

APPENDIX G

Section 1

Outfall 001, January 02, 2006

Del Mar Analytical Laboratory Report



LABORATORY REPORT

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

Project: Quarterly Outfall 001

Sampled: 01/02/06
Received: 01/02/06
Issued: 02/18/06 11:13

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 4°C, on ice and with chain of custody documentation.
- HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report. Due to instrument problems, the Cr VI by EPA 218.6 was analyzed past method specified hold times.
- PRESERVATION: Samples requiring preservation were verified prior to sample analysis.
- QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
- COMMENTS: Results that fall between the MDL and RL are 'J' flagged.
- SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.
- ADDITIONAL INFORMATION: Insufficient sample volume was used in the dilutions for the BOD analysis. The result reported is an estimated value of the concentration.

LABORATORY ID	CLIENT ID	MATRIX
IPA0018-01	Outfall 001	Water
IPA0018-02	Trip Blank	Water

Reviewed By:

Michele Chamberlin

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 001 Report Number: IPA0018	Sampled: 01/02/06 Received: 01/02/06
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CORRECTIVE ACTION REPORT

Department: Extractions

Date: 01/18/2006

Method: EPA 625

Matrix: Water

QC Batch: 6A09061

Identification and Definition of Problem:

The percent recovery for the "L2"-qualified analytes in the Blank Spike Duplicate sample was below QC acceptance limits.

Determination of the Cause of the Problem:

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

Corrective Action Taken:

All results reported for affected analytes are potentially biased low and can be considered estimates only.

Quality Assurance Approval:

Dave Dawes

Date: 01/26/2006 05:57 PM

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



MWH-Pasadena/Boeing
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
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PURGEABLES BY GC/MS (EPA 624)

Table with columns: Analyte, Method, Batch, MDL Limit, Reporting Limit, Sample Result, Dilution Factor, Date Extracted, Date Analyzed, Data Qualifiers. Includes analytes like Benzene, Trichlorotrifluoroethane, Carbon tetrachloride, etc.

Sample ID: IPA0018-01 (Outfall 001 - Water)

Reporting Units: ug/l

Table with columns: Analyte, Method, Batch, MDL Limit, Reporting Limit, Sample Result, Dilution Factor, Date Extracted, Date Analyzed, Data Qualifiers. Includes analytes like Benzene, Trichlorotrifluoroethane, Carbon tetrachloride, etc.

Surrogate: Dibromofluoromethane (80-120%)

109 %

Surrogate: Toluene-d8 (80-120%)

104 %

Surrogate: 4-Bromofluorobenzene (80-120%)

101 %

Sample ID: IPA0018-02 (Trip Blank - Water)

Reporting Units: ug/l

Table with columns: Analyte, Method, Batch, MDL Limit, Reporting Limit, Sample Result, Dilution Factor, Date Extracted, Date Analyzed, Data Qualifiers. Includes analytes like Benzene, Trichlorotrifluoroethane, Carbon tetrachloride, etc.

Surrogate: Dibromofluoromethane (80-120%)

107 %

Surrogate: Toluene-d8 (80-120%)

101 %

Surrogate: 4-Bromofluorobenzene (80-120%)

101 %

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



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Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 001

Report Number: IPA0018

Sampled: 01/02/06

Received: 01/02/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0018-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6A09061	1.0	4.8	2.1	0.952	01/09/06	01/12/06	B, J
2,4-Dinitrotoluene	EPA 625	6A09061	0.22	8.6	ND	0.952	01/09/06	01/12/06	L2
N-Nitrosodimethylamine	EPA 625	6A09061	0.21	7.6	ND	0.952	01/09/06	01/12/06	
Pentachlorophenol	EPA 625	6A09061	0.74	7.6	ND	0.952	01/09/06	01/12/06	L2
2,4,6-Trichlorophenol	EPA 625	6A09061	0.095	5.7	ND	0.952	01/09/06	01/12/06	
Surrogate: 2-Fluorophenol (30-120%)					56 %				
Surrogate: Phenol-d6 (35-120%)					66 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					81 %				
Surrogate: Nitrobenzene-d5 (45-120%)					72 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					66 %				
Surrogate: Terphenyl-d14 (45-120%)					71 %				

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Michele Chamberlin
Project Manager

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 001 Report Number: IPA0018	Sampled: 01/02/06 Received: 01/02/06
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ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0018-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
alpha-BHC	EPA 608	6A06049	0.00095	0.0095	ND	0.952	01/06/06	01/06/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					64 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					57 %				

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 001 Report Number: IPA0018	Sampled: 01/02/06 Received: 01/02/06
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METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0018-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Iron	EPA 200.7	6A03080	0.075	0.20	92	5	01/03/06	01/03/06	
Sample ID: IPA0018-01RE1 (Outfall 001 - Water)									
Reporting Units: mg/l									
Iron	EPA 200.7	6A20071	0.015	0.040	88	1	01/20/06	01/20/06	
Sample ID: IPA0018-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Chromium	EPA 200.7	6A03080	10	25	100	5	01/03/06	01/03/06	
Copper	EPA 200.8	6A03059	0.49	2.0	55	1	01/03/06	01/03/06	
Lead	EPA 200.8	6A03059	0.13	1.0	160	1	01/03/06	01/03/06	
Mercury	EPA 245.1	6A03072	0.050	0.20	0.13	1	01/03/06	01/03/06	J
Sample ID: IPA0018-01RE1 (Outfall 001 - Water)									
Reporting Units: ug/l									
Copper	EPA 200.8	6A05101	0.49	2.0	45	1	01/05/06	01/06/06	
Lead	EPA 200.8	6A05101	0.13	1.0	150	1	01/05/06	01/06/06	

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Report Number: IPA0018

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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0018-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A05098	0.30	0.50	0.56	1	01/05/06	01/05/06	
Biochemical Oxygen Demand	EPA 405.1	6A03056	0.59	2.0	20	1	01/03/06	01/08/06	K
Chloride	EPA 300.0	6A03053	0.26	0.50	8.1	1	01/03/06	01/03/06	
Chromium VI	EPA 7196A	6A04085	N/A	0.010	ND	1	01/03/06	01/03/06	
Nitrate/Nitrite-N	EPA 300.0	6A03053	0.072	0.26	3.7	1	01/03/06	01/03/06	
Oil & Grease	EPA 413.1	6A04043	0.89	4.7	ND	1	01/04/06	01/04/06	
Sulfate	EPA 300.0	6A03053	0.18	0.50	25	1	01/03/06	01/03/06	
Surfactants (MBAS)	SM5540-C	6A03114	0.088	0.20	0.10	2	01/03/06	01/03/06	RL-1, J
Total Dissolved Solids	SM2540C	6A03093	10	10	270	1	01/03/06	01/03/06	
Total Suspended Solids	EPA 160.2	6A05110	10	10	2300	1	01/05/06	01/05/06	
Sample ID: IPA0018-01 (Outfall 001 - Water)									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	6A03069	0.10	0.10	10	1	01/03/06	01/03/06	
Sample ID: IPA0018-01 (Outfall 001 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	6A04071	2.0	50	1600	50	01/04/06	01/04/06	
Sample ID: IPA0018-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Chromium VI	EPA 218.6	6A03067	0.10	1.0	ND	1	01/03/06	01/03/06	H-1
Total Cyanide	EPA 335.2	6A03132	2.2	5.0	7.4	1	01/03/06	01/03/06	
Perchlorate	EPA 314.0	6A03076	0.80	4.0	ND	1	01/03/06	01/03/06	
Sample ID: IPA0018-01RE1 (Outfall 001 - Water)									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6A11082	2.2	5.0	8.4	1	01/03/06	01/11/06	

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Report Number: IPA0018

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Received: 01/02/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0018-01 (Outfall 001 - Water) - cont.									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6A03095	1.0	1.0	270	1	01/03/06	01/03/06	

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Report Number: IPA0018

Sampled: 01/02/06

Received: 01/02/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 001 (IPA0018-01) - Water	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	01/02/2006 10:20	01/02/2006 13:30	01/03/2006 09:17	01/03/2006 11:00
EPA 180.1	2	01/02/2006 10:20	01/02/2006 13:30	01/04/2006 08:00	01/04/2006 08:50
EPA 218.6	1	01/02/2006 10:20	01/02/2006 13:30	01/03/2006 15:00	01/03/2006 15:37
EPA 300.0	2	01/02/2006 10:20	01/02/2006 13:30	01/03/2006 09:00	01/03/2006 09:41
EPA 405.1	2	01/02/2006 10:20	01/02/2006 13:30	01/03/2006 08:22	01/08/2006 11:00
EPA 7196A	1	01/02/2006 10:20	01/02/2006 13:30	01/03/2006 10:00	01/03/2006 10:06
SM5540-C	2	01/02/2006 10:20	01/02/2006 13:30	01/03/2006 16:45	01/03/2006 22:46

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 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 001

Report Number: IPA0018

Sampled: 01/02/06

Received: 01/02/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A05005 Extracted: 01/05/06											
Blank Analyzed: 01/05/2006 (6A05005-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	26.1			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	25.8			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	25.2			ug/l	25.0		101	80-120			

LCS Analyzed: 01/05/2006 (6A05005-BS1)

Benzene	24.6	2.0	0.28	ug/l	25.0		98	65-120			
Carbon tetrachloride	25.1	5.0	0.28	ug/l	25.0		100	65-140			
Chloroform	24.2	2.0	0.33	ug/l	25.0		97	65-130			
1,1-Dichloroethane	24.4	2.0	0.27	ug/l	25.0		98	65-130			
1,2-Dichloroethane	23.3	2.0	0.28	ug/l	25.0		93	60-140			
1,1-Dichloroethene	23.8	3.0	0.42	ug/l	25.0		95	70-130			
Ethylbenzene	25.9	2.0	0.25	ug/l	25.0		104	70-125			
Tetrachloroethene	24.3	2.0	0.32	ug/l	25.0		97	65-125			
Toluene	24.1	2.0	0.36	ug/l	25.0		96	70-125			
1,1,1-Trichloroethane	24.5	2.0	0.30	ug/l	25.0		98	65-135			
1,1,2-Trichloroethane	22.1	2.0	0.30	ug/l	25.0		88	65-125			
Trichloroethene	25.4	5.0	0.26	ug/l	25.0		102	70-125			
Trichlorofluoromethane	20.5	5.0	0.34	ug/l	25.0		82	60-140			
Vinyl chloride	19.4	5.0	0.26	ug/l	25.0		78	50-130			
Surrogate: Dibromofluoromethane	26.1			ug/l	25.0		104	80-120			

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A05005 Extracted: 01/05/06											
LCS Analyzed: 01/05/2006 (6A05005-BS1)											
Surrogate: Toluene-d8	26.0			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	25.9			ug/l	25.0		104	80-120			
Matrix Spike Analyzed: 01/05/2006 (6A05005-MS1) Source: IPA0009-01											
Benzene	22.4	2.0	0.28	ug/l	25.0	ND	90	60-125			
Carbon tetrachloride	23.5	5.0	0.28	ug/l	25.0	ND	94	65-140			
Chloroform	23.1	2.0	0.33	ug/l	25.0	ND	92	65-135			
1,1-Dichloroethane	23.0	2.0	0.27	ug/l	25.0	ND	92	60-130			
1,2-Dichloroethane	21.2	2.0	0.28	ug/l	25.0	ND	85	60-140			
1,1-Dichloroethene	22.2	3.0	0.42	ug/l	25.0	ND	89	60-135			
Ethylbenzene	24.6	2.0	0.25	ug/l	25.0	ND	98	65-130			
Tetrachloroethene	22.5	2.0	0.32	ug/l	25.0	ND	90	60-130			
Toluene	22.1	2.0	0.36	ug/l	25.0	ND	88	65-125			
1,1,1-Trichloroethane	23.6	2.0	0.30	ug/l	25.0	ND	94	65-140			
1,1,2-Trichloroethane	19.7	2.0	0.30	ug/l	25.0	ND	79	60-130			
Trichloroethene	22.7	5.0	0.26	ug/l	25.0	ND	91	60-125			
Trichlorofluoromethane	20.0	5.0	0.34	ug/l	25.0	ND	80	55-145			
Vinyl chloride	18.3	5.0	0.26	ug/l	25.0	ND	73	40-135			
Surrogate: Dibromofluoromethane	27.3			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	26.1			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	26.8			ug/l	25.0		107	80-120			
Matrix Spike Dup Analyzed: 01/05/2006 (6A05005-MSD1) Source: IPA0009-01											
Benzene	22.0	2.0	0.28	ug/l	25.0	ND	88	60-125	2	20	
Carbon tetrachloride	22.4	5.0	0.28	ug/l	25.0	ND	90	65-140	5	25	
Chloroform	22.0	2.0	0.33	ug/l	25.0	ND	88	65-135	5	20	
1,1-Dichloroethane	22.0	2.0	0.27	ug/l	25.0	ND	88	60-130	4	20	
1,2-Dichloroethane	20.5	2.0	0.28	ug/l	25.0	ND	82	60-140	3	20	
1,1-Dichloroethene	21.5	3.0	0.42	ug/l	25.0	ND	86	60-135	3	20	
Ethylbenzene	23.5	2.0	0.25	ug/l	25.0	ND	94	65-130	5	20	
Tetrachloroethene	21.7	2.0	0.32	ug/l	25.0	ND	87	60-130	4	20	
Toluene	21.9	2.0	0.36	ug/l	25.0	ND	88	65-125	1	20	
1,1,1-Trichloroethane	22.2	2.0	0.30	ug/l	25.0	ND	89	65-140	6	20	
1,1,2-Trichloroethane	20.1	2.0	0.30	ug/l	25.0	ND	80	60-130	2	25	
Trichloroethene	21.6	5.0	0.26	ug/l	25.0	ND	86	60-125	5	20	
Trichlorofluoromethane	18.4	5.0	0.34	ug/l	25.0	ND	74	55-145	8	25	

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

Project ID: Quarterly Outfall 001

Report Number: IPA0018

Sampled: 01/02/06

Received: 01/02/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A05005 Extracted: 01/05/06											
Matrix Spike Dup Analyzed: 01/05/2006 (6A05005-MSD1)						Source: IPA0009-01					
Vinyl chloride	17.3	5.0	0.26	ug/l	25.0	ND	69	40-135	6	30	
Surrogate: Dibromofluoromethane	26.6			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.2			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	26.2			ug/l	25.0		105	80-120			

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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	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6A09061 Extracted: 01/09/06											
Blank Analyzed: 01/11/2006 (6A09061-BLK1)											
Bis(2-ethylhexyl)phthalate	2.20	5.0	1.1	ug/l							J
2,4-Dinitrotoluene	ND	9.0	0.23	ug/l							
N-Nitrosodimethylamine	ND	8.0	0.22	ug/l							
Pentachlorophenol	ND	8.0	0.78	ug/l							
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l							
Surrogate: 2-Fluorophenol	12.7			ug/l	20.0		64	30-120			
Surrogate: Phenol-d6	15.4			ug/l	20.0		77	35-120			
Surrogate: 2,4,6-Tribromophenol	17.5			ug/l	20.0		88	45-120			
Surrogate: Nitrobenzene-d5	8.74			ug/l	10.0		87	45-120			
Surrogate: 2-Fluorobiphenyl	8.20			ug/l	10.0		82	45-120			
Surrogate: Terphenyl-d14	7.84			ug/l	10.0		78	45-120			
LCS Analyzed: 01/11/2006 (6A09061-BS1)											
Bis(2-ethylhexyl)phthalate	9.16	5.0	1.1	ug/l	10.0		92	60-130			M-NR1
2,4-Dinitrotoluene	7.54	9.0	0.23	ug/l	10.0		75	60-120			J
N-Nitrosodimethylamine	6.72	8.0	0.22	ug/l	10.0		67	40-120			J
Pentachlorophenol	10.3	8.0	0.78	ug/l	10.0		103	50-120			
2,4,6-Trichlorophenol	7.32	6.0	0.10	ug/l	10.0		73	60-120			
Surrogate: 2-Fluorophenol	11.7			ug/l	20.0		58	30-120			
Surrogate: Phenol-d6	13.8			ug/l	20.0		69	35-120			
Surrogate: 2,4,6-Tribromophenol	16.3			ug/l	20.0		82	45-120			
Surrogate: Nitrobenzene-d5	7.76			ug/l	10.0		78	45-120			
Surrogate: 2-Fluorobiphenyl	7.22			ug/l	10.0		72	45-120			
Surrogate: Terphenyl-d14	6.74			ug/l	10.0		67	45-120			
LCS Dup Analyzed: 01/11/2006 (6A09061-BSD1)											
Bis(2-ethylhexyl)phthalate	7.56	5.0	1.1	ug/l	10.0		76	60-130	19	20	
2,4-Dinitrotoluene	5.86	9.0	0.23	ug/l	10.0		59	60-120	25	20	J, L2, R-2
N-Nitrosodimethylamine	5.38	8.0	0.22	ug/l	10.0		54	40-120	22	20	J, R-7
Pentachlorophenol	3.02	8.0	0.78	ug/l	10.0		30	50-120	109	25	J, L2, R-2
2,4,6-Trichlorophenol	6.24	6.0	0.10	ug/l	10.0		62	60-120	16	20	
Surrogate: 2-Fluorophenol	9.70			ug/l	20.0		48	30-120			
Surrogate: Phenol-d6	11.4			ug/l	20.0		57	35-120			
Surrogate: 2,4,6-Tribromophenol	14.0			ug/l	20.0		70	45-120			
Surrogate: Nitrobenzene-d5	6.04			ug/l	10.0		60	45-120			
Surrogate: 2-Fluorobiphenyl	5.76			ug/l	10.0		58	45-120			

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A09061 Extracted: 01/09/06											
LCS Dup Analyzed: 01/11/2006 (6A09061-BSD1)											
Surrogate: Terphenyl-d14	5.30			ug/l	10.0		53	45-120			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A06049 Extracted: 01/06/06											
Blank Analyzed: 01/06/2006 (6A06049-BLK1)											
alpha-BHC	ND	0.010	0.0010	ug/l							
Surrogate: Decachlorobiphenyl	0.399			ug/l	0.500		80	45-120			
Surrogate: Tetrachloro-m-xylene	0.383			ug/l	0.500		77	35-115			
LCS Analyzed: 01/06/2006 (6A06049-BS1)											
alpha-BHC	0.438	0.010	0.0010	ug/l	0.500		88	45-120			M-NR1
Surrogate: Decachlorobiphenyl	0.423			ug/l	0.500		85	45-120			
Surrogate: Tetrachloro-m-xylene	0.395			ug/l	0.500		79	35-115			
LCS Dup Analyzed: 01/09/2006 (6A06049-BSD1)											
alpha-BHC	0.427	0.010	0.0010	ug/l	0.500		85	45-120	3	30	
Surrogate: Decachlorobiphenyl	0.422			ug/l	0.500		84	45-120			
Surrogate: Tetrachloro-m-xylene	0.379			ug/l	0.500		76	35-115			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A03059 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03059-BLK1)											
Copper	ND	2.0	0.49	ug/l							
Lead	ND	1.0	0.13	ug/l							
LCS Analyzed: 01/03/2006 (6A03059-BS1)											
Copper	83.5	2.0	0.49	ug/l	80.0		104	85-115			
Lead	83.9	1.0	0.13	ug/l	80.0		105	85-115			
Matrix Spike Analyzed: 01/03/2006 (6A03059-MS1) Source: IOL2654-03											
Copper	80.8	2.0	0.49	ug/l	80.0	2.2	98	70-130			
Lead	81.9	1.0	0.13	ug/l	80.0	0.31	102	70-130			
Matrix Spike Analyzed: 01/03/2006 (6A03059-MS2) Source: IOL2654-04											
Copper	78.2	2.0	0.49	ug/l	80.0	1.2	96	70-130			
Lead	79.4	1.0	0.13	ug/l	80.0	0.18	99	70-130			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03059-MSD1) Source: IOL2654-03											
Copper	80.9	2.0	0.49	ug/l	80.0	2.2	98	70-130	0	20	
Lead	81.1	1.0	0.13	ug/l	80.0	0.31	101	70-130	1	20	
Batch: 6A03072 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03072-BLK1)											
Mercury	ND	0.20	0.063	ug/l							
LCS Analyzed: 01/03/2006 (6A03072-BS1)											
Mercury	7.95	0.20	0.063	ug/l	8.00		99	85-115			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6A03072 Extracted: 01/03/06											
Matrix Spike Analyzed: 01/03/2006 (6A03072-MS1)						Source: IOL2617-01					
Mercury	7.95	0.20	0.063	ug/l	8.00	ND	99	70-130			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03072-MSD1)						Source: IOL2617-01					
Mercury	8.00	0.20	0.063	ug/l	8.00	ND	100	70-130	1	20	
Batch: 6A03080 Extracted: 01/03/06											
Blank Analyzed: 01/04/2006 (6A03080-BLK1)											
Chromium	ND	5.0	2.0	ug/l							
Iron	ND	0.040	0.015	mg/l							
LCS Analyzed: 01/04/2006 (6A03080-BS1)											
Chromium	477	5.0	2.0	ug/l	500		95	85-115			
Iron	0.480	0.040	0.015	mg/l	0.500		96	85-115			
Matrix Spike Analyzed: 01/04/2006 (6A03080-MS1)						Source: IOL2694-20					
Chromium	474	5.0	2.0	ug/l	500	ND	95	70-130			
Iron	0.489	0.040	0.015	mg/l	0.500	0.021	94	70-130			
Matrix Spike Analyzed: 01/04/2006 (6A03080-MS2)						Source: IOL2694-21					
Chromium	481	5.0	2.0	ug/l	500	ND	96	70-130			
Iron	0.495	0.040	0.015	mg/l	0.500	0.040	91	70-130			
Matrix Spike Dup Analyzed: 01/04/2006 (6A03080-MSD1)						Source: IOL2694-20					
Chromium	480	5.0	2.0	ug/l	500	ND	96	70-130	1	20	
Iron	0.490	0.040	0.015	mg/l	0.500	0.021	94	70-130	0	20	

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A05101 Extracted: 01/05/06											
Blank Analyzed: 01/06/2006 (6A05101-BLK1)											
Copper	3.75	2.0	0.49	ug/l							B
Lead	ND	1.0	0.13	ug/l							
LCS Analyzed: 01/06/2006 (6A05101-BS1)											
Copper	80.0	2.0	0.49	ug/l	80.0		100	85-115			
Lead	78.8	1.0	0.13	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 01/06/2006 (6A05101-MS1) Source: IPA0257-01											
Copper	78.6	2.0	0.49	ug/l	80.0	2.6	95	70-130			
Lead	77.2	1.0	0.13	ug/l	80.0	0.44	96	70-130			
Matrix Spike Dup Analyzed: 01/06/2006 (6A05101-MSD1) Source: IPA0257-01											
Copper	79.3	2.0	0.49	ug/l	80.0	2.6	96	70-130	1	20	
Lead	77.9	1.0	0.13	ug/l	80.0	0.44	97	70-130	1	20	
Batch: 6A20071 Extracted: 01/20/06											
Blank Analyzed: 01/20/2006 (6A20071-BLK1)											
Iron	ND	0.040	0.015	mg/l							
LCS Analyzed: 01/20/2006 (6A20071-BS1)											
Iron	0.518	0.040	0.015	mg/l	0.500		104	85-115			
Matrix Spike Analyzed: 01/20/2006 (6A20071-MS1) Source: IPA1549-01											
Iron	7.74	0.040	0.015	mg/l	0.500	7.1	128	70-130			
Matrix Spike Analyzed: 01/20/2006 (6A20071-MS2) Source: IPA1549-02											
Iron	6.51	0.040	0.015	mg/l	0.500	5.9	122	70-130			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A20071 Extracted: 01/20/06											
Matrix Spike Dup Analyzed: 01/20/2006 (6A20071-MSD1)						Source: IPA1549-01					
Iron	7.75	0.040	0.015	mg/l	0.500	7.1	130	70-130	0	20	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03053 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03053-BLK1)											
Chloride	ND	0.50	0.26	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.18	mg/l							
LCS Analyzed: 01/03/2006 (6A03053-BS1)											
Chloride	4.97	0.50	0.26	mg/l	5.00		99	90-110			
Sulfate	10.2	0.50	0.18	mg/l	10.0		102	90-110			
Matrix Spike Analyzed: 01/03/2006 (6A03053-MS1) Source: IPA0016-01											
Chloride	15.1	0.50	0.26	mg/l	5.00	10	102	80-120			
Sulfate	17.5	0.50	0.18	mg/l	10.0	7.2	103	80-120			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03053-MSD1) Source: IPA0016-01											
Chloride	15.1	0.50	0.26	mg/l	5.00	10	102	80-120	0	20	
Sulfate	17.4	0.50	0.18	mg/l	10.0	7.2	102	80-120	1	20	
Batch: 6A03056 Extracted: 01/03/06											
Blank Analyzed: 01/08/2006 (6A03056-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 01/08/2006 (6A03056-BS1)											
Biochemical Oxygen Demand	208	100	30	mg/l	198		105	85-115			
LCS Dup Analyzed: 01/08/2006 (6A03056-BSD1)											
Biochemical Oxygen Demand	206	100	30	mg/l	198		104	85-115	1	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03067 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03067-BLK1)											
Chromium VI	ND	1.0	0.10	ug/l							
LCS Analyzed: 01/03/2006 (6A03067-BS1)											
Chromium VI	52.1	1.0	0.10	ug/l	50.0		104	90-110			
Matrix Spike Analyzed: 01/03/2006 (6A03067-MS1)											
						Source: IPA0018-01					
Chromium VI	48.3	1.0	0.10	ug/l	50.0	ND	97	90-110			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03067-MSD1)											
						Source: IPA0018-01					
Chromium VI	49.2	1.0	0.10	ug/l	50.0	ND	98	90-110	2	10	
Batch: 6A03076 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03076-BLK1)											
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 01/03/2006 (6A03076-BS1)											
Perchlorate	49.4	4.0	0.80	ug/l	50.0		99	85-115			
Matrix Spike Analyzed: 01/03/2006 (6A03076-MS1)											
						Source: IPA0022-18					
Perchlorate	50.5	4.0	0.80	ug/l	50.0	ND	101	80-120			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03076-MSD1)											
						Source: IPA0022-18					
Perchlorate	50.2	4.0	0.80	ug/l	50.0	ND	100	80-120	1	20	
Batch: 6A03093 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03093-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							

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 Michele Chamberlin
 Project Manager

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 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 001 Report Number: IPA0018	Sampled: 01/02/06 Received: 01/02/06
--	---	---

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03093 Extracted: 01/03/06											
LCS Analyzed: 01/03/2006 (6A03093-BS1)											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 01/03/2006 (6A03093-DUP1) Source: IPA0005-01											
Total Dissolved Solids	981	10	10	mg/l		980			0	10	
Batch: 6A03095 Extracted: 01/03/06											
Duplicate Analyzed: 01/03/2006 (6A03095-DUP1) Source: IPA0009-01											
Specific Conductance	920	1.0	1.0	umhos/cm		890			3	5	
Batch: 6A03114 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03114-BLK1)											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 01/03/2006 (6A03114-BS1)											
Surfactants (MBAS)	0.275	0.10	0.044	mg/l	0.250		110	90-110			
Matrix Spike Analyzed: 01/03/2006 (6A03114-MS1) Source: IPA0017-01											
Surfactants (MBAS)	0.377	0.10	0.044	mg/l	0.250	0.096	112	50-125			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03114-MSD1) Source: IPA0017-01											
Surfactants (MBAS)	0.342	0.10	0.044	mg/l	0.250	0.096	98	50-125	10	20	
Batch: 6A03132 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03132-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							

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

Project ID: Quarterly Outfall 001

Report Number: IPA0018

Sampled: 01/02/06
 Received: 01/02/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03132 Extracted: 01/03/06											
LCS Analyzed: 01/03/2006 (6A03132-BS1)											
Total Cyanide	188	5.0	2.2	ug/l	200		94	90-110			
Matrix Spike Analyzed: 01/03/2006 (6A03132-MS1) Source: IOL2476-01											
Total Cyanide	169	5.0	2.2	ug/l	200	2.3	83	70-115			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03132-MSD1) Source: IOL2476-01											
Total Cyanide	181	5.0	2.2	ug/l	200	2.3	89	70-115	7	15	
Batch: 6A04043 Extracted: 01/04/06											
Blank Analyzed: 01/04/2006 (6A04043-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 01/04/2006 (6A04043-BS1) M-NR1											
Oil & Grease	15.8	5.0	0.94	mg/l	20.0		79	65-120			
LCS Dup Analyzed: 01/04/2006 (6A04043-BSD1)											
Oil & Grease	16.0	5.0	0.94	mg/l	20.0		80	65-120	1	20	
Batch: 6A04071 Extracted: 01/04/06											
Blank Analyzed: 01/04/2006 (6A04071-BLK1)											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 01/04/2006 (6A04071-DUP1) Source: IPA0017-01											
Turbidity	55.5	5.0	0.20	NTU		56			1	20	

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

Project ID: Quarterly Outfall 001

Report Number: IPA0018

Sampled: 01/02/06
 Received: 01/02/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A04085 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A04085-BLK1)											
Chromium VI	ND	0.010	N/A	mg/l							
LCS Analyzed: 01/03/2006 (6A04085-BS1)											
Chromium VI	0.103	0.010	N/A	mg/l	0.100		103	90-110			
Matrix Spike Analyzed: 01/03/2006 (6A04085-MS1)											
						Source: IPA0018-01					
Chromium VI	0.289	0.010	N/A	mg/l	0.300	ND	96	85-115			
Matrix Spike Dup Analyzed: 01/03/2006 (6A04085-MSD1)											
						Source: IPA0018-01					
Chromium VI	0.286	0.010	N/A	mg/l	0.300	ND	95	85-115	1	20	
Batch: 6A05098 Extracted: 01/05/06											
Blank Analyzed: 01/05/2006 (6A05098-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 01/05/2006 (6A05098-BS1)											
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0		109	80-115			
Matrix Spike Analyzed: 01/05/2006 (6A05098-MS1)											
						Source: IOL2366-01					
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	ND	115	70-120			
Matrix Spike Dup Analyzed: 01/05/2006 (6A05098-MSD1)											
						Source: IOL2366-01					
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0	ND	112	70-120	3	15	
Batch: 6A05110 Extracted: 01/05/06											
Blank Analyzed: 01/05/2006 (6A05110-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							

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 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 001

Report Number: IPA0018

Sampled: 01/02/06
Received: 01/02/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A05110 Extracted: 01/05/06											
LCS Analyzed: 01/05/2006 (6A05110-BS1)											
Total Suspended Solids	965	10	10	mg/l	1000		96	85-115			
Duplicate Analyzed: 01/05/2006 (6A05110-DUP1)											
						Source: IPA0025-01					
Total Suspended Solids	382	10	10	mg/l		380			1	10	
Batch: 6A11082 Extracted: 01/11/06											
Blank Analyzed: 01/11/2006 (6A11082-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 01/11/2006 (6A11082-BS1)											
Total Cyanide	194	5.0	2.2	ug/l	200		97	90-110			
Matrix Spike Analyzed: 01/11/2006 (6A11082-MS1)											
						Source: IPA0602-06					
Total Cyanide	187	5.0	2.2	ug/l	200	ND	94	70-115			
Matrix Spike Dup Analyzed: 01/11/2006 (6A11082-MSD1)											
						Source: IPA0602-06					
Total Cyanide	189	5.0	2.2	ug/l	200	ND	94	70-115	1	15	

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Michele Chamberlin
Project Manager

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

Project ID: Quarterly Outfall 001

Report Number: IPA0018

Sampled: 01/02/06
 Received: 01/02/06

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA0018-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.095	4.7	10.00
IPA0018-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0095	0.0100
IPA0018-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPA0018-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00
IPA0018-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.7	6.50
IPA0018-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.6	9.10
IPA0018-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	2.10	4.8	4.00
IPA0018-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.6	8.10
IPA0018-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0.095	7.6	8.20
IPA0018-01	BOD	Biochemical Oxygen Demand	mg/l	20	2.0	20
IPA0018-01	Chloride - 300.0	Chloride	mg/l	8.10	0.50	150
IPA0018-01	Chromium VI-218.6	Chromium VI	ug/l	0	1.0	8.10
IPA0018-01	Chromium VI-7196A (10ppb)	Chromium VI	mg/l	0.00012	0.010	0.0081
IPA0018-01	Chromium-200.7	Chromium	ug/l	100	25	8.10
IPA0018-01	Copper-200.8	Copper	ug/l	55	2.0	7.10
IPA0018-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	7.40	5.0	4.30
IPA0018-01	Iron-200.7	Iron	mg/l	92	0.20	0.30
IPA0018-01	Lead-200.8	Lead	ug/l	160	1.0	2.60
IPA0018-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.100	0.20	0.50
IPA0018-01	Mercury - 245.1	Mercury	ug/l	0.13	0.20	0.20
IPA0018-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	3.70	0.26	8.00
IPA0018-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPA0018-01	Sulfate-300.0	Sulfate	mg/l	25	0.50	300
IPA0018-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	270	10	950
IPA0018-01RE1	Copper-200.8	Copper	ug/l	45	2.0	7.10
IPA0018-01RE1	Cyanide-335.2 5ppb	Total Cyanide	ug/l	8.40	5.0	4.30
IPA0018-01RE1	Iron-200.7	Iron	mg/l	88	0.040	0.30
IPA0018-01RE1	Lead-200.8	Lead	ug/l	150	1.0	2.60
IPA0018-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPA0018-02	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager



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

Project ID: Quarterly Outfall 001

Report Number: IPA0018

Sampled: 01/02/06

Received: 01/02/06

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- H-1** Sample analysis performed past the method-specified holding time per client's approval.
- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- K** The sample dilutions set-up for the BOD analysis did not meet the oxygen depletion criteria of at least 2 mg/l. Therefore the reported result is an estimated value only.
- L2** Laboratory Control Sample recovery was below method control limits.
- M-NR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- R-2** The RPD exceeded the method control limit.
- R-7** LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
- RL-1** Reporting limit raised due to sample matrix effects.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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

Project ID: Quarterly Outfall 001

Report Number: IPA0018

Sampled: 01/02/06
Received: 01/02/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	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 218.6	Water	N/A	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
EPA 7196A	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.dmalabs.com.

Subcontracted Laboratories

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

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta

Samples: IPA0018-01

Analysis Performed: EDD + Level 4

Samples: IPA0018-01

Del Mar Analytical, Irvine

Michele Chamberlin

Project Manager

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PA 0018

CHAIN OF CUSTODY FORM

Del Mar Analytical Version 03/31/05

Client Name/Address:
 MWH-Pasadena
 300 North Lake Avenue, Suite 1200
 Pasadena, CA 91101
Project Manager: Bronwyn Kelly
Sampler: R. C. BERTHOE

Project:
 Boeing-SSFL NPDES
 Quarterly Outfall 001
Phone Number:
 (626) 568-6691
Fax Number:
 (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, Cr, Fe	Settleable Solids 1510g	VOCs 624 + xylenes + Freon 113	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5(20 degrees C)	Surfactants (MBAS)	Chloride (MBA)	Perchlorate	Turbidity, TDS, TSS, Conductivity	Ammonia-N	Alpha BHC (608)	2,4,6 Trichlorophenol, 2,4 Dinitrotoluene, Bis(2-ethylhexyl)phthalate, NDMA, pentachlorophenol (EPA 625)	C-VI	Field readings: Temp = 60.3 pH = 7.08	Comments
Outfall 001	W	Poly-1L	1	HNO3	1A	X																24hr TAT
Outfall 001-Dup	W	Poly-1L	1	HNO3	1B	X																24hr TAT
Outfall 001	W	Poly-1L	1	None	2		X															
Outfall 001	W	VOAs	3	HCl	3A,3B,3C			X														
Outfall 001	W	1L Amber	2	None	4A,4B			X														24hr TAT
Outfall 001	W	1L Amber	2	HCl	5A, 5B				X													24hr TAT
Outfall 001	W	Poly-500 ml	1	NaOH	6					X												
Outfall 001	W	Poly-1L	1	None	7						X											
Outfall 001	W	Poly-500 ml	2	None	8A,8B							X										
Outfall 001	W	Poly-500 ml	2	None	9A,9B								X									
Outfall 001	W	Poly-500 ml	2	None	10A, 10B									X								
Outfall 001	W	Poly-500 ml	1	H2SO4	11																	
Outfall 001	W	1L Amber	2	None	12A, 12B																	
Outfall 001	W	1L Amber	2	None	13A, 13B																	
Trip Blank	W	VOAs	3	HCl	14A, 14B, 14C																	
Outfall 001	W	Poly-500 ml	1	None	15																	24hr TAT
Relinquished By	Date/Time: 01-02-06 12:00				Relinquished By	Date/Time: 01/02/06 12:00				Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____												
Relinquished By	Date/Time: 01/02/06 1330				Received By	Date/Time: 12/06 1330				Perchlorate Only 72 Hours _____ Metals Only 72 Hours _____ Sample Integrity: (Check) <input checked="" type="checkbox"/> On Ice <input checked="" type="checkbox"/> 4.0												



January 17, 2006

Alta Project I.D.: 27129

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

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on January 04, 2006 under your Project Name "IPA0018". 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.



Alta Analytical Laboratory Inc.

1104 Windfield Way
El Dorado Hills, CA 95762
FAX (916) 673-0106
(916) 933-1640

Project 27129

Page 1 of 242

NPDES - 31

Section I: Sample Inventory Report

Date Received: 1/4/2006

Alta Lab. ID

Client Sample ID

27129-001

IPA0018-01

SECTION II

EPA Method 1613									
Method Blank									
Matrix:	Aqueous	QC Batch No.:	7632	Lab Sample:	0-MB001	Date Analyzed DB-5:	11-Jan-06	Date Analyzed DB-225:	NA
Sample Size:	1.00 L	Date Extracted:	8-Jan-06						
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers	
2,3,7,8-TCDD	ND	0.000000671			IS 13C-2,3,7,8-TCDD	84.0	25 - 164		
1,2,3,7,8-PeCDD	ND	0.000000560			13C-1,2,3,7,8-PeCDD	78.7	25 - 181		
1,2,3,4,7,8-HxCDD	ND	0.00000149			13C-1,2,3,4,7,8-HxCDD	81.9	32 - 141		
1,2,3,6,7,8-HxCDD	ND	0.00000147			13C-1,2,3,6,7,8-HxCDD	74.4	28 - 130		
1,2,3,7,8,9-HxCDD	ND	0.00000145			13C-1,2,3,4,6,7,8-HpCDD	75.6	23 - 140		
1,2,3,4,6,7,8-HpCDD	ND	0.00000146			13C-OCDD	40.1	17 - 157		
OCDD	ND	0.00000535			13C-2,3,7,8-TCDF	82.6	24 - 169		
2,3,7,8-TCDF	ND	0.000000546			13C-1,2,3,7,8-PeCDF	65.3	24 - 185		
1,2,3,7,8-PeCDF	ND	0.00000112			13C-2,3,4,7,8-PeCDF	71.3	21 - 178		
2,3,4,7,8-PeCDF	ND	0.000000885			13C-1,2,3,4,7,8-HxCDF	73.7	26 - 152		
1,2,3,4,7,8-HxCDF	ND	0.000000511			13C-1,2,3,6,7,8-HxCDF	70.0	26 - 123		
1,2,3,6,7,8-HxCDF	ND	0.000000518			13C-2,3,4,6,7,8-HxCDF	78.0	28 - 136		
2,3,4,6,7,8-HxCDF	ND	0.000000522			13C-1,2,3,7,8,9-HxCDF	79.2	29 - 147		
1,2,3,7,8,9-HxCDF	ND	0.000000675			13C-1,2,3,4,6,7,8-HpCDF	64.7	28 - 143		
1,2,3,4,6,7,8-HpCDF	ND	0.000000764			13C-1,2,3,4,7,8,9-HpCDF	76.3	26 - 138		
1,2,3,4,7,8,9-HpCDF	ND	0.000000622			13C-OCDF	49.6	17 - 157		
OCDF	ND	0.000000360			CRS 37Cl-2,3,7,8-TCDD	88.7	35 - 197		
Totals					Footnotes				
Total TCDD	ND	0.000000671			a. Sample specific estimated detection limit.				
Total PeCDD	ND	0.000000560			b. Estimated maximum possible concentration.				
Total HxCDD	ND	0.00000147			c. Method detection limit.				
Total HpCDD	ND	0.00000146			d. Lower control limit - upper control limit.				
Total TCDF	ND	0.000000546							
Total PeCDF	ND	0.000000997							
Total HxCDF	ND	0.000000553							
Total HpCDF	ND	0.000000692							

Analyst: JMH

Approved By: Martha M. Maier

17-Jan-2006 09:04

OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7632	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	8-Jan-06	Date Analyzed DB-5:	11-Jan-06	
				Date Analyzed DB-225:	NA	
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	10.0	8.44	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	66.2	25 - 164
1,2,3,7,8-PeCDD	50.0	48.8	35 - 71	13C-1,2,3,7,8-PeCDD	70.5	25 - 181
1,2,3,4,7,8-HxCDD	50.0	48.8	35 - 82	13C-1,2,3,4,7,8-HxCDD	68.7	32 - 141
1,2,3,6,7,8-HxCDD	50.0	46.7	38 - 67	13C-1,2,3,6,7,8-HxCDD	65.6	28 - 130
1,2,3,7,8,9-HxCDD	50.0	48.7	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	70.6	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	47.2	35 - 70	13C-OCDD	49.9	17 - 157
OCDD	100	95.4	78 - 144	13C-2,3,7,8-TCDF	62.9	24 - 169
2,3,7,8-TCDF	10.0	9.58	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	63.1	24 - 185
1,2,3,7,8-PeCDF	50.0	46.6	40 - 67	13C-2,3,4,7,8-PeCDF	64.2	21 - 178
2,3,4,7,8-PeCDF	50.0	48.4	34 - 80	13C-1,2,3,4,7,8-HxCDF	65.4	26 - 152
1,2,3,4,7,8-HxCDF	50.0	47.6	36 - 67	13C-1,2,3,6,7,8-HxCDF	63.8	26 - 123
1,2,3,6,7,8-HxCDF	50.0	48.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	67.9	28 - 136
2,3,4,6,7,8-HxCDF	50.0	47.3	35 - 78	13C-1,2,3,7,8,9-HxCDF	70.4	29 - 147
1,2,3,7,8,9-HxCDF	50.0	47.3	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	63.1	28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	48.5	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	70.1	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	48.4	39 - 69	13C-OCDF	56.4	17 - 157
OCDF	100	97.7	63 - 170	CRS 37Cl-2,3,7,8-TCDD	81.7	35 - 197

Analyst: JMH

Approved By: Martha M. Maier 17-Jan-2006 09:04

Sample ID: IPA0018-01		EPA Method 1613			
Client Data		Sample Data		Laboratory Data	
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27129-001
Project:	IPA0018	Sample Size:	1.02 L	QC Batch No.:	7632
Date Collected:	2-Jan-06			Date Analyzed DB-5:	12-Jan-06
Time Collected:	1020			Date Analyzed DB-225:	NA
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	%R	LCL-UCL ^d Qualifiers
2,3,7,8-TCDD	ND	0.00000158		79.1	25 - 164
1,2,3,7,8-PeCDD	0.00000534			84.2	25 - 181
1,2,3,4,7,8-HxCDD	0.00000718			86.6	32 - 141
1,2,3,6,7,8-HxCDD	0.0000191			83.3	28 - 130
1,2,3,7,8,9-HxCDD	0.0000155			90.0	23 - 140
1,2,3,4,6,7,8-HpCDD	0.000360			63.2	17 - 157
OCDD	0.00288			79.6	24 - 169
2,3,7,8-TCDF	0.00000419			79.4	24 - 185
1,2,3,7,8-PeCDF	0.00000279			80.4	21 - 178
2,3,4,7,8-PeCDF	0.00000489			82.6	26 - 152
1,2,3,4,7,8-HxCDF	0.00000514			78.4	26 - 123
1,2,3,6,7,8-HxCDF	0.00000534			85.5	28 - 136
2,3,4,6,7,8-HxCDF	0.00000581			86.8	29 - 147
1,2,3,7,8,9-HxCDF	ND	0.00000169		78.2	28 - 143
1,2,3,4,6,7,8-HpCDF	0.0000686			88.6	26 - 138
1,2,3,4,7,8,9-HpCDF	0.00000790			71.3	17 - 157
OCDF	0.000262			78.1	35 - 197
Totals					
Total TCDD	0.0000351		0.0000427		
Total PeCDD	0.0000676		0.0000707		
Total HxCDD	0.000168				
Total HpCDD	0.000696				
Total TCDF	0.0000630		0.0000694		
Total PeCDF	0.0000484		0.0000561		
Total HxCDF	0.0000795		0.0000833		
Total HpCDF	0.000199				
Footnotes					
a. Sample specific estimated detection limit.					
b. Estimated maximum possible concentration.					
c. Method detection limit.					
d. Lower control limit - upper control limit.					

Analyst: WJL

Approved By: Martha M. Maier 17-Jan-2006 09:04

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

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



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 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
 9484 Chesapeake Drive, Suite 806, San Diego, CA 92123 Ph (619) 506-8686 Fax (619) 506-8689
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPA0018

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Darian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106 <div style="text-align: right; font-size: 2em; font-family: cursive;">27129</div> <div style="text-align: right; font-size: 2em; font-family: cursive;">OC</div>

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

Analysis	Expiration	Comments
Sample ID: IPA0018-01 Water	Sampled: 01/02/06 10:20	Instant Notification
1613-Dioxin-HR-Alta	01/09/06 10:20	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	01/30/06 10:20	Excel EDD email to pm, Include Std logs for Lvl IV
Containers Supplied:		
1 L Amber (IPA0018-01G)		
1 L Amber (IPA0018-01H)		

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

Released By: 1/3/06 Date Time Received By: 1/4/06 0935 Date Time

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

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27129

Samples Arrival:	Date/Time 01/04/06 0935	Initials: CB	Location: WR-2
Logged In:	Date/Time 1/4/06 1430	Initials: CB	Location: WR-2
Delivered By:	<u>FedEx</u> UPS Cal DHL	Hand Delivered	Other
Preservation:	<u>Ice</u> Blue Ice Dry Ice	None	
Temp °C	0°	Time: 0950	Thermometer ID: DT-20

		YES	NO	NA
Adequate Sample Volume Received?		✓		
Holding Time Acceptable?		✓		
Shipping Container(s) Intact?		✓		
Shipping Custody Seals Intact?		✓		
Shipping Documentation Present?		✓		
Airbill	Trk # 7924 7903 4172	✓		
Sample Container Intact?		✓		
Sample Custody Seals Intact?				✓
Chain of Custody / Sample Documentation Present?		✓		
COC Anomaly/Sample Acceptance Form completed?			✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				✓
Na ₂ S ₂ O ₃ Preservation Documented?	COC	Sample Container	<u>None</u>	
Shipping Container	Alta <u>Client</u>	Retain	<u>Return</u>	Dispose

Comments:

APPENDIX G

Section 2

**Outfall 001, January 02, 2006
AMEC Data Validation Reports**

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID B4MT15
 Task Order 1261.001D.01
 SDG No. 1PA0018
 No. of Analyses 1/1

Laboratory Del Mar Analytical
 Reviewer P. Marks
 Analysis/Method Metals

Date: February 16, 2006
 Reviewer's Signature
P. Marks

ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: ① Reanalysis results rejected in favor of original results ② Detect below reporting limit
COMMENTS ^b	

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



DATA VALIDATION REPORT

NPDES Sampling
Outfall 001

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPA0018

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPA0018
Project Manager: P. Costa
Matrix: Water
Analysis: Metals
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 1
Reviewer: P. Meeks
Date of Review: February 17, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC^x Data Validation Procedure for ICP-MS Metals (DVP-5, Rev. 0), EPA Methods 200.8 and 245.1, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPA0018-01	Water	200.8, 245.1
Outfall 001 RE1	IPA0018-01 RE1	Water	200.8

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the sample and analyses presented in this SDG. Per a request from MWH dated 01/03/06, iron was added to the list of analytes. Per requests from MWH, iron, copper, and lead were reanalyzed for Outfall 001. As the laboratory did not append the MWH IDs with "RE1," the reviewer hand-corrected the Form 1 to reflect this information. No sample qualifications were required.

2.1.3 Holding Times

The date of collection recorded on the COC and the dates of analyses recorded in the raw data documented that the sample analyses were performed within the specified holding times of six months for the ICP-MS metals and 28-days for mercury. No qualifications were required.

2.2 ICP-MS TUNING

The method-specified tune criteria were met and no qualifications were required.

2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP-MS metals and 80-120% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and all recoveries were acceptable. No qualifications were required.

2.4 BLANKS

The method blank and CCB results were nondetects at the reporting limit. No qualifications were required.

2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were included in the raw data for the ICP-MS analyses. Lead, which is not present in the ICSA or ICSAB, was detected in both the ICSA and the ICSAB; however, as the wastewater method (EPA SW-846 6020) lists no known interferences for lead, no qualifications were required. The recoveries were within the control limits and no qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

2.7 LABORATORY DUPLICATES

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

2.8 MATRIX SPIKES

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

2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

2.10 INTERNAL STANDARDS PERFORMANCE

For the target compounds analyzed by ICP-MS, the ICP-MS internal standards were within established control limits. No qualifications were required.

DATA VALIDATION REPORT

2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the samples in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. Mercury detected below the reporting limit was qualified as estimated, "J," and denoted with "DNQ," in accordance with the NPDES permit.

As the original and reanalysis results for iron, copper, and lead were similar, the reanalysis results, Outfall 001 RE1 were rejected, "R," in favor of the original results, Outfall 001. No further qualifications were required.

2.12 FIELD QC SAMPLES

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

2.12.1 Field Blanks and Equipment Rinsates

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

2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.



Del Mar Analytical

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 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
 9630 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Quarterly Outfall 001

Report Number: IPA0018

Sampled: 01/02/06

Received: 01/02/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data	Qualifiers
									Raw Qual	Qual Code
Sample ID: IPA0018-01 (Outfall 001 - Water) - cont. Reporting Units: mg/l										
Iron	EPA 200.7	6A03080	0.075	0.20	92	5	01/03/06	01/03/06		
Sample ID: IPA0018-01RE1 (Outfall 001 - Water) Outfall 001 RE1 Reporting Units: mg/l										
Iron	EPA 200.7	6A20071	0.015	0.040	88	1	01/20/06	01/20/06	R	D
Sample ID: IPA0018-01 (Outfall 001 - Water) Reporting Units: ug/l										
Chromium	EPA 200.7	6A03080	10	25	100	5	01/03/06	01/03/06		
Copper	EPA 200.8	6A03059	0.49	2.0	55	1	01/03/06	01/03/06		
Lead	EPA 200.8	6A03059	0.13	1.0	160	1	01/03/06	01/03/06		
Mercury	EPA 245.1	6A03072	0.050	0.20	0.13	1	01/03/06	01/03/06	J J	DNQ
Sample ID: IPA0018-01RE1 (Outfall 001 - Water) Outfall 001 RE1 Reporting Units: ug/l										
Copper	EPA 200.8	6A05101	0.49	2.0	45	1	01/05/06	01/06/06	R	D
Lead	EPA 200.8	6A05101	0.13	1.0	150	1	01/05/06	01/06/06	R	D

LEVEL IV
 pm 2/1/06

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

IPA0018 <Page 6 of 28>

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
12269 East Vassar Drive
Aurora, CO 80014

Package ID B4VO15
Task Order 1261.001D.01
SDG No. IPA0018

No. of Analyses 2

Laboratory Del Mar Analytical
Reviewer K. Shadowlight
Analysis/Method Volatiles by Method 624

Date: February 16, 2006
Reviewer's Signature
K. Shadowlight

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



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 001

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPA0018

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001.01
Sample Delivery Group: IPA0018
Project Manager: P. Costa
Matrix: Water
Analysis: Volatiles
QC Level: Level IV
No. of Samples: 2
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: February 17, 2006

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

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPA0018-01	Water	624
Trip Blank	IPA0018-02	Water	624

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved. Information regarding lack of headspace in the VOA vials was not provided. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 GC/MS TUNING

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

2.3 CALIBRATION

Two initial calibrations were associated with the samples in this SDG, dated 10/19/05 (Freon 113 only) and 12/29/05. The average RRFs were ≥0.05 for all target compounds. The %RSDs were ≤35% for the target compounds listed on the sample summary forms. The continuing calibration associated with the sample in this SDG was dated 01/05/05. The RRFs for all target compounds were ≥0.05 and all %Ds were within the QC limit of ≤20%. A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

One method blank (6A05005-BLK1) was analyzed with this SDG. No target compounds were detected in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (6A05005-BS1) was analyzed with this SDG. The recoveries for the blank spike 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 for 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 the site sample in this SDG. There were no target compounds detected in the trip blank. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

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

2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

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

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

2.13 SYSTEM PERFORMANCE

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



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 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 001 Report Number: IPA0018	Sampled: 01/02/06 Received: 01/02/06
--	---	---

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
Sample ID: IPA0018-01 (Outfall 001 - Water)										
Reporting Units: ug/l										
Benzene	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	u	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A05005	1.2	5.0	ND	1	01/05/06	01/05/06	<div style="display: flex; justify-content: space-between;"> Rel Qual Qual Code </div> <div style="border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin: 0 auto;"></div>	
Carbon tetrachloride	EPA 624	6A05005	0.28	5.0	ND	1	01/05/06	01/05/06		
Chloroform	EPA 624	6A05005	0.33	2.0	ND	1	01/05/06	01/05/06		
1,1-Dichloroethane	EPA 624	6A05005	0.27	2.0	ND	1	01/05/06	01/05/06		
1,2-Dichloroethane	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06		
1,1-Dichloroethene	EPA 624	6A05005	0.42	3.0	ND	1	01/05/06	01/05/06		
Ethylbenzene	EPA 624	6A05005	0.25	2.0	ND	1	01/05/06	01/05/06		
Tetrachloroethene	EPA 624	6A05005	0.32	2.0	ND	1	01/05/06	01/05/06		
Toluene	EPA 624	6A05005	0.36	2.0	ND	1	01/05/06	01/05/06		
1,1,1-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06		
1,1,2-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06		
Trichloroethene	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06		
Trichlorofluoromethane	EPA 624	6A05005	0.34	5.0	ND	1	01/05/06	01/05/06		
Vinyl chloride	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06		
Xylenes, Total	EPA 624	6A05005	0.52	4.0	ND	1	01/05/06	01/05/06		
Surrogate: Dibromofluoromethane (80-120%)					109 %					
Surrogate: Toluene-d8 (80-120%)					104 %					
Surrogate: 4-Bromofluorobenzene (80-120%)					101 %					
Sample ID: IPA0018-02 (Trip Blank - Water)										
Reporting Units: ug/l										
Benzene	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	u	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A05005	1.2	5.0	ND	1	01/05/06	01/05/06	<div style="display: flex; justify-content: space-between;"> Rel Qual Qual Code </div> <div style="border-left: 1px solid black; border-right: 1px solid black; height: 100px; margin: 0 auto;"></div>	
Carbon tetrachloride	EPA 624	6A05005	0.28	5.0	ND	1	01/05/06	01/05/06		
Chloroform	EPA 624	6A05005	0.33	2.0	ND	1	01/05/06	01/05/06		
1,1-Dichloroethane	EPA 624	6A05005	0.27	2.0	ND	1	01/05/06	01/05/06		
1,2-Dichloroethane	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06		
1,1-Dichloroethene	EPA 624	6A05005	0.42	3.0	ND	1	01/05/06	01/05/06		
Ethylbenzene	EPA 624	6A05005	0.25	2.0	ND	1	01/05/06	01/05/06		
Tetrachloroethene	EPA 624	6A05005	0.32	2.0	ND	1	01/05/06	01/05/06		
Toluene	EPA 624	6A05005	0.36	2.0	ND	1	01/05/06	01/05/06		
1,1,1-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06		
1,1,2-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06		
Trichloroethene	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06		
Trichlorofluoromethane	EPA 624	6A05005	0.34	5.0	ND	1	01/05/06	01/05/06		
Vinyl chloride	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06		
Xylenes, Total	EPA 624	6A05005	0.52	4.0	ND	1	01/05/06	01/05/06		
Surrogate: Dibromofluoromethane (80-120%)					107 %					
Surrogate: Toluene-d8 (80-120%)					101 %					
Surrogate: 4-Bromofluorobenzene (80-120%)					101 %					

Level IV

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID B4WC5
 Task Order 1261.001D.01
 SDG No. IPA0018

No. of Anal/Re 1/1

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

Date: February 17, 2006
 Reviewer's Signature


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



DATA VALIDATION REPORT

NPDES Sampling
Outfall 001

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPA0018

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPA0018
Project Manager: P. Costa
Matrix: Water
Analysis: General Minerals
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 1
Reviewer: E. Wessling
Date of Review: February 17, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the MEC^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, 335.2, 350.2, and 405.1, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPA0018-01	Water	General Minerals
Outfall 001	IPA0018-01RE	Water	Total Cyanide

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and all analyses presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary.

2.1.3 Holding Times

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

2.2 CALIBRATION

For all applicable analyses, the initial calibration correlation coefficients were ≥ 0.995 and the ICV and CCV recoveries were 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 reported LCS recoveries were within the laboratory-established control limits. No qualifications were required.

2.5 LABORATORY DUPLICATES

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

2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with this SDG; therefore, no assessment was made with respect to this criterion. 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 Is were verified against the raw data. Sample Outfall 001 did not meet the BOD method specified sample volumes for determining the oxygen demand; therefore, was determined to be an estimated measurement for BOD. The sample was qualified as estimated, "J."

As the reanalysis results for total cyanide were similar to the original results, the reviewer rejected, "R," the reanalysis results, Outfall 001 RE1, in favor of the original results, Outfall 001. 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.



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 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 001 Report Number: IPA0018	Sampled: 01/02/06 Received: 01/02/06
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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0018-01 (Outfall 001 - Water) - cont. Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A05098	0.30	0.50	0.56	1	01/05/06	01/05/06	
Biochemical Oxygen Demand	EPA 405.1	6A03056	0.59	2.0	20	1	01/03/06	01/08/06	J *7
Chloride *	EPA 300.0	6A03053	0.26	0.50	8.1	1	01/03/06	01/03/06	
Nitrate/Nitrite-N *	EPA 300.0	6A03053	0.072	0.26	3.7	1	01/03/06	01/03/06	
Oil & Grease *	EPA 413.1	6A04043	0.89	4.7	ND	1	01/04/06	01/04/06	
Sulfate *	EPA 300.0	6A03053	0.18	0.50	25	1	01/03/06	01/03/06	
Surfactants (MBAS) *	SM5540-C	6A03114	0.088	0.20	0.10	2	01/03/06	01/03/06	RL-I, J
Total Dissolved Solids *	SM2540C	6A03093	10	10	270	1	01/03/06	01/03/06	
Total Suspended Solids *	EPA 160.2	6A05110	10	10	2300	1	01/05/06	01/05/06	
Sample ID: IPA0018-01 (Outfall 001 - Water) Reporting Units: ml/hr									
Total Settleable Solids *	EPA 160.5	6A03069	0.10	0.10	10	1	01/03/06	01/03/06	
Sample ID: IPA0018-01 (Outfall 001 - Water) Reporting Units: NTU									
Turbidity	EPA 180.1	6A04071	2.0	50	1600	50	01/04/06	01/04/06	
Sample ID: IPA0018-01 (Outfall 001 - Water) Reporting Units: ug/l									
Chromium VI *	EPA 7196A	6A04085	0.65	10	ND	1	01/03/06	01/03/06	
Chromium VI *	EPA 218.6	6A03067	0.10	1.0	ND	1	01/03/06	01/03/06	H-1
Total Cyanide	EPA 335.2	6A03132	2.2	5.0	7.4	1	01/03/06	01/03/06	
Perchlorate	EPA 314.0	6A03076	0.80	4.0	ND	1	01/03/06	01/03/06	
Sample ID: IPA0018-01RE1 (Outfall 001 - Water) Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6A11082	2.2	5.0	8.4	1	01/03/06	01/11/06	R D

LEVEL IV

* analysis not validated
 Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 001

Report Number: IPA0018

Sampled: 01/02/06

Received: 01/02/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0018-01 (Outfall 001 - Water) - cont.									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6A03095	1.0	1.0	270	1	01/03/06	01/03/06	<i>Pass</i> <i>Qual</i> / <i>Case</i>

LEVEL IV

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4DF12
 Task Order 1261.001D.01
 SDG No. IPA0018

No. of Analyses 1

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

Date: <u>February 14, 2006</u>
Reviewer's Signature <i>K. Shadowlight</i>

ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	<p>Detects below the laboratory lower calibration level were qualified as estimated.</p> <p>Holding Times Confirmation analysis was not performed for the 2,3,7,8-TCDF</p> <p>GC/MS Tune/Inst. Performance detect and it was qualified as estimated.</p> <p>Calibration</p> <p>Method blanks</p> <p>Surrogates</p> <p>Matrix Spike/Dup LCS</p> <p>Field QC</p> <p>Internal Standard Performance</p> <p>Compound Identification</p> <p>Quantitation</p> <p>System Performance</p>
COMMENTS^b	
<p>^a Subcontracted analytical laboratory is not meeting contract and/or method requirements.</p> <p>^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.</p>	



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 001

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPA0018

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001.01
Sample Delivery Group: IPA0018
Project Manager: P. Costa
Matrix: Water
Analysis: Dioxins/Furans
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: February 14, 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 1s with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form 1 as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 001	IPA0018-01	27129-001	Water	1613

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 0°C. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the samples were couriered directly to Del Mar Analytical-Irvine, custody seals were not required. Custody seals were present on the coolers from Del Mar to Alta; however no sample custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

2.1.3 Holding Times

The samples were extracted and analyzed within a year of collection. No qualifications were required.

2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%. No qualifications were required.

2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

2.3 CALIBRATION

2.3.1 Initial Calibration

The initial calibration was analyzed 12/30/2005 on instrument VG-7. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs $\leq 20\%$ for the 16 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

2.4 BLANKS

One method blank (0-7632-MB001) was extracted and analyzed with the sample in this SDG. No compounds were reported in the method blank associated with the site sample. A review of the method blank raw data and chromatograms indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7632-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," by the laboratory. These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. A confirmation analysis was not performed for the 2,3,7,8-TCDF detect in sample Outfall 011; therefore, the detect was qualified as estimated, "J." No further qualifications were required.

EPA Method 1613

Sample ID: IPA0018-01 Outfall 001

Client Data
 Name: Del Mar Analytical, Irvine
 Project: IPA0018
 Date Collected: 2-Jan-06
 Time Collected: 1020

Sample Data
 Matrix: Aqueous
 Sample Size: 1.02 L

Laboratory Data
 Lab Sample: 27129-001
 QC Batch No.: 7632
 Date Analyzed DB-5: 12-Jan-06
 Date Received: 4-Jan-06
 Date Extracted: 8-Jan-06
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000158			13C-2,3,7,8-TCDD	79.1	25 - 164	
1,2,3,7,8-PeCDD	0.00000534			J	13C-1,2,3,7,8-PeCDD	84.2	25 - 181	
1,2,3,4,7,8-HxCDD	0.00000718			J	13C-1,2,3,4,7,8-HxCDD	86.6	32 - 141	
1,2,3,6,7,8-HxCDD	0.0000191			J	13C-1,2,3,6,7,8-HxCDD	83.3	28 - 130	
1,2,3,7,8,9-HxCDD	0.0000155			J	13C-1,2,3,4,6,7,8-HpCDD	90.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000360				13C-OCDD	63.2	17 - 157	
OCDD	0.00288				13C-2,3,7,8-TCDF	79.6	24 - 169	
2,3,7,8-TCDF	0.00000419			J	13C-1,2,3,7,8-PeCDF	79.4	24 - 185	
1,2,3,7,8-PeCDF	0.00000279			J	13C-2,3,4,7,8-PeCDF	80.4	21 - 178	
2,3,4,7,8-PeCDF	0.00000489			J	13C-1,2,3,4,7,8-HxCDF	82.6	26 - 152	
1,2,3,4,7,8-HxCDF	0.00000514			J	13C-1,2,3,6,7,8-HxCDF	78.4	26 - 123	
1,2,3,6,7,8-HxCDF	0.00000534			J	13C-2,3,4,6,7,8-HxCDF	85.5	28 - 136	
2,3,4,6,7,8-HxCDF	0.00000581			J	13C-1,2,3,7,8,9-HxCDF	86.8	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000169			13C-1,2,3,4,6,7,8-HpCDF	78.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.0000686				13C-1,2,3,4,7,8,9-HpCDF	88.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	0.00000790			J	13C-OCDF	71.3	17 - 157	
OCDF	0.000262				CRS 37C-2,3,7,8-TCDD	78.1	35 - 197	

Totals

Total TCDD	0.0000351							
Total PeCDD	0.0000676							
Total HxCDD	0.000168							
Total HpCDD	0.000696							
Total TCDF	0.0000630							
Total PeCDF	0.0000484							
Total HxCDF	0.0000795							
Total HpCDF	0.000199							

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

Raw Qual
 U
 J →

Qual Cont
 DNQ
 J →
 J →
 J →
 DNQ
 J →

Analyst: WJL
 Approved By: Martha M. Maier
 Date: 17-Jan-2006 09:04

Level III

Project 27129

APPENDIX G

Section 3

Outfall 001, January 04, 2006

Del Mar Analytical Laboratory Report



Del Mar Analytical

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

LABORATORY REPORT

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

Project: Quarterly Outfall 001

Sampled: 01/04/06
Received: 01/04/06
Issued: 02/02/06 10:16

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.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
IPA0256-01	Outfall 001	Water

Reviewed By:

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



Del Mar Analytical

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 001 Report Number: IPA0256	Sampled: 01/04/06 Received: 01/04/06
--	---	---

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0256-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Copper	EPA 200.8	6A06087	0.49	2.0	4.6	1	01/06/06	01/09/06	
Lead	EPA 200.8	6A05101	0.13	1.0	1.3	1	01/05/06	01/06/06	

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 001

Report Number: IPA0256

Sampled: 01/04/06

Received: 01/04/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A05101 Extracted: 01/05/06											
Blank Analyzed: 01/06/2006 (6A05101-BLK1)											
Lead	ND	1.0	0.13	ug/l							
LCS Analyzed: 01/06/2006 (6A05101-BS1)											
Lead	78.8	1.0	0.13	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 01/06/2006 (6A05101-MS1)											
Lead	77.2	1.0	0.13	ug/l	80.0	0.44	96	70-130			
Matrix Spike Dup Analyzed: 01/06/2006 (6A05101-MSD1)											
Lead	77.9	1.0	0.13	ug/l	80.0	0.44	97	70-130	1	20	
Batch: 6A06087 Extracted: 01/06/06											
Blank Analyzed: 01/09/2006 (6A06087-BLK1)											
Copper	ND	2.0	0.49	ug/l							
LCS Analyzed: 01/09/2006 (6A06087-BS1)											
Copper	78.7	2.0	0.49	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 01/09/2006 (6A06087-MS1)											
Copper	79.5	2.0	0.49	ug/l	80.0	2.6	96	70-130			
Matrix Spike Dup Analyzed: 01/09/2006 (6A06087-MSD1)											
Copper	77.3	2.0	0.49	ug/l	80.0	2.6	93	70-130	3	20	

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 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 001

Report Number: IPA0256

Sampled: 01/04/06

Received: 01/04/06

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA0256-01	Copper-200.8	Copper	ug/l	4.60	2.0	7.10
IPA0256-01	Lead-200.8	Lead	ug/l	1.30	1.0	2.60

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 001

Report Number: IPA0256

Sampled: 01/04/06

Received: 01/04/06

DATA QUALIFIERS AND DEFINITIONS

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

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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IPA0256 <Page 5 of 6>

NPDES - 79



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

Project ID: Quarterly Outfall 001

Report Number: IPA0256

Sampled: 01/04/06

Received: 01/04/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 200.8	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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APPENDIX G

Section 4

Outfall 002, January 01, 2006

Del Mar Analytical Laboratory Report



LABORATORY REPORT

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

Project: Quarterly Outfall 002

Sampled: 01/01/06
Received: 01/01/06
Issued: 01/25/06 10:08

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 4°C, on ice and with chain of custody documentation.
- HOLDING TIMES: Not all holding times were met. Results were qualified where the sample analysis did not occur within method specified holding time requirements. Due to laboratory oversight, the extraction for the EPA 625 analysis was not performed within method specified hold times.
- 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
IPA0009-01	Outfall 002	Water
IPA0009-02	Trip Blank	Water

Reviewed By:

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



Del Mar Analytical

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

Sampled: 01/01/06

Received: 01/01/06

CORRECTIVE ACTION REPORT

Department: Extractions

Date: 01/18/2006

Method: EPA 625

Matrix: Water

QC Batch: 6A09061

Identification and Definition of Problem:

The percent recovery for the "L2"-qualified analytes in the Blank Spike Duplicate sample was below QC acceptance limits.

Determination of the Cause of the Problem:

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

Corrective Action Taken:

All results reported for affected analytes are potentially biased low and can be considered estimates only.

Quality Assurance Approval:

Thong Vu

Date: 01/24/2006 05:18 PM

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

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

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0009-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A05005	1.2	5.0	ND	1	01/05/06	01/05/06	
Carbon tetrachloride	EPA 624	6A05005	0.28	5.0	ND	1	01/05/06	01/05/06	
Chloroform	EPA 624	6A05005	0.33	2.0	ND	1	01/05/06	01/05/06	
1,1-Dichloroethane	EPA 624	6A05005	0.27	2.0	ND	1	01/05/06	01/05/06	
1,2-Dichloroethane	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	
1,1-Dichloroethene	EPA 624	6A05005	0.42	3.0	ND	1	01/05/06	01/05/06	
Ethylbenzene	EPA 624	6A05005	0.25	2.0	ND	1	01/05/06	01/05/06	
Tetrachloroethene	EPA 624	6A05005	0.32	2.0	ND	1	01/05/06	01/05/06	
Toluene	EPA 624	6A05005	0.36	2.0	ND	1	01/05/06	01/05/06	
1,1,1-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06	
1,1,2-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06	
Trichloroethene	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06	
Trichlorofluoromethane	EPA 624	6A05005	0.34	5.0	ND	1	01/05/06	01/05/06	
Vinyl chloride	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06	
Xylenes, Total	EPA 624	6A05005	0.52	4.0	ND	1	01/05/06	01/05/06	
Surrogate: Dibromofluoromethane (80-120%)					108 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					101 %				

Sample ID: IPA0009-02 (Trip Blank - Water)

Reporting Units: ug/l

Benzene	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A05005	1.2	5.0	ND	1	01/05/06	01/05/06	
Carbon tetrachloride	EPA 624	6A05005	0.28	5.0	ND	1	01/05/06	01/05/06	
Chloroform	EPA 624	6A05005	0.33	2.0	ND	1	01/05/06	01/05/06	
1,1-Dichloroethane	EPA 624	6A05005	0.27	2.0	ND	1	01/05/06	01/05/06	
1,2-Dichloroethane	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	
1,1-Dichloroethene	EPA 624	6A05005	0.42	3.0	ND	1	01/05/06	01/05/06	
Ethylbenzene	EPA 624	6A05005	0.25	2.0	ND	1	01/05/06	01/05/06	
Tetrachloroethene	EPA 624	6A05005	0.32	2.0	ND	1	01/05/06	01/05/06	
Toluene	EPA 624	6A05005	0.36	2.0	ND	1	01/05/06	01/05/06	
1,1,1-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06	
1,1,2-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06	
Trichloroethene	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06	
Trichlorofluoromethane	EPA 624	6A05005	0.34	5.0	ND	1	01/05/06	01/05/06	
Vinyl chloride	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06	
Xylenes, Total	EPA 624	6A05005	0.52	4.0	ND	1	01/05/06	01/05/06	
Surrogate: Dibromofluoromethane (80-120%)					103 %				
Surrogate: Toluene-d8 (80-120%)					103 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					96 %				

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

Sampled: 01/01/06

Received: 01/01/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0009-01 (Outfall 002 - Water)									H4
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6A09061	1.1	4.9	2.1	0.98	01/09/06	01/12/06	B, J
2,4-Dinitrotoluene	EPA 625	6A09061	0.23	8.8	ND	0.98	01/09/06	01/12/06	L2
N-Nitrosodimethylamine	EPA 625	6A09061	0.22	7.8	ND	0.98	01/09/06	01/12/06	
Pentachlorophenol	EPA 625	6A09061	0.76	7.8	ND	0.98	01/09/06	01/12/06	L2
2,4,6-Trichlorophenol	EPA 625	6A09061	0.098	5.9	ND	0.98	01/09/06	01/12/06	
Surrogate: 2-Fluorophenol (30-120%)					70 %				
Surrogate: Phenol-d6 (35-120%)					82 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					92 %				
Surrogate: Nitrobenzene-d5 (45-120%)					90 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					82 %				
Surrogate: Terphenyl-d14 (45-120%)					86 %				

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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

Sampled: 01/01/06

Received: 01/01/06

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0009-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
alpha-BHC	EPA 608	6A05086	0.00098	0.0098	ND	0.98	01/05/06	01/06/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					64 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					48 %				

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Project ID: Quarterly Outfall 002

Report Number: IPA0009

Sampled: 01/01/06

Received: 01/01/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0009-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Copper	EPA 200.8	6A03059	0.49	2.0	22	1	01/03/06	01/03/06	
Lead	EPA 200.8	6A03059	0.13	1.0	4.3	1	01/03/06	01/03/06	
Mercury	EPA 245.1	6A03072	0.050	0.20	ND	1	01/03/06	01/03/06	
Sample ID: IPA0009-01RE1 (Outfall 002 - Water)									
Reporting Units: ug/l									
Copper	EPA 200.8	6A06087	0.49	2.0	12	1	01/06/06	01/09/06	
Lead	EPA 200.8	6A05101	0.13	1.0	5.5	1	01/05/06	01/06/06	

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Report Number: IPA0009

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

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0009-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A05098	0.30	0.50	ND	1	01/05/06	01/05/06	
Biochemical Oxygen Demand	EPA 405.1	6A03056	0.59	2.0	33	1	01/03/06	01/08/06	
Chloride	EPA 300.0	6A01004	1.3	2.5	56	5	01/01/06	01/01/06	
Nitrate/Nitrite-N	EPA 300.0	6A01004	0.36	1.3	10	5	01/01/06	01/01/06	
Oil & Grease	EPA 413.1	6A04043	0.94	5.0	ND	1	01/04/06	01/04/06	
Sulfate	EPA 300.0	6A01004	0.90	2.5	110	5	01/01/06	01/01/06	
Surfactants (MBAS)	SM5540-C	6A01006	0.22	0.50	0.55	5	01/01/06	01/01/06	M1
Total Dissolved Solids	SM2540C	6A03093	10	10	600	1	01/03/06	01/03/06	
Total Suspended Solids	EPA 160.2	6A05089	10	10	58	1	01/05/06	01/05/06	
Sample ID: IPA0009-01 (Outfall 002 - Water)									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	6A01005	0.10	0.10	ND	1	01/01/06	01/01/06	
Sample ID: IPA0009-01 (Outfall 002 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	6A03065	0.16	4.0	48	4	01/03/06	01/03/06	
Sample ID: IPA0009-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6A03132	2.2	5.0	4.0	1	01/03/06	01/03/06	J
Perchlorate	EPA 314.0	6A03076	0.80	4.0	ND	1	01/03/06	01/03/06	
Sample ID: IPA0009-01 (Outfall 002 - Water)									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6A03095	1.0	1.0	890	1	01/03/06	01/03/06	

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 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 002

Report Number: IPA0009

Sampled: 01/01/06

Received: 01/01/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 002 (IPA0009-01) - Water	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	01/01/2006 09:10	01/01/2006 15:25	01/01/2006 18:10	01/01/2006 19:10
EPA 180.1	2	01/01/2006 09:10	01/01/2006 15:25	01/03/2006 08:15	01/03/2006 08:30
EPA 300.0	2	01/01/2006 09:10	01/01/2006 15:25	01/01/2006 17:30	01/01/2006 22:42
EPA 405.1	2	01/01/2006 09:10	01/01/2006 15:25	01/03/2006 08:22	01/08/2006 09:37
SM5540-C	2	01/01/2006 09:10	01/01/2006 15:25	01/01/2006 18:00	01/01/2006 19:11

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Project ID: Quarterly Outfall 002

Report Number: IPA0009

Sampled: 01/01/06

Received: 01/01/06

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: 6A05005 Extracted: 01/05/06											
Blank Analyzed: 01/05/2006 (6A05005-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	26.1			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	25.8			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	25.2			ug/l	25.0		101	80-120			

LCS Analyzed: 01/05/2006 (6A05005-BS1)

Benzene	24.6	2.0	0.28	ug/l	25.0		98	65-120			
Carbon tetrachloride	25.1	5.0	0.28	ug/l	25.0		100	65-140			
Chloroform	24.2	2.0	0.33	ug/l	25.0		97	65-130			
1,1-Dichloroethane	24.4	2.0	0.27	ug/l	25.0		98	65-130			
1,2-Dichloroethane	23.3	2.0	0.28	ug/l	25.0		93	60-140			
1,1-Dichloroethene	23.8	3.0	0.42	ug/l	25.0		95	70-130			
Ethylbenzene	25.9	2.0	0.25	ug/l	25.0		104	70-125			
Tetrachloroethene	24.3	2.0	0.32	ug/l	25.0		97	65-125			
Toluene	24.1	2.0	0.36	ug/l	25.0		96	70-125			
1,1,1-Trichloroethane	24.5	2.0	0.30	ug/l	25.0		98	65-135			
1,1,2-Trichloroethane	22.1	2.0	0.30	ug/l	25.0		88	65-125			
Trichloroethene	25.4	5.0	0.26	ug/l	25.0		102	70-125			
Trichlorofluoromethane	20.5	5.0	0.34	ug/l	25.0		82	60-140			
Vinyl chloride	19.4	5.0	0.26	ug/l	25.0		78	50-130			
Surrogate: Dibromofluoromethane	26.1			ug/l	25.0		104	80-120			

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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

Sampled: 01/01/06

Received: 01/01/06

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: 6A05005 Extracted: 01/05/06											
LCS Analyzed: 01/05/2006 (6A05005-BS1)											
Surrogate: Toluene-d8	26.0			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	25.9			ug/l	25.0		104	80-120			
Matrix Spike Analyzed: 01/05/2006 (6A05005-MS1) Source: IPA0009-01											
Benzene	22.4	2.0	0.28	ug/l	25.0	ND	90	60-125			
Carbon tetrachloride	23.5	5.0	0.28	ug/l	25.0	ND	94	65-140			
Chloroform	23.1	2.0	0.33	ug/l	25.0	ND	92	65-135			
1,1-Dichloroethane	23.0	2.0	0.27	ug/l	25.0	ND	92	60-130			
1,2-Dichloroethane	21.2	2.0	0.28	ug/l	25.0	ND	85	60-140			
1,1-Dichloroethene	22.2	3.0	0.42	ug/l	25.0	ND	89	60-135			
Ethylbenzene	24.6	2.0	0.25	ug/l	25.0	ND	98	65-130			
Tetrachloroethene	22.5	2.0	0.32	ug/l	25.0	ND	90	60-130			
Toluene	22.1	2.0	0.36	ug/l	25.0	ND	88	65-125			
1,1,1-Trichloroethane	23.6	2.0	0.30	ug/l	25.0	ND	94	65-140			
1,1,2-Trichloroethane	19.7	2.0	0.30	ug/l	25.0	ND	79	60-130			
Trichloroethene	22.7	5.0	0.26	ug/l	25.0	ND	91	60-125			
Trichlorofluoromethane	20.0	5.0	0.34	ug/l	25.0	ND	80	55-145			
Vinyl chloride	18.3	5.0	0.26	ug/l	25.0	ND	73	40-135			
Surrogate: Dibromofluoromethane	27.3			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	26.1			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	26.8			ug/l	25.0		107	80-120			
Matrix Spike Dup Analyzed: 01/05/2006 (6A05005-MSD1) Source: IPA0009-01											
Benzene	22.0	2.0	0.28	ug/l	25.0	ND	88	60-125	2	20	
Carbon tetrachloride	22.4	5.0	0.28	ug/l	25.0	ND	90	65-140	5	25	
Chloroform	22.0	2.0	0.33	ug/l	25.0	ND	88	65-135	5	20	
1,1-Dichloroethane	22.0	2.0	0.27	ug/l	25.0	ND	88	60-130	4	20	
1,2-Dichloroethane	20.5	2.0	0.28	ug/l	25.0	ND	82	60-140	3	20	
1,1-Dichloroethene	21.5	3.0	0.42	ug/l	25.0	ND	86	60-135	3	20	
Ethylbenzene	23.5	2.0	0.25	ug/l	25.0	ND	94	65-130	5	20	
Tetrachloroethene	21.7	2.0	0.32	ug/l	25.0	ND	87	60-130	4	20	
Toluene	21.9	2.0	0.36	ug/l	25.0	ND	88	65-125	1	20	
1,1,1-Trichloroethane	22.2	2.0	0.30	ug/l	25.0	ND	89	65-140	6	20	
1,1,2-Trichloroethane	20.1	2.0	0.30	ug/l	25.0	ND	80	60-130	2	25	
Trichloroethene	21.6	5.0	0.26	ug/l	25.0	ND	86	60-125	5	20	
Trichlorofluoromethane	18.4	5.0	0.34	ug/l	25.0	ND	74	55-145	8	25	

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 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 002

Report Number: IPA0009

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

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A05005 Extracted: 01/05/06											
Matrix Spike Dup Analyzed: 01/05/2006 (6A05005-MSD1)						Source: IPA0009-01					
Vinyl chloride	17.3	5.0	0.26	ug/l	25.0	ND	69	40-135	6	30	
Surrogate: Dibromofluoromethane	26.6			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.2			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	26.2			ug/l	25.0		105	80-120			

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Project ID: Quarterly Outfall 002

Report Number: IPA0009

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

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A09061 Extracted: 01/09/06											
Blank Analyzed: 01/11/2006 (6A09061-BLK1)											
Bis(2-ethylhexyl)phthalate	2.20	5.0	1.1	ug/l							J
2,4-Dinitrotoluene	ND	9.0	0.23	ug/l							
N-Nitrosodimethylamine	ND	8.0	0.22	ug/l							
Pentachlorophenol	ND	8.0	0.78	ug/l							
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l							
Surrogate: 2-Fluorophenol	12.7			ug/l	20.0		64	30-120			
Surrogate: Phenol-d6	15.4			ug/l	20.0		77	35-120			
Surrogate: 2,4,6-Tribromophenol	17.5			ug/l	20.0		88	45-120			
Surrogate: Nitrobenzene-d5	8.74			ug/l	10.0		87	45-120			
Surrogate: 2-Fluorobiphenyl	8.20			ug/l	10.0		82	45-120			
Surrogate: Terphenyl-d14	7.84			ug/l	10.0		78	45-120			
LCS Analyzed: 01/11/2006 (6A09061-BS1)											
Bis(2-ethylhexyl)phthalate	9.16	5.0	1.1	ug/l	10.0		92	60-130			M-NR1
2,4-Dinitrotoluene	7.54	9.0	0.23	ug/l	10.0		75	60-120			J
N-Nitrosodimethylamine	6.72	8.0	0.22	ug/l	10.0		67	40-120			J
Pentachlorophenol	10.3	8.0	0.78	ug/l	10.0		103	50-120			
2,4,6-Trichlorophenol	7.32	6.0	0.10	ug/l	10.0		73	60-120			
Surrogate: 2-Fluorophenol	11.7			ug/l	20.0		58	30-120			
Surrogate: Phenol-d6	13.8			ug/l	20.0		69	35-120			
Surrogate: 2,4,6-Tribromophenol	16.3			ug/l	20.0		82	45-120			
Surrogate: Nitrobenzene-d5	7.76			ug/l	10.0		78	45-120			
Surrogate: 2-Fluorobiphenyl	7.22			ug/l	10.0		72	45-120			
Surrogate: Terphenyl-d14	6.74			ug/l	10.0		67	45-120			
LCS Dup Analyzed: 01/11/2006 (6A09061-BSD1)											
Bis(2-ethylhexyl)phthalate	7.56	5.0	1.1	ug/l	10.0		76	60-130	19	20	
2,4-Dinitrotoluene	5.86	9.0	0.23	ug/l	10.0		59	60-120	25	20	J, R-2, L2
N-Nitrosodimethylamine	5.38	8.0	0.22	ug/l	10.0		54	40-120	22	20	J, R-7
Pentachlorophenol	3.02	8.0	0.78	ug/l	10.0		30	50-120	109	25	L2, R-2, J
2,4,6-Trichlorophenol	6.24	6.0	0.10	ug/l	10.0		62	60-120	16	20	
Surrogate: 2-Fluorophenol	9.70			ug/l	20.0		48	30-120			
Surrogate: Phenol-d6	11.4			ug/l	20.0		57	35-120			
Surrogate: 2,4,6-Tribromophenol	14.0			ug/l	20.0		70	45-120			
Surrogate: Nitrobenzene-d5	6.04			ug/l	10.0		60	45-120			
Surrogate: 2-Fluorobiphenyl	5.76			ug/l	10.0		58	45-120			

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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

Sampled: 01/01/06

Received: 01/01/06

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting		Spike	Source	%REC		RPD	RPD	Limit	Data	
		Limit	MDL			Units	Level					Result
Batch: 6A09061 Extracted: 01/09/06												
LCS Dup Analyzed: 01/11/2006 (6A09061-BSD1)												
Surrogate: Terphenyl-d14	5.30			ug/l	10.0		53			45-120		

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A05086 Extracted: 01/05/06											
Blank Analyzed: 01/06/2006 (6A05086-BLK1)											
alpha-BHC	ND	0.010	0.0010	ug/l							
Surrogate: Decachlorobiphenyl	0.460			ug/l	0.500		92	45-120			
Surrogate: Tetrachloro-m-xylene	0.351			ug/l	0.500		70	35-115			
LCS Analyzed: 01/06/2006 (6A05086-BS1)											
alpha-BHC	0.411	0.010	0.0010	ug/l	0.500		82	45-120			M-NR1
Surrogate: Decachlorobiphenyl	0.440			ug/l	0.500		88	45-120			
Surrogate: Tetrachloro-m-xylene	0.359			ug/l	0.500		72	35-115			
LCS Dup Analyzed: 01/06/2006 (6A05086-BSD1)											
alpha-BHC	0.386	0.010	0.0010	ug/l	0.500		77	45-120	6	30	
Surrogate: Decachlorobiphenyl	0.435			ug/l	0.500		87	45-120			
Surrogate: Tetrachloro-m-xylene	0.342			ug/l	0.500		68	35-115			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03059 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03059-BLK1)											
Copper	ND	2.0	0.49	ug/l							
Lead	ND	1.0	0.13	ug/l							
LCS Analyzed: 01/03/2006 (6A03059-BS1)											
Copper	83.5	2.0	0.49	ug/l	80.0		104	85-115			
Lead	83.9	1.0	0.13	ug/l	80.0		105	85-115			
Matrix Spike Analyzed: 01/03/2006 (6A03059-MS1) Source: IOL2654-03											
Copper	80.8	2.0	0.49	ug/l	80.0	2.2	98	70-130			
Lead	81.9	1.0	0.13	ug/l	80.0	0.31	102	70-130			
Matrix Spike Analyzed: 01/03/2006 (6A03059-MS2) Source: IOL2654-04											
Copper	78.2	2.0	0.49	ug/l	80.0	1.2	96	70-130			
Lead	79.4	1.0	0.13	ug/l	80.0	0.18	99	70-130			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03059-MSD1) Source: IOL2654-03											
Copper	80.9	2.0	0.49	ug/l	80.0	2.2	98	70-130	0	20	
Lead	81.1	1.0	0.13	ug/l	80.0	0.31	101	70-130	1	20	
Batch: 6A03072 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03072-BLK1)											
Mercury	ND	0.20	0.063	ug/l							
LCS Analyzed: 01/03/2006 (6A03072-BS1)											
Mercury	7.95	0.20	0.063	ug/l	8.00		99	85-115			

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Sampled: 01/01/06

Received: 01/01/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03072 Extracted: 01/03/06											
Matrix Spike Analyzed: 01/03/2006 (6A03072-MS1)											
Mercury	7.95	0.20	0.063	ug/l	8.00	ND	99	70-130			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03072-MSD1)											
Mercury	8.00	0.20	0.063	ug/l	8.00	ND	100	70-130	1	20	
Batch: 6A05101 Extracted: 01/05/06											
Blank Analyzed: 01/06/2006 (6A05101-BLK1)											
Lead	ND	1.0	0.13	ug/l							
LCS Analyzed: 01/06/2006 (6A05101-BS1)											
Lead	78.8	1.0	0.13	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 01/06/2006 (6A05101-MS1)											
Lead	77.2	1.0	0.13	ug/l	80.0	0.44	96	70-130			
Matrix Spike Dup Analyzed: 01/06/2006 (6A05101-MSD1)											
Lead	77.9	1.0	0.13	ug/l	80.0	0.44	97	70-130	1	20	
Batch: 6A06087 Extracted: 01/06/06											
Blank Analyzed: 01/09/2006 (6A06087-BLK1)											
Copper	ND	2.0	0.49	ug/l							
LCS Analyzed: 01/09/2006 (6A06087-BS1)											
Copper	78.7	2.0	0.49	ug/l	80.0		98	85-115			

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A06087 Extracted: 01/06/06											
Matrix Spike Analyzed: 01/09/2006 (6A06087-MS1)						Source: IPA0257-01					
Copper	79.5	2.0	0.49	ug/l	80.0	2.6	96	70-130			
Matrix Spike Dup Analyzed: 01/09/2006 (6A06087-MSD1)						Source: IPA0257-01					
Copper	77.3	2.0	0.49	ug/l	80.0	2.6	93	70-130	3	20	

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A01004 Extracted: 01/01/06											
Blank Analyzed: 01/01/2006 (6A01004-BLK1)											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
LCS Analyzed: 01/01/2006 (6A01004-BS1)											
Chloride	4.88	0.50	0.15	mg/l	5.00		98	90-110			M-3
Sulfate	9.56	0.50	0.45	mg/l	10.0		96	90-110			
Matrix Spike Analyzed: 01/01/2006 (6A01004-MS1)											
					Source: IPA0003-01						
Sulfate	14.4	0.50	0.45	mg/l	10.0	5.1	93	80-120			
Matrix Spike Dup Analyzed: 01/01/2006 (6A01004-MSD1)											
					Source: IPA0003-01						
Sulfate	14.8	0.50	0.45	mg/l	10.0	5.1	97	80-120	3	20	
Batch: 6A01006 Extracted: 01/01/06											
Blank Analyzed: 01/01/2006 (6A01006-BLK1)											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 01/01/2006 (6A01006-BS1)											
Surfactants (MBAS)	0.253	0.10	0.044	mg/l	0.250		101	90-110			
Matrix Spike Analyzed: 01/01/2006 (6A01006-MS1)											
					Source: IPA0009-01						
Surfactants (MBAS)	0.879	0.50	0.22	mg/l	0.250	0.55	132	50-125			MI
Matrix Spike Dup Analyzed: 01/01/2006 (6A01006-MSD1)											
					Source: IPA0009-01						
Surfactants (MBAS)	0.953	0.50	0.22	mg/l	0.250	0.55	161	50-125	8	20	MI

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03056 Extracted: 01/03/06											
Blank Analyzed: 01/08/2006 (6A03056-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 01/08/2006 (6A03056-BS1)											
Biochemical Oxygen Demand	208	100	30	mg/l	198		105	85-115			
LCS Dup Analyzed: 01/08/2006 (6A03056-BSD1)											
Biochemical Oxygen Demand	206	100	30	mg/l	198		104	85-115	1	20	
Batch: 6A03065 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03065-BLK1)											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 01/03/2006 (6A03065-DUP1)											
Turbidity	48.8	4.0	0.16	NTU		Source: IPA0009-01 48			2	20	
Batch: 6A03076 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03076-BLK1)											
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 01/03/2006 (6A03076-BS1)											
Perchlorate	49.4	4.0	0.80	ug/l	50.0		99	85-115			
Matrix Spike Analyzed: 01/03/2006 (6A03076-MS1)											
Perchlorate	50.5	4.0	0.80	ug/l	50.0	Source: IPA0022-18 ND	101	80-120			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03076 Extracted: 01/03/06											
Matrix Spike Dup Analyzed: 01/03/2006 (6A03076-MSD1)											
Source: IPA0022-18											
Perchlorate	50.2	4.0	0.80	ug/l	50.0	ND	100	80-120	1	20	
Batch: 6A03093 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03093-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 01/03/2006 (6A03093-BS1)											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 01/03/2006 (6A03093-DUP1)											
Source: IPA0005-01											
Total Dissolved Solids	981	10	10	mg/l		980			0	10	
Batch: 6A03095 Extracted: 01/03/06											
Duplicate Analyzed: 01/03/2006 (6A03095-DUP1)											
Source: IPA0009-01											
Specific Conductance	920	1.0	1.0	umhos/cm		890			3	5	
Batch: 6A03132 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03132-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 01/03/2006 (6A03132-BS1)											
Total Cyanide	188	5.0	2.2	ug/l	200		94	90-110			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03132 Extracted: 01/03/06											
Matrix Spike Analyzed: 01/03/2006 (6A03132-MS1)						Source: IOL2476-01					
Total Cyanide	169	5.0	2.2	ug/l	200	2.3	83	70-115			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03132-MSD1)						Source: IOL2476-01					
Total Cyanide	181	5.0	2.2	ug/l	200	2.3	89	70-115	7	15	
Batch: 6A04043 Extracted: 01/04/06											
Blank Analyzed: 01/04/2006 (6A04043-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 01/04/2006 (6A04043-BS1)											
Oil & Grease	15.8	5.0	0.94	mg/l	20.0		79	65-120			M-NRI
LCS Dup Analyzed: 01/04/2006 (6A04043-BSD1)											
Oil & Grease	16.0	5.0	0.94	mg/l	20.0		80	65-120	1	20	
Batch: 6A05089 Extracted: 01/05/06											
Blank Analyzed: 01/05/2006 (6A05089-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 01/05/2006 (6A05089-BS1)											
Total Suspended Solids	979	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 01/05/2006 (6A05089-DUP1)											
Total Suspended Solids	458	10	10	mg/l		350			27	10	R-3

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A05098 Extracted: 01/05/06											
Blank Analyzed: 01/05/2006 (6A05098-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 01/05/2006 (6A05098-BS1)											
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0		109	80-115			
Matrix Spike Analyzed: 01/05/2006 (6A05098-MS1)											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	ND	115	70-120			
Matrix Spike Dup Analyzed: 01/05/2006 (6A05098-MSD1)											
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0	ND	112	70-120	3	15	

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 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

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

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA0009-01	413.1 Oil and Grease	Oil & Grease	mg/l	0	5.0	10.00
IPA0009-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0098	0.0100
IPA0009-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPA0009-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00
IPA0009-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.9	6.50
IPA0009-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.8	9.10
IPA0009-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	2.10	4.9	4.00
IPA0009-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.8	8.10
IPA0009-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.8	8.20
IPA0009-01	BOD	Biochemical Oxygen Demand	mg/l	33	2.0	20
IPA0009-01	Chloride - 300.0	Chloride	mg/l	56	2.5	150
IPA0009-01	Copper-200.8	Copper	ug/l	22	2.0	7.10
IPA0009-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	4.00	5.0	4.30
IPA0009-01	Lead-200.8	Lead	ug/l	4.30	1.0	2.60
IPA0009-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.55	0.50	0.50
IPA0009-01	Mercury - 245.1	Mercury	ug/l	0.0083	0.20	0.20
IPA0009-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	10.00	1.3	8.00
IPA0009-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPA0009-01	Sulfate-300.0	Sulfate	mg/l	110	2.5	300
IPA0009-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	600	10	950
IPA0009-01RE1	Copper-200.8	Copper	ug/l	12	2.0	7.10
IPA0009-01RE1	Lead-200.8	Lead	ug/l	5.50	1.0	2.60
IPA0009-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPA0009-02	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

Sampled: 01/01/06

Received: 01/01/06

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- H4** Sample was extracted past holding time, but analyzed within analysis holding time.
- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- L2** Laboratory Control Sample recovery was below method control limits.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- 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.
- R-2** The RPD exceeded the method control limit.
- R-3** The RPD exceeded the method control limit due to sample matrix effects.
- R-7** LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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Del Mar Analytical

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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

Sampled: 01/01/06

Received: 01/01/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
SM2540C	Water	X	X
SM5540-C	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Subcontracted Laboratories

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

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta

Samples: IPA0009-01

Analysis Performed: EDD + Level 4

Samples: IPA0009-01

Del Mar Analytical, Irvine

Michele Chamberlin

Project Manager

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IPA 0009

Client Name/Address:

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

Project:

Boeing-SSFL NPDES
Quarterly Outfall 002

Project Manager:

Bronwyn Kelly

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

Sampler:

R B W A G N

Field readings:
Temp = 58.3
pH = 7.23

Comments

Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg	Settleable Solids	VOCs 624 + xylenes + Freon 113	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5(20 degrees C)	Surfactants (MBAS)	Chloride	Conductivity	Ammonia-N	2,4,6 Trichlorophenol, 2,4-Dinitrofluorene, Bis(2-ethylhexyl)phthalate, NDMA, perchlorophenol (EPA 625)	Alpha BHC (608)
Outfall 002	W	Poly-1 liter	1	HNO3	1A	X												
Outfall 002-Dup	W	Poly-1 liter	1	HNO3	1B	X												
Outfall 002	W	Poly-1 liter	1	None	2		X											
Outfall 002	W	VOAs	3	HCl	3A,3B,3C			X										
Outfall 002	W	Glass-Amber	2	None	4A,4B				X									
Outfall 002	W	1L Amber	2	HCl	5A, 5B				X									
Outfall 002	W	Poly-500 ml	1	NaOH	6					X								
Outfall 002	W	Poly-1 liter	1	None	7						X							
Outfall 002	W	Poly-500 ml	2	None	8A,8B							X						
Outfall 002	W	Poly-500 ml	2	None	9A,9B								X					
Outfall 002	W	Poly-500 ml	2	None	10A, 10B									X				
Outfall 002	W	Poly-500 ml	1	H2SO4	11										X			
Outfall 002	W	1L Amber	2	None	12A, 12B												X	
Outfall 002	W	1L Amber	2	None	13A, 13B													X
Trip Blank	W	VOAs	3	HCl	14A, 14B, 14C			X										

Relinquished By: *[Signature]* Date/Time: 11/06/06 1315

Relinquished By: *[Signature]* Date/Time: 11/06/06 1525

Relinquished By: *[Signature]* Date/Time: 11/06/06 1525

Received By: *[Signature]* Date/Time: 11/06/06 1315

Received By: *[Signature]* Date/Time: 11/06/06 1525

Received By: *[Signature]* Date/Time: 11/06/06 1525

Turnaround Time: (check) Same Day 72 Hours 24 Hours 5 days 48 hours normal

Perchlorate Only 72 Hours

Metals Only 72 Hours

Sample Integrity: (Check) Intact On Ice 4°C



January 17, 2006

Alta Project LD.: 27130

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

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on January 04, 2006 under your Project Name "IPA0009". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

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

Sincerely,

Martha M. Maier
Director of HRMS Services



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



Section I: Sample Inventory Report

Date Received: 1/4/2006

Alta Lab. ID

Client Sample ID

27130-001

IPA0009-01

SECTION II

Method Blank		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7632	Lab Sample:	0-MB001	
Sample Size:	1.00 L	Date Extracted:	8-Jan-06	Date Analyzed DB-5:	11-Jan-06	
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Date Analyzed DB-225:	
				Labeled Standard	%R	
				LCL-UCL ^d	Qualifiers	
2,3,7,8-TCDD	ND	0.000000671		13C-2,3,7,8-TCDD	84.0	25 - 164
1,2,3,7,8-PeCDD	ND	0.000000560		13C-1,2,3,7,8-PeCDD	78.7	25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000149		13C-1,2,3,4,7,8-HxCDD	81.9	32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000147		13C-1,2,3,6,7,8-HxCDD	74.4	28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000145		13C-1,2,3,4,6,7,8-HpCDD	75.6	23 - 140
1,2,3,4,6,7,8-HpCDD	ND	0.00000146		13C-OCDD	40.1	17 - 157
OCDD	ND	0.00000535		13C-2,3,7,8-TCDF	82.6	24 - 169
2,3,7,8-TCDF	ND	0.000000546		13C-1,2,3,7,8-PeCDF	65.3	24 - 185
1,2,3,7,8-PeCDF	ND	0.00000112		13C-2,3,4,7,8-PeCDF	71.3	21 - 178
2,3,4,7,8-PeCDF	ND	0.000000885		13C-1,2,3,4,7,8-HxCDF	73.7	26 - 152
1,2,3,4,7,8-HxCDF	ND	0.000000511		13C-1,2,3,6,7,8-HxCDF	70.0	26 - 123
1,2,3,6,7,8-HxCDF	ND	0.000000518		13C-2,3,4,6,7,8-HxCDF	78.0	28 - 136
2,3,4,6,7,8-HxCDF	ND	0.000000522		13C-1,2,3,7,8,9-HxCDF	79.2	29 - 147
1,2,3,7,8,9-HxCDF	ND	0.000000675		13C-1,2,3,4,6,7,8-HpCDF	64.7	28 - 143
1,2,3,4,6,7,8-HpCDF	ND	0.000000764		13C-1,2,3,4,7,8,9-HpCDF	76.3	26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.000000622		13C-OCDF	49.6	17 - 157
OCDF	ND	0.00000360		CRS 37Cl-2,3,7,8-TCDD	88.7	35 - 197
Totals				Footnotes		
Total TCDD	ND	0.000000671		a. Sample specific estimated detection limit.		
Total PeCDD	ND	0.000000560		b. Estimated maximum possible concentration.		
Total HxCDD	ND	0.00000147		c. Method detection limit.		
Total HpCDD	ND	0.00000146		d. Lower control limit - upper control limit.		
Total TCDF	ND	0.000000546				
Total PeCDF	ND	0.000000997				
Total HxCDF	ND	0.000000553				
Total HpCDF	ND	0.000000692				

Analyst: JMH

Approved By: Martha M. Maier 17-Jan-2006 11:36

OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7632	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	8-Jan-06	Date Analyzed DB-5:	11-Jan-06	
Date Analyzed DB-5:	11-Jan-06	Date Analyzed DB-225:	NA			
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	10.0	8.44	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	66.2	25 - 164
1,2,3,7,8-PeCDD	50.0	48.8	35 - 71	13C-1,2,3,7,8-PeCDD	70.5	25 - 181
1,2,3,4,7,8-HxCDD	50.0	48.8	35 - 82	13C-1,2,3,4,7,8-HxCDD	68.7	32 - 141
1,2,3,6,7,8-HxCDD	50.0	46.7	38 - 67	13C-1,2,3,6,7,8-HxCDD	65.6	28 - 130
1,2,3,7,8,9-HxCDD	50.0	48.7	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	70.6	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	47.2	35 - 70	13C-OCDD	49.9	17 - 157
OCDD	100	95.4	78 - 144	13C-2,3,7,8-TCDF	62.9	24 - 169
2,3,7,8-TCDF	10.0	9.58	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	63.1	24 - 185
1,2,3,7,8-PeCDF	50.0	46.6	40 - 67	13C-2,3,4,7,8-PeCDF	64.2	21 - 178
2,3,4,7,8-PeCDF	50.0	48.4	34 - 80	13C-1,2,3,4,7,8-HxCDF	65.4	26 - 152
1,2,3,4,7,8-HxCDF	50.0	47.6	36 - 67	13C-1,2,3,6,7,8-HxCDF	63.8	26 - 123
1,2,3,6,7,8-HxCDF	50.0	48.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	67.9	28 - 136
2,3,4,6,7,8-HxCDF	50.0	47.3	35 - 78	13C-1,2,3,7,8,9-HxCDF	70.4	29 - 147
1,2,3,7,8,9-HxCDF	50.0	47.3	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	63.1	28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	48.5	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	70.1	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	48.4	39 - 69	13C-OCDF	56.4	17 - 157
OCDF	100	97.7	63 - 170	CRS 37Cl-2,3,7,8-TCDD	81.7	35 - 197

Analyst: JMH

Approved By: Martha M. Maier 17-Jan-2006 11:36

EPA Method 1613

Sample ID: IPA0009-01

Client Data		Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27130-001		
Project:	IPA0009	Sample Size:	0.974 L	QC Batch No.:	7632		
Date Collected:	1-Jan-06			Date Analyzed DB-5:	12-Jan-06		
Time Collected:	0910			Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000974		13C-2,3,7,8-TCDD	73.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000111		13C-1,2,3,7,8-PeCDD	76.8	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000203		13C-1,2,3,4,7,8-HxCDD	76.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000187		13C-1,2,3,6,7,8-HxCDD	73.6	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000191		13C-1,2,3,4,6,7,8-HpCDD	81.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000193		J	13C-OCDD	59.6	17 - 157	
OCDD	0.000156			13C-2,3,7,8-TCDF	69.7	24 - 169	
2,3,7,8-TCDF	ND	0.00000112		13C-1,2,3,7,8-PeCDF	68.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000165		13C-2,3,4,7,8-PeCDF	71.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000139		13C-1,2,3,4,7,8-HxCDF	74.5	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000182		13C-1,2,3,6,7,8-HxCDF	71.1	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000175		13C-2,3,4,6,7,8-HxCDF	75.7	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000189		13C-1,2,3,7,8,9-HxCDF	78.5	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000245		13C-1,2,3,4,6,7,8-HpCDF	72.8	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.0000120		J	13C-1,2,3,4,7,8,9-HpCDF	79.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000237		13C-OCDF	66.6	17 - 157	
OCDF	0.0000953			CRS 37Cl-2,3,7,8-TCDD	75.4	35 - 197	
Totals							
Total TCDD	ND	0.000000974					
Total PeCDD	ND	0.00000111					
Total HxCDD	0.00000250		0.00000427				
Total HpCDD	0.00000346						
Total TCDF	ND	0.00000112					
Total PeCDF	ND		0.000000849				
Total HxCDF	0.00000245		0.00000460				
Total HpCDF	0.00000322						

Footnotes

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

Analyst: JMH

Approved By: Martha M. Maier 17-Jan-2006 11:36

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

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



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 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9599
 9830 South 51st Street, Suite B-128, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3520 Fax (702) 798-3521

SUBCONTRACT ORDER - PROJECT # IPA0009



SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Alta Analytical 1104 Windfield Way El Dorado Hills, CA 95762 Phone : (916) 933-1640 Fax: (916) 673-0106 <div style="text-align: right; font-size: 2em;">27130</div> <div style="text-align: right; font-size: 1.5em;">0.9°C</div>

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

Analysis	Expiration	Comments
Sample ID: IPA0009-01 Water	Sampled: 01/01/06 09:10	Instant Notification
1613-Dioxin-HR-Alta	01/08/06 09:10	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	01/29/06 09:10	Excel EDD email to pm, include Std logs for Lvl IV
Containers Supplied:		
1 L Amber (IPA0009-01G)		
1 L Amber (IPA0009-01H)		

SAMPLE INTEGRITY:

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

Released By:  Date: 1/3/06 Time: _____
 Received By:  Date: 1/4/06 Time: 0935

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

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27130

Samples Arrival:	Date/Time 1/4/06 0935	Initials: PAB	Location: WR-2
Logged In:	Date/Time 1/4/06 1448	Initials: PAB	Location: WR-2
Delivered By:	FedEx	UPS	Cal
		DHL	Hand Delivered
		Other	
Preservation:	Ice	Blue Ice	Dry Ice
		None	
Temp °C	0.9	Time: 0940	Thermometer ID: DT-20

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk # 7924 7903 4161	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?			✓
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			
Na ₂ S ₂ O ₃ Preservation Documented?			None
Shipping Container	Alta	Client	Retain
		Return	Dispose

Comments:

APPENDIX G

Section 5

**Outfall 002, January 01, 2006
AMEC Data Validation Reports**

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID B4MT16
 Task Order 1261.001D.01
 SDG No. 1PA0009

No. of Analyses 1/1

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

Date: February 14, 2006
 Reviewer's Signature
P. Meeks

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



DATA VALIDATION REPORT

NPDES Sampling
Outfall 002

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPA0009

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPA0009
Project Manager: P. Costa
Matrix: Water
Analysis: Metals
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 1
Reviewer: P. Meeks
Date of Review: February 17, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for ICP-MS Metals (DVP-5, Rev. 0)*, EPA Methods 200.8 and 245.1, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

DATA VALIDATION REPORT

Project: NPDES
SDG: IPA0009
Analysis: Metals

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPA0009-01	Water	200.8, 245.1
Outfall 002 RE1	IPA0009-01	Water	208.8

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the sample and analyses presented in this SDG. Per requests from MWH, copper and lead were reanalyzed for Outfall 002. As the laboratory did not append the MWH ID with "RE1," the reviewer hand-corrected the Form 1 to reflect this information. No sample qualifications were required.

2.1.3 Holding Times

The date of collection recorded on the COC and the dates of analyses recorded in the raw data documented that the sample analyses were performed within the specified holding times of six months for the ICP-MS metals and 28-days for mercury. No qualifications were required.

2.2 ICP-MS TUNING

The method-specified tune criteria were met and no qualifications were required.

2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP-MS metals and 80-120% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and all recoveries were acceptable. No qualifications were required.

2.4 BLANKS

The method blank and CCB results were nondetects at the reporting limit and no qualifications were required.

2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were included in the raw data for the ICP-MS analyses. Lead, which is not present in the ICSA or ICSAB, was detected in both the ICSA and the ICSAB; however, as the wastewater method (EPA SW-846 6020) lists no known interferences for lead, no qualifications were required. The recoveries were within the control limits and no qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

2.7 LABORATORY DUPLICATES

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

2.8 MATRIX SPIKES

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

2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

2.10 INTERNAL STANDARDS PERFORMANCE

For the target compounds analyzed by ICP-MS, the ICP-MS internal standards were within established control limits. No qualifications were required.

DATA VALIDATION REPORT

2.11 SAMPLE RESULT VERIFICATION

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

As the original and reanalysis results for lead were similar, the reanalysis result, Outfall 002 RE1 was rejected, "R," in favor of the original result, Outfall 002. The original copper result, Outfall 002, was rejected, "R," in favor of the reanalysis result, Outfall 002 RE1 as this result was similar to an unreported copper analysis. No further qualifications were required.

2.12 FIELD QC SAMPLES

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

2.12.1 Field Blanks and Equipment Rinsates

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

2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.



Del Mar Analytical

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 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

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

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0009-01 (Outfall 002 - Water) - cont. Reporting Units: ug/l									
Copper	EPA 200.8	6A03059	0.49	2.0	22	1	01/03/06	01/03/06	R D
Lead	EPA 200.8	6A03059	0.13	1.0	4.3	1	01/03/06	01/03/06	
Mercury	EPA 245.1	6A03072	0.050	0.20	ND	1	01/03/06	01/03/06	U
Sample ID: IPA0009-01RE1 (Outfall 002 - Water) Outfall 002 RE1 Reporting Units: ug/l									
Copper	EPA 200.8	6A06087	0.49	2.0	12	1	01/06/06	01/09/06	
Lead	EPA 200.8	6A05101	0.13	1.0	5.5	1	01/05/06	01/06/06	R D

LEVEL IV

Am 2/12/06

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA0009 <Page 6 of 25>

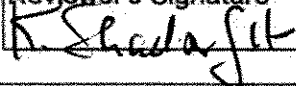
CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4VO16
 Task Order 1261.001D.01
 SDG No. IPA0009

No. of Analyses 2

Laboratory Del Mar Analytical
 Reviewer K. Shadowlight
 Analysis/Method Volatiles by Method 624

Date: February 16, 2006
 Reviewer's Signature


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



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 002

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPA0009

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^x Project Number: 1261.001.01
Sample Delivery Group: IPA0009
Project Manager: P. Costa
Matrix: Water
Analysis: Volatiles
QC Level: Level IV
No. of Samples: 2
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: February 17, 2006

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

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPA0009-01	Water	624
Trip Blank	IPA0009-01	Water	624

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved. Information regarding lack of headspace in the VOA vials was not provided. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 GC/MS TUNING

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

2.3 CALIBRATION

Two initial calibrations were associated with the samples in this SDG, dated 10/19/05 (Freon 113 only) and 12/29/05. The average RRFs were ≥0.05 for all target compounds. The %RSDs were ≤35% for the target compounds listed on the sample summary forms. The continuing calibration associated with the sample in this SDG was dated 01/05/05. The RRFs for all target compounds were ≥0.05 and all %Ds were within the QC limit of ≤20%. A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

One method blank (6A05005-BLK1) was analyzed with this SDG. No target compounds were detected in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

DATA VALIDATION REPORT

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (6A05005-BS1) was analyzed with this SDG. The recoveries for the blank spike 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 for sample Outfall 002. Recoveries and RPDs were within the laboratory QC limits. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.8 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 the site sample in this SDG. There were no target compounds detected in the trip blank. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

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

2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

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

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

2.13 SYSTEM PERFORMANCE

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



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 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

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

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0009-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	u
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A05005	1.2	5.0	ND	1	01/05/06	01/05/06	
Carbon tetrachloride	EPA 624	6A05005	0.28	5.0	ND	1	01/05/06	01/05/06	
Chloroform	EPA 624	6A05005	0.33	2.0	ND	1	01/05/06	01/05/06	
1,1-Dichloroethane	EPA 624	6A05005	0.27	2.0	ND	1	01/05/06	01/05/06	
1,2-Dichloroethane	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	
1,1-Dichloroethene	EPA 624	6A05005	0.42	3.0	ND	1	01/05/06	01/05/06	
Ethylbenzene	EPA 624	6A05005	0.25	2.0	ND	1	01/05/06	01/05/06	
Tetrachloroethene	EPA 624	6A05005	0.32	2.0	ND	1	01/05/06	01/05/06	
Toluene	EPA 624	6A05005	0.36	2.0	ND	1	01/05/06	01/05/06	
1,1,1-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06	
1,1,2-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06	
Trichloroethene	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06	
Trichlorofluoromethane	EPA 624	6A05005	0.34	5.0	ND	1	01/05/06	01/05/06	
Vinyl chloride	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06	
Xylenes, Total	EPA 624	6A05005	0.52	4.0	ND	1	01/05/06	01/05/06	
Surrogate: Dibromofluoromethane (80-120%)					108 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					101 %				
Sample ID: IPA0009-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	u
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A05005	1.2	5.0	ND	1	01/05/06	01/05/06	
Carbon tetrachloride	EPA 624	6A05005	0.28	5.0	ND	1	01/05/06	01/05/06	
Chloroform	EPA 624	6A05005	0.33	2.0	ND	1	01/05/06	01/05/06	
1,1-Dichloroethane	EPA 624	6A05005	0.27	2.0	ND	1	01/05/06	01/05/06	
1,2-Dichloroethane	EPA 624	6A05005	0.28	2.0	ND	1	01/05/06	01/05/06	
1,1-Dichloroethene	EPA 624	6A05005	0.42	3.0	ND	1	01/05/06	01/05/06	
Ethylbenzene	EPA 624	6A05005	0.25	2.0	ND	1	01/05/06	01/05/06	
Tetrachloroethene	EPA 624	6A05005	0.32	2.0	ND	1	01/05/06	01/05/06	
Toluene	EPA 624	6A05005	0.36	2.0	ND	1	01/05/06	01/05/06	
1,1,1-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06	
1,1,2-Trichloroethane	EPA 624	6A05005	0.30	2.0	ND	1	01/05/06	01/05/06	
Trichloroethene	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06	
Trichlorofluoromethane	EPA 624	6A05005	0.34	5.0	ND	1	01/05/06	01/05/06	
Vinyl chloride	EPA 624	6A05005	0.26	5.0	ND	1	01/05/06	01/05/06	
Xylenes, Total	EPA 624	6A05005	0.52	4.0	ND	1	01/05/06	01/05/06	
Surrogate: Dibromofluoromethane (80-120%)					103 %				
Surrogate: Toluene-d8 (80-120%)					103 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					96 %				

Rev Qual
Qual code

Rev Qual
Qual code

Level II

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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IPA0009 <Page 3 of 25>

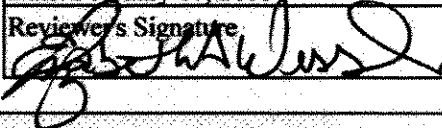
CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID B4WC8
 Task Order 1261.001D.01
 SDG No. IPA0009

No. of Analyses 1

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

Date: February 17, 2006
 Reviewer's Signature: 

ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: - MS/MSD recovery above QC limits for MBAS
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: IPA0009

Prepared by

**MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014**

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPA0009
Project Manager: P. Costa
Matrix: Water
Analysis: General Minerals
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: E. Wessling
Date of Review: February 17, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the MEC^x *Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Method 120.1, 180.1, 300.0, 350.2, and 405.1* and *Standard Methods for the Examination of Water and Wastewater Method SM2540-C*, and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

DATA VALIDATION REPORT

Project: NPDES
SDG: IPA0009
Analysis: Gen. Min.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPA0009-01	Water	General Minerals

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and all analyses presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary.

2.1.3 Holding Times

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

2.2 CALIBRATION

For all applicable analyses, the initial calibration correlation coefficients were ≥ 0.995 and the ICV and CCV recoveries were within the control limits of 90-110%. For those methods requiring weight determinations, balance calibration logs were reviewed and found to be acceptable. No qualifications were required.

2.3 BLANKS

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

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The reported LCS recoveries were within the laboratory-established control limits. No LCS recovery was listed for nitrate; however, the reviewer checked the raw data and found that nitrate was spiked into the LCS and was recovered acceptably. No qualifications were required.

DATA VALIDATION REPORT

2.5 LABORATORY DUPLICATES

Duplicate analyses were performed on Outfall 002 for MBAS, turbidity, and specific conductance only. The RPDs were less than the laboratory control limit of $\leq 20\%$ for MBAS, $\leq 20\%$ for turbidity, and $\leq 5\%$ for conductance. No qualifications were required.

2.6 MATRIX SPIKES

MS/MSD analysis was performed on Outfall 002 for MBAS only. MBAS was recovered above the control limit (50-125%); therefore, the result was qualified as estimated, "J." Evaluation of method accuracy was based on LCS results for all other analyses. No further qualifications were required.

2.7 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. Chloride, nitrate, and sulfate were reported from 5 \times dilutions. The chloride and sulfate MDLs, and the nitrate MDL and reporting limit were not correctly adjusted for the dilutions; therefore, the reviewer hand-corrected the Form I. Results reported by the laboratory between the MDL and reporting limit were qualified as estimated, "J," and annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit.

2.8 FIELD QC SAMPLES

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

2.8.1 Field Blanks and Equipment Rinsates

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

2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



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

Project ID: Quarterly Outfall 002

Report Number: IPA0009

Sampled: 01/01/06

Received: 01/01/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0009-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A05098	0.30	0.50	ND	1	01/05/06	01/05/06	u
Biochemical Oxygen Demand	EPA 405.1	6A03056	0.59	2.0	33	1	01/03/06	01/08/06	
Chloride	EPA 300.0	6A01004	1.3	2.5	56	5	01/01/06	01/01/06	
Nitrate/Nitrite-N	EPA 300.0	6A01004	0.36	1.5	10	5	01/01/06	01/01/06	
Oil & Grease *	EPA 413.1	6A04043	0.94	5.0	ND	1	01/04/06	01/04/06	
Sulfate	EPA 300.0	6A01004	0.90	2.5	110	5	01/01/06	01/01/06	
Surfactants (MBAS)	SM5540-C	6A01006	0.22	0.50	0.55	5	01/01/06	01/01/06	J M R
Total Dissolved Solids *	SM2540C	6A03093	10	10	600	1	01/03/06	01/03/06	
Total Suspended Solids *	EPA 160.2	6A05089	10	10	58	1	01/05/06	01/05/06	
Sample ID: IPA0009-01 (Outfall 002 - Water)									
Reporting Units: ml/hr									
Total Settleable Solids *	EPA 160.5	6A01005	0.10	0.10	ND	1	01/01/06	01/01/06	
Sample ID: IPA0009-01 (Outfall 002 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	6A03065	0.16	4.0	48	4	01/03/06	01/03/06	
Sample ID: IPA0009-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Total Cyanide*	EPA 335.2	6A03132	2.2	5.0	4.0	1	01/03/06	01/03/06	J
*Perchlorate	EPA 314.0	6A03076	0.80	4.0	ND	1	01/03/06	01/03/06	
Sample ID: IPA0009-01 (Outfall 002 - Water)									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6A03095	1.0	1.0	890	1	01/03/06	01/03/06	

Handwritten notes:
 Rev Qual / code
 u
 \$
 \$
 \$
 J M R

* analysis not validated
 Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4DF13
 Task Order 1261.001D.01
 SDG No. IPA0009

No. of Analyses 1

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

Date: February 14, 2006
Reviewer's Signature <i>K. Shadowlight</i>

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



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 002

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPA0009

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001.01
Sample Delivery Group: IPA0009
Project Manager: P. Costa
Matrix: Water
Analysis: Dioxins/Furans
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: February 14, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 002	IPA0009-01	27130-001	Water	1613

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 1°C. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the samples were couriered directly to Del Mar Analytical-Irvine, custody seals were not required. Custody seals were present on the coolers from Del Mar to Alta; however no sample custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

2.1.3 Holding Times

The samples were extracted and analyzed within a year of collection. No qualifications were required.

2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%. No qualifications were required.

2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

2.3 CALIBRATION

2.3.1 Initial Calibration

The initial calibration was analyzed 12/30/2005 on instrument VG-7. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs $\leq 20\%$ for the 16 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

2.4 BLANKS

One method blank (0-7632-MB001) was extracted and analyzed with the sample in this SDG. No compounds were reported in the method blank associated with the site sample. A review of the method blank raw data and chromatograms indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7632-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," by the laboratory. These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. Any reported estimated maximum possible concentration (EMPC) was qualified as an estimated nondetect, "UJ." No further qualifications were required.

APPENDIX G

Section 6

Outfall 002, January 04, 2006

Del Mar Analytical Laboratory Report



Del Mar Analytical

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LABORATORY REPORT

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

Project: Quarterly Outfall 002

Sampled: 01/04/06
Received: 01/04/06
Issued: 02/02/06 10:17

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

LABORATORY ID
IPA0257-01

CLIENT ID
Outfall 002

MATRIX
Water

Reviewed By:

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



Del Mar Analytical

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 002 Report Number: IPA0257	Sampled: 01/04/06 Received: 01/04/06
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METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0257-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Copper	EPA 200.8	6A06087	0.49	2.0	2.6	1	01/06/06	01/09/06	
Lead	EPA 200.8	6A05101	0.13	1.0	0.44	1	01/05/06	01/06/06	J

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA0257

Sampled: 01/04/06

Received: 01/04/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A05101 Extracted: 01/05/06											
Blank Analyzed: 01/06/2006 (6A05101-BLK1)											
Lead	ND	1.0	0.13	ug/l							
LCS Analyzed: 01/06/2006 (6A05101-BS1)											
Lead	78.8	1.0	0.13	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 01/06/2006 (6A05101-MS1)											
Lead	77.2	1.0	0.13	ug/l	80.0	0.44	96	70-130			
Matrix Spike Dup Analyzed: 01/06/2006 (6A05101-MSD1)											
Lead	77.9	1.0	0.13	ug/l	80.0	0.44	97	70-130	1	20	
Batch: 6A06087 Extracted: 01/06/06											
Blank Analyzed: 01/09/2006 (6A06087-BLK1)											
Copper	ND	2.0	0.49	ug/l							
LCS Analyzed: 01/09/2006 (6A06087-BS1)											
Copper	78.7	2.0	0.49	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 01/09/2006 (6A06087-MS1)											
Copper	79.5	2.0	0.49	ug/l	80.0	2.6	96	70-130			
Matrix Spike Dup Analyzed: 01/09/2006 (6A06087-MSD1)											
Copper	77.3	2.0	0.49	ug/l	80.0	2.6	93	70-130	3	20	

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 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA0257

Sampled: 01/04/06

Received: 01/04/06

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA0257-01	Copper-200.8	Copper	ug/l	2.60	2.0	7.10
IPA0257-01	Lead-200.8	Lead	ug/l	0.44	1.0	2.60

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA0257

Sampled: 01/04/06

Received: 01/04/06

DATA QUALIFIERS AND DEFINITIONS

- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA0257

Sampled: 01/04/06
Received: 01/04/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 200.8	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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APPENDIX G

Section 7

Outfall 002, January 05, 2006

Del Mar Analytical Laboratory Report



Del Mar Analytical

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LABORATORY REPORT

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

Project: Quarterly Outfall 002

Sampled: 01/05/06
Received: 01/06/06
Issued: 02/02/06 10:22

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

LABORATORY ID
IPA0443-01

CLIENT ID
Outfall 002

MATRIX
Water

Reviewed By:

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



Del Mar Analytical

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

Project ID: Quarterly Outfall 002

Report Number: IPA0443

Sampled: 01/05/06

Received: 01/06/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0443-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Copper	EPA 200.8	6A09086	0.49	2.0	2.3	1	01/09/06	01/09/06	
Lead	EPA 200.8	6A09086	0.13	1.0	0.24	1	01/09/06	01/09/06	J

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 002

Report Number: IPA0443

Sampled: 01/05/06
 Received: 01/06/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A09086 Extracted: 01/09/06											
Blank Analyzed: 01/09/2006 (6A09086-BLK1)											
Copper	ND	2.0	0.49	ug/l							
Lead	ND	1.0	0.13	ug/l							
LCS Analyzed: 01/09/2006 (6A09086-BS1)											
Copper	81.6	2.0	0.49	ug/l	80.0		102	85-115			
Lead	82.9	1.0	0.13	ug/l	80.0		104	85-115			
Matrix Spike Analyzed: 01/09/2006 (6A09086-MS1) Source: IPA0492-04											
Copper	75.9	2.0	0.49	ug/l	80.0	0.42	94	70-130			
Lead	79.6	1.0	0.13	ug/l	80.0	0.072	99	70-130			
Matrix Spike Analyzed: 01/09/2006 (6A09086-MS2) Source: IPA0451-01											
Copper	101	2.0	0.49	ug/l	80.0	21	100	70-130			
Lead	83.5	1.0	0.13	ug/l	80.0	0.40	104	70-130			
Matrix Spike Dup Analyzed: 01/09/2006 (6A09086-MSD1) Source: IPA0492-04											
Copper	76.7	2.0	0.49	ug/l	80.0	0.42	95	70-130	1	20	
Lead	81.6	1.0	0.13	ug/l	80.0	0.072	102	70-130	2	20	

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Quarterly Outfall 002

Report Number: IPA0443

Sampled: 01/05/06

Received: 01/06/06

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA0443-01	Copper-200.8	Copper	ug/l	2.30	2.0	7.10
IPA0443-01	Lead-200.8	Lead	ug/l	0.24	1.0	2.60

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

Project ID: Quarterly Outfall 002

Report Number: IPA0443

Sampled: 01/05/06

Received: 01/06/06

DATA QUALIFIERS AND DEFINITIONS

- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

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Michele Chamberlin
Project Manager

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IPA0443 <Page 5 of 6>

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

Project ID: Quarterly Outfall 002

Report Number: IPA0443

Sampled: 01/05/06
 Received: 01/06/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 200.8	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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APPENDIX G

Section 8

Outfall 002, January 06, 2006

Del Mar Analytical Laboratory Report



Del Mar Analytical

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LABORATORY REPORT

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

Project: Quarterly Outfall 002

Sampled: 01/06/06
Received: 01/06/06
Issued: 02/02/06 10:23

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 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

LABORATORY ID	CLIENT ID	MATRIX
IPA0444-01	Outfall 002	Water

Reviewed By:

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



Del Mar Analytical

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

Project ID: Quarterly Outfall 002

Report Number: IPA0444

Sampled: 01/06/06

Received: 01/06/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0444-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Copper	EPA 200.8	6A09086	0.49	2.0	2.2	1	01/09/06	01/09/06	
Lead	EPA 200.8	6A09086	0.13	1.0	0.19	1	01/09/06	01/09/06	J

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 002 Report Number: IPA0444	Sampled: 01/06/06 Received: 01/06/06
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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6A09086 Extracted: 01/09/06											
Blank Analyzed: 01/09/2006 (6A09086-BLK1)											
Copper	ND	2.0	0.49	ug/l							
Lead	ND	1.0	0.13	ug/l							
LCS Analyzed: 01/09/2006 (6A09086-BS1)											
Copper	81.6	2.0	0.49	ug/l	80.0		102	85-115			
Lead	82.9	1.0	0.13	ug/l	80.0		104	85-115			
Matrix Spike Analyzed: 01/09/2006 (6A09086-MS1) Source: IPA0492-04											
Copper	75.9	2.0	0.49	ug/l	80.0	0.42	94	70-130			
Lead	79.6	1.0	0.13	ug/l	80.0	0.072	99	70-130			
Matrix Spike Analyzed: 01/09/2006 (6A09086-MS2) Source: IPA0451-01											
Copper	101	2.0	0.49	ug/l	80.0	21	100	70-130			
Lead	83.5	1.0	0.13	ug/l	80.0	0.40	104	70-130			
Matrix Spike Dup Analyzed: 01/09/2006 (6A09086-MSD1) Source: IPA0492-04											
Copper	76.7	2.0	0.49	ug/l	80.0	0.42	95	70-130	1	20	
Lead	81.6	1.0	0.13	ug/l	80.0	0.072	102	70-130	2	20	

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

Project ID: Quarterly Outfall 002

Report Number: IPA0444

Sampled: 01/06/06

Received: 01/06/06

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA0444-01	Copper-200.8	Copper	ug/l	2.20	2.0	7.10
IPA0444-01	Lead-200.8	Lead	ug/l	0.19	1.0	2.60

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA0444

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

DATA QUALIFIERS AND DEFINITIONS

- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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IPA0444 <Page 5 of 6>

NPDES - 173



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

Project ID: Quarterly Outfall 002

Report Number: IPA0444

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

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 200.8	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 002

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPA1193

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001.01
Sample Delivery Group: IPA1193
Project Manager: P. Costa
Matrix: Water
Analysis: Dioxins/Furans
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: February 25, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 002	IPA1193-01	27208-001	Water	1613

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 1°C. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the samples were couriered directly to Del Mar Analytical-Irvine, custody seals were not required. Custody seals were present on the coolers from Del Mar to Alta; however no sample custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

2.1.3 Holding Times

The samples were extracted and analyzed within one year of collection. No qualifications were required.

2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%. No qualifications were required.

2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

2.3 CALIBRATION

2.3.1 Initial Calibration

The initial calibration was analyzed 01/12/2006 on instrument VG-7. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs $\leq 20\%$ for the 16 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

2.4 BLANKS

One method blank (0-7686-MB001) was extracted and analyzed with the sample in this SDG. Target compounds 1,2,3,4,6,7,8-HpCDD and OCDD were reported at concentrations below the laboratory lower calibration level in the method blank. Target compounds 1,2,3,4,6,7,8-HpCDD and OCDD were also reported in the site sample; therefore, the detects for HpCDD and OCDD were qualified as estimated nondetects, "UJ," at the levels of contamination in the site sample. As a portion of total HpCDD was qualified for method blank contamination the result for total HpCDD was qualified as estimated, "J," in the site sample. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No further qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7686-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review

of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. No qualifications were required.

Sample ID: IPA1193-01 <i>Outfall 002</i>		EPA Method 1613			
Client Data		Sample Data		Laboratory Data	
Name: Del Mar Analytical, Irvine	Matrix: Aqueous	DL ^a	EMPC ^b	Labelled Standard	%R LCL-UCL ^d Qualifiers
Project: IPA1193	Sample Size: 1.01 L	Conc. (ug/L)			
Date Collected: 14-Jan-06					
Time Collected: 1115					
Date Analyzed DB-5: 24-Jan-06					
Date Analyzed DB-225: NA					
Date Received: 17-Jan-06					
Date Extracted: 22-Jan-06					
Date Analyzed DB-225: NA					
IS	13C-2,3,7,8-TCDD	65.4	25 - 164		
	13C-1,2,3,7,8-PeCDD	65.4	25 - 181		
	13C-1,2,3,4,7,8-HxCDD	59.2	32 - 141		
	13C-1,2,3,6,7,8-HxCDD	61.8	28 - 130		
	13C-1,2,3,4,6,7,8-HpCDD	60.5	23 - 140		
	13C-OCDD	37.6	17 - 157		
	13C-2,3,7,8-TCDF	65.0	24 - 169		
	13C-1,2,3,7,8-PeCDF	68.1	24 - 185		
	13C-2,3,4,7,8-PeCDF	69.4	21 - 178		
	13C-1,2,3,4,7,8-HxCDF	61.2	26 - 152		
	13C-1,2,3,6,7,8-HxCDF	59.1	26 - 123		
	13C-2,3,4,6,7,8-HxCDF	59.0	28 - 136		
	13C-1,2,3,7,8,9-HxCDF	62.3	29 - 147		
	13C-1,2,3,4,6,7,8-HpCDF	55.9	28 - 143		
	13C-1,2,3,4,7,8,9-HpCDF	61.1	26 - 138		
	13C-OCDF	42.9	17 - 157		
CRS	37Cl-2,3,7,8-TCDD	89.8	35 - 197		
Totals					
Total TCDD	ND	0.00000106			
Total PeCDD	ND	0.00000183			
Total HxCDD	ND	0.00000214			
Total HpCDD	0.0000135				
Total TCDF	ND	0.00000105			
Total PeCDF	ND	0.00000170			
Total HxCDF	ND	0.00000106			
Total HpCDF	ND	0.00000171			

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

Approved By: *Martha M. Maier* 26-Jan-2006 07:42
 Analyst: DMS

Project 27208
Level III

APPENDIX G

Section 9

Outfall 002, January 14, 2006

Del Mar Analytical Laboratory Report



Del Mar Analytical

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LABORATORY REPORT

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

Project: Routine Outfall 002

Sampled: 01/14/06
Received: 01/15/06
Issued: 02/04/06 17:18

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
IPA1193-01	Outfall 002	Water
IPA1193-02	Trip Blank	Water

Reviewed By:

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



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

Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06
 Received: 01/15/06

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1193-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6A24020	0.28	2.0	ND	1	01/24/06	01/24/06	
Carbon tetrachloride	EPA 624	6A24020	0.28	5.0	ND	1	01/24/06	01/24/06	
Chloroform	EPA 624	6A24020	0.33	2.0	ND	1	01/24/06	01/24/06	
1,1-Dichloroethane	EPA 624	6A24020	0.27	2.0	ND	1	01/24/06	01/24/06	
1,2-Dichloroethane	EPA 624	6A24020	0.28	2.0	ND	1	01/24/06	01/24/06	
1,1-Dichloroethene	EPA 624	6A24020	0.32	3.0	ND	1	01/24/06	01/24/06	
Ethylbenzene	EPA 624	6A24020	0.25	2.0	ND	1	01/24/06	01/24/06	
Tetrachloroethene	EPA 624	6A24020	0.32	2.0	ND	1	01/24/06	01/24/06	
Toluene	EPA 624	6A24020	0.36	2.0	ND	1	01/24/06	01/24/06	
1,1,1-Trichloroethane	EPA 624	6A24020	0.30	2.0	ND	1	01/24/06	01/24/06	
1,1,2-Trichloroethane	EPA 624	6A24020	0.30	2.0	ND	1	01/24/06	01/24/06	
Trichloroethene	EPA 624	6A24020	0.26	5.0	ND	1	01/24/06	01/24/06	
Trichlorofluoromethane	EPA 624	6A24020	0.34	5.0	ND	1	01/24/06	01/24/06	
Vinyl chloride	EPA 624	6A24020	0.26	5.0	ND	1	01/24/06	01/24/06	
Xylenes, Total	EPA 624	6A24020	0.52	4.0	ND	1	01/24/06	01/24/06	
Surrogate: Dibromofluoromethane (80-120%)					118 %				
Surrogate: Toluene-d8 (80-120%)					106 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					94 %				
Sample ID: IPA1193-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6A24020	0.28	2.0	ND	1	01/24/06	01/24/06	
Carbon tetrachloride	EPA 624	6A24020	0.28	5.0	ND	1	01/24/06	01/24/06	
Chloroform	EPA 624	6A24020	0.33	2.0	ND	1	01/24/06	01/24/06	
1,1-Dichloroethane	EPA 624	6A24020	0.27	2.0	ND	1	01/24/06	01/24/06	
1,2-Dichloroethane	EPA 624	6A24020	0.28	2.0	ND	1	01/24/06	01/24/06	
1,1-Dichloroethene	EPA 624	6A24020	0.32	3.0	ND	1	01/24/06	01/24/06	
Ethylbenzene	EPA 624	6A24020	0.25	2.0	ND	1	01/24/06	01/24/06	
Tetrachloroethene	EPA 624	6A24020	0.32	2.0	ND	1	01/24/06	01/24/06	
Toluene	EPA 624	6A24020	0.36	2.0	ND	1	01/24/06	01/24/06	
1,1,1-Trichloroethane	EPA 624	6A24020	0.30	2.0	ND	1	01/24/06	01/24/06	
1,1,2-Trichloroethane	EPA 624	6A24020	0.30	2.0	ND	1	01/24/06	01/24/06	
Trichloroethene	EPA 624	6A24020	0.26	5.0	ND	1	01/24/06	01/24/06	
Trichlorofluoromethane	EPA 624	6A24020	0.34	5.0	ND	1	01/24/06	01/24/06	
Vinyl chloride	EPA 624	6A24020	0.26	5.0	ND	1	01/24/06	01/24/06	
Xylenes, Total	EPA 624	6A24020	0.52	4.0	ND	1	01/24/06	01/24/06	
Surrogate: Dibromofluoromethane (80-120%)					104 %				
Surrogate: Toluene-d8 (80-120%)					103 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					95 %				

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

Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06

Received: 01/15/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1193-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6A17060	1.1	4.8	ND	0.962	01/17/06	01/24/06	
2,4-Dinitrotoluene	EPA 625	6A17060	0.22	8.7	ND	0.962	01/17/06	01/24/06	
N-Nitrosodimethylamine	EPA 625	6A17060	0.21	7.7	ND	0.962	01/17/06	01/24/06	
Pentachlorophenol	EPA 625	6A17060	0.75	7.7	ND	0.962	01/17/06	01/24/06	
2,4,6-Trichlorophenol	EPA 625	6A17060	0.096	5.8	ND	0.962	01/17/06	01/24/06	
<i>Surrogate: 2-Fluorophenol (30-120%)</i>					60 %				
<i>Surrogate: Phenol-d6 (35-120%)</i>					69 %				
<i>Surrogate: 2,4,6-Tribromophenol (45-120%)</i>					76 %				
<i>Surrogate: Nitrobenzene-d5 (45-120%)</i>					73 %				
<i>Surrogate: 2-Fluorobiphenyl (45-120%)</i>					77 %				
<i>Surrogate: Terphenyl-d14 (45-120%)</i>					72 %				

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Report Number: IPA1193

Sampled: 01/14/06

Received: 01/15/06

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1193-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
alpha-BHC	EPA 608	6A17047	0.00095	0.0095	ND	0.952	01/17/06	01/18/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					80 %				
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					78 %				

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06

Received: 01/15/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1193-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Copper	EPA 200.8	6A16070	0.49	2.0	2.1	1	01/16/06	01/17/06	B
Lead	EPA 200.8	6A16070	0.13	1.0	0.16	1	01/16/06	01/17/06	J
Mercury	EPA 245.1	6A16076	0.050	0.20	ND	1	01/16/06	01/16/06	

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 002
 Report Number: IPA1193

Sampled: 01/14/06
 Received: 01/15/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1193-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A20097	0.30	0.50	0.56	1	01/20/06	01/20/06	
Biochemical Oxygen Demand	EPA 405.1	6A16062	0.59	2.0	2.4	1	01/16/06	01/21/06	
Chloride	EPA 300.0	6A15017	2.6	5.0	42	10	01/15/06	01/15/06	
Nitrate/Nitrite-N	EPA 300.0	6A15017	0.072	0.10	ND	1	01/15/06	01/15/06	
Oil & Grease	EPA 413.1	6A17048	0.90	4.8	ND	1	01/17/06	01/17/06	
Sulfate	EPA 300.0	6A15017	1.8	5.0	180	10	01/15/06	01/15/06	
Surfactants (MBAS)	SM5540-C	6A15019	0.044	0.10	0.072	1	01/15/06	01/15/06	J
Total Dissolved Solids	SM2540C	6A19093	10	10	590	1	01/19/06	01/19/06	
Total Suspended Solids	EPA 160.2	6A17118	10	10	ND	1	01/17/06	01/17/06	
Sample ID: IPA1193-01 (Outfall 002 - Water)									
Reporting Units: ml/hr									
Total Settleable Solids	EPA 160.5	6A16063	0.10	0.10	ND	1	01/16/06	01/16/06	
Sample ID: IPA1193-01 (Outfall 002 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	6A16061	0.040	1.0	0.93	1	01/16/06	01/16/06	J
Sample ID: IPA1193-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6A17119	2.2	5.0	5.3	1	01/17/06	01/17/06	
Perchlorate	EPA 314.0	6A17063	0.80	4.0	ND	1	01/17/06	01/17/06	
Sample ID: IPA1193-01RE1 (Outfall 002 - Water)									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6A19104	2.2	5.0	ND	1	01/17/06	01/19/06	
Sample ID: IPA1193-01 (Outfall 002 - Water)									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6A20092	1.0	1.0	770	1	01/20/06	01/20/06	

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06
 Received: 01/15/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 002 (IPA1193-01) - Water	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	01/14/2006 11:15	01/15/2006 16:00	01/16/2006 08:00	01/16/2006 09:00
EPA 180.1	2	01/14/2006 11:15	01/15/2006 16:00	01/16/2006 07:30	01/16/2006 08:30
EPA 300.0	2	01/14/2006 11:15	01/15/2006 16:00	01/15/2006 17:00	01/15/2006 19:16
EPA 405.1	2	01/14/2006 11:15	01/15/2006 16:00	01/16/2006 09:45	01/21/2006 14:45
SM5540-C	2	01/14/2006 11:15	01/15/2006 16:00	01/15/2006 17:46	01/15/2006 18:10

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Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06

Received: 01/15/06

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: 6A24020 Extracted: 01/24/06											
Blank Analyzed: 01/24/2006 (6A24020-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	0.32	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND	5.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Vinyl chloride	ND	5.0	0.26	ug/l							
Xylenes, Total	ND	4.0	0.52	ug/l							
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.1			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	24.0			ug/l	25.0		96	80-120			

LCS Analyzed: 01/24/2006 (6A24020-BS1)

Benzene	22.7	2.0	0.28	ug/l	25.0		91	70-120			
Carbon tetrachloride	25.0	5.0	0.28	ug/l	25.0		100	70-140			
Chloroform	22.0	2.0	0.33	ug/l	25.0		88	75-130			
1,1-Dichloroethane	20.6	2.0	0.27	ug/l	25.0		82	70-135			
1,2-Dichloroethane	22.9	2.0	0.28	ug/l	25.0		92	60-150			
1,1-Dichloroethene	21.5	3.0	0.32	ug/l	25.0		86	75-135			
Ethylbenzene	26.0	2.0	0.25	ug/l	25.0		104	80-120			
Tetrachloroethene	25.0	2.0	0.32	ug/l	25.0		100	75-125			
Toluene	24.3	2.0	0.36	ug/l	25.0		97	75-120			
1,1,1-Trichloroethane	22.8	2.0	0.30	ug/l	25.0		91	75-140			
1,1,2-Trichloroethane	22.7	2.0	0.30	ug/l	25.0		91	70-125			
Trichloroethene	24.8	5.0	0.26	ug/l	25.0		99	80-120			
Trichlorofluoromethane	24.9	5.0	0.34	ug/l	25.0		100	65-145			
Vinyl chloride	21.5	5.0	0.26	ug/l	25.0		86	50-130			
Surrogate: Dibromofluoromethane	25.6			ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	25.5			ug/l	25.0		102	80-120			

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06

Received: 01/15/06

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: 6A24020 Extracted: 01/24/06											
LCS Analyzed: 01/24/2006 (6A24020-BS1)											
Surrogate: 4-Bromofluorobenzene	26.9			ug/l	25.0		108	80-120			
Matrix Spike Analyzed: 01/24/2006 (6A24020-MS1) Source: IPA1288-01											
Benzene	22.2	2.0	0.28	ug/l	25.0	ND	89	70-120			
Carbon tetrachloride	23.7	5.0	0.28	ug/l	25.0	ND	95	70-145			
Chloroform	25.7	2.0	0.33	ug/l	25.0	2.7	92	70-135			
1,1-Dichloroethane	21.7	2.0	0.27	ug/l	25.0	ND	87	65-135			
1,2-Dichloroethane	23.4	2.0	0.28	ug/l	25.0	ND	94	60-150			
1,1-Dichloroethene	21.7	3.0	0.32	ug/l	25.0	ND	87	65-140			
Ethylbenzene	23.9	2.0	0.25	ug/l	25.0	ND	96	70-130			
Tetrachloroethene	23.7	2.0	0.32	ug/l	25.0	1.4	89	70-130			
Toluene	23.5	2.0	0.36	ug/l	25.0	ND	94	70-120			
1,1,1-Trichloroethane	23.5	2.0	0.30	ug/l	25.0	ND	94	75-140			
1,1,2-Trichloroethane	23.1	2.0	0.30	ug/l	25.0	ND	92	60-135			
Trichloroethene	23.0	5.0	0.26	ug/l	25.0	ND	92	70-125			
Trichlorofluoromethane	25.6	5.0	0.34	ug/l	25.0	ND	102	55-145			
Vinyl chloride	23.5	5.0	0.26	ug/l	25.0	ND	94	40-135			
Surrogate: Dibromofluoromethane	28.3			ug/l	25.0		113	80-120			
Surrogate: Toluene-d8	26.1			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			
Matrix Spike Dup Analyzed: 01/24/2006 (6A24020-MSD1) Source: IPA1288-01											
Benzene	23.1	2.0	0.28	ug/l	25.0	ND	92	70-120	4	20	
Carbon tetrachloride	24.7	5.0	0.28	ug/l	25.0	ND	99	70-145	4	25	
Chloroform	27.1	2.0	0.33	ug/l	25.0	2.7	98	70-135	5	20	
1,1-Dichloroethane	22.8	2.0	0.27	ug/l	25.0	ND	91	65-135	5	20	
1,2-Dichloroethane	24.9	2.0	0.28	ug/l	25.0	ND	100	60-150	6	20	
1,1-Dichloroethene	22.1	3.0	0.32	ug/l	25.0	ND	88	65-140	2	20	
Ethylbenzene	25.2	2.0	0.25	ug/l	25.0	ND	101	70-130	5	20	
Tetrachloroethene	25.1	2.0	0.32	ug/l	25.0	1.4	95	70-130	6	20	
Toluene	24.3	2.0	0.36	ug/l	25.0	ND	97	70-120	3	20	
1,1,1-Trichloroethane	24.6	2.0	0.30	ug/l	25.0	ND	98	75-140	5	20	
1,1,2-Trichloroethane	24.7	2.0	0.30	ug/l	25.0	ND	99	60-135	7	25	
Trichloroethene	24.2	5.0	0.26	ug/l	25.0	ND	97	70-125	5	20	
Trichlorofluoromethane	26.0	5.0	0.34	ug/l	25.0	ND	104	55-145	2	25	
Vinyl chloride	23.5	5.0	0.26	ug/l	25.0	ND	94	40-135	0	30	

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Routine Outfall 002 Report Number: IPA1193	Sampled: 01/14/06 Received: 01/15/06
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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting		Spike	Source		%REC		RPD	Limit	Data
		Limit	MDL		Units	Level	Result	%REC			
Batch: 6A24020 Extracted: 01/24/06											
Matrix Spike Dup Analyzed: 01/24/2006 (6A24020-MSD1)											
Source: IPA1288-01											
Surrogate: Dibromofluoromethane	28.4			ug/l	25.0		114	80-120			
Surrogate: Toluene-d8	25.8			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	26.8			ug/l	25.0		107	80-120			

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

Project ID: Routine Outfall 002
 Report Number: IPA1193

Sampled: 01/14/06
 Received: 01/15/06

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: 6A17060 Extracted: 01/17/06											
Blank Analyzed: 01/24/2006 (6A17060-BLK1)											
Bis(2-ethylhexyl)phthalate	ND	5.0	1.1	ug/l							
2,4-Dinitrotoluene	ND	9.0	0.23	ug/l							
N-Nitrosodimethylamine	ND	8.0	0.22	ug/l							
Pentachlorophenol	ND	8.0	0.78	ug/l							
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l							
Surrogate: 2-Fluorophenol	11.8			ug/l	20.0		59	30-120			
Surrogate: Phenol-d6	12.5			ug/l	20.0		62	35-120			
Surrogate: 2,4,6-Tribromophenol	13.1			ug/l	20.0		66	45-120			
Surrogate: Nitrobenzene-d5	6.48			ug/l	10.0		65	45-120			
Surrogate: 2-Fluorobiphenyl	6.98			ug/l	10.0		70	45-120			
Surrogate: Terphenyl-d14	6.90			ug/l	10.0		69	45-120			
LCS Analyzed: 01/24/2006 (6A17060-BS1)											
Bis(2-ethylhexyl)phthalate	8.92	5.0	1.1	ug/l	10.0		89	60-130			
2,4-Dinitrotoluene	9.14	9.0	0.23	ug/l	10.0		91	60-120			
N-Nitrosodimethylamine	6.64	8.0	0.22	ug/l	10.0		66	40-120			J
Pentachlorophenol	7.58	8.0	0.78	ug/l	10.0		76	50-120			J
2,4,6-Trichlorophenol	6.50	6.0	0.10	ug/l	10.0		65	60-120			
Surrogate: 2-Fluorophenol	11.3			ug/l	20.0		56	30-120			
Surrogate: Phenol-d6	13.2			ug/l	20.0		66	35-120			
Surrogate: 2,4,6-Tribromophenol	14.6			ug/l	20.0		73	45-120			
Surrogate: Nitrobenzene-d5	7.24			ug/l	10.0		72	45-120			
Surrogate: 2-Fluorobiphenyl	6.90			ug/l	10.0		69	45-120			
Surrogate: Terphenyl-d14	7.40			ug/l	10.0		74	45-120			
LCS Dup Analyzed: 01/24/2006 (6A17060-BSD1)											
Bis(2-ethylhexyl)phthalate	9.32	5.0	1.1	ug/l	10.0		93	60-130	4	20	
2,4-Dinitrotoluene	9.58	9.0	0.23	ug/l	10.0		96	60-120	5	20	
N-Nitrosodimethylamine	7.32	8.0	0.22	ug/l	10.0		73	40-120	10	20	J
Pentachlorophenol	8.50	8.0	0.78	ug/l	10.0		85	50-120	11	25	
2,4,6-Trichlorophenol	7.48	6.0	0.10	ug/l	10.0		75	60-120	14	20	
Surrogate: 2-Fluorophenol	13.1			ug/l	20.0		66	30-120			
Surrogate: Phenol-d6	15.0			ug/l	20.0		75	35-120			
Surrogate: 2,4,6-Tribromophenol	16.2			ug/l	20.0		81	45-120			
Surrogate: Nitrobenzene-d5	7.72			ug/l	10.0		77	45-120			
Surrogate: 2-Fluorobiphenyl	7.32			ug/l	10.0		73	45-120			

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Routine Outfall 002 Report Number: IPA1193	Sampled: 01/14/06 Received: 01/15/06
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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A17060 Extracted: 01/17/06											
LCS Dup Analyzed: 01/24/2006 (6A17060-BSD1)											
Surrogate: Terphenyl-d14	7.54			ug/l	10.0		75	45-120			

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

Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06

Received: 01/15/06

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A17047 Extracted: 01/17/06											
Blank Analyzed: 01/17/2006 (6A17047-BLK1)											
alpha-BHC	ND	0.010	0.0010	ug/l							
Surrogate: Decachlorobiphenyl	0.478			ug/l	0.500		96	45-120			
Surrogate: Tetrachloro-m-xylene	0.374			ug/l	0.500		75	35-115			
LCS Analyzed: 01/18/2006 (6A17047-BS1)											
alpha-BHC	0.293	0.010	0.0010	ug/l	0.500		59	45-120			M-NR1
Surrogate: Decachlorobiphenyl	0.483			ug/l	0.500		97	45-120			
Surrogate: Tetrachloro-m-xylene	0.277			ug/l	0.500		55	35-115			
LCS Dup Analyzed: 01/18/2006 (6A17047-BSD1)											
alpha-BHC	0.457	0.010	0.0010	ug/l	0.500		91	45-120	44	30	R-7
Surrogate: Decachlorobiphenyl	0.455			ug/l	0.500		91	45-120			
Surrogate: Tetrachloro-m-xylene	0.393			ug/l	0.500		79	35-115			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A16070 Extracted: 01/16/06											
Blank Analyzed: 01/17/2006 (6A16070-BLK1)											
Copper	0.600	2.0	0.49	ug/l							J
Lead	ND	1.0	0.13	ug/l							
LCS Analyzed: 01/17/2006 (6A16070-BS1)											
Copper	84.6	2.0	0.49	ug/l	80.0		106	85-115			
Lead	83.3	1.0	0.13	ug/l	80.0		104	85-115			
Matrix Spike Analyzed: 01/17/2006 (6A16070-MS1) Source: IPA1193-01											
Copper	81.0	2.0	0.49	ug/l	80.0	2.1	99	70-130			
Lead	78.7	1.0	0.13	ug/l	80.0	0.16	98	70-130			
Matrix Spike Analyzed: 01/17/2006 (6A16070-MS2) Source: IPA0941-01											
Copper	84.7	2.0	0.49	ug/l	80.0	8.5	95	70-130			
Lead	80.8	1.0	0.13	ug/l	80.0	1.0	100	70-130			
Matrix Spike Dup Analyzed: 01/17/2006 (6A16070-MSD1) Source: IPA1193-01											
Copper	79.5	2.0	0.49	ug/l	80.0	2.1	97	70-130	2	20	
Lead	79.7	1.0	0.13	ug/l	80.0	0.16	99	70-130	1	20	
Batch: 6A16076 Extracted: 01/16/06											
Blank Analyzed: 01/16/2006 (6A16076-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 01/16/2006 (6A16076-BS1)											
Mercury	8.02	0.20	0.050	ug/l	8.00		100	85-115			

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A16076 Extracted: 01/16/06											
Matrix Spike Analyzed: 01/16/2006 (6A16076-MS1)						Source: IPA1035-01					
Mercury	6.60	0.20	0.050	ug/l	8.00	ND	82	70-130			
Matrix Spike Dup Analyzed: 01/16/2006 (6A16076-MSD1)						Source: IPA1035-01					
Mercury	6.63	0.20	0.050	ug/l	8.00	ND	83	70-130	1	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A15017 Extracted: 01/15/06											
Blank Analyzed: 01/15/2006 (6A15017-BLK1)											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.10	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
LCS Analyzed: 01/15/2006 (6A15017-BS1)											
Chloride	4.95	0.50	0.15	mg/l	5.00		99	90-110			M-3
Sulfate	9.80	0.50	0.45	mg/l	10.0		98	90-110			M-3
Batch: 6A15019 Extracted: 01/15/06											
Blank Analyzed: 01/15/2006 (6A15019-BLK1)											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 01/15/2006 (6A15019-BS1)											
Surfactants (MBAS)	0.272	0.10	0.044	mg/l	0.250		109	90-110			
Matrix Spike Analyzed: 01/15/2006 (6A15019-MS1)											
Surfactants (MBAS)	0.310	0.10	0.044	mg/l	0.250	0.072	95	50-125			
Matrix Spike Dup Analyzed: 01/15/2006 (6A15019-MSD1)											
Surfactants (MBAS)	0.317	0.10	0.044	mg/l	0.250	0.072	98	50-125	2	20	
Batch: 6A16061 Extracted: 01/16/06											
Blank Analyzed: 01/16/2006 (6A16061-BLK1)											
Turbidity	ND	1.0	0.040	NTU							

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Routine Outfall 002 Report Number: IPA1193	Sampled: 01/14/06 Received: 01/15/06
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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A16061 Extracted: 01/16/06											
Duplicate Analyzed: 01/16/2006 (6A16061-DUP1)						Source: IPA1193-01					
Turbidity	0.950	1.0	0.040	NTU		0.93			2	20	J
Batch: 6A16062 Extracted: 01/16/06											
Blank Analyzed: 01/21/2006 (6A16062-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 01/21/2006 (6A16062-BS1)											
Biochemical Oxygen Demand	196	100	30	mg/l	198		99	85-115			
LCS Dup Analyzed: 01/21/2006 (6A16062-BSD1)											
Biochemical Oxygen Demand	197	100	30	mg/l	198		99	85-115	1	20	
Batch: 6A17048 Extracted: 01/17/06											
Blank Analyzed: 01/17/2006 (6A17048-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 01/17/2006 (6A17048-BS1)											
Oil & Grease	16.0	5.0	0.94	mg/l	20.0		80	65-120			M-NR1
LCS Dup Analyzed: 01/17/2006 (6A17048-BSD1)											
Oil & Grease	17.0	5.0	0.94	mg/l	20.0		85	65-120	6	20	
Batch: 6A17063 Extracted: 01/17/06											
Blank Analyzed: 01/17/2006 (6A17063-BLK1)											
Perchlorate	ND	4.0	0.80	ug/l							

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

Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06
 Received: 01/15/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A17063 Extracted: 01/17/06											
LCS Analyzed: 01/17/2006 (6A17063-BS1)											
Perchlorate	50.5	4.0	0.80	ug/l	50.0		101	85-115			
Matrix Spike Analyzed: 01/17/2006 (6A17063-MS1)											
						Source: IPA1204-01					
Perchlorate	69.0	4.0	0.80	ug/l	50.0	8.7	121	80-120			MI
Matrix Spike Dup Analyzed: 01/17/2006 (6A17063-MSD1)											
						Source: IPA1204-01					
Perchlorate	64.1	4.0	0.80	ug/l	50.0	8.7	111	80-120	7	20	
Batch: 6A17118 Extracted: 01/17/06											
Blank Analyzed: 01/17/2006 (6A17118-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 01/17/2006 (6A17118-BS1)											
Total Suspended Solids	950	10	10	mg/l	1000		95	85-115			
Duplicate Analyzed: 01/17/2006 (6A17118-DUP1)											
						Source: IPA1313-01					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
Batch: 6A17119 Extracted: 01/17/06											
Blank Analyzed: 01/17/2006 (6A17119-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 01/17/2006 (6A17119-BS1)											
Total Cyanide	192	5.0	2.2	ug/l	200		96	90-110			

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 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: IPA1193

Sampled: 01/14/06

Received: 01/15/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A17119 Extracted: 01/17/06											
Matrix Spike Analyzed: 01/17/2006 (6A17119-MS1)						Source: IPA1193-01					
Total Cyanide	193	5.0	2.2	ug/l	200	5.3	94	70-115			
Matrix Spike Dup Analyzed: 01/17/2006 (6A17119-MSD1)						Source: IPA1193-01					
Total Cyanide	200	5.0	2.2	ug/l	200	5.3	97	70-115	4	15	
Batch: 6A19093 Extracted: 01/19/06											
Blank Analyzed: 01/19/2006 (6A19093-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 01/19/2006 (6A19093-BS1)											
Total Dissolved Solids	1050	10	10	mg/l	1000		105	90-110			
Duplicate Analyzed: 01/19/2006 (6A19093-DUP1)						Source: IPA1473-01					
Total Dissolved Solids	660	10	10	mg/l		650			2	10	
Batch: 6A19104 Extracted: 01/19/06											
Blank Analyzed: 01/19/2006 (6A19104-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 01/19/2006 (6A19104-BS1)											
Total Cyanide	197	5.0	2.2	ug/l	200		98	90-110			
Matrix Spike Analyzed: 01/19/2006 (6A19104-MS1)						Source: IPA0902-02					
Total Cyanide	182	5.0	2.2	ug/l	200	2.5	90	70-115			

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 002
 Report Number: IPA1193

Sampled: 01/14/06
 Received: 01/15/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A19104 Extracted: 01/19/06											
Matrix Spike Dup Analyzed: 01/19/2006 (6A19104-MSD1)											
Source: IPA0902-02											
Total Cyanide	182	5.0	2.2	ug/l	200	2.5	90	70-115	0	15	
Batch: 6A20092 Extracted: 01/20/06											
Duplicate Analyzed: 01/20/2006 (6A20092-DUP1)											
Source: IPA1193-01											
Specific Conductance	771	1.0	1.0	umhos/cm		770			0	5	
Batch: 6A20097 Extracted: 01/20/06											
Blank Analyzed: 01/20/2006 (6A20097-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 01/20/2006 (6A20097-BS1)											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0		115	80-115			
Matrix Spike Analyzed: 01/20/2006 (6A20097-MS1)											
Source: IPA1193-01											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	0.56	109	70-120			
Matrix Spike Dup Analyzed: 01/20/2006 (6A20097-MSD1)											
Source: IPA1193-01											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	0.56	109	70-120	0	15	

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

Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06

Received: 01/15/06

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA1193-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.096	4.8	10.00
IPA1193-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0095	0.0100
IPA1193-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPA1193-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00
IPA1193-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.8	6.50
IPA1193-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.7	9.10
IPA1193-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.35	4.8	4.00
IPA1193-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.7	8.10
IPA1193-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.7	8.20
IPA1193-01	BOD	Biochemical Oxygen Demand	mg/l	2.40	2.0	20
IPA1193-01	Chloride - 300.0	Chloride	mg/l	42	5.0	150
IPA1193-01	Copper-200.8	Copper	ug/l	2.10	2.0	7.10
IPA1193-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	5.30	5.0	4.30
IPA1193-01	Lead-200.8	Lead	ug/l	0.16	1.0	2.60
IPA1193-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.072	0.10	0.50
IPA1193-01	Mercury - 245.1	Mercury	ug/l	0	0.20	0.20
IPA1193-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.012	0.10	8.00
IPA1193-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPA1193-01	Sulfate-300.0	Sulfate	mg/l	180	5.0	300
IPA1193-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	590	10	950
IPA1193-01REI	Cyanide-335.2 5ppb	Total Cyanide	ug/l	2.10	5.0	4.30
IPA1193-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPA1193-02	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00

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

Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06

Received: 01/15/06

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- 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.
- R-7** LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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 Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06

Received: 01/15/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 200.8	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.dmalabs.com.

Subcontracted Laboratories

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

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta

Samples: IPA1193-01

Analysis Performed: EDD + Level 4

Samples: IPA1193-01

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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5 PA 1113

Client Name/Address:		Project:		ANALYSIS REQUIRED												Field Readings:		
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Routine Outfall 002														Temp = 54.3° pH = 7.4		
Project Manager: Bronwyn Kelly Sampler: <i>L. Hays</i>		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Total Recoverable Metals: Cu, Pb, Hg,	Settleable Solids	VOCs 624 + xylenes	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5(20 degrees C)	Surfactants (MBAS)	Ch, SO4, NO3+NO2-N, Perchlorate	Turbidity, TDS, TSS, Conductivity	Ammonia-N	Alpha BHC (608)	2,4,6 Trichlorophenol, 2,4 Dinitrofluorene, Bis(2- ethylhexyl)phthalate, NDMA, pentachlorophenol (EPA 625)	Comments	
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #												
Outfall 002	W	Poly-1 liter	1	1-14-06 11:58A	HNO3	1A	X										24 TAT	
Outfall 002-Dup	W	Poly-1 liter	1		HNO3	1B	X										24 TAT	
Outfall 002	W	Poly-1 liter	1		None	2		X										
Outfall 002	W	VOAs	3		HCl	3A, 3B, 3C												
Outfall 002	W	Glass-Amber	2		None	4A, 4B												
Outfall 002	W	1L Amber	2		HCl	5A, 5B		X									24 TAT	
Outfall 002	W	Poly-500 ml	1		NaOH	6		X									24 TAT	
Outfall 002	W	Poly-1 liter	1		None	7			X									
Outfall 002	W	Poly-500 ml	2		None	8A, 8B				X								
Outfall 002	W	Poly-500 ml	2		None	9A, 9B					X							
Outfall 002	W	Poly-500 ml	2		None	10A, 10B						X						
Outfall 002	W	Poly-500 ml	1		H2SO4	11							X					
Outfall 002	W	1L Amber	2		None	12A, 12B								X				
Outfall 002	W	1L Amber	2		None	13A, 13B									X			
Trip Blank	W	VOAs	3	1-14-06 11:00A	HCl	14A, 14B, 14C												
Trip Blank w	W	v.i.a	3	1-15-06 10:30														
Relinquished By				Date/Time	Received By		Date/Time		Turn around Time: (check)									
<i>Bronwyn Kelly</i>				1-15-06 10:35	<i>Bronwyn Kelly</i>		1/15/06 10:35		24 Hours		5 Days							
Relinquished By				Date/Time	Received By		Date/Time		48 Hours		10 Days							
<i>Bronwyn Kelly</i>				1-15-06 10:35	<i>Bronwyn Kelly</i>		1/15/06 10:35		72 Hours		Normal							
Relinquished By				Date/Time	Received By		Date/Time		Perchlorate Only 72 Hours									
<i>Bronwyn Kelly</i>				1/15/06 10:35	<i>Bronwyn Kelly</i>		1/19/06 16:00		Metals Only 72 Hours									
Relinquished By				Date/Time	Received By		Date/Time		Sample Integrity: (Check)									
<i>Bronwyn Kelly</i>				1/15/06 10:35	<i>Bronwyn Kelly</i>		1/19/06 16:00		Intact									



26, 2006

Subject LD.: 27208

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

Hele Chamberlin,

Here are the results for the one aqueous sample received at Alta Analytical Laboratory on January 10, 2006 under your Project Name "IPA1193". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was 10 business days for this work.

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

M. Maier
Manager of HRMS Services



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



Alta Analytical Laboratory Inc.

1104 Windfield Way
El Dorado Hills, CA 95762

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

Page 1 of 229

NPDES - 209

Section I: Sample Inventory Report

Date Received: 1/17/2006

Alta Lab. ID

Client Sample ID

27208-001

IPA1193-01

SECTION II

Method Blank **EPA Method 1613**

Matrix: Aqueous QC Batch No.: 7686 Lab Sample: 0-MB001
 Sample Size: 1.00 L Date Extracted: 22-Jan-06 Date Analyzed DB-5: 24-Jan-06 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000125			13C-2,3,7,8-TCDD	64.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000167			13C-1,2,3,7,8-PeCDD	64.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000336			13C-1,2,3,4,7,8-HxCDD	59.5	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000330			13C-1,2,3,6,7,8-HxCDD	61.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000322			13C-1,2,3,4,6,7,8-HpCDD	58.2	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000569			J	13C-OCDD	33.9	17 - 157	
OCDD	0.0000474			J	13C-2,3,7,8-TCDF	66.4	24 - 169	
2,3,7,8-TCDF	ND	0.0000106			13C-1,2,3,7,8-PeCDF	70.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000139			13C-2,3,4,7,8-PeCDF	73.0	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000121			13C-1,2,3,4,7,8-HxCDF	59.7	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000123			13C-1,2,3,6,7,8-HxCDF	57.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000114			13C-2,3,4,6,7,8-HxCDF	61.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000120			13C-1,2,3,7,8,9-HxCDF	62.2	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000176			13C-1,2,3,4,6,7,8-HpCDF	53.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000230			13C-1,2,3,4,7,8,9-HpCDF	57.4	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000246			13C-OCDF	38.9	17 - 157	
OCDF	ND	0.00000535			CRS 37Cl-2,3,7,8-TCDD	83.3	35 - 197	

Totals **Footnotes**

Total TCDD	ND	0.00000125			a. Sample specific estimated detection limit.
Total PeCDD	ND	0.00000167			b. Estimated maximum possible concentration.
Total HxCDD	ND	0.00000329			c. Method detection limit.
Total HpCDD	0.00000569				d. Lower control limit - upper control limit.
Total TCDF	ND	0.00000106			
Total PeCDF	ND	0.00000130			
Total HxCDF	ND	0.00000132			
Total HpCDF	ND	0.00000238			

Analyst: DMS

Approved By: Martha M. Maier 26-Jan-2006 07:42

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

Analyst: DMS

Approved By: Martha M. Maier 26-Jan-2006 07:42

Sample ID: IPA1193-01 **EPA Method 1613**

Client Data
 Name: Del Mar Analytical, Irvine
 Project: IPA1193
 Date Collected: 14-Jan-06
 Time Collected: 1115

Sample Data
 Matrix: Aqueous
 Sample Size: 1.01 L

Laboratory Data
 Lab Sample: 27208-001
 QC Batch No.: 7686
 Date Analyzed DB-5: 24-Jan-06
 Date Received: 17-Jan-06
 Date Extracted: 22-Jan-06
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000106			IS 13C-2,3,7,8-TCDD	65.4	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000183			13C-1,2,3,7,8-PeCDD	65.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000212			13C-1,2,3,4,7,8-HxCDD	59.2	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000222			13C-1,2,3,6,7,8-HxCDD	61.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000210			13C-1,2,3,4,6,7,8-HpCDD	60.5	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000695			J,B	13C-OCDD	37.6	17 - 157	
OCDF	0.0000494			B	13C-2,3,7,8-TCDF	65.0	24 - 169	
2,3,7,8-TCDF	ND	0.00000105			13C-1,2,3,7,8-PeCDF	68.1	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000178			13C-2,3,4,7,8-PeCDF	69.4	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000163			13C-1,2,3,4,7,8-HxCDF	61.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000934			13C-1,2,3,6,7,8-HxCDF	59.1	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000927			13C-2,3,4,6,7,8-HxCDF	59.0	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000107			13C-1,2,3,7,8,9-HxCDF	62.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000135			13C-1,2,3,4,6,7,8-HpCDF	55.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000172			13C-1,2,3,4,7,8,9-HpCDF	61.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000169			13C-OCDF	42.9	17 - 157	
OCDF	ND	0.00000431			CRS 37Cl-2,3,7,8-TCDD	89.8	35 - 197	

Totals

Total TCDD	ND	0.00000106						
Total PeCDD	ND	0.00000183						
Total HxCDD	ND	0.00000214						
Total HpCDD	0.00000135			B				
Total TCDF	ND	0.00000105						
Total PeCDF	ND	0.00000170						
Total HxCDF	ND	0.00000106						
Total HpCDF	ND	0.00000171						

Footnotes

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

Analyst: DMS
 Approved By: Martha M. Maier
 Date: 26-Jan-2006 07:42

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

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



17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4867 Fax (909) 370-1046
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3821

SUBCONTRACT ORDER - PROJECT # IPA1193

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue. Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762 Phone : (916) 933-1640 Fax: (916) 673-0106 <div style="text-align: right; font-size: 1.5em; margin-top: 10px;"> 27208 o.g.c </div>

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

Analysis	Expiration	Comments
Sample ID: IPA1193-01 Water	Sampled: 01/14/06 11:15	Instant Notification
1613-Dioxin-HR-Alta	01/21/06 11:15	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
EDD + Level 4	02/11/06 11:15	Excel EDD email to pm, Include Std logs for Lvl IV

Containers Supplied:
 1 L Amber (IPA1193-01G)
 1 L Amber (IPA1193-01H)

SAMPLE INTEGRITY:

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

Released By: 1/16/06 1700 Received By: *Deanna G. Benedict* 1/17/06 0840

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

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27208

Samples Arrival:	Date/Time 1/17/06 0840	Initials: BBB	Location: WR-2
Logged In:	Date/Time 1/17/06 1405	Initials: BBB	Location: WR-2
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> Cal
	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C	0.9°C	Time: 0900	Thermometer ID: DT-20

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill	✓		
Trk # 7924 8983 9854	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented?			<input checked="" type="radio"/> None
Shipping Container	Alta	<input checked="" type="radio"/> Client	Retain
		<input checked="" type="radio"/> Return	Dispose

Comments:

APPENDIX G

Section 10

**Outfall 002, January 14, 2006
AMEC Data Validation Reports**


CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4DF30
 Task Order 1261.001D.01
 SDG No. IPA1193

No. of Analyses 1

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

Date: February 25, 2006
 Reviewer's Signature


ACTION ITEMS^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.,	Qualifications were assigned for method blank contamination
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 002

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPA1193

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001.01
Sample Delivery Group: IPA1193
Project Manager: P. Costa
Matrix: Water
Analysis: Dioxins/Furans
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: February 25, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 002	IPA1193-01	27208-001	Water	1613

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 1°C. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the samples were couriered directly to Del Mar Analytical-Irvine, custody seals were not required. Custody seals were present on the coolers from Del Mar to Alta; however no sample custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

2.1.3 Holding Times

The samples were extracted and analyzed within one year of collection. No qualifications were required.

2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%. No qualifications were required.

2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

2.3 CALIBRATION

2.3.1 Initial Calibration

The initial calibration was analyzed 01/12/2006 on instrument VG-7. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs $\leq 20\%$ for the 16 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

2.4 BLANKS

One method blank (0-7686-MB001) was extracted and analyzed with the sample in this SDG. Target compounds 1,2,3,4,6,7,8-HpCDD and OCDD were reported at concentrations below the laboratory lower calibration level in the method blank. Target compounds 1,2,3,4,6,7,8-HpCDD and OCDD were also reported in the site sample; therefore, the detects for HpCDD and OCDD were qualified as estimated nondetects, "UJ," at the levels of contamination in the site sample. As a portion of total HpCDD was qualified for method blank contamination the result for total HpCDD was qualified as estimated, "J," in the site sample. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No further qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7686-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review

of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. No qualifications were required.

Client Data		Sample Data		Laboratory Data			
Sample ID:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	Date Received:		
IPA1193-01	IPA1193	Sample Size:	1.01 L	27208-001	17-Jan-06		
	14-Jan-06			7686	22-Jan-06		
	1115			24-Jan-06	NA		
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000106		13C-2,3,7,8-TCDD	65.4	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000183		13C-1,2,3,7,8-PeCDD	65.4	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000212		13C-1,2,3,4,7,8-HxCDD	59.2	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000222		13C-1,2,3,6,7,8-HxCDD	61.8	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000210		13C-1,2,3,4,6,7,8-HpCDD	60.5	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000695			13C-OCDD	37.6	17 - 157	
OCDD	0.0000494			13C-2,3,7,8-TCDF	65.0	24 - 169	
2,3,7,8-TCDF	ND	0.00000105		13C-1,2,3,7,8-PeCDF	68.1	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000178		13C-2,3,4,7,8-PeCDF	69.4	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000163		13C-1,2,3,4,7,8-HxCDF	61.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000934		13C-1,2,3,6,7,8-HxCDF	59.1	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000927		13C-2,3,4,6,7,8-HxCDF	59.0	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000107		13C-1,2,3,7,8,9-HxCDF	62.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000135		13C-1,2,3,4,6,7,8-HpCDF	55.9	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000172		13C-1,2,3,4,7,8,9-HpCDF	61.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000169		13C-OCDF	42.9	17 - 157	
OCDF	ND	0.00000431		CRS-17C-2,3,7,8-TCDD	89.8	35 - 197	
Totals							
Total TCDD	ND	0.00000106					
Total PeCDD	ND	0.00000183					
Total HxCDD	ND	0.00000214					
Total HpCDD	0.0000135						
Total TCDF	ND	0.00000105					
Total PeCDF	ND	0.00000170					
Total HxCDF	ND	0.00000106					
Total HpCDF	ND	0.00000171					

EPA Method 1613

Outfall 002

Rev Qual Code

u →

uJ →

uJ →

u →

B

B

B

B

B

level III

Analyst: DMS

Approved By: Martha M. Maier

26-Jan-2006 07:42

Project 27208

NPDES - 228

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4V017
 Task Order: 1261.001D.01
 SDG No.: IPA1193

No. of Analyses: 2

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

Date: February 24, 2006
 Reviewer's Signature


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



DATA VALIDATION REPORT

**NPDES Monitoring Program
Outfall 002**

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPA1193

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001.01
Sample Delivery Group: IPA1193
Project Manager: P. Costa
Matrix: Water
Analysis: Volatiles
QC Level: Level IV
No. of Samples: 2
No. of Reanalyses/Dilutions: 0
Reviewer: L. Calvin
Date of Review: February 24, 2006

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

Table 1. Sample Identification

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

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The samples in this SDG was received at the laboratory within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$, at 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 water samples were analyzed within 14 days of collection. No qualifications were required.

2.2 GC/MS TUNING

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

2.3 CALIBRATION

One initial calibration was associated with the samples in this SDG, dated 01/19/06. The average RRFs were ≥ 0.05 and the %RSDs were $\leq 35\%$ for the target compounds listed on the sample result summary forms. The continuing calibration associated with the sample analyses was dated 01/24/06. The RRFs for all target compounds were ≥ 0.05 and all %Ds were within the QC limit of $\leq 20\%$. A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

One method blank (6A24020-BLK1) was analyzed with this SDG. No target compounds were detected in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (6A24020-BS1) was analyzed with this SDG. The recoveries were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

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

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.8 FIELD QC SAMPLES

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

2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with site sample Outfall 002. No target compounds were detected in the trip blank. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

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

2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times were within the control limits established by the continuing calibration standard: -50%/+100% for internal standard areas and ± 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 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.



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 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: IPA1193	Sampled: 01/14/06 Received: 01/15/06
--	---	---

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1193-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6A24020	0.28	2.0	ND	1	01/24/06	01/24/06	<i>Very Good</i> <i>Good</i> <i>Decide</i>
Carbon tetrachloride	EPA 624	6A24020	0.28	5.0	ND	1	01/24/06	01/24/06	
Chloroform	EPA 624	6A24020	0.33	2.0	ND	1	01/24/06	01/24/06	
1,1-Dichloroethane	EPA 624	6A24020	0.27	2.0	ND	1	01/24/06	01/24/06	
1,2-Dichloroethane	EPA 624	6A24020	0.28	2.0	ND	1	01/24/06	01/24/06	
1,1-Dichloroethene	EPA 624	6A24020	0.32	3.0	ND	1	01/24/06	01/24/06	
Ethylbenzene	EPA 624	6A24020	0.25	2.0	ND	1	01/24/06	01/24/06	
Tetrachloroethene	EPA 624	6A24020	0.32	2.0	ND	1	01/24/06	01/24/06	
Toluene	EPA 624	6A24020	0.36	2.0	ND	1	01/24/06	01/24/06	
1,1,1-Trichloroethane	EPA 624	6A24020	0.30	2.0	ND	1	01/24/06	01/24/06	
1,1,2-Trichloroethane	EPA 624	6A24020	0.30	2.0	ND	1	01/24/06	01/24/06	
Trichloroethene	EPA 624	6A24020	0.26	5.0	ND	1	01/24/06	01/24/06	
Trichlorofluoromethane	EPA 624	6A24020	0.34	5.0	ND	1	01/24/06	01/24/06	
Vinyl chloride	EPA 624	6A24020	0.26	5.0	ND	1	01/24/06	01/24/06	
Xylenes, Total	EPA 624	6A24020	0.52	4.0	ND	1	01/24/06	01/24/06	
Surrogate: Dibromofluoromethane (80-120%)					118 %				
Surrogate: Toluene-d8 (80-120%)					106 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					94 %				
Sample ID: IPA1193-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6A24020	0.28	2.0	ND	1	01/24/06	01/24/06	<i>Very Good</i> <i>Good</i> <i>Decide</i>
Carbon tetrachloride	EPA 624	6A24020	0.28	5.0	ND	1	01/24/06	01/24/06	
Chloroform	EPA 624	6A24020	0.33	2.0	ND	1	01/24/06	01/24/06	
1,1-Dichloroethane	EPA 624	6A24020	0.27	2.0	ND	1	01/24/06	01/24/06	
1,2-Dichloroethane	EPA 624	6A24020	0.28	2.0	ND	1	01/24/06	01/24/06	
1,1-Dichloroethene	EPA 624	6A24020	0.32	3.0	ND	1	01/24/06	01/24/06	
Ethylbenzene	EPA 624	6A24020	0.25	2.0	ND	1	01/24/06	01/24/06	
Tetrachloroethene	EPA 624	6A24020	0.32	2.0	ND	1	01/24/06	01/24/06	
Toluene	EPA 624	6A24020	0.36	2.0	ND	1	01/24/06	01/24/06	
1,1,1-Trichloroethane	EPA 624	6A24020	0.30	2.0	ND	1	01/24/06	01/24/06	
1,1,2-Trichloroethane	EPA 624	6A24020	0.30	2.0	ND	1	01/24/06	01/24/06	
Trichloroethene	EPA 624	6A24020	0.26	5.0	ND	1	01/24/06	01/24/06	
Trichlorofluoromethane	EPA 624	6A24020	0.34	5.0	ND	1	01/24/06	01/24/06	
Vinyl chloride	EPA 624	6A24020	0.26	5.0	ND	1	01/24/06	01/24/06	
Xylenes, Total	EPA 624	6A24020	0.52	4.0	ND	1	01/24/06	01/24/06	
Surrogate: Dibromofluoromethane (80-120%)					104 %				
Surrogate: Toluene-d8 (80-120%)					103 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					95 %				

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 Michele Chamberlin
 Project Manager

Level IV

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4WC21
 Task Order 1261.001D.02
 SDG No. IPA1193

No. of Analyses 1

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

Date: February 27, 2006
 Reviewer's Signature


ACTION ITEMS ^a	
1. Case Narrative Deficiencies	_____
2. Out of Scope Analyses	_____
3. Analyses Not Conducted	_____
4. Missing Hardcopy Deliverables	_____
5. Incorrect Hardcopy Deliverables	_____
6. Deviations from Analysis	_____
Protocol, e.g.,	Qualifications applied for detects below the reporting limit and a reanalysis.
Holding Times	Result was rejected in favor of the original result.
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: IPA1193

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPA1193
Project Manager: P. Costa
Matrix: Water
Analysis: General Minerals
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: P. Meeks
Date of Review: February 27, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), USEPA Methods for Chemical Analysis of Water and Wastes Methods 120.1, 160.5, 180.1, 335.2, 350.2, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPA1193-01	Water	General Minerals

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and all analyses presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. Per a request from MWH personnel, the sample was reanalyzed for cyanide. The laboratory did not append the reanalysis client ID with "RE1," therefore, the reviewer added this information to the Form I. No qualifications were required.

2.1.3 Holding Times

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

2.2 CALIBRATION

For cyanide, the initial calibration correlation coefficients were ≥ 0.995 and the ICV and CCV recoveries were within the control limits of 90-110%. For ammonia, no information for the titrant standardization was provided; however, as the LCS recovery was within the calibration control limits, no qualifications were required. 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.

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

Duplicate analyses were performed on Outfall 002 for turbidity and conductivity only. The RPDs were within the laboratory-established control limits. No qualifications were required.

2.6 MATRIX SPIKES

MS/MSD analyses were performed on Outfall 002 for cyanide only. The recoveries were within the laboratory-established control limit of 70-115% and the RPD was within the control limit of ≤15%. No other MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to these criteria. For these analyses, method accuracy was assessed based on LCS results. No qualifications were required.

2.7 SAMPLE RESULT VERIFICATION

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

The cyanide reanalysis, Outfall 002 RE1 was reported as a nondetect by the laboratory. A review of the raw data indicated that the result was just below the MDL, at 2.1 µg/L; therefore, the reviewer chose to reject, "R," the reanalysis, Outfall 002 RE1 and report the original result, Outfall 002. 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.

Project: NPDES
SDG: IPA1193
Analysis: Gen. Min.

DATA VALIDATION REPORT

2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



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

Project ID: Routine Outfall 002

Report Number: IPA1193

Sampled: 01/14/06
 Received: 01/15/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev Qual	Qual Code
Sample ID: IPA1193-01 (Outfall 002 - Water) - cont.										
Reporting Units: mg/l										
Ammonia-N (Distilled)	EPA 350.2	6A20097	0.30	0.50	0.56	1	01/20/06	01/20/06		
Biochemical Oxygen Demand	EPA 405.1	6A16062	0.59	2.0	2.4	1	01/16/06	01/21/06	*	
Chloride	EPA 300.0	6A15017	2.6	5.0	42	10	01/15/06	01/15/06		
Nitrate/Nitrite-N	EPA 300.0	6A15017	0.072	0.10	ND	1	01/15/06	01/15/06		
Oil & Grease	EPA 413.1	6A17048	0.90	4.8	ND	1	01/17/06	01/17/06		
Sulfate	EPA 300.0	6A15017	1.8	5.0	180	10	01/15/06	01/15/06		
Surfactants (MBAS)	SM5540-C	6A15019	0.044	0.10	0.072	1	01/15/06	01/15/06		
Total Dissolved Solids	SM2540C	6A19093	10	10	590	1	01/19/06	01/19/06		
Total Suspended Solids	EPA 160.2	6A17118	10	10	ND	1	01/17/06	01/17/06		
Sample ID: IPA1193-01 (Outfall 002 - Water)										
Reporting Units: ml/hr										
Total Settleable Solids	EPA 160.5	6A16063	0.10	0.10	ND	1	01/16/06	01/16/06		
Sample ID: IPA1193-01 (Outfall 002 - Water)										
Reporting Units: NTU										
Turbidity	EPA 180.1	6A16061	0.040	1.0	0.93	1	01/16/06	01/16/06	J J	DNQ
Sample ID: IPA1193-01 (Outfall 002 - Water)										
Reporting Units: ug/l										
Total Cyanide	EPA 335.2	6A17119	2.2	5.0	5.3	1	01/17/06	01/17/06		
Perchlorate	EPA 314.0	6A17063	0.80	4.0	ND	1	01/17/06	01/17/06	*	
Sample ID: IPA1193-01RE1 (Outfall 002 - Water) Outfall 002 RE1										
Reporting Units: ug/l										
Total Cyanide	EPA 335.2	6A19104	2.2	5.0	ND	1	01/17/06	01/19/06	R	D
Sample ID: IPA1193-01 (Outfall 002 - Water)										
Reporting Units: umhos/cm										
Specific Conductance	EPA 120.1	6A20092	1.0	1.0	770	1	01/20/06	01/20/06		

* Analysis not validated

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 Michele Chamberlin
 Project Manager

LEVEL IV

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IPA1193 <Page 6 of 23>

APPENDIX G

Section 11

Outfall 002, January 19, 2006

Del Mar Analytical Laboratory Report



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LABORATORY REPORT

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

Project: Quarterly Outfall 002

Sampled: 01/19/06
Received: 01/19/06
Issued: 02/02/06 17:20

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

LABORATORY ID	CLIENT ID	MATRIX
IPA1609-01	Outfall 002	Water

Reviewed By:

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



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MWH-Pasadena/Boeing	Project ID: Quarterly Outfall 002	
300 North Lake Avenue, Suite 1200		Sampled: 01/19/06
Pasadena, CA 91101	Report Number: IPA1609	Received: 01/19/06
Attention: Bronwyn Kelly		

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1609-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Copper	EPA 200.8	6A20080	0.25	2.0	2.8	1	01/20/06	01/23/06	

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 002 Report Number: IPA1609	Sampled: 01/19/06 Received: 01/19/06
--	---	---

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1609-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6A24144	2.2	5.0	ND	1	01/24/06	01/24/06	M2

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 Project Manager

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 002 Report Number: IPA1609	Sampled: 01/19/06 Received: 01/19/06
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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A20080 Extracted: 01/20/06											
Blank Analyzed: 01/24/2006 (6A20080-BLK1)											
Copper	ND	2.0	0.25	ug/l							
LCS Analyzed: 01/24/2006 (6A20080-BS1)											
Copper	80.0	2.0	0.25	ug/l	80.0		100	85-115			
Matrix Spike Analyzed: 01/24/2006 (6A20080-MS1)											
Copper	77.0	2.0	0.25	ug/l	80.0	1.9	94	70-130			
Matrix Spike Analyzed: 01/24/2006 (6A20080-MS2)											
Copper	78.3	2.0	0.25	ug/l	80.0	1.1	96	70-130			
Matrix Spike Dup Analyzed: 01/24/2006 (6A20080-MSD1)											
Copper	78.0	2.0	0.25	ug/l	80.0	1.9	95	70-130	1	20	

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

Project ID: Quarterly Outfall 002

Report Number: IPA1609

Sampled: 01/19/06

Received: 01/19/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A24144 Extracted: 01/24/06											
Blank Analyzed: 01/24/2006 (6A24144-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 01/24/2006 (6A24144-BS1)											
Total Cyanide	205	5.0	2.2	ug/l	200		102	90-110			
Matrix Spike Analyzed: 01/24/2006 (6A24144-MS1)											
Total Cyanide	5.21	5.0	2.2	ug/l	200	ND	3	70-115			M2
Matrix Spike Dup Analyzed: 01/24/2006 (6A24144-MSD1)											
Total Cyanide	6.27	5.0	2.2	ug/l	200	ND	3	70-115	18	15	M2, R-2

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

Project ID: Quarterly Outfall 002

Report Number: IPA1609

Sampled: 01/19/06
 Received: 01/19/06

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA1609-01	Copper-200.8	Copper	ug/l	2.80	2.0	7.10
IPA1609-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	1.40	5.0	4.30

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA1609

Sampled: 01/19/06
Received: 01/19/06

DATA QUALIFIERS AND DEFINITIONS

- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- R-2** The RPD exceeded the method control limit.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Quarterly Outfall 002

Report Number: IPA1609

Sampled: 01/19/06
 Received: 01/19/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 200.8	Water	X	X
EPA 335.2	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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CHAIN OF CUSTODY FORM

Version 02/17/05

Client Name/Address: MVH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project: Boeing-SSFL NPDES Outfall 002		ANALYSIS REQUIRED		Temp. 50.7 Comments			
Del Mar Contact: Michele Chamberlin Project Manager: Bronwyn Kelly		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Total Recoverable Copper (C) X Total Recoverable Cyanide (C)		IRPA 1609			
Sampler: Rick Banaga/Rueban Barraso	Sample Description Outfall 002 Outfall 002	Sample Matrix W W	Container Type Poly-1 liter Poly-500 ml	# of Cont. 1 1	Sampling Date/Time 1-19-06 1-19-06	Preservative HNO3 NaOH	Bottle # 1A 6	Total Recoverable Copper (C) X Total Recoverable Cyanide (C)	Comments
Relinquished By [Signature]	Date/Time 1-19-06 11:35	Relinquished By [Signature]	Date/Time 1/19/06 1735	Received By [Signature]	Date/Time 1/19/06 11:35	Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ Perchlorate Only 72 Hours _____ Metals Only 72 Hours _____	Sample Integrity: (Check) Intact _____ On Ice: <input checked="" type="checkbox"/>		

APPENDIX G

Section 12

Outfall 002, January 20, 2006

Del Mar Analytical Laboratory Report



Del Mar Analytical

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

LABORATORY REPORT

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

Project: Quarterly Outfall 002

Sampled: 01/20/06
Received: 01/20/06
Issued: 02/04/06 17:36

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

LABORATORY ID

IPA1747-01

CLIENT ID

Outfall 002

MATRIX

Water

Reviewed By:

Del Mar Analytical, Irvine

Michele Chamberlin

Project Manager



Del Mar Analytical

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

Project ID: Quarterly Outfall 002

Report Number: IPA1747

Sampled: 01/20/06
 Received: 01/20/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1747-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Copper	EPA 200.8	6A24074	0.25	2.0	2.8	1	01/24/06	01/24/06	

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA1747

Sampled: 01/20/06
 Received: 01/20/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1747-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6A26097	2.2	5.0	ND	1	01/26/06	01/26/06	

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 Michele Chamberlin
 Project Manager

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 002 Report Number: IPA1747	Sampled: 01/20/06 Received: 01/20/06
--	---	---

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A24074 Extracted: 01/24/06											
Blank Analyzed: 01/24/2006 (6A24074-BLK1)											
Copper	ND	2.0	0.25	ug/l							
LCS Analyzed: 01/24/2006 (6A24074-BS1)											
Copper	82.0	2.0	0.25	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 01/24/2006 (6A24074-MS1)											
						Source: IPA1755-01					
Copper	80.2	2.0	0.25	ug/l	80.0	4.7	94	70-130			
Matrix Spike Dup Analyzed: 01/24/2006 (6A24074-MSD1)											
						Source: IPA1755-01					
Copper	78.3	2.0	0.25	ug/l	80.0	4.7	92	70-130	2	20	

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 002 Report Number: IPA1747	Sampled: 01/20/06 Received: 01/20/06
--	---	---

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A26097 Extracted: 01/26/06											
Blank Analyzed: 01/26/2006 (6A26097-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 01/26/2006 (6A26097-BS1)											
Total Cyanide	205	5.0	2.2	ug/l	200		102	90-110			
Matrix Spike Analyzed: 01/26/2006 (6A26097-MS1)											
						Source: IPA1776-01					
Total Cyanide	224	5.0	2.2	ug/l	200	ND	112	70-115			
Matrix Spike Dup Analyzed: 01/26/2006 (6A26097-MSD1)											
						Source: IPA1776-01					
Total Cyanide	216	5.0	2.2	ug/l	200	ND	108	70-115	4	15	

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 Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA1747

Sampled: 01/20/06
 Received: 01/20/06

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA1747-01	Copper-200.8	Copper	ug/l	2.80	2.0	7.10
IPA1747-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	1.00	5.0	4.30

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Quarterly Outfall 002

Report Number: IPA1747

Sampled: 01/20/06
Received: 01/20/06

DATA QUALIFIERS AND DEFINITIONS

- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Quarterly Outfall 002 Report Number: IPA1747	Sampled: 01/20/06 Received: 01/20/06
--	---	---

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 200.8	Water	X	X
EPA 335.2	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

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 Michele Chamberlin
 Project Manager

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APPENDIX G

Section 13

Outfall 002, January 03, 2006

Del Mar Analytical Laboratory Report



LABORATORY REPORT

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

Project: LARWQCB Sample Splits
Outfall 002

Sampled: 01/03/06
Received: 01/03/06
Issued: 01/31/06 11:20

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 5°C, on ice and with chain of custody documentation.
HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.
PRESERVATION: Samples requiring preservation were verified prior to sample analysis.
QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
COMMENTS: Results that fall between the MDL and RL are 'J' flagged.
SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.
ADDITIONAL INFORMATION: Insufficient sample volume was used in the dilutions for the BOD analysis. The result reported is an estimated value of the concentration.

LABORATORY ID	CLIENT ID	MATRIX
IPA0101-01	002 Split	Water

Reviewed By:

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



Del Mar Analytical

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

Project ID: LARWQCB Sample Splits
Outfall 002
Report Number: IPA0101

Sampled: 01/03/06
Received: 01/03/06

CORRECTIVE ACTION REPORT

Department: Extractions
Method: EPA 625
QC Batch: 6A08028

Date: 01/16/2006
Matrix: Water

Identification and Definition of Problem:

The result for Dibenz(a,h)anthracene in the Method Blank for the batch was above the laboratory reporting limit.

Determination of the Cause of the Problem:

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

Corrective Action Taken:

All positive results for Dibenz(a,h)anthracene are potentially biased high and can be considered estimates only.

Quality Assurance Approval:

Dave Dawes

Date: 01/19/2006 11:41 AM

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6A06021	0.28	2.0	ND	1	01/06/06	01/07/06	
Bromodichloromethane	EPA 624	6A06021	0.30	2.0	ND	1	01/06/06	01/07/06	
Bromoform	EPA 624	6A06021	0.32	5.0	ND	1	01/06/06	01/07/06	
Bromomethane	EPA 624	6A06021	0.42	5.0	ND	1	01/06/06	01/07/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A06021	1.2	5.0	ND	1	01/06/06	01/07/06	
Carbon tetrachloride	EPA 624	6A06021	0.28	5.0	ND	1	01/06/06	01/07/06	
Chlorobenzene	EPA 624	6A06021	0.36	2.0	ND	1	01/06/06	01/07/06	
Chloroethane	EPA 624	6A06021	0.33	5.0	ND	1	01/06/06	01/07/06	
Chloroform	EPA 624	6A06021	0.33	2.0	ND	1	01/06/06	01/07/06	
Chloromethane	EPA 624	6A06021	0.30	5.0	ND	1	01/06/06	01/07/06	
Dibromochloromethane	EPA 624	6A06021	0.28	2.0	ND	1	01/06/06	01/07/06	
1,2-Dichlorobenzene	EPA 624	6A06021	0.32	2.0	ND	1	01/06/06	01/07/06	
1,3-Dichlorobenzene	EPA 624	6A06021	0.35	2.0	ND	1	01/06/06	01/07/06	
1,4-Dichlorobenzene	EPA 624	6A06021	0.37	2.0	ND	1	01/06/06	01/07/06	
1,1-Dichloroethane	EPA 624	6A06021	0.27	2.0	ND	1	01/06/06	01/07/06	
1,2-Dichloroethane	EPA 624	6A06021	0.28	2.0	ND	1	01/06/06	01/07/06	
1,1-Dichloroethene	EPA 624	6A06021	0.32	3.0	ND	1	01/06/06	01/07/06	
trans-1,2-Dichloroethene	EPA 624	6A06021	0.27	2.0	ND	1	01/06/06	01/07/06	
1,2-Dichloropropane	EPA 624	6A06021	0.35	2.0	ND	1	01/06/06	01/07/06	
cis-1,3-Dichloropropene	EPA 624	6A06021	0.22	2.0	ND	1	01/06/06	01/07/06	
trans-1,3-Dichloropropene	EPA 624	6A06021	0.32	2.0	ND	1	01/06/06	01/07/06	
Ethylbenzene	EPA 624	6A06021	0.25	2.0	ND	1	01/06/06	01/07/06	
Methylene chloride	EPA 624	6A06021	0.51	5.0	ND	1	01/06/06	01/07/06	
1,1,2,2-Tetrachloroethane	EPA 624	6A06021	0.24	2.0	ND	1	01/06/06	01/07/06	
Tetrachloroethene	EPA 624	6A06021	0.32	2.0	ND	1	01/06/06	01/07/06	
Toluene	EPA 624	6A06021	0.36	2.0	ND	1	01/06/06	01/07/06	
1,1,1-Trichloroethane	EPA 624	6A06021	0.30	2.0	ND	1	01/06/06	01/07/06	
1,1,2-Trichloroethane	EPA 624	6A06021	0.30	2.0	ND	1	01/06/06	01/07/06	
Trichloroethene	EPA 624	6A06021	0.26	5.0	1.6	1	01/06/06	01/07/06	J
Trichlorofluoromethane	EPA 624	6A06021	0.34	5.0	ND	1	01/06/06	01/07/06	
Vinyl chloride	EPA 624	6A06021	0.26	5.0	ND	1	01/06/06	01/07/06	
Xylenes, Total	EPA 624	6A06021	0.52	4.0	ND	1	01/06/06	01/07/06	
Surrogate: Dibromofluoromethane (80-120%)					107 %				
Surrogate: Toluene-d8 (80-120%)					103 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					100 %				

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: ug/l									
1,2-Dichloro-1,1,2-trifluoroethane	EPA 624 (MOD.)	6A06021	N/A	2.5	ND	1	01/06/06	01/07/06	
Cyclohexane	EPA 624 (MOD.)	6A06021	N/A	2.5	ND	1	01/06/06	01/07/06	

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 Project Manager

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

SEMI-VOL ORGANICS by GC/MS-CHEMICAL IONIZATION (EPA 3520C/1625C-CI MOD)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: ug/l									
N-Nitrosodimethylamine	EPA 1625C-CI Mod	6A08026	0.00020	0.0020	0.00056	0.98	01/08/06	01/09/06	B, J

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

Project ID: LARWQCB Sample Splits
Outfall 002
Report Number: IPA0101

Sampled: 01/03/06
Received: 01/03/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6A08028	0.099	0.50	ND	0.99	01/08/06	01/11/06	
Acenaphthylene	EPA 625	6A08028	0.099	0.50	ND	0.99	01/08/06	01/11/06	
Aniline	EPA 625	6A08028	2.9	9.9	ND	0.99	01/08/06	01/11/06	
Anthracene	EPA 625	6A08028	0.082	0.50	ND	0.99	01/08/06	01/11/06	
Benzidine	EPA 625	6A08028	2.4	5.0	ND	0.99	01/08/06	01/11/06	C
Benzoic acid	EPA 625	6A08028	3.7	20	6.0	0.99	01/08/06	01/11/06	A-01, J
Benzo(a)anthracene	EPA 625	6A08028	0.038	5.0	ND	0.99	01/08/06	01/11/06	
Benzo(a)pyrene	EPA 625	6A08028	0.14	2.0	ND	0.99	01/08/06	01/11/06	
Benzo(b)fluoranthene	EPA 625	6A08028	0.050	2.0	ND	0.99	01/08/06	01/11/06	
Benzo(g,h,i)perylene	EPA 625	6A08028	0.058	5.0	ND	0.99	01/08/06	01/11/06	
Benzo(k)fluoranthene	EPA 625	6A08028	0.052	0.50	ND	0.99	01/08/06	01/11/06	
Benzyl alcohol	EPA 625	6A08028	0.21	5.0	ND	0.99	01/08/06	01/11/06	
Bis(2-chloroethoxy)methane	EPA 625	6A08028	0.071	0.50	ND	0.99	01/08/06	01/11/06	
Bis(2-chloroethyl)ether	EPA 625	6A08028	0.083	0.50	ND	0.99	01/08/06	01/11/06	
Bis(2-chloroisopropyl)ether	EPA 625	6A08028	0.11	0.50	ND	0.99	01/08/06	01/11/06	
Bis(2-ethylhexyl)phthalate	EPA 625	6A08028	1.1	5.0	2.2	0.99	01/08/06	01/11/06	B, J
4-Bromophenyl phenyl ether	EPA 625	6A08028	0.12	0.99	ND	0.99	01/08/06	01/11/06	
Butyl benzyl phthalate	EPA 625	6A08028	0.34	5.0	0.89	0.99	01/08/06	01/11/06	B, J
4-Chloroaniline	EPA 625	6A08028	0.20	2.0	ND	0.99	01/08/06	01/11/06	
2-Chloronaphthalene	EPA 625	6A08028	0.058	0.50	ND	0.99	01/08/06	01/11/06	
4-Chloro-3-methylphenol	EPA 625	6A08028	0.34	2.0	ND	0.99	01/08/06	01/11/06	
4-Chlorophenyl phenyl ether	EPA 625	6A08028	0.055	0.50	ND	0.99	01/08/06	01/11/06	
2-Chlorophenol	EPA 625	6A08028	0.12	0.99	ND	0.99	01/08/06	01/11/06	
Chrysene	EPA 625	6A08028	0.071	0.50	ND	0.99	01/08/06	01/11/06	
Dibenz(a,h)anthracene	EPA 625	6A08028	0.082	0.50	ND	0.99	01/08/06	01/11/06	
Dibenzofuran	EPA 625	6A08028	0.074	0.50	ND	0.99	01/08/06	01/11/06	
Di-n-butyl phthalate	EPA 625	6A08028	0.26	2.0	ND	0.99	01/08/06	01/11/06	
1,2-Dichlorobenzene	EPA 625	6A08028	0.11	0.50	ND	0.99	01/08/06	01/11/06	
1,3-Dichlorobenzene	EPA 625	6A08028	0.13	0.50	ND	0.99	01/08/06	01/11/06	
1,4-Dichlorobenzene	EPA 625	6A08028	0.050	0.50	ND	0.99	01/08/06	01/11/06	
3,3-Dichlorobenzidine	EPA 625	6A08028	0.92	5.0	ND	0.99	01/08/06	01/11/06	
2,4-Dichlorophenol	EPA 625	6A08028	0.21	2.0	ND	0.99	01/08/06	01/11/06	
Diethyl phthalate	EPA 625	6A08028	0.12	0.99	0.57	0.99	01/08/06	01/11/06	B, J
2,4-Dimethylphenol	EPA 625	6A08028	0.31	2.0	ND	0.99	01/08/06	01/11/06	
Dimethyl phthalate	EPA 625	6A08028	0.080	0.50	ND	0.99	01/08/06	01/11/06	
4,6-Dinitro-2-methylphenol	EPA 625	6A08028	0.38	5.0	ND	0.99	01/08/06	01/11/06	
2,4-Dinitrophenol	EPA 625	6A08028	2.7	5.0	ND	0.99	01/08/06	01/11/06	
2,4-Dinitrotoluene	EPA 625	6A08028	0.23	5.0	ND	0.99	01/08/06	01/11/06	
2,6-Dinitrotoluene	EPA 625	6A08028	0.24	5.0	ND	0.99	01/08/06	01/11/06	
Di-n-octyl phthalate	EPA 625	6A08028	0.17	5.0	ND	0.99	01/08/06	01/11/06	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6A08028	0.086	0.99	ND	0.99	01/08/06	01/11/06	

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Michele Chamberlin
Project Manager

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: ug/l									
Fluoranthene	EPA 625	6A08028	0.088	0.50	ND	0.99	01/08/06	01/11/06	
Fluorene	EPA 625	6A08028	0.074	0.50	ND	0.99	01/08/06	01/11/06	
Hexachlorobenzene	EPA 625	6A08028	0.13	0.99	ND	0.99	01/08/06	01/11/06	
Hexachlorobutadiene	EPA 625	6A08028	0.38	2.0	ND	0.99	01/08/06	01/11/06	
Hexachlorocyclopentadiene	EPA 625	6A08028	1.8	5.0	ND	0.99	01/08/06	01/11/06	
Hexachloroethane	EPA 625	6A08028	0.50	3.0	ND	0.99	01/08/06	01/11/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6A08028	0.19	2.0	ND	0.99	01/08/06	01/11/06	
Isophorone	EPA 625	6A08028	0.058	0.99	ND	0.99	01/08/06	01/11/06	C
2-Methylnaphthalene	EPA 625	6A08028	0.13	0.99	ND	0.99	01/08/06	01/11/06	
2-Methylphenol	EPA 625	6A08028	0.28	2.0	ND	0.99	01/08/06	01/11/06	
4-Methylphenol	EPA 625	6A08028	0.20	5.0	ND	0.99	01/08/06	01/11/06	
Naphthalene	EPA 625	6A08028	0.13	0.99	ND	0.99	01/08/06	01/11/06	
2-Nitroaniline	EPA 625	6A08028	0.18	5.0	ND	0.99	01/08/06	01/11/06	
3-Nitroaniline	EPA 625	6A08028	0.35	5.0	ND	0.99	01/08/06	01/11/06	
4-Nitroaniline	EPA 625	6A08028	0.49	5.0	ND	0.99	01/08/06	01/11/06	
Nitrobenzene	EPA 625	6A08028	0.099	0.99	ND	0.99	01/08/06	01/11/06	
2-Nitrophenol	EPA 625	6A08028	0.23	2.0	ND	0.99	01/08/06	01/11/06	
4-Nitrophenol	EPA 625	6A08028	0.72	5.0	ND	0.99	01/08/06	01/11/06	
N-Nitrosodimethylamine	EPA 625	6A08028	0.22	2.0	ND	0.99	01/08/06	01/11/06	
N-Nitroso-di-n-propylamine	EPA 625	6A08028	0.18	2.0	ND	0.99	01/08/06	01/11/06	
N-Nitrosodiphenylamine	EPA 625	6A08028	0.076	0.99	ND	0.99	01/08/06	01/11/06	
Pentachlorophenol	EPA 625	6A08028	0.77	2.0	ND	0.99	01/08/06	01/11/06	
Phenanthrene	EPA 625	6A08028	0.070	0.50	ND	0.99	01/08/06	01/11/06	
Phenol	EPA 625	6A08028	0.14	0.99	ND	0.99	01/08/06	01/11/06	
Pyrene	EPA 625	6A08028	0.058	0.50	ND	0.99	01/08/06	01/11/06	
1,2,4-Trichlorobenzene	EPA 625	6A08028	0.099	0.99	ND	0.99	01/08/06	01/11/06	
2,4,5-Trichlorophenol	EPA 625	6A08028	0.074	2.0	ND	0.99	01/08/06	01/11/06	
2,4,6-Trichlorophenol	EPA 625	6A08028	0.099	0.99	ND	0.99	01/08/06	01/11/06	
Surrogate: 2-Fluorophenol (35-120%)									63 %
Surrogate: Phenol-d6 (45-120%)									70 %
Surrogate: 2,4,6-Tribromophenol (50-125%)									84 %
Surrogate: Nitrobenzene-d5 (45-120%)									72 %
Surrogate: 2-Fluorobiphenyl (45-120%)									68 %
Surrogate: Terphenyl-d14 (45-135%)									73 %

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	6A07025	0.20	1.0	ND	1	01/07/06	01/09/06	
Aroclor 1221	EPA 608	6A07025	0.10	1.0	ND	1	01/07/06	01/09/06	
Aroclor 1232	EPA 608	6A07025	0.25	1.0	ND	1	01/07/06	01/09/06	
Aroclor 1242	EPA 608	6A07025	0.25	1.0	ND	1	01/07/06	01/09/06	
Aroclor 1248	EPA 608	6A07025	0.25	1.0	ND	1	01/07/06	01/09/06	
Aroclor 1254	EPA 608	6A07025	0.25	1.0	ND	1	01/07/06	01/09/06	
Aroclor 1260	EPA 608	6A07025	0.40	1.0	ND	1	01/07/06	01/09/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					83 %				

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: mg/l									
Barium	EPA 200.8	6A04091	0.00015	0.0010	0.048	1	01/04/06	01/05/06	
Boron	EPA 200.7	6A04092	0.0080	0.050	0.090	1	01/04/06	01/05/06	
Calcium	EPA 200.7	6A04092	0.040	0.10	65	1	01/04/06	01/05/06	
Magnesium	EPA 200.7	6A04092	0.0070	0.020	18	1	01/04/06	01/05/06	

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8	6A04091	0.050	2.0	0.64	1	01/04/06	01/05/06	B, J
Arsenic	EPA 200.8	6A04091	0.50	1.0	1.9	1	01/04/06	01/06/06	
Beryllium	EPA 200.8	6A04091	0.075	0.50	ND	1	01/04/06	01/05/06	
Cadmium	EPA 200.8	6A04091	0.025	1.0	0.034	1	01/04/06	01/05/06	J
Chromium	EPA 200.7	6A04092	0.68	5.0	1.8	1	01/04/06	01/05/06	J
Cobalt	EPA 200.8	6A04091	0.035	1.0	0.39	1	01/04/06	01/05/06	J
Copper	EPA 200.8	6A04091	0.25	1.0	8.5	1	01/04/06	01/05/06	
Lead	EPA 200.8	6A04091	0.040	1.0	0.50	1	01/04/06	01/05/06	J
Mercury	EPA 245.1	6A04080	0.050	0.20	ND	1	01/04/06	01/04/06	
Molybdenum	EPA 200.8	6A04091	0.15	2.0	2.9	1	01/04/06	01/05/06	B
Nickel	EPA 200.8	6A04091	0.35	2.0	0.80	1	01/04/06	01/05/06	B, J
Selenium	EPA 200.8	6A04091	0.30	2.0	0.77	1	01/04/06	01/05/06	J
Silver	EPA 200.8	6A09086	0.025	1.0	ND	1	01/09/06	01/09/06	
Thallium	EPA 200.8	6A04091	0.15	1.0	ND	1	01/04/06	01/05/06	
Vanadium	EPA 200.8	6A04091	0.70	2.0	2.3	1	01/04/06	01/05/06	
Zinc	EPA 200.8	6A04091	1.0	10	9.7	1	01/04/06	01/05/06	J

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01RE1 (002 Split - Water) - cont.									
Reporting Units: ug/l									
Copper	EPA 200.8	6A27054	0.25	1.0	3.4	1	01/27/06	01/27/06	

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: LARWQCB Sample Splits Outfall 002 Report Number: IPA0101	Sampled: 01/03/06 Received: 01/03/06
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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6A05098	0.30	0.50	ND	1	01/05/06	01/05/06	
Biochemical Oxygen Demand	EPA 405.1	6A04062	0.59	2.0	1.7	1	01/04/06	01/09/06	J
Fluoride	EPA 300.0	6A03051	0.10	0.50	0.52	1	01/03/06	01/03/06	B
Hardness (as CaCO3)	SM2340B	6A04092	1.0	1.0	240	1	01/04/06	01/05/06	
Nitrate/Nitrite-N	EPA 300.0	6A03051	0.072	0.26	1.2	1	01/03/06	01/03/06	
Oil & Grease	EPA 413.1	6A09050	0.96	5.1	2.6	1	01/09/06	01/09/06	J
Sulfate	EPA 300.0	6A03051	0.90	2.5	120	5	01/03/06	01/03/06	
Surfactants (MBAS)	SM5540-C	6A03114	0.044	0.10	0.11	1	01/03/06	01/03/06	
Total Dissolved Solids	SM2540C	6A04107	10	10	410	1	01/04/06	01/04/06	
Total Organic Carbon	EPA 415.1	6A06094	0.25	1.0	8.1	1	01/06/06	01/06/06	
Total Suspended Solids	EPA 160.2	6A06118	10	10	ND	1	01/06/06	01/06/06	

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: ml/hr									
Total Settleable Solids	EPA 160.5	6A04072	0.10	0.10	ND	1	01/04/06	01/04/06	

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Sampled: 01/03/06
 Received: 01/03/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6A06111	2.2	5.0	ND	1	01/06/06	01/09/06	
Perchlorate	EPA 314.0	6A04078	0.80	4.0	ND	1	01/04/06	01/04/06	

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Sampled: 01/03/06
 Received: 01/03/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6A04105	1.0	1.0	700	1	01/04/06	01/04/06	

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Project ID: LARWQCB Sample Splits
Outfall 002
Report Number: IPA0101

Sampled: 01/03/06
Received: 01/03/06

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: 002 Split (IPA0101-01) - Water					
EPA 160.5	2	01/03/2006 11:45	01/03/2006 18:00	01/04/2006 09:18	01/04/2006 10:30
EPA 300.0	2	01/03/2006 11:45	01/03/2006 18:00	01/03/2006 20:30	01/03/2006 22:07
EPA 405.1	2	01/03/2006 11:45	01/03/2006 18:00	01/04/2006 10:15	01/09/2006 16:00
SM5540-C	2	01/03/2006 11:45	01/03/2006 18:00	01/03/2006 21:20	01/03/2006 22:46

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 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A06021 Extracted: 01/06/06											
Blank Analyzed: 01/06/2006 (6A06021-BLK1)											
Benzene	ND	1.0	0.28	ug/l							
Benzene	ND	2.0	0.28	ug/l							
Bromodichloromethane	ND	2.0	0.30	ug/l							
Bromoform	ND	5.0	0.32	ug/l							
Bromomethane	ND	5.0	0.42	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Carbon tetrachloride	ND	5.0	0.28	ug/l							
Chlorobenzene	ND	2.0	0.36	ug/l							
Chloroethane	ND	5.0	0.33	ug/l							
Chloroform	ND	2.0	0.33	ug/l							
Chloroform	ND	2.0	0.33	ug/l							
Chloromethane	ND	5.0	0.30	ug/l							
Dibromochloromethane	ND	2.0	0.28	ug/l							
1,2-Dichlorobenzene	ND	2.0	0.32	ug/l							
1,3-Dichlorobenzene	ND	2.0	0.35	ug/l							
1,4-Dichlorobenzene	ND	2.0	0.37	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	2.0	0.28	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	3.0	0.32	ug/l							
1,1-Dichloroethene	ND	5.0	0.42	ug/l							
trans-1,2-Dichloroethene	ND	2.0	0.27	ug/l							
1,2-Dichloropropane	ND	2.0	0.35	ug/l							
cis-1,3-Dichloropropene	ND	2.0	0.22	ug/l							
trans-1,3-Dichloropropene	ND	2.0	0.32	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Methylene chloride	ND	5.0	0.51	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	0.24	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	ug/l							
Toluene	ND	2.0	0.36	ug/l							

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A06021 Extracted: 01/06/06											
Blank Analyzed: 01/06/2006 (6A06021-BLK1)											
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND	5.0	0.26	ug/l							
Trichloroethene	ND	2.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Vinyl chloride	ND	5.0	0.26	ug/l							
Vinyl chloride	ND	0.50	0.26	ug/l							
Xylenes, Total	ND	4.0	0.52	ug/l							
Xylenes, Total	ND	4.0	0.52	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l							
Surrogate: Dibromofluoromethane	25.8			ug/l	25.0		103	80-120			
Surrogate: Dibromofluoromethane	25.8			ug/l	25.0		103	80-120			
Surrogate: Toluene-d8	26.0			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	26.0			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	25.4			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	25.4			ug/l	25.0		102	80-120			
LCS Analyzed: 01/06/2006 (6A06021-BS1)											
Benzene	22.2	1.0	0.28	ug/l	25.0		89	65-120			
Benzene	22.2	2.0	0.28	ug/l	25.0		89	70-120			
Bromodichloromethane	22.1	2.0	0.30	ug/l	25.0		88	65-135			
Bromoform	18.8	5.0	0.32	ug/l	25.0		75	50-130			
Bromomethane	19.4	5.0	0.42	ug/l	25.0		78	60-140			
Carbon tetrachloride	22.1	0.50	0.28	ug/l	25.0		88	65-140			
Carbon tetrachloride	22.1	5.0	0.28	ug/l	25.0		88	70-140			
Chlorobenzene	22.8	2.0	0.36	ug/l	25.0		91	70-125			
Chloroethane	20.0	5.0	0.33	ug/l	25.0		80	55-140			
Chloroform	21.8	2.0	0.33	ug/l	25.0		87	75-130			
Chloroform	21.8	2.0	0.33	ug/l	25.0		87	65-130			
Chloromethane	14.8	5.0	0.30	ug/l	25.0		59	40-140			
Dibromochloromethane	22.0	2.0	0.28	ug/l	25.0		88	65-140			
1,2-Dichlorobenzene	23.2	2.0	0.32	ug/l	25.0		93	70-120			
1,3-Dichlorobenzene	23.4	2.0	0.35	ug/l	25.0		94	70-125			

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

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: 6A06021 Extracted: 01/06/06											
LCS Analyzed: 01/06/2006 (6A06021-BS1)											
1,4-Dichlorobenzene	22.6	2.0	0.37	ug/l	25.0		90	70-125			
1,1-Dichloroethane	22.0	2.0	0.27	ug/l	25.0		88	65-130			
1,1-Dichloroethane	22.0	2.0	0.27	ug/l	25.0		88	70-135			
1,2-Dichloroethane	21.0	2.0	0.28	ug/l	25.0		84	60-150			
1,2-Dichloroethane	21.0	0.50	0.28	ug/l	25.0		84	60-140			
1,1-Dichloroethene	21.4	3.0	0.32	ug/l	25.0		86	75-135			
1,1-Dichloroethene	21.4	5.0	0.42	ug/l	25.0		86	70-130			
trans-1,2-Dichloroethene	22.4	2.0	0.27	ug/l	25.0		90	65-130			
1,2-Dichloropropane	22.8	2.0	0.35	ug/l	25.0		91	65-125			
cis-1,3-Dichloropropene	23.4	2.0	0.22	ug/l	25.0		94	70-130			
trans-1,3-Dichloropropene	22.9	2.0	0.32	ug/l	25.0		92	65-130			
Ethylbenzene	24.1	2.0	0.25	ug/l	25.0		96	70-125			
Ethylbenzene	24.1	2.0	0.25	ug/l	25.0		96	80-120			
Methylene chloride	21.1	5.0	0.51	ug/l	25.0		84	60-130			
1,1,2,2-Tetrachloroethane	21.8	2.0	0.24	ug/l	25.0		87	55-130			
Tetrachloroethene	23.1	2.0	0.32	ug/l	25.0		92	65-125			
Tetrachloroethene	23.1	2.0	0.32	ug/l	25.0		92	75-125			
Toluene	22.1	2.0	0.36	ug/l	25.0		88	70-125			
Toluene	22.1	2.0	0.36	ug/l	25.0		88	75-120			
1,1,1-Trichloroethane	21.8	2.0	0.30	ug/l	25.0		87	65-135			
1,1,1-Trichloroethane	21.8	2.0	0.30	ug/l	25.0		87	75-140			
1,1,2-Trichloroethane	20.8	2.0	0.30	ug/l	25.0		83	70-125			
1,1,2-Trichloroethane	20.8	2.0	0.30	ug/l	25.0		83	65-125			
Trichloroethene	22.5	2.0	0.26	ug/l	25.0		90	70-125			
Trichloroethene	22.5	5.0	0.26	ug/l	25.0		90	80-120			
Trichlorofluoromethane	17.2	5.0	0.34	ug/l	25.0		69	65-145			
Trichlorofluoromethane	17.2	5.0	0.34	ug/l	25.0		69	60-140			
Vinyl chloride	16.1	0.50	0.26	ug/l	25.0		64	50-130			
Vinyl chloride	16.1	5.0	0.26	ug/l	25.0		64	50-130			
Surrogate: Dibromofluoromethane	26.0			ug/l	25.0		104	80-120			
Surrogate: Dibromofluoromethane	26.0			ug/l	25.0		104	80-120			
Surrogate: Toluene-d8	26.2			ug/l	25.0		105	80-120			
Surrogate: Toluene-d8	26.2			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			

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 Attention: Bronwyn Kelly

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

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: 6A06021 Extracted: 01/06/06											
Matrix Spike Analyzed: 01/06/2006 (6A06021-MS1)						Source: IPA0193-02					
Benzene	25.4	2.0	0.28	ug/l	25.0	ND	102	70-120			
Benzene	25.4	1.0	0.28	ug/l	25.0	ND	102	60-125			
Bromodichloromethane	24.9	2.0	0.30	ug/l	25.0	ND	100	65-135			
Bromoform	19.5	5.0	0.32	ug/l	25.0	ND	78	50-135			
Bromomethane	25.6	5.0	0.42	ug/l	25.0	ND	102	50-145			
Carbon tetrachloride	25.9	0.50	0.28	ug/l	25.0	ND	104	65-140			
Carbon tetrachloride	25.9	5.0	0.28	ug/l	25.0	ND	104	70-145			
Chlorobenzene	24.4	2.0	0.36	ug/l	25.0	ND	98	70-125			
Chloroethane	25.6	5.0	0.33	ug/l	25.0	ND	102	50-140			
Chloroform	26.6	2.0	0.33	ug/l	25.0	2.1	98	65-135			
Chloroform	26.6	2.0	0.33	ug/l	25.0	2.1	98	70-135			
Chloromethane	21.1	5.0	0.30	ug/l	25.0	ND	84	35-140			
Dibromochloromethane	23.5	2.0	0.28	ug/l	25.0	ND	94	60-140			
1,2-Dichlorobenzene	24.9	2.0	0.32	ug/l	25.0	ND	100	70-125			
1,3-Dichlorobenzene	24.8	2.0	0.35	ug/l	25.0	ND	99	70-125			
1,4-Dichlorobenzene	24.1	2.0	0.37	ug/l	25.0	ND	96	70-125			
1,1-Dichloroethane	25.5	2.0	0.27	ug/l	25.0	ND	102	65-135			
1,1-Dichloroethane	25.5	2.0	0.27	ug/l	25.0	ND	102	60-130			
1,2-Dichloroethane	23.4	2.0	0.28	ug/l	25.0	ND	94	60-150			
1,2-Dichloroethane	23.4	0.50	0.28	ug/l	25.0	ND	94	60-140			
1,1-Dichloroethene	26.3	3.0	0.32	ug/l	25.0	ND	105	65-140			
1,1-Dichloroethene	26.3	5.0	0.42	ug/l	25.0	ND	105	60-135			
trans-1,2-Dichloroethene	26.6	2.0	0.27	ug/l	25.0	ND	106	60-135			
1,2-Dichloropropane	25.3	2.0	0.35	ug/l	25.0	ND	101	60-125			
cis-1,3-Dichloropropene	25.6	2.0	0.22	ug/l	25.0	ND	102	65-135			
trans-1,3-Dichloropropene	25.0	2.0	0.32	ug/l	25.0	ND	100	65-140			
Ethylbenzene	26.2	2.0	0.25	ug/l	25.0	ND	105	65-130			
Ethylbenzene	26.2	2.0	0.25	ug/l	25.0	ND	105	70-130			
Methylene chloride	24.8	5.0	0.51	ug/l	25.0	ND	99	55-130			
1,1,2,2-Tetrachloroethane	22.4	2.0	0.24	ug/l	25.0	ND	90	55-140			
Tetrachloroethene	28.5	2.0	0.32	ug/l	25.0	4.1	98	70-130			
Tetrachloroethene	28.5	2.0	0.32	ug/l	25.0	4.1	98	60-130			
Toluene	24.4	2.0	0.36	ug/l	25.0	ND	98	70-120			
Toluene	24.4	2.0	0.36	ug/l	25.0	ND	98	65-125			
1,1,1-Trichloroethane	25.6	2.0	0.30	ug/l	25.0	ND	102	75-140			

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A06021 Extracted: 01/06/06											
Matrix Spike Analyzed: 01/06/2006 (6A06021-MS1)						Source: IPA0193-02					
1,1,1-Trichloroethane	25.6	2.0	0.30	ug/l	25.0	ND	102	65-140			
1,1,2-Trichloroethane	21.6	2.0	0.30	ug/l	25.0	ND	86	60-130			
1,1,2-Trichloroethane	21.6	2.0	0.30	ug/l	25.0	ND	86	60-135			
Trichloroethene	65.8	5.0	0.26	ug/l	25.0	43	91	70-125			
Trichloroethene	65.8	2.0	0.26	ug/l	25.0	43	91	60-125			
Trichlorofluoromethane	23.6	5.0	0.34	ug/l	25.0	0.70	92	55-145			
Trichlorofluoromethane	23.6	5.0	0.34	ug/l	25.0	0.70	92	55-145			
Vinyl chloride	22.8	0.50	0.26	ug/l	25.0	ND	91	40-135			
Vinyl chloride	22.8	5.0	0.26	ug/l	25.0	ND	91	40-135			
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.2			ug/l	25.0		105	80-120			
Surrogate: Toluene-d8	26.2			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	26.6			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.6			ug/l	25.0		106	80-120			
Matrix Spike Dup Analyzed: 01/06/2006 (6A06021-MSD1)						Source: IPA0193-02					
Benzene	25.0	1.0	0.28	ug/l	25.0	ND	100	60-125	2	20	
Benzene	25.0	2.0	0.28	ug/l	25.0	ND	100	70-120	2	20	
Bromodichloromethane	24.1	2.0	0.30	ug/l	25.0	ND	96	65-135	3	20	
Bromoform	19.2	5.0	0.32	ug/l	25.0	ND	77	50-135	2	25	
Bromomethane	25.4	5.0	0.42	ug/l	25.0	ND	102	50-145	1	25	
Carbon tetrachloride	25.5	0.50	0.28	ug/l	25.0	ND	102	65-140	2	25	
Carbon tetrachloride	25.5	5.0	0.28	ug/l	25.0	ND	102	70-145	2	25	
Chlorobenzene	24.1	2.0	0.36	ug/l	25.0	ND	96	70-125	1	20	
Chloroethane	25.7	5.0	0.33	ug/l	25.0	ND	103	50-140	0	25	
Chloroform	26.2	2.0	0.33	ug/l	25.0	2.1	96	70-135	2	20	
Chloroform	26.2	2.0	0.33	ug/l	25.0	2.1	96	65-135	2	20	
Chloromethane	21.1	5.0	0.30	ug/l	25.0	ND	84	35-140	0	25	
Dibromochloromethane	23.4	2.0	0.28	ug/l	25.0	ND	94	60-140	0	25	
1,2-Dichlorobenzene	24.4	2.0	0.32	ug/l	25.0	ND	98	70-125	2	20	
1,3-Dichlorobenzene	24.6	2.0	0.35	ug/l	25.0	ND	98	70-125	1	20	
1,4-Dichlorobenzene	23.5	2.0	0.37	ug/l	25.0	ND	94	70-125	3	20	
1,1-Dichloroethane	25.1	2.0	0.27	ug/l	25.0	ND	100	60-130	2	20	
1,1-Dichloroethane	25.1	2.0	0.27	ug/l	25.0	ND	100	65-135	2	20	
1,2-Dichloroethane	22.6	2.0	0.28	ug/l	25.0	ND	90	60-150	3	20	

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

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: 6A06021 Extracted: 01/06/06											
Matrix Spike Dup Analyzed: 01/06/2006 (6A06021-MSD1)						Source: IPA0193-02					
1,2-Dichloroethane	22.6	0.50	0.28	ug/l	25.0	ND	90	60-140	3	20	
1,1-Dichloroethene	25.5	3.0	0.32	ug/l	25.0	ND	102	65-140	3	20	
1,1-Dichloroethene	25.5	5.0	0.42	ug/l	25.0	ND	102	60-135	3	20	
trans-1,2-Dichloroethene	26.1	2.0	0.27	ug/l	25.0	ND	104	60-135	2	20	
1,2-Dichloropropane	25.0	2.0	0.35	ug/l	25.0	ND	100	60-125	1	20	
cis-1,3-Dichloropropene	24.9	2.0	0.22	ug/l	25.0	ND	100	65-135	3	20	
trans-1,3-Dichloropropene	24.3	2.0	0.32	ug/l	25.0	ND	97	65-140	3	25	
Ethylbenzene	25.9	2.0	0.25	ug/l	25.0	ND	104	70-130	1	20	
Ethylbenzene	25.9	2.0	0.25	ug/l	25.0	ND	104	65-130	1	20	
Methylene chloride	24.0	5.0	0.51	ug/l	25.0	ND	96	55-130	3	20	
1,1,2,2-Tetrachloroethane	21.7	2.0	0.24	ug/l	25.0	ND	87	55-140	3	30	
Tetrachloroethene	28.3	2.0	0.32	ug/l	25.0	4.1	97	60-130	1	20	
Tetrachloroethene	28.3	2.0	0.32	ug/l	25.0	4.1	97	70-130	1	20	
Toluene	24.2	2.0	0.36	ug/l	25.0	ND	97	70-120	1	20	
Toluene	24.2	2.0	0.36	ug/l	25.0	ND	97	65-125	1	20	
1,1,1-Trichloroethane	25.0	2.0	0.30	ug/l	25.0	ND	100	75-140	2	20	
1,1,1-Trichloroethane	25.0	2.0	0.30	ug/l	25.0	ND	100	65-140	2	20	
1,1,2-Trichloroethane	21.5	2.0	0.30	ug/l	25.0	ND	86	60-135	1	25	
1,1,2-Trichloroethane	21.5	2.0	0.30	ug/l	25.0	ND	86	60-130	1	25	
Trichloroethene	63.2	2.0	0.26	ug/l	25.0	43	81	60-125	4	20	
Trichloroethene	63.2	5.0	0.26	ug/l	25.0	43	81	70-125	4	20	
Trichlorofluoromethane	22.5	5.0	0.34	ug/l	25.0	0.70	87	55-145	5	25	
Trichlorofluoromethane	22.5	5.0	0.34	ug/l	25.0	0.70	87	55-145	5	25	
Vinyl chloride	22.2	5.0	0.26	ug/l	25.0	ND	89	40-135	3	30	
Vinyl chloride	22.2	0.50	0.26	ug/l	25.0	ND	89	40-135	3	30	
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Dibromofluoromethane	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.2			ug/l	25.0		105	80-120			
Surrogate: Toluene-d8	26.2			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	26.2			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	26.2			ug/l	25.0		105	80-120			

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A06021 Extracted: 01/06/06										
Blank Analyzed: 01/06/2006 (6A06021-BLK1)										
Cyclohexane	ND	2.5	N/A	ug/l						
1,2-Dichloro-1,1,2-trifluoroethane	ND	2.5	N/A	ug/l						

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: LARWQCB Sample Splits Outfall 002 Report Number: IPA0101	Sampled: 01/03/06 Received: 01/03/06
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METHOD BLANK/QC DATA

SEMI-VOL ORGANICS by GC/MS-CHEMICAL IONIZATION (EPA 3520C/1625C-CI MOD)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A08026 Extracted: 01/08/06											
Blank Analyzed: 01/09/2006 (6A08026-BLK1)											
N-Nitrosodimethylamine	0.000730	0.0020	0.00020	ug/l							J
LCS Analyzed: 01/09/2006 (6A08026-BS1)											
N-Nitrosodimethylamine	0.0105	0.0020	0.00020	ug/l	0.0100		105	70-130			M-NR1
LCS Analyzed: 01/09/2006 (6A08026-BS2)											
N-Nitrosodimethylamine	0.00226	0.0020	0.00020	ug/l	0.00200		113	70-130			
LCS Dup Analyzed: 01/09/2006 (6A08026-BSD1)											
N-Nitrosodimethylamine	0.0112	0.0020	0.00020	ug/l	0.0100		112	70-130	6	20	

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 Outfall 002
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 Received: 01/03/06

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A08028 Extracted: 01/08/06											
Blank Analyzed: 01/11/2006 (6A08028-BLK1)											
Acenaphthene	ND	0.50	0.10	ug/l							
Acenaphthylene	ND	0.50	0.10	ug/l							
Aniline	ND	10	2.9	ug/l							
Anthracene	ND	0.50	0.083	ug/l							
Benzidine	ND	5.0	2.4	ug/l							
Benzoic acid	ND	20	3.7	ug/l							
Benzo(a)anthracene	ND	5.0	0.038	ug/l							
Benzo(a)pyrene	ND	2.0	0.14	ug/l							
Benzo(b)fluoranthene	ND	2.0	0.050	ug/l							
Benzo(g,h,i)perylene	ND	5.0	0.059	ug/l							
Benzo(k)fluoranthene	ND	0.50	0.053	ug/l							
Benzyl alcohol	ND	5.0	0.21	ug/l							
Bis(2-chloroethoxy)methane	ND	0.50	0.072	ug/l							
Bis(2-chloroethyl)ether	ND	0.50	0.084	ug/l							
Bis(2-chloroisopropyl)ether	ND	0.50	0.11	ug/l							
Bis(2-ethylhexyl)phthalate	2.00	5.0	1.1	ug/l							J
4-Bromophenyl phenyl ether	ND	1.0	0.12	ug/l							
Butyl benzyl phthalate	0.780	5.0	0.34	ug/l							J
4-Chloroaniline	ND	2.0	0.20	ug/l							
2-Chloronaphthalene	ND	0.50	0.059	ug/l							
4-Chloro-3-methylphenol	ND	2.0	0.34	ug/l							
4-Chlorophenyl phenyl ether	ND	0.50	0.056	ug/l							
2-Chlorophenol	ND	1.0	0.12	ug/l							
Chrysene	ND	0.50	0.072	ug/l							
Dibenz(a,h)anthracene	0.540	0.50	0.083	ug/l							B
Dibenzofuran	ND	0.50	0.075	ug/l							
Di-n-butyl phthalate	ND	2.0	0.26	ug/l							
1,2-Dichlorobenzene	ND	0.50	0.11	ug/l							
1,3-Dichlorobenzene	ND	0.50	0.13	ug/l							
1,4-Dichlorobenzene	ND	0.50	0.050	ug/l							
3,3-Dichlorobenzidine	ND	5.0	0.93	ug/l							
2,4-Dichlorophenol	ND	2.0	0.21	ug/l							
Diethyl phthalate	0.540	1.0	0.12	ug/l							J
2,4-Dimethylphenol	ND	2.0	0.31	ug/l							
Dimethyl phthalate	ND	0.50	0.081	ug/l							

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MWH-Pasadena/Boeing
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 Attention: Bronwyn Kelly

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

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	RPD Limit	Data Qualifiers
Batch: 6A08028 Extracted: 01/08/06										
Blank Analyzed: 01/11/2006 (6A08028-BLK1)										
4,6-Dinitro-2-methylphenol	ND	5.0	0.38	ug/l						
2,4-Dinitrophenol	ND	5.0	2.7	ug/l						
2,4-Dinitrotoluene	ND	5.0	0.23	ug/l						
2,6-Dinitrotoluene	ND	5.0	0.24	ug/l						
Di-n-octyl phthalate	ND	5.0	0.17	ug/l						
1,2-Diphenylhydrazine/Azobenzene	ND	1.0	0.087	ug/l						
Fluoranthene	ND	0.50	0.089	ug/l						
Fluorene	ND	0.50	0.075	ug/l						
Hexachlorobenzene	ND	1.0	0.13	ug/l						
Hexachlorobutadiene	ND	2.0	0.38	ug/l						
Hexachlorocyclopentadiene	ND	5.0	1.8	ug/l						
Hexachloroethane	ND	3.0	0.51	ug/l						
Indeno(1,2,3-cd)pyrene	ND	2.0	0.19	ug/l						
Isophorone	ND	1.0	0.059	ug/l						
2-Methylnaphthalene	ND	1.0	0.13	ug/l						
2-Methylphenol	ND	2.0	0.28	ug/l						
4-Methylphenol	ND	5.0	0.20	ug/l						
Naphthalene	ND	1.0	0.13	ug/l						
2-Nitroaniline	ND	5.0	0.18	ug/l						
3-Nitroaniline	ND	5.0	0.35	ug/l						
4-Nitroaniline	ND	5.0	0.49	ug/l						
Nitrobenzene	ND	1.0	0.10	ug/l						
2-Nitrophenol	ND	2.0	0.23	ug/l						
4-Nitrophenol	ND	5.0	0.73	ug/l						
N-Nitrosodimethylamine	ND	2.0	0.22	ug/l						
N-Nitroso-di-n-propylamine	ND	2.0	0.18	ug/l						
N-Nitrosodiphenylamine	ND	1.0	0.077	ug/l						
Pentachlorophenol	ND	2.0	0.78	ug/l						
Phenanthrene	ND	0.50	0.071	ug/l						
Phenol	ND	1.0	0.14	ug/l						
Pyrene	ND	0.50	0.059	ug/l						
1,2,4-Trichlorobenzene	ND	1.0	0.10	ug/l						
2,4,5-Trichlorophenol	ND	2.0	0.075	ug/l						
2,4,6-Trichlorophenol	ND	1.0	0.10	ug/l						
Surrogate: 2-Fluorophenol	11.4			ug/l	20.0		57	35-120		

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 Attention: Bronwyn Kelly

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

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: 6A08028 Extracted: 01/08/06											
Blank Analyzed: 01/11/2006 (6A08028-BLK1)											
Surrogate: Phenol-d6	12.6			ug/l	20.0		63	45-120			
Surrogate: 2,4,6-Tribromophenol	16.1			ug/l	20.0		80	50-125			
Surrogate: Nitrobenzene-d5	6.18			ug/l	10.0		62	45-120			
Surrogate: 2-Fluorobiphenyl	6.58			ug/l	10.0		66	45-120			
Surrogate: Terphenyl-d14	6.96			ug/l	10.0		70	45-135			
LCS Analyzed: 01/11/2006 (6A08028-BS1)											
Acenaphthene	7.62	0.50	0.10	ug/l	10.0		76	55-120			
Acenaphthylene	8.16	0.50	0.10	ug/l	10.0		82	55-120			
Aniline	6.36	10	2.9	ug/l	10.0		64	30-120			J
Anthracene	8.30	0.50	0.083	ug/l	10.0		83	60-120			
Benzidine	5.88	5.0	2.4	ug/l	10.0		59	20-180			
Benzoic acid	10.6	20	3.7	ug/l	10.0		106	30-125			J
Benzo(a)anthracene	8.58	5.0	0.038	ug/l	10.0		86	65-120			
Benzo(a)pyrene	8.80	2.0	0.14	ug/l	10.0		88	55-125			
Benzo(b)fluoranthene	8.38	2.0	0.050	ug/l	10.0		84	50-125			
Benzo(g,h,i)perylene	9.46	5.0	0.059	ug/l	10.0		95	35-160			
Benzo(k)fluoranthene	8.12	0.50	0.053	ug/l	10.0		81	50-125			
Benzyl alcohol	7.22	5.0	0.21	ug/l	10.0		72	40-130			
Bis(2-chloroethoxy)methane	7.22	0.50	0.072	ug/l	10.0		72	55-120			
Bis(2-chloroethyl)ether	6.66	0.50	0.084	ug/l	10.0		67	50-120			
Bis(2-chloroisopropyl)ether	6.98	0.50	0.11	ug/l	10.0		70	50-120			
Bis(2-ethylhexyl)phthalate	9.58	5.0	1.1	ug/l	10.0		96	65-125			
4-Bromophenyl phenyl ether	7.60	1.0	0.12	ug/l	10.0		76	55-125			
Butyl benzyl phthalate	9.00	5.0	0.34	ug/l	10.0		90	60-125			
4-Chloroaniline	6.32	2.0	0.20	ug/l	10.0		63	55-120			
2-Chloronaphthalene	7.04	0.50	0.059	ug/l	10.0		70	60-120			
4-Chloro-3-methylphenol	8.36	2.0	0.34	ug/l	10.0		84	60-120			
4-Chlorophenyl phenyl ether	7.82	0.50	0.056	ug/l	10.0		78	55-120			
2-Chlorophenol	6.94	1.0	0.12	ug/l	10.0		69	45-120			
Chrysene	8.28	0.50	0.072	ug/l	10.0		83	65-120			
Dibenz(a,h)anthracene	7.56	0.50	0.083	ug/l	10.0		76	40-160			
Dibenzofuran	7.32	0.50	0.075	ug/l	10.0		73	60-120			
Di-n-butyl phthalate	9.48	2.0	0.26	ug/l	10.0		95	65-125			
1,2-Dichlorobenzene	5.76	0.50	0.11	ug/l	10.0		58	40-120			
1,3-Dichlorobenzene	5.40	0.50	0.13	ug/l	10.0		54	40-120			

M-NRI

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 Michele Chamberlin
 Project Manager

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: LARWQCB Sample Splits Outfall 002 Report Number: IPA0101	Sampled: 01/03/06 Received: 01/03/06
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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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A08028 Extracted: 01/08/06										
LCS Analyzed: 01/11/2006 (6A08028-BS1)										
1,4-Dichlorobenzene	5.62	0.50	0.050	ug/l	10.0		56 40-120			
3,3-Dichlorobenzidine	9.16	5.0	0.93	ug/l	10.0		92 50-170			
2,4-Dichlorophenol	7.34	2.0	0.21	ug/l	10.0		73 55-120			
Diethyl phthalate	7.20	1.0	0.12	ug/l	10.0		72 60-120			
2,4-Dimethylphenol	4.88	2.0	0.31	ug/l	10.0		49 35-120			
Dimethyl phthalate	4.10	0.50	0.081	ug/l	10.0		41 30-120			
4,6-Dinitro-2-methylphenol	8.54	5.0	0.38	ug/l	10.0		85 55-120			
2,4-Dinitrophenol	9.22	5.0	2.7	ug/l	10.0		92 40-140			
2,4-Dinitrotoluene	7.76	5.0	0.23	ug/l	10.0		78 60-140			
2,6-Dinitrotoluene	8.26	5.0	0.24	ug/l	10.0		83 65-125			
Di-n-octyl phthalate	10.2	5.0	0.17	ug/l	10.0		102 60-130			
1,2-Diphenylhydrazine/Azobenzene	7.44	1.0	0.087	ug/l	10.0		74 60-120			
Fluoranthene	8.92	0.50	0.089	ug/l	10.0		89 55-125			
Fluorene	7.88	0.50	0.075	ug/l	10.0		79 60-120			
Hexachlorobenzene	7.38	1.0	0.13	ug/l	10.0		74 50-120			
Hexachlorobutadiene	6.14	2.0	0.38	ug/l	10.0		61 45-120			
Hexachlorocyclopentadiene	3.96	5.0	1.8	ug/l	10.0		40 10-130			J
Hexachloroethane	5.34	3.0	0.51	ug/l	10.0		53 40-120			
Indeno(1,2,3-cd)pyrene	8.50	2.0	0.19	ug/l	10.0		85 35-150			
Isophorone	9.18	1.0	0.059	ug/l	10.0		92 55-120			
2-Methylnaphthalene	7.38	1.0	0.13	ug/l	10.0		74 50-120			
2-Methylphenol	6.76	2.0	0.28	ug/l	10.0		68 45-120			
4-Methylphenol	6.82	5.0	0.20	ug/l	10.0		68 45-120			
Naphthalene	6.60	1.0	0.13	ug/l	10.0		66 50-120			
2-Nitroaniline	7.70	5.0	0.18	ug/l	10.0		77 60-130			
3-Nitroaniline	7.36	5.0	0.35	ug/l	10.0		74 50-140			
4-Nitroaniline	8.04	5.0	0.49	ug/l	10.0		80 45-160			
Nitrobenzene	6.98	1.0	0.10	ug/l	10.0		70 50-120			
2-Nitrophenol	7.08	2.0	0.23	ug/l	10.0		71 55-120			
4-Nitrophenol	9.56	5.0	0.73	ug/l	10.0		96 50-135			
N-Nitrosodimethylamine	6.32	2.0	0.22	ug/l	10.0		63 40-120			
N-Nitroso-di-n-propylamine	7.88	2.0	0.18	ug/l	10.0		79 50-120			
N-Nitrosodiphenylamine	7.88	1.0	0.077	ug/l	10.0		79 60-120			
Pentachlorophenol	10.1	2.0	0.78	ug/l	10.0		101 50-125			
Phenanthrene	8.00	0.50	0.071	ug/l	10.0		80 55-120			

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

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: 6A08028 Extracted: 01/08/06											
LCS Analyzed: 01/11/2006 (6A08028-BS1)											
Phenol	7.36	1.0	0.14	ug/l	10.0		74	45-120			
Pyrene	7.84	0.50	0.059	ug/l	10.0		78	50-120			
1,2,4-Trichlorobenzene	6.28	1.0	0.10	ug/l	10.0		63	50-120			
2,4,5-Trichlorophenol	8.02	2.0	0.075	ug/l	10.0		80	60-120			
2,4,6-Trichlorophenol	8.10	1.0	0.10	ug/l	10.0		81	60-120			
Surrogate: 2-Fluorophenol	12.9			ug/l	20.0		64	35-120			
Surrogate: Phenol-d6	14.1			ug/l	20.0		70	45-120			
Surrogate: 2,4,6-Tribromophenol	15.9			ug/l	20.0		80	50-125			
Surrogate: Nitrobenzene-d5	6.86			ug/l	10.0		69	45-120			
Surrogate: 2-Fluorobiphenyl	7.26			ug/l	10.0		73	45-120			
Surrogate: Terphenyl-d14	7.12			ug/l	10.0		71	45-135			
LCS Dup Analyzed: 01/11/2006 (6A08028-BSD1)											
Acenaphthene	6.82	0.50	0.10	ug/l	10.0		68	55-120	11	20	
Acenaphthylene	7.30	0.50	0.10	ug/l	10.0		73	55-120	11	20	
Aniline	6.06	10	2.9	ug/l	10.0		61	30-120	5	25	J
Anthracene	7.74	0.50	0.083	ug/l	10.0		77	60-120	7	20	
Benzidine	6.62	5.0	2.4	ug/l	10.0		66	20-180	12	35	
Benzoic acid	12.3	20	3.7	ug/l	10.0		123	30-125	15	30	J
Benzo(a)anthracene	8.12	5.0	0.038	ug/l	10.0		81	65-120	6	20	
Benzo(a)pyrene	8.48	2.0	0.14	ug/l	10.0		85	55-125	4	25	
Benzo(b)fluoranthene	7.98	2.0	0.050	ug/l	10.0		80	50-125	5	25	
Benzo(g,h,i)perylene	8.62	5.0	0.059	ug/l	10.0		86	35-160	9	25	
Benzo(k)fluoranthene	7.52	0.50	0.053	ug/l	10.0		75	50-125	8	20	
Benzyl alcohol	6.50	5.0	0.21	ug/l	10.0		65	40-130	10	20	
Bis(2-chloroethoxy)methane	6.66	0.50	0.072	ug/l	10.0		67	55-120	8	20	
Bis(2-chloroethyl)ether	6.02	0.50	0.084	ug/l	10.0		60	50-120	10	20	
Bis(2-chloroisopropyl)ether	6.28	0.50	0.11	ug/l	10.0		63	50-120	11	20	
Bis(2-ethylhexyl)phthalate	10.0	5.0	1.1	ug/l	10.0		100	65-125	4	20	
4-Bromophenyl phenyl ether	7.00	1.0	0.12	ug/l	10.0		70	55-125	8	25	
Butyl benzyl phthalate	8.88	5.0	0.34	ug/l	10.0		89	60-125	1	20	
4-Chloroaniline	5.86	2.0	0.20	ug/l	10.0		59	55-120	8	25	
2-Chloronaphthalene	6.34	0.50	0.059	ug/l	10.0		63	60-120	10	20	
4-Chloro-3-methylphenol	8.06	2.0	0.34	ug/l	10.0		81	60-120	4	25	
4-Chlorophenyl phenyl ether	7.12	0.50	0.056	ug/l	10.0		71	55-120	9	20	
2-Chlorophenol	6.44	1.0	0.12	ug/l	10.0		64	45-120	7	25	

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A08028 Extracted: 01/08/06											
LCS Dup Analyzed: 01/11/2006 (6A08028-BSD1)											
Chrysene	7.84	0.50	0.072	ug/l	10.0		78	65-120	5	20	
Dibenz(a,h)anthracene	6.78	0.50	0.083	ug/l	10.0		68	40-160	11	25	
Dibenzofuran	6.54	0.50	0.075	ug/l	10.0		65	60-120	11	20	
Di-n-butyl phthalate	9.28	2.0	0.26	ug/l	10.0		93	65-125	2	20	
1,2-Dichlorobenzene	5.20	0.50	0.11	ug/l	10.0		52	40-120	10	25	
1,3-Dichlorobenzene	5.12	0.50	0.13	ug/l	10.0		51	40-120	5	25	
1,4-Dichlorobenzene	5.34	0.50	0.050	ug/l	10.0		53	40-120	5	25	
3,3-Dichlorobenzidine	8.84	5.0	0.93	ug/l	10.0		88	50-170	4	25	
2,4-Dichlorophenol	6.80	2.0	0.21	ug/l	10.0		68	55-120	8	20	
Diethyl phthalate	6.46	1.0	0.12	ug/l	10.0		65	60-120	11	20	
2,4-Dimethylphenol	5.44	2.0	0.31	ug/l	10.0		54	35-120	11	25	
Dimethyl phthalate	3.92	0.50	0.081	ug/l	10.0		39	30-120	4	20	
4,6-Dinitro-2-methylphenol	8.40	5.0	0.38	ug/l	10.0		84	55-120	2	25	
2,4-Dinitrophenol	9.02	5.0	2.7	ug/l	10.0		90	40-140	2	25	
2,4-Dinitrotoluene	7.16	5.0	0.23	ug/l	10.0		72	60-140	8	20	
2,6-Dinitrotoluene	7.20	5.0	0.24	ug/l	10.0		72	65-125	14	20	
Di-n-octyl phthalate	9.94	5.0	0.17	ug/l	10.0		99	60-130	3	20	
1,2-Diphenylhydrazine/Azobenzene	6.82	1.0	0.087	ug/l	10.0		68	60-120	9	25	
Fluoranthene	8.84	0.50	0.089	ug/l	10.0		88	55-125	1	20	
Fluorene	7.16	0.50	0.075	ug/l	10.0		72	60-120	10	20	
Hexachlorobenzene	6.98	1.0	0.13	ug/l	10.0		70	50-120	6	20	
Hexachlorobutadiene	5.58	2.0	0.38	ug/l	10.0		56	45-120	10	25	
Hexachlorocyclopentadiene	4.76	5.0	1.8	ug/l	10.0		48	10-130	18	30	J
Hexachloroethane	5.06	3.0	0.51	ug/l	10.0		51	40-120	5	25	
Indeno(1,2,3-cd)pyrene	8.14	2.0	0.19	ug/l	10.0		81	35-150	4	25	
Isophorone	8.24	1.0	0.059	ug/l	10.0		82	55-120	11	20	
2-Methylnaphthalene	6.68	1.0	0.13	ug/l	10.0		67	50-120	10	20	
2-Methylphenol	6.22	2.0	0.28	ug/l	10.0		62	45-120	8	20	
4-Methylphenol	6.32	5.0	0.20	ug/l	10.0		63	45-120	8	20	
Naphthalene	5.98	1.0	0.13	ug/l	10.0		60	50-120	10	20	
2-Nitroaniline	7.30	5.0	0.18	ug/l	10.0		73	60-130	5	20	
3-Nitroaniline	6.70	5.0	0.35	ug/l	10.0		67	50-140	9	25	
4-Nitroaniline	7.40	5.0	0.49	ug/l	10.0		74	45-160	8	20	
Nitrobenzene	6.30	1.0	0.10	ug/l	10.0		63	50-120	10	25	
2-Nitrophenol	6.74	2.0	0.23	ug/l	10.0		67	55-120	5	25	

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

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: 6A08028 Extracted: 01/08/06											
LCS Dup Analyzed: 01/11/2006 (6A08028-BSD1)											
4-Nitrophenol	9.36	5.0	0.73	ug/l	10.0		94	50-135	2	25	
N-Nitrosodimethylamine	6.08	2.0	0.22	ug/l	10.0		61	40-120	4	20	
N-Nitroso-di-n-propylamine	6.96	2.0	0.18	ug/l	10.0		70	50-120	12	20	
N-Nitrosodiphenylamine	7.36	1.0	0.077	ug/l	10.0		74	60-120	7	20	
Pentachlorophenol	10.5	2.0	0.78	ug/l	10.0		105	50-125	4	25	
Phenanthrene	7.44	0.50	0.071	ug/l	10.0		74	55-120	7	20	
Phenol	6.74	1.0	0.14	ug/l	10.0		67	45-120	9	25	
Pyrene	7.38	0.50	0.059	ug/l	10.0		74	50-120	6	25	
1,2,4-Trichlorobenzene	5.70	1.0	0.10	ug/l	10.0		57	50-120	10	20	
2,4,5-Trichlorophenol	7.76	2.0	0.075	ug/l	10.0		78	60-120	3	20	
2,4,6-Trichlorophenol	7.98	1.0	0.10	ug/l	10.0		80	60-120	1	20	
Surrogate: 2-Fluorophenol	12.5			ug/l	20.0		62	35-120			
Surrogate: Phenol-d6	12.8			ug/l	20.0		64	45-120			
Surrogate: 2,4,6-Tribromophenol	15.8			ug/l	20.0		79	50-125			
Surrogate: Nitrobenzene-d5	6.34			ug/l	10.0		63	45-120			
Surrogate: 2-Fluorobiphenyl	6.40			ug/l	10.0		64	45-120			
Surrogate: Terphenyl-d14	6.68			ug/l	10.0		67	45-135			

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 Attention: Bronwyn Kelly

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METHOD BLANK/QC DATA

TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6A07025 Extracted: 01/07/06											
Blank Analyzed: 01/09/2006 (6A07025-BLK1)											
Aroclor 1016	ND	1.0	0.20	ug/l							
Aroclor 1221	ND	1.0	0.10	ug/l							
Aroclor 1232	ND	1.0	0.25	ug/l							
Aroclor 1242	ND	1.0	0.25	ug/l							
Aroclor 1248	ND	1.0	0.25	ug/l							
Aroclor 1254	ND	1.0	0.25	ug/l							
Aroclor 1260	ND	1.0	0.40	ug/l							
Surrogate: Decachlorobiphenyl	0.431			ug/l	0.500		86	45-120			
LCS Analyzed: 01/09/2006 (6A07025-BS2)											
Aroclor 1016	3.95	1.0	0.20	ug/l	4.00		99	45-115			M-NR1
Aroclor 1260	4.08	1.0	0.40	ug/l	4.00		102	55-115			
Surrogate: Decachlorobiphenyl	0.451			ug/l	0.500		90	45-120			
LCS Dup Analyzed: 01/09/2006 (6A07025-BSD2)											
Aroclor 1016	3.90	1.0	0.20	ug/l	4.00		98	45-115	1	30	
Aroclor 1260	4.06	1.0	0.40	ug/l	4.00		102	55-115	1	25	
Surrogate: Decachlorobiphenyl	0.450			ug/l	0.500		90	45-120			

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A04080 Extracted: 01/04/06											
Blank Analyzed: 01/04/2006 (6A04080-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 01/04/2006 (6A04080-BS1)											
Mercury	8.40	0.20	0.050	ug/l	8.00		105	85-115			
Matrix Spike Analyzed: 01/04/2006 (6A04080-MS1)											
						Source: IPA0079-01					
Mercury	8.03	0.20	0.050	ug/l	8.00	ND	100	70-130			
Matrix Spike Dup Analyzed: 01/04/2006 (6A04080-MSD1)											
						Source: IPA0079-01					
Mercury	8.17	0.20	0.050	ug/l	8.00	ND	102	70-130	2	20	
Batch: 6A04091 Extracted: 01/04/06											
Blank Analyzed: 01/05/2006-01/06/2006 (6A04091-BLK1)											
Antimony	0.242	2.0	0.18	ug/l							J
Arsenic	ND	1.0	0.50	ug/l							J
Barium	0.000310	0.0010	0.00015	mg/l							J
Beryllium	ND	0.50	0.075	ug/l							
Cadmium	ND	1.0	0.015	ug/l							
Cobalt	ND	1.0	0.035	ug/l							
Copper	ND	1.0	0.25	ug/l							
Lead	ND	1.0	0.13	ug/l							
Molybdenum	0.394	2.0	0.15	ug/l							J
Nickel	1.06	2.0	0.35	ug/l							J
Selenium	ND	2.0	0.36	ug/l							
Thallium	0.0800	1.0	0.075	ug/l							J
Vanadium	ND	2.0	0.70	ug/l							
Zinc	ND	10	1.0	ug/l							

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A04091 Extracted: 01/04/06											
LCS Analyzed: 01/05/2006 (6A04091-BS1)											
Antimony	86.9	2.0	0.18	ug/l	80.0		109	85-115			
Arsenic	84.2	1.0	0.50	ug/l	80.0		105	85-115			
Barium	0.0840	0.0010	0.00015	mg/l	0.0800		105	85-115			
Beryllium	79.6	0.50	0.075	ug/l	80.0		100	85-115			
Cadmium	83.4	1.0	0.015	ug/l	80.0		104	85-115			
Cobalt	88.5	1.0	0.035	ug/l	80.0		111	85-115			
Copper	90.3	1.0	0.25	ug/l	80.0		113	85-115			
Lead	86.8	1.0	0.13	ug/l	80.0		108	85-115			
Molybdenum	81.0	2.0	0.15	ug/l	80.0		101	85-115			
Nickel	88.7	2.0	0.35	ug/l	80.0		111	85-115			
Selenium	79.3	2.0	0.36	ug/l	80.0		99	85-115			
Thallium	87.3	1.0	0.075	ug/l	80.0		109	85-115			
Vanadium	81.7	2.0	0.70	ug/l	80.0		102	85-115			
Zinc	87.7	10	1.0	ug/l	80.0		110	85-115			
Matrix Spike Analyzed: 01/05/2006 (6A04091-MS1)											
						Source: IPA0032-01					
Antimony	74.7	2.0	0.18	ug/l	80.0	0.24	93	70-130			
Arsenic	70.8	1.0	0.50	ug/l	80.0	ND	88	70-130			
Barium	0.0797	0.0010	0.00015	mg/l	0.0800	0.0060	92	70-130			
Beryllium	65.4	0.50	0.075	ug/l	80.0	ND	82	70-130			
Cadmium	70.2	1.0	0.015	ug/l	80.0	ND	88	70-130			
Cobalt	73.6	1.0	0.035	ug/l	80.0	0.25	92	70-130			
Copper	79.6	1.0	0.25	ug/l	80.0	7.7	90	70-130			
Lead	73.1	1.0	0.13	ug/l	80.0	4.1	86	70-130			
Molybdenum	71.4	2.0	0.15	ug/l	80.0	0.46	89	70-130			
Nickel	70.5	2.0	0.35	ug/l	80.0	ND	88	70-130			
Selenium	65.4	2.0	0.36	ug/l	80.0	1.1	80	70-130			
Thallium	70.0	1.0	0.075	ug/l	80.0	ND	88	70-130			
Vanadium	72.1	2.0	0.70	ug/l	80.0	0.76	89	70-130			
Zinc	769	10	1.0	ug/l	80.0	730	49	70-130			M-HA

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MWH-Pasadena/Boeing
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 Attention: Bronwyn Kelly

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 6A04091 Extracted: 01/04/06

Matrix Spike Analyzed: 01/05/2006 (6A04091-MS2)

Source: IPA0101-01

Antimony	84.1	2.0	0.18	ug/l	80.0	0.64	104	70-130			
Arsenic	81.2	1.0	0.50	ug/l	80.0	1.9	99	70-130			
Barium	0.133	0.0010	0.00015	mg/l	0.0800	0.048	106	70-130			
Beryllium	77.9	0.50	0.075	ug/l	80.0	ND	97	70-130			
Cadmium	79.0	1.0	0.015	ug/l	80.0	0.034	99	70-130			
Cobalt	82.3	1.0	0.035	ug/l	80.0	0.39	102	70-130			
Copper	84.1	1.0	0.25	ug/l	80.0	8.5	94	70-130			
Lead	79.7	1.0	0.13	ug/l	80.0	0.50	99	70-130			
Molybdenum	82.2	2.0	0.15	ug/l	80.0	2.9	99	70-130			
Nickel	81.5	2.0	0.35	ug/l	80.0	0.80	101	70-130			
Selenium	77.1	2.0	0.36	ug/l	80.0	0.77	95	70-130			
Thallium	80.0	1.0	0.075	ug/l	80.0	ND	100	70-130			
Vanadium	82.7	2.0	0.70	ug/l	80.0	2.3	100	70-130			
Zinc	87.3	10	1.0	ug/l	80.0	9.7	97	70-130			

Matrix Spike Dup Analyzed: 01/05/2006 (6A04091-MSD1)

Source: IPA0032-01

Antimony	85.3	2.0	0.18	ug/l	80.0	0.24	106	70-130	13	20	
Arsenic	80.8	1.0	0.50	ug/l	80.0	ND	101	70-130	13	20	
Barium	0.0914	0.0010	0.00015	mg/l	0.0800	0.0060	107	70-130	14	20	
Beryllium	75.9	0.50	0.075	ug/l	80.0	ND	95	70-130	15	20	
Cadmium	79.0	1.0	0.015	ug/l	80.0	ND	99	70-130	12	20	
Cobalt	83.3	1.0	0.035	ug/l	80.0	0.25	104	70-130	12	20	
Copper	87.5	1.0	0.25	ug/l	80.0	7.7	100	70-130	9	20	
Lead	83.3	1.0	0.13	ug/l	80.0	4.1	99	70-130	13	20	
Molybdenum	81.4	2.0	0.15	ug/l	80.0	0.46	101	70-130	13	20	
Nickel	79.3	2.0	0.35	ug/l	80.0	ND	99	70-130	12	20	
Selenium	74.6	2.0	0.36	ug/l	80.0	1.1	92	70-130	13	20	
Thallium	79.9	1.0	0.075	ug/l	80.0	ND	100	70-130	13	20	
Vanadium	84.2	2.0	0.70	ug/l	80.0	0.76	104	70-130	15	20	
Zinc	795	10	1.0	ug/l	80.0	730	81	70-130	3	20	M-HA

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 6A04092 Extracted: 01/04/06

Blank Analyzed: 01/05/2006 (6A04092-BLK1)

Boron	ND	0.050	0.0080	mg/l							
Calcium	ND	0.10	0.040	mg/l							
Chromium	1.63	5.0	0.68	ug/l							J
Magnesium	0.00930	0.020	0.0070	mg/l							J

LCS Analyzed: 01/05/2006 (6A04092-BS1)

Boron	0.469	0.050	0.0080	mg/l	0.500		94	85-115			
Calcium	2.54	0.10	0.040	mg/l	2.50		102	85-115			
Chromium	510	5.0	0.68	ug/l	500		102	85-115			
Magnesium	2.51	0.020	0.0070	mg/l	2.50		100	85-115			

Matrix Spike Analyzed: 01/05/2006 (6A04092-MS1)

Source: IPA0101-01

Boron	0.586	0.050	0.0080	mg/l	0.500	0.090	99	70-130			
Calcium	67.5	0.10	0.040	mg/l	2.50	65	100	70-130			
Chromium	505	5.0	0.68	ug/l	500	1.8	101	70-130			
Magnesium	20.0	0.020	0.0070	mg/l	2.50	18	80	70-130			

Matrix Spike Dup Analyzed: 01/05/2006 (6A04092-MSD1)

Source: IPA0101-01

Boron	0.599	0.050	0.0080	mg/l	0.500	0.090	102	70-130	2	20	
Calcium	68.2	0.10	0.040	mg/l	2.50	65	128	70-130	1	20	
Chromium	521	5.0	0.68	ug/l	500	1.8	104	70-130	3	20	
Magnesium	20.4	0.020	0.0070	mg/l	2.50	18	96	70-130	2	20	

Batch: 6A09086 Extracted: 01/09/06

Blank Analyzed: 01/09/2006 (6A09086-BLK1)

Silver	ND	1.0	0.089	ug/l							
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 Received: 01/03/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A09086 Extracted: 01/09/06											
LCS Analyzed: 01/09/2006 (6A09086-BS1)											
Silver	76.4	1.0	0.089	ug/l	80.0		96	85-115			
Matrix Spike Analyzed: 01/09/2006 (6A09086-MS1) Source: IPA0492-04											
Silver	72.8	1.0	0.089	ug/l	80.0	ND	91	70-130			
Matrix Spike Analyzed: 01/09/2006 (6A09086-MS2) Source: IPA0451-01											
Silver	76.2	1.0	0.089	ug/l	80.0	ND	95	70-130			
Matrix Spike Dup Analyzed: 01/09/2006 (6A09086-MSD1) Source: IPA0492-04											
Silver	74.0	1.0	0.089	ug/l	80.0	ND	92	70-130	2	20	
Batch: 6A27054 Extracted: 01/27/06											
Blank Analyzed: 01/27/2006 (6A27054-BLK1)											
Copper	0.457	1.0	0.25	ug/l							J
LCS Analyzed: 01/27/2006 (6A27054-BS1)											
Copper	81.9	1.0	0.25	ug/l	80.0		102	85-115			
Matrix Spike Analyzed: 01/27/2006 (6A27054-MS1) Source: IPA2199-01											
Copper	86.4	1.0	0.25	ug/l	80.0	9.9	96	70-130			
Matrix Spike Analyzed: 01/27/2006 (6A27054-MS2) Source: IPA2251-01											
Copper	82.2	1.0	0.25	ug/l	80.0	6.2	95	70-130			
Matrix Spike Dup Analyzed: 01/27/2006 (6A27054-MSD1) Source: IPA2199-01											
Copper	84.5	1.0	0.25	ug/l	80.0	9.9	93	70-130	2	20	

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 Attention: Bronwyn Kelly

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 Outfall 002
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Sampled: 01/03/06
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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A03051 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03051-BLK1)											
Fluoride	0.198	0.50	0.10	mg/l							J
Nitrate/Nitrite-N	ND	0.26	0.072	mg/l							
Sulfate	ND	0.50	0.18	mg/l							
LCS Analyzed: 01/03/2006 (6A03051-BS1)											
Fluoride	4.76	0.50	0.10	mg/l	5.00		95	90-110			
Sulfate	9.83	0.50	0.18	mg/l	10.0		98	90-110			
Matrix Spike Analyzed: 01/03/2006 (6A03051-MS1) Source: IPA0036-01											
Fluoride	50.8	5.0	1.0	mg/l	50.0	1.7	98	80-120			
Sulfate	342	5.0	1.8	mg/l	100	240	102	80-120			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03051-MSD1) Source: IPA0036-01											
Fluoride	53.2	5.0	1.0	mg/l	50.0	1.7	103	80-120	5	20	
Sulfate	345	5.0	1.8	mg/l	100	240	105	80-120	1	20	
Batch: 6A03114 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03114-BLK1)											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 01/03/2006 (6A03114-BS1)											
Surfactants (MBAS)	0.275	0.10	0.044	mg/l	0.250		110	90-110			
Matrix Spike Analyzed: 01/03/2006 (6A03114-MS1) Source: IPA0017-01											
Surfactants (MBAS)	0.377	0.10	0.044	mg/l	0.250	0.096	112	50-125			

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Sampled: 01/03/06
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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03114 Extracted: 01/03/06											
Matrix Spike Dup Analyzed: 01/03/2006 (6A03114-MSD1)						Source: IPA0017-01					
Surfactants (MBAS)	0.342	0.10	0.044	mg/l	0.250	0.096	98	50-125	10	20	
Batch: 6A04062 Extracted: 01/04/06											
Blank Analyzed: 01/09/2006 (6A04062-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 01/09/2006 (6A04062-BS1)											
Biochemical Oxygen Demand	216	100	30	mg/l	198		109	85-115			
LCS Dup Analyzed: 01/09/2006 (6A04062-BSD1)											
Biochemical Oxygen Demand	200	100	30	mg/l	198		101	85-115	8	20	
Batch: 6A04078 Extracted: 01/04/06											
Blank Analyzed: 01/04/2006 (6A04078-BLK1)											
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 01/04/2006 (6A04078-BS1)											
Perchlorate	45.3	4.0	0.80	ug/l	50.0		91	85-115			
Matrix Spike Analyzed: 01/04/2006 (6A04078-MS1)						Source: IPA0121-01					
Perchlorate	48.9	4.0	0.80	ug/l	50.0	5.5	87	80-120			
Matrix Spike Dup Analyzed: 01/04/2006 (6A04078-MSD1)						Source: IPA0121-01					
Perchlorate	51.8	4.0	0.80	ug/l	50.0	5.5	93	80-120	6	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A04092 Extracted: 01/04/06											
Blank Analyzed: 01/05/2006 (6A04092-BLK1)											
Hardness (as CaCO3)	ND	1.0	1.0	mg/l							
Batch: 6A04105 Extracted: 01/04/06											
Duplicate Analyzed: 01/04/2006 (6A04105-DUP1)											
Specific Conductance	839	1.0	1.0	umhos/cm		810			4	5	
Batch: 6A04107 Extracted: 01/04/06											
Blank Analyzed: 01/04/2006 (6A04107-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 01/04/2006 (6A04107-BS1)											
Total Dissolved Solids	996	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 01/04/2006 (6A04107-DUP1)											
Total Dissolved Solids	956	10	10	mg/l		920			4	10	
Batch: 6A05098 Extracted: 01/05/06											
Blank Analyzed: 01/05/2006 (6A05098-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 01/05/2006 (6A05098-BS1)											
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0		109	80-115			

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: LARWQCB Sample Splits
Outfall 002
Report Number: IPA0101

Sampled: 01/03/06
Received: 01/03/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A05098 Extracted: 01/05/06											
Matrix Spike Analyzed: 01/05/2006 (6A05098-MS1)						Source: IOL2366-01					
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	ND	115	70-120			
Matrix Spike Dup Analyzed: 01/05/2006 (6A05098-MSD1)						Source: IOL2366-01					
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0	ND	112	70-120	3	15	
Batch: 6A06094 Extracted: 01/06/06											
Blank Analyzed: 01/06/2006 (6A06094-BLK1)											
Total Organic Carbon	ND	1.0	0.25	mg/l							
LCS Analyzed: 01/06/2006 (6A06094-BS1)											
Total Organic Carbon	9.66	1.0	0.25	mg/l	10.0		97	90-110			
Matrix Spike Analyzed: 01/06/2006 (6A06094-MS1)						Source: IPA0097-06					
Total Organic Carbon	10.0	1.0	0.25	mg/l	5.00	5.7	86	80-120			
Matrix Spike Dup Analyzed: 01/06/2006 (6A06094-MSD1)						Source: IPA0097-06					
Total Organic Carbon	10.1	1.0	0.25	mg/l	5.00	5.7	88	80-120	1	20	
Batch: 6A06111 Extracted: 01/06/06											
Blank Analyzed: 01/09/2006 (6A06111-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 01/09/2006 (6A06111-BS1)											
Total Cyanide	183	5.0	2.2	ug/l	200		92	90-110			

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A06111 Extracted: 01/06/06											
Matrix Spike Analyzed: 01/09/2006 (6A06111-MS1)						Source: IPA0102-01					
Total Cyanide	211	5.0	2.2	ug/l	200	3.4	104	70-115			
Matrix Spike Dup Analyzed: 01/09/2006 (6A06111-MSD1)						Source: IPA0102-01					
Total Cyanide	213	5.0	2.2	ug/l	200	3.4	105	70-115	1	15	
Batch: 6A06118 Extracted: 01/06/06											
Blank Analyzed: 01/06/2006 (6A06118-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 01/06/2006 (6A06118-BS1)											
Total Suspended Solids	980	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 01/06/2006 (6A06118-DUP1)						Source: IPA0396-01					
Total Suspended Solids	188	10	10	mg/l		180			4	10	
Batch: 6A09050 Extracted: 01/09/06											
Blank Analyzed: 01/09/2006 (6A09050-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 01/09/2006 (6A09050-BS1)											
Oil & Grease	19.1	5.0	0.94	mg/l	20.0		96	65-120			M-NRI
LCS Dup Analyzed: 01/09/2006 (6A09050-BSD1)											
Oil & Grease	19.0	5.0	0.94	mg/l	20.0		95	65-120	1	20	

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA0101-01	413.1 Oil and Grease	Oil & Grease	mg/l	2.60	5.1	10.00
IPA0101-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPA0101-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	1.60	5.0	5.00
IPA0101-01	625+NDMA, LL	2,4,6-Trichlorophenol	ug/l	0	0.99	6.50
IPA0101-01	625+NDMA, LL	2,4-Dinitrotoluene	ug/l	0	5.0	9.10
IPA0101-01	625+NDMA, LL	Bis(2-ethylhexyl)phthalate	ug/l	2.20	5.0	4.00
IPA0101-01	625+NDMA, LL	N-Nitrosodimethylamine	ug/l	0	2.0	8.10
IPA0101-01	625+NDMA, LL	Pentachlorophenol	ug/l	0.14	2.0	8.20
IPA0101-01	Antimony-200.8	Antimony	ug/l	0.64	2.0	6.00
IPA0101-01	Arsenic-200.8	Arsenic	ug/l	1.90	1.0	50
IPA0101-01	Barium-200.8	Barium	mg/l	0.048	0.0010	1.00
IPA0101-01	Beryllium-200.8	Beryllium	ug/l	0.00100	0.50	4.00
IPA0101-01	BOD	Biochemical Oxygen Demand	mg/l	1.70	2.0	20
IPA0101-01	Boron-200.7	Boron	mg/l	0.090	0.050	1.00
IPA0101-01	Cadmium-200.8	Cadmium	ug/l	0.034	1.0	2.00
IPA0101-01	Chromium-200.7	Chromium	ug/l	1.80	5.0	8.10
IPA0101-01	Copper-200.8, 1ppb	Copper	ug/l	8.50	1.0	7.10
IPA0101-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	1.80	5.0	5.00
IPA0101-01	Fluoride-300.0	Fluoride	mg/l	0.52	0.50	1.60
IPA0101-01	Lead-200.8	Lead	ug/l	0.50	1.0	2.60
IPA0101-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.11	0.10	0.50
IPA0101-01	Mercury - 245.1	Mercury	ug/l	0	0.20	0.20
IPA0101-01	NDMA-1625C Mod	N-Nitrosodimethylamine	ug/l	0.00056	0.0020	8.10
IPA0101-01	Nickel-200.8	Nickel	ug/l	0.80	2.0	35
IPA0101-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	1.20	0.26	8.00
IPA0101-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPA0101-01	Selenium-200.8	Selenium	ug/l	0.77	2.0	4.10
IPA0101-01	Settleable Solids	Total Settleable Solids	ml/l/hr	0	0.10	0.100
IPA0101-01	Silver-200.8	Silver	ug/l	0	1.0	2.00
IPA0101-01	Sulfate-300.0	Sulfate	mg/l	120	2.5	300
IPA0101-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	410	10	950
IPA0101-01	Thallium-200.8	Thallium	ug/l	0.12	1.0	2.00
IPA0101-01	TSS - EPA 160.2	Total Suspended Solids	mg/l	9.00	10	15
IPA0101-01	Zinc-200.8,LOW	Zinc	ug/l	9.70	10	54
IPA0101-01RE1	Copper-200.8, 1ppb	Copper	ug/l	3.40	1.0	7.10

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: LARWQCB Sample Splits
Outfall 002
Report Number: IPA0101

Sampled: 01/03/06
Received: 01/03/06

DATA QUALIFIERS AND DEFINITIONS

- A-01** Calibration Verification recovery was above the method control limit for this analyte.
- B** Analyte was detected in the associated Method Blank.
- C** Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- M-HA** Due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information. See Blank Spike (LCS).
- M-NRI** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

ADDITIONAL COMMENTS

For TICs:

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

For 1,2-Diphenylhydrazine:

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

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



Del Mar Analytical

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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
Calculation	Water	X	X
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 1625C-CI Mod	Water		
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 415.1	Water	X	X
EPA 608	Water	X	X
EPA 624 (MOD.)	Water		X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 900.0	Water		
EPA 905.0	Water		
EPA 906.0	Water		
SM2340B	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.dmalabs.com.

Subcontracted Laboratories

Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gross Alpha
 Samples: IPA0101-01

Analysis Performed: Gross Beta
 Samples: IPA0101-01

Analysis Performed: Level 4 + EDD
 Samples: IPA0101-01

Analysis Performed: Radium, Combined
 Samples: IPA0101-01

Del Mar Analytical, Irvine

Michele Chamberlin
 Project Manager

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

Project ID: LARWQCB Sample Splits
Outfall 002
Report Number: IPA0101

Sampled: 01/03/06
Received: 01/03/06

Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Strontium 90
Samples: IPA0101-01

Analysis Performed: Tritium
Samples: IPA0101-01

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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EBERLINE SERVICES

March 21, 2006

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

Reference: Del Mar Analytical Project No. IPA0101
Eberline Services NELAP Cert #01120CA (exp. 01/31/07)
Eberline Services Report R601022-8639

Dear Ms. Chamberlin:

Enclosed are Sr-90 reanalysis results for one water sample received as the above referenced Del Mar Analytical project. Results were originally reported on January 30, 2006. Only the Sr-90 results are changed, all other results are as reported January 30. The batch QC LCS, blank analysis, and sample 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. The reported gross alpha/gross beta QC sample results are not relevant to this report.

Please call me if you have any questions concerning this report.

Regards,

Melissa Mannion
Senior Program Manager

MCM/njv

Enclosure: Report

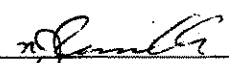
Analytical Services
2030 Wright Avenue
P.O. Box 4040
Richmond, California 94804-0040
(510) 235-2633 Fax (510) 235-0438
Toll Free (800) 841-5487
www.eberlineservices.com

Eberline Services

ANALYSIS RESULTS

SDG <u>8639</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R601022-01</u>	Contract <u>PROJECT# IPA0101</u>
Received Date <u>01/05/06</u>	Matrix <u>WATER</u>

Client	Lab						
<u>Sample ID</u>	<u>Sample ID</u>	<u>Collected</u>	<u>Analyzed</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>Units</u>	<u>MDA</u>
IPA0101 01	8639-001	01/03/06	01/20/06	GrossAlpha	0.858 ± 0.69	pCi/L	0.954
			01/20/06	Gross Beta	5.61 ± 1.2	pCi/L	1.74
			01/21/06	Ra-228	0.436 ± 0.36	pCi/L	0.827
			01/17/06	H-3	-30.5 ± 110	pCi/L	180
			01/20/06	Ra-226	0.475 ± 0.52	pCi/L	0.845
		03/08/06	Sr-90	0.181 ± 0.29	pCi/L	0.588	

Certified by 
Report Date 03/21/06
Page 1

Eberline Services

QC RESULTS

SDG <u>8653</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R602147-11</u>	Contract <u>PROJECT# IPB1818</u>
Received Date <u>02/21/06</u>	Matrix <u>WATER</u>

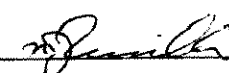
Lab	Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
<u>LCS</u>							
	8653-002	GrossAlpha	9.32 ± 0.63	pCi/Smpl	10.2	0.306	91% recovery
		Gross Beta	9.96 ± 0.37	pCi/Smpl	9.83	0.271	101% recovery
		Sr-90	11.2 ± 0.61	pCi/Smpl	10.8	0.229	104% recovery
<u>BLANK</u>							
	8653-003	GrossAlpha	-0.408 ± 0.18	pCi/Smpl	NA	0.376	<MDA
		Gross Beta	0.080 ± 0.24	pCi/Smpl	NA	0.414	<MDA
		Sr-90	-0.073 ± 0.16	pCi/Smpl	NA	0.418	<MDA

<u>DUPLICATES</u>			
Sample ID	Nuclide	Results ± 2σ	MDA
8653-004	GrossAlpha	0.122 ± 0.53	0.893
	Gross Beta	6.92 ± 0.71	0.869
	Sr-90	0.358 ± 0.39	0.771

<u>ORIGINALS</u>					
Sample ID	Results ± 2σ	MDA	3σ	RPD (Tot)	Eval
8653-001	0.735 ± 0.45	0.587	143	249	satis.
	7.03 ± 0.74	0.906	2	48	satis.
	0.317 ± 0.31	0.594	-	0	satis.

<u>SPIKED SAMPLE</u>			
Sample ID	Nuclide	Results ± 2σ	MDA
8653-005	GrossAlpha	74.0 ± 2.9	0.626
	Gross Beta	66.0 ± 1.7	0.891

<u>ORIGINAL SAMPLE</u>					
Sample ID	Results ± 2σ	MDA	Added	%Recv	
8653-001	0.735 ± 0.45	0.587	71.4	103	
	7.03 ± 0.74	0.906	65.5	90	

Certified by <u></u> Report Date <u>03/21/06</u> Page 2
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 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPA0101

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Eberline Services 2030 Wright Avenue Richmond, CA 94804 Phone: (510) 235-2633 Fax: (510) 235-0438

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

Analysis	Expiration	Comments
Sample ID: IPA0101-01 Water Sampled: 01/03/06 11:45		
Gross Alpha-O	01/03/07 11:45	900.0, IF RESULT > 15 pCi/L, run Radium 226 & 228
Gross Beta-O	01/03/07 11:45	900.0, IF RESULT > 50 pCi/L, run Radium 226 & 228
Level 4 + EDD-OUT	01/31/06 11:45	**LEVEL IV QC, ACCESS 7 EDD**
Radium, Combined-O	01/03/07 11:45	HOLD for Gross Alpha/Beta result; EPA 903.1 & 904.0
Strontium 90-O	01/03/07 11:45	905.0
Tritium-O	01/03/07 11:45	906

Containers Supplied:
 1 gal Poly (IPA0101-01N)
 1 gal Poly (IPA0101-01O)

SAMPLE INTEGRITY:

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

Released By: [Signature] Date: 1-4-06 Time: 1700 Received By: [Signature] Date: 01/05/06 Time: 9:30
 Released By: _____ Date: _____ Time: _____ Received By: _____ Date: _____ Time: _____



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 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPA0101

SENDING LABORATORY:

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

RECEIVING LABORATORY:

Eberline Services
 2030 Wright Avenue
 Richmond, CA 94804
 Phone : (510) 235-2633
 Fax: (510) 235-0438

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

Analysis	Expiration	Comments
Sample ID: IPA0101-01 Water Sampled: 01/03/06 11:45		
Gross Alpha-O	01/03/07 11:45	900.0, IF RESULT > 15 pCi/L, run Radium 226 & 228
Gross Beta-O	01/03/07 11:45	900.0, IF RESULT > 50 pCi/L, run Radium 226 & 228
Level 4 + EDD-OUT	01/31/06 11:45	**LEVEL IV QC, ACCESS 7 EDD**
Radium, Combined-O	01/03/07 11:45	HOLD for Gross Alpha/Beta results, EPA 903.1 & 904.0
Strontium 90-O	01/03/07 11:45	905.0
Tritium-O	01/03/07 11:45	906
<i>off hold + analyze MC 1/10/06</i>		
Containers Supplied:		
1 gal Poly (IPA0101-01N)		
1 gal Poly (IPA0101-01O)		

SAMPLE INTEGRITY:

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

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



RICHMOND, CA LABORATORY SAMPLE RECEIPT CHECKLIST

Client: DEL MAR City IRVINE State CA
 Date/Time received 01/05/06 9:20 CoC No. # IPA 0101
 Container I.D. No. PX/STPR Requested TAT (Days) STD P.O. Received Yes [] No []

INSPECTION

- 1 Custody seals on shipping container intact? Yes [] No [] N/A []
- 2 Custody seals on shipping container dated & signed? Yes [] No [] N/A []
- 3 Custody seals on sample containers intact? Yes [] No [] N/A []
- 4 Custody seals on sample containers dated & signed? Yes [] No [] N/A []
- 5 Packing material is: Wet [] Dry []
- 6 Number of samples in shipping container: 1 Sample Matrix W
- 7 Number of containers per sample: 2 (Or see CoC _____)
- 8 Samples are in correct container Yes [] No []
- 9 Paperwork agrees with samples? Yes [] No []
- 10 Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels []
- 11 Samples are: In good condition [] Leaking [] Broken Container [] Missing []
- 12 Samples are: Preserved [] Not preserved [] pH _____ Preservative _____
- 13 Describe any anomalies:

- 14 Was P.M. notified of any anomalies? Yes [] No [] Date _____
- 15 Inspected by MEW Date: 01/05/06 Time: 10:00

Customer Sample No.	cpm	mR/hr	Wipe	Customer Sample No.	cpm	mR/hr	wipe

Ion Chamber Ser. No. _____ Calibration date _____
 Alpha Meter Ser. No. _____ Calibration date _____
 Beta/Gamma Meter Ser. No. _____ Calibration date _____

APPENDIX G

Section 14

Outfall 002, January 03, 2006
AMEC Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID BHMT11
 Task Order 1261.001D.01
 SDG No. IPA0101
 No. of Analyses 1/1

Laboratory Del Mar Analytical
 Reviewer P. Meeks
 Analysis/Method metals

Date: February 18, 2006
 Reviewer's Signature
P. Meeks

ACTION ITEMS^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: 1. Detects and negative results in the blanks 2. Detects below the reporting limit 3. Rejected reanalysis results 4. Estimated copper as the true value was not able to be determined
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
LARWQCB Sample Splits

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPA0101

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPA0101
Project Manager: P. Costa
Matrix: Water
Analysis: Metals
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 1
Reviewer: P. Meeks
Date of Review: February 18, 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 200.7, 200.8, and 245.1, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPA0101-01	Water	200.7, 200.8, 245.1
Outfall 002 RE1	IPA0101-01 RE1	Water	200.8

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the sample and analyses presented in this SDG. Per a request from MWH, copper was reanalyzed for Outfall 002. As the laboratory did not append the MWH ID with "RE1," the reviewer hand-corrected the Form 1 to reflect this information. 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 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 and ICP-MS metals and 80-120% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and all recoveries were acceptable. No qualifications were required.

DATA VALIDATION REPORT

2.4 BLANKS

There were detects and negative results in the method blanks and CCBs associated with the sample in this SDG:

Blank Detect	Affected Samples	Qualification
Chromium was detected in method blank 6A04092-BLK1 at 1.63 µg/L.	Outfall 002 Split	Chromium detected in the sample was qualified as estimated, "UJ."
Antimony was detected in method blank 6A04091-BLK1 at 0.242.	Outfall 002 Split	Antimony detected in the sample was qualified as estimated, "UJ."
Nickel was detected in method blank 6A04091-BLK1 at 1.06 µg/L.	Outfall 002 Split	Nickel detected in the sample was qualified as estimated, "UJ."
Arsenic was detected in a bracketing CCB (01/06/06) at 0.581 µg/L.	Outfall 002 Split	Arsenic detected in the sample was qualified as estimated, "UJ."
Silver was reported in a CCB (01/09/06) at -0.767 µg/L.	Outfall 002 Split	Nondetected silver in the sample was qualified as estimated, "UJ."

2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were included in the raw data for the ICP and ICP-MS analyses. For the ICP and ICP-MS analyses, all recoveries were acceptable. For the ICP-MS analyses there were some unspiked analytes detected in the ICSA and ICSAB; however, as none were detected above the applicable reporting limits, no qualifications were required. The recoveries were within the control limits and no qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

2.7 LABORATORY DUPLICATES

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

2.8 MATRIX SPIKES

A matrix spike was performed on Outfall 002 Split for the ICP and ICP-MS analytes. All recoveries were within the control limits of 75-125% and no qualifications were required. No matrix spike analyses were performed for mercury; therefore, no assessment was made with

DATA VALIDATION REPORT

respect to this criterion. Mercury method accuracy was evaluated based on LCS results. No qualifications were required.

2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

2.10 INTERNAL STANDARDS PERFORMANCE

For the target compounds analyzed by ICP-MS, the ICP-MS internal standards were within established control limits. No qualifications were required.

2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the samples in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. Analytes detected below the reporting limit were qualified as estimated, "J," and denoted with "DNQ," in accordance with the NPDES permit.

The original and reanalysis results copper differed by more than a factor of two, 8.5 and 3.4 µg/L, respectively. The reviewer checked the ICP copper result, the ICP-MS copper result from the 01/06/06 sequence from which arsenic was reported, and the copper result from the 01/09/06 sequence from which silver was reported. The ICP result and one of the ICP-MS results were similar to the reanalysis result (3.4 µg/L), and the other ICP-MS result was similar to the original result (8.5 µg/L). Due to the variability of the sample results, the reviewer rejected, "R," the reanalysis result, Outfall 002 Split RE1 in favor of the original result, Outfall 002 Split, and qualified the original result as estimated, "J." 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.

Project: NPDES
SDG: IPA0101
Analysis: Metals

DATA VALIDATION REPORT

2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.



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 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: LARWQCB Sample Splits Outfall 002 Report Number: IPA0101	Sampled: 01/03/06 Received: 01/03/06
--	--	---

METALS

Analyte	Method	Batch	MDL Reporting		Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data	
			Limit	Limit					Rev Qual	Qual Code
Sample ID: IPA0101-01 (002 Split - Water) - cont. Reporting Units: ug/l										
Antimony	EPA 200.8	6A04091	0.050	2.0	0.64	1	01/04/06	01/05/06	UJ B, J	B
Arsenic	EPA 200.8	6A04091	0.50	1.0	1.9	1	01/04/06	01/06/06	UJ	B
Beryllium	EPA 200.8	6A04091	0.075	0.50	ND	1	01/04/06	01/05/06	U	
Cadmium	EPA 200.8	6A04091	0.025	1.0	0.034	1	01/04/06	01/05/06	J J	DNQ
Chromium	EPA 200.7	6A04092	0.68	5.0	1.8	1	01/04/06	01/05/06	J J	J
Cobalt	EPA 200.8	6A04091	0.035	1.0	0.39	1	01/04/06	01/05/06	J J	J
Copper	EPA 200.8	6A04091	0.25	1.0	8.5	1	01/04/06	01/05/06	J J	*11
Lead	EPA 200.8	6A04091	0.040	1.0	0.50	1	01/04/06	01/05/06	J J	DNQ
Mercury	EPA 245.1	6A04080	0.050	0.20	ND	1	01/04/06	01/04/06	U	
Molybdenum	EPA 200.8	6A04091	0.15	2.0	2.9	1	01/04/06	01/05/06		B
Nickel	EPA 200.8	6A04091	0.35	2.0	0.80	1	01/04/06	01/05/06	UJ B, J	B
Selenium	EPA 200.8	6A04091	0.30	2.0	0.77	1	01/04/06	01/05/06	J J	DNQ
Silver	EPA 200.8	6A09086	0.025	1.0	ND	1	01/09/06	01/09/06	UJ	B
Thallium	EPA 200.8	6A04091	0.15	1.0	ND	1	01/04/06	01/05/06	U	
Vanadium	EPA 200.8	6A04091	0.70	2.0	2.3	1	01/04/06	01/05/06		
Zinc	EPA 200.8	6A04091	1.0	10	9.7	1	01/04/06	01/05/06	J J	DNQ

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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 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: LARWQCB Sample Splits Outfall 002 Report Number: IPA0101	Sampled: 01/03/06 Received: 01/03/06
--	--	---

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: mg/l									
Barium	EPA 200.8	6A04091	0.00015	0.0010	0.048	1	01/04/06	01/05/06	Rev Qual Qual Code
Boron	EPA 200.7	6A04092	0.0080	0.050	0.090	1	01/04/06	01/05/06	
Calcium	EPA 200.7	6A04092	0.040	0.10	65	1	01/04/06	01/05/06	
Magnesium	EPA 200.7	6A04092	0.0070	0.020	18	1	01/04/06	01/05/06	

LEVEL IV

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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 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: LARWQCB Sample Splits Outfall 002 Report Number: IPA0101	Sampled: 01/03/06 Received: 01/03/06
--	--	---

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01RE1 (002 Split - Water) - cont. Reporting Units: ug/l									Raw Qual Qual Code
Copper	EPA 200.8	6A27054	0.25	1.0	3.4	1	01/27/06	01/27/06	R D

LEVEL IV


Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4PP1
 Task Order 1281.001D.01
 SDG No. IPA0101

No. of Analyses 1
 Date: February 17, 2008
 Reviewer's Signature


Laboratory Del Mar Analytical
 Reviewer K. Shadowlight
 Analysis/Method PCBs by Method 608

ACTION ITEMS^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	
COMMENTS^b	Acceptable as reviewed.

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



DATA VALIDATION REPORT

NPDES Monitoring Program
Outfall 002
LARWQCB Split Samples

ANALYSIS: PCBs

SAMPLE DELIVERY GROUP: IPA0101

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001.01
Sample Delivery Group: IPA0101
Project Manager: P. Costa
Matrix: Water
Analysis: PCBs
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: February 17, 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-4, Rev. 2)*, *EPA Method 608*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPA0101-01	Water	608

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of 4°C \pm 2°C, at 5°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 PCBs, and according to the raw data provided, a resolution check standard was not analyzed by the laboratory. A review of the raw data indicated that the analytical run time was of sufficient length to provide adequate standard separation. The two analytical columns used in the analyses were within the guidelines specified in the methods.

According to the laboratory SOP and the initial calibration raw data, the retention time windows are \pm 0.10 minutes for both surrogates and target compound calibration standards. A review of the raw data indicated that the laboratory retention time criteria were met for the surrogates and pesticide calibration standards. No qualifications were required.

2.3 CALIBRATION

2.3.1 Analytical Sequence

Based on the data provided, the analytical sequences were in accordance with the requirements of Method 608. No qualifications were required.

2.3.2 Initial Calibration

There was one initial calibration dated 12/23/05 associated with site sample in this SDG. The initial calibration consisted of six point calibrations for Aroclor 1016 and Aroclor 1260 on two analytical columns. The r^2 values of the individual Aroclor peaks for Aroclor 1016 and Aroclor

DATA VALIDATION REPORT

1260 were ≥ 0.995 on the primary column (Channel A) and the average %RSDs of the individual Aroclor peaks were $\leq 10\%$ on the secondary column (Channel B). As there were no Aroclors detected in the sample and all results were reported from Channel A, the secondary column was not further evaluated. An ICV was analyzed immediately following the initial calibration and the %Ds for Aroclor 1016 and Aroclor 1260 were within the QC limits of $\leq 15\%$ on the primary analytical column. A representative number of r^2 values and ICV %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.3.3 Continuing Calibration

Sample Outfall 002 was bracketed by two continuing calibrations. The %Ds for Aroclor 1016 and Aroclor 1260 were within the Method QC limit of $\leq 15\%$ for both calibrations. The %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.4 BLANKS

2.4.1 Instrument Blanks

An instrument blank was analyzed at the beginning of the analytical sequence. There was no evidence of cross-contamination in the instrument blank or sample. No qualifications were necessary.

2.4.2 Method Blanks

One water method blank (6A07025-BLK1) was extracted and analyzed with this SDG. There were no target compounds detected in the method blank. Review of the chromatograms for 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 (6A07025-BS2/BSD2) was extracted and analyzed with this SDG. The recoveries and RPDs for spiked compounds Aroclor 1016 and Aroclor 1260 were within the laboratory-established QC limits. A representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

Surrogate recoveries were within the laboratory-established QC limits for the sample in this SDG. The recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.8 SAMPLE CLEANUP PERFORMANCE

According to the laboratory extraction benchesheets, 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 PCBs by EPA Method 608. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for the sample in this SDG. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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



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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 783-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing Project ID: LARWQCB Sample Splits
300 North Lake Avenue, Suite 1200 Outfall 002
Pasadena, CA 91101 Report Number: IPA0101
Attention: Bronwyn Kelly Sampled: 01/03/06
Received: 01/03/06

TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	6A07025	0.20	1.0	ND	1	01/07/06	01/09/06	u
Aroclor 1221	EPA 608	6A07025	0.10	1.0	ND	1	01/07/06	01/09/06	
Aroclor 1232	EPA 608	6A07025	0.25	1.0	ND	1	01/07/06	01/09/06	
Aroclor 1242	EPA 608	6A07025	0.25	1.0	ND	1	01/07/06	01/09/06	
Aroclor 1248	EPA 608	6A07025	0.25	1.0	ND	1	01/07/06	01/09/06	
Aroclor 1254	EPA 608	6A07025	0.25	1.0	ND	1	01/07/06	01/09/06	
Aroclor 1260	EPA 608	6A07025	0.40	1.0	ND	1	01/07/06	01/09/06	
Surrogate: Decachlorobiphenyl (45-120%)					83 %				

Rec
Qual
Level

Level 10%

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA0101 <Page 8 of 46>


CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4SV2
 Task Order: 1261.001D.01
 SDG No.: IPA0101

No. of Analyses: 1

Laboratory: Del Mar Analytical
 Reviewer: L. Calvin
 Analysis/Method: Semivolatiles by Method 625

Date: February 18, 2006
 Reviewer's Signature


ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tuning/Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: -continuing calibration %D outliers -method blank contamination -detects reported between the MDL and the reporting limit
COMMENTS ^b	
* Subcontracted analytical laboratory is not meeting contract and/or method requirements. * Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Monitoring Program
Outfall 002
LARWQCB Split Samples

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP IPA0101

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPA0101
Project Manager: P. Costa
Matrix: Water
Analysis: Semivolatiles
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: L. Calvin
Date of Review: February 18, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MECX Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 625*, and the *National Functional Guidelines for Organic Data Review (2194)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPA0101-01	Water	625

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 GC/MS TUNING

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

2.3 CALIBRATION

One initial calibration was associated with the sample, dated 12/22/05. The average RRFs were ≥0.05 for all target compounds. The %RSDs were ≤35% for all target compounds. The continuing calibration associated with the samples in this SDG was dated 01/11/06. The RRFs for all target compounds were ≥0.05. The %Ds exceeded the QC limit of ≤20% for benzidine, benzoic acid, and isophorone. Results for the aforementioned compounds were qualified as estimated, "UJ," for nondetects, and "J," for detects in the site sample of this SDG. A representative number of average RRFs and %RSDs in the initial calibration and RRFs and %Ds in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No further qualifications were required.

2.4 BLANKS

One method blank (6A08028-BLK1) was extracted and analyzed with this SDG. Target compounds bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and diethylphthalate were detected between the MDLs and the reporting limits, and dibenz(a,h)anthracene was detected above the reporting limit in the method blank. Bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and diethylphthalate were also detected in the site sample. Results for bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and diethylphthalate were qualified as nondetects, "U," at the reporting limits. Review of the method blank raw data indicated no false positives or false negatives. No further qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6A08028-BS1/BSD1) was extracted and analyzed with this SDG. All recoveries and RPDs were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

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

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.8 FIELD QC SAMPLES

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

2.8.1 Field Blanks and Equipment Rinsates

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

2.8.2 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

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

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Any detects between the MDL and the reporting limit were qualified as estimated, "J," by the laboratory, and were annotated with the "DNQ" qualifier code by the reviewer. 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.



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9484 Chesapeake Dr., Suite 803, San Diego, CA 92123 (619) 505-8596 FAX (619) 505-0680
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2320 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing Project ID: LARWQCB Sample Splits
300 North Lake Avenue, Suite 1200 Outfall 002
Pasadena, CA 91101 Report Number: IPA0101
Attention: Bronwyn Kelly Sampled: 01/03/06
Received: 01/03/06

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

Table with columns: Analyte, Method, Batch, MDL Limit, Reporting Limit, Sample Result, Dilution Factor, Date Extracted, Date Analyzed, Data Qualifiers. Includes handwritten notes like 'rel. qual', 'qual. code', and 'B, J, B'.

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

Handwritten signatures and dates: JAC 2-17-04, Level II

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. IPA0101 <Page 6 of 46>



17401 Doran Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 266-1297
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9184 Chippendale Dr., Suite 803, San Diego, CA 92123 (619) 593-8390 FAX (619) 593-8099
9630 South 57th St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0051
7520 E. Sunset Blvd. #3, Las Vegas, NV 89120 (702) 796-3870 FAX (702) 796-3621

MWH-Pasadena/Boeing Project ID: LARWQCB Sample Splits
300 North Lake Avenue, Suite 1200 Outfall 002
Pasadena, CA 91101 Report Number: IPA0101 Sampled: 01/03/06
Attention: Bronwyn Kelly Received: 01/03/06

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

Table with columns: Analyte, Method, Batch, MDL Limit, Reporting Limit, Sample Result, Dilution Factor, Date Extracted, Date Analyzed, Data Qualifier. Includes handwritten notes like 'Level IV' and 'U.C.C.'.

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

Level IV

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Table with columns: Surrogate, % Recovery, MDL, Reporting Limit, Sample Result, Dilution Factor, Date Extracted, Date Analyzed. Includes handwritten checkmarks.

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

Level IV

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPA0102 <Page 3 of 45>

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vasser Drive
 Aurora, CO 80014

Package ID: B4V012
 Task Order: 1261.001D.01
 SDG No.: IPA0101

No. of Analyses: 1
 Date: February 18, 2006
 Reviewer's Signature: *L. Calvin*

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

ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: -continuing calibration %D outlier -target compounds searched for as TICs were estimated -detect reported between the MDL and the reporting limit
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
Outfall 002
LARWQCB Split Samples

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPA0101

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001.01
Sample Delivery Group: IPA0101
Project Manager: P. Costa
Matrix: Water
Analysis: Volatiles
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: L. Calvin
Date of Review: February 17, 2006

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

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPA0101-01	Water	624

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 5°C. According to the case narrative for this SDG, the sample was received intact, on ice, and properly preserved. Information regarding lack of headspace in the VOA vials was not provided. No qualifications were required.

2.1.2 Chain of Custody

The COC 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 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 in this SDG, dated 10/19/05 (Freon 113 only) and 12/29/05 (all remaining target compounds). The average RRFs were ≥0.05 and the %RSDs were ≤35% for all target compounds listed on the sample summary forms. The continuing calibrations associated with the sample in this SDG were dated 01/06/06. The RRFs for all target compounds were ≥0.05 and all %Ds were within the QC limit of ≤20%, with the exception of the %D for bromoform. The nondetect for bromoform was qualified as estimated, "UJ," in the site sample. A representative number of average RRFs and %RSDs in the initial calibrations and RRFs and %Ds in the continuing calibrations were checked from the raw data, and no calculation or transcription errors were noted. No further qualifications were required.

2.4 BLANKS

One method blank (6A06021-BLK1) was analyzed with this SDG. No target compounds were detected in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (6A06021-BS1) was analyzed with this SDG. The recoveries for the blank spike were within the laboratory-established QC limits. Target compounds 1,2-dichloro-1,1,2-trifluoroethane and cyclohexane were not included in the blank spike (see section 2.10). 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 sample of this SDG. Evaluation of method accuracy was based on the blank spike results. No qualifications were required.

2.8 FIELD QC SAMPLES

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

2.8.1 Trip Blanks

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

2.8.2 Field Blanks and Equipment Rinsates

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

2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for volatile target compounds by EPA Method 624. For two of the requested target compounds, 1,2-dichloro-1,1,2-trifluoroethane and cyclohexane, only a TIC search was performed. Calibration was performed for 1,2-dichloro-1,1,2-trifluoroethane but was not utilized, and no calibration was performed for cyclohexane. Neither compound was identified in the site sample. Nondetect results for both compounds were qualified as estimated, "UJ," in the site sample. 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. Any detects between the MDL and the reporting limit were qualified as estimated, "J," and annotated with the qualification code "DNQ." No further qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG; however, a TIC search was performed for two requested target compounds, 1,2-dichloro-1,1,2-trifluoroethane and cyclohexane (see section 2.10). No qualifications were required.

2.13 SYSTEM PERFORMANCE

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



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 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Bocing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Brouwyn Kelly	Project ID: LARWQCB Sample Splits Outfall 002 Report Number: IPA0101	Sampled: 01/03/06 Received: 01/03/06
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PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifies
Sample ID: IPA0101-01 (002 Split - Water) Reporting Units: ng/l									
Benzene	EPA 624	6A06021	0.28	2.0	ND	1	01/06/06	01/07/06	u
Bromodichloromethane	EPA 624	6A06021	0.30	2.0	ND	1	01/06/06	01/07/06	u
Bromoform	EPA 624	6A06021	0.32	5.0	ND	1	01/06/06	01/07/06	u
Bromomethane	EPA 624	6A06021	0.42	5.0	ND	1	01/06/06	01/07/06	u
Trichlorotrifluoroethane (Freon 113)	EPA 624	6A06021	1.2	5.0	ND	1	01/06/06	01/07/06	u
Carbon tetrachloride	EPA 624	6A06021	0.28	5.0	ND	1	01/06/06	01/07/06	u
Chlorobenzene	EPA 624	6A06021	0.36	2.0	ND	1	01/06/06	01/07/06	u
Chloroethane	EPA 624	6A06021	0.33	5.0	ND	1	01/06/06	01/07/06	u
Chloroform	EPA 624	6A06021	0.33	2.0	ND	1	01/06/06	01/07/06	u
Chloromethane	EPA 624	6A06021	0.30	5.0	ND	1	01/06/06	01/07/06	u
Dibromochloromethane	EPA 624	6A06021	0.28	2.0	ND	1	01/06/06	01/07/06	u
1,2-Dichlorobenzene	EPA 624	6A06021	0.32	2.0	ND	1	01/06/06	01/07/06	u
1,3-Dichlorobenzene	EPA 624	6A06021	0.35	2.0	ND	1	01/06/06	01/07/06	u
1,4-Dichlorobenzene	EPA 624	6A06021	0.37	2.0	ND	1	01/06/06	01/07/06	u
1,1-Dichloroethane	EPA 624	6A06021	0.27	2.0	ND	1	01/06/06	01/07/06	u
1,2-Dichloroethane	EPA 624	6A06021	0.28	2.0	ND	1	01/06/06	01/07/06	u
1,1-Dichloroethene	EPA 624	6A06021	0.32	3.0	ND	1	01/06/06	01/07/06	u
trans-1,2-Dichloroethene	EPA 624	6A06021	0.27	2.0	ND	1	01/06/06	01/07/06	u
1,2-Dichloropropane	EPA 624	6A06021	0.35	2.0	ND	1	01/06/06	01/07/06	u
cis-1,3-Dichloropropene	EPA 624	6A06021	0.22	2.0	ND	1	01/06/06	01/07/06	u
trans-1,3-Dichloropropene	EPA 624	6A06021	0.32	2.0	ND	1	01/06/06	01/07/06	u
Ethylbenzene	EPA 624	6A06021	0.25	2.0	ND	1	01/06/06	01/07/06	u
Methylene chloride	EPA 624	6A06021	0.51	5.0	ND	1	01/06/06	01/07/06	u
1,1,2,2-Tetrachloroethane	EPA 624	6A06021	0.24	2.0	ND	1	01/06/06	01/07/06	u
Tetrachloroethene	EPA 624	6A06021	0.32	2.0	ND	1	01/06/06	01/07/06	u
Toluene	EPA 624	6A06021	0.36	2.0	ND	1	01/06/06	01/07/06	u
1,1,1-Trichloroethane	EPA 624	6A06021	0.30	2.0	ND	1	01/06/06	01/07/06	u
1,1,2-Trichloroethane	EPA 624	6A06021	0.30	2.0	ND	1	01/06/06	01/07/06	u
Trichloroethene	EPA 624	6A06021	0.26	5.0	1.6	1	01/06/06	01/07/06	J 1 DNQ
Trichlorofluoromethane	EPA 624	6A06021	0.34	5.0	ND	1	01/06/06	01/07/06	u
Vinyl chloride	EPA 624	6A06021	0.26	5.0	ND	1	01/06/06	01/07/06	u
Xylenes, Total	EPA 624	6A06021	0.52	4.0	ND	1	01/06/06	01/07/06	u
Surrogate: Dibromofluoromethane (80-120%)									107 %
Surrogate: Toluene-d8 (80-120%)									103 %
Surrogate: 4-Bromofluorobenzene (80-120%)									100 %

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

Level IV

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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0013 FAX (480) 785-0837
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Table with 3 columns: Client/Address (MWH-Pasadena/Boeing), Project ID (LARWQCB Sample Splits), and Dates (Sampled: 01/03/06, Received: 01/03/06).

PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Table with columns: Analyte, Method, Batch, MDL Limit, Reporting Limit, Sample Result, Dilution Factor, Date Extracted, Date Analyzed, and Data Qualifiers. Includes handwritten notes like 'rel. qual.' and 'code'.

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

Level II

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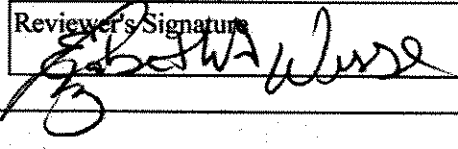
CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID B4WC4
 Task Order 1261.001D.01
 SDG No. IPA0101

No. of Analyses 1

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

Date: February 17, 2006
 Reviewer's Signature 

ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	Qualifications were assigned for the following:
Holding Times	Acceptable as reviewed
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
LARWQCB Splits

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPA0101

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPA0101
Project Manager: P. Costa
Matrix: Water
Analysis: General Minerals
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: E. Wessling
Date of Review: February 17, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 120.1 and 415.1*, and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPA0101-01	Water	General Minerals

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and all analyses presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary.

2.1.3 Holding Times

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

2.2 CALIBRATION

For TOC, the initial calibration correlation coefficients were ≥ 0.995 and the ICV and CCV recoveries were within the control limits of 90-110%. The calibration and continuing verification for conductivity were within control limits. No qualifications were required.

2.3 BLANKS

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

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

2.5 LABORATORY DUPLICATES

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

2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with this SDG; therefore, no assessment was made with respect to this criterion. 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 Is were verified against the raw data.

2.8 FIELD QC SAMPLES

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

2.8.1 Field Blanks and Equipment Rinsates

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

2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



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

Project ID: LARWQCB Sample Splits
 Outfall 002
 Report Number: IPA0101

Sampled: 01/03/06
 Received: 01/03/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled) *	EPA 350.2	6A05098	0.30	0.50	ND	1	01/05/06	01/05/06	
Biochemical Oxygen Demand *	EPA 405.1	6A04062	0.59	2.0	1.7	1	01/04/06	01/09/06	
Fluoride *	EPA 300.0	6A03051	0.10	0.50	0.52	1	01/03/06	01/03/06	B
Hardness (as CaCO3) *	SM2340B	6A04092	1.0	1.0	240	1	01/04/06	01/05/06	
Nitrate/Nitrite-N *	EPA 300.0	6A03051	0.072	0.26	1.2	1	01/03/06	01/03/06	
Oil & Grease *	EPA 413.1	6A09050	0.96	5.1	2.6	1	01/09/06	01/09/06	
Sulfate *	EPA 300.0	6A03051	0.90	2.5	120	5	01/03/06	01/03/06	
Surfactants (MBAS) *	SM5540-C	6A03114	0.044	0.10	0.11	1	01/03/06	01/03/06	
Total Dissolved Solids *	SM2540C	6A04107	10	10	410	1	01/04/06	01/04/06	
Total Organic Carbon	EPA 415.1	6A06094	0.25	1.0	8.1	1	01/06/06	01/06/06	
Total Suspended Solids *	EPA 160.2	6A06118	10	10	ND	1	01/06/06	01/06/06	

Per Qual
Qual side

LEVEL IV

* analysis not validated
 Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: LARWQCB Sample Splits Outfall 002 Report Number: IPA0101	Sampled: 01/03/06 Received: 01/03/06
--	--	---

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data	Qualifiers
Sample ID: IPA0101-01 (002 Split - Water) - cont. Reporting Units: umhos/cm										
Specific Conductance	EPA 120.1	6A04105	1.0	1.0	700	1	01/04/06	01/04/06		Pass Qual cont

LEVEL IV

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 003

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPA0002

Prepared by
MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001.01
Sample Delivery Group: IPA0002
Project Manager: P. Costa
Matrix: Water
Analysis: Dioxins/Furans
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: February 10, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 003	IPA0002-01	27135-001	Water	1613

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 1°C. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the samples were couriered directly to Del Mar Analytical-Irvine, custody seals were not required. Custody seals were present on the coolers from Del Mar to Alta; however no sample custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

2.1.3 Holding Times

The samples were extracted and analyzed within a year of collection. No qualifications were required.

2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%. No qualifications were required.

2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

2.3 CALIBRATION

2.3.1 Initial Calibration

The initial calibration was analyzed 12/30/2005 on instrument VG-7. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs $\leq 20\%$ for the 16 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

2.4 BLANKS

One method blank (0-7632-MB001) was extracted and analyzed with the sample in this SDG. No compounds were reported in the method blank associated with the site sample. A review of the method blank raw data and chromatograms indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7632-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in this SDG. Evaluation of method accuracy was based on

the OPR results. No qualifications were required.

2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," by the laboratory. These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No qualifications were required.

Sample ID: **HPA0002-01** *Outfall 003*

EPA Method 1613

Client Data		Sample Data		Laboratory Data	
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27135-001
Project:	HPA0002	Sample Size:	0.893 L	QC Batch No.:	7632
Date Collected:	1-Jan-06			Date Analyzed DR-5:	12-Jan-06
Time Collected:	1130			Date Analyzed DR-225:	
				Date Received:	4-Jan-06
				Date Extracted:	8-Jan-06
					NA

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labelled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000874			IS 13C-2,3,7,8-TCDD	68.3	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000112			13C-1,2,3,7,8-PeCDD	65.8	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000180			13C-1,2,3,4,7,8-HxCDD	62.0	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000178			13C-1,2,3,6,7,8-HxCDD	60.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000175			13C-1,2,3,4,6,7,8-HpCDD	59.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000158			J	13C-OCDD	38.8	17 - 157	
OCDD	0.000117				13C-2,3,7,8-TCDF	68.7	24 - 169	
2,3,7,8-TCDF	ND	0.00000104			13C-1,2,3,7,8-PeCDF	66.6	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000133			13C-2,3,4,7,8-PeCDF	66.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000115			13C-1,2,3,4,7,8-HxCDF	59.4	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000150			13C-1,2,3,6,7,8-HxCDF	58.5	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000159			13C-2,3,4,6,7,8-HxCDF	60.5	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000221			13C-1,2,3,7,8,9-HxCDF	61.8	29 - 147	
1,2,3,7,8,9-HxCDF	0.00000844			J	13C-1,2,3,4,6,7,8-HpCDF	54.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000252			13C-1,2,3,4,7,8,9-HpCDF	58.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	0.0000260			J	13C-OCDF	44.7	17 - 157	
OCDF					CRS 37Cl-2,3,7,8-TCDD	84.4	35 - 197	
Totals								
Total TCDD	ND	0.000000874						
Total PeCDD	ND	0.00000112						
Total HxCDD	0.00000455							
Total HpCDD	0.0000309							
Total TCDF	ND	0.00000104						
Total PeCDF	ND	0.00000124						
Total HxCDF	0.00000255							
Total HpCDF	0.0000162							

Analyst: DMMS

Approved By: *Martha M. Maier* 17-Jan-2006 09:17

Level II

APPENDIX G

Section 15

Outfall 003, January 01, 2006

Del Mar Analytical Laboratory Report



Del Mar Analytical

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

LABORATORY REPORT

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

Project: Routine Outfall 003

Sampled: 01/01/06
Received: 01/01/06
Issued: 01/13/06 16:10

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
IPA0002-01

CLIENT ID
Outfall 003

MATRIX
Water

Reviewed By:

Del Mar Analytical, Irvine
Amy Windham For Michele Chamberlin
Project Manager



Del Mar Analytical

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

Project ID: Routine Outfall 003

Report Number: IPA0002

Sampled: 01/01/06

Received: 01/01/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0002-01 (Outfall 003 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	6A04084	0.18	2.0	2.7	1	01/04/06	01/05/06	
Cadmium	EPA 200.8	6A04084	0.015	1.0	0.28	1	01/04/06	01/05/06	J
Copper	EPA 200.8	6A04084	0.49	2.0	7.0	1	01/04/06	01/05/06	
Lead	EPA 200.8	6A04084	0.040	1.0	3.0	1	01/04/06	01/05/06	
Mercury	EPA 245.1	6A03072	0.050	0.20	ND	1	01/03/06	01/03/06	

Del Mar Analytical, Irvine
 Amy Windham For Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPA0002

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

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0002-01 (Outfall 003 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6A01004	1.3	2.5	80	5	01/01/06	01/01/06	
Nitrate/Nitrite-N	EPA 300.0	6A01004	0.072	0.26	1.1	1	01/01/06	01/01/06	
Oil & Grease	EPA 413.1	6A06048	0.91	4.9	2.1	1	01/06/06	01/06/06	J
Sulfate	EPA 300.0	6A01004	0.18	0.50	57	1	01/01/06	01/01/06	
Total Dissolved Solids	SM2540C	6A03093	10	10	440	1	01/03/06	01/03/06	
Total Suspended Solids	EPA 160.2	6A04121	10	10	29	1	01/04/06	01/04/06	

Del Mar Analytical, Irvine
 Amy Windham For Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPA0002

Sampled: 01/01/06

Received: 01/01/06

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 003 (IPA0002-01) - Water EPA 300.0	2	01/01/2006 11:30	01/01/2006 15:25	01/01/2006 17:30	01/01/2006 18:28

Del Mar Analytical, Irvine
Amy Windham For Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 003
 Report Number: IPA0002

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

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03072 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03072-BLK1)											
Mercury	ND	0.20	0.063	ug/l							
LCS Analyzed: 01/03/2006 (6A03072-BS1)											
Mercury	7.95	0.20	0.063	ug/l	8.00		99	85-115			
Matrix Spike Analyzed: 01/03/2006 (6A03072-MS1)											
						Source: IOL2617-01					
Mercury	7.95	0.20	0.063	ug/l	8.00	ND	99	70-130			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03072-MSD1)											
						Source: IOL2617-01					
Mercury	8.00	0.20	0.063	ug/l	8.00	ND	100	70-130	1	20	
Batch: 6A04084 Extracted: 01/04/06											
Blank Analyzed: 01/05/2006 (6A04084-BLK1)											
Antimony	0.162	2.0	0.050	ug/l							J
Cadmium	ND	1.0	0.025	ug/l							
Copper	0.321	2.0	0.25	ug/l							J
Lead	ND	1.0	0.040	ug/l							
LCS Analyzed: 01/05/2006 (6A04084-BS1)											
Antimony	78.5	2.0	0.050	ug/l	80.0		98	85-115			
Cadmium	80.2	1.0	0.025	ug/l	80.0		100	85-115			
Copper	80.8	2.0	0.25	ug/l	80.0		101	85-115			
Lead	78.3	1.0	0.040	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 01/05/2006 (6A04084-MS1)											
						Source: IOL2694-49					
Antimony	78.2	2.0	0.050	ug/l	80.0	0.26	97	70-130			
Cadmium	76.0	1.0	0.025	ug/l	80.0	ND	95	70-130			
Copper	102	2.0	0.25	ug/l	80.0	23	99	70-130			
Lead	84.3	1.0	0.040	ug/l	80.0	2.7	102	70-130			

Del Mar Analytical, Irvine
 Amy Windham For Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPA0002

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

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A04084 Extracted: 01/04/06											
Matrix Spike Analyzed: 01/05/2006 (6A04084-MS2)						Source: IOL2694-50					
Antimony	80.0	2.0	0.050	ug/l	80.0	0.094	100	70-130			
Cadmium	76.2	1.0	0.025	ug/l	80.0	ND	95	70-130			
Copper	101	2.0	0.25	ug/l	80.0	18	104	70-130			
Lead	87.5	1.0	0.040	ug/l	80.0	1.8	107	70-130			
Matrix Spike Dup Analyzed: 01/05/2006 (6A04084-MSD1)						Source: IOL2694-49					
Antimony	76.7	2.0	0.050	ug/l	80.0	0.26	96	70-130	2	20	
Cadmium	76.1	1.0	0.025	ug/l	80.0	ND	95	70-130	0	20	
Copper	101	2.0	0.25	ug/l	80.0	23	98	70-130	1	20	
Lead	83.9	1.0	0.040	ug/l	80.0	2.7	102	70-130	1	20	

Del Mar Analytical, Irvine
 Amy Windham For Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 003
 Report Number: IPA0002

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

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A01004 Extracted: 01/01/06											
Blank Analyzed: 01/01/2006 (6A01004-BLK1)											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
LCS Analyzed: 01/01/2006 (6A01004-BS1)											
Chloride	4.88	0.50	0.15	mg/l	5.00		98	90-110			M-3
Sulfate	9.56	0.50	0.45	mg/l	10.0		96	90-110			
Matrix Spike Analyzed: 01/01/2006 (6A01004-MS1)											
						Source: IPA0003-01					
Sulfate	14.4	0.50	0.45	mg/l	10.0	5.1	93	80-120			
Matrix Spike Dup Analyzed: 01/01/2006 (6A01004-MSD1)											
						Source: IPA0003-01					
Sulfate	14.8	0.50	0.45	mg/l	10.0	5.1	97	80-120	3	20	
Batch: 6A03093 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03093-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 01/03/2006 (6A03093-BS1)											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 01/03/2006 (6A03093-DUP1)											
						Source: IPA0005-01					
Total Dissolved Solids	981	10	10	mg/l		980			0	10	
Batch: 6A04121 Extracted: 01/04/06											
Blank Analyzed: 01/04/2006 (6A04121-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							

Del Mar Analytical, Irvine
 Amy Windham For Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPA0002

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

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A04121 Extracted: 01/04/06											
LCS Analyzed: 01/04/2006 (6A04121-BS1)											
Total Suspended Solids	962	10	10	mg/l	1000		96	85-115			
Duplicate Analyzed: 01/04/2006 (6A04121-DUP1)											
						Source: IOL2706-01					
Total Suspended Solids	308	10	10	mg/l		350			13	10	R-3
Batch: 6A06048 Extracted: 01/06/06											
Blank Analyzed: 01/06/2006 (6A06048-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 01/06/2006 (6A06048-BS1)											
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120			M-NRI
LCS Dup Analyzed: 01/06/2006 (6A06048-BSD1)											
Oil & Grease	19.6	5.0	0.94	mg/l	20.0		98	65-120	2	20	

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 Amy Windham For Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 003

Report Number: IPA0002

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

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA0002-01	413.1 Oil and Grease	Oil & Grease	mg/l	2.10	4.9	15
IPA0002-01	Antimony-200.8	Antimony	ug/l	2.70	2.0	6.00
IPA0002-01	Cadmium-200.8	Cadmium	ug/l	0.28	1.0	4.00
IPA0002-01	Chloride - 300.0	Chloride	mg/l	80	2.5	150
IPA0002-01	Copper-200.8	Copper	ug/l	7.00	2.0	14
IPA0002-01	Mercury - 245.1	Mercury	ug/l	0.0037	0.20	0.20
IPA0002-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	1.10	0.26	10.00
IPA0002-01	Sulfate-300.0	Sulfate	mg/l	57	0.50	250
IPA0002-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	440	10	850

Del Mar Analytical, Irvine
Amy Windham For Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 003
Report Number: IPA0002

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

DATA QUALIFIERS AND DEFINITIONS

- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- M-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.
- R-3** The RPD exceeded the method control limit due to sample matrix effects.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical, Irvine
Amy Windham For Michele Chamberlin
Project Manager

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 003

Report Number: IPA0002

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

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
EPA 905.0	Water		
SM2540C	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Subcontracted Laboratories

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

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta
Samples: IPA0002-01

Analysis Performed: EDD + Level 4
Samples: IPA0002-01

Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Level 4 + EDD
Samples: IPA0002-01

Analysis Performed: Strontium 90
Samples: IPA0002-01

Del Mar Analytical, Irvine
Amy Windham For Michele Chamberlin
Project Manager

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CHAIN OF CUSTODY FORM

Version 10/21/05

Client Name/Address: Del Mar Analytical 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project: Boeing-SSFL NPDES Routine Outfall 003 Stormwater at RMHF		ANALYSIS REQUIRED		Field readings: Temp = 56°F pH = 7.13 Comments	
Project Manager: Bronwyn Kelly Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg		TCDD (and all congeners)		Oil & Grease (EPA 413.1)	
Sampler: R. S. Berman		Preservative		Cl ⁻ , SO ₄ , NO ₃ +NO ₂ -N		TDS, TSS	
Sample Description Outfall 003		Container Type 1L Poly		Sampling Date/Time 11-01-06		Bottle # 1A	
Outfall 003-Dup		1L Poly		11:30 AM		1B	
Outfall 003		1L Amber		None		2A, 2B	
Outfall 003		1L Amber		HCl		3A, 3B	
Outfall 003		Poly-500 ml		None		4A, 4B	
Outfall 003		Poly-500 ml		None		5A, 5B	
Outfall 003		Poly-1 gal		None		6A, 8B	
Relinquished By R. S. Berman		Date/Time 11-01-06		Received By Bronwyn Kelly		Date/Time 11/01/06 13:15	
Relinquished By Bronwyn Kelly		Date/Time 11/01/06 15:25		Received By R. S. Berman		Date/Time 11/01/06 15:25	
Relinquished By Bronwyn Kelly		Date/Time 11/01/06		Received By R. S. Berman		Date/Time 11/01/06 15:25	
Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ Perchlorate Only 72 Hours _____ Metals Only 72 Hours _____ Sample Integrity: (Check) Intact <input checked="" type="checkbox"/> On Ice <input type="checkbox"/> 3°C		Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ Perchlorate Only 72 Hours _____ Metals Only 72 Hours _____ Sample Integrity: (Check) Intact <input checked="" type="checkbox"/> On Ice <input type="checkbox"/> 3°C					



January 17, 2006

Alta Project I.D.: 27135

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

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on January 04, 2006 under your Project Name "IPA0002". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

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

Sincerely,

Martha M. Maier
Director of HRMS Services



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



Section I: Sample Inventory Report

Date Received: 1/4/2006

Alta Lab. ID

Client Sample ID

27135-001

IPA0002-01

SECTION II

Method Blank		EPA Method 1613						
Matrix: Aqueous	QC Batch No.: 7632	Lab Sample: 0-MB001	Date Analyzed DB-5: 11-Jan-06	Date Analyzed DB-225: NA				
Sample Size: 1.00 L	Date Extracted: 8-Jan-06							
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000671			IS 13C-2,3,7,8-TCDD	84.0	25 - 164	
1,2,3,7,8-PeCDD	ND	0.000000560			13C-1,2,3,7,8-PeCDD	78.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000149			13C-1,2,3,4,7,8-HxCDD	81.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000147			13C-1,2,3,6,7,8-HxCDD	74.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000145			13C-1,2,3,4,6,7,8-HpCDD	75.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000146			13C-OCDD	40.1	17 - 157	
OCDD	ND	0.00000535			13C-2,3,7,8-TCDF	82.6	24 - 169	
2,3,7,8-TCDF	ND	0.000000546			13C-1,2,3,7,8-PeCDF	65.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000112			13C-2,3,4,7,8-PeCDF	71.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.000000885			13C-1,2,3,4,7,8-HxCDF	73.7	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000511			13C-1,2,3,6,7,8-HxCDF	70.0	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000518			13C-2,3,4,6,7,8-HxCDF	78.0	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000522			13C-1,2,3,7,8,9-HxCDF	79.2	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000675			13C-1,2,3,4,6,7,8-HpCDF	64.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000000764			13C-1,2,3,4,7,8,9-HpCDF	76.3	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000622			13C-OCDF	49.6	17 - 157	
OCDF	ND	0.00000360			CRS 37Cl-2,3,7,8-TCDD	88.7	35 - 197	
Totals								
Total TCDD	ND	0.000000671			Footnotes			
Total PeCDD	ND	0.000000560			a. Sample specific estimated detection limit.			
Total HxCDD	ND	0.00000147			b. Estimated maximum possible concentration.			
Total HpCDD	ND	0.00000146			c. Method detection limit.			
Total TCDF	ND	0.000000546			d. Lower control limit - upper control limit.			
Total PeCDF	ND	0.000000997						
Total HxCDF	ND	0.000000553						
Total HpCDF	ND	0.000000692						

Analyst: JMH

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

OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7632	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	8-Jan-06	Date Analyzed DB-5:	11-Jan-06	
				Date Analyzed DB-225:	NA	
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	10.0	8.44	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	66.2	75 - 164
1,2,3,7,8-PeCDD	50.0	48.8	35 - 71	13C-1,2,3,7,8-PeCDD	70.5	25 - 181
1,2,3,4,7,8-HxCDD	50.0	48.8	35 - 82	13C-1,2,3,4,7,8-HxCDD	68.7	32 - 141
1,2,3,6,7,8-HxCDD	50.0	46.7	38 - 67	13C-1,2,3,6,7,8-HxCDD	65.6	28 - 130
1,2,3,7,8,9-HxCDD	50.0	48.7	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	70.6	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	47.2	35 - 70	13C-OCDD	49.9	17 - 157
OCDD	100	95.4	78 - 144	13C-2,3,7,8-TCDF	62.9	24 - 169
2,3,7,8-TCDF	10.0	9.58	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	63.1	24 - 185
1,2,3,7,8-PeCDF	50.0	46.6	40 - 67	13C-2,3,4,7,8-PeCDF	64.2	21 - 178
2,3,4,7,8-PeCDF	50.0	48.4	34 - 80	13C-1,2,3,4,7,8-HxCDF	65.4	26 - 152
1,2,3,4,7,8-HxCDF	50.0	47.6	36 - 67	13C-1,2,3,6,7,8-HxCDF	63.8	26 - 123
1,2,3,6,7,8-HxCDF	50.0	48.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	67.9	28 - 136
2,3,4,6,7,8-HxCDF	50.0	47.3	35 - 78	13C-1,2,3,7,8,9-HxCDF	70.4	29 - 147
1,2,3,7,8,9-HxCDF	50.0	47.3	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	63.1	28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	48.5	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	70.1	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	48.4	39 - 69	13C-OCDF	56.4	17 - 157
OCDF	100	97.7	63 - 170	CRS 37Cl-2,3,7,8-TCDD	81.7	35 - 197

Analyst: JMH

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

Sample ID: **IPA0002-01**

EPA Method 1613

Client Data
 Name: Del Mar Analytical, Irvine
 Project: IPA0002
 Date Collected: 1-Jan-06
 Time Collected: 1130

Sample Data
 Matrix: Aqueous
 Sample Size: 0.893 L

Laboratory Data
 Lab Sample: 27135-001
 QC Batch No.: 7632
 Date Analyzed DB-5: 12-Jan-06
 Date Received: 4-Jan-06
 Date Extracted: 8-Jan-06
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000874			IS 13C-2,3,7,8-TCDD	68.3	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000112			13C-1,2,3,7,8-PeCDD	65.8	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000180			13C-1,2,3,4,7,8-HxCDD	62.0	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000178			13C-1,2,3,6,7,8-HxCDD	60.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000175			13C-1,2,3,4,6,7,8-HpCDD	59.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000158			J	13C-OCDD	38.8	17 - 157	
OCDD	0.000117				13C-2,3,7,8-TCDF	68.7	24 - 169	
2,3,7,8-TCDF	ND	0.00000104			13C-1,2,3,7,8-PeCDF	66.6	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000133			13C-2,3,4,7,8-PeCDF	66.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000115			13C-1,2,3,4,7,8-HxCDF	59.4	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000150			13C-1,2,3,6,7,8-HxCDF	58.5	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000150			13C-2,3,4,6,7,8-HxCDF	60.5	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000159			13C-1,2,3,7,8,9-HxCDF	61.8	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000221			13C-1,2,3,4,6,7,8-HpCDF	54.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000844			J	13C-1,2,3,4,7,8,9-HpCDF	58.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000252			13C-OCDF	44.7	17 - 157	
OCDF	0.0000260			J	CRS 37Cl-2,3,7,8-TCDD	84.4	35 - 197	

Totals

Total TCDD	ND	0.000000874						
Total PeCDD	ND	0.00000112						
Total HxCDD	0.00000455							
Total HpCDD	0.00000309							
Total TCDF	ND	0.00000104						
Total PeCDF	ND	0.00000124						
Total HxCDF	0.00000255							
Total HpCDF	0.0000162							

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

Analyst: DMS

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

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

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



SUBCONTRACT ORDER - PROJECT # IPA0002

<p align="center">SENDING LABORATORY:</p> Del Mar Analytical, Irvine 17461 Dorian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	<p align="center">RECEIVING LABORATORY:</p> Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106 27135 0.7°C
--	---

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

Analysis	Expiration	Comments
Sample ID: IPA0002-01 Water	Sampled: 01/01/06 11:30	Instant Notification
1613-Dioxin-HR-Alta	01/08/06 11:30	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
* EDD + Level 4	01/29/06 11:30	Excl EDD email to pm, Include Std logs for Lvl IV
Containers Supplied:		
1 L Amber (IPA0002-01C)		
1 L Amber (IPA0002-01D)		

* This request was revised, please use this COC to replace the one received w/ the sample.
 MC

SAMPLE INTEGRITY:

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

Released By	Date	Time	Received By	Date	Time



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) 506-9689
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851
 2520 E. Sunset Rd., Suite #9, Las Vegas, NV 89120 Ph (702) 798-3820 Fax (702) 798-3821

SUBCONTRACT ORDER - PROJECT # IPA0002

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762 Phone : (916) 933-1640 Fax: (916) 673-0106 <i>27135</i> <i>0.7°C</i>

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

Analysis	Expiration	Comments
Sample ID: IPA0002-01 Water 1613-Dioxin-HR-Alta Level 4 + EDD-OUT	Sampled: 01/01/06 11:30 01/08/06 11:30 01/29/06 11:30	Instant Notification J flags, 17 congeners, no TEQ, ug/L, sub=Alta **LEVEL IV QC, ACCESS 7 EDD**
Containers Supplied: 1 L Amber (IPA0002-01C) 1 L Amber (IPA0002-01D)		

SAMPLE INTEGRITY:

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

Released By: *[Signature]* Date: *1/3/06* Time: _____
 Received By: *Bethna C. Benedict* Date: *1/4/06* Time: *0935*

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



March 21, 2006

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

Reference: Del Mar Analytical Project No. IPA002
Eberline Services NELAP Cert #01120CA (exp. 01/31/07)
Eberline Services Report R601009-8637

Dear Ms. Chamberlin:

Enclosed are Sr-90 reanalysis results for one water sample received as the above referenced Del Mar Analytical project. Results were originally reported on January 30, 2006. The batch QC LCS, blank analysis, and sample 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. The reported gross alpha/gross beta QC sample results are not relevant to this report.

Please call me if you have any questions concerning this report.

Regards,

Melissa Mannion
Senior Program Manager

MCM/njv

Enclosure: Report


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

Eberline Services

ANALYSIS RESULTS

SDG <u>8637</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R601009-01</u>	Contract <u>PROJECT# IPA0002</u>
Received Date <u>01/04/06</u>	Matrix <u>WATER</u>

<u>Client</u>	<u>Lab</u>	<u>Collected</u>	<u>Analyzed</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>Units</u>	<u>MDA</u>
<u>Sample ID</u>	<u>Sample ID</u>						
IPA0002-01	8637-001	01/01/06	03/08/06	Sr-90	0.659 ± 0.36	pCi/L	0.604

Certified by <u></u>
Report Date <u>03/21/06</u>
Page 1

Eberline Services

QC RESULTS

SDG <u>8653</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R602147-01</u>	Contract <u>PROJECT# IPB1818</u>
Received Date <u>02/21/06</u>	Matrix <u>WATER</u>

Lab	Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
<u>LCS</u>							
	8653-002	GrossAlpha	9.32 ± 0.63	pCi/Smpl	10.2	0.306	91% recovery
		Gross Beta	9.96 ± 0.37	pCi/Smpl	9.83	0.271	101% recovery
		Sr-90	11.2 ± 0.61	pCi/Smpl	10.8	0.229	104% recovery
<u>BLANK</u>							
	8653-003	GrossAlpha	-0.408 ± 0.18	pCi/Smpl	NA	0.376	<MDA
		Gross Beta	0.080 ± 0.24	pCi/Smpl	NA	0.414	<MDA
		Sr-90	-0.073 ± 0.16	pCi/Smpl	NA	0.418	<MDA

<u>DUPLICATES</u>			
Sample ID	Nuclide	Results ± 2σ	MDA
8653-004	GrossAlpha	0.122 ± 0.53	0.893
	Gross Beta	6.92 ± 0.71	0.869
	Sr-90	0.358 ± 0.39	0.771

<u>ORIGINALS</u>					
Sample ID	Results ± 2σ	MDA	3σ	RPD (Tot)	Eval
8653-001	0.735 ± 0.45	0.587	143	249	satis.
	7.03 ± 0.74	0.906	2	48	satis.
	0.317 ± 0.31	0.594	-	0	satis.

<u>SPIKED SAMPLE</u>			
Sample ID	Nuclide	Results ± 2σ	MDA
8653-005	GrossAlpha	74.0 ± 2.9	0.626
	Gross Beta	66.0 ± 1.7	0.891

<u>ORIGINAL SAMPLE</u>					
Sample ID	Results ± 2σ	MDA	Added	%Recv	
8653-001	0.735 ± 0.45	0.587	71.4	103	
	7.03 ± 0.74	0.906	65.5	90	

Certified by <u><i>[Signature]</i></u>
Report Date <u>03/21/06</u>
Page 2



17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851
 2520 E. Sunval Rd., Suite 83, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPA0002

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlia	Eberline Services 2030 Wright Avenue Richmond, CA 94804 Phone: (510) 235-2633 Fax: (510) 235-0438

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

Analysis	Expiration	Comments
Sample ID: IPA0002-01 Water Strontium 90-O	Sampled: 01/01/06 11:30 01/01/07 11:30	Instant Notification 905.0, sub to Eberline
Containers Supplied: 1 gal Poly (IPA0002-01K)		

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

Released By	Date 1/3/06	Time	Received By	Date 01/04/06	Time 9:45
Released By	Date	Time	Received By	Date	Time



17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228
 1014 E. Cooley Dr., Suite A, Cotton, 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
 9630 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPA0002

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Eberline Services 2030 Wright Avenue Richmond, CA 94804 Phone : (510) 235-2633 Fax: (510) 235-0438

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

Analysis	Expiration	Comments
Sample ID: IPA0002-01 Water	Sampled: 01/01/06 11:30	Instant Notification
Level 4 + EDD-OUT	01/29/06 11:30	**LEVEL IV QC, ACCESS 7 EDD**
Strontium 90-O	01/01/07 11:30	905.0, sub to Eberline
Containers Supplied:		
1 gal Poly (IPA0002-01K)		

* This request was added to the COC, samples should have been received 4/1/06.
 MC

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

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



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: DEL MAR City IRVINE State CA
 Date/Time received 1/04/06 9:45 CoC No. # JPA 0002
 Container I.D. No. 20X/STYNo Requested TAT (Days) STD P.O. Received Yes [] No []

INSPECTION

- 1 Custody seals on shipping container intact? Yes No [] N/A []
- 2 Custody seals on shipping container dated & signed? Yes No [] N/A []
- 3 Custody seals on sample containers intact? Yes [] No [] N/A
- 4 Custody seals on sample containers dated & signed? Yes [] No [] N/A
- 5 Packing material is: Wet [] Dry
- 6 Number of samples in shipping container: 1 Sample Matrix W
- 7 Number of containers per sample: 1 (Or see CoC _____)
- 8 Samples are in correct container Yes No []
- 9 Paperwork agrees with samples? Yes No []
10. Samples have: Tape [] Hazard labels [] Rad labels [] Appropriate sample labels
11. Samples are: In good condition Leaking [] Broken Container [] Missing []
12. Samples are: F reserved [] Not preserved pH _____ Preservative _____
13. Describe any anomalies:

14. Was P.M. notified of any anomalies? Yes [] No [] Date _____
 15. Inspected by MFU Date: 01/04/06 Time: 10:00

Customer Sample No.	cpm	mR/hr	Wipe	Customer Sample No.	cpm	mR/hr	wipe

Ion Chamber Ser. No. _____ Calibration date _____
 Alpha Meter Ser. No. _____ Calibration date _____
 Beta/Gamma Meter Ser. No. _____ Calibration date _____

APPENDIX G

Section 16

Outfall 003, January 01, 2006

AMEC Data Validation Reports



DATA VALIDATION REPORT

NPDES Monitoring Program
Routine Outfall 003

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPA0002

Prepared by
MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001.01
Sample Delivery Group: IPA0002
Project Manager: P. Costa
Matrix: Water
Analysis: Dioxins/Furans
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: February 10, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 003	IPA0002-01	27135-001	Water	1613

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 1°C. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the samples were couriered directly to Del Mar Analytical-Irvine, custody seals were not required. Custody seals were present on the coolers from Del Mar to Alta; however no sample custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

2.1.3 Holding Times

The samples were extracted and analyzed within a year of collection. No qualifications were required.

2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%. No qualifications were required.

2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

2.3 CALIBRATION

2.3.1 Initial Calibration

The initial calibration was analyzed 12/30/2005 on instrument VG-7. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs $\leq 20\%$ for the 16 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

2.4 BLANKS

One method blank (0-7632-MB001) was extracted and analyzed with the sample in this SDG. No compounds were reported in the method blank associated with the site sample. A review of the method blank raw data and chromatograms indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7632-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in this SDG. Evaluation of method accuracy was based on

the OPR results. No qualifications were required.

2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," by the laboratory. These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No qualifications were required.

Sample ID: **IPA0002-01** *Outfall 003* **EPA Method 1613**

Client Data
 Name: Del Mar Analytical, Irvine
 Project: IPA0002
 Date Collected: 1-Jan-06
 Time Collected: 1130

Sample Data
 Matrix: Aqueous
 Sample Size: 0.893 L

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000874			13C-2,3,7,8-TCDD	68.3	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000112			13C-1,2,3,7,8-PeCDD	65.8	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000180			13C-1,2,3,4,7,8-HxCDD	62.0	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000178			13C-1,2,3,6,7,8-HxCDD	60.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000175			13C-1,2,3,4,6,7,8-HpCDD	59.0	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000158			J	13C-OCDD	38.8	17 - 157	
OCDD	0.000117				13C-2,3,7,8-TCDF	68.7	24 - 169	
2,3,7,8-TCDF	ND	0.00000104			13C-1,2,3,7,8-PeCDF	66.6	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000133			13C-2,3,4,7,8-PeCDF	66.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000115			13C-1,2,3,4,7,8-HxCDF	59.4	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000150			13C-1,2,3,6,7,8-HxCDF	58.5	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000150			13C-2,3,4,6,7,8-HxCDF	60.5	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000159			13C-1,2,3,7,8,9-HxCDF	61.8	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000221			13C-1,2,3,4,6,7,8-HpCDF	54.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000844			J	13C-1,2,3,4,7,8,9-HpCDF	58.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000252			13C-OCDF	44.7	17 - 157	
OCDF	0.0000260			J	CRS 37Cl-2,3,7,8-TCDD	84.4	35 - 197	

Totals

Total TCDD	ND	0.000000874		
Total PeCDD	ND	0.00000112		
Total HxCDD	0.00000455			
Total HpCDD	0.0000309			
Total TCDF	ND	0.00000104		
Total PeCDF	ND	0.00000124		
Total HxCDF	0.00000255			
Total HpCDF	0.0000162			

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

Analyst: DMS
 Approved By: Martha M. Maier 17-Jan-2006 09:17
Level II



DATA VALIDATION REPORT

NPDES Sampling
Outfall 003

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPA0002

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPA0002
Project Manager: P. Costa
Matrix: Water
Analysis: Metals
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: P. Meeks
Date of Review: February 3, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^X Data Validation Procedure for ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Methods 200.8 and 245.1*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 003	IPA0002-01	Water	200.8, 245.1

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the sample and analyses presented in this SDG. No sample qualifications were required.

2.1.3 Holding Times

The date of collection recorded on the COC and the dates of analyses recorded in the raw data documented that the sample analyses were performed within the specified holding times of six months for the ICP-MS metals and 28-days for mercury. No qualifications were required.

2.2 ICP-MS TUNING

The method specified tune criteria were met and no qualifications were required.

2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP-MS metals and 80-120% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and all recoveries were acceptable. No qualifications were required.

2.4 BLANKS

The method blank and CCB results were nondetects at the reporting limit or were at concentrations insufficient to qualify the site sample. No qualifications were required.

2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were included in the raw data for the ICP-MS analyses. Antimony and lead, which are not present in the ICSA or ICSAB, were detected in both the ICSA and the ICSAB; however, as the wastewater method (EPA SW-846 6020) lists no known interferents for lead or antimony, no qualifications were required. The recoveries were within the control limits and no qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

2.7 LABORATORY DUPLICATES

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

2.8 MATRIX SPIKES

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

2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

2.10 INTERNAL STANDARDS PERFORMANCE

For the target compounds analyzed by ICP-MS, the ICP-MS internal standards were within established control limits. No qualifications were required.

2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the samples in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No

transcription errors or calculation errors were noted. Cadmium detected below the reporting limit was qualified as estimated, "J," and annotated with "DNQ," in accordance with the requirements of the NPDES permit. No further qualifications were required.

2.12 FIELD QC SAMPLES

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

2.12.1 Field Blanks and Equipment Rinsates

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

2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.



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 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 003 Report Number: IPA0002	Sampled: 01/01/06 Received: 01/01/06
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METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0002-01 (Outfall 003 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	6A04084	0.18	2.0	2.7	1	01/04/06	01/05/06	
Cadmium	EPA 200.8	6A04084	0.015	1.0	0.28	1	01/04/06	01/05/06	J J DNR
Copper	EPA 200.8	6A04084	0.49	2.0	7.0	1	01/04/06	01/05/06	
Lead	EPA 200.8	6A04084	0.040	1.0	3.0	1	01/04/06	01/05/06	
Mercury	EPA 245.1	6A03072	0.050	0.20	ND	1	01/03/06	01/03/06	U

LEVEL IV

Del Mar Analytical, Irvine
 Amy Windham For Michele Chamberlin
 Project Manager

APPENDIX G

Section 17

Outfall 004, January 01, 2006

Del Mar Analytical Laboratory Report



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 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

LABORATORY REPORT

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

Project: Routine Outfall 004

Sampled: 01/01/06
 Received: 01/01/06
 Issued: 01/13/06 15:58

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

CASE NARRATIVE

- SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.
- HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.
- PRESERVATION: Samples requiring preservation were verified prior to sample analysis.
- QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
- COMMENTS: Results that fall between the MDL and RL are 'J' flagged.
- SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.

LABORATORY ID
 IPA0008-01

CLIENT ID
 Outfall 004

MATRIX
 Water

Reviewed By:

Del Mar Analytical, Irvine
 Amy Windham For Michele Chamberlin
 Project Manager



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

Project ID: Routine Outfall 004

Report Number: IPA0008

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

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0008-01 (Outfall 004 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	6A04084	0.18	2.0	0.90	1	01/04/06	01/05/06	B, J
Cadmium	EPA 200.8	6A04084	0.015	1.0	0.096	1	01/04/06	01/05/06	J
Copper	EPA 200.8	6A04084	0.49	2.0	3.9	1	01/04/06	01/05/06	
Lead	EPA 200.8	6A04084	0.040	1.0	0.81	1	01/04/06	01/05/06	J
Mercury	EPA 245.1	6A03072	0.050	0.20	ND	1	01/03/06	01/03/06	

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 Project Manager

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Routine Outfall 004 Report Number: IPA0008	Sampled: 01/01/06 Received: 01/01/06
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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA0008-01 (Outfall 004 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6A01004	0.52	1.0	37	2	01/01/06	01/01/06	
Nitrate/Nitrite-N	EPA 300.0	6A01004	0.072	0.26	0.35	1	01/01/06	01/01/06	
Oil & Grease	EPA 413.1	6A06048	0.90	4.8	4.9	1	01/06/06	01/06/06	
Sulfate	EPA 300.0	6A01004	0.18	0.50	2.8	1	01/01/06	01/01/06	
Total Dissolved Solids	SM2540C	6A03093	10	10	170	1	01/03/06	01/03/06	
Total Suspended Solids	EPA 160.2	6A05089	10	10	13	1	01/05/06	01/05/06	

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 Amy Windham For Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 004

Report Number: IPA0008

Sampled: 01/01/06

Received: 01/01/06

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 004 (IPA0008-01) - Water EPA 300.0	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
	2	01/01/2006 11:55	01/01/2006 15:25	01/01/2006 17:30	01/01/2006 19:52

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

Project ID: Routine Outfall 004
 Report Number: IPA0008

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

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A03072 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03072-BLK1)											
Mercury	ND	0.20	0.063	ug/l							
LCS Analyzed: 01/03/2006 (6A03072-BS1)											
Mercury	7.95	0.20	0.063	ug/l	8.00		99	85-115			
Matrix Spike Analyzed: 01/03/2006 (6A03072-MS1)											
						Source: IOL2617-01					
Mercury	7.95	0.20	0.063	ug/l	8.00	ND	99	70-130			
Matrix Spike Dup Analyzed: 01/03/2006 (6A03072-MSD1)											
						Source: IOL2617-01					
Mercury	8.00	0.20	0.063	ug/l	8.00	ND	100	70-130	1	20	
Batch: 6A04084 Extracted: 01/04/06											
Blank Analyzed: 01/05/2006 (6A04084-BLK1)											
Antimony	0.162	2.0	0.050	ug/l							J
Cadmium	ND	1.0	0.025	ug/l							
Copper	0.321	2.0	0.25	ug/l							J
Lead	ND	1.0	0.040	ug/l							
LCS Analyzed: 01/05/2006 (6A04084-BS1)											
Antimony	78.5	2.0	0.050	ug/l	80.0		98	85-115			
Cadmium	80.2	1.0	0.025	ug/l	80.0		100	85-115			
Copper	80.8	2.0	0.25	ug/l	80.0		101	85-115			
Lead	78.3	1.0	0.040	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 01/05/2006 (6A04084-MS1)											
						Source: IOL2694-49					
Antimony	78.2	2.0	0.050	ug/l	80.0	0.26	97	70-130			
Cadmium	76.0	1.0	0.025	ug/l	80.0	ND	95	70-130			
Copper	102	2.0	0.25	ug/l	80.0	23	99	70-130			
Lead	84.3	1.0	0.040	ug/l	80.0	2.7	102	70-130			

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 Amy Windham For Michele Chamberlin
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 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Routine Outfall 004
 Report Number: IPA0008

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

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A04084 Extracted: 01/04/06											
Matrix Spike Analyzed: 01/05/2006 (6A04084-MS2)						Source: IOL2694-50					
Antimony	80.0	2.0	0.050	ug/l	80.0	0.094	100	70-130			
Cadmium	76.2	1.0	0.025	ug/l	80.0	ND	95	70-130			
Copper	101	2.0	0.25	ug/l	80.0	18	104	70-130			
Lead	87.5	1.0	0.040	ug/l	80.0	1.8	107	70-130			
Matrix Spike Dup Analyzed: 01/05/2006 (6A04084-MSD1)						Source: IOL2694-49					
Antimony	76.7	2.0	0.050	ug/l	80.0	0.26	96	70-130	2	20	
Cadmium	76.1	1.0	0.025	ug/l	80.0	ND	95	70-130	0	20	
Copper	101	2.0	0.25	ug/l	80.0	23	98	70-130	1	20	
Lead	83.9	1.0	0.040	ug/l	80.0	2.7	102	70-130	1	20	

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

Project ID: Routine Outfall 004

Report Number: IPA0008

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

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A01004 Extracted: 01/01/06											
Blank Analyzed: 01/01/2006 (6A01004-BLK1)											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
LCS Analyzed: 01/01/2006 (6A01004-BS1)											
Chloride	4.88	0.50	0.15	mg/l	5.00		98	90-110			M-3
Sulfate	9.56	0.50	0.45	mg/l	10.0		96	90-110			
Matrix Spike Analyzed: 01/01/2006 (6A01004-MS1)											
						Source: IPA0003-01					
Sulfate	14.4	0.50	0.45	mg/l	10.0	5.1	93	80-120			
Matrix Spike Dup Analyzed: 01/01/2006 (6A01004-MSD1)											
						Source: IPA0003-01					
Sulfate	14.8	0.50	0.45	mg/l	10.0	5.1	97	80-120	3	20	
Batch: 6A03093 Extracted: 01/03/06											
Blank Analyzed: 01/03/2006 (6A03093-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 01/03/2006 (6A03093-BS1)											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 01/03/2006 (6A03093-DUP1)											
						Source: IPA0005-01					
Total Dissolved Solids	981	10	10	mg/l		980			0	10	
Batch: 6A05089 Extracted: 01/05/06											
Blank Analyzed: 01/05/2006 (6A05089-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							

Del Mar Analytical, Irvine
 Amy Windham For Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 004
 Report Number: IPA0008

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

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<u>Batch: 6A05089 Extracted: 01/05/06</u>											
LCS Analyzed: 01/05/2006 (6A05089-BS1)											
Total Suspended Solids	979	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 01/05/2006 (6A05089-DUP1)											
						Source: IPA0012-01					
Total Suspended Solids	458	10	10	mg/l		350			27	10	R-3
<u>Batch: 6A06048 Extracted: 01/06/06</u>											
Blank Analyzed: 01/06/2006 (6A06048-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 01/06/2006 (6A06048-BS1)											
Oil & Grease	19.2	5.0	0.94	mg/l	20.0		96	65-120			M-NRI
LCS Dup Analyzed: 01/06/2006 (6A06048-BSD1)											
Oil & Grease	19.6	5.0	0.94	mg/l	20.0		98	65-120	2	20	

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 Project Manager

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

Project ID: Routine Outfall 004
Report Number: IPA0008

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

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA0008-01	413.1 Oil and Grease	Oil & Grease	mg/l	4.90	4.8	15
IPA0008-01	Antimony-200.8	Antimony	ug/l	0.90	2.0	6.00
IPA0008-01	Cadmium-200.8	Cadmium	ug/l	0.096	1.0	4.00
IPA0008-01	Chloride - 300.0	Chloride	mg/l	37	1.0	150
IPA0008-01	Copper-200.8	Copper	ug/l	3.90	2.0	14
IPA0008-01	Mercury - 245.1	Mercury	ug/l	0.014	0.20	0.20
IPA0008-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.35	0.26	10.00
IPA0008-01	Sulfate-300.0	Sulfate	mg/l	2.80	0.50	250
IPA0008-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	170	10	850

Del Mar Analytical, Irvine
Amy Windham For Michele Chamberlin
Project Manager

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

IPA0008 <Page 9 of 11>

NPDES - 429



Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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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 004

Report Number: IPA0008

Sampled: 01/01/06

Received: 01/01/06

DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- M-NR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- R-3** The RPD exceeded the method control limit due to sample matrix effects.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical, Irvine
Amy Windham For Michele Chamberlin
Project Manager

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IPA0008 <Page 10 of 11>
NPDES - 430



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

Project ID: Routine Outfall 004

Report Number: IPA0008

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

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
SM2540C	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Subcontracted Laboratories

Alta Analytical NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413
 1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta
 Samples: IPA0008-01

Analysis Performed: EDD + Level 4
 Samples: IPA0008-01

Del Mar Analytical, Irvine
 Amy Windham For Michele Chamberlin
 Project Manager

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

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

Project: **Boeing-SSFL NPDES Routine Outfall 004 Stormwater at SRE**

Project Manager: **Bronwyn Kelly**

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

Sampler: *L.S. B. r. n. s. o.*

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Sp, Cd, Cu, Pb, Hg	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cl, SO4, NO3+NO2-N	TDS, TSS	Field readings: Temp = 55.5 F pH = 6.55	Comments
Outfall 004	W	Poly-1L	1	01-24-06 11:55A	HNO3	1A	X						
Outfall 004-Dup	W	Poly-1L	1		HNO3	1B	X						
Outfall 004	W	Glass-Amber	2		None	2A, 2B		X					
Outfall 004	W	Glass-Amber	2		HCl	3A, 3B		X					
Outfall 004	W	Poly-500 ml	2		None	4A, 4B			X				
Outfall 004	W	Poly-500 ml	2	01-21-06 11:55A	None	5A, 5B				X			

Relinquished By: *R. L. Beaman* Date/Time: 01-21-06 1315
 Received By: *[Signature]* Date/Time: 01/01/06 1312

Relinquished By: *[Signature]* Date/Time: 1/1/06 1521
 Received By: *[Signature]* Date/Time: 1/1/06 1525

Turn around Time: (Check) 24 Hours 48 Hours 72 Hours 5 Days 10 Days Normal
 Perchlorate Only 72 Hours
 Metals Only 72 Hours
 Sample Integrity: (Check) Intact On Ice *3°C*



January 16, 2006

Alta Project I.D.: 27132

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

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on January 04, 2006 under your Project Name "IPA0008". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

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

Sincerely,

Martha M. Maier
Director of HRMS Services



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



Section I: Sample Inventory Report

Date Received: 1/4/2006

Alta Lab. ID

Client Sample ID

27132-001

IPA0008-01

SECTION II

Method Blank		EPA Method 1613					
Matrix:	Aqueous	QC Batch No.:	7632	Lab Sample:	0-MB001		
Sample Size:	1.00 L	Date Extracted:	8-Jan-06	Date Analyzed DB-5:	11-Jan-06		
				Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.000000671		IS 13C-2,3,7,8-TCDD	84.0	25 - 104	
1,2,3,7,8-PeCDD	ND	0.000000560		13C-1,2,3,7,8-PeCDD	78.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000149		13C-1,2,3,4,7,8-HxCDD	81.9	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000147		13C-1,2,3,6,7,8-HxCDD	74.4	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000145		13C-1,2,3,4,6,7,8-HpCDD	75.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000146		13C-OCDD	40.1	17 - 157	
OCDD	ND	0.00000535		13C-2,3,7,8-TCDF	82.6	24 - 169	
2,3,7,8-TCDF	ND	0.00000546		13C-1,2,3,7,8-PeCDF	65.3	24 - 185	
1,2,3,7,8-PeCDF	ND	0.0000112		13C-2,3,4,7,8-PeCDF	71.3	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000885		13C-1,2,3,4,7,8-HxCDF	73.7	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000511		13C-1,2,3,6,7,8-HxCDF	70.0	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000518		13C-2,3,4,6,7,8-HxCDF	78.0	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000522		13C-1,2,3,7,8,9-HxCDF	79.2	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000675		13C-1,2,3,4,6,7,8-HpCDF	64.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000764		13C-1,2,3,4,7,8,9-HpCDF	76.3	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000622		13C-OCDF	49.6	17 - 157	
OCDF	ND	0.00000360		CRS 37Cl-2,3,7,8-TCDD	88.7	35 - 197	
Totals							
Total TCDD	ND	0.000000671					
Total PeCDD	ND	0.000000560					
Total HxCDD	ND	0.00000147					
Total HpCDD	ND	0.00000146					
Total TCDF	ND	0.00000546					
Total PeCDF	ND	0.000000997					
Total HxCDF	ND	0.000000553					
Total HpCDF	ND	0.000000692					

Footnotes

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

Analyst: JMH Approved By: Martha M. Maier 16-Jan-2006 11:18

OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No:	7632	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	8-Jan-06	Date Analyzed DB-5:	11-Jan-06	
				Date Analyzed DB-225:	NA	
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	10.0	8.44	6.7 - 15.8	<u>IS</u> 13C-2,3,7,8-TCDD	66.2	25 - 104
1,2,3,7,8-PeCDD	50.0	48.8	35 - 71	13C-1,2,3,7,8-PeCDD	70.5	25 - 181
1,2,3,4,7,8-HxCDD	50.0	48.8	35 - 82	13C-1,2,3,4,7,8-HxCDD	68.7	32 - 141
1,2,3,6,7,8-HxCDD	50.0	46.7	38 - 67	13C-1,2,3,6,7,8-HxCDD	65.6	28 - 130
1,2,3,7,8,9-HxCDD	50.0	48.7	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	70.6	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	47.2	35 - 70	13C-OCDD	49.9	17 - 157
OCDD	100	95.4	78 - 144	13C-2,3,7,8-TCDF	62.9	24 - 169
2,3,7,8-TCDF	10.0	9.58	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	63.1	24 - 185
1,2,3,7,8-PeCDF	50.0	46.6	40 - 67	13C-2,3,4,7,8-PeCDF	64.2	21 - 178
2,3,4,7,8-PeCDF	50.0	48.4	34 - 80	13C-1,2,3,4,7,8-HxCDF	65.4	26 - 152
1,2,3,4,7,8-HxCDF	50.0	47.6	36 - 67	13C-1,2,3,6,7,8-HxCDF	63.8	26 - 123
1,2,3,6,7,8-HxCDF	50.0	48.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	67.9	28 - 136
2,3,4,6,7,8-HxCDF	50.0	47.3	35 - 78	13C-1,2,3,7,8,9-HxCDF	70.4	29 - 147
1,2,3,7,8,9-HxCDF	50.0	47.3	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	63.1	28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	48.5	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	70.1	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	48.4	39 - 69	13C-OCDF	56.4	17 - 157
OCDF	100	97.7	63 - 170	<u>CRS</u> 37Cl-2,3,7,8-TCDD	81.7	35 - 197

Analyst: JMH
 Approved By: Martha M. Maier
 Date: 16-Jan-2006 11:18

Sample ID: IPA0008-01		EPA Method 1613					
Client Data		Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27132-001		
Project:	IPA0008	Sample Size:	0.901 L	QC Batch No.:	7632		
Date Collected:	1-Jan-06			Date Analyzed DB-5:	12-Jan-06		
Time Collected:	1155			Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000109		13C-2,3,7,8-TCDD	72.5	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000130		13C-1,2,3,7,8-PeCDD	72.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000226		13C-1,2,3,4,7,8-HxCDD	74.4	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000222		13C-1,2,3,6,7,8-HxCDD	69.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000219		13C-1,2,3,4,6,7,8-HpCDD	68.5	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000797		J	13C-OCDD	35.8	17 - 157	
OCDD	0.0000679			13C-2,3,7,8-TCDF	73.6	24 - 169	
2,3,7,8-TCDF	ND	0.00000926		13C-1,2,3,7,8-PeCDF	74.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.0000128		13C-2,3,4,7,8-PeCDF	75.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.0000115		13C-1,2,3,4,7,8-HxCDF	71.0	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000174		13C-1,2,3,6,7,8-HxCDF	70.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000172		13C-2,3,4,6,7,8-HxCDF	73.3	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.0000176		13C-1,2,3,7,8,9-HxCDF	73.8	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.0000247		13C-1,2,3,4,6,7,8-HpCDF	58.5	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000297		13C-1,2,3,4,7,8,9-HpCDF	69.9	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000272		13C-OCDF	44.6	17 - 157	
OCDF	0.0000182		J	CRS 37Cl-2,3,7,8-TCDD	86.6	35 - 197	
Totals							
Total TCDD	ND	0.00000109					
Total PeCDD	ND	0.00000130					
Total HxCDD	ND	0.00000223					
Total HpCDD	0.0000160						
Total TCDF	ND	0.00000923					
Total PeCDF	ND	0.00000121					
Total HxCDF	ND	0.00000190					
Total HpCDF	0.00000452						

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

Analyst: WJL
Approved By: Martha M. Maier 16-Jan-2006 11:18

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

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



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 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-6596 Fax (619) 505-9689
 9830 South 51st Street, Suite 9-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851
 2520 E. Sunset Rd., Suite 43, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPA0008

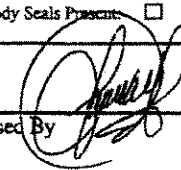
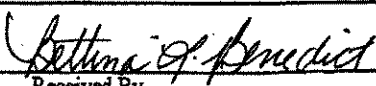
SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762 Phone : (916) 933-1640 Fax: (916) 673-0106 <div style="text-align: right; font-size: 2em;">27132</div> <div style="text-align: right; font-size: 1.5em;">0.9°C</div>

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

Analysis	Expiration	Comments
Sample ID: IPA0008-01 Water 1613-Dioxin-HR-Alta EDD + Level 4	Sampled: 01/01/06 11:55 01/08/06 11:55 01/29/06 11:55	Instant Notification J flags, 17 congeners, no TEQ, ug/L, sub=Alta Excel EDD email to pm, Include Std logs for Lvl IV
Containers Supplied: 1 L Amber (IPA0008-01C) 1 L Amber (IPA0008-01D)		

SAMPLE INTEGRITY:

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

Released By 	Date 1/3/06	Time	Received By 	Date 1/4/06	Time 0935
Released By	Date	Time	Received By	Date	Time

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27132

Samples Arrival:	Date/Time 1/4/06 0935	Initials: PAB	Location: WR-2
Logged In:	Date/Time 1/4/06 1512	Initials: PAB	Location: WR-2
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> Cal
	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C	0.9	Time:	0940
		Thermometer ID:	DT-20

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill			
Trk #	7924 7903 4161		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented?			None
Shipping Container	Alta	<input checked="" type="radio"/> Client	Retain
		<input checked="" type="radio"/> Return	Dispose

Comments:

APPENDIX G

Section 18

Outfall 004, January 01, 2006
AMEC Data Validation Reports


CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^a
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4MT3
 Task Order 1261.001D.01
 SDG No. IPA0008

No. of Analyses 1

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

Date: February 3, 2006
 Reviewer's Signature


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



DATA VALIDATION REPORT

NPDES Sampling
Outfall 004

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPA0008

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPA0008
Project Manager: P. Costa
Matrix: Water
Analysis: Metals
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: P. Meeks
Date of Review: February 3, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC^X *Data Validation Procedure for ICP-MS Metals (DVP-5, Rev. 0)*, EPA Methods 200.8 and 245.1, and validation guidelines outlined in the USEPA CLP *National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 004	IPA0008-01	Water	200.8, 245.1

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the sample and analyses presented in this SDG. No sample qualifications were required.

2.1.3 Holding Times

The date of collection recorded on the COC and the dates of analyses recorded in the raw data documented that the sample analyses were performed within the specified holding times of six months for the ICP-MS metals and 28-days for mercury. No qualifications were required.

2.2 ICP-MS TUNING

The method specified tune criteria were met and no qualifications were required.

2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP-MS metals and 80-120% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and all recoveries were acceptable. No qualifications were required.

2.4 BLANKS

The method blank and CCB results were nondetects at the reporting limit or were at concentrations insufficient to qualify the site sample. No qualifications were required.

2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were included in the raw data for the ICP-MS analyses. Antimony and lead, which are not present in the ICSA or ICSAB, were detected in both the ICSA and the ICSAB; however, as the wastewater method (EPA SW-846 6020) lists no known interferents for lead or antimony, no qualifications were required. The recoveries were within the control limits and no qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

2.7 LABORATORY DUPLICATES

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

2.8 MATRIX SPIKES

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

2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

2.10 INTERNAL STANDARDS PERFORMANCE

For the target compounds analyzed by ICP-MS, the ICP-MS internal standards were within established control limits. No qualifications were required.

2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the samples in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No

DATA VALIDATION REPORT

transcription errors or calculation errors were noted. Cadmium and lead detected below the reporting limit were qualified as estimated, "J," and annotated with "DNQ," in accordance with the requirements of the NPDES permit. No further qualifications were required.

2.12 FIELD QC SAMPLES

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

2.12.1 Field Blanks and Equipment Rinsates

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

2.12.2 Field Duplicates

There were no field duplicate analyses performed in association with the site sample.



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

Project ID: Routine Outfall 004

Report Number: IPA0008

Sampled: 01/01/06

Received: 01/01/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev Qual	Qual Code
Sample ID: IPA0008-01 (Outfall 004 - Water)										
Reporting Units: ug/l										
Antimony	EPA 200.8	6A04084	0.18	2.0	0.90	1	01/04/06	01/05/06	B, J	J DNG
Cadmium	EPA 200.8	6A04084	0.015	1.0	0.096	1	01/04/06	01/05/06	J	J DNG
Copper	EPA 200.8	6A04084	0.49	2.0	3.9	1	01/04/06	01/05/06		
Lead	EPA 200.8	6A04084	0.040	1.0	0.81	1	01/04/06	01/05/06	J	J DNG
Mercury	EPA 245.1	6A03072	0.050	0.20	ND	1	01/03/06	01/03/06	U	

LEVEL IV

Del Mar Analytical, Irvine
 Amy Windham For Michele Chamberlin
 Project Manager

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IPA0008 <Page 2 of 11>

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID B4DF3
 Task Order 1261.001.01
 SDG No. IPA0008
 No. of Analyses 1

Laboratory Alta Analytical
 Reviewer E. Wessling
 Analysis/Method Dioxins/Furans by 1613

Date: February 3, 2006
 Reviewer's Signature 

ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: --estimated values between the RL and the MDL
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 004

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPA0008

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001.01
Sample Delivery Group: IPA0008
Project Manager: P. Costa
Matrix: Water
Analysis: Dioxins/Furans
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: E. Wessling
Date of Review: February 2, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Sample ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 004	IPA0008-01	27132-001	Water	1613

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received within the temperature limits of 4°C ±2°C or slightly below. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the samples were couriered directly to Del Mar Analytical-Irvine, custody seals were not required. Custody seals were present on the coolers from Del Mar to Alta; however not sample custody seals were present. No qualifications were required.

2.1.3 Holding Times

The samples were extracted and analyzed within a year of collection. No qualifications were required.

2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%. No qualifications were required.

2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

2.3 CALIBRATION

2.3.1 Initial Calibration

The initial calibration was analyzed 12/30/2005 on instrument VG-7. The calibration consisted of six concentration level standards (CS1 through CS6) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs $\leq 20\%$ for the 16 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

2.4 BLANKS

One method blank (0-7632-MB001) was extracted and analyzed with the sample in this SDG. No compounds were reported in the method blank associated with the site sample. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7632-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG. No qualification was required.

2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," by the laboratory. These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No qualifications were required.

Client Data		Sample Data		Laboratory Data				
Sample ID: IPA0008-01	Del Mar Analytical, Irvine IPA0008 1-Jan-06 1155	Matrix: Sample Size: 0.901 L	27132-001 7632 12-Jan-06	Date Received: 4-Jan-06 Date Extracted: 8-Jan-06 Date Analyzed DB-225: NA	EPA Method 1613			
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Outliers
2,3,7,8-TCDD	ND	0.00000109			13C-2,3,7,8-TCDD	72.5	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000130			13C-1,2,3,7,8-PeCDD	72.7	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000226			13C-1,2,3,4,7,8-HxCDD	74.4	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000222			13C-1,2,3,6,7,8-HxCDD	69.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000219			13C-1,2,3,4,6,7,8-HpCDD	68.5	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000797			J	13C-OCDD	35.8	17 - 157	
OCDD	0.0000679				13C-2,3,7,8-TCDF	73.6	24 - 169	
2,3,7,8-TCDF	ND	0.00000926			13C-1,2,3,7,8-PeCDF	74.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000128			13C-2,3,4,7,8-PeCDF	75.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000115			13C-1,2,3,4,7,8-HxCDF	71.0	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000174			13C-1,2,3,6,7,8-HxCDF	70.8	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000172			13C-2,3,4,6,7,8-HxCDF	73.3	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000176			13C-1,2,3,7,8,9-HxCDF	73.8	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000247			13C-1,2,3,4,6,7,8-HpCDF	58.5	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000297			13C-1,2,3,4,7,8,9-HpCDF	69.9	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000272			13C-OCDF	44.6	17 - 157	
OCDF	0.0000182			J	CRS 37Cl-2,3,7,8-TCDD	86.6	35 - 197	
Totals								
Total TCDD	ND	0.00000109						
Total PeCDD	ND	0.00000130						
Total HxCDD	ND	0.00000223						
Total HpCDD	0.0000160							
Total TCDF	ND	0.00000923						
Total PeCDF	ND	0.00000121						
Total HxCDF	ND	0.00000190						
Total HpCDF	0.00000452							

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

Analyst: WJL
Approved By: Martha M. Maier 16-Jan-2006 11:18

LEVEL IV

APPENDIX G

Section 19

Outfall 004, January 14, 2006

Del Mar Analytical Laboratory Report



LABORATORY REPORT

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

Project: Routine Outfall 004

Sampled: 01/14/06
Received: 01/15/06
Issued: 02/04/06 16:59

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
IPA1192-01	Outfall 004	Water

Reviewed By:

Michele Chamberlin

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



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

Project ID: Routine Outfall 004

Report Number: IPA1192

Sampled: 01/14/06

Received: 01/15/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1192-01 (Outfall 004 - Water)									
Reporting Units: ug/l									
Antimony	EPA 200.8	6A16092	0.050	2.0	1.2	1	01/16/06	01/17/06	J
Cadmium	EPA 200.8	6A16092	0.025	1.0	0.080	1	01/16/06	01/17/06	J
Copper	EPA 200.8	6A16092	0.25	2.0	1.9	1	01/16/06	01/17/06	J
Lead	EPA 200.8	6A16092	0.040	1.0	0.69	1	01/16/06	01/17/06	J
Mercury	EPA 245.1	6A17070	0.050	0.20	0.051	1	01/17/06	01/17/06	J

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 004
 Report Number: IPA1192

Sampled: 01/14/06
 Received: 01/15/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPA1192-01 (Outfall 004 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6A15017	0.15	0.50	24	1	01/15/06	01/15/06	
Nitrate/Nitrite-N	EPA 300.0	6A15017	0.080	0.10	0.24	1	01/15/06	01/15/06	
Oil & Grease	EPA 413.1	6A17048	0.90	4.8	ND	1	01/17/06	01/17/06	
Sulfate	EPA 300.0	6A15017	0.45	0.50	2.3	1	01/15/06	01/15/06	
Total Dissolved Solids	SM2540C	6A24065	10	10	450	1	01/20/06	01/20/06	
Total Suspended Solids	EPA 160.2	6A17118	10	10	20	1	01/17/06	01/17/06	

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 004

Report Number: IPA1192

Sampled: 01/14/06
Received: 01/15/06

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 (IPA1192-01) - Water EPA 300.0	2	01/14/2006 12:25	01/15/2006 16:00	01/15/2006 17:00	01/15/2006 19:03

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager

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

Project ID: Routine Outfall 004

Report Number: IPA1192

Sampled: 01/14/06
 Received: 01/15/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 6A16092 Extracted: 01/16/06											
Blank Analyzed: 01/17/2006 (6A16092-BLK1)											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.025	ug/l							
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
LCS Analyzed: 01/17/2006 (6A16092-BS1)											
Antimony	79.1	2.0	0.050	ug/l	80.0		99	85-115			
Cadmium	80.9	1.0	0.025	ug/l	80.0		101	85-115			
Copper	79.1	2.0	0.25	ug/l	80.0		99	85-115			
Lead	79.0	1.0	0.040	ug/l	80.0		99	85-115			
Matrix Spike Analyzed: 01/17/2006 (6A16092-MS1)						Source: IPA0831-01					
Antimony	81.3	2.0	0.050	ug/l	80.0	0.51	101	70-130			
Cadmium	77.1	1.0	0.025	ug/l	80.0	0.084	96	70-130			
Copper	78.4	2.0	0.25	ug/l	80.0	4.4	92	70-130			
Lead	78.4	1.0	0.040	ug/l	80.0	0.75	97	70-130			
Matrix Spike Analyzed: 01/17/2006 (6A16092-MS2)						Source: IPA1191-01					
Antimony	83.2	2.0	0.050	ug/l	80.0	0.54	103	70-130			
Cadmium	79.0	1.0	0.025	ug/l	80.0	0.048	99	70-130			
Copper	76.9	2.0	0.25	ug/l	80.0	3.1	92	70-130			
Lead	77.3	1.0	0.040	ug/l	80.0	0.50	96	70-130			
Matrix Spike Dup Analyzed: 01/17/2006 (6A16092-MSD1)						Source: IPA0831-01					
Antimony	82.8	2.0	0.050	ug/l	80.0	0.51	103	70-130	2	20	
Cadmium	78.2	1.0	0.025	ug/l	80.0	0.084	98	70-130	1	20	
Copper	78.8	2.0	0.25	ug/l	80.0	4.4	93	70-130	1	20	
Lead	78.7	1.0	0.040	ug/l	80.0	0.75	97	70-130	0	20	

Del Mar Analytical, Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Routine Outfall 004
 Report Number: IPA1192

Sampled: 01/14/06
 Received: 01/15/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD RPD	Limit	Data Qualifiers
Batch: 6A17070 Extracted: 01/17/06											
Blank Analyzed: 01/17/2006 (6A17070-BLK1)											
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 01/17/2006 (6A17070-BS1)											
Mercury	8.14	0.20	0.050	ug/l	8.00		102	85-115			
Matrix Spike Analyzed: 01/17/2006 (6A17070-MS1)											
						Source: IPA1162-01					
Mercury	8.07	0.20	0.050	ug/l	8.00	ND	101	70-130			
Matrix Spike Dup Analyzed: 01/17/2006 (6A17070-MSD1)											
						Source: IPA1162-01					
Mercury	8.12	0.20	0.050	ug/l	8.00	ND	102	70-130	1	20	

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

Project ID: Routine Outfall 004

Report Number: IPA1192

Sampled: 01/14/06

Received: 01/15/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A15017 Extracted: 01/15/06											
Blank Analyzed: 01/15/2006 (6A15017-BLK1)											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.10	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
LCS Analyzed: 01/15/2006 (6A15017-BS1)											
Chloride	4.95	0.50	0.15	mg/l	5.00		99	90-110			M-3
Sulfate	9.80	0.50	0.45	mg/l	10.0		98	90-110			M-3
Batch: 6A17048 Extracted: 01/17/06											
Blank Analyzed: 01/17/2006 (6A17048-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 01/17/2006 (6A17048-BS1)											
Oil & Grease	16.0	5.0	0.94	mg/l	20.0		80	65-120			M-NR1
LCS Dup Analyzed: 01/17/2006 (6A17048-BSD1)											
Oil & Grease	17.0	5.0	0.94	mg/l	20.0		85	65-120	6	20	
Batch: 6A17118 Extracted: 01/17/06											
Blank Analyzed: 01/17/2006 (6A17118-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 01/17/2006 (6A17118-BS1)											
Total Suspended Solids	950	10	10	mg/l	1000		95	85-115			

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Routine Outfall 004 Report Number: IPA1192	Sampled: 01/14/06 Received: 01/15/06
--	---	---

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6A17118 Extracted: 01/17/06											
Duplicate Analyzed: 01/17/2006 (6A17118-DUP1)						Source: IPA1313-01					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
Batch: 6A24065 Extracted: 01/20/06											
Blank Analyzed: 01/20/2006 (6A24065-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 01/20/2006 (6A24065-BS1)											
Total Dissolved Solids	996	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 01/20/2006 (6A24065-DUP1)						Source: IPA1307-07					
Total Dissolved Solids	305	10	10	mg/l		300			2	10	

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

Project ID: Routine Outfall 004

Report Number: IPA1192

Sampled: 01/14/06

Received: 01/15/06

Compliance Check

The results obtained from the analytical testing of this data set were checked against compliance limits received from the client. Any results at or above the compliance limits appear in bold on this page.

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPA1192-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.67	4.8	15
IPA1192-01	Antimony-200.8	Antimony	ug/l	1.20	2.0	6.00
IPA1192-01	Cadmium-200.8	Cadmium	ug/l	0.080	1.0	4.00
IPA1192-01	Chloride - 300.0	Chloride	mg/l	24	0.50	150
IPA1192-01	Copper-200.8	Copper	ug/l	1.90	2.0	14
IPA1192-01	Mercury - 245.1	Mercury	ug/l	0.051	0.20	0.20
IPA1192-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.24	0.10	10.00
IPA1192-01	Sulfate-300.0	Sulfate	mg/l	2.30	0.50	250
IPA1192-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	450	10	850

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

Project ID: Routine Outfall 004
Report Number: IPA1192

Sampled: 01/14/06
Received: 01/15/06

DATA QUALIFIERS AND DEFINITIONS

- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- M-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-NRI** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

Del Mar Analytical, Irvine
Michele Chamberlin
Project Manager



Del Mar Analytical

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

Project ID: Routine Outfall 004

Report Number: IPA1192

Sampled: 01/14/06
 Received: 01/15/06

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 413.1	Water	X	X
SM2540C	Water	X	X

Nevada and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmlabs.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: IPA1192-01

Analysis Performed: EDD + Level 4

Samples: IPA1192-01

Del Mar Analytical, Irvine

Michele Chamberlin

Project Manager

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2 PA 1192

Client Name/Address: MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Project: Boeing-SSFL NPDES Routine Outfall 004 Stormwater at SRE		ANALYSIS REQUIRED		Field readings: Temp = 55.6 pH = 6.5	
Project Manager: Bronwyn Kelly		Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Total Recoverable Metals: Sb, Cd, Cu, Pb, Hg		Comments	
Sampler: <i>R. Barrado</i> <i>L. Hayes</i>				Oil & Grease (EPA 413.1)			
				TCDD (and all congeners)			
				Cl ⁻ , SO ₄ , NO ₃ +NO ₂ -N			
				TDS, TSS			
Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	
Outfall 004	W	Poly-1L	1	1-14-06 12:35	HNO3	1A	X
Outfall 004-Dup	W	Poly-1L	1		HNO3	1B	X
Outfall 004	W	Glass-Amber	2		None	2A, 2B	X
Outfall 004	W	Glass-Amber	2		HCl	3A, 3B	X
Outfall 004	W	Poly-500 ml	2		None	4A, 4B	X
Outfall 004	W	Poly-500 ml	2	1-14-06 12:35	None	5A, 5B	X
Relinquished By				Date/Time: 1-15-06 10:35	Received By		Date/Time: 1/15/06 1035
Relinquished By				Date/Time: 1/15/06 1600	Received By		Date/Time: 1/15/06 1600
Relinquished By				Date/Time:	Received By		Date/Time:
				Turn around Time: (check)		5 Days	
				48 Hours		10 Days	
				72 Hours		Normal	
				Perchlorate Only 72 Hours			
				Merials Only 72 Hours			
				Sample Integrity: (Check)		On loss: 4C	
				Intact			



26, 2006

Project ID.: 27209

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

Hele Chamberlin,

Here are the results for the one aqueous sample received at Alta Analytical Laboratory on January 11, 2006 under your Project Name "IPA1192". This sample was extracted and analyzed using EPA Method 1631 for tetra- to octa-chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

M. Maier
Manager of HRMS Services



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



Alta Analytical Laboratory Inc.

1104 Windfield Way
El Dorado Hills, CA 95762

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

Page 1 of 236

NPDES - 474

Section I: Sample Inventory Report

Date Received: 1/17/2006

Alta Lab. ID

Client Sample ID

27209-001

IPA1192-01

SECTION II

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

Analyst: DMS

Approved By: Martha M. Maier 26-Jan-2006 08:17

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

Analyte: DMS

Approved By: Martha M. Maier 26-Jan-2006 08:17

Sample ID: IPA1192-01 **EPA Method 1613**

Client Data
 Name: Del Mar Analytical, Irvine
 Project: IPA1192
 Date Collected: 14-Jan-06
 Time Collected: 1225

Laboratory Data
 Lab Sample: 27209-001
 QC Batch No.: 7686
 Date Analyzed DB-5: 24-Jan-06
 Date Received: 17-Jan-06
 Date Extracted: 22-Jan-06
 Date Analyzed DB-225: NA

Sample Data		Sample Data		Labeled Standard		%R LCL-UCL^d Qualifiers	
Analyte	Conc. (ug/L)	DL^a	EMPC^b	Matrix:	Sample Size:	Matrix:	Sample Size:
2,3,7,8-TCDD	ND	0.00000109		Aqueous	1.01 L	IS	13C-2,3,7,8-TCDD
1,2,3,7,8-PeCDD	ND	0.00000168					13C-1,2,3,7,8-PeCDD
1,2,3,4,7,8-HxCDD	ND	0.00000310					13C-1,2,3,4,7,8-HxCDD
1,2,3,6,7,8-HxCDD	ND	0.00000306					13C-1,2,3,6,7,8-HxCDD
1,2,3,7,8,9-HxCDD	ND	0.00000298					13C-1,2,3,4,6,7,8-HpCDD
1,2,3,4,6,7,8-HpCDD	0.0000257			B			13C-OCDD
OCDD	0.0000317			B			13C-2,3,7,8-TCDF
2,3,7,8-TCDF	ND	0.00000127					13C-1,2,3,7,8-PeCDF
1,2,3,7,8-PeCDF	ND	0.00000138					13C-2,3,4,7,8-PeCDF
2,3,4,7,8-PeCDF	ND	0.00000131					13C-1,2,3,4,7,8-HxCDF
1,2,3,4,7,8-HxCDF	ND	0.00000107					13C-1,2,3,6,7,8-HxCDF
1,2,3,6,7,8-HxCDF	ND	0.00000828					13C-2,3,4,6,7,8-HxCDF
2,3,4,6,7,8-HxCDF	ND	0.00000118					13C-1,2,3,7,8,9-HxCDF
1,2,3,7,8,9-HxCDF	ND	0.00000156					13C-1,2,3,4,6,7,8-HpCDF
1,2,3,4,6,7,8-HpCDF	0.00000341			J			13C-1,2,3,4,7,8,9-HpCDF
1,2,3,4,7,8,9-HpCDF	ND	0.00000175					13C-OCDF
OCDF	0.0000103			J			CRS 37Cl-2,3,7,8-TCDD

Totals		Footnotes	
Total TCDD	ND	0.00000109	a. Sample specific estimated detection limit.
Total PeCDD	ND	0.00000168	b. Estimated maximum possible concentration.
Total HxCDD	0.00000545		c. Method detection limit.
Total HpCDD	0.00000505		d. Lower control limit - upper control limit.
Total TCDF	ND	0.00000127	
Total PeCDF	ND	0.00000134	
Total HxCDF	0.00000202		
Total HpCDF	0.00000341	0.00000115	

Analyst: DMS
 Approved By: Martha M. Maier
 Date: 26-Jan-2006 08:17

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

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

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27209

Samples Arrival:	Date/Time 1/17/06 0840	Initials: BBB	Location: WR-2			
Logged In:	Date/Time 1/17/06 1415	Initials: BBB	Location: WR-2			
Delivered By:	<u>FedEx</u>	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice	None		
Temp °C	0.9°C	Time:	0900	Thermometer ID:	DT-20	

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill	✓		
Trk #	7924 8983 9854		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented?		COC	Sample Container <u>None</u>
Shipping Container	Alta	<u>Client</u>	Retain <u>Return</u> Dispose

Comments:

APPENDIX G

Section 20

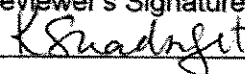
Outfall 004, January 14, 2006
AMEC Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^X
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4DF26
 Task Order 1261.001D.01
 SDG No. IPA1192
 No. of Analyses 1

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

Date: February 25, 2006
 Reviewer's Signature


ACTION ITEMS^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.,	Method blank contamination
Holding Times	Detects below the laboratory lower calibration level were qualified as estimated.
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS^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 004

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPA1192

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001.01
Sample Delivery Group: IPA1192
Project Manager: P. Costa
Matrix: Water
Analysis: Dioxins/Furans
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: February 25, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 004	IPA1192-01	27209-001	Water	1613

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 1°C. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

2.1.2 Chain of Custody

The COC and transfer COC were legible and signed by the appropriate field and laboratory personnel, and accounted for the analysis presented in this SDG. As the samples were couriered directly to Del Mar Analytical-Irvine, custody seals were not required. Custody seals were present on the coolers from Del Mar to Alta; however no sample custody seals were present. The Client ID was added to the sample result summary by the reviewer. No qualifications were required.

2.1.3 Holding Times

The samples were extracted and analyzed within one year of collection. No qualifications were required.

2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

2.2.1 GC Column Performance

A Windows Defining Mix (WDM) containing the first and last eluting congeners of each descriptor and isomer specificity compounds was not analyzed prior to the initial calibration sequence or at the beginning of each analytical sequence; however, the first and last eluting congeners and isomer specificity compounds were added to the midpoint of the initial calibration and to the continuing calibration standards (see section 2.3.2). The GC column performance in the calibrations was acceptable, with the height of the valley between the closely eluting isomers and 2,3,7,8-TCDD reported as less than 25%. No qualifications were required.

2.2.2 Mass Spectrometer Performance

The mass spectrometer performance was acceptable with the static resolving power greater than 10,000. No qualifications were required.

2.3 CALIBRATION

2.3.1 Initial Calibration

The initial calibration was analyzed 01/12/2006 on instrument VG-7. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs $\leq 20\%$ for the 16 native compounds (calibration by isotope dilution) and $\leq 35\%$ for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The VERs were acceptable with the concentrations within the acceptance criteria listed in Table 6 of EPA Method 1613. The ion abundance ratios and relative retention times were within the method QC limits. A representative number of %Ds were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

WDM and isomer specificity compounds were added to the VER standard instead of being analyzed separately, as noted in section 2.2.1 of this report. No adverse effect was observed with this practice.

2.4 BLANKS

One method blank (0-7686-MB001) was extracted and analyzed with the sample in this SDG. Target compounds 1,2,3,4,6,7,8-HpCDD and OCDD were reported at concentrations below the laboratory lower calibration level in the method blank. Target compounds 1,2,3,4,6,7,8-HpCDD and OCDD were also reported in the site sample; therefore, the detect for HpCDD was qualified as an estimated nondetect, "UJ," at the level of contamination in the site sample. The concentration of OCDD reported in the sample was greater than five times the concentration reported in the method blank and required no qualification. As a portion of total HpCDD was qualified for method blank contamination the result for total HpCDD was qualified as estimated, "J," in the site sample. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No further qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7686-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications of the site samples were required.

2.7.2 Field Duplicates

No field duplicates were identified in association with the sample in this SDG.

2.8 INTERNAL STANDARDS

The labeled standard recoveries were within the acceptance criteria listed in Table 7 of Method 1613. No qualifications were required.

2.9 COMPOUND IDENTIFICATION

The laboratory analyzed for polychlorinated dioxins/furans by EPA Method 1613. The compound identifications were verified from the raw data and no false negatives or positives were noted. No qualifications were required.

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantitation was verified from the raw data. The laboratory calculated and reported compound-specific detection limits. Any detects below the laboratory lower calibration level were qualified as estimated, "J," by the laboratory. These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No further qualifications were required.

Client Data			Sample Data			Laboratory Data		
Sample ID: IPA1192-01	Del Mar Analytical, Irvine	Matrix: Aqueous	Lab Sample: 27209-001	Date Received: 17-Jan-06	EPA Method 1613			
Project: IPA1192	14-Jan-06	Sample Size: 1.01 L	QC Batch No.: 7686	Date Extracted: 22-Jan-06				
Date Collected: 1225	1225		Date Analyzed DB-5: 24-Jan-06	Date Analyzed DB-225: NA				
Time Collected:								
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000109			13C-2,3,7,8-TCDD	71.6	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000168			13C-1,2,3,7,8-PeCDD	69.2	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000310			13C-1,2,3,4,7,8-HxCDD	66.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000306			13C-1,2,3,6,7,8-HxCDD	68.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000298			13C-1,2,3,4,6,7,8-HpCDD	68.2	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000257			B	13C-OCDD	39.2	17 - 157	
OCDD	0.000317			B	13C-2,3,7,8-TCDF	67.5	24 - 169	
2,3,7,8-TCDF	ND	0.00000127			13C-1,2,3,7,8-PeCDF	76.2	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000138			13C-2,3,4,7,8-PeCDF	73.9	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000131			13C-1,2,3,4,7,8-HxCDF	66.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000107			13C-1,2,3,6,7,8-HxCDF	65.1	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000828			13C-2,3,4,6,7,8-HxCDF	65.5	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000118			13C-1,2,3,7,8,9-HxCDF	68.2	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000156			13C-1,2,3,4,6,7,8-HpCDF	62.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000341			J	13C-1,2,3,4,7,8,9-HpCDF	69.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000175			13C-OCDF	46.5	17 - 157	
OCDF	0.0000103			J	GRS 37Cl-2,3,7,8-TCDD	91.0	35 - 197	
Totals								
Total TCDD	ND	0.00000109						
Total PeCDD	ND	0.00000168						
Total HxCDD	0.00000545							
Total HpCDD	0.00000505			B				
Total TCDF	ND	0.00000127						
Total PeCDF	ND	0.00000134						
Total HxCDF	0.00000202							
Total HpCDF	0.00000341		0.00000115					

Analyst: DMS

Approved By: Martha M. Maier 26-Jan-2006 08:17

Project 27209

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DATA VALIDATION REPORT

NPDES Sampling
Outfall 004

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPA1192

Prepared by

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

1. INTRODUCTION

Task Order Title: Topanga Fire Surface Samples
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPA1192
Project Manager: P. Costa
Matrix: Sediment
Analysis: Metals
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: P. Meeks
Date of Review: February 27, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC^x Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, *EPA Methods 200.8 and 245.1*, and validation guidelines outlined in the *USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 004	IPA1192-01	Water	200.8, 245.1

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel 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 80-120%. The laboratory analyzed reporting limit check standards in association with the sample in this SDG. No qualifications were required.

2.4 BLANKS

Cadmium was reported in method blank 6A16092-BLK1 at -0.028 µg/L; therefore, cadmium detected Outfall 004 was qualified as estimated, "J." No further qualifications were required.

2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

No ICSA and ICSAB analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

2.7 LABORATORY DUPLICATES

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

2.8 MATRIX SPIKES

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

2.9 ICP/MS AND ICP SERIAL DILUTION

No serial dilution analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion.

2.10 INTERNAL STANDARDS PERFORMANCE

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

2.11 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the samples in this data package. Calculations were verified and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. Analytes detected below the reporting limit were qualified as estimated, "J," and denoted with "DNQ," in accordance with the NPDES permit. No further qualifications were required.