 (Outfall 002 - N		Sampled: 04/04/06						Code		
Copper Lead Mercury	EPA 200.8 EPA 200.8 EPA 245.1	6D04150 6D04150 6D05091	0.25 0.040 0.050	2.0 1.0 0.20	7.4 6.9 0.090	1 1 1	04/04/06 04/04/06 04/05/06	04/05/06 04/05/06 04/05/06	* J	
Sample ID: IPD0254-01RE1 (Outfall 00 Reporting Units: ug/l Copper Lead	EPA 200.8 EPA 200.8	6D06072 6D06072	0.25 0.040	2.0 1.0	8.0 7.4	1 1	04/06/06 04/06/06	04/07/06 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

ME	D [*]			Package ID:	B4VO60
122	69 East Vassar Drive			Task Order:	1261.001D.01
Auro	ora, CO 80014			SDG No.:	IPD0254
			No.	of Analyses:	2
	Laboratory: Del Mar A	nalytical		Date: June 5	, 2006
	Reviewer: L. Calvin		_	Reviewer's Si	gnature
	Analysis/Method: Dioxins		_	P. Muks f	or L. Calvin
	7 thatyolo/filetifled.				3. (6.10.1)
ACT	TION ITEMS ^a				
	Case Narrative				
	Deficiencies	,			000 000 000 000 000 000 000 000 000 00

2.	Out of Scope Analyses				
				- Land Calendary James	A CONTRACTOR OF THE CONTRACTOR
3.	Analyses Not Conducted			· · · · · · · · · · · · · · · · · · ·	
	•				
4.	Missing Hardcopy				
	Deliverables	And the second of the second o			
		The second secon	A CANA		
5.	Incorrect Hardcopy				ALCAL AND
	Deliverables				
6.	Deviations from Analysis	Qualification applied for	a det	ect below the re	eporting limit.
	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				
COI	MMENTS ^b				
				MANAGEMENT OF THE PROPERTY OF	
	ubcontracted analytical laboratory is not				aguirad
ı "D	ifferences in protocol have been adopted	by the laboratory but no action	agains	st the laboratory is r	equireu.



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 DATA VALIDATION REPORT SDG: IPD0254
Analysis: VOCs

NPDES

Project:

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.

B4VO60 1 Revisio NP DES - 195

Project: NPDES SDG: IPD0254

DATA VALIDATION REPORT Analysis: VOCs

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPD0254-01	Water	624
Trip Blank	IPD0254-02	Water	624

Project: SDG: IPD0254 DATA VALIDATION REPORT VOCs Analysis:

NPDES

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.

Holding Times 2.1.3

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 r² 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.

NPDES Project: SDG: IPD0254

DATA VALIDATION REPORT Analysis: VOCs

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. 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. Nο qualifications were required.

2.8.3 **Field Duplicates**

There were no field duplicate samples identified for this SDG.

NPDES Project: SDG: IPD0254

DATA VALIDATION REPORT Analysis: VOCs

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.



Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

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	Qua	ata Jifier)
Sample ID: IPD0254-01 (Outfall 002 - V	Vater)				Sample	d: 04/04/0)6	1	en l	vale
Reporting Units: ug/l								9	2	()000
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	1	
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	V	
Trichloroethene	EPA 624	6D05021	0.26	5.0	0.86	1	04/05/06	04/05/06	T	1 DHQ
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		
Xylenes, Total	EPA 624	6D05021	0.90	4.0	ND	1	04/05/06	04/05/06	\checkmark	
Surrogate: Dibromofluoromethane (80-1)	20%)				97 %					
Surrogate: Toluene-d8 (80-120%)					102 %					
Surrogate: 4-Bromofluorobenzene (80-12	20%)				97 %					
Sample ID: IPD0254-02 (Trip Blank - V	Vater)				Sample	d: 04/04/0)6			
Reporting Units: ug/l										
Benzene	EPA 624	6D05021	0.28	2.0	ND	1	04/05/06	04/05/06	从	
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	1/	
Xylenes, Total	EPA 624	6D05021	0.90	4.0	ND	1	04/05/06	04/05/06	Y	Į.
Surrogate: Dibromofluoromethane (80-1	20%)				99 %					
Surrogate: Toluene-d8 (80-120%)					101 %					
Surrogate: 4-Bromofluorobenzene (80-12	20%)				96 %					

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager Leve II

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID: B4WC85

12269 East Vassar Drive		Task Order: <u>1261.001D.01</u>
Aurora, CO 80014		SDG No.: IPD0254
	No	o. of Analyses: 1
Laboratory: Del Mar A	Analytical	Date: June 6, 2006
Reviewer: P. Meeks	5	Reviewers Signature
Analysis/Method: General I	Vinerals	Y.MID
ACTION ITEMS ^a		
. 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 ^b Differences in protocol have been adopted		

 MEC^{X}



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 DATA VALIDATION REPORT

SDG: IPD0254 Analysis: Gen. Min.

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:

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.

Project:

NPDES

SDG: Analysis: IPD0254 Gen. Min.

DATA VALIDATION REPORT

Table 1. Sample Identification

Clien	tID	Laboratory ID	Matrix	COC Method
Outfall	002	IPD0254-01	Water	General Minerals

Analysis: Gen. Min.

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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 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.

BLANK SPIKES AND LABORATORY CONTROL SAMPLES 2.4

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.

B4WC85 3 Revision 0

Project:

NPDES

SDG: Analysis:

IPD0254 Gen. Min.

DATA VALIDATION REPORT

LABORATORY DUPLICATES 2.5

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.

Revision 0 **NPDES - 206**





Pasadena, CA 91101

Project ID: Quarterly Outfall 002

300 North Lake Avenue, Suite 1200

Report Number: IPD0254

Sampled: 04/04/06

Received: 04/04/06

Attention: Bronwyn Kelly

INORGANICS

			MDL	Reporting	Sample	Dilution	Date	Date	Data	
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers	
Sample ID: IPD0254-01 (Outfall 002 - Reporting Units: mg/l	Water) - cont.				Sample	ed: 04/04/0	06		KEV I	S C
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	X	
Chloride	EPA 300.0	6D03004	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	6D03040	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	6D05142	10	10	190	1	04/05/06	04/05/06	1, 3	
Total Suspended Solids	EPA 160.2	6D07128	10	10	170	1	04/07/06	04/07/06		
i otal Suspended Sonds	EFA 100.2	0D07128	10	10	170	1	04/0//00	04/0//00	~	
Sample ID: IPD0254-01 (Outfall 002 - Reporting Units: ml/l/hr	-Water)				Sample	ed: 04/04/0	06			
Total Settleable Solids	EPA 160.5	6D04131	0.10	0.10	1.0	1	04/04/06	04/04/06	X	
Sample ID: IPD0254-01 (Outfall 002 - Reporting Units: NTU	· Water)				Sample	ed: 04/04/0	06			
Turbidity	EPA 180.1	6D05115	0.20	5.0	100	5	04/05/06	04/05/06		
Sample ID: IPD0254-01 (Outfall 002 - Reporting Units: ug/l	-Water)				Sample	ed: 04/04/0	06			
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 - Reporting Units: umhos/cm	- Water)				Sample	ed: 04/04/	06			
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 Project: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

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

Michele Chamberlin Project Manager



Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Sampled: 04/11/06 Report Number: IPD1227 Received: 04/12/06

Attention: Bronwyn Kelly

Pasadena, CA 91101

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
C 1 ID IDD1227 01 (O (C II 002 W)	4 >							·	
Sample ID: IPD1227-01 (Outfall 002 - Wa	ater)								
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 ND	1	04/17/06	04/17/06	
Chloroform	EPA 624 EPA 624	6D17002	0.28	2.0	ND ND	1	04/17/06	04/17/06	
1,1-Dichloroethane	EPA 624	6D17002	0.33	2.0	ND ND	1	04/17/06	04/17/06	
1,2-Dichloroethane	EPA 624 EPA 624	6D17002	0.27	2.0	ND ND	1	04/17/06	04/17/06	M1
1,1-Dichloroethene	EPA 624	6D17002	0.42	3.0	ND ND	1	04/17/06	04/17/06	1V1 1
•	EPA 624	6D17002	0.42	2.0	ND ND	1	04/17/06	04/17/06	
Ethylbenzene Tetrachloroethene	EPA 624	6D17002	0.23	2.0	ND ND	1	04/17/06	04/17/06	
Toluene	EPA 624	6D17002	0.32	2.0	ND ND	1	04/17/06	04/17/06	
1,1,1-Trichloroethane	EPA 624	6D17002	0.30	2.0	ND ND	1	04/17/06	04/17/06	
	EPA 624	6D17002		2.0	ND ND	1	04/17/06	04/17/06	
1,1,2-Trichloroethane Trichloroethene	EPA 624	6D17002	0.30 0.26	5.0	ND ND	1	04/17/06	04/17/06	
Trichlorofluoromethane				5.0	ND ND	1	04/17/06	04/17/06	
Vinyl chloride	EPA 624	6D17002	0.34	5.0	ND ND	1	04/17/06		
-	EPA 624 EPA 624	6D17002 6D17002	0.26 0.90	4.0	ND ND	1	04/17/06	04/17/06 04/17/06	
Xylenes, Total		6D17002	0.90	4.0	108 %	1	04/1//00	04/1//00	
Surrogate: Dibromofluoromethane (80-120 Surrogate: Toluene-d8 (80-120%)	170)				105 % 105 %				
Surrogate: 4-Bromofluorobenzene (80-120	0 /)				103 % 108 %				
Surrogate. 4-Bromojtuorovenzene (80-120	70)				100 70				
Sample ID: IPD1227-02 (Trip Blank - Wa	ater)								
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	
Surrogate: Dibromofluoromethane (80-120	0%)				103 %				
Surrogate: Toluene-d8 (80-120%)					106 %				
Surrogate: 4-Bromofluorobenzene (80-120	%)				111 %				

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



Pasadena, CA 91101

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Sampled: 04/11/06
Report Number: IPD1227 Received: 04/12/06

Attention: Bronwyn Kelly

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 - Wate	er)								H4
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6D19072	1.6	4.8	ND	0.952	04/19/06	04/25/06	
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 %				



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ORGANOCHLORINE PESTICIDES (EPA 608)

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



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METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1227-01 (Outfall 002 - W Reporting Units: ug/l	ater) - cont.								
Copper	EPA 200.8	6D13067	0.25	2.0	2.3	1	04/13/06	04/15/06	В
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	



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INORGANICS

INORGANICS									
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1227-01 (Outfall 002 - Wa	ater) - 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 - Wa Reporting Units: ml/l/hr	ater)								
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 - Wa Reporting Units: NTU	ater)								
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 - Wa Reporting Units: ug/l	ater)								
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 - Wa Reporting Units: umhos/cm		(D12071	1.0	1.0	720		04/12/06	0.4/1.2/07	
Specific Conductance	EPA 120.1	6D13071	1.0	1.0	720	1	04/13/06	04/13/06	

Sampled: 04/11/06

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MWH-Pasadena/Boeing

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SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 002 (IPD1227-01) - Wate	Hold Time (in days) r	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



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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	MDI.	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
·		Limit	MIDL	Cints	Level	Result	70KEC	Limits	KI D	Limit	Quanners
Batch: 6D17002 Extracted: 04/17/00	<u>5</u>										
Blank Analyzed: 04/17/2006 (6D17002-B	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-BS	51)										
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			
Del Mar Analytical - Irvine											

Michele Chamberlin Project Manager



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 Limit	Data Qualifiers
·		Limit	NIDE	Circs	Ecver	resure	/ UILLE	Limits	I L	Ziiiii	Quantiers
Batch: 6D17002 Extracted: 04/17/06	<u>) </u>										
LCS Analyzed: 04/17/2006 (6D17002-BS	(1)										
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 (6D1	-			_		rce: IPD1					
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			M1
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			
N	((D15002 N	(CD4)			C	IDD	225 01				
Matrix Spike Dup Analyzed: 04/17/2006		,	0.20	/1		rce: IPD1		60.125	0	20	
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	

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



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)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D17002 Extracted: 04/17/06	_										
Matrix Spike Dup Analyzed: 04/17/2006	(6D17002-MS	SD1)			Sou	rce: IPD1	1227-01				
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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METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D19072 Extracted: 04/19	9/06										
Blank Analyzed: 04/24/2006 (6D1907	2-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)										M-NR1
Bis(2-ethylhexyl)phthalate	12.1	5.0	1.7	ug/l	10.0		121	60-130			
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 (6D1	9072-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	J
Pentachlorophenol	5.94	8.0	0.10	ug/l	10.0		59	50-120	22	25	J
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			

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 002

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

Report Number: IPD1227

METHOD BLANK/QC DATA

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

Reporting Spike Source %REC RPD Data
Analyte Result Limit MDL Units Level Result %REC Limits RPD Limit 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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Report Number: IPD1227

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

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D17091 Extracted: 04/17/06	<u>.</u>										
Blank Analyzed: 04/18/2006 (6D17091-B	LK1)										
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-BS	1)										M-NR1
alpha-BHC	0.447	0.010	0.0010	ug/l	0.500		89	45-120			
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 (6D1709	1-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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Report Number: IPD1227

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METHOD BLANK/QC DATA

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D13067 Extracted: 04/13/06	_										
Blank Analyzed: 04/15/2006 (6D13067-Bl	LK1)										
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-BS)	1)										
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 (6D1)	3067-MS1)				Sou	rce: IPD1	1055-01				
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-MS	D1)			Sou	rce: IPD1	1055-01				
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-B	L K1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/13/2006 (6D13068-BS)	1)										
Mercury	8.26	0.20	0.050	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 04/13/2006 (6D1)	3068-MS1)				Sou	rce: IPD()955-05				
Mercury	8.23	0.20	0.050	ug/l	8.00	ND	103	70-130			
Matrix Spike Dup Analyzed: 04/13/2006	(6D13068-MS	D 1)			Sou	rce: IPD()955-05				
Mercury	8.23	0.20	0.050	ug/l	8.00	ND	103	70-130	0	20	



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Report Number: IPD1227

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METHOD BLANK/QC DATA

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D12138 Extracted: 04/12/06	- <u>) </u>										
Blank Analyzed: 04/12/2006 (6D12138-B	· ·										
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-BS	1)										
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	<u>.</u>										
Blank Analyzed: 04/13/2006 (6D13003-B	LK1)										
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 04/13/2006 (6D13003-BS	1)										
Surfactants (MBAS)	0.236	0.10	0.044	mg/l	0.250		94	90-110			
Matrix Spike Analyzed: 04/13/2006 (6D1	3003-MS1)				Sou	rce: IPD	1033-01				
Surfactants (MBAS)	0.241	0.10	0.044	mg/l	0.250	ND	96	50-125			
Matrix Spike Dup Analyzed: 04/13/2006	(6D13003-M	ISD1)			Sou	rce: IPD	1033-01				
Surfactants (MBAS)	0.242	0.10	0.044	mg/l	0.250	ND	97	50-125	0	20	
Batch: 6D13054 Extracted: 04/13/06	<u>.</u>										
Blank Analyzed: 04/13/2006 (6D13054-B	LK1)										
Oil & Grease	ND	5.0	0.94	mg/l							



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Report Number: IPD1227

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

METHOD BLANK/QC DATA

	D 1/	Reporting	MDI	T T •4	Spike	Source	A/ DEG	%REC	DDD	RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D13054 Extracted: 04/13/06	_										
LCS Analyzed: 04/13/2006 (6D13054-BS	1)										M-NR1
Oil & Grease	16.0	5.0	0.94	mg/l	20.0		80	65-120			171-17171
LCCD A 1 1 04/12/2007 (CD1207				8							
LCS Dup Analyzed: 04/13/2006 (6D1305) Oil & Grease	4-BSD1) 16.8	5.0	0.04	/1	20.0		84	65-120	5	20	
On & Grease	10.8	5.0	0.94	mg/l	20.0		84	03-120	3	20	
Batch: 6D13071 Extracted: 04/13/06	<u></u>										
D P 4 4 1 1 04/12/2007 (CD1207	1 DUD1)				G	IDD	1055 01				
Duplicate Analyzed: 04/13/2006 (6D1307	,	1.0	1.0	1 /	Sou	rce: IPD1	1022-01		0	_	
Specific Conductance	449	1.0	1.0	umhos/cm		450			0	5	
Batch: 6D13076 Extracted: 04/13/06	<u> </u>										
DI I A I I A A/12/2006 (CD12056 D	T TZ4)										
Blank Analyzed: 04/13/2006 (6D13076-B	· ·	10	10								
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/13/2006 (6D13076-BS	1)										
Total Dissolved Solids	994	10	10	mg/l	1000		99	90-110			
Duplicate Analyzed: 04/13/2006 (6D1307	6-DUP1)				Sou	rce: IPD1	1055-01				
Total Dissolved Solids	250	10	10	mg/l		250			0	10	
Batch: 6D13078 Extracted: 04/13/06											
Buttin ob 10070 Extracteur o 1710/00	_										
Blank Analyzed: 04/18/2006 (6D13078-B	LK1)										
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							



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Report Number: IPD1227

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

METHOD BLANK/QC DATA

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Batch: 6D13078 Extracted: 04/13/06			.,IDE	Cints	Level	resure	/VILLE	Limits	III D	Limit	Quantities
Buten, ab 100/0 Extracted, a 1/10/00	_										
LCS Analyzed: 04/18/2006 (6D13078-BS	1)										
Biochemical Oxygen Demand	203	100	30	mg/l	198		103	85-115			
LCS Dup Analyzed: 04/18/2006 (6D1307	8-BSD1)										
Biochemical Oxygen Demand	205	100	30	mg/l	198		104	85-115	1	20	
Batch: 6D13084 Extracted: 04/13/06	<u>-</u>										
Blank Analyzed: 04/13/2006 (6D13084-B	LK1)										
Turbidity	0.0400	1.0	0.040	NTU							J
Duplicate Analyzed: 04/13/2006 (6D1308	4-DUP1)				Sou	rce: IPD1	1174-01				
Turbidity	0.600	1.0	0.040	NTU		0.64			6	20	J
Batch: 6D13102 Extracted: 04/13/06	<u> </u>										
Blank Analyzed: 04/14/2006 (6D13102-B	LK1)										
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 04/14/2006 (6D13102-BS	1)										
Total Cyanide	188	5.0	2.2	ug/l	200		94	90-110			
Matrix Spike Analyzed: 04/14/2006 (6D1	3102-MS1)				Sou	rce: IPD(0421-01				
Total Cyanide	193	5.0	2.2	ug/l	200	ND	96	70-115			
Matrix Spike Dup Analyzed: 04/14/2006	(6D13102-M	ISD1)			Sou	rce: IPD(0421-01				
Total Cyanide	187	5.0	2.2	ug/l	200	ND	94	70-115	3	15	



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

METHOD BLANK/QC DATA

	B 1	Reporting	MAN	T T •.	Spike	Source	A/DEG	%REC	DDD	RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D13122 Extracted: 04/13/06	_										
DI 1 4 1 1 04/12/2007 (CD12122 D	T 171)										
Blank Analyzed: 04/13/2006 (6D13122-B	,	0.50	0.20	п							
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 04/13/2006 (6D13122-BS	1)										
Ammonia-N (Distilled)	10.6	0.50	0.30	mg/l	10.0		106	80-115			
Matrix Spike Analyzed: 04/13/2006 (6D1	3122-MS1)				Sou	rce: IPD1	1227-01				
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-M	ISD1)			Sou	rce: IPD1	1227-01				
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	<u>-</u>										
Blank Analyzed: 04/15/2006 (6D15042-B	LK1)										
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/15/2006 (6D15042-BS	1)										
Total Suspended Solids	969	10	10	mg/l	1000		97	85-115			
Duplicate Analyzed: 04/15/2006 (6D1504	2-DUP1)				Sou	rce: IPD1	1072-01				
Total Suspended Solids	290	10	10	mg/l		290			0	10	
Batch: 6D17066 Extracted: 04/17/06	<u>.</u>										
Blank Analyzed: 04/17/2006 (6D17066-B	LK1)										
Perchlorate	ND	4.0	0.80	ug/l							



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Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 002

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

METHOD BLANK/QC DATA

]	Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D17066 Extracted: 04/17/06	-										
LCS Analyzed: 04/17/2006 (6D17066-BS1	1)										
Perchlorate	49.4	4.0	0.80	ug/l	50.0		99	85-115			
Matrix Spike Analyzed: 04/17/2006 (6D1	7066-MS1)				Sou	rce: IPD1	634-14				
Perchlorate	48.3	4.0	0.80	ug/l	50.0	3.2	90	80-120			
Matrix Spike Dup Analyzed: 04/17/2006	(6D17066-MSI	D1)			Sou	rce: IPD1	634-14				
Perchlorate	48.1	4.0	0.80	ug/l	50.0	3.2	90	80-120	0	20	



Pasadena, CA 91101

Project ID: Routine Outfall 002

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Attention: Bronwyn Kelly

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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	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



Project ID: Routine Outfall 002

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Attention: Bronwyn Kelly

Pasadena, CA 91101

DATA QUALIFIERS AND DEFINITIONS

В 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.

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

RPD Relative Percent Difference

Sampled: 04/11/06



MWH-Pasadena/Boeing

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPD1227 Received: 04/12/06

Attention: Bronwyn Kelly

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 CHAIN OF CUSTODY FORM

LTZ10d

Comments Field readings: 24 TAT 24 TAT 24 TAT Temp = 6C Page 1 of トン =Hd R~ Sample Integrify: (Check) Intact V 10 Days Perchlorate Only 72 Hours Turn around Time: (check) bentachlorophenol (EPA 625) ethylhexyl)phthalate, NDMA Metals Only 72 Hours \times Dinitrotoluene, Bis(2-2,4,6 Trichlorophenol, 2,4 × 24 Hours 72 Hours Alpha BHC (608) 48 Hours ANALYSIS REQUIRED × **N-sinommA** Conductivity × Turbidity, TDS, TSS, Perchlorate 1955 × CI-' 204' NO3+NO5-N' × Surfactants (MBAS) BOD2(S0 degrees C) × 4-12-06 Cyanide (total recoverable) Oil & Grease (EPA 413.1) Date/Time: Date/Time: Date/Time: TCDD (sud all congeners) × AOC2 624 + xylenes Settleable Solids Сп' Ьр' Нд' × Total Recoverable Metals: 14A, 14B, 12A, 12B 13A, 13B IOA, 10B 9A, 9B 3A, 3B, 3C 4A, 4B 5A, 5B 88 140 " Bottle * ထ ₹ ğ, Preservative Received By Received By Received By Project: Boeing-SSFL NPDES Routine Outfall 002 H2S04 NaOH None None HN03 None None None None None None ᄗ 오 오 (626) 568-6515 Phone Number (626) 568-6691 Fax Number: Sampling Date/Time 1/42 Date/Time: Date/Time: 4/"/10 # of Cont. Project Manager: Bronwyn Kelly N 300 North Lake Avenue, Suite 1200 1L Amber 1L Amber Poly-500 ml Poly-1 liter Poly-500 mí Poly-500 ml Poly-500 Sample Container Matrix Type 1L Amber Poly-500 VOAs Glass-Amber Poly-1 liter Poly-1 liter Poly-1 VOAs diens, R Sampler: Berns yes, R. Client Name/Address; **MWH-Pasadena** Pasadena, CA 91101 ≥ ≥ ≥ ⋛ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ ≥ Relinquished By Sample Description Outfall 002 Outfall 002 Outfail 002 Outfall 002 Outfall 002 Outfall 002 Outfall 002 Outfall 002 Trip Blank Outfall 002. Outfall 002 Outfall 002 Outfall 002 Outfall 002 Outfall 002



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

Project 27594 Page 3 of 229

NPDES - 234

Method Blank				EPA Method 1613
Matrix: Aqueous	QC Batch No.:	7951	Lab Sample: 0-MB001	
Size:	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
CDD	0.00000103		<u>IS</u> 13C-2,3,7,8-TCDD	69.9 25 - 164
טכ	0.00000112		13C-1,2,3,7,8-PeCDD	62.3 25 - 181
) 10 % (10	0.00000217		13C-1,2,3,4,7,8-HxCDD	67.3 32 - 141
	0.00000206		13C-1,2,3,6,7,8-HxCDD	
1.2.3.7.8.9-HxCDD ND	0.00000202		13C-1,2,3,4,6,7,8-11pCDD	
1.2.3.4.6.7.8-HpCDD ND	0.00000235		13C-OCDD	
OCDD	0.00000532		13C-2,3,7,8-TCDF	
2.3.7.8-TCDF	0.00000121		13C-1,2,3,7,8-PeCDF	
1.2.3.7.8-PeCDF ND	0.00000198		13C-2,3,4,7,8-PeCDF	
2.3.4.7.8-PeCDF ND	0.00000190		13C-1,2,3,4,7,8-HxCDF	
1.2.3.4.7.8-HxCDF	0.000000649		13C-1,2,3,6,7,8-HxCDF	
1.2.3.6.7.8-HxCDF ND	0.000000602		13C-2,3,4,6,7,8-HxCDF	
2.3.4.6.7.8-HxCDF ND	0,000000650		13C-1,2,3,7,8,9-HxCDF	
1 2 3 7 8 9-HxCDF ND	0.00000103		13C-1,2,3,4,6,7,8-HpCDF	
12.3.4.6.7.8-HpCDF	0.00000122		13C-1,2,3,4,7,8,9-HpCDF	
	0.00000155		13C-OCDF	47.8 1/-15/
OCDF	0.00000560		CKS 3/CI-2,3,7,8-1 CDD	03.1 32-17/
Totals			Footnotes	
Total TCDD ND	0.00000103		a. Sample specific estimated detection limit.	
Total PeCDD	0.00000112	***************************************	b. Estimated maximum possible concentration.	(A) 《 (A)
Total HxCDD	0.00000207		c. Method detection limit.	
Total HpCDD	0.00000235		d. Lower control limit e upper control limit.	
	0.00000121			
	0.00000194			
Total HxCDF ND	0.00000136			
ipopi			Annoused By: Martha M Maier	Jaier 26-Apr-2006 15:24
Analyst: MAS			Approved by. Ivial tila 1v1. Iv	

cours QC Barch No. 7951 Lab Sample: 0-OPR001 1L Date Txtracted 20-Apri-06 Date Analyzed DB-5: 24-Apri-06 Spike Conc. Conc. (ng/mL) OPR Limits Labeled Standard \$0.0 49.1 35 - 71 13C-12,37,8-PeCDD \$0.0 49.2 35 - 82 13C-1,23,47,8-PeCDD \$0.0 49.2 38 - 67 13C-1,23,47,8-HxCDD \$0.0 52.0 32 - 81 13C-1,23,47,8-HxCDD \$0.0 51.5 35 - 70 13C-0CDD \$0.0 49.2 35 - 70 13C-1,23,47,8-PeCDF \$0.0 46.2 75 - 15.8 13C-1,23,47,8-PeCDF \$0.0 46.2 40 - 67 13C-2,37,8-PeCDF \$0.0 46.2 40 - 67 13C-1,23,47,8-PeCDF \$0.0 48.7 34 - 80 13C-1,23,47,8-PeCDF \$0.0 48.7 36 - 67 13C-1,23,47,8-PeCDF \$0.0 48.7 36 - 67 13C-1,23,46,7,8-HxCDF \$0.0 48.7 36 - 67 13C-1,23,46,							
Spike Conc. Conc. (ng/mL) OPR Limits Labeled Standard DD 50.0 49.1 35 - 71 13C-1,2,3,7,8-PCDD CDD 50.0 49.1 35 - 71 13C-1,2,3,7,8-PCDD CDD 50.0 49.2 38 - 67 13C-1,2,3,4,7,8-HxCDD CDD 50.0 52.0 32 - 81 13C-1,2,3,4,7,8-HxCDD 4pCDD 50.0 51.5 35 - 70 13C-1,2,3,7,8-PcCDF DF 50.0 46.2 7.5 - 15.8 13C-1,2,3,7,8-PcCDF DF 50.0 47.5 34 - 80 13C-1,2,3,7,8-PcCDF CDF 50.0 47.5 34 - 80 13C-1,2,3,4,7,8-PcCDF CCDF 50.0 48.7 36 - 67 13C-1,2,3,4,7,8-PcCDF CCDF 50.0 48.7 36 - 67 13C-1,2,3,4,6,7,8-HxCDF CCDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF CCDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF ACDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF		QC.	No.: cled:	7951 20-Apr-06	Lab Sample: 0-OPR001 Date Analyzed DB-5: 24-Apr-06	Date Analyzed DB-225:	DB-225: NA
DD 50.0 49.1 35 - 71 13C-1,2,3,7,8-PeCDD CDD 50.0 49.1 35 - 71 13C-1,2,3,7,8-PeCDD CDD 50.0 49.2 38 - 67 13C-1,2,3,4,7,8-HxCDD CDD 50.0 49.2 38 - 67 13C-1,2,3,4,7,8-HxCDD CDD 50.0 52.0 32 - 81 13C-1,2,3,4,6,7,8-HpCDD HpCDD 50.0 51.5 35 - 70 13C-0,2,3,7,8-TCDF DF 50.0 46.2 40 - 67 13C-2,3,7,8-PeCDF DF 50.0 46.2 40 - 67 13C-2,3,4,7,8-PeCDF CCDF 50.0 48.7 36 - 67 13C-1,2,3,4,7,8-HxCDF CCDF 50.0 48.7 36 - 67 13C-1,2,3,4,6,7,8-HxCDF CCDF 50.0 48.7 35 - 78 13C-1,2,3,4,6,7,8-HxCDF CCDF 50.0 48.7 35 - 78 13C-1,2,3,4,6,7,8-HxCDF ACDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF		e Conc. Col		OPR Limits	Labeled Standard	%R	TCF-NCF
DD 50.0 49.1 35 - 71 13C-1,2,3,7,8-PeCDD CDD 50.0 49.2 35 - 82 13C-1,2,3,4,7,8-HxCDD CDD 50.0 49.2 38 - 67 13C-1,2,3,4,7,8-HxCDD CDD 50.0 51.5 35 - 70 13C-1,2,3,4,6,7,8-HpCDD HpCDD 50.0 51.5 78 - 144 13C-2,3,7,8-TCDF DF 50.0 46.2 40 - 67 13C-2,3,7,8-PeCDF OFF 50.0 46.2 40 - 67 13C-1,2,3,4,7,8-PeCDF CCDF 50.0 48.7 36 - 67 13C-1,2,3,4,7,8-PeCDF CCDF 50.0 48.7 36 - 67 13C-1,2,3,4,7,8-PxCDF CCDF 50.0 49.6 42 - 65 13C-1,2,3,4,8-PxCDF ACDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF ACDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF ACDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF		10.0	10.2	6.7 - 15.8		56.3	25 - 164
CDD 50.0 50.2 35 - 82 13C-1,2,3,4,7,8-HxCDD CDD 50.0 49.2 38 - 67 13C-1,2,3,4,7,8-HxCDD CDD 50.0 52.0 32 - 81 13C-1,2,3,4,7,8-HpCDD IpCDD 50.0 51.5 35 - 70 13C-0CDD IpCDD 78 - 144 13C-2,3,7,8-TCDF 13C-2,3,7,8-PeCDF IpcDF 50.0 46.2 40 - 67 13C-1,2,3,7,8-PeCDF ICDF 50.0 47.5 34 - 80 13C-1,2,3,4,7,8-HxCDF ICDF 50.0 48.7 36 - 67 13C-1,2,3,6,7,8-HxCDF ICDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF ICDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF	1,2,3,7,8-PeCDD	50.0	49.1	35 - 71	13C-1,2,3,7,8-PeCDD	52.2	25 - 181
CDD 50.0 49.2 38 - 67 13C-1,2,3,6,7,8-HxCDD CDD 50.0 52.0 32 - 81 13C-1,2,3,4,6,7,8-HpCDD IpCDD 50.0 51.5 35 - 70 13C-0,2,3,7,8-TCDF IpCDD 7.5 - 15.8 13C-2,3,7,8-TCDF DF 50.0 46.2 40 - 67 13C-2,3,4,7,8-PeCDF CDF 50.0 48.7 36 - 67 13C-1,2,3,4,7,8-HxCDF CDF 50.0 48.7 36 - 67 13C-1,2,3,4,7,8-HxCDF CDF 50.0 48.7 35 - 78 13C-1,2,3,4,7,8-HxCDF CDF 50.0 48.7 35 - 78 13C-1,2,3,4,6,7,8-HxCDF CDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF	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
CDD 50.0 52.0 32-81 13C-1,2,3,4,6,7,8-HpCDD IpCDD 50.0 51.5 35-70 13C-0CDD 100 9.66 7.5-15.8 13C-2,3,7,8-PeCDF DF 50.0 46.2 40-67 13C-1,2,3,4,7,8-PeCDF CDF 50.0 47.5 34-80 13C-1,2,3,4,7,8-PeCDF CDF 50.0 48.7 36-67 13C-1,2,3,4,7,8-PeCDF CDF 50.0 48.7 36-67 13C-1,2,3,4,7,8-PeCDF CDF 50.0 48.7 35-78 13C-1,2,3,4,7,8-PeCDF CDF 50.0 48.7 35-78 13C-1,2,3,4,7,8-PeCDF CDF 50.0 48.7 35-78 13C-1,2,3,4,6,7,8-PeCDF	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
tpCDD 50.0 51.5 35 - 70 13C-C3,7,8-TCDF 100 101 78 - 144 13C-2,3,7,8-TCDF 10.0 9.66 7.5 - 15.8 13C-1,2,3,7,8-PeCDF DF 50.0 46.2 40 - 67 13C-2,3,4,7,8-PeCDF CDF 36.0 48.7 36 - 67 13C-1,2,3,4,7,8-HxCDF CDF 50.0 48.7 36 - 67 13C-1,2,3,6,7,8-HxCDF CDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF CDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF	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
DF 50.0 101 78 - 144 13C-2,3,7,8-TCDF 13C-1,2,3,7,8-PeCDF 13C-1,2,3,7,8-PeCDF 13C-2,3,4,7,8-PeCDF 13C-2,3,4,7,8-PeCDF 13C-2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,7,8,9-PeCDF 13C-1,2,3,7,8,9-	1.2.3.4.6.7.8-HpCDD	50.0	51.5	35 - 70	13C-OCDD	36.7	17 - 157
DF 50.0 9.66 7.5-15.8 13C-2,3,4,7,8-PeCDF 13C-2,3,4,7,8-PeCDF 13C-2,3,4,7,8-PeCDF 13C-2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,4,7,8-PeCDF 13C-1,2,3,7,8,9-PeCDF 13C-1,2,		100	101	78 - 144	13C-2,3,7,8-TCDF	61.9	24 - 169
DF 50.0 46.2 40 - 67 13C-2,3,4,7,8-PeCDF DF 50.0 47.5 34 - 80 13C-1,2,3,4,7,8-HxCDF CDF 50.0 48.7 36 - 67 13C-1,2,3,6,7,8-HxCDF CDF 50.0 49.6 42 - 65 13C-2,3,4,6,7,8-HxCDF CCDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF		10.01	99.6	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	52.3	24 - 185
50.0 47.5 34 - 80 13C-1,2,3,4,7,8-HxCDF 36 - 67 13C-1,2,3,6,7,8-HxCDF 36 - 67 13C-1,2,3,6,7,8-HxCDF 36 - 67 13C-2,3,4,6,7,8-HxCDF 35 - 78 13C-1,2,3,7,8,9-HxCDF	○F	50.0	46.2	40 - 67	13C-2,3,4,7,8-PeCDF	56.1	21 - 178
DF 50.0 48.7 36 - 67 13C-1,2,3,6,7,8-HxCDF DF 50.0 49.6 42 - 65 13C-2,3,4,6,7,8-HxCDF DF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF		50.0	47.5	34 - 80	13C-1,2,3,4,7,8-HxCDF	49.5	26 - 152
50.0 49.6 42 - 65 13C-2,3,4,6,7,8-HxCDF 50.0 48.7 35 - 78 13C-1,2,3,7,8,9-HxCDF	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
50.0 48.7 35.78 13C-1,2,3,7,8,9-HxCDF	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
50.0 48.1 39 - 65 13C-1,2,3,4,6,7,8-HpCDF	12.3.7.8.9-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	\$1.4	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	49.7	26 - 138
	12.3.4.7.8.9-HpCDF	50.0	50.4	39 - 69	13C-OCDF	40.6	17 - 157
100	OCDF	100	104	63 - 170	CRS 37Cl-2,3,7,8-TCDD	67.5	35 - 197

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

Analyst: MAS

Sample 1D: IPD1227-01						EP	EPA Method 1613
Client Data Name: Project: Project: 1PD 1227 Date Collected: 11-Apr-06 Time Collected: 1142		Sample Data Matrix: Sample Size	Aqueous 0.998 L	Laboratory Data Lab Sample: QC Batch No.: Date Analyzed DB-5:	27594-001 7951 24-Apr-06	Date Received: Date Extracted Date Analyzed DB-225	14-Apr-06 20-Apr-06 25: NA
	а	EMPC ^b	Qualifiers	Labeled Standard	lard	%R LCL-UCL ^d	L ^d Qualifiers
CCDD ND	0.00000153	3		<u>IS</u> 13C-2,3,7,8-TCDD	DD		14.
ON OC	0.00000143	ж 4		13C-1,2,3,7,8-PeCDD 13C-1,2,3,4,7,8-HxCDD	eCDD -HxCDD	56.9 32 - 141	-
	0.00000282	. 2		13C-1,2,3,6,7,8-HxCDD	-HxCDD		0;
ND AND AND AND AND AND AND AND AND AND A	0.00000272	7		13C-1,2,3,4,6,7,8-HpCDD	,8-HpCDD	79.0 23 140 59.4 17 - 157	012
6,7,8-HpCDD ND	0.0000050		ſ	13C-2,3,7,8-TCDF	DF		69
	0.00000161			13C-1.2,3,7,8-PeCDF	PeCDF		35
	0.00000193	3		13C-2,3,4,7,8-PeCDF	eCDF		82
ND	0.00000187	_	4	13C-1,2,3,4,7,8-HxCDF	-HxCDF	69.6 26 - 152 74.8 26 - 123	33
OF ND	0.000000988			13C-1,2,3,6,7,8-HXCDF	-HXCDF		98
ND	0.0000000985	85	33 J	13C-1,2,3,7,8,9-HxCDF	-tracer		47
ON CIN	0.00000153	3 * * m		13C-1,2,3,4,6,7,8-HpCDF	7,8-HpCDF	70.9 28 - 143	43
	0.00000174	4		13C-1,2,3,4,7,8,9-HpCDF	3,9-нрСDF		38
QX CX	0.00000188			13C-OCDF CRS 37CI-2,3,7,8-TCDD	CDD	64.5 17 - 157 84.3 35 - 197	97
				Footnotes			
ND STATE OF THE ST	0.00000153	22		Sample specific estimated detection limit. b. Estimated maximum possible concentration.	ossible concentration.		
	0.00000279	62.19		c. Method detection limit. d. Lower control limit = upper control limit	L upper control limit		
	0.00000161						
QX X	0.00000113	80					
				Approved By:	Martha M. Maier	aier 26-Apr-2006 15:24	5 15:24

Analyst: MAS

APPENDIX

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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

TEO Toxic Equivalency

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

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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 Oklahorna	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

Project 27594 Page 9 of 229



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

RECEIVING LABORATORY:

2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120

Ph (702) 798-3620

Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPD1227

Del Mar Analytical - Irvine 17461 Derian Avenue. Suit Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele C	e 100	Alta Analytical - SU 1104 Windfield Way El Dorado Hills, CA Phone :(916) 933-16 Fax: (916) 673-0106	1.95762 1.95762	
Standard TAT is requeste	ed unless specific due date is request Expiration	ted => Due Date:	Initia	ls:
Sample ID: IPD1227-01 W. 1613-Dioxin-HR-Alta EDD + Level 4		Instant Nofication J flags, 17 congeners, no T Excel EDD email to pm, l	TEQ,ug/L,sub=Alta Include Std logs for Lvl IV	
Containers Supplied: 1 L Amber (IPD1227-01G) 1 L Amber (IPD1227-01H)				
	•	·		
<u></u>	CABA	PLE INTEGRITY:		
All containers intact:		gree: Yes No	Samples Received On Ice:: [Samples Received at (temp):	Yes No
Colin Clarente Released By	24/13/06 Time	Bettera J. Be Received By	medict 4/14/06	0900 Time
Released By	Date Time	Received By	Date	Time

SAMPLE LOG-IN CHECKLIST

Alta Project #:	27	594		

	Date/Time			Initials	s:	Locati	ion: WK	2-2
Samples Arrival:	4/14/06	09	80	B	QB	Shelf/	Rack:	
	Date/Time	20-	-	Initials	s: 0 1 1	Locati	ion: WI	2-2
Logged In:	4/14/06°	045.	ン	Y	310	Shelf/	Rack:	2
Delivered By:	FedEx	UPS	,	Cal	DHL	1	Hand elivered	Other
Preservation:	lce	E	Blue I	се	Dry l	ce	No	ne
Temp °C O°C	Ti	me: <i>(</i>	290)5		Thern	nometer ID	: DT-20

					YES	NO	NA
Adequate Sample Volume Received?					V		
Holding Time Acceptable?					V		
Shipping Container(s) Intact?					V		
Shipping Custody Seals Intact?					V		
Shipping Documentation Present?					V		
Airbill Trk # 79	08	8600	3313		/		
Sample Container Intact?					V		,
Sample Custody Seals Intact?							V
Chain of Custody / Sample Documer	itation P	resent?			V	ļ	
COC Anomaly/Sample Acceptance F	orm cor	npleted?			<u> </u>	V	
If Chlorinated or Drinking Water Sam	ples, Ac	ceptable P	reservation?				/
Na ₂ S ₂ O ₃ Preservation Documented?			coc		npie ainer (. No	one
Shipping Container	Alta	Client	Retain	Ref	turn	Dis	ose

Comments:

APPENDIX G

Section 8

Outfall 002, April 11, 2006

MECX Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA MECX, LLC 12260 East Vassar Drive Suite 500 SDG No. IPD1227 Lakewood, CO 80226 Laboratory Alta Analytical Reviewer E. Wessling Analysis/Method Dioxins/Furans

ACT	TION ITEMS ^a	
	Case Narrative	
	Deficiencies	
2.	Out of Scope	
	Analyses	
	5.0	
3.	Analyses Not Conducted	
4.	Missing Hardcopy	
	Deliverables	
5.	Incorrect Hardcopy	
	Deliverables	
6.	Deviations from Analysis	Qualifications were assigned for the following:
	Protocol, e.g.,	- the result between the RL and the MDL was 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	
CO	MMENTS ^b	



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

Project: SDG: Analysis

NPDES IPD1227 D/F

DATA VALIDATION REPORT

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:

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.

Project: SDG: NPDES IPD1227

Analysis:

D/F

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 002	IPD1227-01	27594-001	Water	1613

DATA VALIDATION REPORT

SDG: Analysis:

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

Sample Preservation, Handling, and Transport 2.1.1

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.

Project: SDG:

NPDES IPD1227

D/F

DATA VALIDATION REPORT

Analysis:

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 ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤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.

Project:

NPDES IPD1227

DATA VALIDATION REPORT

SDG: Analysis:

D/F

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.

Project: IPD	Mar Analytical, Irvine 01227 Apr-06 2		Sample Data Matrix: Sample Size:	Aqueous 0.998 L	Laboratory Data Lab Sample: QC Batch No.: Date Analyzed DB-5:	27594-001 7951 24-Apr-06		sceived: stracted: nalyzed DB-225:	14-Apr-06 20-Apr-06 NA
Analyte	Conc. (ug/L)	DL a	EMPC ^b	Qualifiers	Labeled Stan	dard	%R	LCL-UCLd	Qualifiers
2,3,7,8-TCDD	ND	0.000001	53		IS 13C-2,3,7,8-TC	DD	64.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000001	43		13C-1,2,3,7,8-F	PeCDD	58.1	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.000002	84		13C-1,2,3,4,7,8	-HxCDD	66.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.000002	82		13C-1,2,3,6,7,8	-HxCDD	71.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.000002	72		13C-1,2,3,4,6,7	,8-HpCDD	79.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.000005	60		13C-OCDD		59.4	17 - 157	
OCDD	0.0000122			J	13C-2,3,7,8-TC	DF	68.1	24 - 169	
2,3,7,8-TCDF	ND	0.000001	61		13C-1,2,3,7,8-P	eCDF	61.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000001	93		13C-2,3,4,7,8-P	eCDF	59.4	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000001	87		13C-1,2,3,4,7,8	-HxCDF	69.6	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000	988		13C-1,2,3,6,7,8	-HxCDF	74.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000	985		13C-2,3,4,6,7,8	-HxCDF	71.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000001	09		13C-1,2,3,7,8,9	-HxCDF	69.6	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000001	53		13C-1,2,3,4,6,7,	8-HpCDF	70.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000001	74		13C-1,2,3,4,7,8,	,9-HpCDF	72.7	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000001	88		13C-OCDF		64.5	17 - 157	
OCDF	ND	0.000004	40		CRS 37Cl-2,3,7,8-TC	CDD	84.3	35 - 197	
Totals					Footnotes				
Total TCDD	ND	0.000001	53		a. Sample specific estimate	ed detection limit.			
Total PeCDD	ND	0.0000014	43		b. Estimated maximum pos	ssible concentration.			
Total HxCDD	ND	0.000002	79		c. Method detection limit.				
Total HpCDD	ND	0.0000056	50		d. Lower control limit - up	per control limit.			
Total TCDF	ND	0.0000016	51		NAME OF THE PROPERTY OF THE PARTY OF THE PAR				
Total PeCDF	ND	0.0000019	90						
Total HxCDF	ND	0.0000011	13						
Total HpCDF	ND	0.0000018	30						

Analyst: MAS

Approved By:

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



CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MECX			Package ID:	B4MT84
12269 East Vassar Drive			•	1261.001D.01
Aurora, CO 80014			SDG No.:	IPD1227
		No.	of Analyses:	1
Laboratory: Del Mar	Analytical		Date: June 2	3, 2006
Reviewer: P. Meeks	3		Reviewer's Si	gnature
Analysis/Method: Metals		_	P. MUD	<u> </u>
ACTION ITEMS ^a			450	
. Case Narrative				
Deficiencies				
2. Out of Scope Analyses				
2. Out of Scope Allalyses				
3. Analyses Not Conducted				
4. Missing Hardcopy				
Deliverables				
5. Incorrect Hardcopy				
Deliverables				
6. Deviations from Analysis	Qualifications were appli	ed fo	or reporting limit	check standard
Protocol, e.g.,	recovery, method blank			
Holding Times	Teodycry, medica blank		oto, and podololo	THEORETON CO.
GC/MS Tune/Inst. Performance				
Calibration				
Method blanks				
Surrogates	NAME OF THE PARTY		and the state of t	
Matrix Spike/Dup LCS				
Field QC				
Internal Standard Performance				
Compound Identification				
Quantitation				
System Performance				
COMMENTS ^b				
a Cuberated and timberate	mosting contract and/or mother di			
 Subcontracted analytical laboratory is not Differences in protocol have been adopted 				equired.



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

Project: NPDES SDG: IPD1227

DATA VALIDATION REPORT Analysis: Metals

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.

 Project:
 NPDES

 SDG:
 IPD1227

 DATA VALIDATION REPORT
 Analysis:
 Metals

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Mathad
Client ID	Laboratory ID	Manx	COC Method
Outfall 002	IPD1227-01	Water	200.8, 245.1

Project: NPDES SDG: IPD1227

DATA VALIDATION REPORT Analysis: Metals

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C at 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.

Project: NPDES SDG: IPD1227

DATA VALIDATION REPORT SDG: IPD1227
Analysis: Metals

2.4 BLANKS

Lead was detected in method blank 6D13067 at 0.0781 μ g/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 time 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 μ g/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 $2.0 \,\mu\text{g/L}$. The reviewer check 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.

Project: **NPDES** SDG: IPD1227

DATA VALIDATION REPORT Analysis: Metals

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 methodspecified 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.



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

Attention: Bronwyn Kelly

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

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 Qualifie	rs
Sample ID: IPD1227-01 (Outfall 002 Reporting Units: ug/l Copper	- Water) - cont. EPA 200.8	6D13067	0.25	2.0	2.3	1	04/13/06	04/15/06	Rew Qual J B	Qual Code I
Lead Mercury	EPA 200.8 EPA 245.1	6D13067 6D13068	0.040 - 0.050 -0.094	1.0 0.20	0.11 ND	1	04/13/06 04/13/06	04/15/06 04/13/06	OJ B, J	B \$,*3

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced,

except in full, without written permission from Del Mar Analytical.

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

LEVEL 1V PM 6/23/00

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC	c ^x			Package ID:	B4PP18
122	69 East Vassar Drive			•	1261.001D.01
Auro	ora, CO 80014			SDG No.:	IPD1227
			No.	of Analyses:	1
	Laboratory: Del Mar A	nalytical	2025	Date: June 2	5, 2006
	Reviewer: L. Calvin			Reviewer's Si	gnaty/e -
	Analysis/Method: Pesticides	s/PCBs by Method 608		C/X/	alven
ACT	TION ITEMS ^a				
	Case Narrative				
	Deficiencies				
2.	Out of Scope Analyses				
3.	Analyses Not Conducted				
4.	Missing Hardcopy				
	Deliverables				
5.	Incorrect Hardcopy				
	Deliverables				
-	Deviations from Analysis	Our life ations were and		for continuing a	alibration O/D autliana
6.	Deviations from Analysis	Qualifications were assi	gnea	for continuing c	alibration %D outliers.
	Protocol, e.g.,				
	Holding Times				
	GC/MS Tune/Inst. Performance Calibration				
	Method blanks				
			_		
	Surrogates Matrix Snike/Dun I CS				
	Matrix Spike/Dup LCS Field QC				
	Internal Standard Performance				
	Compound Identification				
	Quantitation				
	System Performance				
CO	MMENTS ^b				
-	MINIEL TO	1			
	subcontracted analytical laboratory is not m				2.
b D	Differences in protocol have been adopted I	by the laboratory but no action ag	ainst th	ne laboratory is requir	ed.



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

SDG: Analysis:

IPD1227 Pesticides

1. INTRODUCTION

Task Order Title:

NPDES

MECX Project Number:

1261.001D.01

Sample Delivery Group:

IPD1227

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Pesticides

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

L. Calvin

Reviewer: Date of Review:

June 25, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MECX 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.

NPDES

SDG: Analysis: IPD1227 Pesticides

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPD1227-01	Water	608

DATA VALIDATION REPORT

DATA VALIDATION REPORT

Project: SDG: NPDES

Analysis:

Pesticides

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was 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 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) ≤20% and ≤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.

B4PP18

Revision NPDES - 264

Project: SDG: **NPDES**

Analysis:

IPD1227 Pesticides

DATA VALIDATION REPORT

2.3.2

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

Initial 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 ≤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 ≤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.

B4PP18

NPDES

SDG: Analysis: IPD1227 Pesticides

DATA VALIDATION REPORT

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.



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 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Project ID: Routine Outlan 002

Pasadena, CA 91101

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		Data Qualifiers
Sample ID: IPD1227-01 (Outfall 002 - Wate Reporting Units: ug/l	r) - cont.							Vg.	you good
alpha-BHC	EPA 608	6D17091	0.00094	0.0094	ND	0.943	04/17/06	04/18/06 U	JC
Surrogate: Decachlorobiphenyl (45-120%)					86 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					58 %				

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

	69 East Vassar Drive ora, CO 80014		Package ID: <u>B4VO62</u> Task Order: <u>1261.001D.01</u> SDG No.: <u>IPD1227</u> No. of Analyses: 2					
	Laboratory: Del Mar A	nalytical-Irvine	Date: June 25, 2006					
	Reviewer: L. Calvin		Reviewer's Signature					
	Analysis/Method: Volatiles b	by Method 624	Maliru					
ACT	ION ITEMS ^a							
	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 as	signed for continuing calibration %D outliers.					
* Si	ubcontracted analytical laboratory is not m ifferences in protocol have been adopted by	eeting contract and/or method re	equirements.					



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

NPDES

SDG: Analysis: IPD1227 VOCs

1. INTRODUCTION

Task Order Title:

NPDES

MECX Project Number:

1261.001D.01

Sample Delivery Group:

DATA VALIDATION REPORT

IPD1227

Project Manager:

Matrix:

P. Costa Water

Volatiles

Analysis:

QC Level:

Level IV

No. of Samples:

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 MECX 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.

NPDES IPD1227

SDG: Analysis:

VOCs

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPD1227-01	Water	624
Trip Blank	IPD1227-02	Water	624

DATA VALIDATION REPORT

ct: NPDES IPD1227

Analysis:

VOCs

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

DATA VALIDATION REPORT

The samples in this SDG were received at the laboratory within the temperature limits of 4° C $\pm 2^{\circ}$ 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 \geq 0.05, and the %RSDs were \leq 35% or r² values \geq 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.

NPDES

SDG: Analysis:

IPD1227 VOCs

DATA VALIDATION REPORT

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. qualifications were required.

2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

NPDES - 273 B4VO62

NPDES

SDG:

IPD1227

Analysis:

VOCs

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

DATA VALIDATION REPORT

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

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

2.13 SYSTEM PERFORMANCE

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



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 783-0043 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

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Data Analyzed Qualifiers
Sample ID: IPD1227-01 (Outfall 002 - Wa	ter)							rely idla
Reporting Units: ug/l								gral grade
Benzene	EPA 624	6D17002	0.28	2.0	ND	1	04/17/06	04/17/06 LL
Carbon tetrachloride	EPA 624	6D17002	0.28	5.0	ND	1	04/17/06	04/17/06 UJ C
Chloroform	EPA 624	6D17002	0.33	2.0	ND	1	04/17/06	04/17/06 14
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 UT M1C
1,1-Dichloroethene	EPA 624	6D17002	0.42	3.0	ND	1	04/17/06	04/17/06 LL
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 UJ C
Vinyl chloride	EPA 624	6D17002	0.26	5.0	ND	1	04/17/06	04/17/06 LL
Xylenes, Total	EPA 624	6D17002	0.90	4.0	ND	1	04/17/06	04/17/06 1
Surrogate: Dibromofluoromethane (80-120					108 %		01111100	0417/00 V
Surrogate: Toluene-d8 (80-120%)					105 %			
Surrogate: 4-Bromofluorobenzene (80-1209)	%)				108 %			
Sample ID: IPD1227-02 (Trip Blank - Wa	ter)							
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
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
Surrogate: Dibromofluoromethane (80-120	%)				103 %			• [
Surrogate: Toluene-d8 (80-120%)					106 %			
Surrogate: 4-Bromofluorobenzene (80-1209)	V6)				111 %			

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager Lave TV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC	c ^x	Package ID: _B4SV35	
122	69 East Vassar Drive	Task Order: 1261.001D.01	
Auro	ora, CO 80014	SDG No.: IPD1227	
		No. of Analyses: 1	
	Laboratory: Del Mar A		
	Reviewer: L. Calvin	Reviewer's/Signature ·	
	Analysis/Method: Semivola		
ACT	TON ITEMS ^a		
1.	Case Narrative		
	Deficiencies		
2.	Out of Scope Analyses		
3.	Analyses Not Conducted		
	<u></u>		
4.	Missing Hardcopy		
	Deliverables		
5.	Incorrect Hardcopy		
Э.	Deliverables		
	Deliverables		
6.	Deviations from Analysis	Qualifications were assigned for exceeding the extraction holding	
0.	Protocol, e.g.,	time.	,
	Holding Times	unic.	
	GC/MS Tune/Inst. Performance		
	Calibration		
	Method blanks		
	Surrogates		
	Matrix Spike/Dup LCS		
	Field QC		
	Internal Standard Performance		
	Compound Identification		
	Quantitation		
	System Performance		
COI	MMENTS ^b		
9.0	the contract of contract of the state of the		
		neeting contract and/or method requirements. by the laboratory but no action against the laboratory is required.	

 MEC^{X}



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

NPDES

SDG: Analysis: IPD1227 SVOC

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

DATA VALIDATION REPORT

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:

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.

Project: **NPDES** SDG: IPD1227 Analysis: SVOC

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPD1227-01	Water	625

NPDES

SDG: Analysis: IPD1227 SVOC

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

DATA VALIDATION REPORT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C at 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.

Project: SDG: NPDES IPD1227

Analysis:

svoc

2.4 BLANKS

DATA VALIDATION REPORT

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 $2.66~\mu g/L$ 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.

B4SV35 4 Revision 0

NPDES Project: SDG: IPD1227 SVOC

Analysis:

2.8.2 Field Duplicates

DATA VALIDATION REPORT

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 μg/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.



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

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IPD1227

Sampled: 04/11/06

Received: 04/12/06

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

			MDL	Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: IPD1227-01 (Outfall 002 - Water	r)							J.C.	121 H4 vale
Reporting Units: ug/l							-	91	19/00
Bis(2-ethylhexyl)phthalate	EPA 625	6D19072	1.6	4.8	ND	0.952	04/19/06	04/25/06	MI H
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	1 1
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 %				

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA MECX, LLC Package ID <u>B4WPC7</u> 12260 East Vassar Drive Task Order __1261.001D.01 SDG No. IPD1227 Suite 500 Lakewood, CO 80226 No. of Analyses 1 Date: June 26, 2006 Laboratory Del Mar Reviewer E. Wessling Reviewer's Signature Analysis/Method General Chemistry ACTION ITEMS^a Case Narrative Deficiencies 2. Out of Scope Analyses 3. Analyses Not Conducted 4. Missing Hardcopy **Deliverables** Incorrect Hardcopy Deliverables Qualifications were assigned for the following: 6. Deviations from Analysis - the result between the RL and the MDL was estimated Protocol, e.g., - Calibration outliers 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: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPD1227

Prepared by

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

Project: NPDES SDG: IPD1227

Analysis: Gen. Min.

DATA VALIDATION REPORT

1. INTRODUCTION

Task Order Title: NPDES Sampling

MEC^X Project Number: 1261.001D.01

Sample Delivery Group: IPD1227 Project Manager: P. Costa

> Matrix: Water

General Minerals Analysis:

QC Level: Level IV

No. of Samples: 1

No. of Reanalyses/Dilutions:

E. Wessling Reviewer:

Date of Review: June 26, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the MECX 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 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.

B4WCP7 Revision 0

Project: NPDES SDG: IPD1227 Analysis: Gen. Min.

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPD1227-01	Water	General Minerals

2

Project: NPDES SDG: IPD1227 Analysis: Gen. Min.

DATA VALIDATION REPORT

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ± 2°C at 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.

Project: SDG: NPDES IPD1227

Analysis:

Gen. Min.

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

DATA VALIDATION REPORT

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

Pasadena, CA 91101

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Report Number: IPD1227

Sampled: 04/11/06

Received: 04/12/06

Attention: Bronwyn Kelly

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit			Date Extracted	Date Analyzed	Data Qualifie	- 1
Sample ID: IPD1227-01 (Outfall 002 Reporting Units: mg/l	- Water) - cont	·-						13	المالية	(C) E
Ammonia-N (Distilled)	EPA 350.2	6D13122	0.30	0.50	ND	1	04/13/06	04/13/06	ii	
Biochemical Oxygen Demand	EPA 405.1	6D13078	0.59	2.0	0.75	1	04/13/06	04/18/06	_)]	DIKE
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	u	
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	") l	DING
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	W	
Sample ID: IPD1227-01 (Outfall 002 Reporting Units: ml/l/hr Total Settleable Solids	2 - Water) EPA 160.5	6D13058	0.10	0.10	ND	1	04/13/06	04/13/06	V	
Sample ID: IPD1227-01 (Outfall 002 Reporting Units: NTU Turbidity	\$1500 DEP (\$650000)	6D13084		1.0	0.91	1	04/13/06			Die C
Sample ID: IPD1227-01 (Outfall 00) Reporting Units: ug/l	2 - Water)									
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	CLI	C
Sample ID: IPD1227-01 (Outfall 00 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



APPENDIX G

Section 9

Outfall 003, April 04, 2006 Del Mar Analytical Laboratory Report



LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: Routine Outfall 003

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

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 CLIENT ID MATRIX
IPD0259-01 Outfall 003 Water

Reviewed By:

Del Mar Analytical - Irvine Michele Chamberlin

Michele Chamberdin

Project Manager



Pasadena, CA 91101

Project ID: Routine Outfall 003

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Report Number: IPD0259 Received: 04/04/06

Attention: Bronwyn Kelly

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0259-01 (Outfall 003 - Wa	ater)								
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	



Project ID: Routine Outfall 003

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Report Number: IPD0259 Pasadena, CA 91101 Received: 04/04/06

Attention: Bronwyn Kelly

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0259-01 (Outfall 003 - Wa	ter) - 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	



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 003

Sampled: 04/04/06 Report Number: IPD0259 Received: 04/04/06

tention: Bronwan Kelly

SHORT HOLD TIME DETAIL REPORT

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

Sampled: 04/04/06



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 003

Report Number: IPD0259 Received: 04/04/06

METHOD BLANK/QC DATA

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D05074 Extracted: 04/05/06	6										
Blank Analyzed: 04/05/2006 (6D05074-B	SLK1)										
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-BS	51)										
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 (6D0)5074-MS1)				Sou	rce: IPD(0082-01				
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 (6D0)5074-MS2)				Sou	rce: IPD(289-01				
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-M	SD1)			Sou	rce: IPD(0082-01				
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



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-Bl	LK1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/05/2006 (6D05091-BS)	1)										
Mercury	7.98	0.20	0.050	ug/l	8.00		100	85-115			
Matrix Spike Analyzed: 04/05/2006 (6D0	5091-MS1)				Sou	rce: IPD(241-01				
Mercury	8.57	0.20	0.050	ug/l	8.00	0.060	106	70-130			
Matrix Spike Dup Analyzed: 04/05/2006	(6D05091-MSI	D1)			Sou	rce: IPD(241-01				
Mercury	8.73	0.20	0.050	ug/l	8.00	0.060	108	70-130	2	20	



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D04136 Extracted: 04/04/06	_										
	_										
Blank Analyzed: 04/04/2006 (6D04136-B	LK1)										
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-BS	1)										
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 (6D0	4136-MS1)				Sou	rce: IPD(0234-12				
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-MS	5 D 1)			Sou	rce: IPD(0234-12				
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	_										
Dlawk Analyzad 04/05/2006 (CD05046 D	I IZ1)										
Blank Analyzed: 04/05/2006 (6D05046-B	<i>'</i>	5.0	0.04	п							
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/05/2006 (6D05046-BS)	1)										M-NR1
Oil & Grease	16.4	5.0	0.94	mg/l	20.0		82	65-120			
LCS Dup Analyzed: 04/05/2006 (6D05046	6-BSD1)										
Oil & Grease	16.5	5.0	0.94	mg/l	20.0		82	65-120	1	20	



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D05071 Extracted: 04/05/06	-										
Blank Analyzed: 04/05/2006 (6D05071-B	LK1)										
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/05/2006 (6D05071-BS	1)										
Total Dissolved Solids	998	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 04/05/2006 (6D0507	1-DUP1)				Sou	rce: IPD(242-01				
Total Dissolved Solids	16.0	10	10	mg/l		18			12	10	R-4
Batch: 6D07128 Extracted: 04/07/06	_										
Blank Analyzed: 04/07/2006 (6D07128-B	LK1)										
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/07/2006 (6D07128-BS	1)										
Total Suspended Solids	975	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 04/07/2006 (6D0712	8-DUP1)				Sou	rce: IPD(270-01				
Total Suspended Solids	64.0	10	10	mg/l		67			5	10	



Pasadena, CA 91101

Project ID: Routine Outfall 003

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Report Number: IPD0259 Received: 04/04/06

Attention: Bronwyn Kelly

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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	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

Sampled: 04/04/06



MWH-Pasadena/Boeing

Project ID: Routine Outfall 003

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPD0259 Received: 04/04/06

Attention: Bronwyn Kelly

M2

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.

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



Project ID: Routine Outfall 003

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Report Number: IPD0259 Received: 04/04/06 Pasadena, CA 91101

Attention: Bronwyn Kelly

Certification Summary

Del Mar Analytical - Irvine

Matrix	Nelac	California
Water		
Water		
Water	X	X
Water	X	X
Liquid	X	X
Water	X	X
Water	X	X
Water		
Water	X	X
	Water Water Water Water Liquid Water Water Water	Water Water Water X Water X Liquid X Water X Water X Water X Water X Water

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

Del Mar Analytical version 03/6/06 CHAIN OF CUSTODY FORM

POOSSA

unfiltered and unpreserved Tic. Page 1 of 1 Comments analysis Field readings: Sample Integrity: (Check)
Intact 10 Days Temp = 5.7Turn around Time: (check)
24 Hours 5 Days Perchlorate Only 72 Hours ン: | Hd Metals Only 72 Hours 72 Hours 48 Hours ANALYSIS REQUIRED \times St-90 (905.0) × TDS, TSS CI-' 20¢' NO3+NO5-N × 90/rt Date/Time: Date/Time: Date/Time: × Oil & Grease (EPA 413.1) × LCDD (sug all congeners) SP' Cq' Cn' bp' Hd' II × Total Recoverable Metals: 2A, 2B 3A, 3B 4 **6B 2B** Bottle * 1B ₹ Ą ₹, ŞĀ, Received By Received By Received By Preservative Boeing-SSFL NPDES Routine Outfall 003 HN03 HN03 None None None Stormwater at RMHF None ᄗ (626) 568-6515 Phone Number (626) 568-6691 0289 (08) for hh Fax Number: cy20 Sampling Date/Time Date/Time: Date/Time: Date/Time: 4/4/0 20/1/60 # of Cont. Project Manager: Bronwyn Kelly 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Poly-1 gal Poly-500 ml Poly-500 ml Container 1t. Amber 1L Amber 1L Poly 1L Poly Sampler: Kroos!, R Client Name/Address: MWH-Pasadena Sample Matrix Relinquished By ≥ ≥ ≥ ≥ ⋛ ≥ ≥ Relinguished By Relinquished By Description Outfall 003-Outfall 003 Outfall 003 Outfall 003 Outfall 003 Outfail 003 Sample Outfall 003



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 not 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

Inein Mar

MCM/njv

Enclosure: Report

Subcontract Form Receipt checklist

Invoice

Eberline Services

ANALYSIS RESULTS

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

Client

Lab

Sample ID Sample ID Collected Analyzed Nuclide Results ± 2σ Units MDA

1PD0259-01

8677-001 04/04/06 04/18/06 Sr-90 3.76 ± 0.47 pCi/L 0.395

Certified by 21 Com. Report Date 04/27/06 Page 1

Eberline Services

QC RESULTS

 SDG
 8677
 Client
 DEL MAR ANAL

 Work Order
 R604023-01
 Contract
 PROJECT# IPD0259

 Received Date
 04/06/06
 Matrix
 WATER

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

DUPLICATE	S			ORIGINALS			
						3σ	
Sample ID Nuclide	Results ± 25	MDA	Sample ID	Results ± 20	MDA	RPD (Tot) Ev	val
8677-004 Sr-90	2.76 ± 0.42	0.402	8677-001	3.76 ± 0.47	0.395	31 36 sa	atis.

Certified by November 1997 (Certified by November 1997)

Page 2



SENDING LABORATORY:

17461 Derian Ave. Suite 100, Irvine, CA 92614 1014 E. Cooley Dr., Suite A, Colton, CA 92324 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044

2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120

RECEIVING LABORATORY:

Ph (909) 370-4667 Fax (909) 370-1046 Ph (619) 505-9596 Ph (480) 785-0043

Ph (949) 261-1022

Ph (702) 798-3620

Fax (619) 505-9689 Fax (480) 785-0851 Fax (702) 798-3621

Fax (949) 261-1228

SUBCONTRACT ORDER - PROJECT # IPD0259

Del Mar Analytical - Irvi 17461 Derian Avenue. St Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Standard TAT is reques	nite 100	Richmond, CA 9 Phone: (510) 235 Fax: (510) 235-0	2030 Wright Avenue Richmond, CA 94804 Phone:(510) 235-2633 Fax: (510) 235-0438		
Sample ID: IPD0259-01 Level 4 + EDD-OUT Strontium 90-O	Water Sampled: 04/04/06 05/02/06 08:20 04/04/07 08:20	08:20 **LEVEL IV QC, AC 905.0, sub to Eberline			
Containers Supplied: 1 gal Poly (IPD0259-01K)					
		SAMPLE INTEGRITY: /COC agree: Yes No	Samples Received On Ice::	☐ Yes 🖾 No	
All containers intact:	_/	,	Samples Received On Ice:: Samples Received at (temp):		
Released By	Date Tim	5/06 e Received By	Date Date	106 06 9:30	

Received By

Time

Date

Released By

Time

Date



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

NE	MAR		City[[VINE	_State		
nt: DLL	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4:20 01	IPD	0259			
e/Time received	02/00/00	COC NO	· - ++	P.O. Received	Ves []	No []	
ntainer I.D. No.	le CHES	Requested	TAT (Days)	P.O. Received	100 []		
			INSPECT	ION			r 1
Out and the co	als on shipr	oing container ir	ntact?		Τ.	io[] N/A	
Custody se	ale on shinr	oing container d	ated & signed	•	, L.	10 [] N/A	
Custody se	ais on sami	ple containers in	ntact?	10		No[] N/A	
Custody se	oic on sam	ple containers of	lated & signed	1.3	_	No [] N/A	1 1
					et[]	Dry [X]	
Packing m	accineria	shinning conta	iner:	Sample Matrix W (Or see CoC			
Number of	Samples	ner sample:	1	(Or see CoC)		
Number of	Containers	t container		Yes [✓] No []		
		t container		Yes [Y] No []	المرايات	
	agrees wit		l labels [] F	end labels [] Approp	riate sam	ole labels [Y	1
							1
1. Samples	are: In g	good condition y	preserved IV] pH Preserva	tive		
2. Samples	are: Prese	rved [] Not	preservou (1,			
a Describe	any anomai	lies:					
3. Describe	•						
J. Describe							
Jeschbe							
			s? Ye	s[] [No[]	Date		
	M. notified o	of any anomalies	۵.			60	
		of any anomalies	s? Ye Date:	04 06 0 Gime: _			
	M. notified o	of any anomalies	۵.			mR/hr	wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample	0%		wipe
14. Was P.M 15. Inspecte	M. notified o	of any anomalies	Date:	Customer Sample No.	cpm	mR/hr	
14. Was P.M. 15. Inspecte Customer Sample No.	M. notified o	mR/hr	Wipe	Customer Sample No.	cpm	mR/hr	
Was P.M 15. Inspecte	n. notified o	mR/hr	Wipe	Customer Sample No.	cpm	mR/hr	



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

Malle Moer



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

27552-001 IPD0259-01

SECTION II

Project 27552

NPDES - 311

Method Blan	k					1				EPA Method 16
Matrix:	Aqueous		QC Batch No.:	7	7910	Lab	Sample:	0-MB001		
Sample Size:	1.00 L		Date Extracted	: 9	9-Apr-06	Date	e Analyzed DB-5:	11-Apr-06	Date An	alyzed DB-225: NA
					•		•	•		•
Analyte	Conc. (ug	/L)	DL a	EMPC b	Qualifiers		Labeled Standa	rd	%R	LCL-UCL ^d Qualifier
2,3,7,8-TCDD	1	ND	0.000000628			<u>IS</u>	13C-2,3,7,8-TCI)D	74.5	25 - 164
1,2,3,7,8-PeCD	DD 1	ND	0.000000450				13C-1,2,3,7,8-Pe	CDD	71.4	25 - 181
1,2,3,4,7,8-Hx0	CDD 1	ND	0.000000804				13C-1,2,3,4,7,8-1	HxCDD	74.6	32 - 141
1,2,3,6,7,8-Hx0	CDD 1	ND	0.000000867				13C-1,2,3,6,7,8-1	HxCDD	70.7	28 - 130
1,2,3,7,8,9-Hx0	CDD 1	ND	0.000000808				13C-1,2,3,4,6,7,8	3-HpCDD	75.4	23 - 140
1,2,3,4,6,7,8-H	pCDD 1	ND	0.00000111				13C-OCDD		55.5	17 - 157
OCDD	(0.0000025	i 9		J		13C-2,3,7,8-TCI	DF	77.3	24 - 169
2,3,7,8-TCDF	1	ND	0.000000346				13C-1,2,3,7,8-Pe	CDF	73.3	24 - 185
1,2,3,7,8-PeCD)F	ND	0.000000474				13C-2,3,4,7,8-Pe	CDF	72.6	21 - 178
2,3,4,7,8-PeCD)F	ND	0.000000453				13C-1,2,3,4,7,8-l	HxCDF	74.5	26 - 152
1,2,3,4,7,8-HxQ	CDF 1	ND	0.000000436				13C-1,2,3,6,7,8-1	HxCDF	66.9	26 - 123
1,2,3,6,7,8-Hx0	CDF 1	ND	0.000000334				13C-2,3,4,6,7,8-l	HxCDF	71.8	28 - 136
2,3,4,6,7,8-Hx0	CDF 1	ND	0.000000326				13C-1,2,3,7,8,9-1	HxCDF	70.0	29 - 147
1,2,3,7,8,9-Hx0	CDF 1	ND	0.000000456				13C-1,2,3,4,6,7,8	3-HpCDF	66.9	28 - 143
1,2,3,4,6,7,8-H	pCDF 1	ND	0.000000395				13C-1,2,3,4,7,8,9	9-HpCDF	72.4	26 - 138
1,2,3,4,7,8,9-H	pCDF 1	ND	0.000000424				13C-OCDF		56.7	17 - 157
OCDF	1	ND	0.00000136			CRS	§ 37Cl-2,3,7,8-TC	DD	84.0	35 - 197
Totals						Foot	tnotes			
Total TCDD	1	ND	0.000000628			a. Sar	nple specific estimated of	letection limit.		
Total PeCDD	1	ND	0.000000450			b. Est	imated maximum possib	ole concentration.		
Total HxCDD	1	ND	0.000000828			c. Me	thod detection limit.			
Total HpCDD	1	ND	0.00000111			d. Lo	wer control limit - upper	control limit.		
Total TCDF	1	ND	0.000000346							
Total PeCDF	1	ND	0.000000463							
Total HxCDF	1	ND	0.000000473							
Total HpCDF	1	ND	0.000000408							

Analyst: MAS William J. Luksemburg 12-Apr-2006 09:57 **NPDES - 312** Approved By:

OPR Results				EPA	Method 1613
Matrix: Aqueous Sample Size: 1.00 L	QC Batch No.: Date Extracted:	7910 9-Apr-06	Lab Sample: 0-OPR001 Date Analyzed DB-5: 10-Apr-06	Date Analyze	d DB-225: NA
Analyte	Spike Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	10.0 11.0	6.7 - 15.8	<u>IS</u> 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	<u>CRS</u> 37Cl-2,3,7,8-TCDD	87.2	35 - 197

Analyst: MAS William J. Luksemburg 12-Apr-2006 09:57

Sample ID:	IPD0259-0	01								EPA I	Method 1613
Client Data				Sample Data		Lab	oratory Data				
Name:	Del Mar An IPD0259	nalytical, Irvine		Matrix:	Aqueous	Lab	Sample:	27552-001	Date Re	ceived:	6-Apr-06
Project: Date Collected:	4-Apr-06			Sample Size:	1.03 L	QC	Batch No.:	7910	Date Ex		9-Apr-06
Time Collected:	0820					Date	e Analyzed DB-5:	11-Apr-06	Date An	alyzed DB-225:	NA
Analyte	Conc.	(ug/L)	DL a	EMPC ^b	Qualifiers		Labeled Stan	dard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD		ND	0.0000004	65		<u>IS</u>	13C-2,3,7,8-TC	CDD	58.0	25 - 164	
1,2,3,7,8-PeCD	DD	ND	0.0000006	81			13C-1,2,3,7,8-l	PeCDD	53.6	25 - 181	
1,2,3,4,7,8-Hx	CDD	ND	0.0000012	9			13C-1,2,3,4,7,8	3-HxCDD	54.5	32 - 141	
1,2,3,6,7,8-Hx	CDD	ND	0.0000012	5			13C-1,2,3,6,7,8	3-HxCDD	50.8	28 - 130	
1,2,3,7,8,9-Hx	CDD	ND	0.0000012	3			13C-1,2,3,4,6,7	7,8-HpCDD	51.4	23 - 140	
1,2,3,4,6,7,8-H	pCDD	0.00000273			J		13C-OCDD		38.1	17 - 157	
OCDD		0.0000200			J,B		13C-2,3,7,8-TC	CDF	59.3	24 - 169	
2,3,7,8-TCDF		ND	0.0000006	65			13C-1,2,3,7,8-l	PeCDF	54.4	24 - 185	
1,2,3,7,8-PeCD)F	ND	0.0000005	36			13C-2,3,4,7,8-l	PeCDF	53.6	21 - 178	
2,3,4,7,8-PeCD)F	ND	0.0000004	99			13C-1,2,3,4,7,8	3-HxCDF	54.2	26 - 152	
1,2,3,4,7,8-Hx	CDF	ND	0.0000004	93			13C-1,2,3,6,7,8	3-HxCDF	46.7	26 - 123	
1,2,3,6,7,8-Hx	CDF	ND	0.0000005	43			13C-2,3,4,6,7,8	3-HxCDF	51.6	28 - 136	
2,3,4,6,7,8-Hx	CDF	ND	0.0000005	11			13C-1,2,3,7,8,9	9-HxCDF	51.7	29 - 147	
1,2,3,7,8,9-Hx	CDF	ND	0.0000007	10			13C-1,2,3,4,6,7	7,8-HpCDF	48.4	28 - 143	
1,2,3,4,6,7,8-H	pCDF	ND	0.0000015	5			13C-1,2,3,4,7,8	3,9-HpCDF	50.4	26 - 138	
1,2,3,4,7,8,9-H	pCDF	ND	0.0000004	30			13C-OCDF		40.2	17 - 157	
OCDF		ND	0.0000040	9		CRS	37Cl-2,3,7,8-T	CDD	87.5	35 - 197	
Totals						Foo	otnotes				
Total TCDD		ND	0.0000004	65		a. Sa	ample specific estima	ted detection limit.			
Total PeCDD		ND	0.0000006	81		b. E	stimated maximum pe	ossible concentration.			
Total HxCDD		ND	0.0000012	6		c. M	lethod detection limit				
Total HpCDD		0.00000273		0.00000)504	d. L	ower control limit - u	pper control limit.			
Total TCDF		ND	0.0000006	65							
Total PeCDF		ND	0.0000005	18							
Total HxCDF		ND		0.00000	00163						
Total HpCDF		ND	0.0000016	1							

Analyst: MAS William J. Luksemburg 12-Apr-2006 09:57

APPENDIX

NPDES - 315

Project 27552 Page 7 of 233

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



SENDING LABORATORY:

Del Mar Analytical - Irvine

17461 Derian Ave. Suite 100, Irvine, CA 92614 1014 E. Cooley Dr., Suite A, Colton, CA 92324 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123

9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120

RECEIVING LABORATORY:

Ph (949) 261-1022 Fax (949) 261-1228 Ph (909) 370-4667

Fax (909) 370-1046 Ph (619) 505-9596 Fax (619) 505-9689

Ph (480) 785-0043 Fax (480) 785-0851 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPD0259

Alta Analytical - SUB

Del Mar Analytical - Irv 17461 Derian Avenue. Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Miche	Suite 100		Alta Analytical - 1104 Windfield V El Dorado Hills, (Phone :(916) 933 Fax: (916) 673-01	Vay 475 CA 95762 -1640 186	52 C
Standard TAT is requ	_	ue date is requeste		,	Initials:
Analysis Sample ID: IPD0259-01 1613-Dioxin-HR-Alta EDD + Level 4	Expiration Water Sampled: 04/11/06 08:20 05/02/06 08:20	: 04/04/06 08:20	J flags,17 congeners,no Excel EDD email to pr		Lvl IV
Containers Supplied: 1 L Amber (IPD0259-01 1 L Amber (IPD0259-01					
			•		
	•				
				·	
					· · · · · · · · · · · · · · · · · · ·
All containers intact:		SAMPI Sample labels/COC agree Samples Preserved Proper		Samples Received Or Samples Received at	
Released By	Date	7/5/06 Time	Blung J.	Benedict	1/0/06 0867) ate Time
Released By Project 27552	(Date	Time	Received By	Ď	NPDES - 318 ate Time Pagage p6233

SAMPLE LOG-IN CHECKLIST

Alta Project #:	27552	
		 _

Samples Arrival:	Date/Time	10	Initial	s:	Locat	ion: WK	2-2
'	4/0/06	085)U 49		Shelf/	Rack:	
	Date/Time		Initial	s:	Locat	ion: WR	4
Logged In:	4/6/06	101	6 B	SB	Shelf	Rack:	-3
Delivered By:	FedEx	UPS	Cal	DHL		Hand elivered	Other
Preservation:	Ice) E	Blue Ice	Dry lo	се	No	ne
Temp °C .	8° T	ime: (3900		Thern	nometer ID	: DT-20

					YES	NO	NA
Adequate Sample Volume Received	?				V		
Holding Time Acceptable?					$\sqrt{}$		
Shipping Container(s) Intact?					V		
Shipping Custody Seals Intact?					V		
Shipping Documentation Present?					V		
Airbill Trk# 79	20 6	6313	8160				
Sample Container Intact?					V		
Sample Custody Seals Intact?							
Chain of Custody / Sample Documer	ntation Pr	esent?			V		
COC Anomaly/Sample Acceptance F	orm com	pleted?				V	
If Chlorinated or Drinking Water Sam	ıples, Acc	eptable P	reservation?				Z
Na ₂ S ₂ O ₃ Preservation Documented?			coc	Sam Conta	•	No	ne
Shipping Container	Alta	Client	Retain	Ret	urn	Disp	ose

Comments:

APPENDIX G

Section 10

Outfall 003, April 04, 2006

MECX Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID B4DF77

Task Order 1261.001D.01

 MEC^{X}

12269 East Vassar Drive

Aurora, CO 80014	SDG No. IPD0259 No. of Analyses 1
Laboratom, Alta	Date: May 21, 2006
Laboratory Alta	
Reviewer K. Shado	
Analysis/Method Dioxin/Fu	ran by Method 1613 Ku Strader (1)
A OPIONI ITEMS	<u> </u>
ACTION ITEMS ^a	
. Case Narrative	
Deficiencies	
O Out of Coope Analyses	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
5. Alialyses Not Collucted	
4. Missing Hardcopy	
Deliverables	
Donvoidoro	
5. Incorrect Hardcopy	
Deliverables	
6. Deviations from Analysis	Detects below the laboratory lower calibration level were qualified
Protocol, e.g.,	as estimated.
Holding Times	Any EMPC was qualified as an estimated nondetect.
GC/MS Tune/Inst. Performand	e e
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	e
Compound Identification	
Quantitation	
System Performance	
COMMENTS	
· · · · · · · · · · · · · · · · · · ·	not meeting contract and/or method requirements. In 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

SDG: Analysis:

NPDES IPD0259 D/F

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:

0

No. of Reanalyses/Dilutions:

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.

Project: SDG: Analysis:

NPDES IPD0259 D/F

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 003	IPD0259-01	27552-001	Water	1613

Project: SDG: Analysis: NPDES IPD0259 D/F

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 $\pm 2^{\circ}$ 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.

Project: SDG: NPDES IPD0259

D/F

DATA VALIDATION REPORT

SDG: Analysis:

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

DATA VALIDATION REPORT

Project: SDG: NPDES IPD0259 D/F

Analysis:

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.

Name: Project: P	100000000000000000000000000000000000000			Ÿ.	Sample Data		Laboratory Data				
Egg.		Del Mar Analytical, Irvine IPD0259	ical, Irvine	51 Z Z	Matrix: Sample Size:	Aqueous 1.03 L		27552-001 7910	Date Received: Date Extracted:		6-Apr-06 9-Apr-06
	Time Collected: 0820	4-Api-00 0820	ат еге дання каза найокунация учасаваней в завидней надва падва				Date Analyzed DB-5:	11-Apr-06	Date Analyzed DB-225:	DB-225:	NA
2,1,2,1,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2	Analyte	Conc. (ug	(ng/L)	DL a	EMPCb	Qualifiers	Labeled Standard	promot	%R LCL	rcr-ncr _q (Oualifiers
2, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7,	2,3,7,8-TCDD		ND	0.000000465	20		IS 13C-2,3,7,8-TCDD		58.0 25	25 - 164	
2, 1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,	1,2,3,7,8-PeCDD		ND	0.000000681			13C-1,2,3,7,8-PeCDD	OD	53.6 25	25 - 181	
7, 0	1,2,3,4,7,8-HxCDD		ND	0.00000129			13C-1,2,3,4,7,8-HxCDD	CDD	54.5 32	32 - 141	
	1,2,3,6,7,8-HxCDD		N N	0.00000125			13C-1,2,3,6,7,8-HxCDD	CDD		28 - 130	
	1,2,3,7,8,9-HxCDD		R	0.00000123			13C-1,2,3,4,6,7,8-HpCDD	(pCDD	51.4 23	23 - 140	
	1,2,3,4,6,7,8-HpCDD		0.00000273			├ ──	13C-OCDD		38.1 17	17 - 157	
J DAR OC	ОСОБ		0.0000200			J,B	13C-2,3,7,8-TCDF			24 - 169	
(K 2,3	2,3,7,8-TCDF		NO NO	0.000000665	5		13C-1,2,3,7,8-PeCDF	ЭF		24 - 185	
1,2	1,2,3,7,8-PeCDF		N O	0.000000536	2		13C-2,3,4,7,8-PeCDF	OF		21 - 178	
2,3	2,3,4,7,8-PeCDF		N	0.000000499	6		13C-1,2,3,4,7,8-HxCDF	CDF	54.2 26	26 - 152	
1,7	1,2,3,4,7,8-HxCDF		R	0.000000493	3		13C-1,2,3,6,7,8-HxCDF	CDF	46.7 26	26 - 123	
1,2	1,2,3,6,7,8-HxCDF		QN	0.000000543	3	-	13C-2,3,4,6,7,8-HxCDF	CDF	51.6 28	28 - 136	
2,3	2,3,4,6,7,8-HxCDF		NO	0.000000511			13C-1,2,3,7,8,9-HxCDF	CDF	51.7 29	29 - 147	
1,2	1,2,3,7,8,9-HxCDF		S S	0.000000710	0		13C-1,2,3,4,6,7,8-HpCDF	HDCDF	48.4 28	28 - 143	
1,2	1,2,3,4,6,7,8-HpCDF		ND QN	0.00000155			13C-1,2,3,4,7,8,9-HpCDF	HpCDF	50.4 26	26 - 138	
1,2	1,2,3,4,7,8,9-HpCDF		NO ON	0.000000430	0		13C-OCDF		40.2 17	17 - 157	
))	OCDF		ND	0.00000409			CRS 37CI-2,3,7,8-TCDD		87.5 35	- 197	
L	Totals						Footnotes				
J.	Total TCDD		ND	0.000000465	5		a. Sample specific estimated detection limit.	stection limit.			
Tol	Total PeCDD		2	0.000000681			b. Estimated maximum possible concentration.	le concentration.			
To	Total HxCDD		QN ON	0.00000126		-	c. Method detection limit.				
	Total HpCDD		0.00000273		0.00000504	40	d. Lower control limit - upper control limit.	control limit.			
T To	Total TCDF		2	0.000000665	5						
	Total PeCDF		ND QN	0.000000518							
	Total HxCDF		N		0.000000163	163					
	Total HpCDF		N	0.00000161				Andrews Speciment and with minimater accounts to the first state of th	CONTRACTOR (AND A AND SERVICE OF CONTRACTOR		
PES	Analyst: MAS						Approved By:	William J. Luksemburg		12-Apr-2006 09:57	09:57
- 32		1 0000									
Project 27552		1 250	+								Page 6 of
)

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

ME	c ^x			Package ID:	B4RA5
122	69 East Vassar Drive			Task Order:	1261.001D.01
	ora, CO 80014			SDG No.:	IPD0259
	•		No.	of Analyses:	1
	Laboratory: Del Mar A	Analytical		Date: May 18	3, 2006
	Reviewer: P. Meeks			Reviewer's Si	gnature
	Analysis/Method: Radionud	clides		P. Me	γ
ACT	ION ITEMS ^a				
	Case Narrative				
	Deficiencies				
2.	Out of Scope Analyses				
3.	Analyses Not Conducted				
				AND PROPERTY OF THE PROPERTY O	
4.	Missing Hardcopy				
	Deliverables				
5.	Incorrect Hardcopy				
	Deliverables				
6.	Deviations from Analysis	Qualifications applied for	or ove	eeded holding ti	ma
0.	-	Qualifications applied it	л ехс	eeded flolding til	IIIG.
	Protocol, e.g.,				
	Holding Times	CONTRACTOR DESCRIPTION OF THE PROPERTY OF THE			
	GC/MS Tune/Inst. Performance				
	Calibration Method blanks				
	Surrogates				
	Matrix Spike/Dup LCS				
	Field QC				
	Internal Standard Performance				
	Compound Identification				And the second s
	Quantitation	The state of the s		· · · · · · · · · · · · · · · · · · ·	
	System Performance				
COI	MMENTS ^b			Married Control of the Control of th	Mah. 1. 10. 10. 10. 10. 10. 10. 10. 10. 10.
<u> </u>					
		44			
1	ubcontracted analytical laboratory is not				oquired
l "D	ifferences in protocol have been adopte	u by the laboratory but no action	ı ayaın	st the laboratory is re	equireu.

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 $4\pm2^{\circ}$ 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.

Project: NPDES SDG: IPD0259 Analysis: Rads

DATA VALIDATION REPORT

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

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

Project: NPDES SDG: IPD0259 Analysis: Rads

DATA VALIDATION REPORT

1. INTRODUCTION

Task Order Title: NPDES Sampling MEC^X Project Number: 1261.001D.01

Sample Delivery Group: IPD0259

Project Manager: P. Costa

Matrix: Water

Matrix: Water
Analysis: Radionulcides

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 905.0USEPA 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.

Project: NPDES SDG: IPD0259 Analysis: Rads

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
 8677
 Client
 DEL MAR ANAL

 Work Order
 R604023-01
 Contract
 PROJECT# IPD0259

 Received Date
 04/06/06
 Matrix
 WATER

Client Lab

Sample ID Sample ID Collected Analyzed Nuclide Results ± 20 Units MDA Qual Code

Outfall 003
1PD0259-01 8677-001 04/04/06 04/18/06 Sr-90 3.76 ± 0.47 pCi/L 0.395 T H

NPDES - 335

APPENDIX G

Section 11

Outfall 003, April 11, 2006 Del Mar Analytical Laboratory Report



LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: Routine Outfall 003

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

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 CLIENT ID MATRIX
IPD1229-01 Outfall 003 Water

Reviewed By:

Del Mar Analytical - Irvine Michele Chamberlin

Michele Chamberdin

Project Manager



Pasadena, CA 91101

Project ID: Routine Outfall 003

300 North Lake Avenue, Suite 1200

Sampled: 04/11/06 Report Number: IPD1229 Received: 04/12/06

Attention: Bronwyn Kelly

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1229-01 (Outfall 003 - Wa	ater)								
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	



Pasadena, CA 91101

Project ID: Routine Outfall 003

300 North Lake Avenue, Suite 1200

Sampled: 04/11/06 Report Number: IPD1229 Received: 04/12/06

Attention: Bronwyn Kelly

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	



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 003

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

Report Number: IPD1229

SHORT HOLD TIME DETAIL REPORT

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



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 003

Sampled: 04/11/06 Report Number: IPD1229 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: 6D13067 Extracted: 04/13/06	_										
Blank Analyzed: 04/15/2006 (6D13067-B	LK1)										
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-BS	1)										
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 (6D1	3067-MS1)				Sou	rce: IPD1	1055-01				
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-M	SD1)			Sou	rce: IPD1	1055-01				
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	



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-B	LK1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/13/2006 (6D13068-BS	1)										
Mercury	8.26	0.20	0.050	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 04/13/2006 (6D1	3068-MS1)				Sou	rce: IPD(955-05				
Mercury	8.23	0.20	0.050	ug/l	8.00	ND	103	70-130			
Matrix Spike Dup Analyzed: 04/13/2006	(6D13068-MS	SD1)			Sou	rce: IPD(955-05				
Mercury	8.23	0.20	0.050	ug/l	8.00	ND	103	70-130	0	20	



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D12138 Extracted: 04/12/06	_										
Blank Analyzed: 04/12/2006 (6D12138-B											
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-BS	1)										
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	<u>-</u>										
Blank Analyzed: 04/13/2006 (6D13076-B	LK1)										
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/13/2006 (6D13076-BS	1)										
Total Dissolved Solids	994	10	10	mg/l	1000		99	90-110			
Duplicate Analyzed: 04/13/2006 (6D1307	6-DUP1)				Sou	rce: IPD1	1055-01				
Total Dissolved Solids	250	10	10	mg/l		250			0	10	
Batch: 6D14054 Extracted: 04/14/06	<u>-</u>										
Blank Analyzed: 04/14/2006 (6D14054-B	LK1)										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/14/2006 (6D14054-BS	1)										
Oil & Grease	19.1	5.0	0.94	mg/l	20.0		96	65-120			



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D14054 Extracted: 04/14/06	<u>.</u>										
LCS Dup Analyzed: 04/14/2006 (6D1405	4-BSD1)										
Oil & Grease	17.7	5.0	0.94	mg/l	20.0		88	65-120	8	20	
Matrix Spike Analyzed: 04/14/2006 (6D1	4054-MS1)				Sou	rce: IPD0	915-01				
Oil & Grease	18.3	4.7	0.89	mg/l	18.9	ND	97	65-120			
Matrix Spike Dup Analyzed: 04/14/2006	(6D14054-MS	SD1)			Sou	rce: IPD0	915-01				
Oil & Grease	17.4	4.7	0.89	mg/l	18.9	ND	92	65-120	5	25	
Batch: 6D15045 Extracted: 04/15/06	<u>.</u>										
Blank Analyzed: 04/17/2006 (6D15045-B	LK1)										
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/17/2006 (6D15045-BS	1)										
Total Suspended Solids	988	10	10	mg/l	1000		99	85-115			
Duplicate Analyzed: 04/17/2006 (6D1504	5-DUP1)				Sou	rce: IPD1	202-01				
Total Suspended Solids	192	10	10	mg/l		190			1	10	



Project ID: Routine Outfall 003

300 North Lake Avenue, Suite 1200

Sampled: 04/11/06 Pasadena, CA 91101 Report Number: IPD1229 Received: 04/12/06

Attention: Bronwyn Kelly

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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	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



Project ID: Routine Outfall 003

300 North Lake Avenue, Suite 1200

Sampled: 04/11/06 Pasadena, CA 91101 Report Number: IPD1229 Received: 04/12/06

Attention: Bronwyn Kelly

DATA QUALIFIERS AND DEFINITIONS

В Analyte was detected in the associated Method Blank.

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-3Results 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

Sampled: 04/11/06



MWH-Pasadena/Boeing

Project ID: Routine Outfall 003

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Report Number: IPD1229 Received: 04/12/06

Attention: Bronwyn Kelly

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

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RM TT 22 Page 1 of 1	ANALYSIS REQUIRED	(1.E14A	D (and all corp.) G Grease (EPA S., TSS Comments	Oil & C.L.,			X	X	×	×	X unfiltered and unpreserved analysis				Date/Time: (check)	1640 24 Hours	Date/Time: 10 Days 10	e Only 72 Ho	120	
OF CUSTODY FORM		e Metals:	al Recoverable	'qs		1B X	2A, 2B	3A, 3B	4A, 4B	5A, 5B	6A, 6B			,	Received By	Llosell	ed By	Received By Da		ل ک
ersion 03/6/06 CHAIN C	Project:		ly Phone Number: (626) 568-6691 Fax Number: (626) 568-6515	# of Sampling Preser			None	HCI	None	None	HIIII None				Date/Time: Rect	079,	ime:	44/2/CU /755 Rece		
Del Mar Analytical Version 03/6/06 CHAIN OF CI	Client Name/Address:	MW/H-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101	Project Manager: Bronwyn Kelly Sampler: アアレルシジア	Sample Sample Container #	W 1L Poly	Outfall 003- W 1L Poly 1	Outfall 003 W 1L Amber 2	Outfall 003 W 1L Amber 2	Outfall 003 W Poly-500 2	Outfall 003 W Poly-500 2	Outfall 003 W Poly-1 gal 1				Doding By		Relinquished By	Relinquished Ry		



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

South State of State

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



Section I: Sample Inventory Report Date Received: 4/14/2006

Alta Lab. ID Client Sample ID

27596-001 IPD1229-01

SECTION II

NPDES - 351

Project 27596 Page 3 of 230

Method Blan	k							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 An	alyzed DB-225: NA
	1,00 2			2 0 141 00		2.11p1 00	2 400 1 111	,200 2 2 22 00 1111
Analyte	Conc. (ug	g/L)	DL a EMPO	Qualifiers	Labeled Standa	ard	%R	LCL-UCL ^d Qualifiers
2,3,7,8-TCDD		ND	0.00000103		<u>IS</u> 13C-2,3,7,8-TC	DD	69.9	25 - 164
1,2,3,7,8-PeCD	DD	ND	0.00000112		13C-1,2,3,7,8-P	eCDD	62.3	25 - 181
1,2,3,4,7,8-Hx0	CDD	ND	0.00000217		13C-1,2,3,4,7,8-	·HxCDD	67.3	32 - 141
1,2,3,6,7,8-Hx0	CDD	ND	0.00000206		13C-1,2,3,6,7,8-	·HxCDD	74.6	28 - 130
1,2,3,7,8,9-Hx0	CDD	ND	0.00000202		13C-1,2,3,4,6,7,	8-HpCDD	72.0	23 - 140
1,2,3,4,6,7,8-H	pCDD	ND	0.00000235		13C-OCDD		55.2	17 - 157
OCDD		ND	0.00000532		13C-2,3,7,8-TC	DF	75.5	24 - 169
2,3,7,8-TCDF		ND	0.00000121		13C-1,2,3,7,8-P	eCDF	64.4	24 - 185
1,2,3,7,8-PeCD)F	ND	0.00000198		13C-2,3,4,7,8-P	eCDF	66.5	21 - 178
2,3,4,7,8-PeCD)F	ND	0.00000190		13C-1,2,3,4,7,8-	-HxCDF	66.2	26 - 152
1,2,3,4,7,8-Hx0	CDF	ND	0.000000649		13C-1,2,3,6,7,8-	·HxCDF	76.1	26 - 123
1,2,3,6,7,8-Hx0	CDF	ND	0.000000602		13C-2,3,4,6,7,8-	-HxCDF	74.8	28 - 136
2,3,4,6,7,8-Hx0	CDF	ND	0.000000650		13C-1,2,3,7,8,9-	HxCDF	67.9	29 - 147
1,2,3,7,8,9-Hx0	CDF	ND	0.00000103		13C-1,2,3,4,6,7,	8-HpCDF	62.5	28 - 143
1,2,3,4,6,7,8-H	pCDF	ND	0.00000122		13C-1,2,3,4,7,8,	9-HpCDF	56.6	26 - 138
1,2,3,4,7,8,9-Н	pCDF	ND	0.00000155		13C-OCDF		47.8	17 - 157
OCDF		ND	0.00000560		<u>CRS</u> 37Cl-2,3,7,8-TC	CDD	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 possi	ble concentration.		
Total HxCDD		ND	0.00000207		c. Method detection limit.			
Total HpCDD		ND	0.00000235		d. Lower control limit - uppe	er control limit.		
Total TCDF		ND	0.00000121					
Total PeCDF		ND	0.00000194					
Total HxCDF		ND	0.000000713					
Total HpCDF		ND	0.00000136					

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

NPDES - 352 Analyst: MAS Approved By:

OPR Results				EPA	Method 1613
Matrix: Aqueous Sample Size: 1.00 L	QC Batch No.: Date Extracted:	7951 20-Apr-06	Lab Sample: 0-OPR001 Date Analyzed DB-5: 24-Apr-06	Date Analyzed	1 DB-225: NA
Analyte	Spike 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-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 William J. Luksemburg 27-Apr-2006 09:51

Sample ID: IPD	1229-01								EPA N	Method 1613
Client Data Name: Del	Mar Analytical, Irvine		Sample Data Matrix:	Aqueous		oratory Data Sample:	27596-001	Date Re	ceived:	14-Apr-06
Project: IPD	1229		Sample Size:	1.00 L		Batch No.:	7951	Date Ex		20-Apr-06
Date Collected: 11-A Time Collected: 0905	Apr-06		Sumple Size.	1.00 L	`	Analyzed DB-5:	7931 24-Apr-06		alyzed DB-225:	NA
0,00		a	b			•	-			
Analyte	Conc. (ug/L)	DL a	EMPC ^b	Qualifiers	-~	Labeled Standa			LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000			<u>IS</u>	13C-2,3,7,8-TCD		62.9	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000001				13C-1,2,3,7,8-Pe		60.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.000002				13C-1,2,3,4,7,8-H		62.8	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.000002	89			13C-1,2,3,6,7,8-H	łxCDD	66.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.000002	77			13C-1,2,3,4,6,7,8	-HpCDD	71.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.000003	77			13C-OCDD		54.4	17 - 157	
OCDD	0.0000113			J		13C-2,3,7,8-TCD	F	67.4	24 - 169	
2,3,7,8-TCDF	ND	0.000001	23			13C-1,2,3,7,8-Pe	CDF	62.2	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000001	73			13C-2,3,4,7,8-Pe	CDF	62.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000001	65			13C-1,2,3,4,7,8-H	HxCDF	59.1	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000	899			13C-1,2,3,6,7,8-H	HxCDF	64.1	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000	859			13C-2,3,4,6,7,8-H	łxCDF	66.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000	918			13C-1,2,3,7,8,9-H	HxCDF	66.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000001	27			13C-1,2,3,4,6,7,8	-HpCDF	61.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000001	11			13C-1,2,3,4,7,8,9	-HpCDF	62.5	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000001	13			13C-OCDF	_	53.9	17 - 157	
OCDF	ND	0.000003	83		CRS	37Cl-2,3,7,8-TCI	OD	72.6	35 - 197	
Totals					Foo	otnotes				
Total TCDD	ND	0.000000	837		a. Sa	imple specific estimated	detection limit.			
Total PeCDD	ND	0.000001	23		b. E	stimated maximum poss	ible concentration.			
Total HxCDD	ND	0.000002	84		c. M	ethod detection limit.				
Total HpCDD	ND	0.000003	77		d. Le	ower control limit - uppe	er control limit.			
Total TCDF	ND	0.000001	23							
Total PeCDF	ND	0.000001	69							
Total HxCDF	ND	0.000000	975							
Total HpCDF	ND	0.000001								

Analyst: MAS William J. Luksemburg 27-Apr-2006 09:51

NPDES - 354

Project 27596 Page 6 of 230

APPENDIX

Project 27596 Page 7 of 230

NPDES - 355

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	02102011
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 1014 E. Cooley Dr., Suite A, Colton, CA 92324

9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044

Ph (480) 785-0043
Ph (702) 798-3620

Fax (949) 261-1228 Fax (909) 370-1046

Ph (949) 261-1022 Ph (909) 370-4667 Ph (619) 505-9596

Fax (619) 505-9689 Fax (480) 785-0851 Fax (702) 798-3621

2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph SUBCONTRACT ORDER - PROJECT # IPD1229

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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

00

Standard TAT is requ	sted => 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 (IPD1229-01	C)	
1 L Amber (IPD1229-01	D)	

	-	
	SAMPLE INTEGRITY:	
All containers intact: Yes 1 N Custody Seals Present: Yes 1 N		Samples Received On Ice:: Yes No Samples Received at (temp):
Col- Ch	112100	Benedict 4/14/06 0900
Released By	Date Time Received By	Date Time

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27596

	Date/Time		Initials	s:	Locat	ion: WK	2-2
Samples Arrival:	4/14/06	0960	B	2B	SheIf/	Rack:	
	Date/Time		Initials	s: 0 1 2	Locat	ion: WR	-2
Logged In:	4/14/06 /	1009	A		Shelf/	Rack: C-	2
Delivered By:	FedEx UP:	S	Cal	DHL	l l	Hand elivered	Other
Preservation:	(Ice	Blue I	ce	Dry lo	e	No	ne
Temp °C 0°C	Time	: 09C)5		Thern	nometer ID	: DT-20

					YES	NO	NA
Adequate Sample Volume Received?		V					
Holding Time Acceptable?					V		
Shipping Container(s) Intact?					V		
Shipping Custody Seals Intact?					V		
Shipping Documentation Present?		• • • • • • • • • • • • • • • • • • • •			$\sqrt{}$		
Airbill Trk# 79	,08,	8600	3313		/		
Sample Container Intact?		V					
Sample Custody Seals Intact?							V
Chain of Custody / Sample Documer	ntation Pi	resent?					
COC Anomaly/Sample Acceptance F	orm con	npleted?			V		
If Chlorinated or Drinking Water Sam				V			
Na ₂ S ₂ O ₃ Preservation Documented? COC C						No	ne
Shipping Container	Alta	Client	Retain	Ret	urn	Disp	ose

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: All 4/14/06
-	plete the Client Authorization section. To comply with
NELAC regulations, we must receive authorization	on before proceeding with sample analysis.
Thank You. (Fax #916-673-0106)	
The following information or item is needed to proceed	roceed with analysis: Preservative
The following anomalies were noted. Authorizati Temperature outside ±2°C range Samples Affect Temperature outside°C Sample ID Discrepancy Samples Affected	
Sample holding time missed Samples Affected	
Custody seals broken Samples Affected	
Insufficient Sample Size Samples Affected	
Sample Container(s) Broken Samples Affected	IPD1229-01 received 2 bottles
Incorrect Container Type Samples Affected	
Other One of 2 bottles receiv	ed was broken woon receipt.
omer one of 2 writes the elv	ed this order approver.
	
Client Authorization	
Proceed With Analysis: YES NO Client Comments/Instructions: 2 d Subtle	Signature and Date WW 4/07/06
Client Comments/Instructions: 2 dd Lottle	nut needed for analysus

ALTA Analytical Laboratory El Dorado Hills, CA 96762

APPENDIX G

Section 12

Outfall 003, April 11, 2006

MECX Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC ^x	Package ID B4DF82
12269 East Vassar Drive	Task Order 1261.001D.01
Aurora, CO 80014	SDG No. IPD1229
	No. of Analyses 1
Laboratory Alta	Date: May 21, 2006
Reviewer K. Shadowl	ight Reviewer's Signature
Analysis/Method Dioxin/Fura	n by Method 1613 Kn / Sta dor C
	Ú
ACTION ITEMS	
. Case Narrative	
Deficiencies	
2. Out of Scope Analyses	
O Applyone Net Conducted	
3. Analyses Not Conducted	
4. Missing Hardcopy	
Deliverables	
Deliverables	
5. Incorrect Hardcopy	
Deliverables	
6. Deviations from Analysis	Detects below the laboratory lower calibration level were qualified
Protocol, e.g.,	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	
a Subcontracted analytical laboratory is not	meeting contract and/or method requirements.
	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: IPD1229

Prepared by

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

SDG: Analysis:

NPDES IPD1229 D/F

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:

0

No. of Reanalyses/Dilutions: Reviewer:

K. Shadowlight

Date of Review:

May 21, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MECX 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.

1

Project: N SDG: IF Analysis:

NPDES IPD1229 D/F

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 003	IPD1229-01	27596-001	Water	1613

SDG: Analysis:

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

Sample Preservation, Handling, and Transport 2.1.1

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.

Project:

NPDES IPD1229

D/F

DATA VALIDATION REPORT

SDG: Analysis:

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 ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤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. qualifications were required.

Project: N SDG: IP Analysis:

NPDES IPD1229 D/F

DATA VALIDATION REPORT

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.

33		Del Mar An IPD 1229	Del Mar Analytical, Irvine IPD1229	42	Sample Data Matrix:	Aqueous	Laboratory Data Lab Sample:	27596-001	Date Received:	eived:	14-Apr-06
2000	llected: ilected:	11-Apr-06 0905			Sample Size:	1.00 L	UC Batch No.: Date Analyzed DB-5:	/951 24-Apr-06	Date Exti	Date Extracted: Date Analyzed DB-225;	20-Apr-06 NA
, c.	Analyte	Conc.	(ng/L)	DI a	EMPCb	Qualifiers	Labeled Standard	ndard	%R	rcr-ncrq	Oualifiers
	2,3,7,8-TCDD	Q.	mania de varia de mania de man	0.000000837	837		IS 13C-2,3,7,8-TCDD	CDD	62.9	25 - 164	
-	1,2,3,7,8-PeCDD	ND		0.00000123	23		13C-1,2,3,7,8-PeCDD	PeCDD	60.4	25 - 181	
	1,2,3,4,7,8-HxCDD	ND ND		0.00000285	85		13C-1,2,3,4,7,8-HxCDD	8-HxCDD	62.8	32 - 141	
	1,2,3,6,7,8-HxCDD	ND		0.00000289	68		13C-1,2,3,6,7,8-HxCDD	8-HxCDD	8.99	28 - 130	
	1,2,3,7,8,9-HxCDD	Q		0.00000277	77		13C-1,2,3,4,6,7,8-HpCDD	7,8-HpCDD	71.4	23 - 140	
	1,2,3,4,6,7,8-HpCDD	QN O		0.00000377	77		13C-OCDD		54.4	17 - 157	
076	ОСDD	0.000	0.0000113			-	13C-2,3,7,8-TCDF	CDF	67.4	24 - 169	
(A)	2,3,7,8-TCDF	QN.		0.00000123	23		13C-1,2,3,7,8-PeCDF	PeCDF	62.2	24 - 185	
t-and	1,2,3,7,8-PeCDF	2		0.00000173	73		13C-2,3,4,7,8-PeCDF	PeCDF	62.0	21 - 178	
(1)	2,3,4,7,8-PeCDF	Q.		0.00000165	65		13C-1,2,3,4,7,8-HxCDF	8-HxCDF	59.1	26 - 152	
	1,2,3,4,7,8-HxCDF	R		0.000000899	668		13C-1,2,3,6,7,8-HxCDF	8-HxCDF	64.1	26 - 123	
	1,2,3,6,7,8-HxCDF	2		0.000000859	859		13C-2,3,4,6,7,8-HxCDF	8-HxCDF	66.4	28 - 136	
(1	2,3,4,6,7,8-HxCDF	R		0.000000918	918		13C-1,2,3,7,8,9-HxCDF	9-HxCDF	66.3	29 - 147	
	1,2,3,7,8,9-HxCDF	QN		0.00000127	27		13C-1,2,3,4,6,7,8-HpCDF	7,8-HpCDF	61.4	28 - 143	
	1,2,3,4,6,7,8-HpCDF	2		0.00000111			13C-1,2,3,4,7,8,9-HpCDF	8,9-HpCDF	62.5	26 - 138	
	1,2,3,4,7,8,9-HpCDF	R		0.00000113	13		13C-OCDF		53.9	17 - 157	
\sim 1	OCDF	Q.		0.00000383	83		CRS 37CI-2,3,7,8-TCDD	CDD	72.6	35 - 197	
F4	Totals						Footnotes				
<u> </u>	Total TCDD	QN		0.0000000837	837		a. Sample specific estimated detection limit.	ated detection limit.			THE PROPERTY OF THE PROPERTY O
	Total PeCDD	R		0.00000123	23		b. Estimated maximum possible concentration.	ossible concentration.			
	Total HxCDD	2		0.00000284	84		c. Method detection limit.				
	Total HpCDD	R		0.00000377	77		d. Lower control limit - upper control limit.	apper control limit.			
	Total TCDF	S		0.00000123	23						
<u> </u>	Total PeCDF	R		0.000001	69						
_	Total HxCDF	2		0.0000000975	975						
	Total HpCDF	2		0.000001	85						
DES	Analyst: MAS						Approved By:	William J. Luksemburg	semburg	27-Apr-2006 09:51	6 09:51
- 36		E	,								

APPENDIX G

Section 13

Outfall 004, April 04, 2006 Del Mar Analytical Laboratory Report



LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: Routine Outfall 004

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

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 CLIENT ID MATRIX
IPD0258-01 Outfall 004 Water

Reviewed By:

Del Mar Analytical - IrvineMichele Chamberlin

Michele Chamberdin

Project Manager



Pasadena, CA 91101

Project ID: Routine Outfall 004

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Report Number: IPD0258 Received: 04/04/06

Attention: Bronwyn Kelly

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0258-01 (Outfall 004 - V	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	



Pasadena, CA 91101

Project ID: Routine Outfall 004

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Report Number: IPD0258 Received: 04/04/06

Attention: Bronwyn Kelly

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0258-01 (Outfall 004 - W	ater) - 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	



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 004

Sampled: 04/04/06

Report Number: IPD0258

Received: 04/04/06

SHORT HOLD TIME DETAIL REPORT

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

Sampled: 04/04/06



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 004

Report Number: IPD0258 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: 6D05074 Extracted: 04/05/06											
	_										
Blank Analyzed: 04/05/2006 (6D05074-B	LK1)										
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-BS	1)										
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 (6D0	5074-MS1)				Sou	rce: IPD(0082-01				
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 (6D0	5074-MS2)				Sou	rce: IPD(289-01				
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-M	(SD1)			Sou	rce: IPD(0082-01				
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



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-Bl	LK1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/05/2006 (6D05091-BS)	1)										
Mercury	7.98	0.20	0.050	ug/l	8.00		100	85-115			
Matrix Spike Analyzed: 04/05/2006 (6D0	5091-MS1)				Sou	rce: IPD(241-01				
Mercury	8.57	0.20	0.050	ug/l	8.00	0.060	106	70-130			
Matrix Spike Dup Analyzed: 04/05/2006	(6D05091-MS	D1)			Sou	rce: IPD(241-01				
Mercury	8.73	0.20	0.050	ug/l	8.00	0.060	108	70-130	2	20	



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D04136 Extracted: 04/04/06	_										
Blank Analyzed: 04/04/2006 (6D04136-B)	,										
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-BS)	1)										
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 (6D0	4136-MS1)				Sou	rce: IPD(0234-12				
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-MS	D1)			Sou	rce: IPD(0234-12				
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-B	LK1)										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/05/2006 (6D05046-BS)	1)										M-NR1
Oil & Grease	16.4	5.0	0.94	mg/l	20.0		82	65-120			
LCS Dup Analyzed: 04/05/2006 (6D05040	6-BSD1)										
Oil & Grease	16.5	5.0	0.94	mg/l	20.0		82	65-120	1	20	



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D05071 Extracted: 04/05/06	<u>.</u>										
Blank Analyzed: 04/05/2006 (6D05071-B	LK1)										
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/05/2006 (6D05071-BS	1)										
Total Dissolved Solids	998	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 04/05/2006 (6D0507	(1-DUP1)				Sou	rce: IPD()242-01				
Total Dissolved Solids	16.0	10	10	mg/l		18			12	10	R-4
Batch: 6D07128 Extracted: 04/07/06	<u>.</u>										
Blank Analyzed: 04/07/2006 (6D07128-B	LK1)										
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/07/2006 (6D07128-BS	1)										
Total Suspended Solids	975	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 04/07/2006 (6D0712	8-DUP1)				Sou	rce: IPD(270-01				
Total Suspended Solids	64.0	10	10	mg/l		67			5	10	



Pasadena, CA 91101

Project ID: Routine Outfall 004

300 North Lake Avenue, Suite 1200

Report Number: IPD0258 Sampled: 04/04/06
Received: 04/04/06

Attention: Bronwyn Kelly

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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	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



Project ID: Routine Outfall 004

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Report Number: IPD0258 Received: 04/04/06 Pasadena, CA 91101

Attention: Bronwyn Kelly

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.

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

RPD Relative Percent Difference



Project ID: Routine Outfall 004

300 North Lake Avenue, Suite 1200

Sampled: 04/04/06 Pasadena, CA 91101 Report Number: IPD0258 Received: 04/04/06

Attention: Bronwyn Kelly

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

Analysis Performed:

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

1104 Windfield Way - El Dorado Hills, CA 95762 1613-Dioxin-HR-Alta

Samples: IPD0258-01

Analysis Performed: EDD + Level 4

Samples: IPD0258-01

PD0258 Page 1 of 1		Field readings:	Temp = 5.5		/ L = Hd		Comments									00:	1000		Turn around Time: (check) 24 Hours 5 Days	1	72 Hours Normal	Perchlorate Only 72 Hours	Metals Only 72 Hours	Sample Integrity: (Check) Intact On loe: 7
IPI	ANALYSIS REQUIRED					8ST ;	201						×						b	(44)				20%
RM			(1.514	ΑЧ	∃) €	SO4, NO	'-lO			×	×	×								ムタケカ	Date/Time:	Date/Time:		11/06 18
Del Mar Analytical version 03/1/06 CHAIN OF CUSTODY FORM			 11	БH	d	Il Recove Cd, Cu,	Tota dS	1A ×		2B	3A, 3B	4A, 4B	5A, 5B											May
OF CUS		NPDES	all 004 SRE		. -	. · S	Preservative Bottle *	HNO3		None 2A,	HCI 3A	None 4A	None 5A						Received By	/	Received By 7	Received By		Charle
[™] CHAIN	Project:	Boeing-SSFL	Routine Outfall 004 Stormwater at SRE	Dhone Number	(626) 568-6691	(626) 568-6515	Sampling	4/4/6 0	0 4 4 5			→	4/466							(4,5)				
/ersion 03/1					>		# of	1	1	2	2	2	2						Date/Time:	40/4/6	Date/Time.	Date/Time:		
vtical			Suite 1200	Ilo VI arang	nwyn Kell	Y	Container	Polv-1L	Poly-1L	Glass- Amber	Glass- Amber	Poly-500 ml	Poly-500									<		
, Anal	Address:		adena e Avenue,	91101	ger: bro	1030	Sample	Wallix	+	Ň	3	>	3						3y) As		•	
/ 3 S Del Mar	Client Name/Address:		MWH-Pasadena 300 North Lake Avenue, Suite 1200	Pasadena, CA	Project Manager: Bronwyn Kelly	Sampler: 52 - 10 Sampler: 52 - 10	Sample	Ouffall 004	Outfall 004-Dup	Outfall 004	Outfall 004	Outfall 004	Outfall 004						Relinquished By	1	Relinquished By	Relinquished By		



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

Makele Morer



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



Section I: Sample Inventory Report Date Received: 4/6/2006

Alta Lab. ID Client Sample ID

27551-001 IPD0258-01

SECTION II

NPDES - 385

Method Blan	k					ł				EPA Method 1613
Matrix:	Aqueous		QC Batch No.:	7	7910	Lab	Sample:	0-MB001		
Sample Size:	1.00 L		Date Extracted	: 9	9-Apr-06	Date	e Analyzed DB-5:	11-Apr-06	Date An	alyzed DB-225: NA
					•		•	•		•
Analyte	Conc. (uş	g/L)	DL a	EMPC b	Qualifiers		Labeled Standa	rd	%R	LCL-UCL ^d Qualifiers
2,3,7,8-TCDD		ND	0.000000628			<u>IS</u>	13C-2,3,7,8-TCI)D	74.5	25 - 164
1,2,3,7,8-PeCD	DD	ND	0.000000450				13C-1,2,3,7,8-Pe	CDD	71.4	25 - 181
1,2,3,4,7,8-Hx	CDD	ND	0.000000804				13C-1,2,3,4,7,8-1	HxCDD	74.6	32 - 141
1,2,3,6,7,8-Hx	CDD	ND	0.000000867				13C-1,2,3,6,7,8-l	HxCDD	70.7	28 - 130
1,2,3,7,8,9-Hx	CDD	ND	0.000000808				13C-1,2,3,4,6,7,8	3-HpCDD	75.4	23 - 140
1,2,3,4,6,7,8-H	pCDD	ND	0.00000111				13C-OCDD		55.5	17 - 157
OCDD		0.0000025	9		J		13C-2,3,7,8-TCI)F	77.3	24 - 169
2,3,7,8-TCDF		ND	0.000000346				13C-1,2,3,7,8-Pe	CDF	73.3	24 - 185
1,2,3,7,8-PeCD)F	ND	0.000000474				13C-2,3,4,7,8-Pe	CDF	72.6	21 - 178
2,3,4,7,8-PeCD)F	ND	0.000000453				13C-1,2,3,4,7,8-1	HxCDF	74.5	26 - 152
1,2,3,4,7,8-Hx	CDF	ND	0.000000436				13C-1,2,3,6,7,8-1	HxCDF	66.9	26 - 123
1,2,3,6,7,8-Hx	CDF	ND	0.000000334				13C-2,3,4,6,7,8-1	HxCDF	71.8	28 - 136
2,3,4,6,7,8-Hx	CDF	ND	0.000000326				13C-1,2,3,7,8,9-1	HxCDF	70.0	29 - 147
1,2,3,7,8,9-Hx	CDF	ND	0.000000456				13C-1,2,3,4,6,7,8	3-HpCDF	66.9	28 - 143
1,2,3,4,6,7,8-H	pCDF	ND	0.000000395				13C-1,2,3,4,7,8,9	9-HpCDF	72.4	26 - 138
1,2,3,4,7,8,9-Н	pCDF	ND	0.000000424				13C-OCDF		56.7	17 - 157
OCDF		ND	0.00000136			CRS	5 37Cl-2,3,7,8-TC	DD	84.0	35 - 197
Totals						Foot	tnotes			
Total TCDD		ND	0.000000628			a. Sar	nple specific estimated of	letection limit.		
Total PeCDD		ND	0.000000450			b. Est	imated maximum possib	ole concentration.		
Total HxCDD		ND	0.000000828			c. Me	thod detection limit.			
Total HpCDD		ND	0.00000111			d. Lo	wer 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							

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

NPDES - 386 Analyst: MAS Approved By:

OPR Results				EPA	Method 1613
Matrix: Aqueous Sample Size: 1.00 L	QC Batch No.: Date Extracted:	7910 9-Apr-06	Lab Sample: 0-OPR001 Date Analyzed DB-5: 10-Apr-06	Date Analyze	d 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	<u>IS</u> 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	<u>CRS</u> 37Cl-2,3,7,8-TCDD	87.2	35 - 197

Analyst: MAS William J. Luksemburg 12-Apr-2006 09:57

Sample ID:	IPD0258-0	1								EPA N	Method 1613
Client Data				Sample Data		Lab	oratory Data				
Name:		alytical, Irvine		Matrix:	Aqueous	Lab	Sample:	27551-001	Date Re	ceived:	6-Apr-06
Project: Date Collected:	IPD0258 4-Apr-06			Sample Size:	1.03 L	QC	Batch No.:	7910	Date Ex	tracted:	9-Apr-06
Time Collected:	0920					Date	Analyzed DB-5:	11-Apr-06	Date An	alyzed DB-225:	NA
Analyte	Conc.	(ug/L)	DL a	EMPC ^b	Qualifiers		Labeled Stand	dard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD		ND	0.000000	753		<u>IS</u>	13C-2,3,7,8-TC	CDD	55.6	25 - 164	
1,2,3,7,8-PeCD	D	ND	0.000000	766			13C-1,2,3,7,8-F	PeCDD	50.9	25 - 181	
1,2,3,4,7,8-HxC	CDD	ND	0.000001	37			13C-1,2,3,4,7,8	-HxCDD	54.3	32 - 141	
1,2,3,6,7,8-HxC	CDD	0.00000201			J		13C-1,2,3,6,7,8	-HxCDD	50.1	28 - 130	
1,2,3,7,8,9-HxC	CDD	ND	0.000001	91			13C-1,2,3,4,6,7	,8-HpCDD	55.2	23 - 140	
1,2,3,4,6,7,8-H _I	pCDD	0.0000724					13C-OCDD		43.4	17 - 157	
OCDD		0.00113			В		13C-2,3,7,8-TC	CDF	54.3	24 - 169	
2,3,7,8-TCDF		ND	0.000000	571			13C-1,2,3,7,8-F	PeCDF	51.2	24 - 185	
1,2,3,7,8-PeCD	F	ND	0.000000	729			13C-2,3,4,7,8-F	PeCDF	49.2	21 - 178	
2,3,4,7,8-PeCD	F	ND	0.000000	714			13C-1,2,3,4,7,8	-HxCDF	51.9	26 - 152	
1,2,3,4,7,8-HxC	CDF	ND	0.000000	553			13C-1,2,3,6,7,8	-HxCDF	47.8	26 - 123	
1,2,3,6,7,8-HxC	CDF	ND	0.000000	572			13C-2,3,4,6,7,8	-HxCDF	49.9	28 - 136	
2,3,4,6,7,8-HxC	CDF	ND	0.000000	583			13C-1,2,3,7,8,9	-HxCDF	49.4	29 - 147	
1,2,3,7,8,9-HxC	CDF	ND	0.000000	816			13C-1,2,3,4,6,7	,8-HpCDF	50.1	28 - 143	
1,2,3,4,6,7,8-H _I	pCDF	0.00000840			J		13C-1,2,3,4,7,8	,9-HpCDF	51.9	26 - 138	
1,2,3,4,7,8,9-H _I	pCDF	ND	0.000001	10			13C-OCDF		44.5	17 - 157	
OCDF		0.0000303			J	CRS	37C1-2,3,7,8-T0	CDD	91.7	35 - 197	
Totals						Foo	otnotes				
Total TCDD		ND	0.000000	753		a. Sa	ample specific estimat	ed detection limit.			
Total PeCDD		ND	0.000000	766		b. Es	stimated maximum po	ossible concentration.			
Total HxCDD		0.0000115				c. M	ethod detection limit.				
Total HpCDD		0.000135				d. Le	ower control limit - up	oper control limit.			
Total TCDF		ND	0.000000	571							
Total PeCDF		0.000000859									
Total HxCDF		0.00000829									
Total HpCDF		0.0000397									

Analyst: MAS William J. Luksemburg 12-Apr-2006 09:57

NPDES - 388

APPENDIX

Project 27551 Page 7 of 240

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	02102011
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 1014 E. Cooley Dr., Suite A, Colton, CA 92324

9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120

Ph (949) 261-1022 Ph (909) 370-4667 Ph (619) 505-9596

Ph (702) 798-3620

Fax (949) 261-1228 Fax (909) 370-1046

Fax (619) 505-9689 Ph (480) 785-0043 Fax (480) 785-0851

SUBCONTRACT ORDER - PROJECT # IPD0258

SENDING	LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical - Irvine 17461 Derian Avenue. Suite 19 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Char		Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106
Standard TAT is requested u	nless specific due date is n	requested => Due Date: Initials:

Standard LAT IS TEQU	esteu uniess specific due date is request	ed -> Due Date miliais	
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,ug/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 (IPD0258-01	1C)		
1 L Amber (IPD0258-01	ID)		

						· · · · · · · · · · · · · · · · · · ·			·	<u>, </u>
				SAMPL	E INTEGRI	ΓY:				
All containers intact:		Yes 🔲 No	San	ple labels/COC agree:	☐ Yes	□ No	Samples Receive	ed On Ice::	☐ Yes	□ No
Custody Seals Present:		Yes 🗆 No	Sam	ples Preserved Properly	r:	□ No	Samples Receive	ed at (temp):	<u> </u>	
			4/5/0	6	Etting	`S.K	modiet	4/6/0	6 6	08 <i>5</i> 0
Released By			Date	Time	Received By	<i>y</i> .		Date .		ime
	٠								ND	DES - 392
Released By			Date	Time	Received By	У.		Date	T	ime
Dun in at 07551									Das	n = 10 = £ 8 40

Project 27551

Pagagle0106240

SAMPLE LOG-IN CHECKLIST

Alta Project #: 2755 /

	Date/Time	Initial	s:	Locat	ion: WK	2-2
Samples Arrival:	4/6/06 085	50 43	43	Shelf/	Rack:	
	Date/Time	Initial	s:	Locat	ion: WR	-2
Logged In:	4/6/06 1010) B	lb	She If/	Rack:	-3
Delivered By:	(FedEx UPS	Cal	DHL		Hand elivered	Other
Preservation:	lce E	Blue Ice	Dry Id	ce	No	ne
Temp °C /.	Time: (3900		Thern	nometer ID	: DT-20

					YEŞ	NO	NA
Adequate Sample Volume Received?)				V		
Holding Time Acceptable?					V		
Shipping Container(s) Intact?			····		V		
Shipping Custody Seals Intact?					V		
Shipping Documentation Present?					V		
Airbill Trk# 79	20 6	6313	8160		/		
Sample Container Intact?					V		
Sample Custody Seals Intact?							V
Chain of Custody / Sample Documer	ntation Pr	esent?			V		
COC Anomaly/Sample Acceptance F	orm com	pleted?				V	
If Chlorinated or Drinking Water Sam	iples, Acc	ceptable P	reservation?				V
Na ₂ S ₂ O ₃ Preservation Documented?	nple ainer	No	ne				
Shipping Container	Alta	Client	Retain	Ret	urn	Disp	oose

Comments:

APPENDIX G

Section 14

Outfall 004, April 04, 2006

MECX Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

ME	O ^X		Package ID	B4DF79
122	69 East Vassar Drive		Task Order	1261.001D.01
Aur	ora, CO 80014		SDG No.	IPD0258
		No.	of Analyses	1
	Laboratory Alta		Date: May	21, 2006
	Reviewer K. Shadowl	ight	Reviewer's	Signature /
F	Analysis/Method Dioxin/Fura	n by Method 1613	Knlst	hadn/1
				<u>J</u>
ACT	TION ITEMS ^a			<u> </u>
	Case Narrative			
	Deficiencies			
2.	Out of Scope Analyses			
3.	Analyses Not Conducted			
4	Missing Hordson.			
4.	Missing Hardcopy Deliverables			
	Deliverables			
5.	Incorrect Hardcopy			The state of the s
5.	Deliverables			
6.	Deviations from Analysis	Detects below the labora	atory lower calib	ration level were qualified
	Protocol, e.g.,	as estimated.		A STATE OF THE STA
	Holding Times			
	GC/MS Tune/Inst. Performance			
	Calibration	And the second s		
	Method blanks			
	Surrogates			
	Matrix Spike/Dup LCS			
	Field QC			
	Internal Standard Performance		water the second	
	Compound Identification			
	Quantitation			
	System Performance	1		
CO	MMENTS ^b			
ac	ubcontracted analytical laboratory is not r	meeting contract and/or method re	auirements	
i	upcontracted analytical laboratory is not r ifferences in protocol have been adopted	-		is required.



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: Analysis: Water Dioxins/Furans

QC Level:

Level IV

No. of Samples:

0

No. of Reanalyses/Dilutions: 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.

1

Project: NPDES SDG: IPD0258 Analysis: D/F

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 004	IPD0258-01	27551-001	Water	1613

SDG: Analysis:

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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.

Project: SDG: Analysis: NPDES IPD0258 D/F

DATA VALIDATION REPORT

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.

Project: NPDES SDG: IPD0258 Analysis: D/F

DATA VALIDATION REPORT

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.

Client Data	;			Sample Dave		AND COLUMN AND AND AND AND AND AND AND AND AND AN				
Name: Project: Date Collected: Time Collected:	Del Mar Ana IPD0258 4-Apr-06 0920	Del Mar Analytical, Irvine IPD0258 4-Apr-06		Matrix: Sample Size:	Aqueous 1.03 L	Lab Sample: QC Batch No.: Date Analyzed DB-5:	27551-001 7910 11-Apr-06	Date Received: Date Extracted: Date Analyzed DB-225:	DB-225:	6-Apr-06 9-Apr-06 NA
Analyte	Conc. ((ug/L)	DF a	EMPCb	Qualifiers	Labeled Standard	p.	%R LCL	rcr-ncr _q on	Oualifiers
2.3.7.8-TCDD	,	N ON	0.000000753	753		IS 13C-2,3,7,8-TCDD		55.6 25	25 - 164	
1,2,3,7,8-PeCDD	DD	S	0.000000766	99/		13C-1,2,3,7,8-PeCDD	DD	50.9 25	25 - 181	
1,2,3,4,7,8-HxCDD	(CDD	N ON	0.00000137	3.7		13C-1,2,3,4,7,8-HxCDD	хСDD	54.3 32	32 - 141	
7 1,2,3,6,7,8-HxCDD	CDD	0.00000201			} >	13C-1,2,3,6,7,8-HxCDD	хСDD	50.1 28	28 - 130	
1,2,3,7,8,9-HxCDD	(CDD	ND	0.00000191)1		13C-1,2,3,4,6,7,8-HpCDD	НрСDD	55.2 23	23 - 140	
1,2,3,4,6,7,8-HpCDD	НрСDD	0.0000724				13C-OCDD		43.4 17	17 - 157	
ОСДД		0.00113			В	13C-2,3,7,8-TCDF	ri÷.	54.3 24	24 - 169	
2,3,7,8-TCDF	r-	ND	0.000000571	571		13C-1,2,3,7,8-PeCDF	DF	51.2 24	24 - 185	
1,2,3,7,8-PeCDF	DF	R	0.000000729	729		13C-2,3,4,7,8-PeCDF	DF	49.2 21	21 - 178	
2,3,4,7,8-PeCDF	DF	ND	0.000000714	714		13C-1,2,3,4,7,8-HxCDF	xCDF	51.9 26	26 - 152	
1,2,3,4,7,8-HxCDF	(CDF	S	0.000000553	553		13C-1,2,3,6,7,8-HxCDF	xCDF	47.8 26	26 - 123	
1,2,3,6,7,8-HxCDF	VCDF	R	0.000000572	572		13C-2,3,4,6,7,8-HxCDF	xCDF	49.9 28	28 - 136	
2,3,4,6,7,8-HxCDF	«CDF	<u>R</u>	0.000000583	583		13C-1,2,3,7,8,9-HxCDF	xCDF	49.4 29	29 - 147	
1,2,3,7,8,9-HxCDF	VCDF	2 R	0.000000816	316		13C-1,2,3,4,6,7,8-HpCDF	HpCDF	50.1 28	28 - 143	
2 1,2,3,4,6,7,8-HpCDF	HpCDF	0.00000840			—	13C-1,2,3,4,7,8,9-HpCDF	HpCDF	51.9 26	26 - 138	
1,2,3,4,7,8,9-HpCDF	HpCDF	R	0.00000110	10		13C-OCDF			17 - 157	
DNG OCDF		0.00000303			i i	CRS 37CI-2,3,7,8-TCDD	D	91.7 35	- 197	
Totals						Footnotes	•			
Total TCDD		ND	0.000000753	753		a. Sample specific estimated detection limit.	letection limit.			
Total PeCDD		R	0.000000766	99/		b. Estimated maximum possible concentration.	de concentration.			
Total HxCDD		0.0000115				c. Method detection limit.				
Total HpCDD		0.000135				d. Lower control limit - upper control limit.	control limit.			
Total TCDF		Q.	0.000000571	571						
Total PeCDF		0.000000859								
Total HxCDF		0.00000829								
Total HpCDF		0.0000397			en particular de constante de c					
Analyst: MAS	S					Approved By:	William J. Luksemburg		12-Apr-2006 09:57	57
- 4										

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APPENDIX G

Section 15

Outfall 004, April 14, 2006 Del Mar Analytical Laboratory Report



LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: Routine Outfall 004

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

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 CLIENT ID MATRIX
IPD1549-01 Outfall 004 Water

Reviewed By:

Del Mar Analytical - IrvineMichele Chamberlin

Michele Chamberdin

Project Manager



Pasadena, CA 91101

Project ID: Routine Outfall 004

300 North Lake Avenue, Suite 1200

Sampled: 04/14/06 Report Number: IPD1549 Received: 04/14/06

Attention: Bronwyn Kelly

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



Pasadena, CA 91101

Project ID: Routine Outfall 004

300 North Lake Avenue, Suite 1200

Sampled: 04/14/06 Report Number: IPD1549 Received: 04/14/06

Attention: Bronwyn Kelly

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	



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 004

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

Report Number: IPD1549

SHORT HOLD TIME DETAIL REPORT

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



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D17063 Extracted: 04/17/06											
	-										
Blank Analyzed: 04/17/2006 (6D17063-B	LK1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/17/2006 (6D17063-BS)	1)										
Mercury	8.25	0.20	0.050	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 04/17/2006 (6D1	7063-MS1)				Sou	rce: IPD1	1477-13				
Mercury	8.39	0.20	0.050	ug/l	8.00	ND	105	70-130			
Matrix Spike Dup Analyzed: 04/17/2006	(6D17063-MS	SD1)			Sou	rce: IPD1	1477-13				
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-B	LK1)										
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-BS)	1)										
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			

Sampled: 04/14/06



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 004

Report Number: IPD1549 Received: 04/14/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Analyte	Result	Limit	MDL	Units	Levei	Kesuit	70KEC	Limits	KFD	Lillit	Quanners
Batch: 6D20092 Extracted: 04/20/06	<u>.</u>										
Matrix Spike Analyzed: 04/21/2006 (6D2	0092-MS1)				Sou	rce: IPD1	586-01				
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 (6D2	0092-MS2)				Sou	rce: IPD1	586-02				
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-M	SD1)			Sou	rce: IPD1	586-01				
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	



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

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6D14143 Extracted: 04/14/06	<u>-</u>										
Blank Analyzed: 04/14/2006 (6D14143-B	LK1)										
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-BS	1)										
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 (6D1	4143-MS1)				Sou	rce: IPD1	1540-17				
Sulfate	18.4	0.50	0.45	mg/l	10.0	8.5	99	80-120			
Matrix Spike Dup Analyzed: 04/14/2006	(6D14143-M	SD1)			Sou	rce: IPD1	1540-17				
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-B	LK1)										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/18/2006 (6D18050-BS)	1)										M-NR1
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120			
LCS Dup Analyzed: 04/18/2006 (6D1805)	0-BSD1)										
Oil & Grease	17.9	5.0	0.94	mg/l	20.0		90	65-120	7	20	
Batch: 6D18055 Extracted: 04/18/06	<u>.</u>										
Blank Analyzed: 04/18/2006 (6D18055-B	LK1)										
Total Dissolved Solids	ND	10	10	mg/l							

Del Mar Analytical - Irvine Michele Chamberlin Project Manager



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

INORGANICS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D18055 Extracted: 04/18/06	_										
LCS Analyzed: 04/18/2006 (6D18055-BS	1)										
Total Dissolved Solids	990	10	10	mg/l	1000		99	90-110			
Duplicate Analyzed: 04/18/2006 (6D1805	5-DUP1)				Sou	rce: IPD1	1326-01				
Total Dissolved Solids	5080	10	10	mg/l		5100			0	10	
Batch: 6D19119 Extracted: 04/19/06	<u>_</u>										
Blank Analyzed: 04/19/2006 (6D19119-B	LK1)										
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/19/2006 (6D19119-BS	1)										
Total Suspended Solids	984	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 04/19/2006 (6D1911	9-DUP1)				Sou	rce: IPD1	1537-01				
Total Suspended Solids	342	10	10	mg/l		340			1	10	



Pasadena, CA 91101

Project ID: Routine Outfall 004

300 North Lake Avenue, Suite 1200

Sampled: 04/14/06 Report Number: IPD1549 Received: 04/14/06

Attention: Bronwyn Kelly

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.

					Compliance
nalysis	Analyte	Units	Result	MRL	Limit
13.1 Oil and Grease	Oil & Grease	mg/l	2.80	4.7	15
ntimony-200.8	Antimony	ug/l	0.82	2.0	6.00
admium-200.8	Cadmium	ug/l	0.23	1.0	4.00
hloride - 300.0	Chloride	mg/l	51	5.0	150
opper-200.8	Copper	ug/l	6.30	2.0	14
ead-200.8	Lead	ug/l	1.30	1.0	5.20
Iercury - 245.1	Mercury	ug/l	0.082	0.20	0.20
itrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.82	0.15	10.00
ulfate-300.0	Sulfate	mg/l	22	0.50	250
DS - SM 2540C	Total Dissolved Solids	mg/l	280	10	850
hallium-200.8	Thallium	ug/l	0.20	1.0	2.00
l i i i i i	3.1 Oil and Grease ntimony-200.8 admium-200.8 alloride - 300.0 opper-200.8 ead-200.8 ercury - 245.1 atrogen, NO3+NO2 -N alfate-300.0 oS - SM 2540C	3.1 Oil and Grease ntimony-200.8 Antimony admium-200.8 Cadmium nloride - 300.0 Chloride opper-200.8 Copper ead-200.8 Lead ercury - 245.1 Mercury itrogen, NO3+NO2 -N Nitrate/Nitrite-N Sulfate-300.0 Sulfate OS - SM 2540C Total Dissolved Solids	3.1 Oil and Grease Oil & Grease mg/l ntimony-200.8 Antimony ug/l ndmium-200.8 Cadmium ug/l nloride - 300.0 Chloride mg/l opper-200.8 Copper ug/l ead-200.8 Lead ug/l ercury - 245.1 Mercury ug/l itrogen, NO3+NO2 -N Nitrate/Nitrite-N mg/l olfate-300.0 Sulfate mg/l oS - SM 2540C Total Dissolved Solids mg/l	3.1 Oil and Grease Oil & Grease mg/l 2.80 ntimony-200.8 Antimony ug/l 0.82 ndmium-200.8 Cadmium ug/l 0.23 nloride - 300.0 Chloride mg/l 51 opper-200.8 Copper ug/l 6.30 nead-200.8 Lead ug/l 1.30 necury - 245.1 Mercury ug/l 0.082 ntrogen, NO3+NO2 -N Nitrate/Nitrite-N mg/l 0.82 ntrogen, NO3+NO2 -N Nitrate/Nitrite-N mg/l 0.82 ntrogen, NO3+NO2 -N Total Dissolved Solids mg/l 280	3.1 Oil and Grease Oil & Grease mg/l 2.80 4.7 ntimony-200.8 Antimony ug/l 0.82 2.0 admium-200.8 Cadmium ug/l 0.23 1.0 nloride - 300.0 Chloride mg/l 51 5.0 ppper-200.8 Copper ug/l 6.30 2.0 add-200.8 Lead ug/l 1.30 1.0 ercury - 245.1 Mercury ug/l 0.082 0.20 atrogen, NO3+NO2 -N Nitrate/Nitrite-N mg/l 0.82 0.15 nlfate-300.0 Sulfate mg/l 22 0.50 ppg/l 280 250 0.50 ppg/l 280 250 0.50 ppg/l 280 10



300 North Lake Avenue, Suite 1200 Sampled: 04/14/06

Pasadena, CA 91101 Report Number: IPD1549 Received: 04/14/06

Attention: Bronwyn Kelly

DATA QUALIFIERS AND DEFINITIONS

Project ID: Routine Outfall 004

B Analyte was detected in the associated Method Blank.

I 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).

 $\textbf{M-NR1} \qquad \text{There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike} \\$

Duplicate.

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

RPD Relative Percent Difference



Pasadena, CA 91101

Project ID: Routine Outfall 004

300 North Lake Avenue, Suite 1200

Sampled: 04/14/06
Report Number: IPD1549 Received: 04/14/06

Attention: Bronwyn Kelly

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

\sim CHAIN OF CUSTODY FORM $\rightarrow \sim $	Project: ANALYSIS REQUIRED	FL NPDES	Routine Outfall 004
rsion 03/1/06 CH	Project:	Boeing-8	Routine
Del Mar Analytical version 03/1/06 CHAIN O	Client Name/Address:		MWH-Pasadena

RED	Field readings: Temp = 5° \dot{q}°	pH= 7.9										1200	J	id Time: (cl	72 Hours Normal	Perchlorate Only 72 Hours	Metals Only 72 Hours
ANALYSIS REQUIRED		N+5ON ,4O3 S2T ,2					×	×						Jate/Time: 14(4/6¢ (44)	1/4/06 /745	ime:	
	ig, II ngeners)	al Recoverable Cd, Cu, Pb, H DD (and all cor & Grease (EP,	TCI	×	×	×								Date/Time	Date/Time	Date/Time:	
	PDES 1004 SRE		vative Bo	HNO3 1B	21	HCI 3A, 3B	None 4A, 4B	None 5A, 5B						Received By	Received By	Received By 0	
Project:	Boeing-SSFL NPDES Routine Outfall 004 Stormwater at SRE	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515	-	1 10/1/4			→	25E1 90/H//H						Date/Time:	Date/Time:	Date/Time:	
	Suite 1200	nwyn Kelly Jobe a	Container # of Type Cont.	Poly-1L 1		Glass- 2 Amber 2	Poly-500 2	Poly-500 2 ml						Date.	Date Chul	-	
Oliont Mame/Address	MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101	Project Manager. Bronwyn Kelly Sampler: Barrosc, Ruben	5	Outfall 004 W		Outfall 004 W	Outfall 004 W	Outfall 004 W						Relinquished By	Relinquished By	Relinquished By	NPDI



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-though-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



Aita 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: 4/18/2006

Alta Lab. ID Client Sample ID

27605-001 IPD1549-01

Project 27605 Page 2 of 237 NPDES - 418

SECTION II

Page 3 of 237 **NPDES - 419**

Method Blank							EPA Method 1613	od 1613
Matrix: Aqueous		QC Batch No.:	7985		Lab Sample: 0-MB001			
Sample Size: 1.00 L		Date Extracted:	3-May-06	9,	Date Analyzed DB-5; 5-May-06	Date Ana	Date Analyzed DB-225.	K Z
Analyte Conc. (ug/L)	ıg/L)	DF a	EMPC b Qu	Qualifiers	Labeled Standard	%R	O pTDH-TDT	Qualifiers
2,3,7,8-TCDD	ND	0.000000220			IS 13C-2,3,7,8-TCDD	\$.98	25 - 161	
1,2,3,7,8-PeCDD	N Q	0.000000333			13C-1,2,3,7,8-PeCDD	77.9	25 - 181	
1,2,3,4,7,8-HxCDD	N	0.000000535			13C-1,2,3,4,7,8-HxCDD	73.7	32 - 141	
1,2,3,6,7,8-HxCDD	N	0.000000571			13C-1,2,3,6,7,8-HxCDD	77.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.0000000558			13C-1,2,3,4,6,7,8-HpCDD	71.1	23 - 140	7
1,2,3,4,6,7,8-HpCDD	ND		0.000000257		13C-OCDD	53.0	17 - 157	
OCDD	0,0000290			,,	13C-2,3,7,8-TCDF	93.0	24 - 169	
2,3,7,8-TCDF	ΩN	0.000000224			13C-1,2,3,7,8-PeCDF	83.5	24 - 185	
1,2,3,7,8-PeCDF	N	0.000000291		1.	13C-2,3,4,7,8-PeCDF	84.3	21 - 178	
2,3,4,7,8-PeCDF	N	0.000000269			13C-1,2,3,4,7,8-HxCDF	73.5	26 - 152	•
1,2,3,4,7,8-HxCDF	NON	0.000000282			13C-1,2,3,6,7,8-HxCDF	73.9	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000251			13C-2,3,4,6,7,8-HxCDF	78.7	28 - 136	
2,3,4,6,7,8-HxCDF	OZ.	0.000000284			13C-1,2,3,7,8,9-HxCDF	74.1	29 - 147	
1,2,3,7,8,9-HxCDF	ΩN	0.000000471			13C-1,2,3,4,6,7,8-HpCDF	69.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000000514			13C-1,2,3,4,7,8,9-HpCDF	70.4	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000554			13C-OCDF	54.7	17 - 157	
OCDF	0.00000233	33 23		Ţ	CRS 37CI-2,3,7,8-TCDD	2.66	35 - 197	
Totals					Footnotes			
Total TCDD Total PeCDD	ND ND	0.0000000220		13				:
Total HxCDD	ND	0.000000555			a Sample specific estimated detection limit.			
Total HpCDD	N Q		0.00000257		b. Estimated maximum possible concentration.			
Total TCDF	ΩN	0.0000000224			c. Method detection limit.			
Total PeCDF	N N	0.000000280			d. Lower control limit - upper control limit.			
Total HxCDF	N N	0.000000322						.13
Total Value of the Control of the Co					War and Walk			

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

Project 27605

JMH

Analyst

OPR Results					EPA	EPA Method 1613
	· ·	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;	ed DB-225: NA
Analyte	Spike Conc. Conc. (ng/mL)	onc. (ng/mL)	OPR Limits	Labeled Standard	%R	TCL-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
ÓCDD	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	7.67	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 37CI-2,3,7,8-TCDD	÷ £01	35 - 197

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

Analyst: JMH

Sample ID: IPD1	IPD1549-01						EPA	EPA Method 1613
Client Data Name Del Mar A Project. Date Collected: 14-Apr-0 Time Collected: 1350	Del Mar Analytical, Irvine IPD1549 14-Apr-06		Sample Data Matrix: Sample Size.	Aqueous 1.02 L	Laboratory, Data Lab Sample: 27605-001 OC Batch No. 7985 Date Analyzed DB-5: 5-May-06		Date Received: Date Extracted Date Analyzed DB-225	18-Apr-06 3-May-06 NA
Analyte	Conc. (ug/L)	DF a	EMPCb	Qualifiers	Labeled Standard	6.	%R LCL-UCL ^d	Oualifiers
2,3,7,8-TCDD	ND	0.000000495	561		LS 13C-2,3,7,8-TCDD		39.7 25 164	
1,2,3,7,8-PeCDD	ND	0.000000865	365		13C-1,2,3,7,8-PeCDD		33.7 25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000104	40		13C-1,2,3,4,7,8-HxCDD		35.1 32 - 141	
1,2,3,6,7,8-HxCDD	0.00000298			ſ	13C-1,2,3,6,7,8-HxCDD		37.7 28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000106	90	-	13C-1,2,3,4,6,7,8-HpCDD	0	38.0 23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000665				13C-OCDD		29.7 17 - 157	
OCDD	0.000997			В	13C-2,3,7,8-TCDF		37.7 24 - 169	
2,3,7,8-TCDF	ND	0.000000730	730		13C-1,2,3,7,8-PeCDF		35.9 24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000585	585		13C-2,3,4,7,8-PeCDF		33.3 21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000622	522		13C-1,2,3,4,7,8-HxCDF		35.0 26 - 152	
1,2,3,4,7,8-HxCDF	QN	0.000000552	552		13C-1,2,3,6,7,8-HxCDF		37.0 26 123	
1,2,3,6,7,8-HxCDF	ND	0.000000485	185		13C-2,3,4,6,7,8-HxCDF		34.2 28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000621	521		13C-1,2,3,7,8,9-HxCDF		32.3 29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000000	666		13C-1,2,3,4,6,7,8-HpCDF	ft.	36.7 28 - 143	
1,2,3,4,6,7,8-HpCDF	0,00000956				13C-1,2,3,4,7,8,9-HpCDF		32.2 26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000103)3		13C-OCDF		29.6 17 - 157	
OCDF	0.0000297	New York		J,B	CRS 37Cl-2,3,7,8-TCDD		96.2 35 - 197	
Totals					Footnotes			
Total TCDD	ΔN	0.000000495	S6t				·	
Total PeCDD	ND	0.000000865	365					
Total HxCDD	0.0000172				a. Sample specific estimated detection limit.	limit.		
Total HpCDD	0.000134			В	b. Estimated maximum possible concentration.	ntration.		
Total TCDF	ND	0.000000730	730		c. Method detection limit.			
Total PeCDF	ND ON	0.0000000604	504		d. Lower control limit - upper control limit.	imit.		
Total HxCDF	0.0000104		0.0000112	2				
Total HpCDF	0.0000303							

APPENDIX

Project 27605 Page 7 of 237 NPDES - 423

DATA QUALIFIERS & ABBREVIATIONS

В	This compound was also detected in the method blank.
D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
Е	The reported value exceeds the calibration range of the instrument.
Н	The signal-to-noise ratio is greater than 10:1.
[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.
ЕМРС	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.

Page 8 of 237 **NPDES - 424** Project 27605

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

Page 9 of 237 **NPDES - 425**



17461 Derian Ave. Suite 100, Irvine, CA 92614 1014 E. Cooley Dr., Suite A. Colton, CA 92324 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123

Ph (949) 261-1022 Fax (949) 261-1228 Ph (909) 370-4667 Ph (619) 505-9596

Ph (702) 798-3620

Fax (909) 370-1046 Fax (619) 505-9689

9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (480) 785-0043 Fax (480) 785-0851 Fax (702) 798-3621

	SUBCONTRACTOR	CDER - PROJECT # IPD1549
SENDI Del Mar Analytical - Irvine 17461 Derian Avenue. Suit Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele (te 100	RECEIVING LABORATORY: Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106
Standard TAT is requeste	ed unless specific due date is reques	sted => Due Date: Initials:
Analysis	Expiration	Comments
Sample ID: IPD1549-01 Wa 1613-Dioxin-HR-Alta EDD + Level 4 Containers Supplied: 1 L Amber (IPD1549-01C) 1 L Amber (IPD1549-01D)	ater Sampled: 04/14/06 13:50 04/21/06 13:50 05/12/06 13:50	J flags,17 congeners,no TEQ,ug/L,sub=Alta Excel EDD email to pm,Include Std logs for Lvl IV
	•	
		•
·		
		*Ne
	SAMI	PLE INTEGRITY:
All containers intact: Yes Custody Seals Present: Yes	bumple model coo ugi	•
Eduardo A	4/17/06	Bettina J. Binedict 4/18/06 0905
Released By	Date Time	Received By Date Time

.Date

Time

Received By

Released By

Time

Date

SAMPLE LOG-IN CHECKLIST

Alta Project #:	+605							
	Date/Time		Initials	•	Locati	ion: W	R- 2	}
Samples Arrival:	4/18/06	0905	5 Bx	\mathcal{B}	Shelf/	Rack:		
Logged In:	Date/Time	6 144	6 B	: B	Shelf/	ion: W	R-ã	}
Delivered By:	FedEx	UPS	Cal	DHL	1	Hand elivered	Oth	ner
Preservation:	lce.	В	lue Ice	Dry I	ce	No	one	
Temp °C D. 3	0	Time: (9935		Thern	nometer ID	: DT-	20
				mmmm	mm	//// VEC	NO	NIA
						YES	NO	NA
Adequate Sample	: Volume Recei	ved?				-	<u>, </u>	
Holding Time Acc	eptable?					V		
Shipping Contain	∈r(s) Intact?							
Shipping Custody						V		
Shipping Docume		t?				V		
Airbil!			6932	436		V		
Sample Containe								
Sample Custody			···					V
Chain of Custody		umentation	Present?			Land I		/
							V	
COC Anomaly/S	ample Acceptai	ince i oitii c	ompieteu:				+	
If Chlorinated or	Drinking Water	Samples,	Acceptable l	Preservati	on?		<u></u>	5
Na ₂ S ₂ O ₃ Preserv	ation Documer	nted?		coc		Sample Container	(No	one

Client

Alta

Retain

Shipping Container

Return

Dispose

APPENDIX G

Section 16

Outfall 004, April 14, 2006

MECX Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA MECX, LLC Package ID B4DF93 12260 East Vassar Drive Task Order <u>1261.001D.01</u> Suite 500 SDG No. _IPD1549 Lakewood, CO 80226 No. of Analyses 1 Laboratory Alta Analytical Date: July 3, 2006 Reviewer E. Wessling Reviewer's Signature Analysis/Method Dioxins/Furans ACTION ITEMS^a Case Narrative Deficiencies 2. Out of Scope Analyses Analyses Not Conducted Missing Hardcopy Deliverables 5. Incorrect Hardcopy Deliverables Deviations from Analysis Qualifications were assigned for the following: Protocol, e.g., - the results between the RL and the MDL were estimated Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks

Compound Identification	
Quantitation	
System Performance	
COMMENTS ^b	

Surrogates

Field QC

Matrix Spike/Dup LCS

Internal Standard Performance

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 004

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IPD1549

Prepared by

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

Project: **NPDES** SDG: IPD1549 DATA VALIDATION REPORT Analysis: D/F

1. INTRODUCTION

Task Order Title: **NPDES**

Contract Task Order: 1261.001D.01 Sample Delivery Group: IPD1549

Project Manager: P. Costa Matrix: Water

Dioxins/Furans Analysis:

QC Level: Level IV

No. of Samples: 1 No. of Reanalyses/Dilutions: 0

qualification code since the data had already been rejected.

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

Revision 0 NPDES - 431 B4DF93 1

Project: SDG: NPDES IPD1549 Analysis: DATA VALIDATION REPORT D/F

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 004	IPD1549-01	27605-001	Water	1613

 Project:
 NPDES

 SDG:
 IPD1549

 DATA VALIDATION REPORT
 Analysis:
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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 $\pm 2^{\circ}$ 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.

 Project:
 NPDES

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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 ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤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.

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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

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Project: NPDES SDG: IPD1549

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"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.

	Sample ID: IPD	1549-01 Out-f	all E	2004					EPA I	Method 161.
المد	Project: IPD	Mar Analytical, Irvine 01549 Apr-06 0		Sample Data Matrix: Sample Size:	Aqueous 1.02 L	Laboratory Data Lab Sample: QC Batch No.: Date Analyzed DB-5:	27605-001 7985 5-May-06	Date Re Date Ex		18-Apr-06 3-May-06 NA
Code	Analyte	Conc. (ug/L)	DL a	EMPC ^b	Qualifiers	Labeled Stand	dard	%R	LCL-UCLd	Qualifiers
	2,3,7,8-TCDD	ND	0.000000	495		IS 13C-2,3,7,8-TC	DD	39.7	25 - 164	
	1,2,3,7,8-PeCDD	ND	0.000000	865		13C-1,2,3,7,8-F	PeCDD	33.7	25 - 181	
	1,2,3,4,7,8-HxCDD	ND	0.000001	04		13C-1,2,3,4,7,8	-HxCDD	35.1	32 - 141	
DNO	1,2,3,6,7,8-HxCDD	0.00000298			J	13C-1,2,3,6,7,8	-HxCDD	37.7	28 - 130	
	1,2,3,7,8,9-HxCDD	ND	0.000001	06		13C-1,2,3,4,6,7	,8-HpCDD	38.0	23 - 140	
	1,2,3,4,6,7,8-HpCDD	0.0000665				13C-OCDD		29.7	17 - 157	
	OCDD	0.000997			В	13C-2,3,7,8-TC	DF	37.7	24 - 169	
	2,3,7,8-TCDF	ND	0.000000	730		13C-1,2,3,7,8-P	eCDF	35.9	24 - 185	
	1,2,3,7,8-PeCDF	ND	0.000000	585		13C-2,3,4,7,8-P	eCDF	33.3	21 - 178	
	2,3,4,7,8-PeCDF	ND	0.000000	622		13C-1,2,3,4,7,8	-HxCDF	35.0	26 - 152	
	1,2,3,4,7,8-HxCDF	ND	0.000000	552		13C-1,2,3,6,7,8	-HxCDF	37.0	26 - 123	
	1,2,3,6,7,8-HxCDF	ND	0.000000	485		13C-2,3,4,6,7,8	-HxCDF	34.2	28 - 136	
	2,3,4,6,7,8-HxCDF	ND	0.000000	621		13C-1,2,3,7,8,9	-HxCDF	32.3	29 - 147	
	1,2,3,7,8,9-HxCDF	ND	0.000000	999		13C-1,2,3,4,6,7	8-HpCDF	36.7	28 - 143	
DNO	1,2,3,4,6,7,8-HpCDF	0.00000956			J	13C-1,2,3,4,7,8	9-HpCDF	32.2	26 - 138	
- 1	1,2,3,4,7,8,9-HpCDF	ND	0.000001	03		13C-OCDF		29.6	17 - 157	
DNG	OCDF	0.0000297			J,B	CRS 37Cl-2,3,7,8-TC	CDD	96.2	35 - 197	
	Totals					Footnotes				
	Total TCDD	ND	0.000000	495						
	Total PeCDD	ND	0.000000	865						
	Total HxCDD	0.0000172				a. Sample specific estimate	ed detection limit.			
	Total HpCDD	0.000134			В	b. Estimated maximum po	ssible concentration.			
	Total TCDF	ND	0.000000	730		c. Method detection limit.				
	Total PeCDF	ND	0.000000	604		d. Lower control limit - up	per control limit.			
	Total HxCDF	0.0000104		0.0000112	2					
	Total HpCDF	0.0000365								

Analyst: JMH



Approved By:

William J. Luksemburg 23-Jun-2006 15:40

APPENDIX G

Section 17

Outfall 005, April 05, 2006 Del Mar Analytical Laboratory Report



LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: Routine Outfall 005

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

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.

LABORATORY ID

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

IPD0422-01 Outfall 005 Water

CLIENT ID

Reviewed By:

Del Mar Analytical - IrvineMichele Chamberlin

Michele Chamberdin

Michele Chamberlii Project Manager MATRIX



Pasadena, CA 91101

Project ID: Routine Outfall 005

300 North Lake Avenue, Suite 1200

Sampled: 04/05/06 Report Number: IPD0422 Received: 04/05/06

Attention: Bronwyn Kelly

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0422-01 (Outfall 005 - Wa	iter)								
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	



Pasadena, CA 91101

Project ID: Routine Outfall 005

300 North Lake Avenue, Suite 1200

Sampled: 04/05/06 Report Number: IPD0422 Received: 04/05/06

Attention: Bronwyn Kelly

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD0422-01 (Outfall 005 - W	ater) - 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	



Attention: Bronwyn Kelly

Project ID: Routine Outfall 005

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPD0422

Sampled: 04/05/06

Received: 04/05/06

SHORT HOLD TIME DETAIL REPORT

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



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: 6D06061 Extracted: 04/06/06	_										
Blank Analyzed: 04/06/2006 (6D06061-B	LK1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/06/2006 (6D06061-BS	1)										
Mercury	8.10	0.20	0.050	ug/l	8.00		101	85-115			
Matrix Spike Analyzed: 04/06/2006 (6D0	6061-MS1)				Sou	rce: IPD(320-01				
Mercury	8.34	0.20	0.050	ug/l	8.00	ND	104	70-130			
Matrix Spike Dup Analyzed: 04/06/2006	(6D06061-MS	D1)			Sou	rce: IPD(320-01				
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-BLK	(1)									
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 (6	D06072-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			



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D06072 Extracted: 04/06/06	<u>;</u>										
Matrix Spike Analyzed: 04/06/2006-04/0	7/2006 (6D06	072-MS1)			Sou	rce: IPD(0061-03				
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 (6D0)6072-MS2)				Sou	rce: IPD(061-04				
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-MS	SD1)			Sou	rce: IPD(0061-03				
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	



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D06048 Extracted: 04/06/06	: <u> </u>										
	_										
Blank Analyzed: 04/06/2006 (6D06048-B	LK1)										
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-BS	1)										
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 (6D0	6048-MS1)				Sou	rce: IPD(0419-01				
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-MS	SD1)			Sou	rce: IPD(0419-01				
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	<u>.</u>										
Blank Analyzed: 04/06/2006 (6D06049-B	LK1)										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/06/2006 (6D06049-BS	1)										M-NR1
Oil & Grease	15.9	5.0	0.94	mg/l	20.0		80	65-120			
LCS Dup Analyzed: 04/06/2006 (6D0604	9-BSD1)										
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120	19	20	



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D06066 Extracted: 04/06/06	_										
Blank Analyzed: 04/06/2006 (6D06066-B	LK1)										
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/06/2006 (6D06066-BS	1)										
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 04/06/2006 (6D0606	6-DUP1)				Sou	rce: IPD0	419-01				
Total Dissolved Solids	156	10	10	mg/l		160			3	10	
Batch: 6D11091 Extracted: 04/11/06	_										
Blank Analyzed: 04/11/2006 (6D11091-B	LK1)										
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/11/2006 (6D11091-BS	1)										
Total Suspended Solids	972	10	10	mg/l	1000		97	85-115			
Duplicate Analyzed: 04/11/2006 (6D1109	1-DUP1)				Sou	rce: IPD0	412-01				
Total Suspended Solids	326	10	10	mg/l		340			4	10	



Pasadena, CA 91101

Project ID: Routine Outfall 005

300 North Lake Avenue, Suite 1200

Report Number: IPD0422 Sampled: 04/05/06
Received: 04/05/06

Attention: Bronwyn Kelly

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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	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

Sampled: 04/05/06



MWH-Pasadena/Boeing

Project ID: Routine Outfall 005

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPD0422 Received: 04/05/06

Attention: Bronwyn Kelly

DATA QUALIFIERS AND DEFINITIONS

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



Project ID: Routine Outfall 005

300 North Lake Avenue, Suite 1200

Sampled: 04/05/06 Pasadena, CA 91101 Report Number: IPD0422 Received: 04/05/06

Attention: Bronwyn Kelly

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 1613-Dioxin-HR-Alta Analysis Performed:

Samples: IPD0422-01

Analysis Performed: EDD + Level 4

Samples: IPD0422-01

IPDD422 Page 1 of 1

Del Mar Analytical version 03/01/06 CHAIN	nalytica	<u>w</u>	sion 03,	101/06 CHAI		USTC	OF CUSTODY FORM	ORM			I I	77 101	Page 1 of 1
Client Name/Address:	fress			Project:					Company of the Park of the Par	AN	ANALYSIS REQUIRED	JIRED	
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	9			Positine Outfall	- ברני המי	4.1.4	:s						rigid i dadiiigas.
NIVVIT-F' STATE ITA 300 North Lake Avenue, Suite 1200	enue, Suit	te 1200		Stormwater at FSDF-1	SDF-1		Netal T						Temp= >7'
Pasadena, CA 91	101						e V						7 2 Hu
Project Manager: Bronwyn Kelly	r: Bronwy	n Kell		Phone Number:			srabl P, H						\
Sampler, of rose, R.	146, K			(626) 568-6515 (626) 568-6515			Recove)d, Cu, I	s bns) (Grease	OU ,4OS	SST ,			Comments
Sample Sample Description Matrix	iple Container		Cont	Sampling Date/Time	Preservative	Bottle *	Total Sp, C			SCT			
+	ď	<u> </u>			HNO3	1A	×						
Outfall 005- W	Poly-1L	1			HNO3	18	×						
Outfall 005 W	Glass- Amber	2			None	2A, 2B		×					
Outfall 005 W	Glass- Amber	2			HCI	3A, 3B		×					
Outfall 005 W	Poly-500	500 2		->	None	4A, 4B			×				
Outfall 005 W	Poly-500 ml	500 2	2.	415/06	None	5A, 5B				×			
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7 C

Sample Integrity: (Check) Intact On Ice:

Metals Only 72 Hours



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

Marche Marer



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

NPDES - 453

Method Blank	k					ł				EPA Method 1613
Matrix:	Aqueous		QC Batch No.:	79	918	Lab	Sample:	0-MB001		
Sample Size:	1.00 L		Date Extracted:	: 10	0-Apr-06	Date	Analyzed DB-5:	11-Apr-06	Date An	alyzed DB-225: NA
					1		•	1		•
Analyte	Conc. (u	g/L)	DL a	EMPC b	Qualifiers		Labeled Standa	rd	%R	LCL-UCL ^d Qualifiers
2,3,7,8-TCDD		ND	0.000000788			<u>IS</u>	13C-2,3,7,8-TCI)D	72.2	25 - 164
1,2,3,7,8-PeCD	DD	ND	0.000000469				13C-1,2,3,7,8-Pe	CDD	73.0	25 - 181
1,2,3,4,7,8-HxQ	CDD	ND	0.00000114				13C-1,2,3,4,7,8-1	HxCDD	75.7	32 - 141
1,2,3,6,7,8-HxC	CDD	ND	0.00000120				13C-1,2,3,6,7,8-1	HxCDD	67.3	28 - 130
1,2,3,7,8,9-HxO	CDD	ND	0.00000113				13C-1,2,3,4,6,7,8	3-HpCDD	69.6	23 - 140
1,2,3,4,6,7,8-H	pCDD	ND	0.00000167				13C-OCDD		44.8	17 - 157
OCDD		ND	0.0000150				13C-2,3,7,8-TCI	DF	77.0	24 - 169
2,3,7,8-TCDF		ND	0.000000832				13C-1,2,3,7,8-Pe	CDF	72.9	24 - 185
1,2,3,7,8-PeCD	F	ND	0.000000866				13C-2,3,4,7,8-Pe	CDF	77.1	21 - 178
2,3,4,7,8-PeCD)F	ND	0.000000754				13C-1,2,3,4,7,8-1	HxCDF	70.7	26 - 152
1,2,3,4,7,8-HxC	CDF	ND	0.000000479				13C-1,2,3,6,7,8-1	HxCDF	66.8	26 - 123
1,2,3,6,7,8-HxC	CDF	ND	0.000000466				13C-2,3,4,6,7,8-1	HxCDF	70.2	28 - 136
2,3,4,6,7,8-HxQ	CDF	ND	0.000000465				13C-1,2,3,7,8,9-1	HxCDF	68.4	29 - 147
1,2,3,7,8,9-HxC	CDF	ND	0.000000684				13C-1,2,3,4,6,7,8	8-HpCDF	61.1	28 - 143
1,2,3,4,6,7,8-H	pCDF	ND	0.000000806				13C-1,2,3,4,7,8,9	9-HpCDF	67.5	26 - 138
1,2,3,4,7,8,9-H		ND	0.000000832				13C-OCDF		49.1	17 - 157
OCDF		ND	0.00000337			CRS	37Cl-2,3,7,8-TC	DD	86.2	35 - 197
Totals						Foot	notes			
Total TCDD		ND	0.000000788			a. San	nple specific estimated of	letection limit.		
Total PeCDD		ND	0.00000120				imated maximum possib			
Total HxCDD		ND	0.00000116				thod detection limit.			
Total HpCDD		ND	0.00000167			d. Lov	wer 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							

William J. Luksemburg 13-Apr-2006 07:30 **NPDES - 454** Analyst: MAS Approved By:

OPR Results					EPA	Method 1613
Matrix: Aqueous Sample Size: 1.00 L	_	C Batch No.: ate Extracted:	7918 10-Apr-06	Lab Sample: 0-OPR001 Date Analyzed DB-5: 11-Apr-06	Date Analyze	d DB-225: NA
Analyte	Spike Conc. Co	onc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	10.0	9.88	6.7 - 15.8	<u>IS</u> 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 William J. Luksemburg 13-Apr-2006 07:30

Sample ID:	IPD0422-01									EPA I	Method 1613
Client Data Name: Project:	Del Mar Ana IPD0422	lytical, Irvine		Sample Data Matrix: Sample Size:	Aqueous 1.02 L	Lab	oratory Data Sample: Batch No.:	27562-001 7918	Date Re		7-Apr-06 10-Apr-06
Date Collected: Time Collected:	5-Apr-06 0750			Sumple Size.	1.02 L	`	Analyzed DB-5:	11-Apr-06		alyzed DB-225:	NA
Analyte	Conc. (ug/L)	DL a	EMPC ^b	Qualifiers		Labeled Stand	dard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD		ND	0.000001	03		<u>IS</u>	13C-2,3,7,8-TC	CDD	64.1	25 - 164	
1,2,3,7,8-PeCD	D	ND	0.000000	732			13C-1,2,3,7,8-F	PeCDD	65.4	25 - 181	
1,2,3,4,7,8-HxC	CDD	ND	0.000002	08			13C-1,2,3,4,7,8	-HxCDD	67.9	32 - 141	
1,2,3,6,7,8-HxC	CDD	ND	0.000002	06			13C-1,2,3,6,7,8	-HxCDD	64.8	28 - 130	
1,2,3,7,8,9-HxC	CDD	ND	0.000002	00			13C-1,2,3,4,6,7	,8-HpCDD	66.0	23 - 140	
1,2,3,4,6,7,8-H ₁	pCDD	0.0000118			J		13C-OCDD		51.0	17 - 157	
OCDD		0.000262					13C-2,3,7,8-TC	DF	62.9	24 - 169	
2,3,7,8-TCDF		ND	0.000000	958			13C-1,2,3,7,8-F	PeCDF	67.9	24 - 185	
1,2,3,7,8-PeCD	F	ND	0.000001	11			13C-2,3,4,7,8-F	PeCDF	67.4	21 - 178	
2,3,4,7,8-PeCD	F	ND	0.000001	06			13C-1,2,3,4,7,8	-HxCDF	66.9	26 - 152	
1,2,3,4,7,8-HxC	CDF	ND	0.000000	616			13C-1,2,3,6,7,8	-HxCDF	65.8	26 - 123	
1,2,3,6,7,8-HxC	CDF	ND	0.000000	591			13C-2,3,4,6,7,8	-HxCDF	65.7	28 - 136	
2,3,4,6,7,8-HxC	CDF	ND	0.000000	615			13C-1,2,3,7,8,9	-HxCDF	64.4	29 - 147	
1,2,3,7,8,9-HxC	CDF	ND	0.000000	930			13C-1,2,3,4,6,7	,8-HpCDF	59.8	28 - 143	
1,2,3,4,6,7,8-H _J	pCDF	ND	0.000002	18			13C-1,2,3,4,7,8	,9-HpCDF	65.8	26 - 138	
1,2,3,4,7,8,9-H ₁	pCDF	ND	0.000000	600			13C-OCDF		56.7	17 - 157	
OCDF		ND		0.00000	221	CRS	37Cl-2,3,7,8-T	CDD	91.4	35 - 197	
Totals						Foo	otnotes				
Total TCDD		ND	0.000003	85		a. Sa	mple specific estimat	ed detection limit.			
Total PeCDD		ND	0.000000	732		b. E	stimated maximum po	essible concentration.			
Total HxCDD		ND	0.000002	05		c. M	ethod detection limit.				
Total HpCDD		0.0000241				d. L	ower control limit - up	oper control limit.			
Total TCDF		ND	0.000003	58							
Total PeCDF		ND	0.000001	08							
Total HxCDF		ND	0.000000	674							
Total HpCDF		ND	0.000002								

Analyst: MAS William J. Luksemburg 13-Apr-2006 07:30

APPENDIX

NPDES - 457

Project 27562 Page 7 of 232

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	02102011
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



Project 27562

17461 Derian Ave. Suite 100, Irvine, CA 92614
1014 E. Cooley Dr., Suite A, Colton, CA 92324
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123

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

Ph (619) 505-9596 Ph (480) 785-0043 Ph (702) 798-3620

Ph (949) 261-1022

Ph (909) 370-4667

Fax (909) 370-1046 Fax (619) 505-9689 Fax (480) 785-0851

Fax (702) 798-3621

Page 10 of 232

Fax (949) 261-1228

2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120

SUBCONTRACT ORDER - PROJECT # IPD0422

SENDI	NG LABORATORY:	RECEIVING LABORATORY:					
Del Mar Analytical - Irvine		Alta Analytical - SUB	17-10	BSB 4/10/06			
17461 Derian Avenue. Suit	e 100	1104 Windfield Way	d 1065	4/10/06			
Irvine, CA 92614		El Dorado Hills, CA 95762	,	1710108			
Phone: (949) 261-1022		Phone :(916) 933-1640	1 100	•			
Fax: (949) 261-1228		Fax: (916) 673-0106	1.00				
Project Manager: Michele C	`hamberlin	1 ax. (910) 073-0100	1.0°C 27562				
r roject wanager. Twitchele C			21002				
Standard TAT is requeste	d unless specific due date is requeste	ed => Due Date:	Initials:				
Analysis	Expiration	Comments					
Sample ID: IPD0422-01 Wa 1613-Dioxin-HR-Alta EDD + Level 4	04/12/06 07:50 05/03/06 07:50	Instant Nofication J flags,17 congeners,no TEQ,ug/L,s Excel EDD email to pm,Include Std					
Containers Supplied: 1 L Amber (IPD0422-01C)							
1 L Amber (IPD0422-01D)	·						
•							
	1						
			•				
,							
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	•						
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	•						
	G 1.2 CO	·					
		LE INTEGRITY:					
All containers intact:			Received On Ice:: Ye Received at (temp):	s 🗆 No			
Cal- Pl		Betting & Sund	1 4/766	0900			
Released By	Date Time	Received By	Date	Time			
				IPDES - 460			
Released By	Date Time	Received By		Time			

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27 567

	Date/Time		Initials	3:	Locati	ion: WR-	.7
Samples Arrival:	4/7/06 04	900	B	IB	Shelf/	Rack:	
	Date/Time		Initials	5:	Locati	ion: W	R-7
Logged In:	4/10/06 0	7/0	B	SB	Shelf/	Rack: C	3
Delivered By:	FedEx UPS	}	Cal	DHL	1	Hand elivered	Other
Preservation:	lce	Blue I	lce	Dry lo	е	No	ne
Temp °C /. ()	Time:	09:	30		Thern	nometer ID	: DT-20

				YES	NO	NA	
Adequate Sample Volume Received?							
Holding Time Acceptable?							
						·	
				/			
				V			
1436	58 827	80		V			
(
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 S.O. Prospryation Documented?						ne	
Alta	Client	Retain	Ret	urn	Disp	ose	
	ntation Pr	ntation Present? Form completed? nples, Acceptable P	ntation Present? Form completed? nples, Acceptable Preservation? COC	ntation Present? Form completed? nples, Acceptable Preservation? COC San Cont	ntation Present? Form completed? nples, Acceptable Preservation? COC Sample Container	ntation Present? Form completed? ples, Acceptable Preservation? COC Sample Container	

Comments:

APPENDIX G

Section 18

Outfall 005, April 05, 2006

MECX Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA MECX, LLC Package ID <u>B4DF84</u> 12260 East Vassar Drive Task Order <u>1261.001D.01</u> SDG No. IPD0422 Suite 500 Lakewood, CO 80226 No. of Analyses 1 Date: June 5, 2006 Laboratory Alta Analytical Reviewer's Signature Reviewer E. Wessling Analysis/Method Dioxins/Furans ACTION ITEMS^a Case Narrative Deficiencies 2. Out of Scope Analyses Analyses Not Conducted 4. Missing Hardcopy Deliverables 5. Incorrect Hardcopy Deliverables 6. Deviations from Analysis Qualifications were assigned for the following: - results between the RL and the MDL were estimated Protocol, e.g., - EMPC values qualified as estimated nondetects. 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 005

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IPD0422

Prepared by

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

Project: SDG: IPD0422 DATA VALIDATION REPORT Analysis: D/F

1. INTRODUCTION

Task Order Title: **NPDES**

Contract Task Order: 1261.001D.01 Sample Delivery Group: IPD0422 Project Manager: P. Costa

> Matrix: Water

Dioxins/Furans Analysis:

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.

Revision 0 NPDES - 465

NPDES

NPDES IPD0422 Project: SDG: Analysis: D/F DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 005	IPD0422-01	27562-001	Water	1613

 Project:
 NPDES

 SDG:
 IPD0422

 DATA VALIDATION REPORT
 Analysis:
 D/F

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 $\pm 2^{\circ}$ 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.

 Project:
 NPDES

 SDG:
 IPD0422

 DATA VALIDATION REPORT
 Analysis:
 D/F

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.

 Project:
 NPDES

 SDG:
 IPD0422

 DATA VALIDATION REPORT
 Analysis:
 D/F

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.

	200	Client Data Name: Del M: Project: IPD04 Date Collected: 5-Apr- Time Collected: 0750	ar Analytical, Irvine	allot	Sample Data Matrix: Sample Size:	Aqueous 1.02 L	Laboratory Data Lab Sample: QC Batch No.: Date Analyzed DB-5:	27562-001 7918 11-Apr-06	Date Re Date Ex	eceived: stracted: nalyzed DB-225:	7-Apr-06 10-Apr-06 NA
2	Co Son	Analyte Co	one. (ug/L)	DL a	$EMPC^{b}$	Qualifiers	Labeled Stan	dard	%R	LCL-UCLd	Qualifiers
		2,3,7,8-TCDD	ND	0.000001	03		IS 13C-2,3,7,8-T0	CDD	64.1	25 - 164	
		1,2,3,7,8-PeCDD	ND	0.000000	732		13C-1,2,3,7,8-	PeCDD	65.4	25 - 181	
		1,2,3,4,7,8-HxCDD	ND	0.000002	08		13C-1,2,3,4,7,	8-HxCDD	67.9	32 - 141	
		1,2,3,6,7,8-HxCDD	ND	0.000002	06		13C-1,2,3,6,7,	8-HxCDD	64.8	28 - 130	
.		1,2,3,7,8,9-HxCDD	ND	0.000002	00		13C-1,2,3,4,6,	7,8-HpCDD	66.0	23 - 140	
	DNO	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-T0	CDF	62.9	24 - 169	
1		2,3,7,8-TCDF	ND	0.000000	958		13C-1,2,3,7,8-1	PeCDF	67.9	24 - 185	
		1,2,3,7,8-PeCDF	ND	0.000001	11		13C-2,3,4,7,8-1	PeCDF	67.4	21 - 178	
		2,3,4,7,8-PeCDF	ND	0.000001	06		13C-1,2,3,4,7,8	8-HxCDF	66.9	26 - 152	
		1,2,3,4,7,8-HxCDF	ND	0.000000	616		13C-1,2,3,6,7,8	8-HxCDF	65.8	26 - 123	
		1,2,3,6,7,8-HxCDF	ND	0.000000	591		13C-2,3,4,6,7,8	8-HxCDF	65.7	28 - 136	
		2,3,4,6,7,8-HxCDF	ND	0.000000	615		13C-1,2,3,7,8,9	9-HxCDF	64.4	29 - 147	
		1,2,3,7,8,9-HxCDF	ND	0.000000	930		13C-1,2,3,4,6,7	7,8-HpCDF	59.8	28 - 143	
		1,2,3,4,6,7,8-HpCDF	ND	0.000002	18		13C-1,2,3,4,7,8	8,9-HpCDF	65.8	26 - 138	
		1,2,3,4,7,8,9-HpCDF	ND	0.000000	600		13C-OCDF		56.7	17 - 157	
5	110	OCDF	ND		0.00000	221	CRS 37Cl-2,3,7,8-T	CDD	91.4	35 - 197	
		Totals					Footnotes				
		Total TCDD	ND	0.000003	85		a. Sample specific estima	ted detection limit.			
1		Total PeCDD	ND	0.000000	732		b. Estimated maximum pe	ossible concentration.			
		Total HxCDD	ND	0.0000020	05		c. Method detection limit				
		Total HpCDD	0.0000241				d. Lower control limit - u	pper control limit.			
		Total TCDF	ND	0.000003	58						
		Total PeCDF	ND	0.0000010	08						
		Total HxCDF	ND	0.0000000	674						
		Total HpCDF	ND	0.0000022	25						

Analyst: MAS

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

Approved By:

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID: B4WC71

1226	69 East Vassar Drive		Task Order: <u>1261.001D.01</u>
Auro	ra, CO 80014		SDG No.: IPD0422
		No	. of Analyses: 1
	Laboratory: Del Mar A	nalytical	Date: June 6, 2006
	Reviewer: P. Meeks		Reviewer's Signature
	Analysis/Method: General M	linerals	h. 14002
ACT	ON ITEMS ^a		
	Case Narrative		
	Deficiencies		
2.	Out of Scope Analyses		
	_		
3.	Analyses Not Conducted	- Control of the Cont	
	p		
	Missing Hardcopy		
	Deliverables		
	Incorrect Hardcopy		
	Deliverables		The state of the s
6.	Deviations from Analysis		
0.		dericania () a promotiva de la compania del compania del compania de la compania del la compania de la compani	
	Protocol, e.g., Holding Times		
	GC/MS Tune/Inst. Performance		
	Calibration	AND THE RESERVE OF THE PARTY OF	
	Method blanks		
	Surrogates		
	Matrix Spike/Dup LCS		
	Field QC		
	Internal Standard Performance		
	Compound Identification		
	Quantitation		
	System Performance		
CON	MENTS ^b	Acceptable as reviewed.	
	bcontracted analytical laboratory is not		
b Di	fferences in protocol have been adopted	i by the laboratory but no action again	ist the laboratory is required.

 MEC^{X}



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 DATA VALIDATION REPORT

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.

1

Project:

NPDES IPD0422

SDG: Analysis:

Gen. Min.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 005	IPD0422-01	Water	General Minerals

DATA VALIDATION REPORT

NPDES IPD0422

SDG: Analysis:

Gen. Min.

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

DATA VALIDATION REPORT

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 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.

Project:

NPDES

SDG: Analysis: IPD0422 Gen. Min.

DATA VALIDATION REPORT

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.



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 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 Qualifie	rs
Sample ID: IPD0422-01 (Outfall 005	5 - Water) - cont.								Rev	Qual
Reporting Units: mg/l									Qual	Code
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	X	
Total Suspended Solids	EPA 160.2	6D11091	10	10	33	1	04/11/06	04/11/06	* /	
									1	

+ Analysis not validated

APPENDIX G

Section 19

Outfall 005, April 15, 2006 Del Mar Analytical Laboratory Report



LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: Routine Outfall 005

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

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 CLIENT ID MATRIX
IPD1608-01 Outfall 005 Water

Reviewed By:

Del Mar Analytical - IrvineMichele Chamberlin

Michele Chamberdin

Michele Chamberlin Project Manager



Pasadena, CA 91101

Project ID: Routine Outfall 005

300 North Lake Avenue, Suite 1200

Sampled: 04/15/06

Report Number: IPD1608

Received: 04/15/06

Attention: Bronwyn Kelly

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1608-01 (Outfall 005 - Wa	ater)								
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	



Pasadena, CA 91101

Project ID: Routine Outfall 005

300 North Lake Avenue, Suite 1200

Sampled: 04/15/06

Report Number: IPD1608

Received: 04/15/06

Attention: Bronwyn Kelly

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPD1608-01 (Outfall 005 - W	ater) - 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	



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Routine Outfall 005

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

Report Number: IPD1608

SHORT HOLD TIME DETAIL REPORT

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



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D17063 Extracted: 04/17/06	<u>L</u>										
	- "										
Blank Analyzed: 04/17/2006 (6D17063-B	LK1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 04/17/2006 (6D17063-BS	1)										
Mercury	8.25	0.20	0.050	ug/l	8.00		103	85-115			
Matrix Spike Analyzed: 04/17/2006 (6D1	7063-MS1)				Sou	rce: IPD1	1477-13				
Mercury	8.39	0.20	0.050	ug/l	8.00	ND	105	70-130			
Matrix Spike Dup Analyzed: 04/17/2006	(6D17063-MS	SD1)			Sou	rce: IPD1	1477-13				
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-B	LK1)										
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-BS	1)										
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			



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: 6D20092 Extracted: 04/20/06	<u>.</u>										
Matrix Spike Analyzed: 04/21/2006 (6D2	0092-MS1)				Sou	rce: IPD1	586-01				
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 (6D2	0092-MS2)				Sou	rce: IPD1	586-02				
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-M	SD1)			Sou	rce: IPD1	586-01				
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	



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D15028 Extracted: 04/15/06	_										
Blank Analyzed: 04/15/2006 (6D15028-B	LK1)										
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-BS	1)										
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 (6D1	5028-MS1)				Sou	rce: IPD1	1578-01				
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-MS	SD1)			Sou	rce: IPD1	1578-01				
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: 6D18050 Extracted: 04/18/06											
	_										
Blank Analyzed: 04/18/2006 (6D18050-B	LK1)										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/18/2006 (6D18050-BS)	1)										M-NR1
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120			
LCS Dup Analyzed: 04/18/2006 (6D1805	0-BSD1)										
Oil & Grease	17.9	5.0	0.94	mg/l	20.0		90	65-120	7	20	



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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D18055 Extracted: 04/18/06	_										
Blank Analyzed: 04/18/2006 (6D18055-B	LK1)										
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/18/2006 (6D18055-BS	1)										
Total Dissolved Solids	990	10	10	mg/l	1000		99	90-110			
Duplicate Analyzed: 04/18/2006 (6D1805	5-DUP1)				Sou	rce: IPD1	326-01				
Total Dissolved Solids	5080	10	10	mg/l		5100			0	10	
Batch: 6D20128 Extracted: 04/20/06	<u>.</u>										
Blank Analyzed: 04/20/2006 (6D20128-B	LK1)										
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 04/20/2006 (6D20128-BS	1)										
Total Suspended Solids	990	10	10	mg/l	1000		99	85-115			
Duplicate Analyzed: 04/20/2006 (6D2012	8-DUP1)				Sou	rce: IPD1	603-01				
Total Suspended Solids	356	10	10	mg/l		350			2	10	



Pasadena, CA 91101

Project ID: Routine Outfall 005

300 North Lake Avenue, Suite 1200

Sampled: 04/15/06 Report Number: IPD1608 Received: 04/15/06

Attention: Bronwyn Kelly

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.

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



Project ID: Routine Outfall 005

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Sampled: 04/15/06 Report Number: IPD1608 Received: 04/15/06

Attention: Bronwyn Kelly

DATA QUALIFIERS AND DEFINITIONS

B Analyte was detected in the associated Method Blank.

I 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



Pasadena, CA 91101

Project ID: Routine Outfall 005

300 North Lake Avenue, Suite 1200

1200 Sampled: 04/15/06 Report Number: IPD1608 Received: 04/15/06

Attention: Bronwyn Kelly

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

NPDES - 490

Client Name/Address:	Addres	S.	Client Name/Address: Project:	Project:						ANALYSIS REQUIRED	'SIS REQUIRED
MWH-Pasadena 300 North Lake Avenue, Suite 1200	asadena -ake Avenu	e, Suite 12		Boeing-SSFL NPDES Routine Outfall 005 Stormwater at FSDF-1	NPDES all 005 FSDF-1	. 3 649)}	11 '£		N-SC		Field readings: Temp = 5 % · I
Project Manager: Bronwyn Kelly Sampler: 12 August 12 Aug	anager: B	ronwyn K	elly	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515	er: 31	-14-3	Recoverable bd, Cu, Pb, Hg	ond all con Grease (EPA	504, NO3+NC	881	pH= 7. C Comments
Sample	Sample	Container	# of Cont	Sampling Date/Time	Preservative	Bottle *	 o 'qs		CF' 6	, TDS,	
+	W	Poly-1L	1	20/54/14	HNO3	1A	×				
1.	3	Poly-1L	1		HNO3	18	×				
all 005	3	Glass- Amber	2		None	2A, 2B		×			
Outfall 005	3	Glass- Amber	2		Ë	3A, 3B		×			
Outfall 005	>	Poly-500 ml	2	->	None	4A, 4B			×		
Outfall 005	>	Poly-500 ml	2	401511H	None	5A, 5B				×	
								-			
											03
											1630
Relinquished By	By		١	Date/Time:	Received By			Date/Time:			Turn around Time: (check) 24 Hours 5 Days
Relinquished By	By A			Date/Time:	Received	a for		77/ > Date/Time:	7-66 e:	0,0	48 Hours 10 Days 72 Hours Normal
Relinguished By	2 2 By	3		Date/Time:	Received By	Λ,		Date/Time	<u></u>		te Only 72 Ho
	-										
					-		•				Sample Integrity: (Check)



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

Manine More



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: 4/18/2006

Alta Lab. ID

Client Sample ID

27607-001

IPD1608-01

SECTION II

Page 3 of 237 **NPDES - 493** Project 27607

Method Blank					EPA M	EPA Method 1613
Matrix: Aqueous		QC Batch No.:	2968	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:	S: NA
Analyte Conc. (ug/L)	/L)	DL ^a EMI	EMPC b Qualifiers	Labeled Standard	%R LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD N	CZ	0.000000767		IS 13C-2,3,7,8-TCDD	77.8 25-161	
1,2,3,7,8-PeCDD N	ND	0.000000968		13C-1,2,3,7,8-PeCDD	69.9 25 - 181	
1,2,3,4,7,8-HxCDD N	ND	0.00000195		13C-1,2,3,4,7,8-HxCDD	78.1 32 - 141	
1,2,3,6,7,8-HxCDD N	ND	0.00000219		13C-1,2,3,6,7,8-HxCDD	67.4 28 - 130	•
1,2,3,7,8,9-HxCDD	ND QN	0.00000200		13C-1,2,3,4,6,7,8-HpCDD	62.1 23 - 140	
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	0.000000001		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	0.0000000696		13C-1,2,3,6,7,8-HxCDF	85.4 26 - 123	
	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	ON	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 37CI-2,3,7,8-TCDD	89.1 35-197	Vij
Totals				Footnotes		
Total TCDD	ND	0.000000067		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 ON	0.00000273		d. Lower control limit - upper control limit		
Total TCDF	ND	0.000000483	:			
Total PeCDF	ND QN	0.000000889				
Total HxCDF	ND	0.000000786				
Total HpCDF	ND	0.000000841				

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

OPR Results					EPA	EPA Method 1613
		QC Batch No	7968	Lab Sample. 0-OPR001		
Sample Size 1.00 L		Date Fytracted:	26-Apr-06	Date Analyzed DB-5: 2-May-06	Date Analyzed DB-225.	d DB-225. NA
Analyte	Spike Conc.	Spike Conc. Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	TCT-ACT
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	9.99	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-0CDD	44.0	17 - 157
ОСДД	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 37CI-2,3,7,8-TCDD	95.0	35 - 197

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

Analyst: MAS

Sample ID: IPD1	IPD1608-01							EPA M	EPA Method 1613
Client Data			Sample Data		Laboratory Data				
	Del Mar Analytical, Irvine		Matrix:	Aqueous	Lab Sample:	27607-001	Date Received	cived.	18-Apr-06
Date Collected. 15-A	15-Apr-06		Sample Size:	1.02 L	QC Batch No.: Date Analyzed DB-5	7968	Date Extracted	Date Extracted:	26-Apr-06
			-			2-IVIAy-00	Mark Julia	gred OD 223.	INA
Analyte	Conc. (ug/L)	DF a	EMPC	Qualifiers	Labeled Standard	fard	%R	rcr-ncr _q	Qualifiers
2.3,7.8-TCDD	ND	0.000000612	112		IS 13C-2378-TCDD	DD	03.1	25 - 164	
1.2,3,7,8-PeCDD	ND	0.000000757	157		13C-1,2,3,7,8-PeCDD	eCDD	9.9/	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000121			13C-1,2,3,4,7,8-HxCDD	-HxCDD	95.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000177	7		13C-1,2,3,6,7,8-HxCDD	-HxCDD	87.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000167	L		13C-1,2,3,4,6,7,8-IIpCDD	.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	DF	0.06	24 - 169	
2,3,7,8-TCDF	ND	0.000000717	.17		13C-1,2,3,7,8-PeCDF	eCDF	7.97	24 - 185	
1,2,3,7,8-PeCDF	ND	0.000000919	61		13C-2,3,4,7,8-PeCDF	eCDF	72.6	21 - 178	
2.3,4,7,8-PeCDF	ND	0.000000934	34		13C-1,2,3,4,7,8-HxCDF	-HxCDF	901	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000644	44		13C-1,2,3,6,7,8-HxCDF	-HxCDF	103	26 - 123	•
1,2,3,6,7,8-HxCDF	ND	0.000000563			13C-2,3,4,6,7,8-HxCDF	-HxCDF	100	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000671	.71		13C-1,2,3,7,8,9-HxCDF	-HxCDF	94.1	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000994	194		13C-1,2,3,4,6,7,8-HpCDF	,8-HpCDF	90.1	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000191			Î.,	13C-1,2,3,4,7,8,9-HpCDF	9-HpCDF	93.2	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000926	750		13C-OCDF		75.8	17 - 157	
OCDF	ND		0.00000410	10	CRS 37CI-2,3,7,8-TCDD)DD	102	35 - 197	
Totals					Footnotes				
Total TCDD	ND	0.000000612	12		a. Sample specific estimated detection limit	ed detection limit.			
Total PeCDD	ND	0.00000176	9.		b. Estimated maximum possible concentration.	ssible concentration.			
Total HxCDD	0.00000276		0.00000483	.83	c. Method detection limit.				
Total HpCDD	0.0000594				d. Lower control limit - upper control limit.	per control limit.			· .
Total TCDF	ND	0.000000717	.17						
Total PeCDF	ND	0.000000926	126						
Total HxCDF	0.00000154								
Total HpCDF	0.00000477								

Analyst:

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

APPENDIX

Project 27607 Page 7 of 237

DATA QUALIFIERS & ABBREVIATIONS

В This compound was also detected in the method blank. D The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference. Е The reported value exceeds the calibration range of the instrument. Н The signal-to-noise ratio is greater than 10:1. Chemical interference 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 1014 E. Cooley Dr., Suite A, Colton, CA 92324

9484 Chesapeake Drive, Suite 805, San Diego, CA 92123

9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-004:
2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620

Ph (949) 261-1022 Fax (949) 261-1228
Ph (909) 370-4667 Fax (909) 370-1046
Ph (619) 505-9596 Fax (619) 505-9689

Ph (480) 785-0043 Fax (480) 785-0851 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPD1608

SENDING LABORATORY: RECEIVING LABORATORY: Del Mar Analytical - Irvine Alta Analytical - SUB 17461 Derian Avenue. Suite 100 1104 Windfield Way Irvine, CA 92614 El Dorado Hills, CA 95762 Phone: (949) 261-1022 Phone: (916) 933-1640 Fax: (949) 261-1228 Fax: (916) 673-0106 Project Manager: Michele Chamberlin 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 Nofication** 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: ☐ Yes ☐ No All containers intact: Sample labels/COC agree: Samples Received On Ice:: ☐ Yes □ No ☐ Yes ☐ Yes Custody Seals Present: Samples Preserved Properly: Samples Received at (temp):

Date

Time

Received By

Time

Date