



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

Project ID: Annual Outfall 008  
 Report Number: IPB2648

Sampled: 02/28/06  
 Received: 02/28/06

**METHOD BLANK/QC DATA**

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C03009 Extracted: 03/03/06</b>											
<b>LCS Analyzed: 03/03/2006 (6C03009-BS1)</b>											
Benzene	27.4	1.0	0.28	ug/l	25.0		110	65-120			
Bromodichloromethane	27.0	2.0	0.30	ug/l	25.0		108	65-135			
Bromoform	20.1	5.0	0.32	ug/l	25.0		80	50-130			
Bromomethane	26.2	5.0	0.42	ug/l	25.0		105	60-140			
Carbon tetrachloride	25.6	0.50	0.28	ug/l	25.0		102	65-140			
Chlorobenzene	26.9	2.0	0.36	ug/l	25.0		108	70-125			
Chloroethane	28.8	5.0	0.40	ug/l	25.0		115	55-140			
Chloroform	27.6	2.0	0.33	ug/l	25.0		110	65-130			
Chloromethane	24.9	5.0	0.30	ug/l	25.0		100	40-140			
Dibromochloromethane	25.2	2.0	0.28	ug/l	25.0		101	65-140			
1,2-Dichlorobenzene	27.4	2.0	0.32	ug/l	25.0		110	70-120			
1,3-Dichlorobenzene	25.1	2.0	0.35	ug/l	25.0		100	70-125			
1,4-Dichlorobenzene	24.8	2.0	0.37	ug/l	25.0		99	70-125			
1,1-Dichloroethane	27.4	2.0	0.27	ug/l	25.0		110	65-130			
1,2-Dichloroethane	27.2	0.50	0.28	ug/l	25.0		109	60-140			
1,1-Dichloroethene	30.5	5.0	0.42	ug/l	25.0		122	70-130			
trans-1,2-Dichloroethene	28.9	2.0	0.27	ug/l	25.0		116	65-130			
1,2-Dichloropropane	28.4	2.0	0.35	ug/l	25.0		114	65-125			
cis-1,3-Dichloropropene	27.0	2.0	0.22	ug/l	25.0		108	70-130			
trans-1,3-Dichloropropene	26.8	2.0	0.32	ug/l	25.0		107	65-130			
Ethylbenzene	26.6	2.0	0.25	ug/l	25.0		106	70-125			
Methylene chloride	29.6	5.0	0.70	ug/l	25.0		118	60-130			
1,1,2,2-Tetrachloroethane	30.2	2.0	0.24	ug/l	25.0		121	55-130			
Tetrachloroethene	26.0	2.0	0.32	ug/l	25.0		104	65-125			
Toluene	27.1	2.0	0.36	ug/l	25.0		108	70-125			
1,1,1-Trichloroethane	23.4	2.0	0.30	ug/l	25.0		94	65-135			
1,1,2-Trichloroethane	30.4	2.0	0.30	ug/l	25.0		122	65-125			
Trichloroethene	29.5	2.0	0.26	ug/l	25.0		118	70-125			
Trichlorofluoromethane	23.9	5.0	0.34	ug/l	25.0		96	60-140			
Vinyl chloride	27.1	0.50	0.26	ug/l	25.0		108	50-130			
Surrogate: Dibromofluoromethane	28.8			ug/l	25.0		115	80-120			
Surrogate: Toluene-d8	28.0			ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	27.8			ug/l	25.0		111	80-120			

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager



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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	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C03009 Extracted: 03/03/06</b>										
<b>Matrix Spike Analyzed: 03/03/2006 (6C03009-MS1)</b>					<b>Source: IPB2645-01RE1</b>					
Benzene	26.0	1.0	0.28	ug/l	25.0	ND	104	60-125		
Bromodichloromethane	24.7	2.0	0.30	ug/l	25.0	ND	99	65-135		
Bromoform	20.3	5.0	0.32	ug/l	25.0	ND	81	50-135		
Bromomethane	24.8	5.0	0.42	ug/l	25.0	ND	99	50-145		
Carbon tetrachloride	24.6	0.50	0.28	ug/l	25.0	ND	98	65-140		
Chlorobenzene	26.1	2.0	0.36	ug/l	25.0	ND	104	70-125		
Chloroethane	27.7	5.0	0.40	ug/l	25.0	ND	111	50-140		
Chloroform	25.2	2.0	0.33	ug/l	25.0	ND	101	65-135		
Chloromethane	23.6	5.0	0.30	ug/l	25.0	ND	94	35-140		
Dibromochloromethane	24.8	2.0	0.28	ug/l	25.0	ND	99	60-140		
1,2-Dichlorobenzene	26.2	2.0	0.32	ug/l	25.0	ND	105	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	25.7	2.0	0.27	ug/l	25.0	ND	103	60-130		
1,2-Dichloroethane	24.5	0.50	0.28	ug/l	25.0	ND	98	60-140		
1,1-Dichloroethene	28.4	5.0	0.42	ug/l	25.0	ND	114	60-135		
trans-1,2-Dichloroethene	27.2	2.0	0.27	ug/l	25.0	ND	109	60-135		
1,2-Dichloropropane	26.3	2.0	0.35	ug/l	25.0	ND	105	60-125		
cis-1,3-Dichloropropene	24.4	2.0	0.22	ug/l	25.0	ND	98	65-135		
trans-1,3-Dichloropropene	24.1	2.0	0.32	ug/l	25.0	ND	96	65-140		
Ethylbenzene	26.0	2.0	0.25	ug/l	25.0	ND	104	65-130		
Methylene chloride	26.9	5.0	0.70	ug/l	25.0	ND	108	55-130		
1,1,2,2-Tetrachloroethane	30.7	2.0	0.24	ug/l	25.0	ND	123	55-140		
Tetrachloroethene	26.3	2.0	0.32	ug/l	25.0	ND	105	60-130		
Toluene	25.4	2.0	0.36	ug/l	25.0	ND	102	65-125		
1,1,1-Trichloroethane	22.2	2.0	0.30	ug/l	25.0	ND	89	65-140		
1,1,2-Trichloroethane	26.3	2.0	0.30	ug/l	25.0	ND	105	60-130		
Trichloroethene	26.3	2.0	0.26	ug/l	25.0	ND	105	60-125		
Trichlorofluoromethane	22.4	5.0	0.34	ug/l	25.0	ND	90	55-145		
Vinyl chloride	26.1	0.50	0.26	ug/l	25.0	ND	104	40-135		
Surrogate: Dibromofluoromethane	27.9			ug/l	25.0		112	80-120		
Surrogate: Toluene-d8	27.0			ug/l	25.0		108	80-120		
Surrogate: 4-Bromofluorobenzene	26.8			ug/l	25.0		107	80-120		

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C03009 Extracted: 03/03/06</b>											
<b>Matrix Spike Dup Analyzed: 03/03/2006 (6C03009-MSD1)</b>						<b>Source: IPB2645-01RE1</b>					
Benzene	26.1	1.0	0.28	ug/l	25.0	ND	104	60-125	0	20	
Bromodichloromethane	25.7	2.0	0.30	ug/l	25.0	ND	103	65-135	4	20	
Bromoform	20.5	5.0	0.32	ug/l	25.0	ND	82	50-135	1	25	
Bromomethane	22.2	5.0	0.42	ug/l	25.0	ND	89	50-145	11	25	
Carbon tetrachloride	25.3	0.50	0.28	ug/l	25.0	ND	101	65-140	3	25	
Chlorobenzene	25.6	2.0	0.36	ug/l	25.0	ND	102	70-125	2	20	
Chloroethane	25.7	5.0	0.40	ug/l	25.0	ND	103	50-140	7	25	
Chloroform	26.0	2.0	0.33	ug/l	25.0	ND	104	65-135	3	20	
Chloromethane	22.7	5.0	0.30	ug/l	25.0	ND	91	35-140	4	25	
Dibromochloromethane	25.4	2.0	0.28	ug/l	25.0	ND	102	60-140	2	25	
1,2-Dichlorobenzene	26.7	2.0	0.32	ug/l	25.0	ND	107	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	24.0	2.0	0.37	ug/l	25.0	ND	96	70-125	0	20	
1,1-Dichloroethane	26.0	2.0	0.27	ug/l	25.0	ND	104	60-130	1	20	
1,2-Dichloroethane	26.0	0.50	0.28	ug/l	25.0	ND	104	60-140	6	20	
1,1-Dichloroethene	27.9	5.0	0.42	ug/l	25.0	ND	112	60-135	2	20	
trans-1,2-Dichloroethene	27.5	2.0	0.27	ug/l	25.0	ND	110	60-135	1	20	
1,2-Dichloropropane	26.3	2.0	0.35	ug/l	25.0	ND	105	60-125	0	20	
cis-1,3-Dichloropropene	25.2	2.0	0.22	ug/l	25.0	ND	101	65-135	3	20	
trans-1,3-Dichloropropene	25.6	2.0	0.32	ug/l	25.0	ND	102	65-140	6	25	
Ethylbenzene	25.9	2.0	0.25	ug/l	25.0	ND	104	65-130	0	20	
Methylene chloride	27.3	5.0	0.70	ug/l	25.0	ND	109	55-130	1	20	
1,1,1,2-Tetrachloroethane	37.0	2.0	0.24	ug/l	25.0	ND	148	55-140	19	30	MI
Tetrachloroethene	25.4	2.0	0.32	ug/l	25.0	ND	102	60-130	3	20	
Toluene	25.6	2.0	0.36	ug/l	25.0	ND	102	65-125	1	20	
1,1,1-Trichloroethane	23.0	2.0	0.30	ug/l	25.0	ND	92	65-140	4	20	
1,1,2-Trichloroethane	28.8	2.0	0.30	ug/l	25.0	ND	115	60-130	9	25	
Trichloroethene	25.8	2.0	0.26	ug/l	25.0	ND	103	60-125	2	20	
Trichlorofluoromethane	22.6	5.0	0.34	ug/l	25.0	ND	90	55-145	1	25	
Vinyl chloride	23.1	0.50	0.26	ug/l	25.0	ND	92	40-135	12	30	
Surrogate: Dibromofluoromethane	28.2			ug/l	25.0		113	80-120			
Surrogate: Toluene-d8	27.4			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			

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PURGEABLES-- GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Limit	Qualifiers
<b>Batch: 6C03009 Extracted: 03/03/06</b>											
<b>Blank Analyzed: 03/03/2006 (6C03009-BLK1)</b>											
Acrolein	ND	50	4.6	ug/l							
Acrylonitrile	ND	50	0.70	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: Dibromofluoromethane	26.5			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	27.3			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	23.2			ug/l	25.0		93	80-120			
<b>LCS Analyzed: 03/03/2006 (6C03009-BS1)</b>											
2-Chloroethyl vinyl ether	16.0	5.0	1.8	ug/l	25.0		64	25-170			
Surrogate: Dibromofluoromethane	28.8			ug/l	25.0		115	80-120			
Surrogate: Toluene-d8	28.0			ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	27.8			ug/l	25.0		111	80-120			
<b>Matrix Spike Analyzed: 03/03/2006 (6C03009-MS1)</b>						<b>Source: IPB2645-01RE1</b>					
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l	25.0	ND		25-170			M2
Surrogate: Dibromofluoromethane	27.9			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	27.0			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	26.8			ug/l	25.0		107	80-120			
<b>Matrix Spike Dup Analyzed: 03/03/2006 (6C03009-MSD1)</b>						<b>Source: IPB2645-01RE1</b>					
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l	25.0	ND		25-170		25	M2
Surrogate: Dibromofluoromethane	28.2			ug/l	25.0		113	80-120			
Surrogate: Toluene-d8	27.4			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			

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**METHOD BLANK/QC DATA**

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06054 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/08/2006 (6C06054-BLK1)</b>											
Acenaphthene	ND	10	4.3	ug/l							
Acenaphthylene	ND	10	3.2	ug/l							
Aniline	ND	10	2.9	ug/l							
Anthracene	ND	10	3.2	ug/l							
Benzidine	ND	20	5.2	ug/l							
Benzoic acid	ND	20	2.6	ug/l							
Benzo(a)anthracene	ND	10	3.7	ug/l							
Benzo(b)fluoranthene	ND	10	2.7	ug/l							
Benzo(k)fluoranthene	ND	10	3.4	ug/l							
Benzo(g,h,i)perylene	ND	10	5.3	ug/l							
Benzo(a)pyrene	ND	10	3.5	ug/l							
Benzyl alcohol	ND	20	2.5	ug/l							
Bis(2-chloroethoxy)methane	ND	10	3.9	ug/l							
Bis(2-chloroethyl)ether	ND	10	4.4	ug/l							
Bis(2-chloroisopropyl)ether	ND	10	4.6	ug/l							
Bis(2-ethylhexyl)phthalate	ND	50	5.2	ug/l							
4-Bromophenyl phenyl ether	ND	10	4.6	ug/l							
Butyl benzyl phthalate	ND	20	3.5	ug/l							
4-Chloroaniline	ND	10	6.0	ug/l							
2-Chloronaphthalene	ND	10	4.0	ug/l							
4-Chloro-3-methylphenol	ND	20	3.5	ug/l							
2-Chlorophenol	ND	10	4.2	ug/l							
4-Chlorophenyl phenyl ether	ND	10	3.0	ug/l							
Chrysene	ND	10	2.8	ug/l							
Dibenz(a,h)anthracene	ND	20	4.7	ug/l							
Dibenzofuran	ND	10	2.6	ug/l							
Di-n-butyl phthalate	ND	20	2.8	ug/l							
1,3-Dichlorobenzene	ND	10	4.1	ug/l							
1,4-Dichlorobenzene	ND	10	3.9	ug/l							
1,2-Dichlorobenzene	ND	10	4.5	ug/l							
3,3-Dichlorobenzidine	ND	20	11	ug/l							
2,4-Dichlorophenol	ND	10	4.1	ug/l							
Diethyl phthalate	ND	10	3.1	ug/l							
2,4-Dimethylphenol	ND	20	4.4	ug/l							
Dimethyl phthalate	ND	10	3.6	ug/l							

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

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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
<b>Batch: 6C06054 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/08/2006 (6C06054-BLK1)</b>											
4,6-Dinitro-2-methylphenol	ND	20	5.1	ug/l							
2,4-Dinitrophenol	ND	20	5.3	ug/l							
2,4-Dinitrotoluene	ND	10	4.2	ug/l							
2,6-Dinitrotoluene	ND	10	3.2	ug/l							
Di-n-octyl phthalate	ND	20	4.7	ug/l							
Fluoranthene	ND	10	4.2	ug/l							
Fluorene	ND	10	3.9	ug/l							
Hexachlorobenzene	ND	10	4.8	ug/l							
Hexachlorobutadiene	ND	10	4.2	ug/l							
Hexachlorocyclopentadiene	ND	20	3.4	ug/l							
Hexachloroethane	ND	10	4.2	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20	5.4	ug/l							
Isophorone	ND	10	3.7	ug/l							
2-Methylnaphthalene	ND	10	3.0	ug/l							
2-Methylphenol	ND	10	3.7	ug/l							
4-Methylphenol	ND	10	3.8	ug/l							
Naphthalene	ND	10	4.5	ug/l							
2-Nitroaniline	ND	20	3.9	ug/l							
3-Nitroaniline	ND	20	4.5	ug/l							
4-Nitroaniline	ND	20	4.9	ug/l							
Nitrobenzene	ND	20	4.2	ug/l							
2-Nitrophenol	ND	10	4.2	ug/l							
4-Nitrophenol	ND	20	6.6	ug/l							
N-Nitrosodiphenylamine	ND	10	4.0	ug/l							
N-Nitroso-di-n-propylamine	ND	10	3.6	ug/l							
Pentachlorophenol	ND	20	4.0	ug/l							
Phenanthrene	ND	10	3.3	ug/l							
Phenol	ND	10	4.0	ug/l							
Pyrene	ND	10	3.9	ug/l							
1,2,4-Trichlorobenzene	ND	10	4.4	ug/l							
2,4,5-Trichlorophenol	ND	20	3.6	ug/l							
2,4,6-Trichlorophenol	ND	20	4.1	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	20	5.0	ug/l							
N-Nitrosodimethylamine	ND	20	3.7	ug/l							
Surrogate: 2-Fluorophenol	127			ug/l	200		64	30-120			

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Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06054 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/08/2006 (6C06054-BLK1)</b>											
Surrogate: Phenol-d6	137			ug/l	200		68	35-120			
Surrogate: 2,4,6-Tribromophenol	173			ug/l	200		86	45-120			
Surrogate: Nitrobenzene-d5	67.6			ug/l	100		68	45-120			
Surrogate: 2-Fluorobiphenyl	70.6			ug/l	100		71	45-120			
Surrogate: Terphenyl-d14	87.7			ug/l	100		88	45-120			
<b>LCS Analyzed: 03/08/2006 (6C06054-BS1)</b>											
Acenaphthene	81.1	10	4.3	ug/l	100		81	55-120			M-NR1
Acenaphthylene	85.5	10	3.2	ug/l	100		86	55-120			
Aniline	73.2	10	2.9	ug/l	100		73	35-120			
Anthracene	89.9	10	3.2	ug/l	100		90	55-120			
Benzidine	134	20	5.2	ug/l	100		134	20-160			
Benzoic acid	69.1	20	2.6	ug/l	100		69	35-120			
Benzo(a)anthracene	88.6	10	3.7	ug/l	100		89	60-120			
Benzo(b)fluoranthene	101	10	2.7	ug/l	100		101	50-120			
Benzo(k)fluoranthene	101	10	3.4	ug/l	100		101	50-120			
Benzo(g,h,i)perylene	112	10	5.3	ug/l	100		112	40-125			
Benzo(a)pyrene	101	10	3.5	ug/l	100		101	55-120			
Benzyl alcohol	74.1	20	2.5	ug/l	100		74	45-120			
Bis(2-chloroethoxy)methane	75.3	10	3.9	ug/l	100		75	55-120			
Bis(2-chloroethyl)ether	70.4	10	4.4	ug/l	100		70	50-120			
Bis(2-chloroisopropyl)ether	70.1	10	4.6	ug/l	100		70	45-120			
Bis(2-ethylhexyl)phthalate	87.5	50	5.2	ug/l	100		88	60-130			
4-Bromophenyl phenyl ether	87.5	10	4.6	ug/l	100		88	50-120			
Butyl benzyl phthalate	83.1	20	3.5	ug/l	100		83	55-125			
4-Chloroaniline	78.9	10	6.0	ug/l	100		79	50-120			
2-Chloronaphthalene	81.7	10	4.0	ug/l	100		82	55-120			
4-Chloro-3-methylphenol	77.1	20	3.5	ug/l	100		77	60-120			
2-Chlorophenol	71.6	10	4.2	ug/l	100		72	45-120			
4-Chlorophenyl phenyl ether	86.9	10	3.0	ug/l	100		87	55-120			
Chrysene	90.5	10	2.8	ug/l	100		90	60-120			
Dibenz(a,h)anthracene	112	20	4.7	ug/l	100		112	45-130			
Dibenzofuran	80.6	10	2.6	ug/l	100		81	60-120			
Di-n-butyl phthalate	88.2	20	2.8	ug/l	100		88	55-125			
1,3-Dichlorobenzene	55.9	10	4.1	ug/l	100		56	35-120			
1,4-Dichlorobenzene	57.1	10	3.9	ug/l	100		57	35-120			

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 Michele Chamberlin  
 Project Manager



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

Project ID: Annual Outfall 008  
Report Number: IPB2648

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06054 Extracted: 03/06/06</b>											
<b>LCS Analyzed: 03/08/2006 (6C06054-BS1)</b>											
1,2-Dichlorobenzene	61.1	10	4.5	ug/l	100	61	35-120				M-NRI
3,3-Dichlorobenzidine	105	20	11	ug/l	100	105	45-130				
2,4-Dichlorophenol	78.4	10	4.1	ug/l	100	78	55-120				
Diethyl phthalate	80.7	10	3.1	ug/l	100	81	55-120				
2,4-Dimethylphenol	60.1	20	4.4	ug/l	100	60	30-120				
Dimethyl phthalate	51.4	10	3.6	ug/l	100	51	30-120				
4,6-Dinitro-2-methylphenol	83.2	20	5.1	ug/l	100	83	50-120				
2,4-Dinitrophenol	75.0	20	5.3	ug/l	100	75	40-120				
2,4-Dinitrotoluene	82.5	10	4.2	ug/l	100	82	60-120				
2,6-Dinitrotoluene	81.0	10	3.2	ug/l	100	81	60-120				
Di-n-octyl phthalate	76.5	20	4.7	ug/l	100	76	60-130				
Fluoranthene	88.2	10	4.2	ug/l	100	88	55-120				
Fluorene	81.1	10	3.9	ug/l	100	81	60-120				
Hexachlorobenzene	96.4	10	4.8	ug/l	100	96	50-120				
Hexachlorobutadiene	71.6	10	4.2	ug/l	100	72	40-120				
Hexachlorocyclopentadiene	79.5	20	3.4	ug/l	100	80	15-120				
Hexachloroethane	57.1	10	4.2	ug/l	100	57	35-120				
Indeno(1,2,3-cd)pyrene	104	20	5.4	ug/l	100	104	40-130				
Isophorone	71.9	10	3.7	ug/l	100	72	50-120				
2-Methylnaphthalene	76.2	10	3.0	ug/l	100	76	50-120				
2-Methylphenol	72.8	10	3.7	ug/l	100	73	45-120				
4-Methylphenol	75.4	10	3.8	ug/l	100	75	45-120				
Naphthalene	74.5	10	4.5	ug/l	100	74	50-120				
2-Nitroaniline	80.0	20	3.9	ug/l	100	80	60-120				
3-Nitroaniline	81.3	20	4.5	ug/l	100	81	55-120				
4-Nitroaniline	85.4	20	4.9	ug/l	100	85	50-125				
Nitrobenzene	70.7	20	4.2	ug/l	100	71	50-120				
2-Nitrophenol	74.0	10	4.2	ug/l	100	74	55-120				
4-Nitrophenol	80.1	20	6.6	ug/l	100	80	45-120				
N-Nitrosodiphenylamine	82.7	10	4.0	ug/l	100	83	55-120				
N-Nitroso-di-n-propylamine	74.1	10	3.6	ug/l	100	74	45-120				
Pentachlorophenol	99.9	20	4.0	ug/l	100	100	50-120				
Phenanthrene	88.0	10	3.3	ug/l	100	88	55-120				
Phenol	69.7	10	4.0	ug/l	100	70	45-120				
Pyrene	88.2	10	3.9	ug/l	100	88	50-120				

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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: Annual Outfall 008  
 Report Number: IPB2648

Sampled: 02/28/06  
 Received: 02/28/06

**METHOD BLANK/QC DATA**

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06054 Extracted: 03/06/06</b>											
<b>LCS Analyzed: 03/08/2006 (6C06054-BS1)</b>											
1,2,4-Trichlorobenzene	70.2	10	4.4	ug/l	100	70	70	45-120			M-NRI
2,4,5-Trichlorophenol	82.2	20	3.6	ug/l	100	82	82	60-120			
2,4,6-Trichlorophenol	84.5	20	4.1	ug/l	100	84	84	60-120			
1,2-Diphenylhydrazine/Azobenzene	76.8	20	5.0	ug/l	100	77	77	60-120			
N-Nitrosodimethylamine	66.7	20	3.7	ug/l	100	67	67	40-120			
Surrogate: 2-Fluorophenol	120			ug/l	200	60	60	30-120			
Surrogate: Phenol-d6	136			ug/l	200	68	68	35-120			
Surrogate: 2,4,6-Tribromophenol	188			ug/l	200	94	94	45-120			
Surrogate: Nitrobenzene-d5	69.1			ug/l	100	69	69	45-120			
Surrogate: 2-Fluorobiphenyl	80.3			ug/l	100	80	80	45-120			
Surrogate: Terphenyl-d14	86.9			ug/l	100	87	87	45-120			
<b>LCS Dup Analyzed: 03/08/2006 (6C06054-BSD1)</b>											
Acenaphthene	69.9	10	4.3	ug/l	100	70	70	55-120	15	20	
Acenaphthylene	73.7	10	3.2	ug/l	100	74	74	55-120	15	20	
Aniline	59.9	10	2.9	ug/l	100	60	60	35-120	20	25	
Anthracene	75.2	10	3.2	ug/l	100	75	75	55-120	18	20	
Benzidine	73.2	20	5.2	ug/l	100	73	73	20-160	59	35	R-7
Benzoic acid	85.7	20	2.6	ug/l	100	86	86	35-120	21	30	
Benzo(a)anthracene	75.5	10	3.7	ug/l	100	76	76	60-120	16	20	
Benzo(b)fluoranthene	89.7	10	2.7	ug/l	100	90	90	50-120	12	25	
Benzo(k)fluoranthene	86.4	10	3.4	ug/l	100	86	86	50-120	16	20	
Benzo(g,h,i)perylene	88.0	10	5.3	ug/l	100	88	88	40-125	24	25	
Benzo(a)pyrene	87.5	10	3.5	ug/l	100	88	88	55-120	14	25	
Benzyl alcohol	61.0	20	2.5	ug/l	100	61	61	45-120	19	20	
Bis(2-chloroethoxy)methane	62.7	10	3.9	ug/l	100	63	63	55-120	18	20	
Bis(2-chloroethyl)ether	57.5	10	4.4	ug/l	100	58	58	50-120	20	20	
Bis(2-chloroisopropyl)ether	58.8	10	4.6	ug/l	100	59	59	45-120	18	20	
Bis(2-ethylhexyl)phthalate	70.7	50	5.2	ug/l	100	71	71	60-130	21	20	R-7
4-Bromophenyl phenyl ether	72.0	10	4.6	ug/l	100	72	72	50-120	19	25	
Butyl benzyl phthalate	65.7	20	3.5	ug/l	100	66	66	55-125	23	20	R-7
4-Chloroaniline	65.1	10	6.0	ug/l	100	65	65	50-120	19	25	
2-Chloronaphthalene	70.4	10	4.0	ug/l	100	70	70	55-120	15	20	
4-Chloro-3-methylphenol	68.0	20	3.5	ug/l	100	68	68	60-120	13	25	
2-Chlorophenol	71.7	10	4.2	ug/l	100	72	72	45-120	0	25	
4-Chlorophenyl phenyl ether	73.8	10	3.0	ug/l	100	74	74	55-120	16	20	

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 Michele Chamberlin  
 Project Manager



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

Project ID: Annual Outfall 008
Report Number: IPB2648

Sampled: 02/28/06
Received: 02/28/06

METHOD BLANK/QC DATA

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

Table with columns: Analyte, Result, Reporting Limit, MDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Data Qualifiers. Includes data for various analytes like Chrysene, Dibenzo(a,h)anthracene, etc.

Batch: 6C06054 Extracted: 03/06/06

LCS Dup Analyzed: 03/08/2006 (6C06054-BSD1)

Del Mar Analytical - Irvine
Michele Chamberlin
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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
<b>Batch: 6C06054 Extracted: 03/06/06</b>											
<b>LCS Dup Analyzed: 03/08/2006 (6C06054-BSD1)</b>											
N-Nitrosodiphenylamine	69.7	10	4.0	ug/l	100	70	55-120	17	20		
N-Nitroso-di-n-propylamine	60.4	10	3.6	ug/l	100	60	45-120	20	20		
Pentachlorophenol	106	20	4.0	ug/l	100	106	50-120	6	25		
Phenanthrene	73.1	10	3.3	ug/l	100	73	55-120	18	20		
Phenol	65.0	10	4.0	ug/l	100	65	45-120	7	25		
Pyrene	70.7	10	3.9	ug/l	100	71	50-120	22	25		
1,2,4-Trichlorobenzene	57.9	10	4.4	ug/l	100	58	45-120	19	20		
2,4,5-Trichlorophenol	87.2	20	3.6	ug/l	100	87	60-120	6	20		
2,4,6-Trichlorophenol	89.5	20	4.1	ug/l	100	90	60-120	6	20		
1,2-Diphenylhydrazine/Azobenzene	65.9	20	5.0	ug/l	100	66	60-120	15	25		
N-Nitrosodimethylamine	55.7	20	3.7	ug/l	100	56	40-120	18	20		
Surrogate: 2-Fluorophenol	126			ug/l	200	63	30-120				
Surrogate: Phenol-d6	131			ug/l	200	66	35-120				
Surrogate: 2,4,6-Tribromophenol	190			ug/l	200	95	45-120				
Surrogate: Nitrobenzene-d5	58.5			ug/l	100	58	45-120				
Surrogate: 2-Fluorobiphenyl	71.2			ug/l	100	71	45-120				
Surrogate: Terphenyl-d14	71.7			ug/l	100	72	45-120				

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Project Manager

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Project ID: Annual Outfall 008  
 Report Number: IPB2648

Sampled: 02/28/06  
 Received: 02/28/06

**METHOD BLANK/QC DATA**

**ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>										
<b>Blank Analyzed: 03/06/2006 (6C05031-BLK1)</b>										
Aldrin	ND	0.10	0.030	ug/l						
alpha-BHC	ND	0.10	0.020	ug/l						
beta-BHC	ND	0.10	0.015	ug/l						
delta-BHC	ND	0.20	0.020	ug/l						
gamma-BHC (Lindane)	ND	0.10	0.020	ug/l						
Chlordane	ND	1.0	0.20	ug/l						
4,4'-DDD	ND	0.10	0.020	ug/l						
4,4'-DDE	ND	0.10	0.025	ug/l						
4,4'-DDT	ND	0.10	0.035	ug/l						
Dieldrin	ND	0.10	0.015	ug/l						
Endosulfan I	ND	0.10	0.015	ug/l						
Endosulfan II	ND	0.10	0.040	ug/l						
Endosulfan sulfate	ND	0.20	0.020	ug/l						
Endrin	ND	0.10	0.020	ug/l						
Endrin aldehyde	ND	0.10	0.045	ug/l						
Endrin ketone	ND	0.10	0.020	ug/l						
Heptachlor	ND	0.10	0.030	ug/l						
Heptachlor epoxide	ND	0.10	0.030	ug/l						
Methoxychlor	ND	0.10	0.035	ug/l						
Toxaphene	ND	5.0	1.5	ug/l						
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		70		35-115	
Surrogate: Decachlorobiphenyl	0.455			ug/l	0.500		91		45-120	
<b>LCS Analyzed: 03/06/2006 (6C05031-BS1)</b>										
Aldrin	0.389	0.10	0.030	ug/l	0.500		78		35-120	
alpha-BHC	0.434	0.10	0.020	ug/l	0.500		87		45-120	
beta-BHC	0.426	0.10	0.015	ug/l	0.500		85		50-120	
delta-BHC	0.435	0.20	0.020	ug/l	0.500		87		50-120	
gamma-BHC (Lindane)	0.423	0.10	0.020	ug/l	0.500		85		40-120	
4,4'-DDD	0.438	0.10	0.020	ug/l	0.500		88		55-120	
4,4'-DDE	0.419	0.10	0.025	ug/l	0.500		84		50-120	
4,4'-DDT	0.458	0.10	0.035	ug/l	0.500		92		55-120	
Dieldrin	0.431	0.10	0.015	ug/l	0.500		86		50-120	
Endosulfan I	0.406	0.10	0.015	ug/l	0.500		81		50-120	
Endosulfan II	0.421	0.10	0.040	ug/l	0.500		84		55-120	
Endosulfan sulfate	0.429	0.20	0.020	ug/l	0.500		86		60-120	

M-NR1

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Report Number: IPB2648

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Limit	Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>											
<b>LCS Analyzed: 03/06/2006 (6C05031-BS1)</b>											
Endrin	0.449	0.10	0.020	ug/l	0.500		90	55-120			M-NRI
Endrin aldehyde	0.410	0.10	0.045	ug/l	0.500		82	55-120			
Endrin ketone	0.429	0.10	0.020	ug/l	0.500		86	55-120			
Heptachlor	0.393	0.10	0.030	ug/l	0.500		79	40-115			
Heptachlor epoxide	0.409	0.10	0.030	ug/l	0.500		82	50-120			
Methoxychlor	0.435	0.10	0.035	ug/l	0.500		87	55-120			
Surrogate: Tetrachloro-m-xylene	0.361			ug/l	0.500		72	35-115			
Surrogate: Decachlorobiphenyl	0.412			ug/l	0.500		82	45-120			
<b>LCS Dup Analyzed: 03/06/2006 (6C05031-BSD1)</b>											
Aldrin	0.372	0.10	0.030	ug/l	0.500		74	35-120	4	30	
alpha-BHC	0.413	0.10	0.020	ug/l	0.500		83	45-120	5	30	
beta-BHC	0.413	0.10	0.015	ug/l	0.500		83	50-120	3	30	
delta-BHC	0.425	0.20	0.020	ug/l	0.500		85	50-120	2	30	
gamma-BHC (Lindane)	0.406	0.10	0.020	ug/l	0.500		81	40-120	4	30	
4,4'-DDD	0.422	0.10	0.020	ug/l	0.500		84	55-120	4	30	
4,4'-DDE	0.411	0.10	0.025	ug/l	0.500		82	50-120	2	30	
4,4'-DDT	0.450	0.10	0.035	ug/l	0.500		90	55-120	2	30	
Dieldrin	0.424	0.10	0.015	ug/l	0.500		85	50-120	2	30	
Endosulfan I	0.397	0.10	0.015	ug/l	0.500		79	50-120	2	30	
Endosulfan II	0.415	0.10	0.040	ug/l	0.500		83	55-120	1	30	
Endosulfan sulfate	0.426	0.20	0.020	ug/l	0.500		85	60-120	1	30	
Endrin	0.434	0.10	0.020	ug/l	0.500		87	55-120	3	30	
Endrin aldehyde	0.404	0.10	0.045	ug/l	0.500		81	55-120	1	30	
Endrin ketone	0.424	0.10	0.020	ug/l	0.500		85	55-120	1	30	
Heptachlor	0.377	0.10	0.030	ug/l	0.500		75	40-115	4	30	
Heptachlor epoxide	0.398	0.10	0.030	ug/l	0.500		80	50-120	3	30	
Methoxychlor	0.434	0.10	0.035	ug/l	0.500		87	55-120	0	30	
Surrogate: Tetrachloro-m-xylene	0.339			ug/l	0.500		68	35-115			
Surrogate: Decachlorobiphenyl	0.407			ug/l	0.500		81	45-120			

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Project Manager

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

Project ID: Annual Outfall 008

Report Number: IPB2648

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C05031-BLK1)</b>											
Aroclor 1016	ND	1.0	0.20	ug/l							
Aroclor 1221	ND	1.0	0.10	ug/l							
Aroclor 1232	ND	1.0	0.25	ug/l							
Aroclor 1242	ND	1.0	0.25	ug/l							
Aroclor 1248	ND	1.0	0.25	ug/l							
Aroclor 1254	ND	1.0	0.25	ug/l							
Aroclor 1260	ND	1.0	0.40	ug/l							
Surrogate: Decachlorobiphenyl	0.512			ug/l	0.500		102	45-120			
<b>LCS Analyzed: 03/06/2006 (6C05031-BS2)</b>											
Aroclor 1016	3.60	1.0	0.20	ug/l	4.00		90	45-115			M-NRI
Aroclor 1260	3.91	1.0	0.40	ug/l	4.00		98	55-115			
Surrogate: Decachlorobiphenyl	0.458			ug/l	0.500		92	45-120			
<b>LCS Dup Analyzed: 03/06/2006 (6C05031-BSD2)</b>											
Aroclor 1016	3.74	1.0	0.20	ug/l	4.00		94	45-115	4	30	
Aroclor 1260	3.99	1.0	0.40	ug/l	4.00		100	55-115	2	25	
Surrogate: Decachlorobiphenyl	0.550			ug/l	0.500		110	45-120			

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

Project ID: Annual Outfall 008  
Report Number: IPB2648

Sampled: 02/28/06  
Received: 02/28/06

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit	Data Qualifiers
<b>Batch: 6C02097 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02097-BLK1)</b>											
Mercury	ND	0.20	0.050	ug/l							
<b>LCS Analyzed: 03/02/2006 (6C02097-BS1)</b>											
Mercury	7.88	0.20	0.050	ug/l	8.00		98	85-115			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02097-MS1) Source: IPB2608-01</b>											
Mercury	7.84	0.20	0.050	ug/l	8.00	ND	98	70-130			
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02097-MSD1) Source: IPB2608-01</b>											
Mercury	7.88	0.20	0.050	ug/l	8.00	ND	98	70-130	1	20	
<b>Batch: 6C02098 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02098-BLK1)</b>											
Antimony	ND	2.0	0.18	ug/l							
Cadmium	0.0179	1.0	0.015	ug/l							J
Copper	ND	2.0	0.49	ug/l							
Lead	ND	1.0	0.13	ug/l							
Thallium	ND	1.0	N/A	ug/l							
<b>LCS Analyzed: 03/02/2006 (6C02098-BS1)</b>											
Antimony	86.5	2.0	0.18	ug/l	80.0		108	85-115			
Cadmium	86.9	1.0	0.015	ug/l	80.0		109	85-115			
Copper	89.3	2.0	0.49	ug/l	80.0		112	85-115			
Lead	85.6	1.0	0.13	ug/l	80.0		107	85-115			
Thallium	84.8	1.0	N/A	ug/l	80.0		106	85-115			

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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: Annual Outfall 008  Report Number: IPB2648	Sampled: 02/28/06 Received: 02/28/06
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## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Limit	Qualifiers
<b>Batch: 6C02098 Extracted: 03/02/06</b>											
<b>Matrix Spike Analyzed: 03/02/2006 (6C02098-MS1)</b>						<b>Source: IPB2651-01</b>					
Antimony	84.3	2.0	0.18	ug/l	80.0	ND	105	70-130			
Cadmium	83.6	1.0	0.015	ug/l	80.0	ND	104	70-130			
Copper	81.5	2.0	0.49	ug/l	80.0	0.49	101	70-130			
Lead	83.1	1.0	0.13	ug/l	80.0	0.19	104	70-130			
Thallium	81.3	1.0	N/A	ug/l	80.0	0.31	101	70-130			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02098-MS2)</b>						<b>Source: IPB2645-01</b>					
Antimony	85.1	2.0	0.18	ug/l	80.0	0.46	106	70-130			
Cadmium	82.7	1.0	0.015	ug/l	80.0	0.077	103	70-130			
Copper	78.9	2.0	0.49	ug/l	80.0	2.3	96	70-130			
Lead	82.4	1.0	0.13	ug/l	80.0	0.50	102	70-130			
Thallium	81.6	1.0	N/A	ug/l	80.0	0.53	101	70-130			
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02098-MSD1)</b>						<b>Source: IPB2651-01</b>					
Antimony	82.9	2.0	0.18	ug/l	80.0	ND	104	70-130	2	20	
Cadmium	81.4	1.0	0.015	ug/l	80.0	ND	102	70-130	3	20	
Copper	78.3	2.0	0.49	ug/l	80.0	0.49	97	70-130	4	20	
Lead	80.8	1.0	0.13	ug/l	80.0	0.19	101	70-130	3	20	
Thallium	80.7	1.0	N/A	ug/l	80.0	0.31	100	70-130	1	20	

### Batch: 6C03084 Extracted: 03/03/06

#### Blank Analyzed: 03/04/2006-03/07/2006 (6C03084-BLK1)

Aluminum	ND	50	40	ug/l							
Arsenic	ND	5.0	3.8	ug/l							
Beryllium	ND	2.0	0.62	ug/l							
Boron	ND	0.050	0.0074	mg/l							
Chromium	1.10	5.0	0.68	ug/l							J
Nickel	ND	10	2.0	ug/l							
Selenium	ND	10	8.0	ug/l							
Silver	ND	10	3.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	3.7	ug/l							

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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
<b>Batch: 6C03084 Extracted: 03/03/06</b>											
<b>LCS Analyzed: 03/04/2006-03/07/2006 (6C03084-BS1)</b>											
Aluminum	495	50	40	ug/l	500		99	85-115			
Arsenic	519	5.0	3.8	ug/l	500		104	85-115			
Beryllium	524	2.0	0.62	ug/l	500		105	85-115			
Boron	0.501	0.050	0.0074	mg/l	0.500		100	85-115			
Chromium	518	5.0	0.68	ug/l	500		104	85-115			
Nickel	513	10	2.0	ug/l	500		103	85-115			
Selenium	493	10	8.0	ug/l	500		99	85-115			
Silver	263	10	3.0	ug/l	250		105	85-115			
Vanadium	517	10	3.0	ug/l	500		103	85-115			
Zinc	499	20	3.7	ug/l	500		100	85-115			

Matrix Spike Analyzed: 03/04/2006-03/07/2006 (6C03084-MS1)

Source: IPB2463-01

Aluminum	490	50	40	ug/l	500	ND	98	70-130			
Arsenic	544	5.0	3.8	ug/l	500	8.8	107	70-130			
Beryllium	520	2.0	0.62	ug/l	500	ND	104	70-130			
Boron	0.609	0.050	0.0074	mg/l	0.500	0.064	109	70-130			
Chromium	520	5.0	0.68	ug/l	500	ND	104	70-130			
Nickel	503	10	2.0	ug/l	500	ND	101	70-130			
Selenium	508	10	8.0	ug/l	500	ND	102	70-130			
Silver	273	10	3.0	ug/l	250	4.9	107	70-130			
Vanadium	522	10	3.0	ug/l	500	ND	104	70-130			
Zinc	732	20	3.7	ug/l	500	480	50	70-130			M2

Matrix Spike Analyzed: 03/04/2006-03/07/2006 (6C03084-MS2)

Source: IPB2463-02

Aluminum	1200	50	40	ug/l	500	560	128	70-130			
Arsenic	527	5.0	3.8	ug/l	500	4.9	104	70-130			
Beryllium	508	2.0	0.62	ug/l	500	ND	102	70-130			
Boron	0.554	0.050	0.0074	mg/l	0.500	0.037	103	70-130			
Chromium	511	5.0	0.68	ug/l	500	2.3	102	70-130			
Nickel	493	10	2.0	ug/l	500	ND	99	70-130			
Selenium	494	10	8.0	ug/l	500	ND	99	70-130			
Silver	263	10	3.0	ug/l	250	4.0	104	70-130			
Vanadium	511	10	3.0	ug/l	500	ND	102	70-130			
Zinc	497	20	3.7	ug/l	500	ND	99	70-130			

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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
<b>Batch: 6C03084 Extracted: 03/03/06</b>											
<b>Matrix Spike Dup Analyzed: 03/04/2006-03/07/2006 (6C03084-MSD1)</b>						<b>Source: IPB2463-01</b>					
Aluminum	461	50	40	ug/l	500	ND	92	70-130	6	20	
Arsenic	532	5.0	3.8	ug/l	500	8.8	105	70-130	2	20	
Beryllium	504	2.0	0.62	ug/l	500	ND	101	70-130	3	20	
Boron	0.593	0.050	0.0074	mg/l	0.500	0.064	106	70-130	3	20	
Chromium	510	5.0	0.68	ug/l	500	ND	102	70-130	2	20	
Nickel	492	10	2.0	ug/l	500	ND	98	70-130	2	20	
Selenium	488	10	8.0	ug/l	500	ND	98	70-130	4	20	
Silver	262	10	3.0	ug/l	250	4.9	103	70-130	4	20	
Vanadium	504	10	3.0	ug/l	500	ND	101	70-130	4	20	
Zinc	722	20	3.7	ug/l	500	480	48	70-130	1	20	M2

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## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Limit	Data Qualifiers
<b>Batch: 6B28141 Extracted: 02/28/06</b>											
<b>Blank Analyzed: 02/28/2006 (6B28141-BLK1)</b>											
Chloride	ND	0.50	0.26	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.072	mg/l							
Sulfate	ND	0.50	0.18	mg/l							
<b>LCS Analyzed: 02/28/2006 (6B28141-BS1)</b>											
Chloride	5.00	0.50	0.26	mg/l	5.00		100	90-110			
Sulfate	10.5	0.50	0.18	mg/l	10.0		105	90-110			
<b>Matrix Spike Analyzed: 02/28/2006 (6B28141-MS1) Source: IPB2607-01</b>											
Chloride	30.4	1.0	0.52	mg/l	5.00	26	88	80-120			
Sulfate	36.5	1.0	0.36	mg/l	10.0	27	95	80-120			
<b>Matrix Spike Dup Analyzed: 02/28/2006 (6B28141-MSD1) Source: IPB2607-01</b>											
Chloride	30.3	1.0	0.52	mg/l	5.00	26	86	80-120	0	20	
Sulfate	36.9	1.0	0.36	mg/l	10.0	27	99	80-120	1	20	
<b>Batch: 6C02125 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02125-BLK1)</b>											
Total Cyanide	ND	5.0	2.2	ug/l							
<b>LCS Analyzed: 03/02/2006 (6C02125-BS1)</b>											
Total Cyanide	194	5.0	2.2	ug/l	200		97	90-110			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02125-MS1) Source: IPB2379-01</b>											
Total Cyanide	193	5.0	2.2	ug/l	200	2.5	95	70-115			

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02125 Extracted: 03/02/06</b>											
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02125-MSD1)</b>						<b>Source: IPB2379-01</b>					
Total Cyanide	205	5.0	2.2	ug/l	200	2.5	101	70-115	6	15	
<b>Batch: 6C03066 Extracted: 03/03/06</b>											
<b>Blank Analyzed: 03/03/2006 (6C03066-BLK1)</b>											
Perchlorate	ND	4.0	2.0	ug/l							
<b>LCS Analyzed: 03/03/2006 (6C03066-BS1)</b>											
Perchlorate	50.4	4.0	2.0	ug/l	50.0		101	85-115			
<b>Matrix Spike Analyzed: 03/03/2006 (6C03066-MS1)</b>						<b>Source: IPC0361-01</b>					
Perchlorate	62.8	4.0	2.0	ug/l	50.0	15	96	80-120			
<b>Matrix Spike Dup Analyzed: 03/03/2006 (6C03066-MSD1)</b>						<b>Source: IPC0361-01</b>					
Perchlorate	61.7	4.0	2.0	ug/l	50.0	15	93	80-120	2	20	
<b>Batch: 6C03069 Extracted: 03/03/06</b>											
<b>Blank Analyzed: 03/03/2006 (6C03069-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 03/03/2006 (6C03069-BS1)</b>											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
<b>Duplicate Analyzed: 03/03/2006 (6C03069-DUP1)</b>						<b>Source: IPC0153-03</b>					
Total Dissolved Solids	285	10	10	mg/l		280			2	10	

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**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06085 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C06085-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 03/06/2006 (6C06085-BS1)</b>											
Total Suspended Solids	987	10	10	mg/l	1000		99	85-115			
<b>Duplicate Analyzed: 03/06/2006 (6C06085-DUP1)</b>											
						<b>Source: IPC0040-01</b>					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
<b>Batch: 6C08046 Extracted: 03/08/06</b>											
<b>Blank Analyzed: 03/08/2006 (6C08046-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							
<b>LCS Analyzed: 03/08/2006 (6C08046-BS1)</b>											
Oil & Grease	15.7	5.0	0.94	mg/l	20.0		78	65-120			M-NR1
<b>LCS Dup Analyzed: 03/08/2006 (6C08046-BSD1)</b>											
Oil & Grease	16.2	5.0	0.94	mg/l	20.0		81	65-120	3	20	

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### 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
IPB2648-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.38	4.8	15
IPB2648-01	Boron-200.7	Boron	mg/l	0.056	0.050	1.00
IPB2648-01	Chloride - 300.0	Chloride	mg/l	25	0.50	150
IPB2648-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	2.60	0.26	8.00
IPB2648-01	Perchlorate 314.0	Perchlorate	ug/l	1.80	4.0	6.00
IPB2648-01	Sulfate-300.0	Sulfate	mg/l	13	0.50	300
IPB2648-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	260	10	950

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### 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.
- L2** Laboratory Control Sample recovery was below method control limits.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-NR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- N-2** See corrective action report.
- R-7** LFB/LFBD RPD exceeded the method control limit. Recovery met acceptance criteria.
- Z6** Surrogate recovery was below acceptance limits.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

### ADDITIONAL COMMENTS

**For 1,2-Diphenylhydrazine:**

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

Del Mar Analytical - Irvine  
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### Certification Summary

#### Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
Calculation	Water	X	X
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 335.2	Water	X	X
EPA 413.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 900.0	Water		
EPA 905.0	Water		
EPA 906.0	Water		
Haz Waste Scree	Water		
SM2540C	Water	X	X

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

#### Subcontracted Laboratories

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

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta

Samples: IPB2648-01

Analysis Performed: Level 4 + EDD

Samples: IPB2648-01

##### Aquatic Testing Laboratories-SUB *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr

Samples: IPB2648-01

##### Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: EDD + Level 4

Samples: IPB2648-01

Analysis Performed: Gross Alpha

Samples: IPB2648-01

#### Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager





# Del Mar Analytical

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

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

Project ID: Annual Outfall 008

Report Number: IPB2648

Sampled: 02/28/06

Received: 02/28/06

## Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gross Beta

Samples: IPB2648-01

Analysis Performed: Radium, Combined

Samples: IPB2648-01

Analysis Performed: Strontium 90

Samples: IPB2648-01

Analysis Performed: Tritium

Samples: IPB2648-01

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

*The results pertain only to the samples tested in the laboratory. This report shall not be reproduced,  
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IPB2648 <Page 40 of 40>

**NPDES - 2520**

IPB2648

**Del Mar Analytical** Version 01/25/06 **CHAIN OF CUSTODY FORM**

<b>Client Name/Address:</b> MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Project Manager: Bronwyn Kelly Sampler: Rick B...		<b>Project:</b> Boeing-SSFL NPDES Annual Outfall 008 Stormwater at Happy Valley Phone Number: (626) 568-6691 Fax Number: (626) 568-8515		<b>ANALYSIS REQUIRED</b>										Field readings: Temp = 55.3 pH = 7.1 Comments				
Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Total Recoverable Metals: As, Cd, Cu, Pb, Hg, B, V, Mn, + PP	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cl <sub>2</sub> , SO <sub>4</sub> , NO <sub>3</sub> +NO <sub>2</sub> -N, Perchlorate	TDS, TSS	VOCS (624), NPDES + PP	VOCS A+A+2CVE	Pesticides/PCBs - PP	Gross Alpha, Gross Beta (905) Total Combined Tritium (906.0*, Sr-90 Radium 226 & 228	SVOCs - PP	Acute Toxicity	Cyanide	
Outfall 008	W	1L Poly	1	HNO3	1A	X												
Outfall 008-Dup	W	1L Poly	1	HNO3	1B	X												
Outfall 008	W	1L Amber	2	None	2A, 2B		X											
Outfall 008	W	1L Amber	2	HCl	3A, 3B			X										
Outfall 008	W	Poly-500 ml	2	None	4A, 4B			X										
Outfall 008	W	Poly-500 ml	2	None	5A, 5B				X									
Outfall 008	W	VOAs	3	HCl	6A, 6B, 6C					X								
Outfall 008	W	VOA	3	None	7A, 7B, 7C						X							
Outfall 008	W	1L Amber	2	None	8A, 8B							X						
Outfall 008	W	2.5 Gal Poly Amber VOAs	3	None	9A, 15A, 15B, 15C								X					
Outfall 008	W	1L Amber	2	None	10A, 10B									X				
Outfall 008	W	1 Gal Poly	1	None	11A										X			
Outfall 008	W	500ml Poly	1	NaOH	12													
Trip Blank	W	VOA	3	None	13A, 13B, 13C						X							
Trip Blank	W	VOAs	3	HCl	14A, 14B, 14C					X								
Relinquished By	Date/Time:		Received By		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:	
Relinquished By	2-28-06 1545		R. Kelly		2-28-06 1545													
Relinquished By	2-28-06 1835		R. Kelly		2-28-06 1835													
Relinquished By	2-28-06 1835		R. Kelly		2-28-06 1835													
Turn around Time: (check)	24 Hours		48 Hours		72 Hours		Perchlorate Only 72 Hours		Metals Only 72 Hours		Sample Integrity: (Check) <input checked="" type="checkbox"/>		On Ice: <input checked="" type="checkbox"/>					

# LABORATORY REPORT



**Aquatic  
Testing  
Laboratories**

*"dedicated to providing quality aquatic toxicity testing"*

4350 Transport Street, Unit 107  
Ventura, CA 93003  
(805) 650-0546 FAX (805) 650-0756  
CA DOHS ELAP Cert. No.: 1775

**Date:** March 5, 2006

**Client:** Del Mar Analytical, Irvine  
17461 Derian Ave., Suite 100  
Irvine, CA 92614  
Attn: Michele Chamberlin

**Laboratory No.:** A-06030117-001  
**Sample ID.:** IPB2648-01

**Sample Control:** The sample was received by ATL within the recommended hold time, in a chilled state, and with the chain of custody record attached.

Date Sampled: 02/28/06  
Date Received: 03/01/06  
Temp. Received: 2°C  
Chlorine (TRC): 0.0 mg/l  
Date Tested: 03/01/06 to 03/05/06

**Sample Analysis:** The following analyses were performed on your sample:

Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0).

Attached are the test data generated from the analysis of your sample.

## Result Summary:

<u>Sample ID.</u>	<u>Results</u>
IPB2648-01	100% Survival (TU <sub>a</sub> = 0.0)

**Quality Control:** Reviewed and approved by:

Joseph A. LeMay  
Laboratory Director

**FATHEAD MINNOW PERCENT SURVIVAL TEST**  
**EPA Method 2000.0**



Lab No.: A-06030117-001  
 Client/ID: Del Mar - IPB2648-01

Start Date: 03/01/2006

**TEST SUMMARY**

Species: *Pimephales promelas*.  
 Age: 13 (1-14) days.  
 Regulations: NPDES.  
 Test solution volume: 250 ml.  
 Feeding: prior to renewal at 48 hrs.  
 Number of replicates: 2.  
 Dilution water: Moderately hard reconstituted water.  
 Photoperiod: 16/8 hrs light/dark.

Source: In-laboratory Culture.  
 Test type: Static-Renewal.  
 Test Protocol: EPA-821-R-02-012.  
 Endpoints: Percent Survival at 96 hrs.  
 Test chamber: 600 ml beakers.  
 Temperature: 20 +/- 1°C.  
 Number of fish per chamber: 10.  
 QA/QC Batch No.: RT-060301.

**TEST DATA**

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	20.4	8.9	7.9	0	0	R 1200
	100%	19.3	8.2	6.9	0	0	
24 Hr	Control	19.2	8.0	7.7	0	0	R 1100
	100%	19.3	7.2	7.4	0	0	
48 Hr	Control	19.3	7.4	7.6	0	0	R 1230
	100%	19.2	6.8	7.3	0	0	
Renewal	Control	19.5	8.4	7.8	0	0	R 1300
	100%	19.0	6.2	7.0	0	0	
72 Hr	Control	19.4	8.0	7.6	0	0	R 1100
	100%	19.3	7.0	7.3	0	0	
96 Hr	Control	19.4	7.9	7.6	0	0	R 1130
	100%	19.4	7.3	7.5	0	0	

**Comments:**

Sample as received: Chlorine: 0.0 mg/l; pH: 6.7; Conductivity: 292 umho; Temp: 2°C;  
 DO: 5.3 mg/l; Alkalinity: 65 mg/l; Hardness: 73 mg/l; NH<sub>3</sub>-N: 0.4 mg/l.  
 Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / No.  
 Control: Alkalinity: 54 mg/l; Hardness: 94 mg/l; Conductivity: 325 umho.  
 Test solution aerated (not to exceed 100 bubbles/min) to maintain DO >4.0 mg/l? Yes / No.  
 Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.

**RESULTS**

Percent Survival In:	Control: <u>100</u> %	100% Sample: <u>100</u> %
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 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 # IPB2648

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	Aquatic Testing Laboratories-SUB 4350 Transport Street, Unit 107 Ventura, CA 93003 Phone : (805) 650-0546 Fax: (805) 650-0756

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

Analysis	Expiration	Comments	
Sample ID: IPB2648-01 Water	Sampled: 02/28/06 08:15	Instant Notification	
Bioassay-Acute 96hr	03/01/06 20:15	FH minnow, EPA/821-R02-012, Sub to AqTox Labs	
<b>Containers Supplied:</b>			
1 gal Poly (IPB2648-01Y)			

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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received On Ice::	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received at (temp):	<u>5°C</u>	

Released By <u>[Signature]</u>	Date	Time	Received By <u>[Signature]</u>	Date	Time
Released By <u>[Signature]</u>	3/06	10:00	Received By <u>[Signature]</u>	3-1-6	10:20

**FATHEAD MINNOW ACUTE**  
**Method 2000.0**  
**Reference Toxicant - SDS**



QA/QC Batch No.: RT-060301

**TEST SUMMARY**

Species: *Pimephales promelas*.

Age: 13 days old.

Regulations: NPDES.

Test chamber volume: 250 ml.

Feeding: Prior to renewal at 48 hrs.

Temperature: 20 +/- 1°C.

Number of replicates: 2.

Dilution water: MHSF.

Source: In-lab culture.

Test type: Static-Renewal.

Test Protocol: EPA-821-R-02-012.

Endpoints: LC50 at 96 hrs.

Test chamber: 600 ml glass beakers.

Aeration: None.

Number of organisms per chamber: 10.

Photoperiod: 16/8 hrs light/dark.

**TEST DATA**

Date/Time:	INITIAL			24 Hr					48 Hr				
	<u>3-1-06 1200</u>			<u>3-2-06 1100</u>					<u>3-3-06 1300</u>				
	<u>Ru</u>			<u>Ru</u>					<u>Ru</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	<u>20.4</u>	<u>8.9</u>	<u>7.9</u>	<u>19.8</u>	<u>7.8</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>20.0</u>	<u>7.1</u>	<u>7.6</u>	<u>0</u>	<u>0</u>
1.0 mg/l	<u>20.4</u>	<u>8.9</u>	<u>7.9</u>	<u>19.7</u>	<u>7.7</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>20.0</u>	<u>7.0</u>	<u>7.6</u>	<u>0</u>	<u>0</u>
2.0 mg/l	<u>20.5</u>	<u>9.0</u>	<u>7.9</u>	<u>19.7</u>	<u>7.4</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>20.0</u>	<u>6.9</u>	<u>7.5</u>	<u>0</u>	<u>0</u>
4.0 mg/l	<u>20.5</u>	<u>9.1</u>	<u>7.9</u>	<u>19.7</u>	<u>7.7</u>	<u>7.4</u>	<u>0</u>	<u>0</u>	<u>20.0</u>	<u>6.6</u>	<u>7.5</u>	<u>0</u>	<u>0</u>
8.0 mg/l	<u>20.5</u>	<u>9.1</u>	<u>7.9</u>	<u>19.7</u>	<u>5.3</u>	<u>7.2</u>	<u>10</u>	<u>10</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Date/Time:	RENEWAL			72 Hr					96 Hr				
	<u>3-3-06 1300</u>			<u>3-4-06 1100</u>					<u>3-5-06 1130</u>				
	<u>Ru</u>			<u>Ru</u>					<u>Ru</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	<u>19.8</u>	<u>9.0</u>	<u>7.8</u>	<u>19.5</u>	<u>7.9</u>	<u>7.6</u>	<u>0</u>	<u>0</u>	<u>19.9</u>	<u>7.5</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
1.0 mg/l	<u>19.8</u>	<u>9.0</u>	<u>7.8</u>	<u>19.6</u>	<u>8.3</u>	<u>7.6</u>	<u>0</u>	<u>0</u>	<u>19.9</u>	<u>7.6</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
2.0 mg/l	<u>19.8</u>	<u>9.1</u>	<u>7.8</u>	<u>19.6</u>	<u>8.3</u>	<u>7.6</u>	<u>0</u>	<u>0</u>	<u>19.8</u>	<u>7.6</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
4.0 mg/l	<u>19.9</u>	<u>9.1</u>	<u>7.8</u>	<u>19.6</u>	<u>7.7</u>	<u>7.5</u>	<u>0</u>	<u>0</u>	<u>19.8</u>	<u>7.6</u>	<u>7.4</u>	<u>0</u>	<u>0</u>
8.0 mg/l	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>

Comments:

Control: Alkalinity: 54 mg/l; Hardness: 94 mg/l; Conductivity: 325 umho.

SDS: Alkalinity: 53 mg/l; Hardness: 94 mg/l; Conductivity: 330 umho.

**Acute Fish Test-96 Hr Survival**

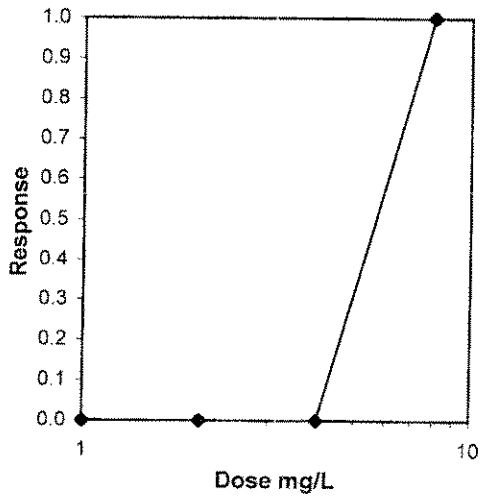
Start Date: 01 Mar-06 12:00 Test ID: RT-060301f Sample ID: REF-Ref Toxicant  
 End Date: 05 Mar-06 11:30 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SDS-Sodium dodecyl sulfate  
 Sample Date: 01 Mar-06 00:00 Protocol: EPAA 91-EPA Acute Test Species: PP-Pimephales promelas  
 Comments:

Conc-mg/L	1	2
D-Control	1.0000	1.0000
1	1.0000	1.0000
2	1.0000	1.0000
4	1.0000	1.0000
8	0.0000	0.0000

Conc-mg/L	Transform: Arcsin Square Root							Number Resp	Total Number
	Mean	N-Mean	Mean	Min	Max	CV%	N		
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
4	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

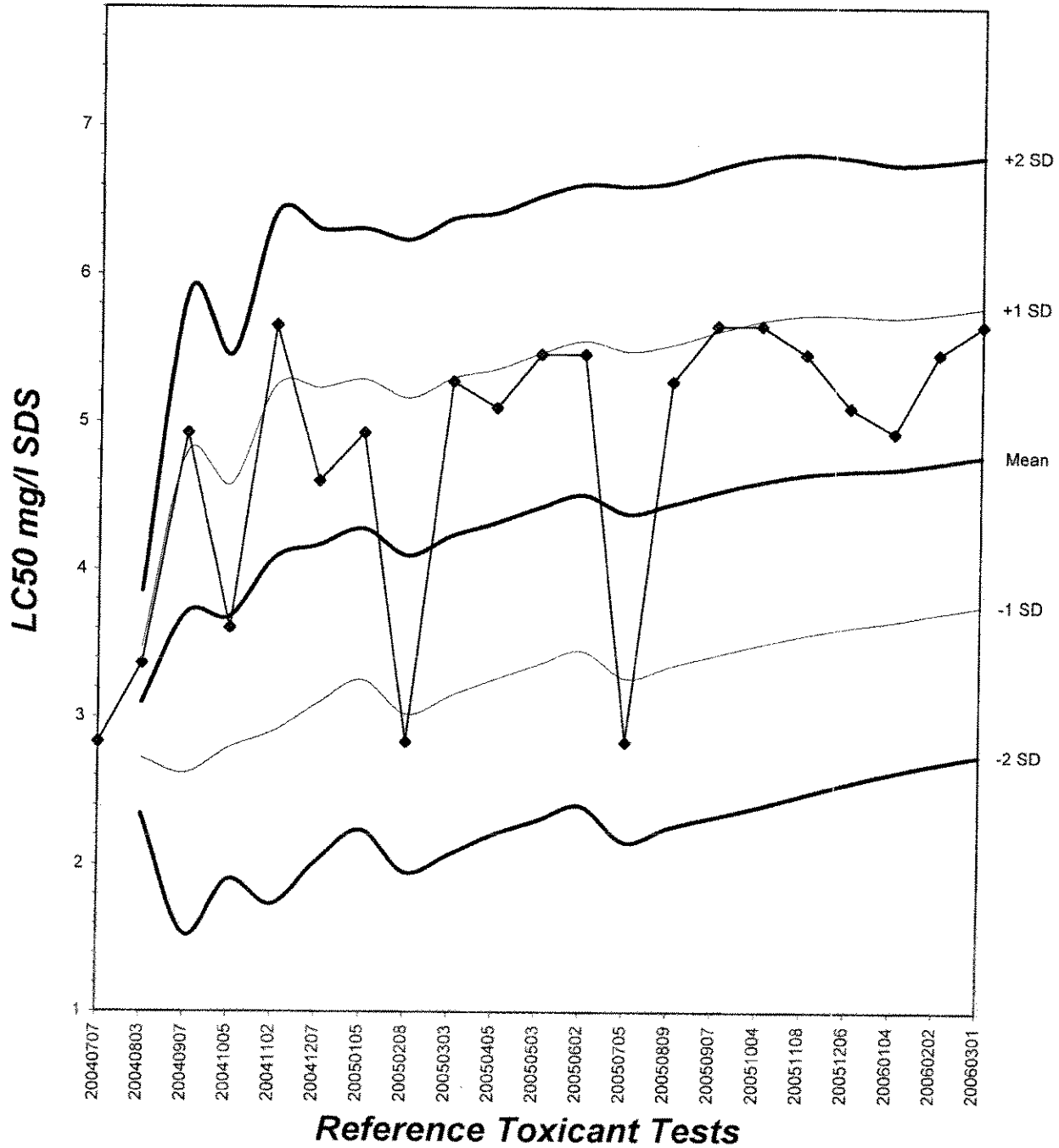
Auxiliary Tests	Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed				
Equality of variance cannot be confirmed				

Graphical Method	
Trim Level	EC50
0.0%	5.6569



# Fathead Minnow Acute Laboratory Control Chart

CV% = 21.3





# TEST ORGANISM LOG

FATHEAD MINNOW - LARVAL  
(*Pimephales promelas*)



QA/QC BATCH NO.: RT-060301

SOURCE: In-Lab Culture

DATE HATCHED: 2-16-06

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

# MORTALITIES 48 HOURS PRIOR TO  
TO USE IN TESTING: 0

DATES USED IN LAB: 3/1/06  
to  
1/1/06

AVERAGE FISH WEIGHT: 0.006 gm

TEST LOADING LIMITS: 0.65 gm/liter

200 ml test solution volume = 0.013 gm mean fish weight limit

250 ml test solution volume = 0.016 gm mean fish weight limit

## ACCLIMATION WATER QUALITY:

Temp.: 20.4 °C      pH: 7.7      Ammonia: 0.2 mg/l NH<sub>3</sub>-N

DO: 2.8 mg/l      Alkalinity: 54 mg/l      Hardness: 90 mg/l

READINGS RECORDED BY: \_\_\_\_\_

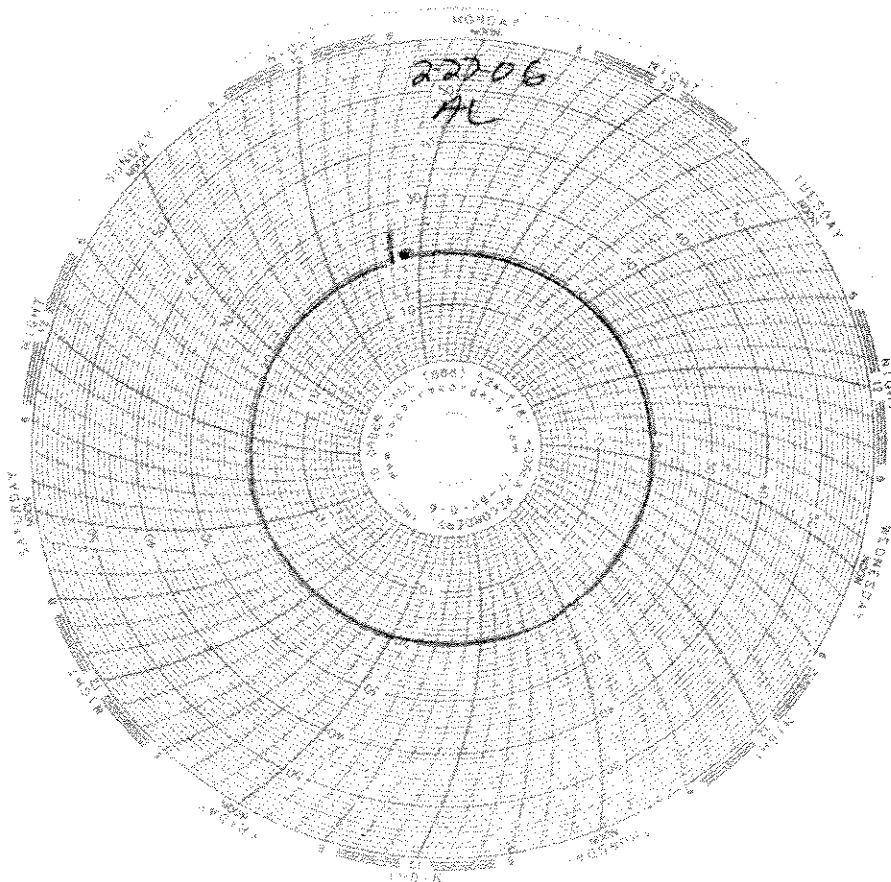
DATE: 3-5-06

# Laboratory Temperature Chart

**QA/QC Batch No: RT-060301**

**Date Tested: 03/01/06 to 03/05/06**

**Acceptable Range: 20 $\pm$  1 $^{\circ}$ C**





**EBERLINE**  
SERVICES

March 13, 2006

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

Reference: Del Mar Analytical Project No. IPB2648  
Eberline Services NELAP Cert #01120CA (exp. 01/31/07)  
Eberline Services Report R603022-8666

Dear Ms. Chamberlin:

Enclosed are results from the analysis of one water sample received at Eberline Services on March 2, 2006. The sample was analyzed according to the accompanying Del Mar Analytical Subcontract Order Form. The requested analysis was gross alpha/gross beta (EPA900.0). The batch QC LCS, blank analysis, duplicate analysis, and matrix spike results were within the limits defined in Eberline Services Quality Control Procedures Manual. No problems were encountered during the requested analysis.

Please call me if you have any questions concerning this report.

Regards,

Melissa Mannion  
Senior Program Manager

MCM/njv

Enclosure: Report  
Subcontract Form  
Receipt checklist  
Invoice

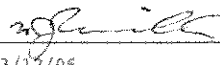
Analytical Services  
2030 Wright Avenue  
P.O. Box 4040  
Richmond, California 94804-0040  
(510) 235-2633 Fax (510) 235-0438  
Toll Free (800) 841-5487  
[www.eberlineservices.com](http://www.eberlineservices.com)  
**NPDES - 2530**

# Eberline Services

## ANALYSIS RESULTS

SDG <u>8666</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603022-01</u>	Contract <u>PROJECT# IPB2648</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab						
<u>Sample ID</u>	<u>Sample ID</u>	<u>Collected</u>	<u>Analyzed</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>Units</u>	<u>MDA</u>
IPB2648-01	8666-001	02/28/06	03/06/06	GrossAlpha	1.01 ± 1.6	pCi/L	2.02
			03/06/06	Gross Beta	23.7 ± 2.2	pCi/L	1.92

Certified by <u></u>
Report Date <u>03/12/06</u>
Page 1

# Eberline Services

## QC RESULTS

SDG <u>8666</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603022-01</u>	Contract <u>PROJECT# IPB2648</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Lab	Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
<u>LCS</u>							
	8660-002	GrossAlpha	9.57 ± 1.3	pCi/Smpl	10.2	0.635	94% recovery
		Gross Beta	9.53 ± 0.77	pCi/Smpl	9.84	0.609	97% recovery
<u>BLANK</u>							
	8660-003	GrossAlpha	-0.067 ± 0.23	pCi/Smpl	NA	0.513	<MDA
		Gross Beta	0.136 ± 0.31	pCi/Smpl	NA	0.548	<MDA

<u>DUPLICATES</u>			
Sample ID	Nuclide	Results ± 2σ	MDA
8660-004	GrossAlpha	1.33 ± 1.5	2.25
	Gross Beta	7.77 ± 1.8	2.37

<u>ORIGINALS</u>			
Sample ID	Results ± 2σ	MDA	RPD (Tot) Eval
8660-001	2.64 ± 1.7	1.95	66 177 satis.
	7.69 ± 1.6	2.06	1 63 satis.

<u>SPIKED SAMPLE</u>			
Sample ID	Nuclide	Results ± 2σ	MDA
8660-005	GrossAlpha	92.9 ± 7.9	1.88
	Gross Beta	79.8 ± 3.9	1.99

<u>ORIGINAL SAMPLE</u>				
Sample ID	Results ± 2σ	MDA	Added	%Recv
8660-001	2.64 ± 1.7	1.95	76.5	118
	7.69 ± 1.6	2.06	70.3	103

Certified by
Report Date <u>03/12/06</u>
Page 2



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

## SUBCONTRACT ORDER - PROJECT # IPB2648

**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
<b>Sample ID: IPB2648-01</b>	<b>Water</b>	<b>Sampled: 02/28/06 08:15</b>
608-Pesticides	03/07/06 08:15	Instant Notification
EDD + Level 4	03/28/06 08:15	J flags, Boeing, annual
Gross Alpha-O	02/28/07 08:15	900.0, IF RESULT > 15 pCi/L, run Radium 226 & 228
Gross Beta-O	02/28/07 08:15	900.0, IF RESULT > 50 pCi/L, run Radium 226 & 228
Radium, Combined-O	02/28/07 08:15	HOLD for Gross A&B results; EPA 903.1 & 904.0
Strontium 90-O	02/28/07 08:15	EPA 905.0
Tritium-O	02/28/07 08:15	EPA 906.0

**Containers Supplied:**

- 2.5 gal Poly (IPB2648-01S)
- 40 ml Amber Voa Vial (IPB2648-01T)
- 40 ml Amber Voa Vial (IPB2648-01U)
- 40 ml Amber Voa Vial (IPB2648-01V)

**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: 3-1-06      Time: 1700      Received By: [Signature]      Date: 03/02/06      Time: 9:30

Released By: \_\_\_\_\_      Date: \_\_\_\_\_      Time: \_\_\_\_\_      Received By: \_\_\_\_\_      Date: \_\_\_\_\_      Time: \_\_\_\_\_



**RICHMOND, CA LABORATORY**

**SAMPLE RECEIPT CHECKLIST**

Client: DEL MAR City IRVINE State CA  
 Date/Time received 03/02/06 9:30 CoC No. IPB 2648  
 Container I.D. No. GE CHEST Requested TAT (Days) MUST 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: 4 (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 MFW Date: 03/02/06 Time: 10:50

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 \_\_\_\_\_



March 08, 2006

**Alta Project I.D.: 27347**

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

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on March 02, 2006 under your Project Name "IPB2648". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

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

Sincerely,

Martha M. Maier  
Director of HRMS Services





**Section I: Sample Inventory Report**

**Date Received: 3/2/2006**

Alta Lab. ID

Client Sample ID

27347-001

IPB2648-01

## SECTION II

Method Blank		EPA Method 1613					
Matrix:	Aqueous	QC Batch No.:	7807	Lab Sample:	0-MIB001		
Sample Size:	1.00 L	Date Extracted:	5-Mar-06	Date Analyzed DB-5:	7-Mar-06		
				Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000119			82.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000130			84.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000161			82.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000170			81.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000161			79.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000167			54.4	17 - 157	
OCDD	ND	0.00000485			85.8	24 - 169	
2,3,7,8-TCDF	ND	0.00000138			89.7	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000126			92.9	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000115			82.7	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000677			82.0	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000623			83.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000697			77.1	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000951			71.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000890			80.8	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000780			59.4	17 - 157	
OCDF	ND	0.00000335			90.3	35 - 197	
<b>Totals</b>							
Total TCDD	ND	0.00000119					
Total PeCDD	ND	0.00000130					
Total HxCDD	ND	0.00000164					
Total HpCDD	ND	0.00000167					
Total TCDF	ND	0.00000138					
Total PeCDF	ND	0.00000120					
Total HxCDF	ND	0.00000725					
Total HpCDF	ND	0.00000836					

**Footnotes**

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

Analyst: JMH  
 Approved By: Martha M. Maier  
 08-Mar-2006 10:32

OPR Results		EPA Method 1613			
Matrix	Aqueous	QC Batch No.: 7807	Lab Sample: 0-OPR001	Date Analyzed DB-5: 7-Mar-06	Date Analyzed DB-225: NA
Sample Size: 1.00 L		Date Extracted: 5-Mar-06			
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R LCL-UCL
2,3,7,8-TCDD	10.0	11.1	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	77.8 25 - 164
1,2,3,7,8-PeCDD	50.0	56.7	35 - 71	13C-1,2,3,7,8-PeCDD	81.0 25 - 181
1,2,3,4,7,8-HxCDD	50.0	54.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	74.4 32 - 141
1,2,3,6,7,8-HxCDD	50.0	53.3	38 - 67	13C-1,2,3,6,7,8-HxCDD	76.6 28 - 130
1,2,3,7,8,9-HxCDD	50.0	52.4	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	74.2 23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	55.2	35 - 70	13C-OCDD	52.1 17 - 157
OCDD	100	109	78 - 144	13C-2,3,7,8-TCDF	78.6 24 - 169
2,3,7,8-TCDF	10.0	11.2	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	84.3 24 - 185
1,2,3,7,8-PeCDF	50.0	55.2	40 - 67	13C-2,3,4,7,8-PeCDF	87.3 21 - 178
2,3,4,7,8-PeCDF	50.0	56.1	34 - 80	13C-1,2,3,4,7,8-HxCDF	76.8 26 - 152
1,2,3,4,7,8-HxCDF	50.0	55.2	36 - 67	13C-1,2,3,6,7,8-HxCDF	76.9 26 - 123
1,2,3,6,7,8-HxCDF	50.0	56.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	76.3 28 - 136
2,3,4,6,7,8-HxCDF	50.0	56.4	35 - 78	13C-1,2,3,7,8,9-HxCDF	69.6 29 - 147
1,2,3,7,8,9-HxCDF	50.0	54.9	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	70.6 28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	55.1	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	74.0 26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	55.0	39 - 69	13C-OCDF	57.0 17 - 157
OCDF	100	105	63 - 170	CRS 37Cl-2,3,7,8-TCDD	94.1 35 - 197

Analyst: JMH Approved By: Martha M. Maier 08-Mar-2006 10:32

Client Data		Sample Data		Laboratory Data	
Sample ID: <b>IPB2648-01</b>	Del Mar Analytical, Irvine IPB2648 28-Feb-06 0815	Matrix: Sample Size: 0.983 L	Aqueous	Lab Sample: 27347-001 QC Batch No: 7807 Date Analyzed DB-5: 7-Mar-06	Date Received: 2-Mar-06 Date Extracted: 5-Mar-06 Date Analyzed DB-225: NA
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.00000170		13C-2,3,7,8-TCDD	65.2 25 - 164
1,2,3,7,8-PeCDD	ND	0.00000179		13C-1,2,3,7,8-PeCDD	63.1 25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000295		13C-1,2,3,4,7,8-HxCDD	57.4 32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000313		13C-1,2,3,6,7,8-HxCDD	56.9 28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000295		13C-1,2,3,4,6,7,8-HpCDD	55.7 23 - 140
1,2,3,4,6,7,8-HpCDD	0.0000286			13C-OCDD	38.6 17 - 157
OCDD	0.000331			13C-2,3,7,8-TCDF	61.4 24 - 169
2,3,7,8-TCDF	ND	0.00000145		13C-1,2,3,7,8-PeCDF	68.4 24 - 185
1,2,3,7,8-PeCDF	ND	0.00000177		13C-2,3,4,7,8-PeCDF	64.7 21 - 178
2,3,4,7,8-PeCDF	ND	0.00000186		13C-1,2,3,4,7,8-HxCDF	54.7 26 - 152
1,2,3,4,7,8-HxCDF	ND	0.00000115		13C-1,2,3,6,7,8-HxCDF	54.6 26 - 123
1,2,3,6,7,8-HxCDF	ND	0.00000110		13C-2,3,4,6,7,8-HxCDF	52.1 28 - 136
2,3,4,6,7,8-HxCDF	ND	0.00000125		13C-1,2,3,7,8,9-HxCDF	55.2 29 - 147
1,2,3,7,8,9-HxCDF	ND	0.00000159		13C-1,2,3,4,6,7,8-HpCDF	53.6 28 - 143
1,2,3,4,6,7,8-HpCDF	0.00000614			13C-1,2,3,4,7,8,9-HpCDF	55.5 26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.00000169		13C-OCDF	41.3 17 - 157
OCDF	0.0000228			<b>CRS</b> 37Cl-2,3,7,8-TCDD	97.3 35 - 197
<b>Totals</b>					
Total TCDD	ND	0.00000170			
Total PeCDD	ND	0.00000179			
Total HxCDD	ND	0.00000301			
Total HpCDD	0.0000682				
Total TCDF	ND	0.00000145			
Total PeCDF	ND	0.00000181			
Total HxCDF	0.00000508				
Total HpCDF	0.0000155				

**Footnotes**

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

Analyst: JMH  
Approved By: Martha M. Maier 08-Mar-2006 10:32

**APPENDIX**

## DATA QUALIFIERS & ABBREVIATIONS

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

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

**CERTIFICATIONS**

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





17461 Derian Avenue, 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 806, San Diego, CA 92123 Ph (619) 595-9596 Fax (619) 595-9599  
 9830 South 81st 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 # IPB2648

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="font-size: 2em; margin-left: 20px;">27347</div> <div style="font-size: 2em; margin-left: 20px;">0.4 °C</div>

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

Analysis	Expiration	Comments
Sample ID: IPB2648-01 Water	Sampled: 02/28/06 08:15	Instant Notification
1613-Dioxin-HR-Alta	03/07/06 08:15	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
Level 4 + EDD-OUT	03/28/06 08:15	Excel EDD email to pm, include Std logs for Lvl IV
<b>Containers Supplied:</b>		
1 L Amber (IPB2648-01C)		
1 L Amber (IPB2648-01D)		

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):	_____

Fra - EX 3-01-06

Released By	Date	Time	Received By	Date	Time
				3/2/06	0850
Released By	Date	Time	Received By	Date	Time

**SAMPLE LOG-IN CHECKLIST**

Alta Project #:

*UBB*  
23 27347

Samples Arrival:	Date/Time 3/2/06 0850	Initials: UBB	Location: WR-2			
Logged In:	Date/Time 3/2/06 1310	Initials: UBB	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	0.4°C	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 #	7908 3243 0340		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?		COC	Sample Container
			<u>None</u>
Shipping Container	Alta	<u>Client</u>	Retain
			<u>Return</u>
			Dispose

Comments:

## **APPENDIX G**

### **Section 60**

Outfall 008, February 28, 2006

AMEC Data Validation Reports

# CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID B4DF52  
 Task Order 1261.001D.01  
 SDG No. IPB2648

No. of Analyses 1

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

Date: April 4, 2006  
 Reviewer's Signature  
*K. Shadowlight*

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



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 008

ANALYSIS: DIOXINS/FURANS  
SAMPLE DELIVERY GROUP: IPB2648

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

## 1. INTRODUCTION

Task Order Title: NPDES  
Contract Task Order: 1261.001.01  
Sample Delivery Group: IPB2648  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Dioxins/Furans  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: K. Shadowlight  
Date of Review: April 4, 2006

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

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 008	IPB2648-01	27347-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

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

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

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

#### 2.2.2 Mass Spectrometer Performance

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



## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

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

### 2.3.2 Continuing Calibration

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

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

## 2.4 BLANKS

One method blank (0-7807-MB001) was extracted and analyzed with the sample in this SDG. There were no target compounds detected in the method blank. A review of the method blank raw data and chromatograms indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7807-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

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

### 2.7.2 Field Duplicates

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

## 2.8 INTERNAL STANDARDS

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

## 2.9 COMPOUND IDENTIFICATION

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

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

Client Data		Sample Data		Laboratory Data		EPA Method 1613	
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27347-001	Date Received:	2-Mar-06
Project:	IPB2648	Sample Size:	0.983 L	QC Batch No.:	7807	Date Extracted:	5-Mar-06
Date Collected:	28-Feb-06			Date Analyzed DB-5:	7-Mar-06	Date Analyzed DB-225:	NA
Time Collected:	0815						
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000170		13C-2,3,7,8-TCDD	65.2	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000179		13C-1,2,3,7,8-PeCDD	63.1	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000295		13C-1,2,3,4,7,8-HxCDD	57.4	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000313		13C-1,2,3,6,7,8-HxCDD	56.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000295		13C-1,2,3,4,6,7,8-HpCDD	55.7	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000286			13C-OCDD	38.6	17 - 157	
OCDD	0.000331			13C-2,3,7,8-TCDF	61.4	24 - 169	
2,3,7,8-TCDF	ND	0.00000145		13C-1,2,3,7,8-PeCDF	68.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000177		13C-2,3,4,7,8-PeCDF	64.7	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000186		13C-1,2,3,4,7,8-HxCDF	54.7	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000115		13C-1,2,3,6,7,8-HxCDF	54.6	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000110		13C-2,3,4,6,7,8-HxCDF	52.1	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000125		13C-1,2,3,7,8,9-HxCDF	55.2	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000159		13C-1,2,3,4,6,7,8-HpCDF	53.6	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000614			13C-1,2,3,4,7,8,9-HpCDF	55.5	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000169		13C-OCDF	41.3	17 - 157	
OCDF	0.0000228			CRS 37Cl-2,3,7,8-TCDD	97.3	35 - 197	
<b>Totals</b>							
Total TCDD	ND	0.00000170					
Total PeCDD	ND	0.00000179					
Total HxCDD	ND	0.00000301					
Total HpCDD	0.0000682						
Total TCDF	ND	0.00000145					
Total PeCDF	ND	0.00000181					
Total HxCDF	0.00000508						
Total HpCDF	0.0000155						

**Footnotes**

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

Analyst: JMH  
Approved By: Martha M. Maier 08-Mar-2006 10:32

*Level III*

Project 27347

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

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

Package ID: B4MT52  
 Task Order: 1261.001D.01  
 SDG No.: IPB2648

No. of Analyses: 1

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

Date: April 6, 2006  
 Reviewer's Signature  


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



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 008

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPB2648

Prepared by

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

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2648  
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: April 6, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC<sup>X</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0), EPA Methods 200.7, 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 008	IPB2648-01	Water	200.7, 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 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 85-115% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and the recoveries were considered to be acceptable. No qualifications were required.



## 2.4 BLANKS

Antimony was detected in a bracketing CCB at 0.45 0.45 µg/L; therefore, antimony detected in Outfall 008 was qualified as an estimated nondetect, "UJ." No further qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were performed in association with the sample in this SDG for the ICP metals. Silver and chromium were detected in the ICSA above the respective reporting limits. The reviewer checked the raw data for the sample and determined that the level of interferents in Outfall 008 were not of sufficient concentrations to qualify the sample results. No qualifications were required.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

## 2.11 SAMPLE RESULT VERIFICATION

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

## 2.12 FIELD QC SAMPLES

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

### 2.12.1 Field Blanks and Equipment Rinsates

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

### 2.12.2 Field Duplicates

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



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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: Annual Outfall 008  
 Report Number: IPB2648

Sampled: 02/28/06  
 Received: 02/28/06

**METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2648-01 (Outfall 008 - Water) - cont.									
Reporting Units: ug/l									
Aluminum	EPA 200.7	6C03084	40	50	4700	1	03/03/06	03/04/06	
Antimony	EPA 200.8	6C02098	0.18	2.0	0.28	1	03/02/06	03/02/06	U J B
Arsenic	EPA 200.7	6C03084	4.4	5.0	4.4	1	03/03/06	03/04/06	J J DNR
Beryllium	EPA 200.7	6C03084	0.90	2.0	ND	1	03/03/06	03/04/06	U U
Cadmium	EPA 200.8	6C02098	0.015	1.0	0.20	1	03/02/06	03/02/06	J J DNR
Chromium	EPA 200.7	6C03084	2.0	5.0	6.9	1	03/03/06	03/04/06	B
Copper	EPA 200.8	6C02098	0.49	2.0	7.6	1	03/02/06	03/02/06	
Lead	EPA 200.8	6C02098	0.040	1.0	4.4	1	03/02/06	03/02/06	
Mercury	EPA 245.1	6C02097	0.063	0.20	ND	1	03/02/06	03/02/06	U
Nickel	EPA 200.7	6C03084	2.0	10	5.0	1	03/03/06	03/04/06	J J DNR
Selenium	EPA 200.7	6C03084	8.0	10	ND	1	03/03/06	03/04/06	U
Silver	EPA 200.7	6C03084	3.0	10	ND	1	03/03/06	03/04/06	U
Thallium	EPA 200.8	6C02098	N/A	1.0	ND	1	03/02/06	03/02/06	
Vanadium	EPA 200.7	6C03084	3.0	10	13	1	03/03/06	03/04/06	
Zinc	EPA 200.7	6C03084	15	20	40	1	03/03/06	03/04/06	

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

LEVEL IV

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# 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: Annual Outfall 008  Report Number: IPB2648	Sampled: 02/28/06 Received: 02/28/06
--	--	---

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2648-01 (Outfall 008 - Water) - cont. Reporting Units: mg/l									
Boron	EPA 200.7	6C03084	0.0074	0.050	0.056	1	03/03/06	03/07/05	* <span style="float: right; border-left: 1px solid black; padding-left: 5px;">Rev Code</span>
* Analysis not validated									

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

LEVEL IV

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**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

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

Package ID: B4PP16  
 Task Order: 1261.001D.01  
 SDG No.: IPB2648

No. of Analyses: 1

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

Date: April 7, 2006  
 Reviewer's Signature  


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



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 008

ANALYSIS: PESTICIDES / PCBs

SAMPLE DELIVERY GROUP: IPB2648

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2648  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Pesticides  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 7, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC<sup>X</sup> *Data Validation Procedure for Organochlorine Pesticides and PCBs (DVP-4, Rev. 0)*, EPA Method 608, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 008	IPB2648-01	Water	608



## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , at  $5^{\circ}\text{C}$ . According to the case narrative for this SDG, the sample was received intact and on ice. No qualifications were required.

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

### 2.2 PESTICIDES INSTRUMENT PERFORMANCE

No resolution check standards or breakdown check standards are required by Method 608 for pesticides, and according to the raw data provided, a resolution check standard was not analyzed by the laboratory. The laboratory did analyze a breakdown check standard with the breakdown for individual components (4,4-DDT and endrin)  $\leq 20\%$  and  $\leq 30\%$  for the total, as suggested in the National Functional Guidelines. A review of the raw data indicated that the analytical run time was of sufficient length to provide adequate standard separation. The two analytical columns used in the analyses were within the guidelines specified in the methods.

According to the laboratory SOP and the initial calibration raw data, the retention time windows are  $\pm 0.10$  minutes for both surrogates and target compound calibration standards. A review of the raw data indicated that the laboratory retention time criteria were met for the surrogates and pesticide calibration standards. No qualifications were required.

### 2.3 CALIBRATION

#### 2.3.1 Analytical Sequence

Based on the data provided, the analytical sequences were in accordance with the requirements of Method 608. No qualifications were required.

### 2.3.2 Initial Calibration

There was one initial calibration dated 03/02/06 associated with the Aroclor analysis of the site sample and one dated 03/06/06 associated with the pesticide analysis. The initial calibrations consisted of six point calibrations for Aroclors 1016 and 1260 and all pesticide target compounds on two analytical columns. The average %RSDs of the individual Aroclor peaks were within the EPA Method 608 QC limit of  $\leq 10\%$  on the primary analytical column (Channel A) or the  $r^2$  values were  $\geq 0.995$ , except for the average %RSD for Aroclor 1260. The nondetects for Aroclors 1248, 1254, and 1260 in Outfall 008 were qualified as estimated, "UJ." The %RSDs for all pesticide target compounds were  $\leq 10\%$  on the primary column or  $r^2$  values  $\geq 0.995$ , with the exception of the %RSD for heptachlor. The nondetect for heptachlor was qualified as estimated, "UJ," in Outfall 008.

The pesticide and average Aroclor %RSDs were  $\leq 10\%$  or  $r^2$  values  $\geq 0.995$  on the secondary column (Channel B).

An ICV was analyzed immediately following each initial calibration, and the %Ds for all pesticide target compounds and Aroclors 1016 and 1260 were within the QC limit of  $\leq 15\%$  on the primary column. No further qualifications were required.

### 2.3.3 Continuing Calibration

The pesticide and Aroclor analyses of Outfall 008 were each bracketed by two continuing calibrations. The %Ds for all pesticide target compounds and Aroclors 1016 and 1260 were within the Method QC limit of  $\leq 15\%$  for all calibrations on the primary column, with the exception of 4,4-DDT and methoxychlor on the primary column in the ending pesticide CCV. As the responses were low, the nondetects for 4,4-DDT and methoxychlor in Outfall 008 were qualified as estimated, "UJ." No further qualifications were required.

## 2.4 BLANKS

### 2.4.1 Instrument Blanks

An instrument blank was analyzed at the beginning of the analytical sequence. Cross-contamination was not evident in the instrument blank or the sample. No qualifications were necessary.

### 2.4.2 Method Blanks

One water method blank (6C05031-BLK1) was extracted and analyzed with this SDG. No pesticide target compounds or Aroclors were detected in the method blank. Review of the chromatograms from both channels showed no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6C05031-BS1/BSD1 for pesticides and Aroclors) was analyzed with this SDG. The recoveries for all pesticide compounds and Aroclors 1016 and 1260 were within the laboratory-established QC limits, and all RPDs were within the QC limit of  $\leq 30\%$ . A representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.6 SURROGATE RECOVERY

Surrogate recoveries were within the laboratory-established QC limits for the sample in this SDG. The recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

## 2.8 SAMPLE CLEANUP PERFORMANCE

According to the laboratory extraction benchsheets, no cleanups were performed on the water sample. No qualifications were required.

## 2.9 FIELD QC SAMPLES

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

### 2.9.1 Field Blanks and Equipment Rinsates

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

### 2.9.2 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for pesticide target compounds and seven Aroclors by EPA Method 608. Compound identification is verified at a Level IV validation. The laboratory provided an overlay of the pesticide sample chromatogram and the pesticide standard for identification purposes. Review of chromatograms and retention times indicated no problems with compound identification for the sample in this SDG. No qualifications were required.

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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



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

Project ID: Annual Outfall 008

Report Number: IPB2648

Sampled: 02/28/06  
 Received: 02/28/06

**TOTAL PCBS (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2648-01 (Outfall 008 - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	6C05031	0.19	0.94	ND	0.943	03/05/06	03/06/06	U
Aroclor 1221	EPA 608	6C05031	0.094	0.94	ND	0.943	03/05/06	03/06/06	
Aroclor 1232	EPA 608	6C05031	0.24	0.94	ND	0.943	03/05/06	03/06/06	
Aroclor 1242	EPA 608	6C05031	0.24	0.94	ND	0.943	03/05/06	03/06/06	
Aroclor 1248	EPA 608	6C05031	0.24	0.94	ND	0.943	03/05/06	03/06/06	US ↓
Aroclor 1254	EPA 608	6C05031	0.24	0.94	ND	0.943	03/05/06	03/06/06	US ↓
Aroclor 1260	EPA 608	6C05031	0.38	0.94	ND	0.943	03/05/06	03/06/06	US ↓
Surrogate: Decachlorobiphenyl (45-120%)					85 %				

Raw Data  
 Qual Code  
 U  
 ↓  
 US  
 ↓  
 US  
 ↓  
 US

PM 4/10/06

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

LEVEL IV

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. IPB2648 <Page 9 of 40>



MWH-Pasadena/Boeing Project ID: Annual Outfall 008  
300 North Lake Avenue, Suite 1200 Report Number: IPB2648  
Pasadena, CA 91101 Sampled: 02/28/06  
Attention: Bronwyn Kelly Received: 02/28/06

### ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2648-01 (Outfall 008 - Water) - cont.									
Reporting Units: ug/l									
Aldrin	EPA 608	6C05031	0.028	0.094	ND	0.943	03/05/06	03/07/06	U
alpha-BHC	EPA 608	6C05031	0.019	0.094	ND	0.943	03/05/06	03/07/06	U
beta-BHC	EPA 608	6C05031	0.014	0.094	ND	0.943	03/05/06	03/07/06	U
delta-BHC	EPA 608	6C05031	0.019	0.19	ND	0.943	03/05/06	03/07/06	U
gamma-BHC (Lindane)	EPA 608	6C05031	0.019	0.094	ND	0.943	03/05/06	03/07/06	U
Chlordane	EPA 608	6C05031	0.19	0.94	ND	0.943	03/05/06	03/07/06	U
4,4'-DDD	EPA 608	6C05031	0.019	0.094	ND	0.943	03/05/06	03/07/06	U
4,4'-DDE	EPA 608	6C05031	0.024	0.094	ND	0.943	03/05/06	03/07/06	U
4,4'-DDT	EPA 608	6C05031	0.033	0.094	ND	0.943	03/05/06	03/07/06	U
Dieldrin	EPA 608	6C05031	0.014	0.094	ND	0.943	03/05/06	03/07/06	U
Endosulfan I	EPA 608	6C05031	0.014	0.094	ND	0.943	03/05/06	03/07/06	U
Endosulfan II	EPA 608	6C05031	0.038	0.094	ND	0.943	03/05/06	03/07/06	U
Endosulfan sulfate	EPA 608	6C05031	0.019	0.19	ND	0.943	03/05/06	03/07/06	U
Endrin	EPA 608	6C05031	0.019	0.094	ND	0.943	03/05/06	03/07/06	U
Endrin aldehyde	EPA 608	6C05031	0.042	0.094	ND	0.943	03/05/06	03/07/06	U
Endrin ketone	EPA 608	6C05031	0.019	0.094	ND	0.943	03/05/06	03/07/06	U
Heptachlor	EPA 608	6C05031	0.028	0.094	ND	0.943	03/05/06	03/07/06	U
Heptachlor epoxide	EPA 608	6C05031	0.028	0.094	ND	0.943	03/05/06	03/07/06	U
Methoxychlor	EPA 608	6C05031	0.033	0.094	ND	0.943	03/05/06	03/07/06	U
Toxaphene	EPA 608	6C05031	1.4	4.7	ND	0.943	03/05/06	03/07/06	U
Surrogate: Tetrachloro-m-xylene (35-115%)					48 %				
Surrogate: Decachlorobiphenyl (45-120%)					54 %				

Handwritten notes: "Qual" and "Code" headers, a vertical line, and "U" marks next to several rows. There are also some handwritten numbers like "1" and "2" next to "U" marks.

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

Level IV

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

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

Package ID: B4RA3  
 Task Order: 1261.001D.05  
 SDG No.: Multiple

No. of Analyses: 8  
 Date: April 1, 2006  
 Reviewer's Signature  
P. Meeks

Laboratory: Ebeline  
 Reviewer: P. Meeks  
 Analysis/Method: Radionuclides

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



## DATA VALIDATION REPORT

NPDES Sampling  
Multiple Outfalls

ANALYSIS: RADIONUCLIDES

SAMPLE DELIVERY GROUPS: IPB2637, IPB2639, IPB2641,  
IPB2643, IPB2645, IPB2647, IPB2648, IPB2650

Prepared by

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



## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2637, IPB2639, IPB2641, IPB2643, IPB2645,  
IPB2647, IPB2648, IPB2650  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Radionuclides  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 1, 2006

The samples listed in Table 1 were validated based on the 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	Del Mar ID	Eberline ID	Matrix	COC Method
Outfall 001	IPB2637-01	8660-001	water	900.0
Outfall 002	IPB2639-01	8661-001	water	900.0
Outfall 011	IPB2641-01	8662-001	water	900.0
Outfall 018	IPB2643-01	8663-001	water	900.0
Outfall 005	IPB2645-01	8664-001	water	900.0
Outfall 007	IPB2647-01	8665-001	water	900.0
Outfall 008	IPB2648-01	8666-001	water	900.0
Outfall 010	IPB2650-01	8667-001	water	900.0

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

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

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

#### 2.1.2 Chain of Custody

The original COCs were signed and dated by field and laboratory personnel and the transfer COCs were signed by personnel from both laboratories. Eberline did not list the MWH IDs on the Form Is; therefore, the reviewer edited the Form Is to reflect these IDs. The original COCs requested strontium and tritium analyses; however, in accordance with the NPDES permit, these analyses per not performed as the gross alpha and gross beta results did not exceed the permit requirements. No qualifications were required.

#### 2.1.3 Holding Times

All samples were analyzed beyond the five day holding time for unpreserved samples; therefore, all results were qualified as estimated, "J," for detects and, "UJ," for nondetects. No further qualifications were required.

### 2.2 CALIBRATION

The laboratory calibration information included the standard certificates and applicable preparation/dilutions logs for NIST-traceability. All gross alpha detector efficiencies were less than 20%; therefore, all gross alpha results were qualified as estimated, "J," for detects and, "UJ," for nondetects. No further qualifications were required.

### 2.3 BLANKS

No measurable activities were detected in the method blanks, therefore, no qualifications were necessary.

## 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Aqueous blank spikes were analyzed in association with the samples in these SDGs. The blank spike results were within the 3-sigma limits. No qualifications were necessary.

## 2.5 LABORATORY DUPLICATES

The laboratory performed duplicate analyses on Outfall 001. Both results were within the 3-sigma limit limits. No qualifications were necessary.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The laboratory performed MS/MSD analyses on Outfall 001. Both recoveries were within the 3-sigma limits and no qualifications were required.

## 2.7 SAMPLE RESULT VERIFICATION

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

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Field Blanks and Equipment Rinsates

The samples in these SDGs had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate samples in these SDGs.

# Eberline Services

## ANALYSIS RESULTS

SDG <u>8659</u>	Client <u>DEL. MAR. ANNL.</u>
Work Order <u>R60304-01</u>	Contract <u>PROJECTS IPB2637</u>
Received Date <u>03/03/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Nuclide	Results ± SD	Units	MDA	Rev Qual	Qual Code
<u>Sample ID</u>	<u>Sample ID</u>								
<u>Outfall 001</u>									
<u>IPB2637-01</u>	<u>8660-001</u>	<u>03/28/06</u>	<u>03/06/06</u>	<u>Gross Alpha</u>	<u>2.64 ± 1.7</u>	<u>pCi/L</u>	<u>1.95</u>	<u>J</u>	<u>R, H</u>
			<u>03/06/06</u>	<u>Gross Beta</u>	<u>7.69 ± 1.6</u>	<u>pCi/L</u>	<u>2.06</u>	<u>J</u>	<u>↓</u>

LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>03/13/06</u>
Page <u>1</u>

Eberline Services

ANALYSIS RESULTS

SDS <u>8661</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603017-01</u>	Contract <u>PROJECT# IPB2639</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA
Client <u>Sample ID</u> Outfall 002 IPB2639-01		8661-001	02/28/06	03/06/06	GrossAlpha	2.58 ± 1.6	pCi/L	1.93
				03/06/06	Gross Beta	4.60 ± 1.4	pCi/L	1.85

Rev Qual	Qual Code
J	R, H
J	↓

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Certified by <u>[Signature]</u>
Report Date <u>03/22/06</u>
Page 1

**Eberline Services**  
**ANALYSIS RESULTS**

SDG <u>8662</u>	Client <u>DEL MAB ANAL</u>
Work Order <u>8603018-01</u>	Contract <u>PROJECT# IPH2641</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analysed	Nuclide	Results ± 2σ	Units	MDA	Raw Qual	Qual Code
<u>Sample ID</u> <u>IPH2641-01</u>	<u>Sample ID</u> 8662-001	<u>02/28/06</u>	<u>03/06/06</u>	Gross Alpha	5.24 ± 2.0	pCi/L	1.86	J	R <sub>1</sub> H
			<u>03/06/06</u>	Gross Beta	7.59 ± 1.7	pCi/L	2.16	↓	↓

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**Eberline Services**  
**ANALYSIS RESULTS**

SDG <u>8663</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603019-01</u>	Contract <u>PROJECT# IPB2643</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analysed	Nuclide	Results ± 2σ	Units	MDA	Rev Qual	Qual Code
Sample ID <u>outfall 018</u> IPB2643-01		8663-001	02/28/06	03/06/06	GrossAlpha	1.58 ± 1.1	pCi/L	1.40	J ↓	R, H ↓
				03/06/06	Gross Beta	5.59 ± 1.4	pCi/L	1.81		

LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>03/13/06</u>
Page 1



Eberline Services

ANALYSIS RESULTS

SDG <u>8664</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>8603020-01</u>	Contract <u>PROJECT# IPB2649</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± SD	Units	MDA	Rev Qual	Qual Code
Outfall 005		8664-001	02/28/06	03/06/06	Gross Alpha	1.30 ± 1.0	pCi/L	1.45	UJ	R, H
IPB2649-01				03/06/06	Gross Beta	6.96 ± 1.4	pCi/L	1.98	J	↓

LEVEL IV

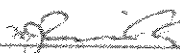
Certified by <u>[Signature]</u>
Report Date <u>03/13/06</u>
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**Eberline Services**  
**ANALYSIS RESULTS**

SOG <u>8665</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R403021-01</u>	Contract <u>PROJECT# IPS2647</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab								
<u>Sample ID</u>	<u>Sample ID</u>	<u>Collected</u>	<u>Analyzed</u>	<u>Nuclids</u>	<u>Results ± 3σ</u>	<u>Units</u>	<u>MUA</u>	<u>Rev Qual</u>	<u>Qual Code</u>
Outfall 007 IPS2647-01	8665-001	02/28/06	03/06/06	GrossAlpha	2.56 ± 1.2	pCi/L	1.09	J	R, H
			03/06/06	Gross Beta	5.35 ± 1.8	pCi/L	2.56	↓	↓

LEVEL IV

Certified by <u></u> Report Date <u>03/13/06</u> Page 1
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Eberline Services

ANALYSIS RESULTS

SDG <u>8565</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>RG03622-01</u>	Contract <u>PROJECT# IPB2648</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	Rev Qual	Qual Code
<u>Sample ID</u> <u>Outfall 008</u> IPB2648-01		8666-001	02/28/06	03/06/06	GrossAlpha	1.01 ± 1.6	pCi/L	2.02	UI	R: H
				03/06/06	Gross Beta	23.7 ± 2.2	pCi/L	1.92	J	↓

LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>03/12/06</u>
Page 1

Eberline Services

ANALYSIS RESULTS

SDG <u>8667</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R693023-01</u>	Contract <u>PROJECT# IP82650</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± SD	Units	MDA	Rev Qual	Qual Code
Outfall 010 IP82650-01		8667-001	02/28/06	03/06/06	Gross Alpha	0.532 ± 0.90	pCi/L	1.55	05 J	R, H ↓
				03/06/06	Gross Beta	4.02 ± 1.3	pCi/L	1.82		

LEVEL IV

Certified by <u><i>ngf</i></u>
Report Date <u>03/10/06</u>
Page 1


**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

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

Package ID: B4SV31  
 Task Order: 1261.001D.01  
 SDG No.: IPB2648

No. of Analyses: 1

Laboratory: Del Mar Analytical  
 Reviewer: L. Calvin  
 Analysis/Method: Semivolatiles by Method 625

Date: April 10, 2006  
 Reviewer's Signature:  


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



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 008

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP IPB2648

Prepared by

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

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>x</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2648  
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: April 10, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in *the MEC<sup>x</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 625*, and the *National Functional Guidelines For Organic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 008	IPB2648-01	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, analyzed 02/27/06. The %RSDs for all target compounds were ≤35% or  $r^2$  values ≥0.995 in the initial calibration. The continuing calibration associated with the sample analysis was analyzed 03/09/06. The %Ds for all target compounds were ≤20% in the continuing calibration. No qualifications were required.

## 2.4 BLANKS

One method blank (6C06054-BLK1) was extracted and analyzed with this SDG. Target compounds were not detected above the MDLs in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6C06054-BS1/BSD1) was extracted and analyzed with this SDG. Diethyl phthalate and dimethyl phthalate were recovered below the QC limits but  $\geq 10\%$  in the BSD only. RPDs exceeded the QC limits for benzidine, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, di-n-butyl phthalate, diethyl phthalate, dimethyl phthalate, di-n-octyl phthalate, hexachlorocyclopentadiene, and hexachloroethane. Nondetect results for the RPD outliers were qualified as estimated, "UJ," in sample Outfall 008. All remaining recoveries and RPDs were within the laboratory-established QC limits. No further qualifications were required.

## 2.6 SURROGATE RECOVERY

One acid surrogate, phenol-d6, and all base-neutral surrogates, nitrobenzene-d5, 2-fluorobiphenyl, and terphenyl-d14 were recovered below the laboratory QC limits but  $\geq 10\%$ . No qualification of acid target compounds was required for the single acid surrogate outlier. All base-neutral target compounds were qualified as estimated nondetects, "UJ," in sample Outfall 008. No further qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Field Blanks and Equipment Rinsates

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

### 2.8.2 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.9 INTERNAL STANDARDS PERFORMANCE

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

## 2.10 COMPOUND IDENTIFICATION

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

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

## 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

## 2.13 SYSTEM PERFORMANCE

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



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

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

Project ID: Annual Outfall 008

Report Number: IPB2648

Sampled: 02/28/06  
 Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2648-01 (Outfall 008 - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6C06054	4.1	9.4	ND	0.943	03/06/06	03/09/06	u
Acenaphthylene	EPA 625	6C06054	3.0	9.4	ND	0.943	03/06/06	03/09/06	u
Aniline	EPA 625	6C06054	2.7	9.4	ND	0.943	03/06/06	03/09/06	u
Anthracene	EPA 625	6C06054	3.0	9.4	ND	0.943	03/06/06	03/09/06	u
Benzdine	EPA 625	6C06054	4.9	19	ND	0.943	03/06/06	03/09/06	*5
Benzoic acid	EPA 625	6C06054	2.5	19	ND	0.943	03/06/06	03/09/06	u
Benzo(a)anthracene	EPA 625	6C06054	3.5	9.4	ND	0.943	03/06/06	03/09/06	u
Benzo(b)fluoranthene	EPA 625	6C06054	2.5	9.4	ND	0.943	03/06/06	03/09/06	u
Benzo(k)fluoranthene	EPA 625	6C06054	3.2	9.4	ND	0.943	03/06/06	03/09/06	u
Benzo(g,h,i)perylene	EPA 625	6C06054	5.0	9.4	ND	0.943	03/06/06	03/09/06	u
Benzo(a)pyrene	EPA 625	6C06054	3.3	9.4	ND	0.943	03/06/06	03/09/06	u
Benzyl alcohol	EPA 625	6C06054	2.4	19	ND	0.943	03/06/06	03/09/06	u
Bis(2-chloroethoxy)methane	EPA 625	6C06054	3.7	9.4	ND	0.943	03/06/06	03/09/06	u
Bis(2-chloroethyl)ether	EPA 625	6C06054	4.2	9.4	ND	0.943	03/06/06	03/09/06	u
Bis(2-chloroisopropyl)ether	EPA 625	6C06054	4.3	9.4	ND	0.943	03/06/06	03/09/06	u
Bis(2-ethylhexyl)phthalate	EPA 625	6C06054	4.9	47	ND	0.943	03/06/06	03/09/06	*5
4-Bromophenyl phenyl ether	EPA 625	6C06054	4.3	9.4	ND	0.943	03/06/06	03/09/06	*5
Butyl benzyl phthalate	EPA 625	6C06054	3.3	19	ND	0.943	03/06/06	03/09/06	*5
4-Chloroaniline	EPA 625	6C06054	5.7	9.4	ND	0.943	03/06/06	03/09/06	u
2-Chloronaphthalene	EPA 625	6C06054	3.8	9.4	ND	0.943	03/06/06	03/09/06	u
4-Chloro-3-methylphenol	EPA 625	6C06054	3.3	19	ND	0.943	03/06/06	03/09/06	u
2-Chlorophenol	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	u
4-Chlorophenyl phenyl ether	EPA 625	6C06054	2.8	9.4	ND	0.943	03/06/06	03/09/06	u
Chrysene	EPA 625	6C06054	2.6	9.4	ND	0.943	03/06/06	03/09/06	u
Dibenz(a,h)anthracene	EPA 625	6C06054	4.4	19	ND	0.943	03/06/06	03/09/06	u
Dibenzofuran	EPA 625	6C06054	2.5	9.4	ND	0.943	03/06/06	03/09/06	u
Di-n-butyl phthalate	EPA 625	6C06054	2.6	19	ND	0.943	03/06/06	03/09/06	*5
1,3-Dichlorobenzene	EPA 625	6C06054	3.9	9.4	ND	0.943	03/06/06	03/09/06	u
1,4-Dichlorobenzene	EPA 625	6C06054	3.7	9.4	ND	0.943	03/06/06	03/09/06	u
1,2-Dichlorobenzene	EPA 625	6C06054	4.2	9.4	ND	0.943	03/06/06	03/09/06	u
3,3-Dichlorobenzidine	EPA 625	6C06054	10	19	ND	0.943	03/06/06	03/09/06	u
2,4-Dichlorophenol	EPA 625	6C06054	3.9	9.4	ND	0.943	03/06/06	03/09/06	u
Diethyl phthalate	EPA 625	6C06054	2.9	9.4	ND	0.943	03/06/06	03/09/06	u
2,4-Dimethylphenol	EPA 625	6C06054	4.2	19	ND	0.943	03/06/06	03/09/06	u
Dimethyl phthalate	EPA 625	6C06054	3.4	9.4	ND	0.943	03/06/06	03/09/06	u
4,6-Dinitro-2-methylphenol	EPA 625	6C06054	4.8	19	ND	0.943	03/06/06	03/09/06	u
2,4-Dinitrophenol	EPA 625	6C06054	5.0	19	ND	0.943	03/06/06	03/09/06	u
2,4-Dinitrotoluene	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	u
2,6-Dinitrotoluene	EPA 625	6C06054	3.0	9.4	ND	0.943	03/06/06	03/09/06	u
Di-n-octyl phthalate	EPA 625	6C06054	4.4	19	ND	0.943	03/06/06	03/09/06	*5
Fluoranthene	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	u

*Handwritten notes:*  
 u = u/L  
 \*5 = \*5  
 S = S  
 L2\*5 S  
 L2\*5 S

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: Annual Outfall 008

Report Number: IPB2648

Sampled: 02/28/06  
 Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2648-01 (Outfall 008 - Water) - cont.									
Reporting Units: ug/l									
Fluorene	EPA 625	6C06054	3.7	9.4	ND	0.943	03/06/06	03/09/06	u
Hexachlorobenzene	EPA 625	6C06054	4.5	9.4	ND	0.943	03/06/06	03/09/06	u
Hexachlorobutadiene	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	u
Hexachlorocyclopentadiene	EPA 625	6C06054	3.2	19	ND	0.943	03/06/06	03/09/06	u
Hexachloroethane	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	u
Indeno(1,2,3-cd)pyrene	EPA 625	6C06054	5.1	19	ND	0.943	03/06/06	03/09/06	u
Isophorone	EPA 625	6C06054	3.5	9.4	ND	0.943	03/06/06	03/09/06	u
2-Methylnaphthalene	EPA 625	6C06054	2.8	9.4	ND	0.943	03/06/06	03/09/06	u
2-Methylphenol	EPA 625	6C06054	3.5	9.4	ND	0.943	03/06/06	03/09/06	u
4-Methylphenol	EPA 625	6C06054	3.6	9.4	ND	0.943	03/06/06	03/09/06	u
Naphthalene	EPA 625	6C06054	4.2	9.4	ND	0.943	03/06/06	03/09/06	u
2-Nitroaniline	EPA 625	6C06054	3.7	19	ND	0.943	03/06/06	03/09/06	u
3-Nitroaniline	EPA 625	6C06054	4.2	19	ND	0.943	03/06/06	03/09/06	u
4-Nitroaniline	EPA 625	6C06054	4.6	19	ND	0.943	03/06/06	03/09/06	u
Nitrobenzene	EPA 625	6C06054	4.0	19	ND	0.943	03/06/06	03/09/06	u
2-Nitrophenol	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	u
4-Nitrophenol	EPA 625	6C06054	6.2	19	ND	0.943	03/06/06	03/09/06	u
N-Nitrosodiphenylamine	EPA 625	6C06054	3.8	9.4	ND	0.943	03/06/06	03/09/06	u
N-Nitroso-di-n-propylamine	EPA 625	6C06054	3.4	9.4	ND	0.943	03/06/06	03/09/06	u
Pentachlorophenol	EPA 625	6C06054	3.8	19	ND	0.943	03/06/06	03/09/06	u
Phenanthrene	EPA 625	6C06054	3.1	9.4	ND	0.943	03/06/06	03/09/06	u
Phenol	EPA 625	6C06054	3.8	9.4	ND	0.943	03/06/06	03/09/06	u
Pyrene	EPA 625	6C06054	3.7	9.4	ND	0.943	03/06/06	03/09/06	u
1,2,4-Trichlorobenzene	EPA 625	6C06054	4.2	9.4	ND	0.943	03/06/06	03/09/06	u
2,4,5-Trichlorophenol	EPA 625	6C06054	3.4	19	ND	0.943	03/06/06	03/09/06	u
2,4,6-Trichlorophenol	EPA 625	6C06054	3.9	19	ND	0.943	03/06/06	03/09/06	u
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6C06054	4.7	19	ND	0.943	03/06/06	03/09/06	u
N-Nitrosodimethylamine	EPA 625	6C06054	3.5	19	ND	0.943	03/06/06	03/09/06	u
Surrogate: 2-Fluorophenol (30-120%)					51 %				
Surrogate: Phenol-d6 (35-120%)					28 %				Z6
Surrogate: 2,4,6-Tribromophenol (45-120%)					66 %				
Surrogate: Nitrobenzene-d5 (45-120%)					13 %				Z6
Surrogate: 2-Fluorobiphenyl (45-120%)					27 %				Z6
Surrogate: Terphenyl-d14 (45-120%)					34 %				Z6

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

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*Lwel TV*

## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID: B4V036  
 Task Order: 1261.001D.01  
 SDG No.: IPB2648

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

No. of Analyses: 2  
 Date: April 10, 2006  
 Reviewer's Signature: *L. Calvin*

ACTION ITEMS <sup>a</sup>	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance	Qualifications were assigned for the following: - $r^2$ value < 0.995 in initial calibration -continuing calibration %D > 20%
COMMENTS <sup>b</sup>	
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 008

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB2648

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2648  
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: April 10, 2006

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



**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 008	IPB2648-01	Water	624
Trip Blank	IPB2648-02	Water	624

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C, at 5°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved. Unpreserved aliquots of the samples were also provided. 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 unpreserved aliquots of the water samples were analyzed for all target compounds within seven days of collection. No qualifications were required.

### 2.2 GC/MS TUNING

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

### 2.3 CALIBRATION

Two initial calibrations were associated with the sample analyses, dated 03/01/06 (acrolein and acrylonitrile only), 02/06/06 (all remaining target compounds). The average RRFs were ≥0.05 for all target compounds. The  $r^2$  value was <0.995 for 2-chloroethyl vinyl ether. The nondetect result for 2-chloroethyl vinyl ether was qualified as estimated, "UJ," in sample Outfall 008. Sample Trip Blank was a field QC sample and required no qualification. The %RSDs were ≤35% or  $r^2$  values ≥0.995 for the remaining target compounds listed on the sample result summary forms.

Two continuing calibrations were associated with the sample analyses, dated 03/03/06, one for acrolein and acrylonitrile and one for the remaining target compounds. The RRFs for were ≥0.05 and all %Ds were within the QC limit of ≤20%, with the exception of the %D for 2-chloroethyl vinyl ether. The nondetect result for 2-chloroethyl vinyl ether was qualified as estimated, "UJ," in sample Outfall 008. Sample Trip Blank was a field QC sample and required no qualification. No further qualifications were required.

## 2.4 BLANKS

One method blank (6C03009-BLK1) was analyzed with this SDG. No target compounds were detected above the MDLs in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (6C03009-BS1) was analyzed with this SDG. Target compounds acrolein and acrylonitrile were not included in the blank spike. All recoveries were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.6 SURROGATE RECOVERY

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

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with site sample Outfall 008. No target compounds were detected in the trip blank. No qualifications were required.

### 2.8.2 Field Blanks and Equipment Rinsates

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

### 2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.9 INTERNAL STANDARDS PERFORMANCE

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

## 2.10 COMPOUND IDENTIFICATION

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

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

## 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

## 2.13 SYSTEM PERFORMANCE

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



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

Project ID: Annual Outfall 008

Report Number: IPB2648

Sampled: 02/28/06  
Received: 02/28/06

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2648-01 (Outfall 008 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C03009	0.28	1.0	ND	1	03/03/06	03/03/06	<i>well qualified</i> <i>Decade</i> 
Bromodichloromethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Bromoform	EPA 624	6C03009	0.32	5.0	ND	1	03/03/06	03/03/06	
Bromomethane	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
Carbon tetrachloride	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
Chlorobenzene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
Chloroethane	EPA 624	6C03009	0.40	5.0	ND	1	03/03/06	03/03/06	
Chloroform	EPA 624	6C03009	0.33	2.0	ND	1	03/03/06	03/03/06	
Chloromethane	EPA 624	6C03009	0.30	5.0	ND	1	03/03/06	03/03/06	
Dibromochloromethane	EPA 624	6C03009	0.28	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichlorobenzene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
1,3-Dichlorobenzene	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
1,4-Dichlorobenzene	EPA 624	6C03009	0.37	2.0	ND	1	03/03/06	03/03/06	
1,1-Dichloroethane	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloroethane	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
1,1-Dichloroethene	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
trans-1,2-Dichloroethene	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloropropane	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
cis-1,3-Dichloropropene	EPA 624	6C03009	0.22	2.0	ND	1	03/03/06	03/03/06	
trans-1,3-Dichloropropene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Ethylbenzene	EPA 624	6C03009	0.25	2.0	ND	1	03/03/06	03/03/06	
Methylene chloride	EPA 624	6C03009	0.70	5.0	ND	1	03/03/06	03/03/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C03009	0.24	2.0	ND	1	03/03/06	03/03/06	
Tetrachloroethene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Toluene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
1,1,1-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
1,1,2-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Trichloroethene	EPA 624	6C03009	0.26	2.0	ND	1	03/03/06	03/03/06	
Trichlorofluoromethane	EPA 624	6C03009	0.34	5.0	ND	1	03/03/06	03/03/06	
Vinyl chloride	EPA 624	6C03009	0.26	0.50	ND	1	03/03/06	03/03/06	
Xylenes, Total	EPA 624	6C03009	0.90	4.0	ND	1	03/03/06	03/03/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C03009	1.2	5.0	ND	1	03/03/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					112 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					95 %				

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

*Level IV*

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

Project ID: Annual Outfall 008

Report Number: IPB2648

Sampled: 02/28/06  
Received: 02/28/06

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2648-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C03009	0.28	1.0	ND	1	03/03/06	03/03/06	<i>see qual code</i> <u>u</u>
Bromodichloromethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Bromoform	EPA 624	6C03009	0.32	5.0	ND	1	03/03/06	03/03/06	
Bromomethane	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
Carbon tetrachloride	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
Chlorobenzene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
Chloroethane	EPA 624	6C03009	0.40	5.0	ND	1	03/03/06	03/03/06	
Chloroform	EPA 624	6C03009	0.33	2.0	ND	1	03/03/06	03/03/06	
Chloromethane	EPA 624	6C03009	0.30	5.0	ND	1	03/03/06	03/03/06	
Dibromochloromethane	EPA 624	6C03009	0.28	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichlorobenzene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
1,3-Dichlorobenzene	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
1,4-Dichlorobenzene	EPA 624	6C03009	0.37	2.0	ND	1	03/03/06	03/03/06	
1,1-Dichloroethane	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloroethane	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
1,1-Dichloroethene	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
trans-1,2-Dichloroethene	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloropropane	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
cis-1,3-Dichloropropene	EPA 624	6C03009	0.22	2.0	ND	1	03/03/06	03/03/06	
trans-1,3-Dichloropropene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Ethylbenzene	EPA 624	6C03009	0.25	2.0	ND	1	03/03/06	03/03/06	
Methylene chloride	EPA 624	6C03009	0.70	5.0	ND	1	03/03/06	03/03/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C03009	0.24	2.0	ND	1	03/03/06	03/03/06	
Tetrachloroethene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Toluene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
1,1,1-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
1,1,2-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Trichloroethene	EPA 624	6C03009	0.26	2.0	ND	1	03/03/06	03/03/06	
Trichlorofluoromethane	EPA 624	6C03009	0.34	5.0	ND	1	03/03/06	03/03/06	
Vinyl chloride	EPA 624	6C03009	0.26	0.50	ND	1	03/03/06	03/03/06	
Xylenes, Total	EPA 624	6C03009	0.90	4.0	ND	1	03/03/06	03/03/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C03009	1.2	5.0	ND	1	03/03/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					106 %				
Surrogate: Toluene-d8 (80-120%)					111 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					92 %				

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

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*Level III*



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

Project ID: Annual Outfall 008  
 Report Number: IPB2648

Sampled: 02/28/06  
 Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2648-01 (Outfall 008 - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6C03009	4.6	50	ND	1	03/03/06	03/03/06	u
Acrylonitrile	EPA 624	6C03009	0.70	50	ND	1	03/03/06	03/03/06	u
2-Chloroethyl vinyl ether	EPA 624	6C03009	1.8	5.0	ND	1	03/03/06	03/03/06	u
Surrogate: Dibromofluoromethane (80-120%)					112 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					95 %				
<b>Sample ID: IPB2648-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6C03009	4.6	50	ND	1	03/03/06	03/03/06	u
Acrylonitrile	EPA 624	6C03009	0.70	50	ND	1	03/03/06	03/03/06	u
2-Chloroethyl vinyl ether	EPA 624	6C03009	1.8	5.0	ND	1	03/03/06	03/03/06	u
Surrogate: Dibromofluoromethane (80-120%)					106 %				
Surrogate: Toluene-d8 (80-120%)					111 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					92 %				

*see qual code*  
 u  
 u  
 u  
 u  
 u  
 u

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

*Level IV*

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## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID: B4WC47  
 Task Order: 1261.001D.01  
 SDG No.: IPB2648

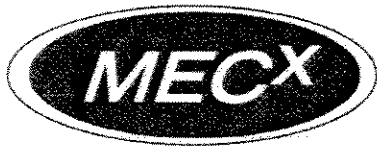
No. of Analyses: 1

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

Date: <u>April 4, 2006</u>
Reviewer's Signature

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





# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 008

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPB2648

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2648  
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: April 4, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 160.2 and 335.2*, 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 008	IPB2648-01	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 analyses presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

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

### 2.2 CALIBRATION

For cyanide, the initial calibration correlation coefficient was  $\geq 0.995$  and the ICV and CCV recoveries were within the control limits of 90-110%. For TSS, 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 qualifications were required.

## 2.5 LABORATORY DUPLICATES

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

## 2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with this SDG; therefore, no assessment was made with respect to this criterion. 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. Cyanide detected below the reporting limit was qualified as estimated, "J," and denoted with "DNQ," in accordance with the NPDES permit. No further qualifications were required.

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Field Blanks and Equipment Rinsates

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

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



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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: Annual Outfall 008 Report Number: IPB2648	Sampled: 02/28/06 Received: 02/28/06
--	--	---

## INORGANICS

Analyte	Method	Batch	MDL Reporting		Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
			Limit	Limit					Rev Qual	Qual Code
Sample ID: IPB2648-01 (Outfall 008 - Water) - cont.										
Reporting Units: ug/l										
Total Cyanide	EPA 335.2	6C02125	2.2	5.0	2.3	1	03/02/06	03/02/06	J J	DNQ
Perchlorate	EPA 314.0	6C03066	0.80	4.0	1.8	1	03/03/06	03/03/06	* J	

\* Analysis not validated

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

LEVEL IV

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 008 Report Number: IPB2648	Sampled: 02/28/06 Received: 02/28/06
--	--	---

**INORGANICS**

Analyte	Method	Batch	MDL Reporting		Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
			Limit	Limit					Low Qual	Qual Code
Sample ID: IPB2648-01 (Outfall 008 - Water) - cont.										
Reporting Units: mg/l										
Chloride	EPA 300.0	6B28141	0.26	0.50	25	1	02/28/06	03/01/06	*	
Nitrate/Nitrite-N	EPA 300.0	6B28141	0.072	0.26	2.6	1	02/28/06	03/01/06		
Oil & Grease	EPA 413.1	6C08046	0.90	4.8	ND	1	03/08/06	03/08/06		
Sulfate	EPA 300.0	6B28141	0.18	0.50	13	1	02/28/06	03/01/06		
Total Dissolved Solids	SM2540C	6C03069	10	10	260	1	03/03/06	03/03/06		
Total Suspended Solids	EPA 160.2	6C06085	10	10	110	1	03/06/06	03/06/06		

\* Analysis not validated

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

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## **APPENDIX G**

### **Section 61**

Outfall 009, February 18, 2006

Del Mar Analytical Laboratory Report





LABORATORY REPORT

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

Project: Annual Outfall 009

Sampled: 02/18/06  
Received: 02/18/06  
Revised: 03/28/06 17:51

NELAP #01108CA California ELAP#1197 CSDLAC #10117

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 2 pages, are included and are an integral part of this report.  
This entire report was reviewed and approved for release.*

CASE NARRATIVE

- SAMPLE RECEIPT: Samples were received intact, at 4°C, on ice and with chain of custody documentation.
- HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.
- PRESERVATION: Samples requiring preservation were verified prior to sample analysis.
- QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers. Due to QC issues, the EPA 608 analysis was re-run and the results are included in this revised report.
- 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
IPB1811-01	Outfall 009	Water
IPB1811-02	Trip Blanks	Water

Reviewed By:

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager



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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

**CORRECTIVE ACTION REPORT**

Department: Pesticides

Date: 03/21/2006

Method: EPA 608

Matrix: Water

QC Batch: 6B24053

**Identification and Definition of Problem:**

A continuing calibration verification (CCV) standard containing AR1016 and AR1260 was not analyzed at the method-specified frequency.

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

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

**Corrective Action Taken:**

All affected samples were bracketed by passing CCVs containing AR1016 and AR1260. Although these aroclors were not analyzed, as required, between the bracketing CCVs, other aroclor standards were, indicating that the analytical run was still within calibration criteria for aroclors in general. All affected samples were re-analyzed in a run with acceptable CCV frequency and recovery to confirm original AR1016 and AR1260 results.

Quality Assurance Approval:

Dave Dawes

Date: 03/29/2006 10:18 AM

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



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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06

Received: 02/18/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB1811-01 (Outfall 009 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	6B19012	0.28	1.0	ND	1	02/19/06	02/19/06	
Bromodichloromethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
Bromoform	EPA 624	6B19012	0.32	5.0	ND	1	02/19/06	02/19/06	
Bromomethane	EPA 624	6B19012	0.42	5.0	ND	1	02/19/06	02/19/06	
Carbon tetrachloride	EPA 624	6B19012	0.28	0.50	ND	1	02/19/06	02/19/06	
Chlorobenzene	EPA 624	6B19012	0.36	2.0	ND	1	02/19/06	02/19/06	
Chloroethane	EPA 624	6B19012	0.40	5.0	ND	1	02/19/06	02/19/06	
Chloroform	EPA 624	6B19012	0.33	2.0	ND	1	02/19/06	02/19/06	
Chloromethane	EPA 624	6B19012	0.30	5.0	ND	1	02/19/06	02/19/06	
Dibromochloromethane	EPA 624	6B19012	0.28	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichlorobenzene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
1,3-Dichlorobenzene	EPA 624	6B19012	0.35	2.0	ND	1	02/19/06	02/19/06	
1,4-Dichlorobenzene	EPA 624	6B19012	0.37	2.0	ND	1	02/19/06	02/19/06	
1,1-Dichloroethane	EPA 624	6B19012	0.27	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichloroethane	EPA 624	6B19012	0.28	0.50	ND	1	02/19/06	02/19/06	
1,1-Dichloroethene	EPA 624	6B19012	0.42	5.0	ND	1	02/19/06	02/19/06	
trans-1,2-Dichloroethene	EPA 624	6B19012	0.27	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichloropropane	EPA 624	6B19012	0.35	2.0	ND	1	02/19/06	02/19/06	
cis-1,3-Dichloropropene	EPA 624	6B19012	0.22	2.0	ND	1	02/19/06	02/19/06	
trans-1,3-Dichloropropene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
Ethylbenzene	EPA 624	6B19012	0.25	2.0	ND	1	02/19/06	02/19/06	
Methylene chloride	EPA 624	6B19012	0.70	5.0	ND	1	02/19/06	02/19/06	
1,1,2,2-Tetrachloroethane	EPA 624	6B19012	0.24	2.0	ND	1	02/19/06	02/19/06	
Tetrachloroethene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
Toluene	EPA 624	6B19012	0.36	2.0	ND	1	02/19/06	02/19/06	
1,1,1-Trichloroethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
1,1,2-Trichloroethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
Trichloroethene	EPA 624	6B19012	0.26	2.0	ND	1	02/19/06	02/19/06	
Trichlorofluoromethane	EPA 624	6B19012	0.34	5.0	ND	1	02/19/06	02/19/06	
Vinyl chloride	EPA 624	6B19012	0.26	0.50	ND	1	02/19/06	02/19/06	
Xylenes, Total	EPA 624	6B19012	0.90	4.0	ND	1	02/19/06	02/19/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6B19012	1.2	5.0	ND	1	02/19/06	02/19/06	
Surrogate: Dibromofluoromethane (80-120%)									115 %
Surrogate: Toluene-d8 (80-120%)									110 %
Surrogate: 4-Bromofluorobenzene (80-120%)									109 %

**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: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB1811-02 (Trip Blanks - Water)</b>									
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	6B19012	0.28	1.0	ND	1	02/19/06	02/19/06	
Bromodichloromethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
Bromoform	EPA 624	6B19012	0.32	5.0	ND	1	02/19/06	02/19/06	
Bromomethane	EPA 624	6B19012	0.42	5.0	ND	1	02/19/06	02/19/06	
Carbon tetrachloride	EPA 624	6B19012	0.28	0.50	ND	1	02/19/06	02/19/06	
Chlorobenzene	EPA 624	6B19012	0.36	2.0	ND	1	02/19/06	02/19/06	
Chloroethane	EPA 624	6B19012	0.40	5.0	ND	1	02/19/06	02/19/06	
Chloroform	EPA 624	6B19012	0.33	2.0	ND	1	02/19/06	02/19/06	
Chloromethane	EPA 624	6B19012	0.30	5.0	ND	1	02/19/06	02/19/06	
Dibromochloromethane	EPA 624	6B19012	0.28	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichlorobenzene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
1,3-Dichlorobenzene	EPA 624	6B19012	0.35	2.0	ND	1	02/19/06	02/19/06	
1,4-Dichlorobenzene	EPA 624	6B19012	0.37	2.0	ND	1	02/19/06	02/19/06	
1,1-Dichloroethane	EPA 624	6B19012	0.27	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichloroethane	EPA 624	6B19012	0.28	0.50	ND	1	02/19/06	02/19/06	
1,1-Dichloroethene	EPA 624	6B19012	0.42	5.0	ND	1	02/19/06	02/19/06	
trans-1,2-Dichloroethene	EPA 624	6B19012	0.27	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichloropropane	EPA 624	6B19012	0.35	2.0	ND	1	02/19/06	02/19/06	
cis-1,3-Dichloropropene	EPA 624	6B19012	0.22	2.0	ND	1	02/19/06	02/19/06	
trans-1,3-Dichloropropene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
Ethylbenzene	EPA 624	6B19012	0.25	2.0	ND	1	02/19/06	02/19/06	
Methylene chloride	EPA 624	6B19012	0.70	5.0	ND	1	02/19/06	02/19/06	
1,1,2,2-Tetrachloroethane	EPA 624	6B19012	0.24	2.0	ND	1	02/19/06	02/19/06	
Tetrachloroethene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
Toluene	EPA 624	6B19012	0.36	2.0	ND	1	02/19/06	02/19/06	
1,1,1-Trichloroethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
1,1,2-Trichloroethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
Trichloroethene	EPA 624	6B19012	0.26	2.0	ND	1	02/19/06	02/19/06	
Trichlorofluoromethane	EPA 624	6B19012	0.34	5.0	ND	1	02/19/06	02/19/06	
Vinyl chloride	EPA 624	6B19012	0.26	0.50	ND	1	02/19/06	02/19/06	
Xylenes, Total	EPA 624	6B19012	0.90	4.0	ND	1	02/19/06	02/19/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6B19012	1.2	5.0	ND	1	02/19/06	02/19/06	
Surrogate: Dibromofluoromethane (80-120%)									97 %
Surrogate: Toluene-d8 (80-120%)									108 %
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: Annual Outfall 009

Sampled: 02/18/06

Report Number: IPB1811

Received: 02/18/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB1811-01 (Outfall 009 - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6B19012	4.6	50	ND	1	02/19/06	02/19/06	
Acrylonitrile	EPA 624	6B19012	0.70	50	ND	1	02/19/06	02/19/06	
2-Chloroethyl vinyl ether	EPA 624	6B19012	1.8	5.0	ND	1	02/19/06	02/19/06	
Surrogate: Dibromofluoromethane (80-120%)					115 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					109 %				
<b>Sample ID: IPB1811-02 (Trip Blanks - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6B19012	4.6	50	ND	1	02/19/06	02/19/06	
Acrylonitrile	EPA 624	6B19012	0.70	50	ND	1	02/19/06	02/19/06	
2-Chloroethyl vinyl ether	EPA 624	6B19012	1.8	5.0	ND	1	02/19/06	02/19/06	
Surrogate: Dibromofluoromethane (80-120%)					97 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					100 %				

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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: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06

Received: 02/18/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB1811-01 (Outfall 009 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acenaphthene	EPA 625	6B19029	4.1	9.6	ND	0.957	02/19/06	02/28/06	
Acenaphthylene	EPA 625	6B19029	3.1	9.6	ND	0.957	02/19/06	02/28/06	
Aniline	EPA 625	6B19029	2.8	9.6	ND	0.957	02/19/06	02/28/06	
Anthracene	EPA 625	6B19029	3.1	9.6	ND	0.957	02/19/06	02/28/06	
Benzidine	EPA 625	6B19029	5.0	19	ND	0.957	02/19/06	02/28/06	
<b>Benzoic acid</b>	EPA 625	6B19029	2.5	19	<b>19</b>	0.957	02/19/06	02/28/06	
Benzo(a)anthracene	EPA 625	6B19029	3.5	9.6	ND	0.957	02/19/06	02/28/06	
Benzo(b)fluoranthene	EPA 625	6B19029	2.6	9.6	ND	0.957	02/19/06	02/28/06	
Benzo(k)fluoranthene	EPA 625	6B19029	3.3	9.6	ND	0.957	02/19/06	02/28/06	
Benzo(g,h,i)perylene	EPA 625	6B19029	5.1	9.6	ND	0.957	02/19/06	02/28/06	
Benzo(a)pyrene	EPA 625	6B19029	3.3	9.6	ND	0.957	02/19/06	02/28/06	
Benzyl alcohol	EPA 625	6B19029	2.4	19	ND	0.957	02/19/06	02/28/06	
Bis(2-chloroethoxy)methane	EPA 625	6B19029	3.7	9.6	ND	0.957	02/19/06	02/28/06	
Bis(2-chloroethyl)ether	EPA 625	6B19029	4.2	9.6	ND	0.957	02/19/06	02/28/06	
Bis(2-chloroisopropyl)ether	EPA 625	6B19029	4.4	9.6	ND	0.957	02/19/06	02/28/06	
Bis(2-ethylhexyl)phthalate	EPA 625	6B19029	5.0	48	ND	0.957	02/19/06	02/28/06	
4-Bromophenyl phenyl ether	EPA 625	6B19029	4.4	9.6	ND	0.957	02/19/06	02/28/06	
Butyl benzyl phthalate	EPA 625	6B19029	3.3	19	ND	0.957	02/19/06	02/28/06	
4-Chloroaniline	EPA 625	6B19029	5.7	9.6	ND	0.957	02/19/06	02/28/06	
2-Chloronaphthalene	EPA 625	6B19029	3.8	9.6	ND	0.957	02/19/06	02/28/06	
4-Chloro-3-methylphenol	EPA 625	6B19029	3.3	19	ND	0.957	02/19/06	02/28/06	
2-Chlorophenol	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	
4-Chlorophenyl phenyl ether	EPA 625	6B19029	2.9	9.6	ND	0.957	02/19/06	02/28/06	
Chrysene	EPA 625	6B19029	2.7	9.6	ND	0.957	02/19/06	02/28/06	
Dibenz(a,h)anthracene	EPA 625	6B19029	4.5	19	ND	0.957	02/19/06	02/28/06	
Dibenzofuran	EPA 625	6B19029	2.5	9.6	ND	0.957	02/19/06	02/28/06	
Di-n-butyl phthalate	EPA 625	6B19029	2.7	19	ND	0.957	02/19/06	02/28/06	
1,3-Dichlorobenzene	EPA 625	6B19029	3.9	9.6	ND	0.957	02/19/06	02/28/06	
1,4-Dichlorobenzene	EPA 625	6B19029	3.7	9.6	ND	0.957	02/19/06	02/28/06	
1,2-Dichlorobenzene	EPA 625	6B19029	4.3	9.6	ND	0.957	02/19/06	02/28/06	
3,3-Dichlorobenzidine	EPA 625	6B19029	11	19	ND	0.957	02/19/06	02/28/06	
2,4-Dichlorophenol	EPA 625	6B19029	3.9	9.6	ND	0.957	02/19/06	02/28/06	
Diethyl phthalate	EPA 625	6B19029	3.0	9.6	ND	0.957	02/19/06	02/28/06	
2,4-Dimethylphenol	EPA 625	6B19029	4.2	19	ND	0.957	02/19/06	02/28/06	
Dimethyl phthalate	EPA 625	6B19029	3.4	9.6	ND	0.957	02/19/06	02/28/06	
4,6-Dinitro-2-methylphenol	EPA 625	6B19029	4.9	19	ND	0.957	02/19/06	02/28/06	
2,4-Dinitrophenol	EPA 625	6B19029	5.1	19	ND	0.957	02/19/06	02/28/06	
2,4-Dinitrotoluene	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	
2,6-Dinitrotoluene	EPA 625	6B19029	3.1	9.6	ND	0.957	02/19/06	02/28/06	
Di-n-octyl phthalate	EPA 625	6B19029	4.5	19	ND	0.957	02/19/06	02/28/06	
Fluoranthene	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	

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 Project Manager

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**IPB1811 <Page 6 of 40>**



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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06

Received: 02/18/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Fluorene	EPA 625	6B19029	3.7	9.6	ND	0.957	02/19/06	02/28/06	
Hexachlorobenzene	EPA 625	6B19029	4.6	9.6	ND	0.957	02/19/06	02/28/06	
Hexachlorobutadiene	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	
Hexachlorocyclopentadiene	EPA 625	6B19029	3.3	19	ND	0.957	02/19/06	02/28/06	
Hexachloroethane	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6B19029	5.2	19	ND	0.957	02/19/06	02/28/06	
Isophorone	EPA 625	6B19029	3.5	9.6	ND	0.957	02/19/06	02/28/06	
2-Methylnaphthalene	EPA 625	6B19029	2.9	9.6	ND	0.957	02/19/06	02/28/06	
2-Methylphenol	EPA 625	6B19029	3.5	9.6	ND	0.957	02/19/06	02/28/06	
4-Methylphenol	EPA 625	6B19029	3.6	9.6	ND	0.957	02/19/06	02/28/06	
Naphthalene	EPA 625	6B19029	4.3	9.6	ND	0.957	02/19/06	02/28/06	
2-Nitroaniline	EPA 625	6B19029	3.7	19	ND	0.957	02/19/06	02/28/06	
3-Nitroaniline	EPA 625	6B19029	4.3	19	ND	0.957	02/19/06	02/28/06	
4-Nitroaniline	EPA 625	6B19029	4.7	19	ND	0.957	02/19/06	02/28/06	
Nitrobenzene	EPA 625	6B19029	4.0	19	ND	0.957	02/19/06	02/28/06	
2-Nitrophenol	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	
4-Nitrophenol	EPA 625	6B19029	6.3	19	ND	0.957	02/19/06	02/28/06	
N-Nitrosodiphenylamine	EPA 625	6B19029	3.8	9.6	ND	0.957	02/19/06	02/28/06	
N-Nitroso-di-n-propylamine	EPA 625	6B19029	3.4	9.6	ND	0.957	02/19/06	02/28/06	
Pentachlorophenol	EPA 625	6B19029	3.8	19	ND	0.957	02/19/06	02/28/06	
Phenanthrene	EPA 625	6B19029	3.2	9.6	ND	0.957	02/19/06	02/28/06	
Phenol	EPA 625	6B19029	3.8	9.6	ND	0.957	02/19/06	02/28/06	
Pyrene	EPA 625	6B19029	3.7	9.6	ND	0.957	02/19/06	02/28/06	
1,2,4-Trichlorobenzene	EPA 625	6B19029	4.2	9.6	ND	0.957	02/19/06	02/28/06	
2,4,5-Trichlorophenol	EPA 625	6B19029	3.4	19	ND	0.957	02/19/06	02/28/06	
2,4,6-Trichlorophenol	EPA 625	6B19029	3.9	19	ND	0.957	02/19/06	02/28/06	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6B19029	4.8	19	ND	0.957	02/19/06	02/28/06	
N-Nitrosodimethylamine	EPA 625	6B19029	3.5	19	ND	0.957	02/19/06	02/28/06	
Surrogate: 2-Fluorophenol (30-120%)									56 %
Surrogate: Phenol-d6 (35-120%)									68 %
Surrogate: 2,4,6-Tribromophenol (45-120%)									69 %
Surrogate: Nitrobenzene-d5 (45-120%)									62 %
Surrogate: 2-Fluorobiphenyl (45-120%)									66 %
Surrogate: Terphenyl-d14 (45-120%)									82 %

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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: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06

Received: 02/18/06

**ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: ug/l									
Aldrin	EPA 608	6B24053	0.029	0.096	ND	0.962	02/24/06	02/24/06	
alpha-BHC	EPA 608	6B24053	0.019	0.096	ND	0.962	02/24/06	02/24/06	
beta-BHC	EPA 608	6B24053	0.014	0.096	ND	0.962	02/24/06	02/24/06	
delta-BHC	EPA 608	6B24053	0.019	0.19	ND	0.962	02/24/06	02/24/06	
gamma-BHC (Lindane)	EPA 608	6B24053	0.019	0.096	ND	0.962	02/24/06	02/24/06	
Chlordane	EPA 608	6B24053	0.19	0.96	ND	0.962	02/24/06	02/24/06	
4,4'-DDD	EPA 608	6B24053	0.019	0.096	ND	0.962	02/24/06	02/24/06	
4,4'-DDE	EPA 608	6B24053	0.024	0.096	ND	0.962	02/24/06	02/24/06	
4,4'-DDT	EPA 608	6B24053	0.034	0.096	ND	0.962	02/24/06	02/24/06	
Dieldrin	EPA 608	6B24053	0.014	0.096	ND	0.962	02/24/06	02/24/06	
Endosulfan I	EPA 608	6B24053	0.014	0.096	ND	0.962	02/24/06	02/24/06	
Endosulfan II	EPA 608	6B24053	0.038	0.096	ND	0.962	02/24/06	02/24/06	
Endosulfan sulfate	EPA 608	6B24053	0.019	0.19	ND	0.962	02/24/06	02/24/06	
Endrin	EPA 608	6B24053	0.019	0.096	ND	0.962	02/24/06	02/24/06	
Endrin aldehyde	EPA 608	6B24053	0.043	0.096	ND	0.962	02/24/06	02/24/06	
Endrin ketone	EPA 608	6B24053	0.019	0.096	ND	0.962	02/24/06	02/24/06	
Heptachlor	EPA 608	6B24053	0.029	0.096	ND	0.962	02/24/06	02/24/06	
Heptachlor epoxide	EPA 608	6B24053	0.029	0.096	ND	0.962	02/24/06	02/24/06	
Methoxychlor	EPA 608	6B24053	0.034	0.096	ND	0.962	02/24/06	02/24/06	
Toxaphene	EPA 608	6B24053	1.4	4.8	ND	0.962	02/24/06	02/24/06	
Surrogate: Tetrachloro-m-xylene (35-115%)									73 %
Surrogate: Decachlorobiphenyl (45-120%)									67 %

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 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: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06

Received: 02/18/06

## TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aroclor 1016	EPA 608	6B24053	0.19	0.96	ND	0.962	02/24/06	02/24/06	
Aroclor 1221	EPA 608	6B24053	0.096	0.96	ND	0.962	02/24/06	02/24/06	
Aroclor 1232	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/24/06	
Aroclor 1242	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/24/06	
Aroclor 1248	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/24/06	
Aroclor 1254	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/24/06	
Aroclor 1260	EPA 608	6B24053	0.38	0.96	ND	0.962	02/24/06	02/24/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					73 %				

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

Project ID: Annual Outfall 009  
 Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

**METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.</b>									
<b>Reporting Units: mg/l</b>									
<b>Boron</b>	EPA 200.7	6B20080	0.0080	0.050	<b>0.10</b>	1	02/20/06	02/27/06	

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 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046  
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851  
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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

**METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aluminum	EPA 200.7	6B20080	40	50	<b>5900</b>	1	02/20/06	02/28/06	
Antimony	EPA 200.8	6B21089	0.050	2.0	<b>0.60</b>	1	02/21/06	02/22/06	J
Arsenic	EPA 200.7	6B20080	4.4	5.0	<b>5.6</b>	1	02/20/06	02/25/06	
Beryllium	EPA 200.7	6B20080	0.90	2.0	ND	1	02/20/06	02/25/06	
Cadmium	EPA 200.8	6B21089	0.025	1.0	<b>0.48</b>	1	02/21/06	02/22/06	J
Chromium	EPA 200.7	6B20080	2.0	5.0	<b>14</b>	1	02/20/06	02/25/06	
Copper	EPA 200.8	6B21089	0.25	2.0	<b>22</b>	1	02/21/06	02/22/06	
Lead	EPA 200.8	6B21089	0.040	1.0	<b>33</b>	1	02/21/06	02/22/06	
Mercury	EPA 245.1	6B21083	0.050	0.20	ND	1	02/21/06	02/21/06	
Nickel	EPA 200.7	6B20080	2.0	10	<b>10</b>	1	02/20/06	02/25/06	
Selenium	EPA 200.7	6B20080	8.0	10	ND	1	02/20/06	02/25/06	
Silver	EPA 200.7	6B20080	3.0	10	ND	1	02/20/06	02/25/06	
Thallium	EPA 200.7	6B20080	7.0	10	ND	1	02/20/06	02/25/06	
Vanadium	EPA 200.7	6B20080	3.0	10	<b>20</b>	1	02/20/06	02/25/06	
Zinc	EPA 200.7	6B20080	15	20	<b>88</b>	1	02/20/06	02/25/06	B

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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: mg/l									
Chloride	EPA 300.0	6B19038	0.15	0.50	20	1	02/19/06	02/19/06	M2
Nitrate/Nitrite-N	EPA 300.0	6B19038	0.080	0.15	0.69	1	02/19/06	02/19/06	
Oil & Grease	EPA 413.1	6B22047	0.94	5.0	1.5	1	02/22/06	02/22/06	J
Sulfate	EPA 300.0	6B19038	2.2	2.5	66	5	02/19/06	02/19/06	
Total Dissolved Solids	SM2540C	6B22069	10	10	290	1	02/22/06	02/22/06	
Total Suspended Solids	EPA 160.2	6B22101	10	10	330	1	02/22/06	02/22/06	

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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06

Received: 02/18/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.</b>									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6B22127	2.2	5.0	2.6	1	02/22/06	02/22/06	J
Perchlorate	EPA 314.0	6B23071	0.80	4.0	ND	1	02/23/06	02/23/06	

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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
<b>Sample ID: Outfall 009 (IPB1811-01) - Water</b>					
EPA 300.0	2	02/18/2006 11:00	02/18/2006 18:15	02/19/2006 17:30	02/19/2006 18:49
EPA 624	3	02/18/2006 11:00	02/18/2006 18:15	02/19/2006 00:00	02/19/2006 16:01
<b>Sample ID: Trip Blanks (IPB1811-02) - Water</b>					
EPA 624	3	02/18/2006 13:20	02/18/2006 18:15	02/19/2006 00:00	02/19/2006 16:27

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B19012 Extracted: 02/19/06</b>										
<b>Blank Analyzed: 02/19/2006 (6B19012-BLK1)</b>										
Benzene	ND	1.0	0.28	ug/l						
Bromodichloromethane	ND	2.0	0.30	ug/l						
Bromoform	ND	5.0	0.32	ug/l						
Bromomethane	ND	5.0	0.42	ug/l						
Carbon tetrachloride	ND	0.50	0.28	ug/l						
Chlorobenzene	ND	2.0	0.36	ug/l						
Chloroethane	ND	5.0	0.40	ug/l						
Chloroform	ND	2.0	0.33	ug/l						
Chloromethane	ND	5.0	0.30	ug/l						
Dibromochloromethane	ND	2.0	0.28	ug/l						
1,2-Dichlorobenzene	ND	2.0	0.32	ug/l						
1,3-Dichlorobenzene	ND	2.0	0.35	ug/l						
1,4-Dichlorobenzene	ND	2.0	0.37	ug/l						
1,1-Dichloroethane	ND	2.0	0.27	ug/l						
1,2-Dichloroethane	ND	0.50	0.28	ug/l						
1,1-Dichloroethene	ND	5.0	0.42	ug/l						
trans-1,2-Dichloroethene	ND	2.0	0.27	ug/l						
1,2-Dichloropropane	ND	2.0	0.35	ug/l						
cis-1,3-Dichloropropene	ND	2.0	0.22	ug/l						
trans-1,3-Dichloropropene	ND	2.0	0.32	ug/l						
Ethylbenzene	ND	2.0	0.25	ug/l						
Methylene chloride	ND	5.0	0.70	ug/l						
1,1,2,2-Tetrachloroethane	ND	2.0	0.24	ug/l						
Tetrachloroethene	ND	2.0	0.32	ug/l						
Toluene	ND	2.0	0.36	ug/l						
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l						
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l						
Trichloroethene	ND	2.0	0.26	ug/l						
Trichlorofluoromethane	ND	5.0	0.34	ug/l						
Vinyl chloride	ND	0.50	0.26	ug/l						
Xylenes, Total	ND	4.0	0.90	ug/l						
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l						
Surrogate: Dibromofluoromethane	28.0			ug/l	25.0		112	80-120		
Surrogate: Toluene-d8	27.4			ug/l	25.0		110	80-120		
Surrogate: 4-Bromofluorobenzene	26.8			ug/l	25.0		107	80-120		

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Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 009  
Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

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
<b>Batch: 6B19012 Extracted: 02/19/06</b>											
<b>LCS Analyzed: 02/19/2006 (6B19012-BS1)</b>											
Benzene	26.1	1.0	0.28	ug/l	25.0		104	65-120			
Bromodichloromethane	29.5	2.0	0.30	ug/l	25.0		118	65-135			
Bromoform	30.7	5.0	0.32	ug/l	25.0		123	50-130			
Bromomethane	30.0	5.0	0.42	ug/l	25.0		120	60-140			
Carbon tetrachloride	30.0	0.50	0.28	ug/l	25.0		120	65-140			
Chlorobenzene	27.6	2.0	0.36	ug/l	25.0		110	70-125			
Chloroethane	28.7	5.0	0.40	ug/l	25.0		115	55-140			
Chloroform	28.4	2.0	0.33	ug/l	25.0		114	65-130			
Chloromethane	27.3	5.0	0.30	ug/l	25.0		109	40-140			
Dibromochloromethane	29.5	2.0	0.28	ug/l	25.0		118	65-140			
1,2-Dichlorobenzene	26.7	2.0	0.32	ug/l	25.0		107	70-120			
1,3-Dichlorobenzene	26.1	2.0	0.35	ug/l	25.0		104	70-125			
1,4-Dichlorobenzene	25.7	2.0	0.37	ug/l	25.0		103	70-125			
1,1-Dichloroethane	27.5	2.0	0.27	ug/l	25.0		110	65-130			
1,2-Dichloroethane	29.5	0.50	0.28	ug/l	25.0		118	60-140			
1,1-Dichloroethene	27.4	5.0	0.42	ug/l	25.0		110	70-130			
trans-1,2-Dichloroethene	27.4	2.0	0.27	ug/l	25.0		110	65-130			
1,2-Dichloropropane	26.8	2.0	0.35	ug/l	25.0		107	65-125			
cis-1,3-Dichloropropene	28.9	2.0	0.22	ug/l	25.0		116	70-130			
trans-1,3-Dichloropropene	30.4	2.0	0.32	ug/l	25.0		122	65-130			
Ethylbenzene	28.0	2.0	0.25	ug/l	25.0		112	70-125			
Methylene chloride	27.0	5.0	0.70	ug/l	25.0		108	60-130			
1,1,2,2-Tetrachloroethane	27.7	2.0	0.24	ug/l	25.0		111	55-130			
Tetrachloroethene	26.9	2.0	0.32	ug/l	25.0		108	65-125			
Toluene	26.6	2.0	0.36	ug/l	25.0		106	70-125			
1,1,1-Trichloroethane	29.2	2.0	0.30	ug/l	25.0		117	65-135			
1,1,2-Trichloroethane	27.0	2.0	0.30	ug/l	25.0		108	65-125			
Trichloroethene	27.4	2.0	0.26	ug/l	25.0		110	70-125			
Trichlorofluoromethane	30.2	5.0	0.34	ug/l	25.0		121	60-140			
Vinyl chloride	29.6	0.50	0.26	ug/l	25.0		118	50-130			
Surrogate: Dibromofluoromethane	28.0			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	27.7			ug/l	25.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	28.5			ug/l	25.0		114	80-120			

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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: Annual Outfall 009  
Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B19012 Extracted: 02/19/06</b>											
<b>Matrix Spike Analyzed: 02/19/2006 (6B19012-MS1)</b>						<b>Source: IPB0811-01</b>					
Benzene	25.5	1.0	0.28	ug/l	25.0	ND	102	60-125			
Bromodichloromethane	28.7	2.0	0.30	ug/l	25.0	ND	115	65-135			
Bromoform	29.8	5.0	0.32	ug/l	25.0	ND	119	50-135			
Bromomethane	29.5	5.0	0.42	ug/l	25.0	ND	118	50-145			
Carbon tetrachloride	29.3	0.50	0.28	ug/l	25.0	ND	117	65-140			
Chlorobenzene	26.8	2.0	0.36	ug/l	25.0	ND	107	70-125			
Chloroethane	28.4	5.0	0.40	ug/l	25.0	ND	114	50-140			
Chloroform	27.6	2.0	0.33	ug/l	25.0	ND	110	65-135			
Chloromethane	27.1	5.0	0.30	ug/l	25.0	ND	108	35-140			
Dibromochloromethane	28.9	2.0	0.28	ug/l	25.0	ND	116	60-140			
1,2-Dichlorobenzene	25.7	2.0	0.32	ug/l	25.0	ND	103	70-125			
1,3-Dichlorobenzene	24.7	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	26.9	2.0	0.27	ug/l	25.0	ND	108	60-130			
1,2-Dichloroethane	29.3	0.50	0.28	ug/l	25.0	ND	117	60-140			
1,1-Dichloroethene	27.8	5.0	0.42	ug/l	25.0	ND	111	60-135			
trans-1,2-Dichloroethene	27.2	2.0	0.27	ug/l	25.0	ND	109	60-135			
1,2-Dichloropropane	26.5	2.0	0.35	ug/l	25.0	ND	106	60-125			
cis-1,3-Dichloropropene	27.9	2.0	0.22	ug/l	25.0	ND	112	65-135			
trans-1,3-Dichloropropene	29.7	2.0	0.32	ug/l	25.0	ND	119	65-140			
Ethylbenzene	27.2	2.0	0.25	ug/l	25.0	ND	109	65-130			
Methylene chloride	26.8	5.0	0.70	ug/l	25.0	ND	107	55-130			
1,1,1,2-Tetrachloroethane	27.2	2.0	0.24	ug/l	25.0	ND	109	55-140			
Tetrachloroethene	25.8	2.0	0.32	ug/l	25.0	ND	103	60-130			
Toluene	25.9	2.0	0.36	ug/l	25.0	ND	104	65-125			
1,1,1-Trichloroethane	28.5	2.0	0.30	ug/l	25.0	ND	114	65-140			
1,1,2-Trichloroethane	26.7	2.0	0.30	ug/l	25.0	ND	107	60-130			
Trichloroethene	26.1	2.0	0.26	ug/l	25.0	0.31	103	60-125			
Trichlorofluoromethane	29.3	5.0	0.34	ug/l	25.0	ND	117	55-145			
Vinyl chloride	29.1	0.50	0.26	ug/l	25.0	ND	116	40-135			
Surrogate: Dibromofluoromethane	28.3			ug/l	25.0		113	80-120			
Surrogate: Toluene-d8	27.7			ug/l	25.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	28.5			ug/l	25.0		114	80-120			

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Michele Chamberlin  
Project Manager

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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06

Received: 02/18/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B19012 Extracted: 02/19/06</b>											
<b>Matrix Spike Dup Analyzed: 02/19/2006 (6B19012-MSD1)</b>						<b>Source: IPB0811-01</b>					
Benzene	24.4	1.0	0.28	ug/l	25.0	ND	98	60-125	4	20	
Bromodichloromethane	27.4	2.0	0.30	ug/l	25.0	ND	110	65-135	5	20	
Bromoform	30.0	5.0	0.32	ug/l	25.0	ND	120	50-135	1	25	
Bromomethane	27.8	5.0	0.42	ug/l	25.0	ND	111	50-145	6	25	
Carbon tetrachloride	27.1	0.50	0.28	ug/l	25.0	ND	108	65-140	8	25	
Chlorobenzene	25.7	2.0	0.36	ug/l	25.0	ND	103	70-125	4	20	
Chloroethane	27.3	5.0	0.40	ug/l	25.0	ND	109	50-140	4	25	
Chloroform	26.4	2.0	0.33	ug/l	25.0	ND	106	65-135	4	20	
Chloromethane	26.0	5.0	0.30	ug/l	25.0	ND	104	35-140	4	25	
Dibromochloromethane	28.4	2.0	0.28	ug/l	25.0	ND	114	60-140	2	25	
1,2-Dichlorobenzene	25.0	2.0	0.32	ug/l	25.0	ND	100	70-125	3	20	
1,3-Dichlorobenzene	23.6	2.0	0.35	ug/l	25.0	ND	94	70-125	5	20	
1,4-Dichlorobenzene	23.6	2.0	0.37	ug/l	25.0	ND	94	70-125	2	20	
1,1-Dichloroethane	25.5	2.0	0.27	ug/l	25.0	ND	102	60-130	5	20	
1,2-Dichloroethane	28.2	0.50	0.28	ug/l	25.0	ND	113	60-140	4	20	
1,1-Dichloroethene	25.8	5.0	0.42	ug/l	25.0	ND	103	60-135	7	20	
trans-1,2-Dichloroethene	26.0	2.0	0.27	ug/l	25.0	ND	104	60-135	5	20	
1,2-Dichloropropane	25.5	2.0	0.35	ug/l	25.0	ND	102	60-125	4	20	
cis-1,3-Dichloropropene	27.2	2.0	0.22	ug/l	25.0	ND	109	65-135	3	20	
trans-1,3-Dichloropropene	29.5	2.0	0.32	ug/l	25.0	ND	118	65-140	1	25	
Ethylbenzene	25.9	2.0	0.25	ug/l	25.0	ND	104	65-130	5	20	
Methylene chloride	25.7	5.0	0.70	ug/l	25.0	ND	103	55-130	4	20	
1,1,2,2-Tetrachloroethane	28.6	2.0	0.24	ug/l	25.0	ND	114	55-140	5	30	
Tetrachloroethene	24.4	2.0	0.32	ug/l	25.0	ND	98	60-130	6	20	
Toluene	24.8	2.0	0.36	ug/l	25.0	ND	99	65-125	4	20	
1,1,1-Trichloroethane	26.4	2.0	0.30	ug/l	25.0	ND	106	65-140	8	20	
1,1,2-Trichloroethane	26.5	2.0	0.30	ug/l	25.0	ND	106	60-130	1	25	
Trichloroethene	24.8	2.0	0.26	ug/l	25.0	0.31	98	60-125	5	20	
Trichlorofluoromethane	27.3	5.0	0.34	ug/l	25.0	ND	109	55-145	7	25	
Vinyl chloride	27.0	0.50	0.26	ug/l	25.0	ND	108	40-135	7	30	
Surrogate: Dibromofluoromethane	28.0			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	27.6			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	27.6			ug/l	25.0		110	80-120			

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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: Annual Outfall 009  
Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

**METHOD BLANK/QC DATA**

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B19012 Extracted: 02/19/06</b>										
<b>Blank Analyzed: 02/19/2006 (6B19012-BLK1)</b>										
Acrolein	ND	50	4.6	ug/l						
Acrylonitrile	ND	50	0.70	ug/l						
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l						
Surrogate: Dibromofluoromethane	28.0			ug/l	25.0		112		80-120	
Surrogate: Toluene-d8	27.4			ug/l	25.0		110		80-120	
Surrogate: 4-Bromofluorobenzene	26.8			ug/l	25.0		107		80-120	
<b>LCS Analyzed: 02/19/2006 (6B19012-BS1)</b>										
2-Chloroethyl vinyl ether	35.1	5.0	1.8	ug/l	25.0		140		25-170	
Surrogate: Dibromofluoromethane	28.0			ug/l	25.0		112		80-120	
Surrogate: Toluene-d8	27.7			ug/l	25.0		111		80-120	
Surrogate: 4-Bromofluorobenzene	28.5			ug/l	25.0		114		80-120	

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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: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06

Received: 02/18/06

**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
<b>Batch: 6B19029 Extracted: 02/19/06</b>											
<b>Blank Analyzed: 02/27/2006 (6B19029-BLK1)</b>											
Acenaphthene	ND	10	4.3	ug/l							
Acenaphthylene	ND	10	3.2	ug/l							
Aniline	ND	10	2.9	ug/l							
Anthracene	ND	10	3.2	ug/l							
Benzidine	ND	20	5.2	ug/l							
Benzoic acid	ND	20	2.6	ug/l							
Benzo(a)anthracene	ND	10	3.7	ug/l							
Benzo(b)fluoranthene	ND	10	2.7	ug/l							
Benzo(k)fluoranthene	ND	10	3.4	ug/l							
Benzo(g,h,i)perylene	ND	10	5.3	ug/l							
Benzo(a)pyrene	ND	10	3.5	ug/l							
Benzyl alcohol	ND	20	2.5	ug/l							
Bis(2-chloroethoxy)methane	ND	10	3.9	ug/l							
Bis(2-chloroethyl)ether	ND	10	4.4	ug/l							
Bis(2-chloroisopropyl)ether	ND	10	4.6	ug/l							
Bis(2-ethylhexyl)phthalate	ND	50	5.2	ug/l							
4-Bromophenyl phenyl ether	ND	10	4.6	ug/l							
Butyl benzyl phthalate	ND	20	3.5	ug/l							
4-Chloroaniline	ND	10	6.0	ug/l							
2-Chloronaphthalene	ND	10	4.0	ug/l							
4-Chloro-3-methylphenol	ND	20	3.5	ug/l							
2-Chlorophenol	ND	10	4.2	ug/l							
4-Chlorophenyl phenyl ether	ND	10	3.0	ug/l							
Chrysene	ND	10	2.8	ug/l							
Dibenz(a,h)anthracene	ND	20	4.7	ug/l							
Dibenzofuran	ND	10	2.6	ug/l							
Di-n-butyl phthalate	ND	20	2.8	ug/l							
1,3-Dichlorobenzene	ND	10	4.1	ug/l							
1,4-Dichlorobenzene	ND	10	3.9	ug/l							
1,2-Dichlorobenzene	ND	10	4.5	ug/l							
3,3-Dichlorobenzidine	ND	20	11	ug/l							
2,4-Dichlorophenol	ND	10	4.1	ug/l							
Diethyl phthalate	ND	10	3.1	ug/l							
2,4-Dimethylphenol	ND	20	4.4	ug/l							
Dimethyl phthalate	ND	10	3.6	ug/l							

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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: Annual Outfall 009  
 Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## 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
<b>Batch: 6B19029 Extracted: 02/19/06</b>											
<b>Blank Analyzed: 02/27/2006 (6B19029-BLK1)</b>											
4,6-Dinitro-2-methylphenol	ND	20	5.1	ug/l							
2,4-Dinitrophenol	ND	20	5.3	ug/l							
2,4-Dinitrotoluene	ND	10	4.2	ug/l							
2,6-Dinitrotoluene	ND	10	3.2	ug/l							
Di-n-octyl phthalate	ND	20	4.7	ug/l							
Fluoranthene	ND	10	4.2	ug/l							
Fluorene	ND	10	3.9	ug/l							
Hexachlorobenzene	ND	10	4.8	ug/l							
Hexachlorobutadiene	ND	10	4.2	ug/l							
Hexachlorocyclopentadiene	ND	20	3.4	ug/l							
Hexachloroethane	ND	10	4.2	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20	5.4	ug/l							
Isophorone	ND	10	3.7	ug/l							
2-Methylnaphthalene	ND	10	3.0	ug/l							
2-Methylphenol	ND	10	3.7	ug/l							
4-Methylphenol	ND	10	3.8	ug/l							
Naphthalene	ND	10	4.5	ug/l							
2-Nitroaniline	ND	20	3.9	ug/l							
3-Nitroaniline	ND	20	4.5	ug/l							
4-Nitroaniline	ND	20	4.9	ug/l							
Nitrobenzene	ND	20	4.2	ug/l							
2-Nitrophenol	ND	10	4.2	ug/l							
4-Nitrophenol	ND	20	6.6	ug/l							
N-Nitrosodiphenylamine	ND	10	4.0	ug/l							
N-Nitroso-di-n-propylamine	ND	10	3.6	ug/l							
Pentachlorophenol	ND	20	4.0	ug/l							
Phenanthrene	ND	10	3.3	ug/l							
Phenol	ND	10	4.0	ug/l							
Pyrene	ND	10	3.9	ug/l							
1,2,4-Trichlorobenzene	ND	10	4.4	ug/l							
2,4,5-Trichlorophenol	ND	20	3.6	ug/l							
2,4,6-Trichlorophenol	ND	20	4.1	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	20	5.0	ug/l							
N-Nitrosodimethylamine	ND	20	3.7	ug/l							
Surrogate: 2-Fluorophenol	138			ug/l	200		69	30-120			

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

Project ID: Annual Outfall 009  
Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B19029 Extracted: 02/19/06</b>										
<b>Blank Analyzed: 02/27/2006 (6B19029-BLK1)</b>										
Surrogate: Phenol-d6	153			ug/l	200		76		35-120	
Surrogate: 2,4,6-Tribromophenol	151			ug/l	200		76		45-120	
Surrogate: Nitrobenzene-d5	70.3			ug/l	100		70		45-120	
Surrogate: 2-Fluorobiphenyl	76.1			ug/l	100		76		45-120	
Surrogate: Terphenyl-d14	80.8			ug/l	100		81		45-120	
<b>LCS Analyzed: 02/27/2006 (6B19029-BS1)</b>										
Acenaphthene	80.1	10	4.3	ug/l	100		80		55-120	M-NRI
Acenaphthylene	87.1	10	3.2	ug/l	100		87		55-120	
Aniline	73.7	10	2.9	ug/l	100		74		35-120	
Anthracene	82.2	10	3.2	ug/l	100		82		55-120	
Benzidine	101	20	5.2	ug/l	100		101		20-160	
Benzoic acid	35.1	20	2.6	ug/l	100		35		35-120	
Benzo(a)anthracene	82.4	10	3.7	ug/l	100		82		60-120	
Benzo(b)fluoranthene	87.8	10	2.7	ug/l	100		88		50-120	
Benzo(k)fluoranthene	83.1	10	3.4	ug/l	100		83		50-120	
Benzo(g,h,i)perylene	87.2	10	5.3	ug/l	100		87		40-125	
Benzo(a)pyrene	86.5	10	3.5	ug/l	100		86		55-120	
Benzyl alcohol	76.7	20	2.5	ug/l	100		77		45-120	
Bis(2-chloroethoxy)methane	71.9	10	3.9	ug/l	100		72		55-120	
Bis(2-chloroethyl)ether	71.7	10	4.4	ug/l	100		72		50-120	
Bis(2-chloroisopropyl)ether	76.1	10	4.6	ug/l	100		76		45-120	
Bis(2-ethylhexyl)phthalate	82.5	50	5.2	ug/l	100		82		60-130	
4-Bromophenyl phenyl ether	75.6	10	4.6	ug/l	100		76		50-120	
Butyl benzyl phthalate	80.5	20	3.5	ug/l	100		80		55-125	
4-Chloroaniline	73.9	10	6.0	ug/l	100		74		50-120	
2-Chloronaphthalene	79.7	10	4.0	ug/l	100		80		55-120	
4-Chloro-3-methylphenol	75.1	20	3.5	ug/l	100		75		60-120	
2-Chlorophenol	65.8	10	4.2	ug/l	100		66		45-120	
4-Chlorophenyl phenyl ether	81.9	10	3.0	ug/l	100		82		55-120	
Chrysene	83.6	10	2.8	ug/l	100		84		60-120	
Dibenz(a,h)anthracene	90.4	20	4.7	ug/l	100		90		45-130	
Dibenzofuran	78.6	10	2.6	ug/l	100		79		60-120	
Di-n-butyl phthalate	80.3	20	2.8	ug/l	100		80		55-125	
1,3-Dichlorobenzene	46.1	10	4.1	ug/l	100		46		35-120	
1,4-Dichlorobenzene	49.0	10	3.9	ug/l	100		49		35-120	

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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: Annual Outfall 009  
 Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## 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
<b>Batch: 6B19029 Extracted: 02/19/06</b>											
<b>LCS Analyzed: 02/27/2006 (6B19029-BS1)</b>											<b>M-NRI</b>
1,2-Dichlorobenzene	53.2	10	4.5	ug/l	100	53	35-120				
3,3-Dichlorobenzidine	90.2	20	11	ug/l	100	90	45-130				
2,4-Dichlorophenol	65.1	10	4.1	ug/l	100	65	55-120				
Diethyl phthalate	59.8	10	3.1	ug/l	100	60	55-120				
2,4-Dimethylphenol	57.2	20	4.4	ug/l	100	57	30-120				
Dimethyl phthalate	33.0	10	3.6	ug/l	100	33	30-120				
4,6-Dinitro-2-methylphenol	78.4	20	5.1	ug/l	100	78	50-120				
2,4-Dinitrophenol	71.4	20	5.3	ug/l	100	71	40-120				
2,4-Dinitrotoluene	81.0	10	4.2	ug/l	100	81	60-120				
2,6-Dinitrotoluene	79.2	10	3.2	ug/l	100	79	60-120				
Di-n-octyl phthalate	71.6	20	4.7	ug/l	100	72	60-130				
Fluoranthene	81.0	10	4.2	ug/l	100	81	55-120				
Fluorene	80.0	10	3.9	ug/l	100	80	60-120				
Hexachlorobenzene	81.0	10	4.8	ug/l	100	81	50-120				
Hexachlorobutadiene	49.3	10	4.2	ug/l	100	49	40-120				
Hexachlorocyclopentadiene	65.4	20	3.4	ug/l	100	65	15-120				
Hexachloroethane	41.0	10	4.2	ug/l	100	41	35-120				
Indeno(1,2,3-cd)pyrene	84.4	20	5.4	ug/l	100	84	40-130				
Isophorone	68.5	10	3.7	ug/l	100	68	50-120				
2-Methylnaphthalene	71.1	10	3.0	ug/l	100	71	50-120				
2-Methylphenol	74.8	10	3.7	ug/l	100	75	45-120				
4-Methylphenol	77.0	10	3.8	ug/l	100	77	45-120				
Naphthalene	67.2	10	4.5	ug/l	100	67	50-120				
2-Nitroaniline	84.1	20	3.9	ug/l	100	84	60-120				
3-Nitroaniline	86.0	20	4.5	ug/l	100	86	55-120				
4-Nitroaniline	88.7	20	4.9	ug/l	100	89	50-125				
Nitrobenzene	69.7	20	4.2	ug/l	100	70	50-120				
2-Nitrophenol	64.9	10	4.2	ug/l	100	65	55-120				
4-Nitrophenol	88.7	20	6.6	ug/l	100	89	45-120				
N-Nitrosodiphenylamine	78.5	10	4.0	ug/l	100	78	55-120				
N-Nitroso-di-n-propylamine	75.0	10	3.6	ug/l	100	75	45-120				
Pentachlorophenol	92.2	20	4.0	ug/l	100	92	50-120				
Phenanthrene	81.8	10	3.3	ug/l	100	82	55-120				
Phenol	72.5	10	4.0	ug/l	100	72	45-120				
Pyrene	85.2	10	3.9	ug/l	100	85	50-120				

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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: Annual Outfall 009  
 Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B19029 Extracted: 02/19/06</b>											
<b>LCS Analyzed: 02/27/2006 (6B19029-BS1)</b>											
1,2,4-Trichlorobenzene	54.2	10	4.4	ug/l	100	54	45-120				
2,4,5-Trichlorophenol	78.6	20	3.6	ug/l	100	79	60-120				
2,4,6-Trichlorophenol	79.1	20	4.1	ug/l	100	79	60-120				
1,2-Diphenylhydrazine/Azobenzene	81.1	20	5.0	ug/l	100	81	60-120				
N-Nitrosodimethylamine	67.1	20	3.7	ug/l	100	67	40-120				
Surrogate: 2-Fluorophenol	111			ug/l	200	56	30-120				
Surrogate: Phenol-d6	136			ug/l	200	68	35-120				
Surrogate: 2,4,6-Tribromophenol	165			ug/l	200	82	45-120				
Surrogate: Nitrobenzene-d5	67.5			ug/l	100	68	45-120				
Surrogate: 2-Fluorobiphenyl	76.6			ug/l	100	77	45-120				
Surrogate: Terphenyl-d14	81.8			ug/l	100	82	45-120				
<b>LCS Dup Analyzed: 02/27/2006 (6B19029-BSD1)</b>											
Acenaphthene	73.8	10	4.3	ug/l	100	74	55-120	8	20		
Acenaphthylene	79.9	10	3.2	ug/l	100	80	55-120	9	20		
Aniline	69.4	10	2.9	ug/l	100	69	35-120	6	25		
Anthracene	79.9	10	3.2	ug/l	100	80	55-120	3	20		
Benzidine	92.2	20	5.2	ug/l	100	92	20-160	9	35		
Benzoic acid	80.6	20	2.6	ug/l	100	81	35-120	79	30		R-7
Benzo(a)anthracene	80.6	10	3.7	ug/l	100	81	60-120	2	20		
Benzo(b)fluoranthene	84.5	10	2.7	ug/l	100	84	50-120	4	25		
Benzo(k)fluoranthene	80.1	10	3.4	ug/l	100	80	50-120	4	20		
Benzo(g,h,i)perylene	86.7	10	5.3	ug/l	100	87	40-125	1	25		
Benzo(a)pyrene	82.9	10	3.5	ug/l	100	83	55-120	4	25		
Benzyl alcohol	71.5	20	2.5	ug/l	100	72	45-120	7	20		
Bis(2-chloroethoxy)methane	69.7	10	3.9	ug/l	100	70	55-120	3	20		
Bis(2-chloroethyl)ether	65.4	10	4.4	ug/l	100	65	50-120	9	20		
Bis(2-chloroisopropyl)ether	71.5	10	4.6	ug/l	100	72	45-120	6	20		
Bis(2-ethylhexyl)phthalate	79.6	50	5.2	ug/l	100	80	60-130	4	20		
4-Bromophenyl phenyl ether	72.5	10	4.6	ug/l	100	72	50-120	4	25		
Butyl benzyl phthalate	76.3	20	3.5	ug/l	100	76	55-125	5	20		
4-Chloroaniline	70.7	10	6.0	ug/l	100	71	50-120	4	25		
2-Chloronaphthalene	74.4	10	4.0	ug/l	100	74	55-120	7	20		
4-Chloro-3-methylphenol	72.3	20	3.5	ug/l	100	72	60-120	4	25		
2-Chlorophenol	72.3	10	4.2	ug/l	100	72	45-120	9	25		
4-Chlorophenyl phenyl ether	76.9	10	3.0	ug/l	100	77	55-120	6	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: Annual Outfall 009
Report Number: IPB1811

Sampled: 02/18/06
Received: 02/18/06

METHOD BLANK/QC DATA

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

Table with columns: Analyte, Result, Reporting Limit, MDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Data Qualifiers. Includes a list of analytes such as Chrysene, Dibenz(a,h)anthracene, etc., with their respective values and limits.

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Michele Chamberlin
Project Manager

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Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
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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
<b>Batch: 6B19029 Extracted: 02/19/06</b>											
<b>LCS Dup Analyzed: 02/27/2006 (6B19029-BSD1)</b>											
N-Nitrosodiphenylamine	74.0	10	4.0	ug/l	100	74	55-120	6	20		
N-Nitroso-di-n-propylamine	71.6	10	3.6	ug/l	100	72	45-120	5	20		
Pentachlorophenol	102	20	4.0	ug/l	100	102	50-120	10	25		
Phenanthrene	78.4	10	3.3	ug/l	100	78	55-120	4	20		
Phenol	72.2	10	4.0	ug/l	100	72	45-120	0	25		
Pyrene	80.1	10	3.9	ug/l	100	80	50-120	6	25		
1,2,4-Trichlorobenzene	52.1	10	4.4	ug/l	100	52	45-120	4	20		
2,4,5-Trichlorophenol	84.3	20	3.6	ug/l	100	84	60-120	7	20		
2,4,6-Trichlorophenol	88.6	20	4.1	ug/l	100	89	60-120	11	20		
1,2-Diphenylhydrazine/Azobenzene	77.9	20	5.0	ug/l	100	78	60-120	4	25		
N-Nitrosodimethylamine	63.6	20	3.7	ug/l	100	64	40-120	5	20		
Surrogate: 2-Fluorophenol	123			ug/l	200	62	30-120				
Surrogate: Phenol-d6	139			ug/l	200	70	35-120				
Surrogate: 2,4,6-Tribromophenol	169			ug/l	200	84	45-120				
Surrogate: Nitrobenzene-d5	63.9			ug/l	100	64	45-120				
Surrogate: 2-Fluorobiphenyl	70.5			ug/l	100	70	45-120				
Surrogate: Terphenyl-d14	75.5			ug/l	100	76	45-120				

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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B24053 Extracted: 02/24/06</b>										
<b>Blank Analyzed: 02/24/2006 (6B24053-BLK1)</b>										
Aldrin	ND	0.10	0.030	ug/l						
alpha-BHC	ND	0.10	0.020	ug/l						
beta-BHC	ND	0.10	0.015	ug/l						
delta-BHC	ND	0.20	0.020	ug/l						
gamma-BHC (Lindane)	ND	0.10	0.020	ug/l						
Chlordane	ND	1.0	0.20	ug/l						
4,4'-DDD	ND	0.10	0.020	ug/l						
4,4'-DDE	ND	0.10	0.025	ug/l						
4,4'-DDT	ND	0.10	0.035	ug/l						
Dieldrin	ND	0.10	0.015	ug/l						
Endosulfan I	ND	0.10	0.015	ug/l						
Endosulfan II	ND	0.10	0.040	ug/l						
Endosulfan sulfate	ND	0.20	0.020	ug/l						
Endrin	ND	0.10	0.020	ug/l						
Endrin aldehyde	ND	0.10	0.045	ug/l						
Endrin ketone	ND	0.10	0.020	ug/l						
Heptachlor	ND	0.10	0.030	ug/l						
Heptachlor epoxide	ND	0.10	0.030	ug/l						
Methoxychlor	ND	0.10	0.035	ug/l						
Toxaphene	ND	5.0	1.5	ug/l						
Surrogate: Tetrachloro-m-xylene	0.376			ug/l	0.500		75	35-115		
Surrogate: Decachlorobiphenyl	0.480			ug/l	0.500		96	45-120		

**LCS Analyzed: 02/24/2006 (6B24053-BS1)**

Aldrin	0.470	0.10	0.030	ug/l	0.500		94	35-120		
alpha-BHC	0.506	0.10	0.020	ug/l	0.500		101	45-120		
beta-BHC	0.495	0.10	0.015	ug/l	0.500		99	50-120		
delta-BHC	0.558	0.20	0.020	ug/l	0.500		112	50-120		
gamma-BHC (Lindane)	0.510	0.10	0.020	ug/l	0.500		102	40-120		
4,4'-DDD	0.540	0.10	0.020	ug/l	0.500		108	55-120		
4,4'-DDE	0.531	0.10	0.025	ug/l	0.500		106	50-120		
4,4'-DDT	0.554	0.10	0.035	ug/l	0.500		111	55-120		
Dieldrin	0.525	0.10	0.015	ug/l	0.500		105	50-120		
Endosulfan I	0.457	0.10	0.015	ug/l	0.500		91	50-120		
Endosulfan II	0.528	0.10	0.040	ug/l	0.500		106	55-120		
Endosulfan sulfate	0.559	0.20	0.020	ug/l	0.500		112	60-120		

M-NR1

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Sampled: 02/18/06  
Received: 02/18/06

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B24053 Extracted: 02/24/06</b>											
<b>LCS Analyzed: 02/24/2006 (6B24053-BS1)</b>											
Endrin	0.547	0.10	0.020	ug/l	0.500		109	55-120			M-NR1
Endrin aldehyde	0.538	0.10	0.045	ug/l	0.500		108	55-120			
Endrin ketone	0.550	0.10	0.020	ug/l	0.500		110	55-120			
Heptachlor	0.481	0.10	0.030	ug/l	0.500		96	40-115			
Heptachlor epoxide	0.502	0.10	0.030	ug/l	0.500		100	50-120			
Methoxychlor	0.587	0.10	0.035	ug/l	0.500		117	55-120			
Surrogate: Tetrachloro-m-xylene	0.399			ug/l	0.500		80	35-115			
Surrogate: Decachlorobiphenyl	0.519			ug/l	0.500		104	45-120			
<b>LCS Dup Analyzed: 02/24/2006 (6B24053-BSD1)</b>											
Aldrin	0.439	0.10	0.030	ug/l	0.500		88	35-120	7	30	
alpha-BHC	0.465	0.10	0.020	ug/l	0.500		93	45-120	8	30	
beta-BHC	0.464	0.10	0.015	ug/l	0.500		93	50-120	6	30	
delta-BHC	0.521	0.20	0.020	ug/l	0.500		104	50-120	7	30	
gamma-BHC (Lindane)	0.472	0.10	0.020	ug/l	0.500		94	40-120	8	30	
4,4'-DDD	0.514	0.10	0.020	ug/l	0.500		103	55-120	5	30	
4,4'-DDE	0.493	0.10	0.025	ug/l	0.500		99	50-120	7	30	
4,4'-DDT	0.524	0.10	0.035	ug/l	0.500		105	55-120	6	30	
Dieldrin	0.497	0.10	0.015	ug/l	0.500		99	50-120	5	30	
Endosulfan I	0.432	0.10	0.015	ug/l	0.500		86	50-120	6	30	
Endosulfan II	0.505	0.10	0.040	ug/l	0.500		101	55-120	4	30	
Endosulfan sulfate	0.532	0.20	0.020	ug/l	0.500		106	60-120	5	30	
Endrin	0.516	0.10	0.020	ug/l	0.500		103	55-120	6	30	
Endrin aldehyde	0.503	0.10	0.045	ug/l	0.500		101	55-120	7	30	
Endrin ketone	0.523	0.10	0.020	ug/l	0.500		105	55-120	5	30	
Heptachlor	0.444	0.10	0.030	ug/l	0.500		89	40-115	8	30	
Heptachlor epoxide	0.464	0.10	0.030	ug/l	0.500		93	50-120	8	30	
Methoxychlor	0.551	0.10	0.035	ug/l	0.500		110	55-120	6	30	
Surrogate: Tetrachloro-m-xylene	0.364			ug/l	0.500		73	35-115			
Surrogate: Decachlorobiphenyl	0.492			ug/l	0.500		98	45-120			

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 009  Report Number: IPB1811	Sampled: 02/18/06 Received: 02/18/06
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**METHOD BLANK/QC DATA**

**TOTAL PCBs (EPA 608)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B24053 Extracted: 02/24/06</b>										
<b>Blank Analyzed: 02/26/2006 (6B24053-BLK1)</b>										
Aroclor 1016	ND	1.0	0.20	ug/l						
Aroclor 1221	ND	1.0	0.10	ug/l						
Aroclor 1232	ND	1.0	0.25	ug/l						
Aroclor 1242	ND	1.0	0.25	ug/l						
Aroclor 1248	ND	1.0	0.25	ug/l						
Aroclor 1254	ND	1.0	0.25	ug/l						
Aroclor 1260	ND	1.0	0.40	ug/l						
Surrogate: Decachlorobiphenyl	0.473			ug/l	0.500		95 45-120			
<b>LCS Analyzed: 02/26/2006 (6B24053-BS2)</b>										
Aroclor 1016	4.07	1.0	0.20	ug/l	4.00		102 45-115			M-NR1
Aroclor 1260	4.15	1.0	0.40	ug/l	4.00		104 55-115			
Surrogate: Decachlorobiphenyl	0.459			ug/l	0.500		92 45-120			
<b>LCS Dup Analyzed: 02/26/2006 (6B24053-BSD2)</b>										
Aroclor 1016	3.93	1.0	0.20	ug/l	4.00		98 45-115	4	30	
Aroclor 1260	4.01	1.0	0.40	ug/l	4.00		100 55-115	3	25	
Surrogate: Decachlorobiphenyl	0.449			ug/l	0.500		90 45-120			

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 009  
Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Qualifiers
<b>Batch: 6B20080 Extracted: 02/20/06</b>										
<b>Blank Analyzed: 02/25/2006-02/27/2006 (6B20080-BLK1)</b>										
Aluminum	ND	50	40	ug/l						
Arsenic	ND	5.0	4.4	ug/l						
Beryllium	ND	2.0	0.90	ug/l						
Boron	ND	0.050	0.0080	mg/l						
Chromium	ND	5.0	2.0	ug/l						
Nickel	ND	10	2.0	ug/l						
Selenium	ND	10	8.0	ug/l						
Silver	ND	10	3.0	ug/l						
Thallium	ND	10	7.0	ug/l						
Vanadium	ND	10	3.0	ug/l						
Zinc	15.6	20	15	ug/l						J

LCS Analyzed: 02/25/2006-02/27/2006 (6B20080-BS1)

Aluminum	531	50	40	ug/l	500		106	85-115		
Arsenic	535	5.0	4.4	ug/l	500		107	85-115		
Beryllium	548	2.0	0.90	ug/l	500		110	85-115		
Boron	0.481	0.050	0.0080	mg/l	0.500		96	85-115		
Chromium	537	5.0	2.0	ug/l	500		107	85-115		
Nickel	528	10	2.0	ug/l	500		106	85-115		
Selenium	517	10	8.0	ug/l	500		103	85-115		
Silver	275	10	3.0	ug/l	250		110	85-115		
Thallium	536	10	7.0	ug/l	500		107	85-115		
Vanadium	547	10	3.0	ug/l	500		109	85-115		
Zinc	572	20	15	ug/l	500		114	85-115		

Matrix Spike Analyzed: 02/25/2006-02/27/2006 (6B20080-MS1)

Source: IPB1673-01

Aluminum	591	50	40	ug/l	500	ND	118	70-130		
Arsenic	558	5.0	4.4	ug/l	500	ND	112	70-130		
Beryllium	560	2.0	0.90	ug/l	500	ND	112	70-130		
Boron	0.487	0.050	0.0080	mg/l	0.500	ND	97	70-130		
Chromium	561	5.0	2.0	ug/l	500	ND	112	70-130		
Nickel	545	10	2.0	ug/l	500	3.6	108	70-130		
Selenium	537	10	8.0	ug/l	500	ND	107	70-130		
Silver	285	10	3.0	ug/l	250	ND	114	70-130		
Thallium	557	10	7.0	ug/l	500	ND	111	70-130		
Vanadium	566	10	3.0	ug/l	500	ND	113	70-130		

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 300 North Lake Avenue, Suite 1200  
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

**METHOD BLANK/QC DATA**

**METALS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Limit	Data Qualifiers
<b>Batch: 6B20080 Extracted: 02/20/06</b>											
<b>Matrix Spike Analyzed: 02/25/2006-02/27/2006 (6B20080-MS1)</b>						<b>Source: IPB1673-01</b>					
Zinc	634	20	15	ug/l	500	150	97	70-130			
<b>Matrix Spike Analyzed: 02/25/2006-02/27/2006 (6B20080-MS2)</b>						<b>Source: IPB1673-02</b>					
Aluminum	526	50	40	ug/l	500	ND	105	70-130			
Arsenic	529	5.0	4.4	ug/l	500	ND	106	70-130			
Beryllium	536	2.0	0.90	ug/l	500	ND	107	70-130			
Boron	0.488	0.050	0.0080	mg/l	0.500	ND	98	70-130			
Chromium	533	5.0	2.0	ug/l	500	2.9	106	70-130			
Nickel	519	10	2.0	ug/l	500	2.9	103	70-130			
Selenium	517	10	8.0	ug/l	500	ND	103	70-130			
Silver	272	10	3.0	ug/l	250	ND	109	70-130			
Thallium	532	10	7.0	ug/l	500	ND	106	70-130			
Vanadium	538	10	3.0	ug/l	500	ND	108	70-130			
Zinc	662	20	15	ug/l	500	190	94	70-130			
<b>Matrix Spike Dup Analyzed: 02/25/2006-02/27/2006 (6B20080-MSD1)</b>						<b>Source: IPB1673-01</b>					
Aluminum	540	50	40	ug/l	500	ND	108	70-130	9	20	
Arsenic	532	5.0	4.4	ug/l	500	ND	106	70-130	5	20	
Beryllium	544	2.0	0.90	ug/l	500	ND	109	70-130	3	20	
Boron	0.500	0.050	0.0080	mg/l	0.500	ND	100	70-130	3	20	
Chromium	534	5.0	2.0	ug/l	500	ND	107	70-130	5	20	
Nickel	520	10	2.0	ug/l	500	3.6	103	70-130	5	20	
Selenium	507	10	8.0	ug/l	500	ND	101	70-130	6	20	
Silver	272	10	3.0	ug/l	250	ND	109	70-130	5	20	
Thallium	531	10	7.0	ug/l	500	ND	106	70-130	5	20	
Vanadium	540	10	3.0	ug/l	500	ND	108	70-130	5	20	
Zinc	893	20	15	ug/l	500	150	149	70-130	34	20	MI

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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
<b>Batch: 6B21083 Extracted: 02/21/06</b>											
<b>Blank Analyzed: 02/21/2006 (6B21083-BLK1)</b>											
Mercury	ND	0.20	0.050	ug/l							
<b>LCS Analyzed: 02/21/2006 (6B21083-BS1)</b>											
Mercury	8.63	0.20	0.050	ug/l	8.00		108	85-115			
<b>Matrix Spike Analyzed: 02/21/2006 (6B21083-MS1)</b>											
						<b>Source: IPB1786-01</b>					
Mercury	8.06	0.20	0.050	ug/l	8.00	ND	101	70-130			
<b>Matrix Spike Dup Analyzed: 02/21/2006 (6B21083-MSD1)</b>											
						<b>Source: IPB1786-01</b>					
Mercury	8.48	0.20	0.050	ug/l	8.00	ND	106	70-130	5	20	
<b>Batch: 6B21089 Extracted: 02/21/06</b>											
<b>Blank Analyzed: 02/22/2006 (6B21089-BLK1)</b>											
Antimony	ND	2.0	0.050	ug/l							
Cadmium	ND	1.0	0.025	ug/l							
Copper	0.281	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
<b>LCS Analyzed: 02/22/2006 (6B21089-BS1)</b>											
Antimony	81.3	2.0	0.050	ug/l	80.0		102	85-115			
Cadmium	81.7	1.0	0.025	ug/l	80.0		102	85-115			
Copper	79.2	2.0	0.25	ug/l	80.0		99	85-115			
Lead	80.3	1.0	0.040	ug/l	80.0		100	85-115			
<b>Matrix Spike Analyzed: 02/22/2006 (6B21089-MS1)</b>											
						<b>Source: IPB1597-01</b>					
Antimony	82.7	2.0	0.050	ug/l	80.0	0.089	103	70-130			
Cadmium	79.4	1.0	0.025	ug/l	80.0	ND	99	70-130			
Copper	132	2.0	0.25	ug/l	80.0	62	88	70-130			
Lead	84.8	1.0	0.040	ug/l	80.0	6.8	98	70-130			

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NPDES - 2647





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Report Number: IPB1811

Sampled: 02/18/06  
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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
<b>Batch: 6B21089 Extracted: 02/21/06</b>											
<b>Matrix Spike Analyzed: 02/22/2006 (6B21089-MS2)</b>						<b>Source: IPB1597-02</b>					
Antimony	82.9	2.0	0.050	ug/l	80.0	0.071	104	70-130			
Cadmium	79.6	1.0	0.025	ug/l	80.0	ND	100	70-130			
Copper	95.6	2.0	0.25	ug/l	80.0	22	92	70-130			
Lead	82.3	1.0	0.040	ug/l	80.0	2.4	100	70-130			
<b>Matrix Spike Dup Analyzed: 02/22/2006 (6B21089-MSD1)</b>						<b>Source: IPB1597-01</b>					
Antimony	83.9	2.0	0.050	ug/l	80.0	0.089	105	70-130	1	20	
Cadmium	80.4	1.0	0.025	ug/l	80.0	ND	100	70-130	1	20	
Copper	134	2.0	0.25	ug/l	80.0	62	90	70-130	2	20	
Lead	87.4	1.0	0.040	ug/l	80.0	6.8	101	70-130	3	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Limit	Qualifiers
<b>Batch: 6B19038 Extracted: 02/19/06</b>											
<b>Blank Analyzed: 02/19/2006 (6B19038-BLK1)</b>											
Chloride	ND	0.50	0.15	mg/l							
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
<b>LCS Analyzed: 02/19/2006 (6B19038-BS1)</b>											
Chloride	5.06	0.50	0.15	mg/l	5.00		101	90-110			
Sulfate	10.3	0.50	0.45	mg/l	10.0		103	90-110			M-3
<b>Matrix Spike Analyzed: 02/19/2006 (6B19038-MS1) Source: IPB1811-01</b>											
Chloride	24.0	0.50	0.15	mg/l	5.00	20	80	80-120			
<b>Matrix Spike Dup Analyzed: 02/19/2006 (6B19038-MSD1) Source: IPB1811-01</b>											
Chloride	23.8	0.50	0.15	mg/l	5.00	20	76	80-120	1	20	M2
<b>Batch: 6B22047 Extracted: 02/22/06</b>											
<b>Blank Analyzed: 02/22/2006 (6B22047-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							
<b>LCS Analyzed: 02/22/2006 (6B22047-BS1) M-NR1</b>											
Oil & Grease	17.0	5.0	0.94	mg/l	20.0		85	65-120			
<b>LCS Dup Analyzed: 02/22/2006 (6B22047-BSD1)</b>											
Oil & Grease	16.6	5.0	0.94	mg/l	20.0		83	65-120	2	20	
<b>Batch: 6B22069 Extracted: 02/22/06</b>											
<b>Blank Analyzed: 02/22/2006 (6B22069-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							

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: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B22069 Extracted: 02/22/06</b>											
<b>LCS Analyzed: 02/22/2006 (6B22069-BS1)</b>											
Total Dissolved Solids	982	10	10	mg/l	1000		98	90-110			
<b>Duplicate Analyzed: 02/22/2006 (6B22069-DUP1)</b>											
Total Dissolved Solids	500	10	10	mg/l		490			2	10	
<b>Batch: 6B22101 Extracted: 02/22/06</b>											
<b>Blank Analyzed: 02/22/2006 (6B22101-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 02/22/2006 (6B22101-BS1)</b>											
Total Suspended Solids	989	10	10	mg/l	1000		99	85-115			
<b>Duplicate Analyzed: 02/22/2006 (6B22101-DUP1)</b>											
Total Suspended Solids	236	10	10	mg/l		250			6	10	
<b>Batch: 6B22127 Extracted: 02/22/06</b>											
<b>Blank Analyzed: 02/22/2006 (6B22127-BLK1)</b>											
Total Cyanide	ND	5.0	2.2	ug/l							
<b>LCS Analyzed: 02/22/2006 (6B22127-BS1)</b>											
Total Cyanide	194	5.0	2.2	ug/l	200		97	90-110			
<b>Matrix Spike Analyzed: 02/22/2006 (6B22127-MS1)</b>											
Total Cyanide	177	5.0	2.2	ug/l	200	2.5	87	70-115			

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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: Annual Outfall 009  
Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B22127 Extracted: 02/22/06</b>											
<b>Matrix Spike Dup Analyzed: 02/22/2006 (6B22127-MSD1)</b>						<b>Source: IPB1567-02</b>					
Total Cyanide	175	5.0	2.2	ug/l	200	2.5	86	70-115	1	15	
<b>Batch: 6B23071 Extracted: 02/23/06</b>											
<b>Blank Analyzed: 02/23/2006 (6B23071-BLK1)</b>											
Perchlorate	ND	4.0	0.80	ug/l							
<b>LCS Analyzed: 02/23/2006 (6B23071-BS1)</b>											
Perchlorate	50.9	4.0	0.80	ug/l	50.0		102	85-115			
<b>Matrix Spike Analyzed: 02/23/2006 (6B23071-MS1)</b>						<b>Source: IPB1972-03</b>					
Perchlorate	61.6	4.0	0.80	ug/l	50.0	13	97	80-120			
<b>Matrix Spike Dup Analyzed: 02/23/2006 (6B23071-MSD1)</b>						<b>Source: IPB1972-03</b>					
Perchlorate	63.5	4.0	0.80	ug/l	50.0	13	101	80-120	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: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## 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
IPB1811-01	413.1 Oil and Grease	Oil & Grease	mg/l	1.50	5.0	15
IPB1811-01	Boron-200.7	Boron	mg/l	0.100	0.050	1.00
IPB1811-01	Chloride - 300.0	Chloride	mg/l	20	0.50	150
IPB1811-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.69	0.15	10.00
IPB1811-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPB1811-01	Sulfate-300.0	Sulfate	mg/l	66	2.5	250
IPB1811-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	290	10	850

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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: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06

Received: 02/18/06

### 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).
- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-3** Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
- 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

### ADDITIONAL COMMENTS

**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

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IPB1811 <Page 38 of 40>

**NPDES - 2653**



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

Project ID: Annual Outfall 009  
Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

### Certification Summary

#### Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.7	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 413.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 900.0	Water		
Haz Waste Scree	Water		
SM2540C	Water	X	X

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

#### Subcontracted Laboratories

**Alta Analytical** NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413  
1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta  
Samples: IPB1811-01

Analysis Performed: Level 4 + EDD  
Samples: IPB1811-01

**Aquatic Testing Laboratories-SUB** California Cert #1775  
4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr  
Samples: IPB1811-01

#### Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: EDD + Level 4  
Samples: IPB1811-01

Analysis Performed: Gross Alpha  
Samples: IPB1811-01

Analysis Performed: Gross Beta  
Samples: IPB1811-01

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: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

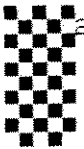
**Del Mar Analytical - Irvine**  
Michele Chamberlin  
Project Manager

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**IPB1811 <Page 40 of 40>**

**NPDES - 2655**





**F A X**



300 N. Lake Ave., Suite 1200  
Pasadena, California 91101  
Tel: 626-568-6691  
Fax: 626-568-6515

Date: 02/20/06

To: Michele Harper / Del Mar Analytical  
Krissi McIlvanna / MWH

Fax No: 949-260-3297  
925-975-3412

From: Bronwyn K. Kelly

sign:

Subject: Chain-of-Custody Form Analytical Request Change

No. of Pages: 1  
(including cover)

**Per Request:**  
Please make the changes listed below to the chain-of-custody analytical request form. Include this form with the final deliverables for these samples.

Del Mar Work Order #	Sample ID	Date Collected	Change(s) Requested, Not Completed	Change(s) and Method (s) Now Requested
IPB1818	Annual Outfall 03	02/19/06		Gross Alpha, Gross Beta, Sr-90 as part of the 13267 study.
IPB1818 IPB1817 IPB1811 IPB1810	Annual Outfall 003, 004, 006 & 009	02/19/06		Analyze for Total combined RA-226 & 228 only if Gross Alpha and Gross Beta exceed a permit limit (15 & 50 pCi/L respectively).
IPB1818	Annual Outfall 003	02/19/06		Analyze for Tritium only if RA-226 & 228 exceed a permit limit (5 pCi/L).
IPB1817 IPB1811 IPB1810	Annual Outfall 004, 006 & 009	2/19/06		Analyze for Tritium & Sr-90 only if RA-226 & 228 exceed a permit limit (5 pCi/L).

The reason for these changes:

*Incorrectly marked on COC form* \_\_\_\_\_

*Lack of sample volume* \_\_\_\_\_

*MWH office personnel require this change* \_\_\_\_\_

*Other: Containers mislabeled* \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
X  
\_\_\_\_\_

This Change Order supersedes all previous change orders submitted.

Thank you

IPB1811

Del Mar Analytical Version 01/25/06 CHAIN OF CUSTODY FORM

Client Name/Address:		Project:		ANALYSIS REQUIRED										Field readings:																			
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Annual Outfall 009 Stormwater at WS-13		Sample Description		Container Type		Sample Matrix		# of Cart.		Sampling Date/Time		Preservative		Bottle #		Total Recoverable Metals: Sp, Cd, Cu, Pb, Hg, B, V, Al, + PP		TCDD (and all congeners)		Oil & Grease (EPA 413.1)		Chloride, Sulfate, Nitrate, Nitrite (905) Total Combined		Tritium (906.0*, Sr-90 Radium 226 & 228		SVOCs - PP		Acute Toxicity		Cyanide	
Project Manager: Bronwyn Kelly		Phone Number: (626) 568-6691		Outfall 009		1L Poly		W		1		2/18/06 13:00		HNO3		1A		X														Temp = 14.6 °C pH = 7.3	
Sampler: <i>Barnes, R &amp; May, L</i>		Fax Number: (626) 568-6515		Outfall 009-Dup		1L Poly		W		1				HNO3		1B		X														Comments	
				Outfall 009		1L Amber		W		2				None		2A, 2B																	
				Outfall 009		1L Amber		W		2				HCl		3A, 3B																	
				Outfall 009		Poly-500 ml		W		2				None		4A, 4B																	
				Outfall 009		Poly-500 ml		W		2				None		5A, 5B																	
				Outfall 009		VOAs		W		3				HCl		6A, 6B, 6C																	
				Outfall 009		VOA		W		3				None		7A, 7B, 7C																	
				Outfall 009		1L Amber		W		2				None		8A, 8B																	
				Outfall 009		2.5 Gal Cube Amber VOAs		W		3				None		9A, 15A, 15B, 15C																Analyze for Total Combined RA-226 & RA-228 only if Gross Alpha/Beta > 15pCi/L Preserve 2.5 Gal Cube with HNO3 at lab	
				Outfall 009		1L Amber		W		2				None		10A, 10B																SAMPLE DELIVERED TO AHL	
				Outfall 009		1 Gal Poly		W		1				None		11A																	
				Outfall 009		500ml Poly		W		1				NaOH		12																	
				Trip Blanks		VOA		W		3				None		13A, 13B, 13C																	
				Trip Blank		VOAs		W		3				HCl		14A, 14B, 14C																	
Relinquished By: <i>Rob Barnes</i>		Date/Time: 2/18/06 13:00		Received By: <i>Christina DMT I</i>		Date/Time: 02/18/06 13:00		Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ Perchlorate Only 72 Hours _____ Metals Only 72 Hours _____		Sample Integrity: (Check) Intact <input checked="" type="checkbox"/>		On Ice: <input checked="" type="checkbox"/>		4.0																			
Relinquished By: <i>Christina DMT I</i>		Date/Time: 02/18/06 18:15		Received By: <i>[Signature]</i>		Date/Time: 2/18/06 18:15																											



March 02, 2006

**Alta Project I.D.: 27309**

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 February 21, 2006 under your Project Name "IPB1811". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

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

Sincerely,

A handwritten signature in cursive script, appearing to read "Martha M. Maier".

Martha M. Maier  
Director of HRMS Services



**Section I: Sample Inventory Report**

**Date Received: 2/21/2006**

Alta Lab. ID

Client Sample ID

27309-001

IPB1811-01



Method Blank		EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	7782	Lab Sample:	0-MIB001
Sample Size:	1.00 L	Date Extracted:	23-Feb-06	Date Analyzed DB-5:	25-Feb-06
				Date Analyzed DB-225:	NA
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	%R	LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.00000121		77.9	25 - 164
1,2,3,7,8-PeCDD	ND	0.00000169		79.6	25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000158		71.3	32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000166		77.6	28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000157		65.5	23 - 140
1,2,3,4,6,7,8-HpCDD	ND	0.00000137		35.1	17 - 157
OCDD	0.00000377			85.3	24 - 169
2,3,7,8-TCDF	ND	0.00000151		92.7	24 - 185
1,2,3,7,8-PeCDF	ND	0.00000212		97.9	21 - 178
2,3,4,7,8-PeCDF	ND	0.00000198		76.4	26 - 152
1,2,3,4,7,8-HxCDF	ND	0.000000509		66.4	26 - 123
1,2,3,6,7,8-HxCDF	ND	0.000000514		79.6	28 - 136
2,3,4,6,7,8-HxCDF	ND	0.000000550		75.0	29 - 147
1,2,3,7,8,9-HxCDF	ND	0.000000908		62.0	28 - 143
1,2,3,4,6,7,8-HpCDF	ND	0.00000130		70.3	26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.00000125		44.2	17 - 157
OCDF	ND		0.00000518	95.0	35 - 197
<b>Totals</b>					
Total TCDD	ND	0.00000121			
Total PeCDD	ND	0.00000169			
Total HxCDD	ND	0.00000160			
Total HpCDD	ND	0.00000137			
Total TCDF	ND	0.00000151			
Total PeCDF	ND	0.00000205			
Total HxCDF	ND	0.000000611			
Total HpCDF	ND	0.00000128			
<b>Footnotes</b>					
a. Sample specific estimated detection limit.					
b. Estimated maximum possible concentration.					
c. Method detection limit.					
d. Lower control limit - upper control limit.					

Analyst: RAS

Approved By:

William J. Luksemburg

02-Mar-2006 11:07



**EPA Method 1613**

OPR Results		Lab Sample: 0-OPR001	
Matrix:	Aqueous	QC Batch No.:	7782
Sample Size:	1.00 L	Date Analyzed DB-5:	24-Feb-06
		Date Analyzed DB-225:	NA
Analyte	Spike Conc. (ug/mL)	OPR Limits	Labeled Standard
2,3,7,8-TCDD	10.0	6.7 - 15.8	IS 13C-2,3,7,8-TCDD
1,2,3,7,8-PeCDD	50.0	35 - 71	13C-1,2,3,7,8-PeCDD
1,2,3,4,7,8-HxCDD	50.0	35 - 82	13C-1,2,3,4,7,8-HxCDD
1,2,3,6,7,8-HxCDD	50.0	38 - 67	13C-1,2,3,6,7,8-HxCDD
1,2,3,7,8,9-HxCDD	50.0	32 - 81	13C-1,2,3,4,6,7,8-HpCDD
1,2,3,4,6,7,8-HpCDD	50.0	35 - 70	13C-OCDD
OCDD	100	78 - 144	13C-2,3,7,8-TCDF
2,3,7,8-TCDF	10.0	7.5 - 15.8	13C-1,2,3,7,8-PeCDF
1,2,3,7,8-PeCDF	50.0	40 - 67	13C-2,3,4,7,8-PeCDF
2,3,4,7,8-PeCDF	50.0	34 - 80	13C-1,2,3,4,7,8-HxCDF
1,2,3,4,7,8-HxCDF	50.0	36 - 67	13C-1,2,3,6,7,8-HxCDF
1,2,3,6,7,8-HxCDF	50.0	42 - 65	13C-2,3,4,6,7,8-HxCDF
2,3,4,6,7,8-HxCDF	50.0	35 - 78	13C-1,2,3,7,8,9-HxCDF
1,2,3,7,8,9-HxCDF	50.0	39 - 65	13C-1,2,3,4,6,7,8-HpCDF
1,2,3,4,6,7,8-HpCDF	50.0	41 - 61	13C-1,2,3,4,7,8,9-HpCDF
1,2,3,4,7,8,9-HpCDF	50.0	39 - 69	13C-OCDF
OCDF	100	63 - 170	<b>CRS</b> 37Cl-2,3,7,8-TCDD
			<b>%R</b>
			70.1
			73.4
			63.8
			69.0
			58.3
			34.1
			75.7
			81.7
			85.2
			68.1
			66.4
			69.5
			70.1
			55.0
			62.6
			42.4
			83.6
			<b>LCL-UCL</b>
			25 - 164
			25 - 181
			32 - 141
			28 - 130
			23 - 140
			17 - 157
			24 - 169
			24 - 185
			21 - 178
			26 - 152
			26 - 123
			28 - 136
			29 - 147
			28 - 143
			26 - 138
			17 - 157
			35 - 197

Analyst: RAS  
 Approved By: William J. Luksemburg 02-Mar-2006 11:07



Sample ID: IPB1811-01		EPA Method 1613					
Client Data		Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27309-001		
Project:	IPB1811	Sample Size:	0.997 L	QC Batch No.:	7782		
Date Collected:	18-Feb-06			Date Analyzed DB-5:	25-Feb-06		
Time Collected:	1100			Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000316		IS 13C-2,3,7,8-TCDD	74.8	25 - 164	
1,2,3,7,8-PeCDD	0.0000103			13C-1,2,3,7,8-PeCDD	77.3	25 - 181	J
1,2,3,4,7,8-HxCDD	0.0000163			13C-1,2,3,4,7,8-HxCDD	68.6	32 - 141	J
1,2,3,6,7,8-HxCDD	0.0000298			13C-1,2,3,6,7,8-HxCDD	73.4	28 - 130	
1,2,3,7,8,9-HxCDD	0.0000310			13C-1,2,3,4,6,7,8-HpCDD	64.8	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.000723			13C-OCDD	46.7	17 - 157	
OCDD	0.0117			13C-2,3,7,8-TCDF	81.1	24 - 169	B
2,3,7,8-TCDF	ND	0.00000280		13C-1,2,3,7,8-PeCDF	84.5	24 - 185	
1,2,3,7,8-PeCDF	0.0000348			13C-2,3,4,7,8-PeCDF	86.5	21 - 178	J
2,3,4,7,8-PeCDF	0.0000707			13C-1,2,3,4,7,8-HxCDF	73.7	26 - 152	J
1,2,3,4,7,8-HxCDF	0.0000783			13C-1,2,3,6,7,8-HxCDF	73.8	26 - 123	J
1,2,3,6,7,8-HxCDF	0.0000764			13C-2,3,4,6,7,8-HxCDF	74.0	28 - 136	J
2,3,4,6,7,8-HxCDF	0.0000114			13C-1,2,3,7,8,9-HxCDF	70.5	29 - 147	J
1,2,3,7,8,9-HxCDF	0.0000250			13C-1,2,3,4,6,7,8-HpCDF	61.5	28 - 143	J
1,2,3,4,6,7,8-HpCDF	0.000110			13C-1,2,3,4,7,8,9-HpCDF	69.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND		0.00000539	13C-OCDF	53.8	17 - 157	
OCDF	0.000285			CRS 37Cl-2,3,7,8-TCDD	95.8	35 - 197	
<b>Totals</b>							
Total TCDD	ND	0.00000316					
Total PeCDD	0.0000646		0.0000842				
Total HxCDD	0.000327						
Total HpCDD	0.00209						
Total TCDF	0.0000207		0.0000239				
Total PeCDF	0.0000776		0.0000848				
Total HxCDF	0.000172						
Total HpCDF	0.000251		0.000257				
<b>Footnotes</b>							
a. Sample specific estimated detection limit.							
b. Estimated maximum possible concentration.							
c. Method detection limit.							
d. Lower control limit - upper control limit.							

Analyst: RAS  
 Approved By: William J. Luksemburg  
 Date: 02-Mar-2006 11:07

---

**APPENDIX**



## DATA QUALIFIERS & ABBREVIATIONS

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

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

**CERTIFICATIONS**

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



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

## SUBCONTRACT ORDER - PROJECT # IPB1811

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Alta Analytical 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106 <div style="text-align: right; font-size: 1.2em; font-weight: bold;">             279 27309              JLB              2/21/06 0.6°C           </div>

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

Analysis	Expiration	Comments
Sample ID: IPB1811-01	Water	Sampled: 02/18/06 11:00
1613-Dioxin-HR-Alta	02/25/06 11:00	Instant Notification
Level 4 + EDD-OUT	03/18/06 11:00	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
		Excel EDD email to pm, include Std logs for Lvl IV
<b>Containers Supplied:</b>		
1 L Amber (IPB1811-01C)		
1 L Amber (IPB1811-01D)		

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	2/20/06	Date	Time	Received By	Bettonia J. Benedic	Date	2/21/06	Time	0910
Released By	Date	Time	Received By	Date	Time	Date	Time	Date	Time

**SAMPLE LOG-IN CHECKLIST**

Alta Project #: 27309

Samples Arrival:	Date/Time 2/21/06 0910	Initials: BMB	Location: WR-2
Logged In:	Date/Time 2/21/06 1513	Initials: BMB	Location: WR-2
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> Cal
	<input type="radio"/> DHL	<input type="radio"/> Hand Delivered	<input type="radio"/> Other
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
	<input type="radio"/> None		
Temp °C	0.6	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 #	7918 6646 8875		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?		COC	Sample Container
			None
Shipping Container	Alta	Client	Retain
			Return
			Dispose

Comments:

# LABORATORY REPORT



*"dedicated to providing quality aquatic toxicity testing"*

4350 Transport Street, Unit 107  
Ventura, CA 93003  
(805) 650-0546 FAX (805) 650-0756  
CA DOHS ELAP Cert. No.: 1775

**Date:** February 23, 2006  
**Client:** Del Mar Analytical, Irvine  
17461 Derian Ave., Suite 100  
Irvine, CA 92614  
Attn: Michele Chamberlin

**Laboratory No.:** A-06021803-001  
**Sample ID.:** IPB1811-01

**Sample Control:** The sample was received by ATL within the recommended hold time, in a chilled state, and with the chain of custody record attached.

Date Sampled: 02/18/06  
Date Received: 02/18/06  
Temp. Received: 4°C  
Chlorine (TRC): 0.0 mg/l  
Date Tested: 02/18/06 to 02/22/06

**Sample Analysis:** The following analyses were performed on your sample:  
  
Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0).  
  
Attached are the test data generated from the analysis of your sample.

## Result Summary:

<u>Sample ID.</u>	<u>Results</u>
IPB1811-01	100% Survival (TUa = 0.0)

**Quality Control:** Reviewed and approved by:



Joseph A. LeMay  
Laboratory Director

**FATHEAD MINNOW PERCENT SURVIVAL TEST**  
**EPA Method 2000.0**



Lab No.: A-06021803-001  
 Client/ID: Del Mar - Outfall 009

Start Date: 02/18/2006

**TEST SUMMARY**

Species: *Pimephales promelas*.  
 Age: 12 (1-14) days.  
 Regulations: NPDES.  
 Test solution volume: 250 ml.  
 Feeding: prior to renewal at 48 hrs.  
 Number of replicates: 2.  
 Dilution water: Moderately hard reconstituted water.  
 Photoperiod: 16/8 hrs light/dark.

Source: In-laboratory Culture.  
 Test type: Static-Renewal.  
 Test Protocol: EPA-821-R-02-012.  
 Endpoints: Percent Survival at 96 hrs.  
 Test chamber: 600 ml beakers.  
 Temperature: 20 +/- 1°C.  
 Number of fish per chamber: 10.  
 QA/QC Batch No.: RT-060202.

**TEST DATA**

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	19.6	9.2	7.8	0	0	LW 1530
	100%	20.0	11.0	7.4	0	0	
24 Hr	Control	19.1	7.9	7.8	0	0	2 1430
	100%	19.3	6.5	7.7	0	0	
48 Hr	Control	19.2	7.7	7.9	0	0	LW 1500
	100%	19.1	6.8	8.0	0	0	
Renewal	Control	19.3	8.9	7.8	0	0	LW 1500
	100%	19.4	8.6	7.3	0	0	
72 Hr	Control	19.1	7.7	7.5	0	0	LW 1400
	100%	19.0	7.0	7.7	0	0	
96 Hr	Control	19.7	6.8	7.4	0	0	LW
	100%	19.7	6.5	7.8	0	0	

**Comments:**

Sample as received: Chlorine: 0.0 mg/l; pH: 7.4; Conductivity: 465 umho; Temp: 4°C;  
 DO: 11.0 mg/l; Alkalinity: 115 mg/l; Hardness: 155 mg/l; NH<sub>3</sub>-N: 0.5 mg/l.  
 Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes /  No  
 Control: Alkalinity: 54 mg/l; Hardness: 94 mg/l; Conductivity: 325 umho.  
 Test solution aerated (not to exceed 100 bubbles/min) to maintain DO > 4.0 mg/l? Yes /  No  
 Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.

**RESULTS**

Percent Survival In:	Control: <u>100</u> %	100% Sample: <u>100</u> %
----------------------	-----------------------	---------------------------

**SUBCONTRACT ORDER - PROJECT # IPB1811**

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

**RECEIVING LABORATORY:**  
 Aquatic Testing Laboratories-SUB  
 4350 Transport Street, Unit 107  
 Ventura, CA 93003  
 Phone: (805) 650-0546  
 Fax: (805) 650-0756

**FAXED 2/23/06**

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

Analysis	Expiration	Comments
Sample ID: IPB1811-01 Water Bioassay-Acute 96hr	Sampled: 02/18/06 11:00 02/19/06 23:00	Instant Notification FH minnow, EPA/821-R02-012, Sub to AqTox Labs
Containers Supplied: 1 gal Poly (IPB1811-01Y)		

**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): 40C

Released By:  Date: 2/18/06 Time: \_\_\_\_\_ Received By:  Date: 2-18-06 Time: \_\_\_\_\_

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_



**EBERLINE**  
SERVICES

March 20, 2006

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

Reference: Del Mar Analytical Project No. IPB1811  
Eberline Services NELAP Cert #01120CA (exp. 01/31/07)  
Eberline Services Report R602145-8651

Dear Ms. Chamberlin:

Enclosed are results from the analysis of one water sample received at Eberline Services on February 21, 2006. The sample was analyzed according to the accompanying Del Mar Analytical Subcontract Order Form. The requested analysis was gross alpha/gross beta (EPA900.0). The batch QC LCS, blank analysis, duplicate analysis, and matrix spike results were within the limits defined in Eberline Services Quality Control Procedures Manual. No problems were encountered during the requested analysis.

Please call me if you have any questions concerning this report.

Regards,

Melissa Mannion  
Senior Program Manager

MCM/njv

Enclosure: Report  
Subcontract Form  
Receipt checklist  
Invoice

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



# Eberline Services

## ANALYSIS RESULTS

SDG <u>8651</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R602145-01</u>	Contract <u>PROJECT# IPB1811</u>
Received Date <u>02/21/06</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>						
IPB1811-01	-651-001	02/18/06	03/14/06	GrossAlpha	16.3 ± 2.2	pCi/L	1.30
			03/14/06	Gross Beta	21.8 ± 1.4	pCi/L	1.43

Certified by <u>209</u>
Report Date <u>03/20/06</u>
Page 1

Eberline Services

QC RESULTS

SDG <u>8651</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>8602145-01</u>	Contract <u>PROJECT# IPB1811</u>
Received Date <u>02/21/06</u>	Matrix <u>WATER</u>


Lab	Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
LCS	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
BLANK	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

DUPLICATES			
Sample ID	Nuclide	Results ± 2σ	MDA
8653-004	GrossAlpha	0.122 ± 0.53	0.893
	Gross Beta	5.92 ± 0.71	0.869

ORIGINALS				3σ	
Sample ID	Results ± 2σ	MDA	RPD (Tot)	Eval	
8653-001	0.735 ± 0.45	0.587	143	249	satis.
	7.03 ± 0.74	0.906	2	48	satis.

SPIKED SAMPLE			
Sample ID	Nuclide	Results ± 2σ	MDA
8653-005	GrossAlpha	74.0 ± 2.9	0.626
	Gross Beta	56.0 ± 1.7	0.891

ORIGINAL SAMPLE					
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   
 Report Date 03/20/06  
 Page 2



17401 Del Mar Ave., Suite 100, Irvine, CA 92614 Ph (909) 370-4867 Fax (909) 370-1046  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (619) 505-8596 Fax (619) 505-8688  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (480) 785-0043 Fax (480) 785-0851  
 9630 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (702) 796-3820 Fax (702) 796-3821  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120

## SUBCONTRACT ORDER - PROJECT # IPB1811

**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: 4 weeks Initials: \_\_\_\_\_

Analysis	Expiration	Comments
Sample ID: IPB1811-01 Water	Sampled: 02/18/06 11:00	Instant Notification
EDD + Level 4	03/18/06 11:00	900.0, IF RESULT > 15 pCi/L, run Radium 226 & 228
Gross Alpha-O	02/18/07 11:00	900.0, IF RESULT > 50 pCi/L, run Radium 226 & 228
Gross Beta-O	02/18/07 11:00	HOLD for Gross A&B results; EPA 903.1 & 904.0
Radium, Combined-O	02/18/07 11:00	HOLD for Ra 226+Ra 228 results, EPA 905.0
Strontium 90-O	02/18/07 11:00	HOLD for Ra 226+Ra 228 results, EPA 906.0
Tritium-O	02/18/07 11:00	

**Containers Supplied:**  
 2.5 gal Poly (IPB1811-01S) *HNO3*  
 40 ml Amber Voa Vial (IPB1811-01T)  
 40 ml Amber Voa Vial (IPB1811-01U)  
 40 ml Amber Voa Vial (IPB1811-01V)

**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: [Signature] Date: 2/20/06 Time: 1700 Received By: flex kelmer Date: 2/21/06 Time: 10:00

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

Client: DEL. MAR ANALYT City IRVINE State CA

Date/Time received 2/21/06 10:00 CoC No. IPB 1811

Container I.D. No. BOX Requested TAT (Days) STAND 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 [ ] N/A [✓]
- 6. Number of samples in shipping container: 1 Sample Matrix WATER
- 7. Number of containers per sample: 4 (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 2 Preservative \_\_\_\_\_
- 13. Describe any anomalies: \_\_\_\_\_

14. Was P.M. notified of any anomalies? Yes [ ] No [ ] Date \_\_\_\_\_

15. Inspected by AK Date: 2/21/06 Time: 11:40

Customer Sample No.	cpm	mR/hr	Wipe	Customer Sample No.	cpm	mR/hr	wipe

Ion Chamber Ser. No. \_\_\_\_\_  
Alpha Meter Ser. No. \_\_\_\_\_  
Beta/Gamma Meter Ser. No. \_\_\_\_\_

Calibration date \_\_\_\_\_  
Calibration date \_\_\_\_\_  
Calibration date \_\_\_\_\_

"over 55 years of quality nuclear services"

# **APPENDIX G**

## **Section 62**

Outfall 009, February 18, 2006  
AMEC Data Validation Reports

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

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

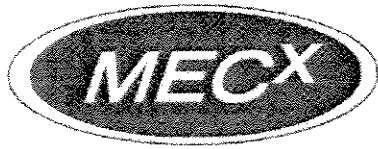
Package ID B4DF39  
 Task Order 1261.001D.01  
 SDG No. IPB1811

No. of Analyses 1

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

Date: April 2, 2006  
 Reviewer's Signature  


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



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 009

ANALYSIS: DIOXINS/FURANS  
SAMPLE DELIVERY GROUP: IPB1811

Prepared by

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

## 1. INTRODUCTION

Task Order Title:	NPDES
Contract Task Order:	1261.001.01
Sample Delivery Group:	IPB1811
Project Manager:	P. Costa
Matrix:	Water
Analysis:	Dioxins/Furans
QC Level:	Level IV
No. of Samples:	1
No. of Reanalyses/Dilutions:	0
Reviewer:	K. Shadowlight
Date of Review:	April 2, 2006

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



**Table 1. Sample Identification**

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 009	IPB1811-01	27309-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

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

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

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

#### 2.2.2 Mass Spectrometer Performance

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

## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

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

### 2.3.2 Continuing Calibration

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

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

## 2.4 BLANKS

One method blank (0-7782-MB001) was extracted and analyzed with the sample in this SDG. Target compound OCDD was reported at a concentration below the laboratory lower calibration level in the method blank. The concentration of OCDD in the sample exceeded five times the concentration in the method blank and required no qualification. OCDF was reported as an EMPC in the method blank. A review of the method blank raw data and chromatograms indicated no false negatives or false positives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7782-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

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

### 2.7.2 Field Duplicates

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

## 2.8 INTERNAL STANDARDS

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

## 2.9 COMPOUND IDENTIFICATION

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

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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



EPA Method 1613

Sample ID: IPB1811-01 Out fall 009		Laboratory Data		Date	
Client Data		Sample Data		Date	
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Date Received:	21-Feb-06
Project:	IPB1811	Sample Size:	0.997 L	Date Extracted:	23-Feb-06
Date Collected:	18-Feb-06	DL <sup>a</sup>	EMPC <sup>b</sup>	Date Analyzed DB-225:	NA
Time Collected:	1100	Conc. (ug/L)	Qualifiers	%R	LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.00000316		74.8	25 - 164
1,2,3,7,8-PeCDD	0.0000103		J	77.3	25 - 181
1,2,3,4,7,8-HxCDD	0.0000163		J	68.6	32 - 141
1,2,3,6,7,8-HxCDD	0.0000298			73.4	28 - 130
1,2,3,7,8,9-HxCDD	0.0000310			64.8	23 - 140
1,2,3,4,6,7,8-HpCDD	0.000723			46.7	17 - 157
OCDD	0.0117			81.1	24 - 169
2,3,7,8-TCDF	ND	0.00000280	B	84.5	24 - 185
1,2,3,7,8-PeCDF	0.00000348		J	86.5	21 - 178
2,3,4,7,8-PeCDF	0.00000707		J	73.7	26 - 152
1,2,3,4,7,8-HxCDF	0.00000783		J	73.8	26 - 123
1,2,3,6,7,8-HxCDF	0.00000764		J	74.0	28 - 136
2,3,4,6,7,8-HxCDF	0.0000114		J	70.5	29 - 147
1,2,3,7,8,9-HxCDF	0.00000250		J	61.5	28 - 143
1,2,3,4,6,7,8-HpCDF	0.000110	0.00000539		69.0	26 - 138
1,2,3,4,7,8,9-HpCDF	ND			53.8	17 - 157
OCDF	0.000285			95.8	35 - 197
<b>Totals</b>					
Total TCDD	ND	0.00000316			
Total PeCDD	0.0000646				
Total HxCDD	0.000327				
Total HpCDD	0.00209				
Total TCDF	0.0000207				
Total PeCDF	0.0000776				
Total HxCDF	0.000172				
Total HpCDF	0.000251				

Footnotes

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

Approved By: William J. Luksemburg 02-Mar-2006 11:07

Analyst: RAS

10000 IV

Project 27309

1283 NPDES - 2684


## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID: B4MT39  
 Task Order: 1261.001D.01  
 SDG No.: IPB1811

No. of Analyses: 1

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

Date: April 4, 2006  
 Reviewer's Signature  


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



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 009

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPB1811

Prepared by

MEC<sup>x</sup>, LLC  
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Aurora, CO 80014

Project: NPDES  
SDG: IPB1811  
Analysis: Metals

DATA VALIDATION REPORT

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB1811  
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: April 4, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC<sup>X</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0), EPA Methods 200.7 and 200.8, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.



Project: NPDES  
SDG: IPB1811  
Analysis: Metals

DATA VALIDATION REPORT

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 009	IPB1811-01	Water	200.7, 200.8

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

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

#### 2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and analyses presented in this SDG. No sample qualifications were required.

#### 2.1.3 Holding Times

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

### 2.2 ICP-MS TUNING

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

### 2.3 CALIBRATION

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

### 2.4 BLANKS

Silver was reported in a bracketing CCB at -3.3 µg/L; therefore, nondetected silver in Outfall 009 was qualified as an estimated nondetect, "UJ." No further qualifications were required.

DATA VALIDATION REPORT

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were performed in association with the sample in this SDG for the ICP metals. Silver, boron, and chromium were detected in the ICSA above the respective reporting limits. The reviewer checked the raw data for the sample and determined that the level of interferences in Outfall 009 were not of sufficient concentrations to qualify the sample results. No qualifications were required.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The ICP and ICP-MS 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 sample 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*

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transcription errors or calculation errors were noted. Analytes detected below the reporting limit were qualified as estimated, "J," and denoted with "DNQ," in accordance with the NPDES permit. No further qualifications were required.

## **2.12 FIELD QC SAMPLES**

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

### **2.12.1 Field Blanks and Equipment Rinsates**

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

### **2.12.2 Field Duplicates**

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



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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Low Qual	Qual Code
Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.										
Reporting Units: mg/l										
Boron	EPA 200.7	6B20080	0.0080	0.050	0.10	1	02/20/06	02/27/06		

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

LEVEL IV

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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev Qual	Qual Code
Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.										
Reporting Units: ug/l										
Aluminum	EPA 200.7	6B20080	40	50	5900	1	02/20/06	02/28/06		
Antimony	EPA 200.8	6B21089	0.050	2.0	0.60	1	02/21/06	02/22/06	J J	DNQ
Arsenic	EPA 200.7	6B20080	4.4	5.0	5.6	1	02/20/06	02/25/06		
Beryllium	EPA 200.7	6B20080	0.90	2.0	ND	1	02/20/06	02/25/06		
Cadmium	EPA 200.8	6B21089	0.025	1.0	0.48	1	02/21/06	02/22/06	J J	DNQ
Chromium	EPA 200.7	6B20080	2.0	5.0	14	1	02/20/06	02/25/06		
Copper	EPA 200.8	6B21089	0.25	2.0	22	1	02/21/06	02/22/06		
Lead	EPA 200.8	6B21089	0.040	1.0	33	1	02/21/06	02/22/06		
Mercury	EPA 200.8	6B21089	0.050	0.20	ND	1	02/21/06	02/21/06		
Nickel	EPA 245.1	6B21083	0.050	0.20	ND	1	02/21/06	02/21/06		
Selenium	EPA 200.7	6B20080	2.0	10	10	1	02/20/06	02/25/06		
Silver	EPA 200.7	6B20080	8.0	10	ND	1	02/20/06	02/25/06		
Thallium	EPA 200.7	6B20080	3.0	10	ND	1	02/20/06	02/25/06		
Vanadium	EPA 200.7	6B20080	7.0	10	ND	1	02/20/06	02/25/06		
Zinc	EPA 200.7	6B20080	3.0	10	20	1	02/20/06	02/25/06		
	EPA 200.7	6B20080	15	20	88	1	02/20/06	02/25/06		B

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

LEVEL IV


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## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID: B4PP7  
 Task Order: 1261.001D.01  
 SDG No.: IPB1811

No. of Analyses: 1  
 Date: April 6, 2006  
 Reviewer's Signature:  


Laboratory: Del Mar Analytical  
 Reviewer: L. Calvin  
 Analysis/Method: Pesticides/PCBs by Method 608

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



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 009

ANALYSIS: PESTICIDES / PCBs

SAMPLE DELIVERY GROUP: IPB1811

Prepared by

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



## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001.01 <sup>D</sup>  
Sample Delivery Group: IPB1811  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Pesticides  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: L. Calvin  
Date of Review: April 6, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC<sup>X</sup> Data Validation Procedure for Organochlorine Pesticides and PCBs (DVP-4, Rev. 0), EPA Method 608, and the National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 009	IPB1811-01	Water	608

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , at  $4^{\circ}\text{C}$ . According to the case narrative for this SDG, the sample was received intact and on ice. No qualifications were required.

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

### 2.2 PESTICIDES INSTRUMENT PERFORMANCE

No resolution check standards or breakdown check standards are required by Method 608 for pesticides, and according to the raw data provided, a resolution check standard was not analyzed by the laboratory. The laboratory did analyze a breakdown check standard with the breakdown for individual components (4,4-DDT and endrin)  $\leq 20\%$  and  $\leq 30\%$  for the total, as suggested in the National Functional Guidelines. A review of the raw data indicated that the analytical run time was of sufficient length to provide adequate standard separation. The two analytical columns used in the analyses were within the guidelines specified in the methods.

According to the laboratory SOP and the initial calibration raw data, the retention time windows are  $\pm 0.10$  minutes for both surrogates and target compound calibration standards. A review of the raw data indicated that the laboratory retention time criteria were met for the surrogates and pesticide calibration standards. No qualifications were required.

### 2.3 CALIBRATION

#### 2.3.1 Analytical Sequence

Based on the data provided, the analytical sequences were in accordance with the requirements of Method 608. No qualifications were required.

DATA VALIDATION REPORT

### 2.3.2 Initial Calibration

There was one initial calibration dated 02/03/06 associated with the Aroclor analysis of the site sample and one dated 01/30/06 associated with the pesticide analysis. The initial calibrations consisted of six point calibrations for Aroclors 1016 and 1260 and five or six point calibrations for all pesticide target compounds on two analytical columns. The average %RSDs of the individual Aroclor peaks were within the QC limit of  $\leq 10\%$  or  $r^2$  values  $\geq 0.995$  on the primary analytical column (Channel B). The %RSDs were  $\leq 10\%$  or  $r^2$  values  $\geq 0.995$  on the primary column (Channel A) for all pesticide target compounds. The pesticide and average Aroclor %RSDs were also  $\leq 10\%$  or  $r^2$  values  $\geq 0.995$  on the secondary column.

An ICV was analyzed immediately following each initial calibration, and the %Ds for all pesticide target compounds and Aroclors 1016 and 1260 were within the QC limit of  $\leq 15\%$  on both analytical columns. No qualifications were required.

### 2.3.3 Continuing Calibration

The pesticide and Aroclor analyses of the sample were each bracketed by continuing calibrations. The %Ds for all pesticide target compounds and Aroclors 1016 and 1260 were within the Method QC limit of  $\leq 15\%$  for all calibrations on both columns, with the exception of a high response for endrin on the secondary column in the ending pesticide CCV. As any detects would be reported from the primary column, no qualifications were required.

## 2.4 BLANKS

### 2.4.1 Instrument Blanks

An instrument blank was analyzed at the beginning of each analytical sequence. Cross-contamination was not evident in the instrument blanks or the sample. No qualifications were necessary.

### 2.4.2 Method Blanks

Two water method blanks (6B24053-BLK1 for pesticides and 6B24053-BLK1 for Aroclors) were extracted and analyzed with this SDG. No pesticide target compounds or Aroclors were detected in the method blank analyses. Review of the chromatograms from both channels showed no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two blank spike/blank spike duplicate pairs (6B24053-BS1/BSD1 for pesticides and 6B24053-BS2/BSD2 for Aroclors) were analyzed with this SDG. The recoveries for all pesticide compounds and Aroclors 1016 and 1260 were within the laboratory-established QC limits, and all RPDs were

**DATA VALIDATION REPORT**

within the QC limit of  $\leq 30\%$  or  $\leq 20\%$  (Aroclor 1260 only). 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 Aroclor and pesticide analyses of the sample. 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.

DATA VALIDATION REPORT

## 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for pesticide target compounds and seven Aroclors by EPA Method 608. Compound identification is verified at a Level IV validation. The laboratory provided an overlay of the pesticide sample chromatogram and the pesticide standard for identification purposes. Review of chromatograms and retention times indicated no problems with compound identification for the sample in this SDG. No qualifications were required.

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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



# Del Mar Analytical

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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data	
									Qualifiers	Code
Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.										
Reporting Units: ug/l										
Aldrin	EPA 608	6B24053	0.029	0.096	ND	0.962	02/24/06	02/24/06	✓	
alpha-BHC	EPA 608	6B24053	0.019	0.096	ND	0.962	02/24/06	02/24/06		
beta-BHC	EPA 608	6B24053	0.014	0.096	ND	0.962	02/24/06	02/24/06		
delta-BHC	EPA 608	6B24053	0.019	0.19	ND	0.962	02/24/06	02/24/06		
gamma-BHC (Lindane)	EPA 608	6B24053	0.019	0.096	ND	0.962	02/24/06	02/24/06		
Chlordane	EPA 608	6B24053	0.19	0.96	ND	0.962	02/24/06	02/24/06		
4,4'-DDD	EPA 608	6B24053	0.019	0.096	ND	0.962	02/24/06	02/24/06		
4,4'-DDE	EPA 608	6B24053	0.024	0.096	ND	0.962	02/24/06	02/24/06		
4,4'-DDT	EPA 608	6B24053	0.034	0.096	ND	0.962	02/24/06	02/24/06		
Dieldrin	EPA 608	6B24053	0.014	0.096	ND	0.962	02/24/06	02/24/06		
Endosulfan I	EPA 608	6B24053	0.014	0.096	ND	0.962	02/24/06	02/24/06		
Endosulfan II	EPA 608	6B24053	0.038	0.096	ND	0.962	02/24/06	02/24/06		
Endosulfan sulfate	EPA 608	6B24053	0.019	0.19	ND	0.962	02/24/06	02/24/06		
Endrin	EPA 608	6B24053	0.019	0.096	ND	0.962	02/24/06	02/24/06		
Endrin aldehyde	EPA 608	6B24053	0.043	0.096	ND	0.962	02/24/06	02/24/06		
Endrin ketone	EPA 608	6B24053	0.019	0.096	ND	0.962	02/24/06	02/24/06		
Heptachlor	EPA 608	6B24053	0.029	0.096	ND	0.962	02/24/06	02/24/06		
Heptachlor epoxide	EPA 608	6B24053	0.029	0.096	ND	0.962	02/24/06	02/24/06		
Methoxychlor	EPA 608	6B24053	0.034	0.096	ND	0.962	02/24/06	02/24/06		
Toxaphene	EPA 608	6B24053	1.4	4.8	ND	0.962	02/24/06	02/24/06		
Surrogate: Tetrachloro-m-xylene (35-115%)										73 %
Surrogate: Decachlorobiphenyl (45-120%)										67 %

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

*Level IV*

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

Project ID: Annual Outfall 009  
 Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

**TOTAL PCBS (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	6B24053	0.19	0.96	ND	0.962	02/24/06	02/24/06	<i>see            qual            table</i> ↓
Aroclor 1221	EPA 608	6B24053	0.096	0.96	ND	0.962	02/24/06	02/24/06	
Aroclor 1232	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/24/06	
Aroclor 1242	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/24/06	
Aroclor 1248	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/24/06	
Aroclor 1254	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/24/06	
Aroclor 1260	EPA 608	6B24053	0.38	0.96	ND	0.962	02/24/06	02/24/06	
Surrogate: Decachlorobiphenyl (45-12096)					73 %				

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

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*see table II*  
 IPB1811 <Page 9 of 40>



## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID: B4RA2  
 Task Order: 1261.001D.05  
 SDG No.: Multiple

No. of Analyses: 4

Laboratory: Ebeline  
 Reviewer: P. Meeks  
 Analysis/Method: Radionuclides

Date: April 1, 2006  
 Reviewer's Signature  
*P. Meeks*

ACTION ITEMS <sup>a</sup>	
Case Narrative Deficiencies	_____
2. Out of Scope Analyses	_____
3. Analyses Not Conducted	_____
4. Missing Hardcopy Deliverables	_____
5. Incorrect Hardcopy Deliverables	_____
6. Deviations from Analysis Protocol, e.g.,	_____
Holding Times	_____
GC/MS Tune/Inst. Performance	_____
Calibration	_____
Method blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
Internal Standard Performance	_____
Compound Identification	_____
Quantitation	_____
System Performance	_____
Qualifications were applied for preservation and low detector efficiencies:	_____
COMMENTS <sup>b</sup>	_____
	_____
	_____
	_____
	_____

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



# DATA VALIDATION REPORT

NPDES Sampling  
Multiple Outfalls

ANALYSIS: RADIONUCLIDES

SAMPLE DELIVERY GROUPS: IPB1810, IPB1811, IPB1817,  
IPB1818

Prepared by

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

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB1810, IPB1811, IPB1817, IPB1818  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Radionuclides  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 1, 2006

The samples listed in Table 1 were validated based on the 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	Del Mar ID	Eberline ID	Matrix	COC Method
Outfall 004	IPB1810-01	8650-001	water	900.0
Outfall 009	IPB1811-01	8651-001	water	900.0
Outfall 008	IPB1817-01	8652-001	water	900.0
Outfall 003	IPB1818-01	8653-001	water	900.0, 905.0

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

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

According to the Los Angeles Regional Water Quality Control Board's (LARWQCB) guidance letter dated 01/12/05, unfiltered samples should not be preserved and filtered aliquots should be preserved after filtration. The samples in these SDGs were preserved but were not filtered. As the requirements of the permit were not met, all results were qualified as estimated, "J," for detects and, "UJ," for nondetects. No further qualifications were required.

#### 2.1.2 Chain of Custody

The original COCs were signed and dated by field and laboratory personnel and the transfer COCs were signed by personnel from both laboratories. Eberline did not list the MWH IDs on the Form Is; therefore, the reviewer edited the Form Is to reflect these IDs. The strontium analysis for Outfall 003 was requested in a memo from MWH personnel dated 2/20/06. No qualifications were required.

#### 2.1.3 Holding Times

All samples were analyzed within the 180-day analytical holding time for preserved samples. No qualifications were required.

### 2.2 CALIBRATION

The laboratory calibration information included the standard certificates and applicable preparation/dilutions logs for NIST-traceability. All gross alpha detector efficiencies were less than 20%; therefore, all gross alpha results were qualified as estimated, "J," for detects and, "UJ," for nondetects. All strontium chemical yields were at least 75% and were considered acceptable. The strontium continuing calibration results were within the laboratory control limits. No further qualifications were required.

### 2.3 BLANKS

No measurable activities were detected in the method blanks, therefore, no qualifications were necessary.

## 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Aqueous blank spikes were analyzed in association with the samples in these SDGs. The blank spike results were within the 3-sigma limits. No qualifications were necessary.

## 2.5 LABORATORY DUPLICATES

The laboratory performed duplicate analyses on Outfall 003. All results were within the 3-sigma limit limits. No qualifications were necessary.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The laboratory performed matrix spike analyses on Outfall 003 for gross alpha and gross beta. Both recoveries were within the 3-sigma limits. Analyses that involve the yielding of an analytical tracer do not require matrix spike analyses; therefore, no strontium matrix spike was performed. No qualifications were required.

## 2.7 SAMPLE RESULT VERIFICATION

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

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Field Blanks and Equipment Rinsates

The samples in these SDGs had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate samples in these SDGs.

**Eberline Services**  
**ANALYSIS RESULTS**

SDG <u>8650</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>8602144-01</u>	Contract <u>PROJECT# IPB1810</u>
Received Date <u>02/21/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	Rev Qual	Qual Code
Sample ID <u>Outfall 004</u> IPB1810-01	Sample ID 8650-001	02/18/06	03/14/06	Gross Alpha	0.926 ± 0.63	pCi/L	0.916	WJ	R, #1
			03/14/06	Gross Beta	21.4 ± 1.0	pCi/L	0.873	J	↓

LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>03/20/06</u>
Page 1

Eberline Services

ANALYSIS RESULTS

SDG <u>8651</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R602145-01</u>	Contract <u>PROJECT# IPH1811</u>
Received Date <u>02/21/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Nuclide	Results ± SD	Units	MDA	Rev Dwn	Qual Code
Sample ID	Sample ID								
<u>Outfall 009</u> IPH1811-01	8651-001	02/18/06	03/14/06	Gross Alpha	16.3 ± 2.2	pCi/L	1.30	J	R.#1
			03/14/06	Gross Beta	21.8 ± 1.4	pCi/L	1.43	J	↓

LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>03/20/06</u>
Page 1



# Eberline Services

## ANALYSIS RESULTS

SDG <u>8652</u> Work Order <u>R602146-01</u> Received Date <u>02/21/06</u>	Client <u>DEL MAR ANAL</u> Contract <u>PROJECT# IPB1817</u> Matrix <u>WATER</u>
--	---

Client	Lab				Results ± 2σ	Units	MDA	Raw Qual	Qual Code
Sample ID	Sample ID	Collected	Analyzed	Nuclide					
Cutoff 006 IPB1817-01	8652-001	02/19/06	03/14/06	Gross Alpha	-0.117 ± 0.44	pci/L	0.738	UJ	R, #1
			03/14/06	Gross Beta	4.33 ± 0.66	pci/L	0.885	J	↓

LEVEL III

Certified by <u><i>[Signature]</i></u> Report Date <u>03/20/06</u> Page <u>1</u>
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# Eberline Services

## ANALYSIS RESULTS

SDG <u>8653</u> Work Order <u>R592147-01</u> Received Date <u>02/21/06</u>	Client <u>DEL MAR ANAL</u> Contract <u>PROJECT# IPB1818</u> Matrix <u>WATER</u>
--	---

Client	Lab							
Sample ID	Sample ID	Collected	Analyzed	Nuclide	Results ± SD	Units	MCA	
Outfall 003 IPB1818-01	8653-001	02/19/06	03/14/06	Gross Alpha	0.735 ± 0.45	pCi/L	0.587	R Q C ↓
			03/14/06	Gross Beta	7.03 ± 0.74	pCi/L	0.906	
			03/08/06	Sr-90	0.317 ± 0.31	pCi/L	0.594	

R Q C	Qual Code
R, K1	↓

LEVEL II

Certified by <u>[Signature]</u> Report Date <u>03/20/06</u> Page 1
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**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

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

Package ID: B4SV22  
 Task Order: 1261.001D.01  
 SDG No.: IPB1811

No. of Analyses: 1  
 Date: April 6, 2006  
 Reviewer's Signature: *L. Calvin*

Laboratory: Del Mar Analytical  
 Reviewer: L. Calvin  
 Analysis/Method: Semivolatiles by Method 625

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



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 009

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP IPB1811

Prepared by

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

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB1811  
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: April 6, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for Levels C and D Semivolatile Organics (DVP-3, Rev. 0)*, *EPA Method 625*, and the *National Functional Guidelines For Organic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: NPDES  
SDG: IPB1811  
Analysis: NDMA

DATA VALIDATION REPORT

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 009	IPB1811-01	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  $\pm$ 2°C at 4°C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

### 2.2 GC/MS TUNING

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

### 2.3 CALIBRATION

One initial calibration analyzed 02/27/06 was associated with the sample in this SDG. The %RSDs for all target compounds were  $\leq$ 35%. An initial calibration verification (ICV) was analyzed following the initial calibration, with %Ds for all target compounds within the QC limits of  $\leq$ 20%. Sample Outfall 009 was analyzed in the same analytical sequence as the initial calibration and ICV; therefore a continuing calibration was not necessary. No qualifications were required.

## 2.4 BLANKS

One method blank (6B19029-BLK1) was extracted and analyzed with this SDG. Target compounds were not detected above the MDLs in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6B19029-BS1/BSD1) was extracted and analyzed with this SDG. All recoveries and RPDs were within the laboratory-established QC limits, with the exception of the RPDs for benzoic acid and dimethylphthalate. Results for both compounds were qualified as estimated, "J" or "UJ," in sample Outfall 009. No further qualifications were required.

## 2.6 SURROGATE RECOVERY

Surrogate recoveries for the sample were within the laboratory QC limits. No qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Field Blanks and Equipment Rinsates

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

### 2.8.2 Field Duplicates

There were no field duplicate samples identified for this SDG.



Project: NPDES  
SDG: IPB1811  
Analysis: NDMA

DATA VALIDATION REPORT

## 2.9 INTERNAL STANDARDS PERFORMANCE

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

## 2.10 COMPOUND IDENTIFICATION

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

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

## 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

## 2.13 SYSTEM PERFORMANCE

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



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 2320 E. Sunset Rd., #3, Las Vegas, NV 89120 (702) 798-1620 FAX (702) 798-1621

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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

**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: IPB1811-01 (Outfall 009 - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6B19029	4.1	9.6	ND	0.957	02/19/06	02/28/06	u
Acenaphthylene	EPA 625	6B19029	3.1	9.6	ND	0.957	02/19/06	02/28/06	u
Aniline	EPA 625	6B19029	2.8	9.6	ND	0.957	02/19/06	02/28/06	u
Anthracene	EPA 625	6B19029	3.1	9.6	ND	0.957	02/19/06	02/28/06	u
Benzdine	EPA 625	6B19029	5.0	19	ND	0.957	02/19/06	02/28/06	u
Benzoic acid	EPA 625	6B19029	2.5	19	19	0.957	02/19/06	02/28/06	u #5
Benzo(a)anthracene	EPA 625	6B19029	3.5	9.6	ND	0.957	02/19/06	02/28/06	u
Benzo(b)fluoranthene	EPA 625	6B19029	2.6	9.6	ND	0.957	02/19/06	02/28/06	u
Benzo(k)fluoranthene	EPA 625	6B19029	3.3	9.6	ND	0.957	02/19/06	02/28/06	u
Benzo(g,h,i)perylene	EPA 625	6B19029	5.1	9.6	ND	0.957	02/19/06	02/28/06	u
Benzo(a)pyrene	EPA 625	6B19029	3.3	9.6	ND	0.957	02/19/06	02/28/06	u
Benzyl alcohol	EPA 625	6B19029	2.4	19	ND	0.957	02/19/06	02/28/06	u
Bis(2-chloroethoxy)methane	EPA 625	6B19029	3.7	9.6	ND	0.957	02/19/06	02/28/06	u
Bis(2-chloroethyl)ether	EPA 625	6B19029	4.2	9.6	ND	0.957	02/19/06	02/28/06	u
Bis(2-chloroisopropyl)ether	EPA 625	6B19029	4.4	9.6	ND	0.957	02/19/06	02/28/06	u
Bis(2-ethylhexyl)phthalate	EPA 625	6B19029	5.0	48	ND	0.957	02/19/06	02/28/06	u
4-Bromophenyl phenyl ether	EPA 625	6B19029	4.4	9.6	ND	0.957	02/19/06	02/28/06	u
Butyl benzyl phthalate	EPA 625	6B19029	3.3	19	ND	0.957	02/19/06	02/28/06	u
4-Chloroaniline	EPA 625	6B19029	5.7	9.6	ND	0.957	02/19/06	02/28/06	u
2-Chloronaphthalene	EPA 625	6B19029	3.8	9.6	ND	0.957	02/19/06	02/28/06	u
4-Chloro-3-methylphenol	EPA 625	6B19029	3.3	19	ND	0.957	02/19/06	02/28/06	u
2-Chlorophenol	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	u
4-Chlorophenyl phenyl ether	EPA 625	6B19029	2.9	9.6	ND	0.957	02/19/06	02/28/06	u
Chrysene	EPA 625	6B19029	2.7	9.6	ND	0.957	02/19/06	02/28/06	u
Dibenz(a,h)anthracene	EPA 625	6B19029	4.5	19	ND	0.957	02/19/06	02/28/06	u
Dibenzofuran	EPA 625	6B19029	2.5	9.6	ND	0.957	02/19/06	02/28/06	u
Di-n-butyl phthalate	EPA 625	6B19029	2.7	19	ND	0.957	02/19/06	02/28/06	u
1,3-Dichlorobenzene	EPA 625	6B19029	3.9	9.6	ND	0.957	02/19/06	02/28/06	u
1,4-Dichlorobenzene	EPA 625	6B19029	3.7	9.6	ND	0.957	02/19/06	02/28/06	u
1,2-Dichlorobenzene	EPA 625	6B19029	4.3	9.6	ND	0.957	02/19/06	02/28/06	u
3,3-Dichlorobenzidine	EPA 625	6B19029	11	19	ND	0.957	02/19/06	02/28/06	u
2,4-Dichlorophenol	EPA 625	6B19029	3.9	9.6	ND	0.957	02/19/06	02/28/06	u
Diethyl phthalate	EPA 625	6B19029	3.0	9.6	ND	0.957	02/19/06	02/28/06	u
2,4-Dimethylphenol	EPA 625	6B19029	4.2	19	ND	0.957	02/19/06	02/28/06	u #5
Dimethyl phthalate	EPA 625	6B19029	3.4	9.6	ND	0.957	02/19/06	02/28/06	u
4,6-Dinitro-2-methylphenol	EPA 625	6B19029	4.9	19	ND	0.957	02/19/06	02/28/06	u
2,4-Dinitrophenol	EPA 625	6B19029	5.1	19	ND	0.957	02/19/06	02/28/06	u
2,4-Dinitrotoluene	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	u
2,6-Dinitrotoluene	EPA 625	6B19029	3.1	9.6	ND	0.957	02/19/06	02/28/06	u
Di-n-octyl phthalate	EPA 625	6B19029	4.5	19	ND	0.957	02/19/06	02/28/06	u
Fluoranthene	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	u

*Handwritten notes:*  
 New Qual Score  
 u

#5

#5

*Handwritten:* Level IV

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: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## 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: IPB1811-01 (Outfall 009 - Water) - cont.									
Reporting Units: ug/l									
Fluorene	EPA 625	6B19029	3.7	9.6	ND	0.957	02/19/06	02/28/06	u
Hexachlorobenzene	EPA 625	6B19029	4.6	9.6	ND	0.957	02/19/06	02/28/06	
Hexachlorobutadiene	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	
Hexachlorocyclopentadiene	EPA 625	6B19029	3.3	19	ND	0.957	02/19/06	02/28/06	
Hexachloroethane	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6B19029	5.2	19	ND	0.957	02/19/06	02/28/06	
Isophorone	EPA 625	6B19029	3.5	9.6	ND	0.957	02/19/06	02/28/06	
2-Methylnaphthalene	EPA 625	6B19029	2.9	9.6	ND	0.957	02/19/06	02/28/06	
2-Methylphenol	EPA 625	6B19029	3.5	9.6	ND	0.957	02/19/06	02/28/06	
4-Methylphenol	EPA 625	6B19029	3.6	9.6	ND	0.957	02/19/06	02/28/06	
Naphthalene	EPA 625	6B19029	4.3	9.6	ND	0.957	02/19/06	02/28/06	
2-Nitroaniline	EPA 625	6B19029	3.7	19	ND	0.957	02/19/06	02/28/06	
3-Nitroaniline	EPA 625	6B19029	4.3	19	ND	0.957	02/19/06	02/28/06	
4-Nitroaniline	EPA 625	6B19029	4.7	19	ND	0.957	02/19/06	02/28/06	
Nitrobenzene	EPA 625	6B19029	4.0	19	ND	0.957	02/19/06	02/28/06	
2-Nitrophenol	EPA 625	6B19029	4.0	9.6	ND	0.957	02/19/06	02/28/06	
4-Nitrophenol	EPA 625	6B19029	6.3	19	ND	0.957	02/19/06	02/28/06	
N-Nitrosodiphenylamine	EPA 625	6B19029	3.8	9.6	ND	0.957	02/19/06	02/28/06	
N-Nitroso-di-n-propylamine	EPA 625	6B19029	3.4	9.6	ND	0.957	02/19/06	02/28/06	
Pentachlorophenol	EPA 625	6B19029	3.8	19	ND	0.957	02/19/06	02/28/06	
Phenanthrene	EPA 625	6B19029	3.2	9.6	ND	0.957	02/19/06	02/28/06	
Phenol	EPA 625	6B19029	3.8	9.6	ND	0.957	02/19/06	02/28/06	
Pyrene	EPA 625	6B19029	3.7	9.6	ND	0.957	02/19/06	02/28/06	
1,2,4-Trichlorobenzene	EPA 625	6B19029	4.2	9.6	ND	0.957	02/19/06	02/28/06	
2,4,5-Trichlorophenol	EPA 625	6B19029	3.4	19	ND	0.957	02/19/06	02/28/06	
2,4,6-Trichlorophenol	EPA 625	6B19029	3.9	19	ND	0.957	02/19/06	02/28/06	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6B19029	4.8	19	ND	0.957	02/19/06	02/28/06	
N-Nitrosodimethylamine	EPA 625	6B19029	3.5	19	ND	0.957	02/19/06	02/28/06	
Surrogate: 2-Fluorophenol (30-120%)					56 %				
Surrogate: Phenol-d6 (35-120%)					68 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					69 %				
Surrogate: Nitrobenzene-d5 (45-120%)					62 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					66 %				
Surrogate: Terphenyl-d14 (45-120%)					82 %				

see  
base

WJC  
04-06-06

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

Level III

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# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 009

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB1811

Prepared by

MECX, LLC  
12269 East Vassar Drive  
Aurora, CO 80014

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB1811  
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: April 6, 2006

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

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 009	IPB1811-01	Water	624
Trip Blank	IPB1811-02	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  $\pm$  2°C, at 4°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved. An unpreserved aliquot of each sample was also provided. 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 unpreserved aliquots of the water samples were analyzed for all target compounds within seven 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 (acrolein and acrylonitrile only) and 02/18/06 (all remaining target compounds). The average RRF for acrolein was less than 0.05. The nondetect results for acrolein were rejected, "R," in both samples of this SDG. The remaining average RRFs were  $\geq 0.05$ , and the %RSDs were  $\leq 35\%$  or  $r^2 \geq 0.995$  for the target compounds listed on the sample result summary forms.

The continuing calibrations associated with the sample analyses were dated 02/19/06. The RRF for acrolein was less than 0.05. The nondetect results for acrolein were rejected, "R," in both samples of this SDG. The remaining RRFs for were  $\geq 0.05$  and all %Ds were within the QC limit of  $\leq 20\%$ , with the exception of the %Ds for acrolein and 2-chloroethyl vinyl ether. The nondetect result for 2-chloroethyl vinyl ether was qualified as estimated, "UJ," in sample Outfall 009. Sample Trip Blank was a field QC sample and required no qualification. As acrolein was previously rejected for RRFs  $< 0.05$ , the results were not further qualified. No further qualifications were required.



DATA VALIDATION REPORT

## 2.4 BLANKS

One method blank (6B19012-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 (6B19012-BS1) was analyzed with this SDG. Target compounds acrolein and acrylonitrile were not included in the spike. All recoveries were within the laboratory-established QC limits. No qualifications were required.

## 2.6 SURROGATE RECOVERY

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

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with site sample Outfall 009. 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.

Project: NPDES  
SDG: IPB1811  
Analysis: VOCs

DATA VALIDATION REPORT

### 2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

### 2.9 INTERNAL STANDARDS PERFORMANCE

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

### 2.10 COMPOUND IDENTIFICATION

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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

### 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: IPB1811-01 (Outfall 009 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6B19012	0.28	1.0	ND	1	02/19/06	02/19/06	<i>see qual table</i> ✓
Bromodichloromethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
Bromoform	EPA 624	6B19012	0.32	5.0	ND	1	02/19/06	02/19/06	
Bromomethane	EPA 624	6B19012	0.42	5.0	ND	1	02/19/06	02/19/06	
Carbon tetrachloride	EPA 624	6B19012	0.28	0.50	ND	1	02/19/06	02/19/06	
Chlorobenzene	EPA 624	6B19012	0.36	2.0	ND	1	02/19/06	02/19/06	
Chloroethane	EPA 624	6B19012	0.40	5.0	ND	1	02/19/06	02/19/06	
Chloroform	EPA 624	6B19012	0.33	2.0	ND	1	02/19/06	02/19/06	
Chloromethane	EPA 624	6B19012	0.30	5.0	ND	1	02/19/06	02/19/06	
Dibromochloromethane	EPA 624	6B19012	0.28	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichlorobenzene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
1,3-Dichlorobenzene	EPA 624	6B19012	0.35	2.0	ND	1	02/19/06	02/19/06	
1,4-Dichlorobenzene	EPA 624	6B19012	0.37	2.0	ND	1	02/19/06	02/19/06	
1,1-Dichloroethane	EPA 624	6B19012	0.27	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichloroethane	EPA 624	6B19012	0.28	0.50	ND	1	02/19/06	02/19/06	
1,1-Dichloroethene	EPA 624	6B19012	0.42	5.0	ND	1	02/19/06	02/19/06	
trans-1,2-Dichloroethene	EPA 624	6B19012	0.27	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichloropropane	EPA 624	6B19012	0.35	2.0	ND	1	02/19/06	02/19/06	
cis-1,3-Dichloropropene	EPA 624	6B19012	0.22	2.0	ND	1	02/19/06	02/19/06	
trans-1,3-Dichloropropene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
Ethylbenzene	EPA 624	6B19012	0.25	2.0	ND	1	02/19/06	02/19/06	
Methylene chloride	EPA 624	6B19012	0.70	5.0	ND	1	02/19/06	02/19/06	
1,1,2,2-Tetrachloroethane	EPA 624	6B19012	0.24	2.0	ND	1	02/19/06	02/19/06	
Tetrachloroethene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
Toluene	EPA 624	6B19012	0.36	2.0	ND	1	02/19/06	02/19/06	
1,1,1-Trichloroethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
1,1,2-Trichloroethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
Trichloroethene	EPA 624	6B19012	0.26	2.0	ND	1	02/19/06	02/19/06	
Trichlorofluoromethane	EPA 624	6B19012	0.34	5.0	ND	1	02/19/06	02/19/06	
Vinyl chloride	EPA 624	6B19012	0.26	0.50	ND	1	02/19/06	02/19/06	
Xylenes, Total	EPA 624	6B19012	0.90	4.0	ND	1	02/19/06	02/19/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6B19012	1.2	5.0	ND	1	02/19/06	02/19/06	
Surrogate: Dibromofluoromethane (80-120%)					115 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					109 %				

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

*Level IV*

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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

### 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: IPB1811-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6B19012	0.28	1.0	ND	1	02/19/06	02/19/06	<div style="text-align: right; font-size: small;">           see            qual            code            ↓         </div>
Bromodichloromethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
Bromoform	EPA 624	6B19012	0.32	5.0	ND	1	02/19/06	02/19/06	
Bromomethane	EPA 624	6B19012	0.42	5.0	ND	1	02/19/06	02/19/06	
Carbon tetrachloride	EPA 624	6B19012	0.28	0.50	ND	1	02/19/06	02/19/06	
Chlorobenzene	EPA 624	6B19012	0.36	2.0	ND	1	02/19/06	02/19/06	
Chloroethane	EPA 624	6B19012	0.40	5.0	ND	1	02/19/06	02/19/06	
Chloroform	EPA 624	6B19012	0.33	2.0	ND	1	02/19/06	02/19/06	
Chloromethane	EPA 624	6B19012	0.30	5.0	ND	1	02/19/06	02/19/06	
Dibromochloromethane	EPA 624	6B19012	0.28	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichlorobenzene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
1,3-Dichlorobenzene	EPA 624	6B19012	0.35	2.0	ND	1	02/19/06	02/19/06	
1,4-Dichlorobenzene	EPA 624	6B19012	0.37	2.0	ND	1	02/19/06	02/19/06	
1,1-Dichloroethane	EPA 624	6B19012	0.27	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichloroethane	EPA 624	6B19012	0.28	0.50	ND	1	02/19/06	02/19/06	
1,1-Dichloroethene	EPA 624	6B19012	0.42	5.0	ND	1	02/19/06	02/19/06	
trans-1,2-Dichloroethene	EPA 624	6B19012	0.27	2.0	ND	1	02/19/06	02/19/06	
1,2-Dichloropropane	EPA 624	6B19012	0.35	2.0	ND	1	02/19/06	02/19/06	
cis-1,3-Dichloropropene	EPA 624	6B19012	0.22	2.0	ND	1	02/19/06	02/19/06	
trans-1,3-Dichloropropene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
Ethylbenzene	EPA 624	6B19012	0.25	2.0	ND	1	02/19/06	02/19/06	
Methylene chloride	EPA 624	6B19012	0.70	5.0	ND	1	02/19/06	02/19/06	
1,1,2,2-Tetrachloroethane	EPA 624	6B19012	0.24	2.0	ND	1	02/19/06	02/19/06	
Tetrachloroethene	EPA 624	6B19012	0.32	2.0	ND	1	02/19/06	02/19/06	
Toluene	EPA 624	6B19012	0.36	2.0	ND	1	02/19/06	02/19/06	
1,1,1-Trichloroethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
1,1,2-Trichloroethane	EPA 624	6B19012	0.30	2.0	ND	1	02/19/06	02/19/06	
Trichloroethene	EPA 624	6B19012	0.26	2.0	ND	1	02/19/06	02/19/06	
Trichlorofluoromethane	EPA 624	6B19012	0.34	5.0	ND	1	02/19/06	02/19/06	
Vinyl chloride	EPA 624	6B19012	0.26	0.50	ND	1	02/19/06	02/19/06	
Xylenes, Total	EPA 624	6B19012	0.90	4.0	ND	1	02/19/06	02/19/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6B19012	1.2	5.0	ND	1	02/19/06	02/19/06	
Surrogate: Dibromofluoromethane (80-120%)					97 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					100 %				

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

Level II

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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 793-0343 FAX (480) 733-0871  
2520 E. Sunset Rd., #3, Las Vegas, NV 89120 (702) 798-0820 FAX (702) 798-1011

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

Project ID: Annual Outfall 009

Report Number: IPB1811

Sampled: 02/18/06  
Received: 02/18/06

PURGEABLES- GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1811-01 (Outfall 009 - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	6B19012	4.6	50	ND	1	02/19/06	02/19/06	R R
Acrylonitrile	EPA 624	6B19012	0.70	50	ND	1	02/19/06	02/19/06	u u
2-Chloroethyl vinyl ether	EPA 624	6B19012	1.8	5.0	ND	1	02/19/06	02/19/06	u u
Surrogate: Dibromofluoromethane (80-120%)					115 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					109 %				
Sample ID: IPB1811-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	6B19012	4.6	50	ND	1	02/19/06	02/19/06	R R
Acrylonitrile	EPA 624	6B19012	0.70	50	ND	1	02/19/06	02/19/06	u u
2-Chloroethyl vinyl ether	EPA 624	6B19012	1.8	5.0	ND	1	02/19/06	02/19/06	u u
Surrogate: Dibromofluoromethane (80-120%)					97 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					100 %				

u u  
02-06-06

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

Level III

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## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID: B4WC27  
 Task Order: 1261.001D.01  
 SDG No.: IPB1811

No. of Analyses: 1

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

Date: April 3, 2006  
 Reviewer's Signature  


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



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 009

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPB1811

Prepared by

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

Project: NPDES  
SDG: IPB1811  
Analysis: Gen. Min.

DATA VALIDATION REPORT

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>x</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB1811  
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: April 3, 2006

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



Project: NPDES  
SDG: IPB1811  
Analysis: Gen. Min.

DATA VALIDATION REPORT

---

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 009	IPB1811-01	Water	General Minerals

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , at  $3^{\circ}\text{C}$ . 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 analyses presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

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

### 2.2 CALIBRATION

For cyanide, the initial calibration correlation coefficients were  $\geq 0.995$  and the ICV and CCV recoveries were within the control limits of 90-110%. For TSS, 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 qualifications were required.

DATA VALIDATION REPORT

## 2.5 LABORATORY DUPLICATES

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

## 2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with this SDG; therefore, no assessment was made with respect to this criterion. 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. Cyanide detected below the reporting limit in Outfall 009 was qualified as estimated, "J," and annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No further qualifications were required.

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Field Blanks and Equipment Rinsates

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

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



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

Project ID: Annual Outfall 009  
 Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

**INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Raw Qual.	Qual Code
Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.										
Reporting Units: mg/l										
Chloride	EPA 300.0	6B19038	0.15	0.50	20	1	02/19/06	02/19/06	*	M2
Nitrate/Nitrite-N	EPA 300.0	6B19038	0.080	0.15	0.69	1	02/19/06	02/19/06		
Oil & Grease	EPA 413.1	6B22047	0.94	5.0	1.5	1	02/22/06	02/22/06		J
Sulfate	EPA 300.0	6B19038	2.2	2.5	66	5	02/19/06	02/19/06		
Total Dissolved Solids	SM2540C	6B22069	10	10	290	1	02/22/06	02/22/06		
Total Suspended Solids	EPA 160.2	6B22101	10	10	330	1	02/22/06	02/22/06		

\* Analysis not validated

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) 795-0043 FAX (480) 785-0851  
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MWH-Pasadena/Boeing  
 300 North Lake Avenue, Suite 1200  
 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 009  
 Report Number: IPB1811

Sampled: 02/18/06  
 Received: 02/18/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Low Qual	Qual Code
Sample ID: IPB1811-01 (Outfall 009 - Water) - cont.										
Reporting Units: ug/l										
Total Cyanide	EPA 335.2	6B22127	2.2	5.0	2.6	1	02/22/06	02/22/06	J J	DNQ
Perchlorate	EPA 314.0	6B23071	0.80	4.0	ND	1	02/23/06	02/23/06	*	

\* Analysis not validated

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

LEVEL N

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# **APPENDIX G**

## **Section 63**

Outfall 010, February 28, 2006

Del Mar Analytical Laboratory Report



LABORATORY REPORT

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

Project: Annual Outfall 010

Sampled: 02/28/06  
Received: 02/28/06  
Issued: 03/30/06 19:04

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
IPB2650-01	Outfall 010	Water
IPB2650-02	Trip Blank	Water

Reviewed By:

*Michele Chamberlin*

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager



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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

### CORRECTIVE ACTION REPORT

Department: Extractions

Date: 03/09/2006

Method: EPA 625

Matrix: Water

QC Batch: 6C06054

#### Identification and Definition of Problem:

- 1) The percent recoveries for dimethylphthalate and diethylphthalate in the LCSD were below laboratory acceptance limits.
- 2) The RPD between the LCS and LCSD exceeded laboratory acceptance limits for dimethylphthalate and diethylphthalate.

#### Determination of the Cause of the Problem:

- 1) A definitive cause for the QC failure has not been determined.
- 2) The RPDs failed due to the difference between the low LCSD recoveries and the acceptable LCS recoveries.

#### Corrective Action Taken:

Although the LCS recoveries for these two analytes were within acceptance limits, all results reported for dimethylphthalate and diethylphthalate must still be considered potentially biased low and can be used as estimates only.

Quality Assurance Approval: \_\_\_\_\_

Michele Chamberlin

Date: 03/16/2006 09:57 AM

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager





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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-01 (Outfall 010 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C03009	0.28	1.0	ND	1	03/03/06	03/03/06	
Bromodichloromethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Bromoform	EPA 624	6C03009	0.32	5.0	ND	1	03/03/06	03/03/06	
Bromomethane	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
Carbon tetrachloride	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
Chlorobenzene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
Chloroethane	EPA 624	6C03009	0.40	5.0	ND	1	03/03/06	03/03/06	
Chloroform	EPA 624	6C03009	0.33	2.0	ND	1	03/03/06	03/03/06	
Chloromethane	EPA 624	6C03009	0.30	5.0	ND	1	03/03/06	03/03/06	
Dibromochloromethane	EPA 624	6C03009	0.28	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichlorobenzene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
1,3-Dichlorobenzene	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
1,4-Dichlorobenzene	EPA 624	6C03009	0.37	2.0	ND	1	03/03/06	03/03/06	
1,1-Dichloroethane	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloroethane	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
1,1-Dichloroethene	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
trans-1,2-Dichloroethene	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloropropane	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
cis-1,3-Dichloropropene	EPA 624	6C03009	0.22	2.0	ND	1	03/03/06	03/03/06	
trans-1,3-Dichloropropene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Ethylbenzene	EPA 624	6C03009	0.25	2.0	ND	1	03/03/06	03/03/06	
Methylene chloride	EPA 624	6C03009	0.70	5.0	ND	1	03/03/06	03/03/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C03009	0.24	2.0	ND	1	03/03/06	03/03/06	
Tetrachloroethene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Toluene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
1,1,1-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
1,1,2-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Trichloroethene	EPA 624	6C03009	0.26	2.0	ND	1	03/03/06	03/03/06	
Trichlorofluoromethane	EPA 624	6C03009	0.34	5.0	ND	1	03/03/06	03/03/06	
Vinyl chloride	EPA 624	6C03009	0.26	0.50	ND	1	03/03/06	03/03/06	
Xylenes, Total	EPA 624	6C03009	0.90	4.0	ND	1	03/03/06	03/03/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C03009	1.2	5.0	ND	1	03/03/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)									108 %
Surrogate: Toluene-d8 (80-120%)									110 %
Surrogate: 4-Bromofluorobenzene (80-120%)									94 %

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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C03009	0.28	1.0	ND	1	03/03/06	03/03/06	
Bromodichloromethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Bromoform	EPA 624	6C03009	0.32	5.0	ND	1	03/03/06	03/03/06	
Bromomethane	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
Carbon tetrachloride	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
Chlorobenzene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
Chloroethane	EPA 624	6C03009	0.40	5.0	ND	1	03/03/06	03/03/06	
Chloroform	EPA 624	6C03009	0.33	2.0	ND	1	03/03/06	03/03/06	
Chloromethane	EPA 624	6C03009	0.30	5.0	ND	1	03/03/06	03/03/06	
Dibromochloromethane	EPA 624	6C03009	0.28	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichlorobenzene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
1,3-Dichlorobenzene	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
1,4-Dichlorobenzene	EPA 624	6C03009	0.37	2.0	ND	1	03/03/06	03/03/06	
1,1-Dichloroethane	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloroethane	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
1,1-Dichloroethene	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
trans-1,2-Dichloroethene	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloropropane	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
cis-1,3-Dichloropropene	EPA 624	6C03009	0.22	2.0	ND	1	03/03/06	03/03/06	
trans-1,3-Dichloropropene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Ethylbenzene	EPA 624	6C03009	0.25	2.0	ND	1	03/03/06	03/03/06	
Methylene chloride	EPA 624	6C03009	0.70	5.0	ND	1	03/03/06	03/03/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C03009	0.24	2.0	ND	1	03/03/06	03/03/06	
Tetrachloroethene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Toluene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
1,1,1-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
1,1,2-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Trichloroethene	EPA 624	6C03009	0.26	2.0	ND	1	03/03/06	03/03/06	
Trichlorofluoromethane	EPA 624	6C03009	0.34	5.0	ND	1	03/03/06	03/03/06	
Vinyl chloride	EPA 624	6C03009	0.26	0.50	ND	1	03/03/06	03/03/06	
Xylenes, Total	EPA 624	6C03009	0.90	4.0	ND	1	03/03/06	03/03/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C03009	1.2	5.0	ND	1	03/03/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					106 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					92 %				

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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2650-01 (Outfall 010 - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6C03009	4.6	50	ND	1	03/03/06	03/03/06	
Acrylonitrile	EPA 624	6C03009	0.70	50	ND	1	03/03/06	03/03/06	
2-Chloroethyl vinyl ether	EPA 624	6C03009	1.8	5.0	ND	1	03/03/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					108 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					94 %				
<b>Sample ID: IPB2650-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6C03009	4.6	50	ND	1	03/03/06	03/03/06	
Acrylonitrile	EPA 624	6C03009	0.70	50	ND	1	03/03/06	03/03/06	
2-Chloroethyl vinyl ether	EPA 624	6C03009	1.8	5.0	ND	1	03/03/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					106 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					92 %				

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 Michele Chamberlin  
 Project Manager

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MWH-Pasadena/Boeing Project ID: Annual Outfall 010  
300 North Lake Avenue, Suite 1200 Report Number: IPB2650  
Pasadena, CA 91101  
Attention: Bronwyn Kelly  
Sampled: 02/28/06  
Received: 02/28/06

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 sample ID: IPB2650-01 (Outfall 010 - Water) and reporting units: ug/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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Fluorene	EPA 625	6C06054	3.7	9.4	ND	0.943	03/06/06	03/09/06	
Hexachlorobenzene	EPA 625	6C06054	4.5	9.4	ND	0.943	03/06/06	03/09/06	
Hexachlorobutadiene	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	
Hexachlorocyclopentadiene	EPA 625	6C06054	3.2	19	ND	0.943	03/06/06	03/09/06	
Hexachloroethane	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6C06054	5.1	19	ND	0.943	03/06/06	03/09/06	
Isophorone	EPA 625	6C06054	3.5	9.4	ND	0.943	03/06/06	03/09/06	
2-Methylnaphthalene	EPA 625	6C06054	2.8	9.4	ND	0.943	03/06/06	03/09/06	
2-Methylphenol	EPA 625	6C06054	3.5	9.4	ND	0.943	03/06/06	03/09/06	
4-Methylphenol	EPA 625	6C06054	3.6	9.4	ND	0.943	03/06/06	03/09/06	
Naphthalene	EPA 625	6C06054	4.2	9.4	ND	0.943	03/06/06	03/09/06	
2-Nitroaniline	EPA 625	6C06054	3.7	19	ND	0.943	03/06/06	03/09/06	
3-Nitroaniline	EPA 625	6C06054	4.2	19	ND	0.943	03/06/06	03/09/06	
4-Nitroaniline	EPA 625	6C06054	4.6	19	ND	0.943	03/06/06	03/09/06	
Nitrobenzene	EPA 625	6C06054	4.0	19	ND	0.943	03/06/06	03/09/06	
2-Nitrophenol	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	
4-Nitrophenol	EPA 625	6C06054	6.2	19	ND	0.943	03/06/06	03/09/06	
N-Nitrosodiphenylamine	EPA 625	6C06054	3.8	9.4	ND	0.943	03/06/06	03/09/06	
N-Nitroso-di-n-propylamine	EPA 625	6C06054	3.4	9.4	ND	0.943	03/06/06	03/09/06	
Pentachlorophenol	EPA 625	6C06054	3.8	19	ND	0.943	03/06/06	03/09/06	
Phenanthrene	EPA 625	6C06054	3.1	9.4	ND	0.943	03/06/06	03/09/06	
Phenol	EPA 625	6C06054	3.8	9.4	ND	0.943	03/06/06	03/09/06	
Pyrene	EPA 625	6C06054	3.7	9.4	ND	0.943	03/06/06	03/09/06	
1,2,4-Trichlorobenzene	EPA 625	6C06054	4.2	9.4	ND	0.943	03/06/06	03/09/06	
2,4,5-Trichlorophenol	EPA 625	6C06054	3.4	19	ND	0.943	03/06/06	03/09/06	
2,4,6-Trichlorophenol	EPA 625	6C06054	3.9	19	ND	0.943	03/06/06	03/09/06	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6C06054	4.7	19	ND	0.943	03/06/06	03/09/06	
N-Nitrosodimethylamine	EPA 625	6C06054	3.5	19	ND	0.943	03/06/06	03/09/06	
Surrogate: 2-Fluorophenol (30-120%)					62 %				
Surrogate: Phenol-d6 (35-120%)					67 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					86 %				
Surrogate: Nitrobenzene-d5 (45-120%)					68 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					69 %				
Surrogate: Terphenyl-d14 (45-120%)					83 %				

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

**ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Aldrin	EPA 608	6C05031	0.029	0.095	ND	0.952	03/05/06	03/07/06	
alpha-BHC	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	
beta-BHC	EPA 608	6C05031	0.014	0.095	ND	0.952	03/05/06	03/07/06	
delta-BHC	EPA 608	6C05031	0.019	0.19	ND	0.952	03/05/06	03/07/06	
gamma-BHC (Lindane)	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	
Chlordane	EPA 608	6C05031	0.19	0.95	ND	0.952	03/05/06	03/07/06	
4,4'-DDD	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	
4,4'-DDE	EPA 608	6C05031	0.024	0.095	ND	0.952	03/05/06	03/07/06	
4,4'-DDT	EPA 608	6C05031	0.033	0.095	ND	0.952	03/05/06	03/07/06	
Dieldrin	EPA 608	6C05031	0.014	0.095	ND	0.952	03/05/06	03/07/06	
Endosulfan I	EPA 608	6C05031	0.014	0.095	ND	0.952	03/05/06	03/07/06	
Endosulfan II	EPA 608	6C05031	0.038	0.095	ND	0.952	03/05/06	03/07/06	
Endosulfan sulfate	EPA 608	6C05031	0.019	0.19	ND	0.952	03/05/06	03/07/06	
Endrin	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	
Endrin aldehyde	EPA 608	6C05031	0.043	0.095	ND	0.952	03/05/06	03/07/06	
Endrin ketone	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	
Heptachlor	EPA 608	6C05031	0.029	0.095	ND	0.952	03/05/06	03/07/06	
Heptachlor epoxide	EPA 608	6C05031	0.029	0.095	ND	0.952	03/05/06	03/07/06	
Methoxychlor	EPA 608	6C05031	0.033	0.095	ND	0.952	03/05/06	03/07/06	
Toxaphene	EPA 608	6C05031	1.4	4.8	ND	0.952	03/05/06	03/07/06	
Surrogate: Tetrachloro-m-xylene (35-115%)									65 %
Surrogate: Decachlorobiphenyl (45-120%)									66 %

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

## TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	6C05031	0.19	0.95	ND	0.952	03/05/06	03/06/06	
Aroclor 1221	EPA 608	6C05031	0.095	0.95	ND	0.952	03/05/06	03/06/06	
Aroclor 1232	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	
Aroclor 1242	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	
Aroclor 1248	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	
Aroclor 1254	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	
Aroclor 1260	EPA 608	6C05031	0.38	0.95	ND	0.952	03/05/06	03/06/06	
Surrogate: Decachlorobiphenyl (45-120%)					98 %				

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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.									
Reporting Units: mg/l									
Boron	EPA 200.7	6C03084	0.0074	0.050	ND	1	03/03/06	03/07/06	

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 010  Report Number: IPB2650	Sampled: 02/28/06 Received: 02/28/06
--	--	---

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Aluminum	EPA 200.7	6C03084	40	50	1100	1	03/03/06	03/04/06	
Antimony	EPA 200.8	6C02098	0.18	2.0	0.33	1	03/02/06	03/02/06	J
Arsenic	EPA 200.7	6C03084	4.4	5.0	ND	1	03/03/06	03/04/06	
Beryllium	EPA 200.7	6C03084	0.90	2.0	ND	1	03/03/06	03/04/06	
Cadmium	EPA 200.8	6C02098	0.015	1.0	0.037	1	03/02/06	03/02/06	B, J
Chromium	EPA 200.7	6C03084	2.0	5.0	2.1	1	03/03/06	03/04/06	B, J
Copper	EPA 200.8	6C02098	0.49	2.0	2.2	1	03/02/06	03/02/06	
Lead	EPA 200.8	6C02098	0.040	1.0	0.83	1	03/02/06	03/02/06	J
Mercury	EPA 245.1	6C02097	0.063	0.20	ND	1	03/02/06	03/02/06	
Nickel	EPA 200.7	6C03084	2.0	10	ND	1	03/03/06	03/04/06	
Selenium	EPA 200.7	6C03084	8.0	10	ND	1	03/03/06	03/04/06	
Silver	EPA 200.7	6C03084	3.0	10	ND	1	03/03/06	03/04/06	
Thallium	EPA 200.8	6C02098	N/A	1.0	ND	1	03/02/06	03/02/06	
Vanadium	EPA 200.7	6C03084	3.0	10	3.7	1	03/03/06	03/04/06	J
Zinc	EPA 200.7	6C03084	15	20	ND	1	03/03/06	03/04/06	

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6B28141	0.26	0.50	4.5	1	02/28/06	03/01/06	
Nitrate/Nitrite-N	EPA 300.0	6B28141	0.072	0.26	0.27	1	02/28/06	03/01/06	
Oil & Grease	EPA 413.1	6C08046	0.93	5.0	4.2	1	03/08/06	03/08/06	J
Sulfate	EPA 300.0	6B28141	0.18	0.50	4.1	1	02/28/06	03/01/06	
Total Dissolved Solids	SM2540C	6C03069	10	10	110	1	03/03/06	03/03/06	
Total Suspended Solids	EPA 160.2	6C06085	10	10	14	1	03/06/06	03/06/06	

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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6C02125	2.2	5.0	ND	1	03/02/06	03/02/06	
Perchlorate	EPA 314.0	6C03066	0.80	4.0	ND	1	03/03/06	03/03/06	

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

## SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
<b>Sample ID: Outfall 010 (IPB2650-01) - Water</b>					
EPA 300.0	2	02/28/2006 10:10	02/28/2006 18:35	02/28/2006 23:30	03/01/2006 05:05
EPA 624	3	02/28/2006 10:10	02/28/2006 18:35	03/03/2006 00:00	03/03/2006 15:57
<b>Sample ID: Trip Blank (IPB2650-02) - Water</b>					
EPA 624	3	02/28/2006 15:45	02/28/2006 18:35	03/03/2006 00:00	03/03/2006 11:15

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 6C03009 Extracted: 03/03/06

Blank Analyzed: 03/03/2006 (6C03009-BLK1)

Benzene	ND	1.0	0.28	ug/l							
Bromodichloromethane	ND	2.0	0.30	ug/l							
Bromoform	ND	5.0	0.32	ug/l							
Bromomethane	ND	5.0	0.42	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chlorobenzene	ND	2.0	0.36	ug/l							
Chloroethane	ND	5.0	0.40	ug/l							
Chloroform	ND	2.0	0.33	ug/l							
Chloromethane	ND	5.0	0.30	ug/l							
Dibromochloromethane	ND	2.0	0.28	ug/l							
1,2-Dichlorobenzene	ND	2.0	0.32	ug/l							
1,3-Dichlorobenzene	ND	2.0	0.35	ug/l							
1,4-Dichlorobenzene	ND	2.0	0.37	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	5.0	0.42	ug/l							
trans-1,2-Dichloroethene	ND	2.0	0.27	ug/l							
1,2-Dichloropropane	ND	2.0	0.35	ug/l							
cis-1,3-Dichloropropene	ND	2.0	0.22	ug/l							
trans-1,3-Dichloropropene	ND	2.0	0.32	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Methylene chloride	ND	5.0	0.70	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	0.24	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND	2.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Vinyl chloride	ND	0.50	0.26	ug/l							
Xylenes, Total	ND	4.0	0.90	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l							
Surrogate: Dibromofluoromethane	26.5			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	27.3			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	23.2			ug/l	25.0		93	80-120			

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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C03009 Extracted: 03/03/06</b>										
<b>LCS Analyzed: 03/03/2006 (6C03009-BS1)</b>										
Benzene	27.4	1.0	0.28	ug/l	25.0		110 65-120			
Bromodichloromethane	27.0	2.0	0.30	ug/l	25.0		108 65-135			
Bromoform	20.1	5.0	0.32	ug/l	25.0		80 50-130			
Bromomethane	26.2	5.0	0.42	ug/l	25.0		105 60-140			
Carbon tetrachloride	25.6	0.50	0.28	ug/l	25.0		102 65-140			
Chlorobenzene	26.9	2.0	0.36	ug/l	25.0		108 70-125			
Chloroethane	28.8	5.0	0.40	ug/l	25.0		115 55-140			
Chloroform	27.6	2.0	0.33	ug/l	25.0		110 65-130			
Chloromethane	24.9	5.0	0.30	ug/l	25.0		100 40-140			
Dibromochloromethane	25.2	2.0	0.28	ug/l	25.0		101 65-140			
1,2-Dichlorobenzene	27.4	2.0	0.32	ug/l	25.0		110 70-120			
1,3-Dichlorobenzene	25.1	2.0	0.35	ug/l	25.0		100 70-125			
1,4-Dichlorobenzene	24.8	2.0	0.37	ug/l	25.0		99 70-125			
1,1-Dichloroethane	27.4	2.0	0.27	ug/l	25.0		110 65-130			
1,2-Dichloroethane	27.2	0.50	0.28	ug/l	25.0		109 60-140			
1,1-Dichloroethene	30.5	5.0	0.42	ug/l	25.0		122 70-130			
trans-1,2-Dichloroethene	28.9	2.0	0.27	ug/l	25.0		116 65-130			
1,2-Dichloropropane	28.4	2.0	0.35	ug/l	25.0		114 65-125			
cis-1,3-Dichloropropene	27.0	2.0	0.22	ug/l	25.0		108 70-130			
trans-1,3-Dichloropropene	26.8	2.0	0.32	ug/l	25.0		107 65-130			
Ethylbenzene	26.6	2.0	0.25	ug/l	25.0		106 70-125			
Methylene chloride	29.6	5.0	0.70	ug/l	25.0		118 60-130			
1,1,2,2-Tetrachloroethane	30.2	2.0	0.24	ug/l	25.0		121 55-130			
Tetrachloroethene	26.0	2.0	0.32	ug/l	25.0		104 65-125			
Toluene	27.1	2.0	0.36	ug/l	25.0		108 70-125			
1,1,1-Trichloroethane	23.4	2.0	0.30	ug/l	25.0		94 65-135			
1,1,2-Trichloroethane	30.4	2.0	0.30	ug/l	25.0		122 65-125			
Trichloroethene	29.5	2.0	0.26	ug/l	25.0		118 70-125			
Trichlorofluoromethane	23.9	5.0	0.34	ug/l	25.0		96 60-140			
Vinyl chloride	27.1	0.50	0.26	ug/l	25.0		108 50-130			
Surrogate: Dibromofluoromethane	28.8			ug/l	25.0		115 80-120			
Surrogate: Toluene-d8	28.0			ug/l	25.0		112 80-120			
Surrogate: 4-Bromofluorobenzene	27.8			ug/l	25.0		111 80-120			

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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C03009 Extracted: 03/03/06</b>											
<b>Matrix Spike Analyzed: 03/03/2006 (6C03009-MS1)</b>						<b>Source: IPB2645-01RE1</b>					
Benzene	26.0	1.0	0.28	ug/l	25.0	ND	104	60-125			
Bromodichloromethane	24.7	2.0	0.30	ug/l	25.0	ND	99	65-135			
Bromoform	20.3	5.0	0.32	ug/l	25.0	ND	81	50-135			
Bromomethane	24.8	5.0	0.42	ug/l	25.0	ND	99	50-145			
Carbon tetrachloride	24.6	0.50	0.28	ug/l	25.0	ND	98	65-140			
Chlorobenzene	26.1	2.0	0.36	ug/l	25.0	ND	104	70-125			
Chloroethane	27.7	5.0	0.40	ug/l	25.0	ND	111	50-140			
Chloroform	25.2	2.0	0.33	ug/l	25.0	ND	101	65-135			
Chloromethane	23.6	5.0	0.30	ug/l	25.0	ND	94	35-140			
Dibromochloromethane	24.8	2.0	0.28	ug/l	25.0	ND	99	60-140			
1,2-Dichlorobenzene	26.2	2.0	0.32	ug/l	25.0	ND	105	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	25.7	2.0	0.27	ug/l	25.0	ND	103	60-130			
1,2-Dichloroethane	24.5	0.50	0.28	ug/l	25.0	ND	98	60-140			
1,1-Dichloroethene	28.4	5.0	0.42	ug/l	25.0	ND	114	60-135			
trans-1,2-Dichloroethene	27.2	2.0	0.27	ug/l	25.0	ND	109	60-135			
1,2-Dichloropropane	26.3	2.0	0.35	ug/l	25.0	ND	105	60-125			
cis-1,3-Dichloropropene	24.4	2.0	0.22	ug/l	25.0	ND	98	65-135			
trans-1,3-Dichloropropene	24.1	2.0	0.32	ug/l	25.0	ND	96	65-140			
Ethylbenzene	26.0	2.0	0.25	ug/l	25.0	ND	104	65-130			
Methylene chloride	26.9	5.0	0.70	ug/l	25.0	ND	108	55-130			
1,1,2,2-Tetrachloroethane	30.7	2.0	0.24	ug/l	25.0	ND	123	55-140			
Tetrachloroethene	26.3	2.0	0.32	ug/l	25.0	ND	105	60-130			
Toluene	25.4	2.0	0.36	ug/l	25.0	ND	102	65-125			
1,1,1-Trichloroethane	22.2	2.0	0.30	ug/l	25.0	ND	89	65-140			
1,1,2-Trichloroethane	26.3	2.0	0.30	ug/l	25.0	ND	105	60-130			
Trichloroethene	26.3	2.0	0.26	ug/l	25.0	ND	105	60-125			
Trichlorofluoromethane	22.4	5.0	0.34	ug/l	25.0	ND	90	55-145			
Vinyl chloride	26.1	0.50	0.26	ug/l	25.0	ND	104	40-135			
Surrogate: Dibromofluoromethane	27.9			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	27.0			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	26.8			ug/l	25.0		107	80-120			

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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C03009 Extracted: 03/03/06</b>										
<b>Matrix Spike Dup Analyzed: 03/03/2006 (6C03009-MSD1)</b>										
<b>Source: IPB2645-01RE1</b>										
Benzene	26.1	1.0	0.28	ug/l	25.0	ND	104 60-125	0	20	
Bromodichloromethane	25.7	2.0	0.30	ug/l	25.0	ND	103 65-135	4	20	
Bromoform	20.5	5.0	0.32	ug/l	25.0	ND	82 50-135	1	25	
Bromomethane	22.2	5.0	0.42	ug/l	25.0	ND	89 50-145	11	25	
Carbon tetrachloride	25.3	0.50	0.28	ug/l	25.0	ND	101 65-140	3	25	
Chlorobenzene	25.6	2.0	0.36	ug/l	25.0	ND	102 70-125	2	20	
Chloroethane	25.7	5.0	0.40	ug/l	25.0	ND	103 50-140	7	25	
Chloroform	26.0	2.0	0.33	ug/l	25.0	ND	104 65-135	3	20	
Chloromethane	22.7	5.0	0.30	ug/l	25.0	ND	91 35-140	4	25	
Dibromochloromethane	25.4	2.0	0.28	ug/l	25.0	ND	102 60-140	2	25	
1,2-Dichlorobenzene	26.7	2.0	0.32	ug/l	25.0	ND	107 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	24.0	2.0	0.37	ug/l	25.0	ND	96 70-125	0	20	
1,1-Dichloroethane	26.0	2.0	0.27	ug/l	25.0	ND	104 60-130	1	20	
1,2-Dichloroethane	26.0	0.50	0.28	ug/l	25.0	ND	104 60-140	6	20	
1,1-Dichloroethene	27.9	5.0	0.42	ug/l	25.0	ND	112 60-135	2	20	
trans-1,2-Dichloroethene	27.5	2.0	0.27	ug/l	25.0	ND	110 60-135	1	20	
1,2-Dichloropropane	26.3	2.0	0.35	ug/l	25.0	ND	105 60-125	0	20	
cis-1,3-Dichloropropene	25.2	2.0	0.22	ug/l	25.0	ND	101 65-135	3	20	
trans-1,3-Dichloropropene	25.6	2.0	0.32	ug/l	25.0	ND	102 65-140	6	25	
Ethylbenzene	25.9	2.0	0.25	ug/l	25.0	ND	104 65-130	0	20	
Methylene chloride	27.3	5.0	0.70	ug/l	25.0	ND	109 55-130	1	20	
1,1,2,2-Tetrachloroethane	37.0	2.0	0.24	ug/l	25.0	ND	148 55-140	19	30	
Tetrachloroethene	25.4	2.0	0.32	ug/l	25.0	ND	102 60-130	3	20	
Toluene	25.6	2.0	0.36	ug/l	25.0	ND	102 65-125	1	20	
1,1,1-Trichloroethane	23.0	2.0	0.30	ug/l	25.0	ND	92 65-140	4	20	
1,1,2-Trichloroethane	28.8	2.0	0.30	ug/l	25.0	ND	115 60-130	9	25	
Trichloroethene	25.8	2.0	0.26	ug/l	25.0	ND	103 60-125	2	20	
Trichlorofluoromethane	22.6	5.0	0.34	ug/l	25.0	ND	90 55-145	1	25	
Vinyl chloride	23.1	0.50	0.26	ug/l	25.0	ND	92 40-135	12	30	
Surrogate: Dibromofluoromethane	28.2			ug/l	25.0		113 80-120			
Surrogate: Toluene-d8	27.4			ug/l	25.0		110 80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106 80-120			MI

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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES-- GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C03009 Extracted: 03/03/06</b>										
<b>Blank Analyzed: 03/03/2006 (6C03009-BLK1)</b>										
Acrolein	ND	50	4.6	ug/l						
Acrylonitrile	ND	50	0.70	ug/l						
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l						
Surrogate: Dibromofluoromethane	26.5			ug/l	25.0		106	80-120		
Surrogate: Toluene-d8	27.3			ug/l	25.0		109	80-120		
Surrogate: 4-Bromofluorobenzene	23.2			ug/l	25.0		93	80-120		
<b>LCS Analyzed: 03/03/2006 (6C03009-BS1)</b>										
2-Chloroethyl vinyl ether	16.0	5.0	1.8	ug/l	25.0		64	25-170		
Surrogate: Dibromofluoromethane	28.8			ug/l	25.0		115	80-120		
Surrogate: Toluene-d8	28.0			ug/l	25.0		112	80-120		
Surrogate: 4-Bromofluorobenzene	27.8			ug/l	25.0		111	80-120		
<b>Matrix Spike Analyzed: 03/03/2006 (6C03009-MS1)</b>										
					<b>Source: IPB2645-01RE1</b>					
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l	25.0	ND		25-170		M2
Surrogate: Dibromofluoromethane	27.9			ug/l	25.0		112	80-120		
Surrogate: Toluene-d8	27.0			ug/l	25.0		108	80-120		
Surrogate: 4-Bromofluorobenzene	26.8			ug/l	25.0		107	80-120		
<b>Matrix Spike Dup Analyzed: 03/03/2006 (6C03009-MSD1)</b>										
					<b>Source: IPB2645-01RE1</b>					
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l	25.0	ND		25-170	25	M2
Surrogate: Dibromofluoromethane	28.2			ug/l	25.0		113	80-120		
Surrogate: Toluene-d8	27.4			ug/l	25.0		110	80-120		
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120		

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting	MDL	Units	Spike	Source	%REC	RPD	RPD	Data
		Limit								
<b>Batch: 6C06054 Extracted: 03/06/06</b>										
<b>Blank Analyzed: 03/08/2006 (6C06054-BLK1)</b>										
Acenaphthene	ND	10	4.3	ug/l						
Acenaphthylene	ND	10	3.2	ug/l						
Aniline	ND	10	2.9	ug/l						
Anthracene	ND	10	3.2	ug/l						
Benzidine	ND	20	5.2	ug/l						
Benzoic acid	ND	20	2.6	ug/l						
Benzo(a)anthracene	ND	10	3.7	ug/l						
Benzo(b)fluoranthene	ND	10	2.7	ug/l						
Benzo(k)fluoranthene	ND	10	3.4	ug/l						
Benzo(g,h,i)perylene	ND	10	5.3	ug/l						
Benzo(a)pyrene	ND	10	3.5	ug/l						
Benzyl alcohol	ND	20	2.5	ug/l						
Bis(2-chloroethoxy)methane	ND	10	3.9	ug/l						
Bis(2-chloroethyl)ether	ND	10	4.4	ug/l						
Bis(2-chloroisopropyl)ether	ND	10	4.6	ug/l						
Bis(2-ethylhexyl)phthalate	ND	50	5.2	ug/l						
4-Bromophenyl phenyl ether	ND	10	4.6	ug/l						
Butyl benzyl phthalate	ND	20	3.5	ug/l						
4-Chloroaniline	ND	10	6.0	ug/l						
2-Chloronaphthalene	ND	10	4.0	ug/l						
4-Chloro-3-methylphenol	ND	20	3.5	ug/l						
2-Chlorophenol	ND	10	4.2	ug/l						
4-Chlorophenyl phenyl ether	ND	10	3.0	ug/l						
Chrysene	ND	10	2.8	ug/l						
Dibenz(a,h)anthracene	ND	20	4.7	ug/l						
Dibenzofuran	ND	10	2.6	ug/l						
Di-n-butyl phthalate	ND	20	2.8	ug/l						
1,3-Dichlorobenzene	ND	10	4.1	ug/l						
1,4-Dichlorobenzene	ND	10	3.9	ug/l						
1,2-Dichlorobenzene	ND	10	4.5	ug/l						
3,3-Dichlorobenzidine	ND	20	1.1	ug/l						
2,4-Dichlorophenol	ND	10	4.1	ug/l						
Diethyl phthalate	ND	10	3.1	ug/l						
2,4-Dimethylphenol	ND	20	4.4	ug/l						
Dimethyl phthalate	ND	10	3.6	ug/l						

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

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

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

**Batch: 6C06054 Extracted: 03/06/06**

**Blank Analyzed: 03/08/2006 (6C06054-BLK1)**

4,6-Dinitro-2-methylphenol	ND	20	5.1	ug/l							
2,4-Dinitrophenol	ND	20	5.3	ug/l							
2,4-Dinitrotoluene	ND	10	4.2	ug/l							
2,6-Dinitrotoluene	ND	10	3.2	ug/l							
Di-n-octyl phthalate	ND	20	4.7	ug/l							
Fluoranthene	ND	10	4.2	ug/l							
Fluorene	ND	10	3.9	ug/l							
Hexachlorobenzene	ND	10	4.8	ug/l							
Hexachlorobutadiene	ND	10	4.2	ug/l							
Hexachlorocyclopentadiene	ND	20	3.4	ug/l							
Hexachloroethane	ND	10	4.2	ug/l							
Indeno(1,2,3-cd)pyrene	ND	20	5.4	ug/l							
Isophorone	ND	10	3.7	ug/l							
2-Methylnaphthalene	ND	10	3.0	ug/l							
2-Methylphenol	ND	10	3.7	ug/l							
4-Methylphenol	ND	10	3.8	ug/l							
Naphthalene	ND	10	4.5	ug/l							
2-Nitroaniline	ND	20	3.9	ug/l							
3-Nitroaniline	ND	20	4.5	ug/l							
4-Nitroaniline	ND	20	4.9	ug/l							
Nitrobenzene	ND	20	4.2	ug/l							
2-Nitrophenol	ND	10	4.2	ug/l							
4-Nitrophenol	ND	20	6.6	ug/l							
N-Nitrosodiphenylamine	ND	10	4.0	ug/l							
N-Nitroso-di-n-propylamine	ND	10	3.6	ug/l							
Pentachlorophenol	ND	20	4.0	ug/l							
Phenanthrene	ND	10	3.3	ug/l							
Phenol	ND	10	4.0	ug/l							
Pyrene	ND	10	3.9	ug/l							
1,2,4-Trichlorobenzene	ND	10	4.4	ug/l							
2,4,5-Trichlorophenol	ND	20	3.6	ug/l							
2,4,6-Trichlorophenol	ND	20	4.1	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	20	5.0	ug/l							
N-Nitrosodimethylamine	ND	20	3.7	ug/l							
Surrogate: 2-Fluorophenol	127			ug/l	200		64		30-120		

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06054 Extracted: 03/06/06</b>										
<b>Blank Analyzed: 03/08/2006 (6C06054-BLK1)</b>										
Surrogate: Phenol-d6	137			ug/l	200		68 35-120			
Surrogate: 2,4,6-Tribromophenol	173			ug/l	200		86 45-120			
Surrogate: Nitrobenzene-d5	67.6			ug/l	100		68 45-120			
Surrogate: 2-Fluorobiphenyl	70.6			ug/l	100		71 45-120			
Surrogate: Terphenyl-d14	87.7			ug/l	100		88 45-120			
<b>LCS Analyzed: 03/08/2006 (6C06054-BS1)</b>										
Acenaphthene	81.1	10	4.3	ug/l	100		81 55-120			M-NR1
Acenaphthylene	85.5	10	3.2	ug/l	100		86 55-120			
Aniline	73.2	10	2.9	ug/l	100		73 35-120			
Anthracene	89.9	10	3.2	ug/l	100		90 55-120			
Benzidine	134	20	5.2	ug/l	100		134 20-160			
Benzoic acid	69.1	20	2.6	ug/l	100		69 35-120			
Benzo(a)anthracene	88.6	10	3.7	ug/l	100		89 60-120			
Benzo(b)fluoranthene	101	10	2.7	ug/l	100		101 50-120			
Benzo(k)fluoranthene	101	10	3.4	ug/l	100		101 50-120			
Benzo(g,h,i)perylene	112	10	5.3	ug/l	100		112 40-125			
Benzo(a)pyrene	101	10	3.5	ug/l	100		101 55-120			
Benzyl alcohol	74.1	20	2.5	ug/l	100		74 45-120			
Bis(2-chloroethoxy)methane	75.3	10	3.9	ug/l	100		75 55-120			
Bis(2-chloroethyl)ether	70.4	10	4.4	ug/l	100		70 50-120			
Bis(2-chloroisopropyl)ether	70.1	10	4.6	ug/l	100		70 45-120			
Bis(2-ethylhexyl)phthalate	87.5	50	5.2	ug/l	100		88 60-130			
4-Bromophenyl phenyl ether	87.5	10	4.6	ug/l	100		88 50-120			
Butyl benzyl phthalate	83.1	20	3.5	ug/l	100		83 55-125			
4-Chloroaniline	78.9	10	6.0	ug/l	100		79 50-120			
2-Chloronaphthalene	81.7	10	4.0	ug/l	100		82 55-120			
4-Chloro-3-methylphenol	77.1	20	3.5	ug/l	100		77 60-120			
2-Chlorophenol	71.6	10	4.2	ug/l	100		72 45-120			
4-Chlorophenyl phenyl ether	86.9	10	3.0	ug/l	100		87 55-120			
Chrysene	90.5	10	2.8	ug/l	100		90 60-120			
Dibenz(a,h)anthracene	112	20	4.7	ug/l	100		112 45-130			
Dibenzofuran	80.6	10	2.6	ug/l	100		81 60-120			
Di-n-butyl phthalate	88.2	20	2.8	ug/l	100		88 55-125			
1,3-Dichlorobenzene	55.9	10	4.1	ug/l	100		56 35-120			
1,4-Dichlorobenzene	57.1	10	3.9	ug/l	100		57 35-120			

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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06

Received: 02/28/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06054 Extracted: 03/06/06</b>										
<b>LCS Analyzed: 03/08/2006 (6C06054-BS1)</b>										
1,2-Dichlorobenzene	61.1	10	4.5	ug/l	100		61 35-120			M-NRI
3,3-Dichlorobenzidine	105	20	11	ug/l	100		105 45-130			
2,4-Dichlorophenol	78.4	10	4.1	ug/l	100		78 55-120			
Diethyl phthalate	80.7	10	3.1	ug/l	100		81 55-120			
2,4-Dimethylphenol	60.1	20	4.4	ug/l	100		60 30-120			
Dimethyl phthalate	51.4	10	3.6	ug/l	100		51 30-120			
4,6-Dinitro-2-methylphenol	83.2	20	5.1	ug/l	100		83 50-120			
2,4-Dinitrophenol	75.0	20	5.3	ug/l	100		75 40-120			
2,4-Dinitrotoluene	82.5	10	4.2	ug/l	100		82 60-120			
2,6-Dinitrotoluene	81.0	10	3.2	ug/l	100		81 60-120			
Di-n-octyl phthalate	76.5	20	4.7	ug/l	100		76 60-130			
Fluoranthene	88.2	10	4.2	ug/l	100		88 55-120			
Fluorene	81.1	10	3.9	ug/l	100		81 60-120			
Hexachlorobenzene	96.4	10	4.8	ug/l	100		96 50-120			
Hexachlorobutadiene	71.6	10	4.2	ug/l	100		72 40-120			
Hexachlorocyclopentadiene	79.5	20	3.4	ug/l	100		80 15-120			
Hexachloroethane	57.1	10	4.2	ug/l	100		57 35-120			
Indeno(1,2,3-cd)pyrene	104	20	5.4	ug/l	100		104 40-130			
Isophorone	71.9	10	3.7	ug/l	100		72 50-120			
2-Methylnaphthalene	76.2	10	3.0	ug/l	100		76 50-120			
2-Methylphenol	72.8	10	3.7	ug/l	100		73 45-120			
4-Methylphenol	75.4	10	3.8	ug/l	100		75 45-120			
Naphthalene	74.5	10	4.5	ug/l	100		74 50-120			
2-Nitroaniline	80.0	20	3.9	ug/l	100		80 60-120			
3-Nitroaniline	81.3	20	4.5	ug/l	100		81 55-120			
4-Nitroaniline	85.4	20	4.9	ug/l	100		85 50-125			
Nitrobenzene	70.7	20	4.2	ug/l	100		71 50-120			
2-Nitrophenol	74.0	10	4.2	ug/l	100		74 55-120			
4-Nitrophenol	80.1	20	6.6	ug/l	100		80 45-120			
N-Nitrosodiphenylamine	82.7	10	4.0	ug/l	100		83 55-120			
N-Nitroso-di-n-propylamine	74.1	10	3.6	ug/l	100		74 45-120			
Pentachlorophenol	99.9	20	4.0	ug/l	100		100 50-120			
Phenanthrene	88.0	10	3.3	ug/l	100		88 55-120			
Phenol	69.7	10	4.0	ug/l	100		70 45-120			
Pyrene	88.2	10	3.9	ug/l	100		88 50-120			

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06054 Extracted: 03/06/06</b>										
<b>LCS Analyzed: 03/08/2006 (6C06054-BS1)</b>										
1,2,4-Trichlorobenzene	70.2	10	4.4	ug/l	100	70	45-120			M-NR1
2,4,5-Trichlorophenol	82.2	20	3.6	ug/l	100	82	60-120			
2,4,6-Trichlorophenol	84.5	20	4.1	ug/l	100	84	60-120			
1,2-Diphenylhydrazine/Azobenzene	76.8	20	5.0	ug/l	100	77	60-120			
N-Nitrosodimethylamine	66.7	20	3.7	ug/l	100	67	40-120			
Surrogate: 2-Fluorophenol	120			ug/l	200	60	30-120			
Surrogate: Phenol-d6	136			ug/l	200	68	35-120			
Surrogate: 2,4,6-Tribromophenol	188			ug/l	200	94	45-120			
Surrogate: Nitrobenzene-d5	69.1			ug/l	100	69	45-120			
Surrogate: 2-Fluorobiphenyl	80.3			ug/l	100	80	45-120			
Surrogate: Terphenyl-d14	86.9			ug/l	100	87	45-120			
<b>LCS Dup Analyzed: 03/08/2006 (6C06054-BSD1)</b>										
Acenaphthene	69.9	10	4.3	ug/l	100	70	55-120	15	20	
Acenaphthylene	73.7	10	3.2	ug/l	100	74	55-120	15	20	
Aniline	59.9	10	2.9	ug/l	100	60	35-120	20	25	
Anthracene	75.2	10	3.2	ug/l	100	75	55-120	18	20	
Benzidine	73.2	20	5.2	ug/l	100	73	20-160	59	35	R-7
Benzoic acid	85.7	20	2.6	ug/l	100	86	35-120	21	30	
Benzo(a)anthracene	75.5	10	3.7	ug/l	100	76	60-120	16	20	
Benzo(b)fluoranthene	89.7	10	2.7	ug/l	100	90	50-120	12	25	
Benzo(k)fluoranthene	86.4	10	3.4	ug/l	100	86	50-120	16	20	
Benzo(g,h,i)perylene	88.0	10	5.3	ug/l	100	88	40-125	24	25	
Benzo(a)pyrene	87.5	10	3.5	ug/l	100	88	55-120	14	25	
Benzyl alcohol	61.0	20	2.5	ug/l	100	61	45-120	19	20	
Bis(2-chloroethoxy)methane	62.7	10	3.9	ug/l	100	63	55-120	18	20	
Bis(2-chloroethyl)ether	57.5	10	4.4	ug/l	100	58	50-120	20	20	
Bis(2-chloroisopropyl)ether	58.8	10	4.6	ug/l	100	59	45-120	18	20	
Bis(2-ethylhexyl)phthalate	70.7	50	5.2	ug/l	100	71	60-130	21	20	R-7
4-Bromophenyl phenyl ether	72.0	10	4.6	ug/l	100	72	50-120	19	25	
Butyl benzyl phthalate	65.7	20	3.5	ug/l	100	66	55-125	23	20	R-7
4-Chloroaniline	65.1	10	6.0	ug/l	100	65	50-120	19	25	
2-Chloronaphthalene	70.4	10	4.0	ug/l	100	70	55-120	15	20	
4-Chloro-3-methylphenol	68.0	20	3.5	ug/l	100	68	60-120	13	25	
2-Chlorophenol	71.7	10	4.2	ug/l	100	72	45-120	0	25	
4-Chlorophenyl phenyl ether	73.8	10	3.0	ug/l	100	74	55-120	16	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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06054 Extracted: 03/06/06</b>											
<b>LCS Dup Analyzed: 03/08/2006 (6C06054-BSD1)</b>											
Chrysene	76.1	10	2.8	ug/l	100		76	60-120	17	20	
Dibenz(a,h)anthracene	91.5	20	4.7	ug/l	100		92	45-130	20	25	
Dibenzofuran	70.0	10	2.6	ug/l	100		70	60-120	14	20	
Di-n-butyl phthalate	69.0	20	2.8	ug/l	100		69	55-125	24	20	R-7
1,3-Dichlorobenzene	53.2	10	4.1	ug/l	100		53	35-120	5	25	
1,4-Dichlorobenzene	52.3	10	3.9	ug/l	100		52	35-120	9	25	
1,2-Dichlorobenzene	54.8	10	4.5	ug/l	100		55	35-120	11	25	
3,3-Dichlorobenzidine	85.4	20	11	ug/l	100		85	45-130	21	25	
2,4-Dichlorophenol	76.3	10	4.1	ug/l	100		76	55-120	3	20	
Diethyl phthalate	21.0	10	3.1	ug/l	100		21	55-120	117	20	L2, N-2
2,4-Dimethylphenol	53.8	20	4.4	ug/l	100		54	30-120	11	25	
Dimethyl phthalate	14.3	10	3.6	ug/l	100		14	30-120	113	20	L2, N-2
4,6-Dinitro-2-methylphenol	88.7	20	5.1	ug/l	100		89	50-120	6	25	
2,4-Dinitrophenol	84.5	20	5.3	ug/l	100		84	40-120	12	25	
2,4-Dinitrotoluene	69.9	10	4.2	ug/l	100		70	60-120	17	20	
2,6-Dinitrotoluene	71.5	10	3.2	ug/l	100		72	60-120	12	20	
Di-n-octyl phthalate	62.1	20	4.7	ug/l	100		62	60-130	21	20	R-7
Fluoranthene	76.2	10	4.2	ug/l	100		76	55-120	15	20	
Fluorene	69.7	10	3.9	ug/l	100		70	60-120	15	20	
Hexachlorobenzene	79.2	10	4.8	ug/l	100		79	50-120	20	20	
Hexachlorobutadiene	52.8	10	4.2	ug/l	100		53	40-120	30	25	R-7
Hexachlorocyclopentadiene	57.1	20	3.4	ug/l	100		57	15-120	33	30	R-7
Hexachloroethane	48.5	10	4.2	ug/l	100		48	35-120	16	25	
Indeno(1,2,3-cd)pyrene	84.4	20	5.4	ug/l	100		84	40-130	21	25	
Isophorone	58.9	10	3.7	ug/l	100		59	50-120	20	20	
2-Methylnaphthalene	63.2	10	3.0	ug/l	100		63	50-120	19	20	
2-Methylphenol	61.7	10	3.7	ug/l	100		62	45-120	17	20	
4-Methylphenol	63.8	10	3.8	ug/l	100		64	45-120	17	20	
Naphthalene	62.3	10	4.5	ug/l	100		62	50-120	18	20	
2-Nitroaniline	69.6	20	3.9	ug/l	100		70	60-120	14	20	
3-Nitroaniline	69.2	20	4.5	ug/l	100		69	55-120	16	25	
4-Nitroaniline	70.8	20	4.9	ug/l	100		71	50-125	19	20	
Nitrobenzene	57.9	20	4.2	ug/l	100		58	50-120	20	25	
2-Nitrophenol	76.8	10	4.2	ug/l	100		77	55-120	4	25	
4-Nitrophenol	86.7	20	6.6	ug/l	100		87	45-120	8	25	

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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting		Spike	Source	%REC		RPD	RPD	Data
		Limit	MDL			Units	Level			
<b>Batch: 6C06054 Extracted: 03/06/06</b>										
<b>LCS Dup Analyzed: 03/08/2006 (6C06054-BSD1)</b>										
N-Nitrosodiphenylamine	69.7	10	4.0	ug/l	100	70	55-120	17	20	
N-Nitroso-di-n-propylamine	60.4	10	3.6	ug/l	100	60	45-120	20	20	
Pentachlorophenol	106	20	4.0	ug/l	100	106	50-120	6	25	
Phenanthrene	73.1	10	3.3	ug/l	100	73	55-120	18	20	
Phenol	65.0	10	4.0	ug/l	100	65	45-120	7	25	
Pyrene	70.7	10	3.9	ug/l	100	71	50-120	22	25	
1,2,4-Trichlorobenzene	57.9	10	4.4	ug/l	100	58	45-120	19	20	
2,4,5-Trichlorophenol	87.2	20	3.6	ug/l	100	87	60-120	6	20	
2,4,6-Trichlorophenol	89.5	20	4.1	ug/l	100	90	60-120	6	20	
1,2-Diphenylhydrazine/Azobenzene	65.9	20	5.0	ug/l	100	66	60-120	15	25	
N-Nitrosodimethylamine	55.7	20	3.7	ug/l	100	56	40-120	18	20	
Surrogate: 2-Fluorophenol	126			ug/l	200	63	30-120			
Surrogate: Phenol-d6	131			ug/l	200	66	35-120			
Surrogate: 2,4,6-Tribromophenol	190			ug/l	200	95	45-120			
Surrogate: Nitrobenzene-d5	58.5			ug/l	100	58	45-120			
Surrogate: 2-Fluorobiphenyl	71.2			ug/l	100	71	45-120			
Surrogate: Terphenyl-d14	71.7			ug/l	100	72	45-120			

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

**METHOD BLANK/QC DATA**

**ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 6C05031 Extracted: 03/05/06

**Blank Analyzed: 03/06/2006 (6C05031-BLK1)**

Aldrin	ND	0.10	0.030	ug/l							
alpha-BHC	ND	0.10	0.020	ug/l							
beta-BHC	ND	0.10	0.015	ug/l							
delta-BHC	ND	0.20	0.020	ug/l							
gamma-BHC (Lindane)	ND	0.10	0.020	ug/l							
Chlordane	ND	1.0	0.20	ug/l							
4,4'-DDD	ND	0.10	0.020	ug/l							
4,4'-DDE	ND	0.10	0.025	ug/l							
4,4'-DDT	ND	0.10	0.035	ug/l							
Dieldrin	ND	0.10	0.015	ug/l							
Endosulfan I	ND	0.10	0.015	ug/l							
Endosulfan II	ND	0.10	0.040	ug/l							
Endosulfan sulfate	ND	0.20	0.020	ug/l							
Endrin	ND	0.10	0.020	ug/l							
Endrin aldehyde	ND	0.10	0.045	ug/l							
Endrin ketone	ND	0.10	0.020	ug/l							
Heptachlor	ND	0.10	0.030	ug/l							
Heptachlor epoxide	ND	0.10	0.030	ug/l							
Methoxychlor	ND	0.10	0.035	ug/l							
Toxaphene	ND	5.0	1.5	ug/l							
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		70	35-115			
Surrogate: Decachlorobiphenyl	0.455			ug/l	0.500		91	45-120			

**LCS Analyzed: 03/06/2006 (6C05031-BS1)**

Aldrin	0.389	0.10	0.030	ug/l	0.500		78	35-120			M-NR1
alpha-BHC	0.434	0.10	0.020	ug/l	0.500		87	45-120			
beta-BHC	0.426	0.10	0.015	ug/l	0.500		85	50-120			
delta-BHC	0.435	0.20	0.020	ug/l	0.500		87	50-120			
gamma-BHC (Lindane)	0.423	0.10	0.020	ug/l	0.500		85	40-120			
4,4'-DDD	0.438	0.10	0.020	ug/l	0.500		88	55-120			
4,4'-DDE	0.419	0.10	0.025	ug/l	0.500		84	50-120			
4,4'-DDT	0.458	0.10	0.035	ug/l	0.500		92	55-120			
Dieldrin	0.431	0.10	0.015	ug/l	0.500		86	50-120			
Endosulfan I	0.406	0.10	0.015	ug/l	0.500		81	50-120			
Endosulfan II	0.421	0.10	0.040	ug/l	0.500		84	55-120			
Endosulfan sulfate	0.429	0.20	0.020	ug/l	0.500		86	60-120			

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>										
<b>LCS Analyzed: 03/06/2006 (6C05031-BS1)</b>										
Endrin	0.449	0.10	0.020	ug/l	0.500		90 55-120			M-NR1
Endrin aldehyde	0.410	0.10	0.045	ug/l	0.500		82 55-120			
Endrin ketone	0.429	0.10	0.020	ug/l	0.500		86 55-120			
Heptachlor	0.393	0.10	0.030	ug/l	0.500		79 40-115			
Heptachlor epoxide	0.409	0.10	0.030	ug/l	0.500		82 50-120			
Methoxychlor	0.435	0.10	0.035	ug/l	0.500		87 55-120			
Surrogate: Tetrachloro-m-xylene	0.361			ug/l	0.500		72 35-115			
Surrogate: Decachlorobiphenyl	0.412			ug/l	0.500		82 45-120			
<b>LCS Dup Analyzed: 03/06/2006 (6C05031-BSD1)</b>										
Aldrin	0.372	0.10	0.030	ug/l	0.500	74	35-120	4	30	
alpha-BHC	0.413	0.10	0.020	ug/l	0.500	83	45-120	5	30	
beta-BHC	0.413	0.10	0.015	ug/l	0.500	83	50-120	3	30	
delta-BHC	0.425	0.20	0.020	ug/l	0.500	85	50-120	2	30	
gamma-BHC (Lindane)	0.406	0.10	0.020	ug/l	0.500	81	40-120	4	30	
4,4'-DDD	0.422	0.10	0.020	ug/l	0.500	84	55-120	4	30	
4,4'-DDE	0.411	0.10	0.025	ug/l	0.500	82	50-120	2	30	
4,4'-DDT	0.450	0.10	0.035	ug/l	0.500	90	55-120	2	30	
Dieldrin	0.424	0.10	0.015	ug/l	0.500	85	50-120	2	30	
Endosulfan I	0.397	0.10	0.015	ug/l	0.500	79	50-120	2	30	
Endosulfan II	0.415	0.10	0.040	ug/l	0.500	83	55-120	1	30	
Endosulfan sulfate	0.426	0.20	0.020	ug/l	0.500	85	60-120	1	30	
Endrin	0.434	0.10	0.020	ug/l	0.500	87	55-120	3	30	
Endrin aldehyde	0.404	0.10	0.045	ug/l	0.500	81	55-120	1	30	
Endrin ketone	0.424	0.10	0.020	ug/l	0.500	85	55-120	1	30	
Heptachlor	0.377	0.10	0.030	ug/l	0.500	75	40-115	4	30	
Heptachlor epoxide	0.398	0.10	0.030	ug/l	0.500	80	50-120	3	30	
Methoxychlor	0.434	0.10	0.035	ug/l	0.500	87	55-120	0	30	
Surrogate: Tetrachloro-m-xylene	0.339			ug/l	0.500	68	35-115			
Surrogate: Decachlorobiphenyl	0.407			ug/l	0.500	81	45-120			

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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### TOTAL PCBS (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C05031-BLK1)</b>											
Aroclor 1016	ND	1.0	0.20	ug/l							
Aroclor 1221	ND	1.0	0.10	ug/l							
Aroclor 1232	ND	1.0	0.25	ug/l							
Aroclor 1242	ND	1.0	0.25	ug/l							
Aroclor 1248	ND	1.0	0.25	ug/l							
Aroclor 1254	ND	1.0	0.25	ug/l							
Aroclor 1260	ND	1.0	0.40	ug/l							
Surrogate: Decachlorobiphenyl	0.512			ug/l	0.500		102	45-120			
<b>LCS Analyzed: 03/06/2006 (6C05031-BS2)</b>											
Aroclor 1016	3.60	1.0	0.20	ug/l	4.00		90	45-115			M-NRI
Aroclor 1260	3.91	1.0	0.40	ug/l	4.00		98	55-115			
Surrogate: Decachlorobiphenyl	0.458			ug/l	0.500		92	45-120			
<b>LCS Dup Analyzed: 03/06/2006 (6C05031-BSD2)</b>											
Aroclor 1016	3.74	1.0	0.20	ug/l	4.00		94	45-115	4	30	
Aroclor 1260	3.99	1.0	0.40	ug/l	4.00		100	55-115	2	25	
Surrogate: Decachlorobiphenyl	0.550			ug/l	0.500		110	45-120			

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02097 Extracted: 03/02/06</b>										
<b>Blank Analyzed: 03/02/2006 (6C02097-BLK1)</b>										
Mercury	ND	0.20	0.050	ug/l						
<b>LCS Analyzed: 03/02/2006 (6C02097-BS1)</b>										
Mercury	7.88	0.20	0.050	ug/l	8.00		98 85-115			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02097-MS1)</b>										
Mercury	7.84	0.20	0.050	ug/l	8.00	ND	98 70-130			
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02097-MSD1)</b>										
Mercury	7.88	0.20	0.050	ug/l	8.00	ND	98 70-130	1	20	
<b>Batch: 6C02098 Extracted: 03/02/06</b>										
<b>Blank Analyzed: 03/02/2006 (6C02098-BLK1)</b>										
Antimony	ND	2.0	0.18	ug/l						
Cadmium	0.0179	1.0	0.015	ug/l						J
Copper	ND	2.0	0.49	ug/l						
Lead	ND	1.0	0.13	ug/l						
Thallium	ND	1.0	N/A	ug/l						
<b>LCS Analyzed: 03/02/2006 (6C02098-BS1)</b>										
Antimony	86.5	2.0	0.18	ug/l	80.0		108 85-115			
Cadmium	86.9	1.0	0.015	ug/l	80.0		109 85-115			
Copper	89.3	2.0	0.49	ug/l	80.0		112 85-115			
Lead	85.6	1.0	0.13	ug/l	80.0		107 85-115			
Thallium	84.8	1.0	N/A	ug/l	80.0		106 85-115			

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 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02098 Extracted: 03/02/06</b>											
<b>Matrix Spike Analyzed: 03/02/2006 (6C02098-MS1)</b>											
						<b>Source: IPB2651-01</b>					
Antimony	84.3	2.0	0.18	ug/l	80.0	ND	105	70-130			
Cadmium	83.6	1.0	0.015	ug/l	80.0	ND	104	70-130			
Copper	81.5	2.0	0.49	ug/l	80.0	0.49	101	70-130			
Lead	83.1	1.0	0.13	ug/l	80.0	0.19	104	70-130			
Thallium	81.3	1.0	N/A	ug/l	80.0	0.31	101	70-130			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02098-MS2)</b>											
						<b>Source: IPB2645-01</b>					
Antimony	85.1	2.0	0.18	ug/l	80.0	0.46	106	70-130			
Cadmium	82.7	1.0	0.015	ug/l	80.0	0.077	103	70-130			
Copper	78.9	2.0	0.49	ug/l	80.0	2.3	96	70-130			
Lead	82.4	1.0	0.13	ug/l	80.0	0.50	102	70-130			
Thallium	81.6	1.0	N/A	ug/l	80.0	0.53	101	70-130			
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02098-MSD1)</b>											
						<b>Source: IPB2651-01</b>					
Antimony	82.9	2.0	0.18	ug/l	80.0	ND	104	70-130	2	20	
Cadmium	81.4	1.0	0.015	ug/l	80.0	ND	102	70-130	3	20	
Copper	78.3	2.0	0.49	ug/l	80.0	0.49	97	70-130	4	20	
Lead	80.8	1.0	0.13	ug/l	80.0	0.19	101	70-130	3	20	
Thallium	80.7	1.0	N/A	ug/l	80.0	0.31	100	70-130	1	20	
<b>Batch: 6C03084 Extracted: 03/03/06</b>											
<b>Blank Analyzed: 03/04/2006-03/07/2006 (6C03084-BLK1)</b>											
Aluminum	ND	50	40	ug/l							
Arsenic	ND	5.0	3.8	ug/l							
Beryllium	ND	2.0	0.62	ug/l							
Boron	ND	0.050	0.0074	mg/l							
Chromium	1.10	5.0	0.68	ug/l							
Nickel	ND	10	2.0	ug/l							
Selenium	ND	10	8.0	ug/l							
Silver	ND	10	3.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	3.7	ug/l							

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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 6C03084 Extracted: 03/03/06

LCS Analyzed: 03/04/2006-03/07/2006 (6C03084-BS1)

Aluminum	495	50	40	ug/l	500		99	85-115		
Arsenic	519	5.0	3.8	ug/l	500		104	85-115		
Beryllium	524	2.0	0.62	ug/l	500		105	85-115		
Boron	0.501	0.050	0.0074	mg/l	0.500		100	85-115		
Chromium	518	5.0	0.68	ug/l	500		104	85-115		
Nickel	513	10	2.0	ug/l	500		103	85-115		
Selenium	493	10	8.0	ug/l	500		99	85-115		
Silver	263	10	3.0	ug/l	250		105	85-115		
Vanadium	517	10	3.0	ug/l	500		103	85-115		
Zinc	499	20	3.7	ug/l	500		100	85-115		

Matrix Spike Analyzed: 03/04/2006-03/07/2006 (6C03084-MS1)

Source: IPB2463-01

Aluminum	490	50	40	ug/l	500	ND	98	70-130		
Arsenic	544	5.0	3.8	ug/l	500	8.8	107	70-130		
Beryllium	520	2.0	0.62	ug/l	500	ND	104	70-130		
Boron	0.609	0.050	0.0074	mg/l	0.500	0.064	109	70-130		
Chromium	520	5.0	0.68	ug/l	500	ND	104	70-130		
Nickel	503	10	2.0	ug/l	500	ND	101	70-130		
Selenium	508	10	8.0	ug/l	500	ND	102	70-130		
Silver	273	10	3.0	ug/l	250	4.9	107	70-130		
Vanadium	522	10	3.0	ug/l	500	ND	104	70-130		
Zinc	732	20	3.7	ug/l	500	480	50	70-130		M2

Matrix Spike Analyzed: 03/04/2006-03/07/2006 (6C03084-MS2)

Source: IPB2463-02

Aluminum	1200	50	40	ug/l	500	560	128	70-130		
Arsenic	527	5.0	3.8	ug/l	500	4.9	104	70-130		
Beryllium	508	2.0	0.62	ug/l	500	ND	102	70-130		
Boron	0.554	0.050	0.0074	mg/l	0.500	0.037	103	70-130		
Chromium	511	5.0	0.68	ug/l	500	2.3	102	70-130		
Nickel	493	10	2.0	ug/l	500	ND	99	70-130		
Selenium	494	10	8.0	ug/l	500	ND	99	70-130		
Silver	263	10	3.0	ug/l	250	4.0	104	70-130		
Vanadium	511	10	3.0	ug/l	500	ND	102	70-130		
Zinc	497	20	3.7	ug/l	500	ND	99	70-130		

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

### METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C03084 Extracted: 03/03/06</b>											
<b>Matrix Spike Dup Analyzed: 03/04/2006-03/07/2006 (6C03084-MSD1)</b>						<b>Source: IPB2463-01</b>					
Aluminum	461	50	40	ug/l	500	ND	92	70-130	6	20	
Arsenic	532	5.0	3.8	ug/l	500	8.8	105	70-130	2	20	
Beryllium	504	2.0	0.62	ug/l	500	ND	101	70-130	3	20	
Boron	0.593	0.050	0.0074	mg/l	0.500	0.064	106	70-130	3	20	
Chromium	510	5.0	0.68	ug/l	500	ND	102	70-130	2	20	
Nickel	492	10	2.0	ug/l	500	ND	98	70-130	2	20	
Selenium	488	10	8.0	ug/l	500	ND	98	70-130	4	20	
Silver	262	10	3.0	ug/l	250	4.9	103	70-130	4	20	
Vanadium	504	10	3.0	ug/l	500	ND	101	70-130	4	20	
Zinc	722	20	3.7	ug/l	500	480	48	70-130	1	20	M2

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06

Received: 02/28/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B28141 Extracted: 02/28/06</b>										
<b>Blank Analyzed: 02/28/2006 (6B28141-BLK1)</b>										
Chloride	ND	0.50	0.26	mg/l						
Nitrate/Nitrite-N	ND	0.26	0.072	mg/l						
Sulfate	ND	0.50	0.18	mg/l						
<b>LCS Analyzed: 02/28/2006 (6B28141-BS1)</b>										
Chloride	5.00	0.50	0.26	mg/l	5.00		100		90-110	
Sulfate	10.5	0.50	0.18	mg/l	10.0		105		90-110	
<b>Matrix Spike Analyzed: 02/28/2006 (6B28141-MS1) Source: IPB2607-01</b>										
Chloride	30.4	1.0	0.52	mg/l	5.00	26	88		80-120	
Sulfate	36.5	1.0	0.36	mg/l	10.0	27	95		80-120	
<b>Matrix Spike Dup Analyzed: 02/28/2006 (6B28141-MSD1) Source: IPB2607-01</b>										
Chloride	30.3	1.0	0.52	mg/l	5.00	26	86		80-120	0 20
Sulfate	36.9	1.0	0.36	mg/l	10.0	27	99		80-120	1 20
<b>Batch: 6C02125 Extracted: 03/02/06</b>										
<b>Blank Analyzed: 03/02/2006 (6C02125-BLK1)</b>										
Total Cyanide	ND	5.0	2.2	ug/l						
<b>LCS Analyzed: 03/02/2006 (6C02125-BS1)</b>										
Total Cyanide	194	5.0	2.2	ug/l	200		97		90-110	
<b>Matrix Spike Analyzed: 03/02/2006 (6C02125-MS1) Source: IPB2379-01</b>										
Total Cyanide	193	5.0	2.2	ug/l	200	2.5	95		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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02125 Extracted: 03/02/06</b>											
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02125-MSD1)</b>						<b>Source: IPB2379-01</b>					
Total Cyanide	205	5.0	2.2	ug/l	200	2.5	101	70-115	6	15	
<b>Batch: 6C03066 Extracted: 03/03/06</b>											
<b>Blank Analyzed: 03/03/2006 (6C03066-BLK1)</b>											
Perchlorate	ND	4.0	2.0	ug/l							
<b>LCS Analyzed: 03/03/2006 (6C03066-BS1)</b>											
Perchlorate	50.4	4.0	2.0	ug/l	50.0		101	85-115			
<b>Matrix Spike Analyzed: 03/03/2006 (6C03066-MS1)</b>						<b>Source: IPC0361-01</b>					
Perchlorate	62.8	4.0	2.0	ug/l	50.0	15	96	80-120			
<b>Matrix Spike Dup Analyzed: 03/03/2006 (6C03066-MSD1)</b>						<b>Source: IPC0361-01</b>					
Perchlorate	61.7	4.0	2.0	ug/l	50.0	15	93	80-120	2	20	
<b>Batch: 6C03069 Extracted: 03/03/06</b>											
<b>Blank Analyzed: 03/03/2006 (6C03069-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 03/03/2006 (6C03069-BS1)</b>											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
<b>Duplicate Analyzed: 03/03/2006 (6C03069-DUP1)</b>						<b>Source: IPC0153-03</b>					
Total Dissolved Solids	285	10	10	mg/l		280			2	10	

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

## METHOD BLANK/QC DATA

### INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06085 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C06085-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 03/06/2006 (6C06085-BS1)</b>											
Total Suspended Solids	987	10	10	mg/l	1000		99	85-115			
<b>Duplicate Analyzed: 03/06/2006 (6C06085-DUP1)</b>											
Total Suspended Solids	ND	10	10	mg/l		Source: IPC0040-01 ND				10	
<b>Batch: 6C08046 Extracted: 03/08/06</b>											
<b>Blank Analyzed: 03/08/2006 (6C08046-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							
<b>LCS Analyzed: 03/08/2006 (6C08046-BS1)</b>											
Oil & Grease	15.7	5.0	0.94	mg/l	20.0		78	65-120			M-NRI
<b>LCS Dup Analyzed: 03/08/2006 (6C08046-BSD1)</b>											
Oil & Grease	16.2	5.0	0.94	mg/l	20.0		81	65-120	3	20	

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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

## Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPB2650-01	413.1 Oil and Grease	Oil & Grease	mg/l	4.20	5.0	15
IPB2650-01	Boron-200.7	Boron	mg/l	0.00076	0.050	1.00
IPB2650-01	Chloride - 300.0	Chloride	mg/l	4.50	0.50	150
IPB2650-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.27	0.26	10.00
IPB2650-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPB2650-01	Sulfate-300.0	Sulfate	mg/l	4.10	0.50	250
IPB2650-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	110	10	850

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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

### 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.
- L2** Laboratory Control Sample recovery was below method control limits.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-NRI** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- N-2** See corrective action report.
- 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

### ADDITIONAL COMMENTS

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

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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

## Certification Summary

### Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
Calculation	Water	X	X
EDD + Level 4	Water		
EPA 160.2	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 335.2	Water	X	X
EPA 413.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 900.0	Water		
EPA 905.0	Water		
EPA 906.0	Water		
Haz Waste Scree	Water		
SM2540C	Water	X	X

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

### Subcontracted Laboratories

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

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta  
Samples: IPB2650-01

Analysis Performed: Level 4 + EDD  
Samples: IPB2650-01

**Aquatic Testing Laboratories-SUB** California Cert #1775

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr  
Samples: IPB2650-01

### Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: EDD + Level 4  
Samples: IPB2650-01

Analysis Performed: Gross Alpha  
Samples: IPB2650-01

### 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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

## Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: Gross Beta  
Samples: IPB2650-01

Analysis Performed: Radium, Combined  
Samples: IPB2650-01

Analysis Performed: Strontium 90  
Samples: IPB2650-01

Analysis Performed: Tritium  
Samples: IPB2650-01

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

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IPB2650

**Del Mar Analytical** Version 02/17/05 **CHAIN OF CUSTODY FORM**

<b>Client Name/Address:</b> MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		<b>Project:</b> Boeing-SSFL NPDES Annual Outfall 010 Stormwater at Building 203		<b>Project Manager:</b> Bronwyn Kelly <b>Phone Number:</b> (626) 568-6691 <b>Fax Number:</b> (626) 568-6515		<b>Field readings:</b> Temp = 52.7° pH = 6.9		<b>Comments</b>																							
<b>Sampler:</b> <i>Barros, R</i>		<b>ANALYSIS REQUIRED</b>		Total Recoverable Metals Sb, Cd, Cu, Pb, Hg, B, V, Al, + PP		TCDD (and all congeners)		Oil & Grease (EPA 413.1)		Cl-, SO4, NO3+NO2-N, Perchlorate		TDS, TSS		VOCs (624), NPDES + PP		VOCs A+A+2CVE		Pesticides/PCBs - PP		Gross Alpha, Gross Beta, Tritium (906.0*, Sr-90 (905.) Total Combined Radium 226 & 228		SVOCs - PP		Acute Toxicity		Cyanide					
<b>Sample Description</b>		<b>Sample Matrix</b>		<b>Container Type</b>		<b># of Cont.</b>		<b>Sampling Date/Time</b>		<b>Preservative</b>		<b>Bottle #</b>		Turn around Times: (check)		24 Hours		48 Hours		72 Hours		Perchlorate Only 72 Hours		Metals Only 72 Hours		Sample Integrity: (Check)		Intact		On Ice	
Outfall 010		W		1L Poly		1		2/28/06 18:35		HNO3		1A		X		X		X		X		X		X		X		X			
Outfall 010-Dup		W		1L Poly		1		[Blank]		HNO3		1B		X		X		X		X		X		X		X		X			
Outfall 010		W		1L Amber		2		[Blank]		None		2A, 2B		X		X		X		X		X		X		X		X			
Outfall 010		W		1L Amber		2		[Blank]		HCl		3A, 3B		X		X		X		X		X		X		X		X			
Outfall 010		W		Poly-500 ml		2		[Blank]		None		4A, 4B		X		X		X		X		X		X		X		X			
Outfall 010		W		Poly-500 ml		2		[Blank]		None		5A, 5B		X		X		X		X		X		X		X		X			
Outfall 010		W		VOAs		3		[Blank]		HCl		6A, 6B, 6C		X		X		X		X		X		X		X		X			
Outfall 010		W		VOA		3		[Blank]		None		7A, 7B, 7C		X		X		X		X		X		X		X		X			
Outfall 010		W		1L Amber		2		[Blank]		None		8A, 8B		X		X		X		X		X		X		X		X			
Outfall 010		W		2.5 Gal Cube Amber VOAs		1 3		[Blank]		None None		9A 15A, 15B, 15C		X		X		X		X		X		X		X		X			
Outfall 010		W		1L Amber		2		[Blank]		None		10A, 10B		X		X		X		X		X		X		X		X			
Outfall 010		W		1 Gal Poly		1		[Blank]		None		11A		X		X		X		X		X		X		X		X			
Outfall 010		W		500ml Poly		1		[Blank]		NaOH		12		X		X		X		X		X		X		X		X			
Trip Blanks		W		VOA		3		[Blank]		None		13A, 13B, 13C		X		X		X		X		X		X		X		X			
Trip Blank		W		VOAs		3		[Blank]		HCl		14A, 14B, 14C		X		X		X		X		X		X		X		X			
Relinquished By		Date/Time		Received By		Date/Time		Relinquished By		Date/Time		Received By		Date/Time		Relinquished By		Date/Time		Received By		Date/Time		Relinquished By		Date/Time		Received By		Date/Time	
[Signature]		2/28/06 1545		[Signature]		2/28/06 1545		[Signature]		2/28/06 1545		[Signature]		2/28/06 1545		[Signature]		2/28/06 1545		[Signature]		2/28/06 1545		[Signature]		2/28/06 1545		[Signature]		2/28/06 1545	
[Signature]		2/28/06 1835		[Signature]		2/28/06 1835		[Signature]		2/28/06 1835		[Signature]		2/28/06 1835		[Signature]		2/28/06 1835		[Signature]		2/28/06 1835		[Signature]		2/28/06 1835		[Signature]		2/28/06 1835	

# LABORATORY REPORT



*"dedicated to providing quality aquatic toxicity testing"*

4350 Transport Street, Unit 107  
Ventura, CA 93003  
(805) 650-0546 FAX (805) 650-0756  
CA DOHS ELAP Cert. No.: 1775

**Date:** March 5, 2006  
**Client:** Del Mar Analytical, Irvine  
17461 Derian Ave., Suite 100  
Irvine, CA 92614  
Attn: Michele Chamberlin

**Laboratory No.:** A-06030118-001  
**Sample ID.:** IPB2650-01

**Sample Control:** The sample was received by ATL within the recommended hold time, in a chilled state, and with the chain of custody record attached.

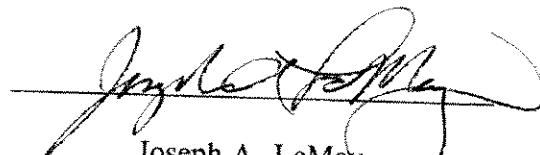
Date Sampled: 02/28/06  
Date Received: 03/01/06  
Temp. Received: 2°C  
Chlorine (TRC): 0.0 mg/l  
Date Tested: 03/01/06 to 03/05/06

**Sample Analysis:** The following analyses were performed on your sample:  
Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0).  
Attached are the test data generated from the analysis of your sample.

## Result Summary:

<u>Sample ID.</u>	<u>Results</u>
IPB2650-01	100% Survival (TU <sub>a</sub> = 0.0)

**Quality Control:** Reviewed and approved by:

  
Joseph A. LeMay  
Laboratory Director



# FATHEAD MINNOW PERCENT SURVIVAL TEST

## EPA Method 2000.0



Lab No.: A-06030118-001  
 Client/ID: Del Mar - IPB2650-01

Start Date: 03/01/2006

### TEST SUMMARY

Species: *Pimephales promelas*.  
 Age: 13 (1-14) days.  
 Regulations: NPDES.  
 Test solution volume: 250 ml.  
 Feeding: prior to renewal at 48 hrs.  
 Number of replicates: 2.  
 Dilution water: Moderately hard reconstituted water.  
 Photoperiod: 16/8 hrs light/dark.

Source: In-laboratory Culture.  
 Test type: Static-Renewal.  
 Test Protocol: EPA-821-R-02-012.  
 Endpoints: Percent Survival at 96 hrs.  
 Test chamber: 600 ml beakers.  
 Temperature: 20 +/- 1°C.  
 Number of fish per chamber: 10.  
 QA/QC Batch No.: RT-060301.

### TEST DATA

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	20.4	8.9	7.9	0	0	R 1200
	100%	19.5	9.6	7.5	0	0	
24 Hr	Control	19.2	8.0	7.7	0	0	R 1100
	100%	19.4	8.2	7.4	0	0	
48 Hr	Control	19.3	7.4	7.6	0	0	R 1230
	100%	19.9	6.3	7.4	0	0	
Renewal	Control	19.5	8.4	7.8	0	0	R 1300
	100%	19.4	9.4	7.2	0	0	
72 Hr	Control	19.4	8.0	7.6	0	0	R 1100
	100%	19.3	8.2	7.4	0	0	
96 Hr	Control	19.4	7.9	7.6	0	0	R 1130
	100%	19.4	8.0	7.5	0	0	

**Comments:**

Sample as received: Chlorine: 0.0 mg/l; pH: 7.5; Conductivity: 133 umho; Temp: 2°C;  
 DO: 9.6 mg/l; Alkalinity: 44 mg/l; Hardness: 46 mg/l; NH<sub>3</sub>-N: 0.4 mg/l.  
 Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / No  
 Control: Alkalinity: 54 mg/l; Hardness: 94 mg/l; Conductivity: 325 umho.  
 Test solution aerated (not to exceed 100 bubbles/min) to maintain DO >4.0 mg/l? Yes / No  
 Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.

### RESULTS

Percent Survival In: Control: 100 %      100% Sample: 100 %



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  
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 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3820 Fax (702) 798-3821

## SUBCONTRACT ORDER - PROJECT # IPB2650

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

**RECEIVING LABORATORY:**  
 Aquatic Testing Laboratories-SUB  
 4350 Transport Street, Unit 107  
 Ventura, CA 93003  
 Phone : (805) 650-0546  
 Fax: (805) 650-0756

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

Analysis	Expiration	Comments
<b>Sample ID: IPB2650-01</b> Water <b>Sampled: 02/28/06 10:10</b> Bioassay-Acute 96hr    03/01/06 22:10		<b>Instant Notification</b> FH minnow, EPA/821-R02-012, Sub to AqTox Labs
<b>Containers Supplied:</b> 1 gal Poly (IPB2650-01Y)		

**SAMPLE INTEGRITY:**

All containers intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Sample labels/COC agree: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received On Ice: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Custody Seals Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Samples Preserved Properly: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Received at (temp): <u>28C</u>

Released By: <u>[Signature]</u>	Date: <u>3/06</u>	Time: <u>10:20</u>	Received By: <u>[Signature]</u>	Date: <u>3-1-6</u>	Time: <u>7:00</u>
Released By: <u>[Signature]</u>	Date: <u>3/06</u>	Time: <u>10:20</u>	Received By: <u>[Signature]</u>	Date: <u>3-1-6</u>	Time: <u>10:20</u>

**FATHEAD MINNOW ACUTE**  
**Method 2000.0**  
**Reference Toxicant - SDS**



QA/QC Batch No.: RT-060301

**TEST SUMMARY**

Species: *Pimephales promelas*.

Age: 13 days old.

Regulations: NPDES.

Test chamber volume: 250 ml.

Feeding: Prior to renewal at 48 hrs.

Temperature: 20 +/- 1°C.

Number of replicates: 2.

Dilution water: MHSF.

Source: In-lab culture.

Test type: Static-Renewal.

Test Protocol: EPA-821-R-02-012.

Endpoints: LC50 at 96 hrs.

Test chamber: 600 ml glass beakers.

Aeration: None.

Number of organisms per chamber: 10.

Photoperiod: 16/8 hrs light/dark.

**TEST DATA**

Date/Time:	INITIAL			24 Hr					48 Hr				
	<u>3-1-06 1200</u>			<u>3-2-06 1100</u>					<u>3-3-06 1300</u>				
	<u>[Signature]</u>			<u>[Signature]</u>					<u>[Signature]</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	20.4	8.9	7.9	19.8	7.8	7.5	0	0	20.0	7.1	7.6	0	0
1.0 mg/l	20.4	8.9	7.9	19.7	7.7	7.5	0	0	20.0	7.0	7.6	0	0
2.0 mg/l	20.5	9.0	7.9	19.7	7.4	7.4	0	0	20.0	6.9	7.5	0	0
4.0 mg/l	20.5	9.1	7.9	19.7	7.7	7.4	0	0	20.0	6.6	7.5	0	0
8.0 mg/l	20.5	9.1	7.9	19.7	5.3	7.2	10	10	—	—	—	—	—

Date/Time:	RENEWAL			72 Hr					96 Hr				
	<u>3-3-06 1200</u>			<u>3-4-06 1100</u>					<u>3-5-06 1130</u>				
	<u>[Signature]</u>			<u>[Signature]</u>					<u>[Signature]</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	19.8	9.0	7.8	19.5	7.9	7.6	0	0	19.9	7.5	7.4	0	0
1.0 mg/l	19.8	9.0	7.8	19.6	8.3	7.6	0	0	19.9	7.6	7.4	0	0
2.0 mg/l	19.8	9.1	7.8	19.6	8.3	7.6	0	0	19.8	7.6	7.4	0	0
4.0 mg/l	19.9	9.1	7.8	19.6	7.7	7.5	0	0	19.8	7.6	7.4	0	0
8.0 mg/l	—	—	—	—	—	—	—	—	—	—	—	—	—

**Comments:**

Control: Alkalinity: 54 mg/l; Hardness: 94 mg/l; Conductivity: 325 umho.  
 SDS: Alkalinity: 53 mg/l; Hardness: 94 mg/l; Conductivity: 330 umho.

**Acute Fish Test-96 Hr Survival**

Start Date: 01 Mar-06 12:00	Test ID: RT-060301f	Sample ID: REF-Ref Toxicant
End Date: 05 Mar-06 11:30	Lab ID: CAATL-Aquatic Testing Labs	Sample Type: SDS-Sodium dodecyl sulfate
Sample Date: 01 Mar-06 00:00	Protocol: EPAA 91-EPA Acute	Test Species: PP-Pimephaies promelas

Conc-mg/L	1	2
D-Control	1.0000	1.0000
1	1.0000	1.0000
2	1.0000	1.0000
4	1.0000	1.0000
8	0.0000	0.0000

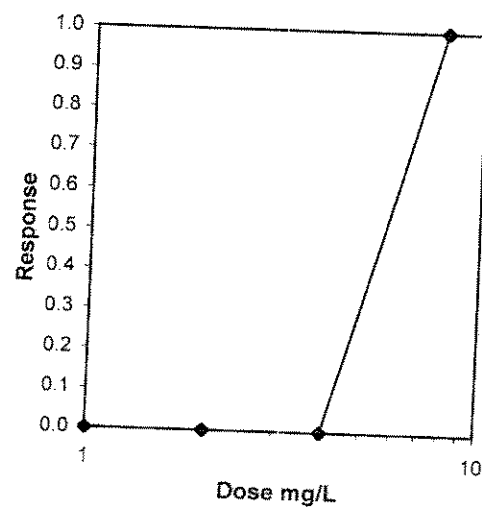
Conc-mg/L	Mean	N-Mean	Transform: Arcsin Square Root				N	Number Resp	Total Number
			Mean	Min	Max	CV%			
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	20	
1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	20	
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	20	
4	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	20	
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	

**Auxiliary Tests**

Statistic	Critical	Skew	Kurt
Normality of the data set cannot be confirmed			
Equality of variance cannot be confirmed			

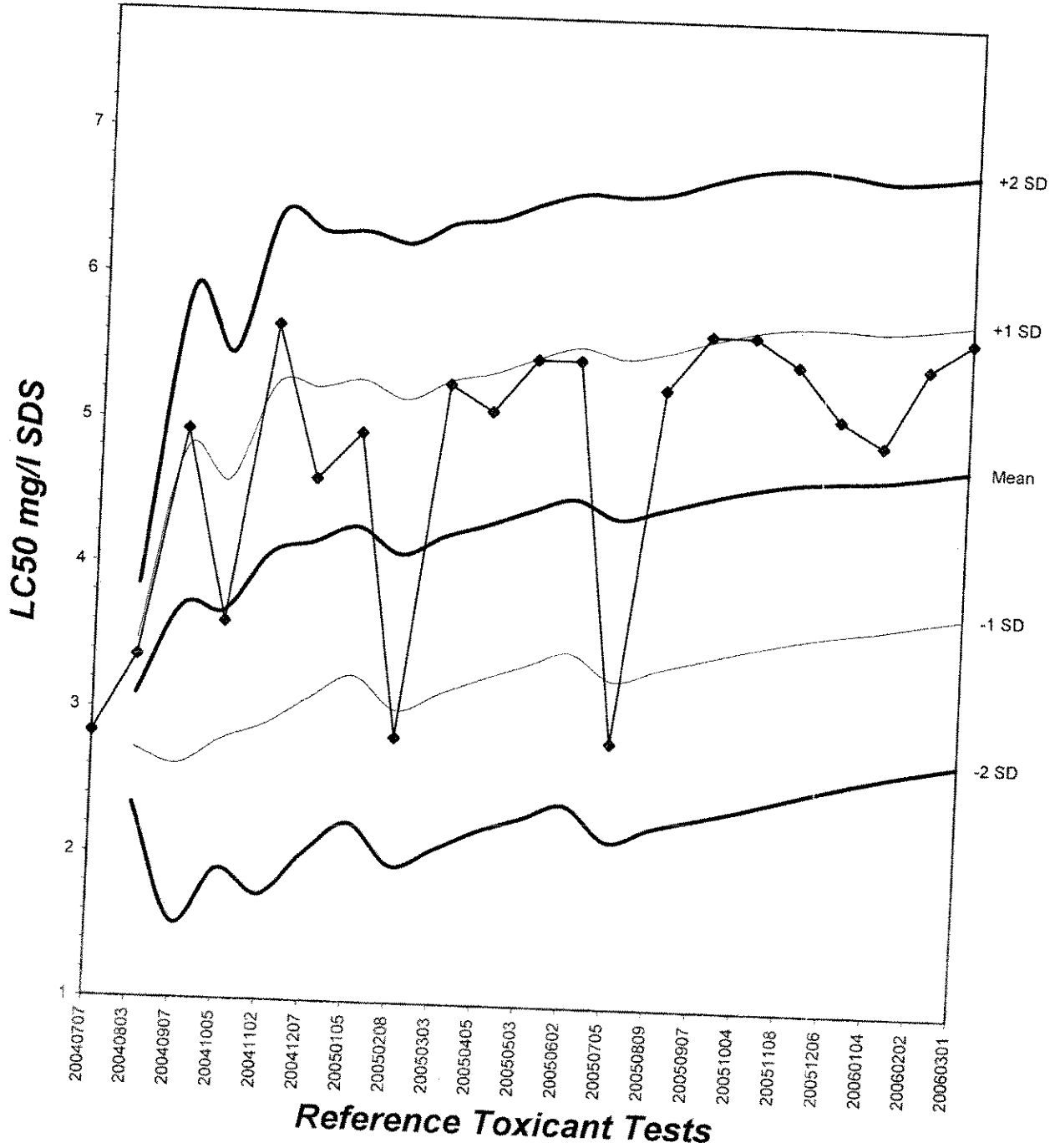
Trim Level **EC50**  
0.0% 5.6569

**Graphical Method**



# Fathead Minnow Acute Laboratory Control Chart

CV% = 21.3



# TEST ORGANISM LOG

FATHEAD MINNOW - LARVAL  
(*Pimephales promelas*)



QA/QC BATCH NO.: RT-060301

SOURCE: In-Lab Culture

DATE HATCHED: 2-16-06

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

# MORTALITIES 48 HOURS PRIOR TO  
TO USE IN TESTING: 0

DATES USED IN LAB: 3/1/06  
to  
1/1/06

AVERAGE FISH WEIGHT: 0.006 gm

TEST LOADING LIMITS: 0.65 gm/liter

200 ml test solution volume = 0.013 gm mean fish weight limit  
250 ml test solution volume = 0.016 gm mean fish weight limit

## ACCLIMATION WATER QUALITY:

Temp.: 20.4 °C      pH: 7.7      Ammonia: 0.2 mg/l NH<sub>3</sub>-N  
DO: 2.8 mg/l      Alkalinity: 54 mg/l      Hardness: 94 mg/l

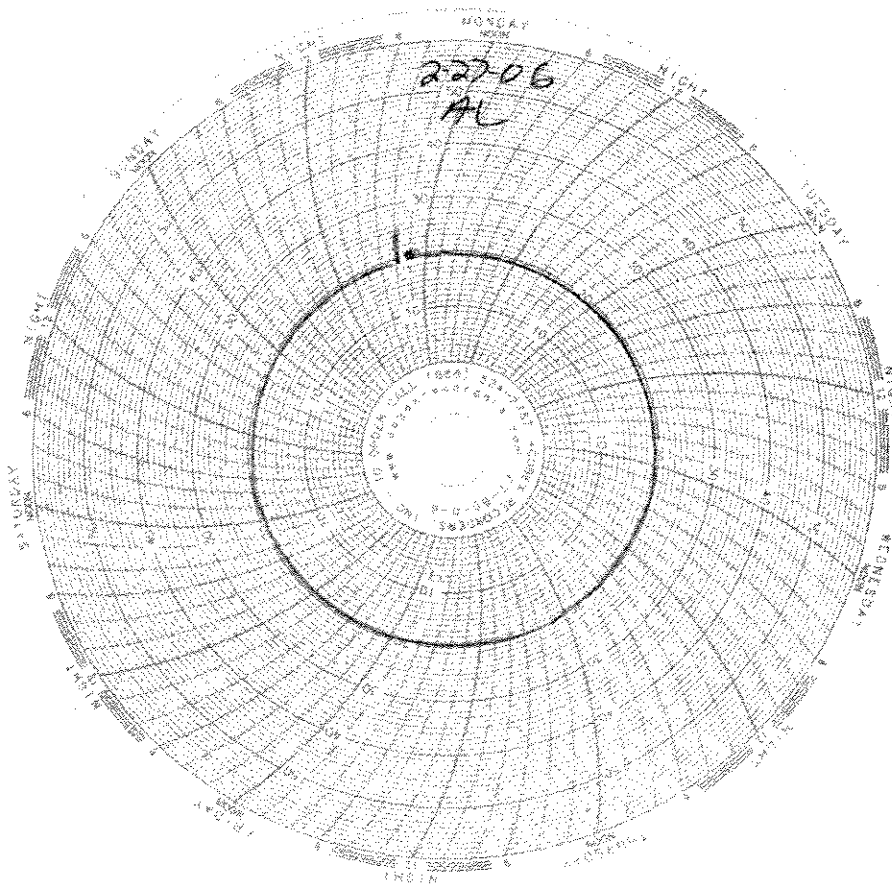
READINGS RECORDED BY: [Signature]      DATE: 3-5-06

# Laboratory Temperature Chart

*QA/QC Batch No: RT-060301*

*Date Tested: 03/01/06 to 03/05/06*

*Acceptable Range: 20+/- 1°C*





# EBERLINE

SERVICES

March 13, 2006

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

Reference: Del Mar Analytical Project No. IPB2650  
Eberline Services NELAP Cert #01120CA (exp. 01/31/07)  
Eberline Services Report R603023-8667

Dear Ms. Chamberlin:

Enclosed are results from the analysis of one water sample received at Eberline Services on March 2, 2006. The sample was analyzed according to the accompanying Del Mar Analytical Subcontract Order Form. The requested analysis was gross alpha/gross beta (EPA900.0). The batch QC LCS, blank analysis, duplicate analysis, and matrix spike results were within the limits defined in Eberline Services Quality Control Procedures Manual. No problems were encountered during the requested analysis.

Please call me if you have any questions concerning this report.

Regards,

Melissa Mannion  
Senior Program Manager

MCM/njv

Enclosure: Report  
Subcontract Form  
Receipt checklist  
Invoice

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

www.eberlineservices.com  
NPDES - 2791



# Eberline Services

## ANALYSIS RESULTS

SDG <u>8667</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603023-01</u>	Contract <u>PROJECT# IPB2650</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab						
<u>Sample ID</u>	<u>Sample ID</u>	<u>Collected</u>	<u>Analyzed</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>Units</u>	<u>MDA</u>
IPB2650-01	8667-001	02/28/06	03/06/06	GrossAlpha	0.532 ± 0.90	pCi/L	1.55
			03/06/06	Gross Beta	4.02 ± 1.3	pCi/L	1.83

Certified by *ngwill*  
Report Date 03/12/06  
Page 1

# Eberline Services

## QC RESULTS

SDG <u>8667</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603023-01</u>	Contract <u>PROJECT# IPB2650</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Lab

<u>Sample ID</u>	<u>Nuclide</u>	<u>Results</u>	<u>Units</u>	<u>Amount Added</u>	<u>MDA</u>	<u>Evaluation</u>
<u>LCS</u>						
8660-002	GrossAlpha	9.57 ± 1.3	pCi/Smpl	10.2	0.635	94% recovery
	Gross Beta	9.53 ± 0.77	pCi/Smpl	9.84	0.609	97% recovery
<u>BLANK</u>						
8660-003	GrossAlpha	-0.067 ± 0.23	pCi/Smpl	NA	0.513	<MDA
	Gross Beta	0.136 ± 0.31	pCi/Smpl	NA	0.548	<MDA

<u>DUPLICATES</u>			
<u>Sample ID</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>MDA</u>
8660-004	GrossAlpha	1.33 ± 1.5	2.25
	Gross Beta	7.77 ± 1.8	2.37

<u>ORIGINALS</u>			
<u>Sample ID</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>RPD (Tot) Eval</u>
8660-001	2.64 ± 1.7	1.95	66 177 satis.
	7.69 ± 1.6	2.06	1 63 satis.

<u>SPIKED SAMPLE</u>			
<u>Sample ID</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>MDA</u>
8660-005	GrossAlpha	92.9 ± 7.9	1.88
	Gross Beta	79.8 ± 3.9	1.99

<u>ORIGINAL SAMPLE</u>				
<u>Sample ID</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>Added</u>	<u>%Recv</u>
8660-001	2.64 ± 1.7	1.95	76.5	118
	7.69 ± 1.6	2.06	70.3	103

Certified by <u><i>[Signature]</i></u>
Report Date <u>03/12/06</u>
Page <u>2</u>





# RICHMOND, CA LABORATORY

## SAMPLE RECEIPT CHECKLIST

Client: DEL MAR City IRVINE State CA  
Date/Time received 03/02/06 9:20 CoC No. 1PB2650  
Container I.D. No. ICE CHEST Requested TAT (Days) RUSH 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: 4 (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 [Signature] Date: 03/02/06 Time: 10:50

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 \_\_\_\_\_



March 08, 2006

**Alta Project I.D.: 27348**

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

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on March 02, 2006 under your Project Name "IPB2650". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

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

Sincerely,

Martha M. Maier  
Director of HRMS Services



**Section I: Sample Inventory Report**

**Date Received: 3/2/2006**

Alta Lab. ID

Client Sample ID

27348-001

IPB2650-01

**SECTION II**

Method Blank		EPA Method 1613					
Matrix:	Aqueous	QC Batch No.:	7807	Lab Sample:	0-MB001		
Sample Size:	1.00 L	Date Extracted:	5-Mar-06	Date Analyzed DB-5:	7-Mar-06		
				Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000119		13C-2,3,7,8-1CDD	82.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000130		13C-1,2,3,7,8-PeCDD	84.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000161		13C-1,2,3,4,7,8-HxCDD	82.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000170		13C-1,2,3,6,7,8-HxCDD	81.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000161		13C-1,2,3,4,6,7,8-HpCDD	79.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000167		13C-OCDD	54.4	17 - 157	
OCDD	ND	0.00000485		13C-2,3,7,8-TCDF	85.8	24 - 169	
2,3,7,8-TCDF	ND	0.00000138		13C-1,2,3,7,8-PeCDF	89.7	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000126		13C-2,3,4,7,8-PeCDF	92.9	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000115		13C-1,2,3,4,7,8-HxCDF	82.7	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000677		13C-1,2,3,6,7,8-HxCDF	82.0	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000623		13C-2,3,4,6,7,8-HxCDF	83.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000697		13C-1,2,3,7,8,9-HxCDF	77.1	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000951		13C-1,2,3,4,6,7,8-HpCDF	71.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000890		13C-1,2,3,4,7,8,9-HpCDF	80.8	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000780		13C-OCDF	59.4	17 - 157	
OCDF	ND	0.00000335		<b>CRS</b> 37Cl-2,3,7,8-TCDD	90.3	35 - 197	
<b>Totals</b>				<b>Footnotes</b>			
Total TCDD	ND	0.00000119		a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000130		b. Estimated maximum possible concentration.			
Total HxCDD	ND	0.00000164		c. Method detection limit			
Total HpCDD	ND	0.00000167		d. Lower control limit - upper control limit.			
Total TCDF	ND	0.00000138					
Total PeCDF	ND	0.00000120					
Total HxCDF	ND	0.00000725					
Total HpCDF	ND	0.00000836					

Analyst: JMH

Approved By: Martha M. Maier 08-Mar-2006 10:40

Project 27348



OPR Results				EPA Method 1613			
Matrix:	Aqueous	QC Batch No:	7807	Lab Sample:	0-OPR001	Date Analyzed DB-5:	7-Mar-06
Sample Size:	1.00 L	Date Extracted:	5-Mar-06	Date Analyzed DB-225:	NA		
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL	
2,3,7,8-TCDD	10.0	11.1	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	77.8	25 - 164	
1,2,3,7,8-PeCDD	50.0	56.7	35 - 71	13C-1,2,3,7,8-PeCDD	81.0	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	54.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	74.4	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	53.3	38 - 67	13C-1,2,3,6,7,8-HxCDD	76.6	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	52.4	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	74.2	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	55.2	35 - 70	13C-OCDD	52.1	17 - 157	
OCDD	100	109	78 - 144	13C-2,3,7,8-TCDF	78.6	24 - 169	
2,3,7,8-TCDF	10.0	11.2	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	84.3	24 - 185	
1,2,3,7,8-PeCDF	50.0	55.2	40 - 67	13C-2,3,4,7,8-PeCDF	87.3	21 - 178	
2,3,4,7,8-PeCDF	50.0	56.1	34 - 80	13C-1,2,3,4,7,8-HxCDF	76.8	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	55.2	36 - 67	13C-1,2,3,6,7,8-HxCDF	76.9	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	56.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	76.3	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	56.4	35 - 78	13C-1,2,3,7,8,9-HxCDF	69.6	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	54.9	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	70.6	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	55.1	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	74.0	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	55.0	39 - 69	13C-OCDF	57.0	17 - 157	
OCDF	100	105	63 - 170	CRS 37Cl-2,3,7,8-TCDD	94.1	35 - 197	

Analyst: JMH

Approved By: Martha M. Maier 08-Mar-2006 10:40

Sample ID: **IPB2650-01**

Client Data			Sample Data			Laboratory Data			EPA Method 1613			
Name:	Del Mar Analytical, Irvine		Matrix:	Aqueous		Lab Sample:	27348-001	Date Received:	2-Mar-06			
Project:	IPB2650		Sample Size:	1.00 L		QC Batch No.:	7807	Date Extracted:	5-Mar-06			
Date Collected:	28-Feb-06					Date Analyzed DB-5:	7-Mar-06	Date Analyzed DB-225:	NA			
Date Collected:	1010											
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL	UCL <sup>d</sup>	Qualifiers			
2,3,7,8-TCDD	ND	0.00000166			IS 13C-2,3,7,8-TCDD	80.8	25	164				
1,2,3,7,8-PeCDD	ND	0.00000144			13C-1,2,3,7,8-PeCDD	83.6	25	181				
1,2,3,4,7,8-HxCDD	ND	0.00000217			13C-1,2,3,4,7,8-HxCDD	74.6	32	141				
1,2,3,6,7,8-HxCDD	ND	0.00000222			13C-1,2,3,6,7,8-HxCDD	77.6	28	130				
1,2,3,7,8,9-HxCDD	ND	0.00000212			13C-1,2,3,4,6,7,8-HpCDD	79.5	23	140				
1,2,3,4,6,7,8-HpCDD	0.0000184				13C-OCDD	54.6	17	157				
OCDD	0.000181			J	13C-2,3,7,8-TCDF	80.9	24	169				
2,3,7,8-TCDF	ND	0.00000111			13C-1,2,3,7,8-PeCDF	87.8	24	185				
1,2,3,7,8-PeCDF	ND	0.00000144			13C-2,3,4,7,8-PeCDF	88.4	21	178				
2,3,4,7,8-PeCDF	ND	0.00000143			13C-1,2,3,4,7,8-HxCDF	74.7	26	152				
1,2,3,4,7,8-HxCDF	ND	0.00000734			13C-1,2,3,6,7,8-HxCDF	74.5	26	123				
1,2,3,6,7,8-HxCDF	ND	0.00000679			13C-2,3,4,6,7,8-HxCDF	72.7	28	136				
2,3,4,6,7,8-HxCDF	ND	0.00000784			13C-1,2,3,7,8,9-HxCDF	76.6	29	147				
1,2,3,7,8,9-HxCDF	ND	0.00000972		J	13C-1,2,3,4,6,7,8-HpCDF	73.9	28	143				
1,2,3,4,6,7,8-HpCDF	0.00000381				13C-1,2,3,4,7,8,9-HpCDF	79.2	26	138				
1,2,3,4,7,8,9-HpCDF	ND	0.00000962		J	13C-OCDF	59.4	17	157				
OCDF	0.0000274			J	CRS 37Cl-2,3,7,8-TCDD	97.8	35	197				
<b>Totals</b>												
Total TCDD	ND	0.00000166										
Total PeCDD	ND	0.00000144										
Total HxCDD	ND	0.00000217										
Total HpCDD	0.0000396											
Total TCDF	ND	0.00000111										
Total PeCDF	ND	0.00000144										
Total HxCDF	0.00000139											
Total HpCDF	0.0000141											

**Footnotes**

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

Analyst: JMH

Approved By: Martha M. Maier 08-Mar-2006 10:40

Project 27348

**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, 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) 505-9688  
 8830 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 # IPB2650**

<p><b>SENDING LABORATORY:</b>          Del Mar Analytical, Irvine          17461 Derian Avenue, Suite 100          Irvine, CA 92614          Phone: (949) 261-1022          Fax: (949) 261-1228          Project Manager: Michele Chamberlin</p>	<p><b>RECEIVING LABORATORY:</b>          Alta Analytical          1104 Windfield Way          El Dorado Hills, CA 95762          Phone : (916) 933-1640          Fax: (916) 673-0106</p> <p style="font-size: 2em; text-align: right;">27 348 0.4°C</p>
--	---

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

Analysis	Expiration	Comments
Sample ID: IPB2650-01 Water	Sampled: 02/28/06 10:10	Instant Notification
1613-Dioxin-HR-Alta	03/07/06 10:10	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
Level 4 + EDD-OUT	03/28/06 10:10	Excel EDD email to pm, Include Std logs for Lvl IV
<b>Containers Supplied:</b>		
1 L Amber (IPB2650-01C)		
1 L Amber (IPB2650-01D)		

**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: *AL* Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: *Fed-Ex* Date: *3.01.06* Time: \_\_\_\_\_  
 Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: *Patricia Benedict* Date: *3/2/06* Time: *0850*

**SAMPLE LOG-IN CHECKLIST**

Alta Project #: 27348

Samples Arrival:	Date/Time 3/2/06 0850	Initials: UAB	Location: WR-2			
Logged In:	Date/Time 3/2/06 1313	Initials: UAB	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	6.4°C	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 #	7908 3243 0340				
Sample Container Intact?	✓				
Sample Custody Seals Intact?			✓		
Chain of Custody / Sample Documentation Present?	✓				
COC Anomaly/Sample Acceptance Form completed?		✓			
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓		
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?	COC	Sample Container	<u>None</u>		
Shipping Container	Alta	<u>Client</u>	Retain	<u>Return</u>	Dispose

Comments:

## **APPENDIX G**

### **Section 64**

Outfall 010, February 28, 2006  
AMEC Data Validation Reports



**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

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

Package ID B4DF49  
 Task Order 1261.001D.01  
 SDG No. IPB2650

No. of Analyses 1

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

Date: April 4, 2006  
 Reviewer's Signature  


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



## DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 010

ANALYSIS: DIOXINS/FURANS  
SAMPLE DELIVERY GROUP: IPB2650

Prepared by

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

## 1. INTRODUCTION

Task Order Title: NPDES  
Contract Task Order: 1261.001.01  
Sample Delivery Group: IPB2650  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Dioxins/Furans  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: K. Shadowlight  
Date of Review: April 4, 2006

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

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 010	IPB2650-01	27348-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

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

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

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

#### 2.2.2 Mass Spectrometer Performance

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

## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

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

### 2.3.2 Continuing Calibration

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

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

## 2.4 BLANKS

One method blank (0-7807-MB001) was extracted and analyzed with the sample in this SDG. There were no target compounds detected in the method blank. A review of the method blank raw data and chromatograms indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7807-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

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

### 2.7.2 Field Duplicates

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

## 2.8 INTERNAL STANDARDS

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

## 2.9 COMPOUND IDENTIFICATION

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

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

**EPA Method 1613**

Sample ID: **IPB2650-01** Outfall 010

**Client Data**  
 Name: Del Mar Analytical, Irvine  
 Project: IPB2650  
 Date Collected: 28-Feb-06  
 Time Collected: 1910

**Laboratory Data**  
 Lab Sample: 27348-001  
 QC Batch No.: 7807  
 Date Analyzed DB-5: 7-Mar-06  
 Date Received: 2-Mar-06  
 Date Extracted: 5-Mar-06  
 Date Analyzed DB-225: N/A

Sample Data		Sample Data		Sample Data	
Matrix:	Aqueous	Matrix:	Aqueous	Matrix:	Aqueous
Sample Size:	1.00 L	Sample Size:	1.00 L	Sample Size:	1.00 L
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R LCL-UCL <sup>d</sup> Qualifiers
2,3,7,8-TCDD	ND	0.00000166		13C-2,3,7,8-TCDD	80.8 25 - 164
1,2,3,7,8-PeCDD	ND	0.00000144		13C-1,2,3,7,8-PeCDD	83.6 25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000217		13C-1,2,3,4,7,8-HxCDD	74.6 32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000222		13C-1,2,3,6,7,8-HxCDD	77.6 28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000212		13C-1,2,3,4,6,7,8-HpCDD	79.5 23 - 140
1,2,3,4,6,7,8-HpCDD	0.0000184		J	13C-OCDD	54.6 17 - 157
OCDD	0.000181			13C-2,3,7,8-TCDF	80.9 24 - 169
2,3,7,8-TCDF	ND	0.00000111		13C-1,2,3,7,8-PeCDF	87.8 24 - 185
1,2,3,7,8-PeCDF	ND	0.00000144		13C-2,3,4,7,8-PeCDF	88.4 21 - 178
2,3,4,7,8-PeCDF	ND	0.00000143		13C-1,2,3,4,7,8-HxCDF	74.7 26 - 152
1,2,3,4,7,8-HxCDF	ND	0.000000734		13C-1,2,3,6,7,8-HxCDF	74.5 26 - 123
1,2,3,6,7,8-HxCDF	ND	0.000000679		13C-2,3,4,6,7,8-HxCDF	72.7 28 - 136
2,3,4,6,7,8-HxCDF	ND	0.000000784		13C-1,2,3,7,8,9-HxCDF	76.6 29 - 147
1,2,3,7,8,9-HxCDF	ND	0.000000972		13C-1,2,3,4,6,7,8-HpCDF	73.9 28 - 143
1,2,3,4,6,7,8-HpCDF	0.00000381		J	13C-1,2,3,4,7,8,9-HpCDF	79.2 26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.000000962		13C-OCDF	59.4 17 - 157
OCDF	0.0000274		J	CRS 37Cl-2,3,7,8-TCDD	97.8 35 - 197

**Totals**

Total TCDD	ND	0.00000166	
Total PeCDD	ND	0.00000144	
Total HxCDD	ND	0.00000217	
Total HpCDD	0.0000396		
Total TCDF	ND	0.00000111	
Total PeCDF	ND	0.00000144	
Total HxCDF	0.0000139		
Total HpCDF	0.0000141		

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

Analyst: **JMH**  
 Approved By: **Martha M. Maier** 08-Mar-2006 10:40

Project 27348  
 Level III



**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

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

Package ID: B4MT49  
 Task Order: 1261.001D.01  
 SDG No.: IPB2650

No. of Analyses: 1

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

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

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



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 010

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPB2650

Prepared by

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

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2650  
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: April 6, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC<sup>X</sup> Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0), EPA Methods 200.7, 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 010	IPB2650-01	Water	200.7, 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 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 85-115% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and the recoveries were considered to be acceptable. No qualifications were required.

DATA VALIDATION REPORT

---

## 2.4 BLANKS

Chromium and cadmium were detected in method blank 6C03084-BLK1 at 1.10 and 0.0179 µg/L, respectively; therefore, chromium and cadmium detected in Outfall 010 were qualified as estimated nondetects, "UJ." Antimony was detected in a bracketing CCB at 0.45 µg/L; therefore, antimony detected in Outfall 010 was qualified as an estimated nondetect, "UJ." No further qualifications were required.

## 2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/JAB)

ICSA and ICSAB analyses were performed in association with the sample in this SDG for the ICP metals. Silver and chromium were detected in the ICSA above the respective reporting limits. The reviewer checked the raw data for the sample and determined that the level of interferents in Outfall 010 were not of sufficient concentrations to qualify the sample results. No qualifications were required.

## 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

## 2.11 SAMPLE RESULT VERIFICATION

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

## 2.12 FIELD QC SAMPLES

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

### 2.12.1 Field Blanks and Equipment Rinsates

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

### 2.12.2 Field Duplicates

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



# Del Mar Analytical

17461 Dorian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-1297  
 1014 E. Cocoly Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-3046  
 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: Brouwyn Kelly

Project ID: Annual Outfall 010  
 Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Aluminum	EPA 200.7	6C03084	40	50	1100	1	03/03/06	03/04/06	REV Qual
Antimony	EPA 200.8	6C02098	0.18	2.0	0.33	1	03/02/06	03/02/06	U J J B
Arsenic	EPA 200.7	6C03084	4.4	5.0	ND	1	03/03/06	03/04/06	U
Beryllium	EPA 200.7	6C03084	0.90	2.0	ND	1	03/03/06	03/04/06	U
Cadmium	EPA 200.8	6C02098	0.015	1.0	0.037	1	03/02/06	03/02/06	U J B, J B
Chromium	EPA 200.7	6C03084	2.0	5.0	2.1	1	03/03/06	03/04/06	U J B, J B
Copper	EPA 200.8	6C02098	0.49	2.0	2.2	1	03/02/06	03/02/06	
Lead	EPA 200.8	6C02098	0.040	1.0	0.83	1	03/02/06	03/02/06	J J DNA
Mercury	EPA 245.1	6C02097	0.063	0.20	ND	1	03/02/06	03/02/06	U
Nickel	EPA 200.7	6C03084	2.0	10	ND	1	03/03/06	03/04/06	
Selenium	EPA 200.7	6C03084	8.0	10	ND	1	03/03/06	03/04/06	
Silver	EPA 200.7	6C03084	3.0	10	ND	1	03/03/06	03/04/06	
Thallium	EPA 200.8	6C02098	N/A	1.0	ND	1	03/02/06	03/02/06	
Vanadium	EPA 200.7	6C03084	3.0	10	3.7	1	03/03/06	03/04/06	J J DNA
Zinc	EPA 200.7	6C03084	15	20	ND	1	03/03/06	03/04/06	U

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

LEVEL IV

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# 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: Annual Outfall 010

Sampled: 02/28/06  
 Received: 02/28/06

Report Number: IPB2650

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Res	Qual Code
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.										
Reporting Units: mg/l										
Boron	EPA 200.7	6C03084	0.0074	0.050	ND	1	03/03/06	03/07/06	*	

\* Analysis not validated.

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

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IPB2650 <Page 10 of 40>

## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID: B4PP13  
 Task Order: 1261.001D.01  
 SDG No.: IPB2650

No. of Analyses: 1  
 Date: April 7, 2006  
 Reviewer's Signature: P. Meeks

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

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



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 010

ANALYSIS: PESTICIDES / PCBs

SAMPLE DELIVERY GROUP: IPB2650

Prepared by

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

Project: NPDES  
SDG: IPB2650  
Analysis: Pest/PCBs

DATA VALIDATION REPORT

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>x</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2650  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Pesticides  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 7, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC<sup>x</sup> Data Validation Procedure for Organochlorine Pesticides and PCBs (DVP-4, Rev. 0), EPA Method 608, and the National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: NPDES  
SDG: IPB2650  
Analysis: Pest/PCBs

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 010	IPB2650-01	Water	608

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ , at  $5^{\circ}\text{C}$ . According to the case narrative for this SDG, the sample was received intact and on ice. No qualifications were required.

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

### 2.2 PESTICIDES INSTRUMENT PERFORMANCE

No resolution check standards or breakdown check standards are required by Method 608 for pesticides, and according to the raw data provided, a resolution check standard was not analyzed by the laboratory. The laboratory did analyze a breakdown check standard with the breakdown for individual components (4,4-DDT and endrin)  $\leq 20\%$  and  $\leq 30\%$  for the total, as suggested in the National Functional Guidelines. A review of the raw data indicated that the analytical run time was of sufficient length to provide adequate standard separation. The two analytical columns used in the analyses were within the guidelines specified in the methods.

According to the laboratory SOP and the initial calibration raw data, the retention time windows are  $\pm 0.10$  minutes for both surrogates and target compound calibration standards. A review of the raw data indicated that the laboratory retention time criteria were met for the surrogates and pesticide calibration standards. No qualifications were required.

### 2.3 CALIBRATION

#### 2.3.1 Analytical Sequence

Based on the data provided, the analytical sequences were in accordance with the requirements of Method 608. No qualifications were required.

DATA VALIDATION REPORT

### 2.3.2 Initial Calibration

There was one initial calibration dated 03/02/06 associated with the Aroclor analysis of the site sample and one dated 03/06/06 associated with the pesticide analysis. The initial calibrations consisted of six point calibrations for Aroclors 1016 and 1260 and all pesticide target compounds on two analytical columns. The average %RSDs of the individual Aroclor peaks were within the EPA Method 608 QC limit of  $\leq 10\%$  on the primary analytical column (Channel A) or the  $r^2$  values were  $\geq 0.995$ , except for the average %RSD for Aroclor 1260. The nondetects for Aroclors 1248, 1254, and 1260 in Outfall 010 were qualified as estimated, "UJ." The %RSDs for all pesticide target compounds were  $\leq 10\%$  on the primary column or  $r^2$  values  $\geq 0.995$ , with the exception of the %RSD for heptachlor. The nondetect for heptachlor was qualified as estimated, "UJ," in Outfall 010.

The pesticide and average Aroclor %RSDs were  $\leq 10\%$  or  $r^2$  values  $\geq 0.995$  on the secondary column (Channel B).

An ICV was analyzed immediately following each initial calibration, and the %Ds for all pesticide target compounds and Aroclors 1016 and 1260 were within the QC limit of  $\leq 15\%$  on the primary column. No further qualifications were required.

### 2.3.3 Continuing Calibration

The pesticide and Aroclor analyses of Outfall 010 were each bracketed by two continuing calibrations. The %Ds for all pesticide target compounds and Aroclors 1016 and 1260 were within the Method QC limit of  $\leq 15\%$  for all calibrations on the primary column, with the exception of 4,4-DDT and methoxychlor on the primary column in the ending pesticide CCV. As the responses were low, the nondetects for 4,4-DDT and methoxychlor in Outfall 010 were qualified as estimated, "UJ." No further qualifications were required.

## 2.4 BLANKS

### 2.4.1 Instrument Blanks

An instrument blank was analyzed at the beginning of the analytical sequence. Cross-contamination was not evident in the instrument blank or the sample. No qualifications were necessary.

### 2.4.2 Method Blanks

One water method blank (6C05031-BLK1) was extracted and analyzed with this SDG. No pesticide target compounds or Aroclors were detected in the method blank. Review of the chromatograms from both channels showed no false negatives. No qualifications were required.

DATA VALIDATION REPORT

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6C05031-BS1/BSD1 for pesticides and Aroclors) was analyzed with this SDG. The recoveries for all pesticide compounds and Aroclors 1016 and 1260 were within the laboratory-established QC limits, and all RPDs were within the QC limit of  $\leq 30\%$ . A representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.6 SURROGATE RECOVERY

Surrogate recoveries were within the laboratory-established QC limits for the sample in this SDG. The recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

## 2.8 SAMPLE CLEANUP PERFORMANCE

According to the laboratory extraction 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 sample. 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.



Project: NPDES  
SDG: IPB2650  
Analysis: Pest/PCBs

DATA VALIDATION REPORT

## 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for pesticide target compounds and seven Aroclors by EPA Method 608. Compound identification is verified at a Level IV validation. The laboratory provided an overlay of the pesticide sample chromatogram and the pesticide standard for identification purposes. Review of chromatograms and retention times indicated no problems with compound identification for the sample in this SDG. No qualifications were required.

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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



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 2320 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Per Qual	Qual Code
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.										
Reporting Units: ug/l										
Aroclor 1016	EPA 608	6C05031	0.19	0.95	ND	0.952	03/05/06	03/06/06	U	
Aroclor 1221	EPA 608	6C05031	0.095	0.95	ND	0.952	03/05/06	03/06/06		
Aroclor 1232	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06		
Aroclor 1242	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06		
Aroclor 1248	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	U	C
Aroclor 1254	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	U	C
Aroclor 1260	EPA 608	6C05031	0.38	0.95	ND	0.952	03/05/06	03/06/06	U	C
Surrogate: Decachlorobiphenyl (45-120%)					98 %					

pm 4/10/06

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

LEVEL IV

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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

**ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.									
Reporting Units: ug/l									
Aldrin	EPA 608	6C05031	0.029	0.095	ND	0.952	03/05/06	03/07/06	U
alpha-BHC	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	U
beta-BHC	EPA 608	6C05031	0.014	0.095	ND	0.952	03/05/06	03/07/06	U
delta-BHC	EPA 608	6C05031	0.019	0.19	ND	0.952	03/05/06	03/07/06	U
gamma-BHC (Lindane)	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	U
Chlordane	EPA 608	6C05031	0.19	0.95	ND	0.952	03/05/06	03/07/06	U
4,4'-DDD	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	U
4,4'-DDE	EPA 608	6C05031	0.024	0.095	ND	0.952	03/05/06	03/07/06	U
4,4'-DDT	EPA 608	6C05031	0.033	0.095	ND	0.952	03/05/06	03/07/06	U
Dieldrin	EPA 608	6C05031	0.014	0.095	ND	0.952	03/05/06	03/07/06	U
Endosulfan I	EPA 608	6C05031	0.014	0.095	ND	0.952	03/05/06	03/07/06	U
Endosulfan II	EPA 608	6C05031	0.038	0.095	ND	0.952	03/05/06	03/07/06	U
Endosulfan sulfate	EPA 608	6C05031	0.019	0.19	ND	0.952	03/05/06	03/07/06	U
Endrin	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	U
Endrin aldehyde	EPA 608	6C05031	0.043	0.095	ND	0.952	03/05/06	03/07/06	U
Endrin ketone	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	U
Heptachlor	EPA 608	6C05031	0.029	0.095	ND	0.952	03/05/06	03/07/06	U
Heptachlor epoxide	EPA 608	6C05031	0.029	0.095	ND	0.952	03/05/06	03/07/06	U
Methoxychlor	EPA 608	6C05031	0.033	0.095	ND	0.952	03/05/06	03/07/06	U
Toxaphene	EPA 608	6C05031	1.4	4.8	ND	0.952	03/05/06	03/07/06	U
Surrogate: Tetrachloro-m-xylene (35-115%)					65 %				
Surrogate: Decachlorobiphenyl (45-120%)					66 %				

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

LEVEL IV

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## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID: B4RA3  
 Task Order: 1261.001D.05  
 SDG No.: Multiple

No. of Analyses: 8

Laboratory: Ebeline  
 Reviewer: P. Meeks  
 Analysis/Method: Radionuclides

Date: <u>April 1, 2006</u>
Reviewer's Signature <i>P. Meeks</i>

<b>ACTION ITEMS<sup>a</sup></b>	
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	Qualifications were applied for exceeded holding times and low detector efficiencies.
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
<b>COMMENTS<sup>b</sup></b>	
<sup>a</sup> Subcontracted analytical laboratory is not meeting contract and/or method requirements. <sup>b</sup> Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



# DATA VALIDATION REPORT

NPDES Sampling  
Multiple Outfalls

ANALYSIS: RADIONUCLIDES

SAMPLE DELIVERY GROUPS: IPB2637, IPB2639, IPB2641,  
IPB2643, IPB2645, IPB2647, IPB2648, IPB2650

Prepared by

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

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>x</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2637, IPB2639, IPB2641, IPB2643, IPB2645,  
IPB2647, IPB2648, IPB2650  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Radionuclides  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: P. Meeks  
Date of Review: April 1, 2006

The samples listed in Table 1 were validated based on the 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	Del Mar ID	Eberline ID	Matrix	COC Method
Outfall 001	IPB2637-01	8660-001	water	900.0
Outfall 002	IPB2639-01	8661-001	water	900.0
Outfall 011	IPB2641-01	8662-001	water	900.0
Outfall 018	IPB2643-01	8663-001	water	900.0
Outfall 005	IPB2645-01	8664-001	water	900.0
Outfall 007	IPB2647-01	8665-001	water	900.0
Outfall 008	IPB2648-01	8666-001	water	900.0
Outfall 010	IPB2650-01	8667-001	water	900.0

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

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

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

#### 2.1.2 Chain of Custody

The original COCs were signed and dated by field and laboratory personnel and the transfer COCs were signed by personnel from both laboratories. Eberline did not list the MWH IDs on the Form Is; therefore, the reviewer edited the Form Is to reflect these IDs. The original COCs requested strontium and tritium analyses; however, in accordance with the NPDES permit, these analyses per not performed as the gross alpha and gross beta results did not exceed the permit requirements. No qualifications were required.

#### 2.1.3 Holding Times

All samples were analyzed beyond the five day holding time for unpreserved samples; therefore, all results were qualified as estimated, "J," for detects and, "UJ," for nondetects. No further qualifications were required.

### 2.2 CALIBRATION

The laboratory calibration information included the standard certificates and applicable preparation/dilutions logs for NIST-traceability. All gross alpha detector efficiencies were less than 20%; therefore, all gross alpha results were qualified as estimated, "J," for detects and, "UJ," for nondetects. No further qualifications were required.

### 2.3 BLANKS

No measurable activities were detected in the method blanks, therefore, no qualifications were necessary.



## 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Aqueous blank spikes were analyzed in association with the samples in these SDGs. The blank spike results were within the 3-sigma limits. No qualifications were necessary.

## 2.5 LABORATORY DUPLICATES

The laboratory performed duplicate analyses on Outfall 001. Both results were within the 3-sigma limit limits. No qualifications were necessary.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

The laboratory performed MS/MSD analyses on Outfall 001. Both recoveries were within the 3-sigma limits and no qualifications were required.

## 2.7 SAMPLE RESULT VERIFICATION

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

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Field Blanks and Equipment Rinsates

The samples in these SDGs had no associated field QC samples. No qualifications were required.

### 2.8.2 Field Duplicates

There were no field duplicate samples in these SDGs.

**Eberline Services**  
**ANALYSIS RESULTS**

SDG <u>8660</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>PH03014-01</u>	Contract <u>PROJECT# 1582637</u>
Received Date <u>02/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	Rev Qual	Qual Code
<u>Sample ID</u>	<u>Sample ID</u>								
<u>Outfall 001</u>									
<u>IPR2637-01</u>	<u>8660-001</u>	<u>02/28/06</u>	<u>03/06/06</u>	<u>Gross Alpha</u>	<u>2.64 ± 1.7</u>	<u>pCi/L</u>	<u>1.98</u>	<u>J</u>	<u>R, H</u>
			<u>03/06/06</u>	<u>Gross Beta</u>	<u>7.69 ± 1.6</u>	<u>pCi/L</u>	<u>2.06</u>	<u>J</u>	<u>↓</u>

LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>02/23/06</u>
Page 1

**Eberline Services**  
**ANALYSIS RESULTS**

SDG <u>8661</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603017-01</u>	Contract <u>PROJECT# IPB2639</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA
<u>Sample ID</u>	<u>Sample ID</u>						
<i>outfall 002</i>							
<u>IPB2639-01</u>	<u>0661-001</u>	<u>02/28/06</u>	<u>03/06/06</u>	<u>Gross Alpha</u>	<u>2.58 ± 1.6</u>	<u>pCi/L</u>	<u>1.93</u>
			<u>03/05/06</u>	<u>Gross Beta</u>	<u>4.60 ± 1.4</u>	<u>pCi/L</u>	<u>1.85</u>

<i>Rec</i>	<i>Qual</i>
<i>04</i>	<i>R.H</i>
	<i>↓</i>

*LEVEL IV*

Certified by <i>[Signature]</i>
Report Date <u>03/12/06</u>
Page 1

# Eberline Services

## ANALYSIS RESULTS

SDG <u>8662</u> Work Order <u>RP2641-01</u> Received Date <u>03/02/06</u>	Client <u>DEL MAR ANAL</u> Contract <u>PROJECT# IPR2641</u> Matrix <u>WATER</u>
---	---

Client	Lab		Nuclide	Results ± SD	Units	MDA	Rel Qual	Qual Code	
Sample ID	Sample ID	Collected	Analyzed						
Outfall 011 IPR2641-01	8662-001	03/28/06	03/06/06	Gross Alpha	9.24 ± 2.0	pCi/L	1.86	J ↓	R, H ↓
			03/06/06	Gross Beta	7.52 ± 1.7	pCi/L	2.18		

LEVEL IV

Certified by <u><i>[Signature]</i></u> Report Date <u>03/12/06</u> Page <u>1</u>
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**Eberline Services**  
**ANALYSIS RESULTS**

SDG <u>8653</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>8693019-01</u>	Contract <u>PROJECT# IPN2643</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	Rev Qual	Qual Code
Sample ID <u>Outfall 018</u> IPN2643-01	Sample ID 8653-001	02/29/06	03/06/06	GrossAlpha	1.58 ± 1.1	pCi/L	1.40	J ↓	R, H ↓
			03/06/06	Gross Beta	5.59 ± 1.4	pCi/L	1.81		

LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>03/12/06</u>
Page 1

# Eberline Services

## ANALYSIS RESULTS

SDG <u>8664</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R601020-01</u>	Contract <u>PROJECT# IPB2645</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	Rev Qual	Qual Code
Sample ID <u>Outfall 005</u> IPB2645-01	8664-001	02/28/06	03/06/06	Gross Alpha	1.30 ± 1.0	pCi/L	1.45	UJ	R, H
			03/06/06	Gross Beta	6.98 ± 1.4	pCi/L	1.98	J	↓

LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>03/12/06</u>
Page 1

# Eberline Services

## ANALYSIS RESULTS

SDG <u>8665</u>	Client <u>DEL MAR AVAL</u>
Work Order <u>8601921-01</u>	Contract <u>PROJECT# IPR2647</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab								MDA	Rev Qual	Qual Code
Sample ID	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units					
OUTFall 007 IPR2647-01	8665-001	02/28/06	03/06/06	Gross Alpha	2.56 ± 1.2	pCi/L		1.09	J	↓	R, H ↓
			03/06/06	Gross Beta	5.35 ± 1.8	pCi/L		2.56		↓	↓

LEVEL IV

Certified by <u><i>[Signature]</i></u> Report Date <u>03/13/06</u> Page 1
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**Eberline Services**  
**ANALYSIS RESULTS**

SIG <u>8666</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603022-01</u>	Contract <u>PROJECT# IPB2648</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	Rev Qual	Qual Code
Sample ID <i>Outfall 008</i> IPB2648-01	8666-001	02/28/06	03/06/06	GrossAlpha	1.01 ± 1.6	pCi/L	2.02	UI	R, H
			03/06/06	Gross Beta	23.7 ± 2.2	pCi/L	1.92	J	↓

LEVEL IV

Certified by <u><i>[Signature]</i></u>
Report Date <u>03/13/06</u>
Page 1



**Eberline Services**  
**ANALYSIS RESULTS**

SDG <u>8667</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>8601023-01</u>	Contract <u>PROJECTS IPR2650</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Methods	Results ± 2σ	Units	MDA	Raw Qual	Raw Code
<u>Sample ID</u>	<u>Sample ID</u>								
<u>Outfall 010</u>									
<u>IPR2650-01</u>	8667-001	02/20/06	03/06/06	Gross Alpha	0.533 ± 0.90	pCi/L	1.55	U3	R, H
			03/06/06	Gross Beta	4.02 ± 1.3	pCi/L	1.83	J	↓

LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>03/13/06</u>
Page 1





# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 010

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP IPB2650

Prepared by

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

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2650  
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: April 10, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MEC<sup>X</sup> Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0), EPA Method 625, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 010	IPB2650-01	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, analyzed 02/27/06. The %RSDs for all target compounds were ≤35% or  $r^2$  values ≥0.995 in the initial calibration. The continuing calibration associated with the sample analysis was analyzed 03/09/06. The %Ds for all target compounds were ≤20% in the continuing calibration. No qualifications were required.

## 2.4 BLANKS

One method blank (6C06054-BLK1) was extracted and analyzed with this SDG. Target compounds were not detected above the MDLs in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6C06054-BS1/BSD1) was extracted and analyzed with this SDG. Diethyl phthalate and dimethyl phthalate were recovered below the QC limits but  $\geq 10\%$  in the BSD only. RPDs exceeded the QC limits for benzidine, bis(2-ethylhexyl)phthalate, butyl benzyl phthalate, di-n-butyl phthalate, diethyl phthalate, dimethyl phthalate, di-n-octyl phthalate, hexachlorocyclopentadiene, and hexachloroethane. Nondetect results for the RPD outliers were qualified as estimated, "UJ," in sample Outfall 010. All remaining recoveries and RPDs were within the laboratory-established QC limits. No further qualifications were required.

## 2.6 SURROGATE RECOVERY

Surrogate recoveries for the sample were within the laboratory QC limits. No qualifications were required.

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Field Blanks and Equipment Rinsates

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

*DATA VALIDATION REPORT*

---

### **2.8.2 Field Duplicates**

There were no field duplicate samples identified for this SDG.

### **2.9 INTERNAL STANDARDS PERFORMANCE**

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

### **2.10 COMPOUND IDENTIFICATION**

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

### **2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS**

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

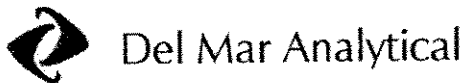
### **2.12 TENTATIVELY IDENTIFIED COMPOUNDS**

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

### **2.13 SYSTEM PERFORMANCE**

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





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

Project ID: Annual Outfall 010  
 Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2650-01 (Outfall 010 - Water)</b>									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6C06054	4.1	9.4	ND	0.943	03/06/06	03/09/06	u
Acenaphthylene	EPA 625	6C06054	3.0	9.4	ND	0.943	03/06/06	03/09/06	u
Aniline	EPA 625	6C06054	2.7	9.4	ND	0.943	03/06/06	03/09/06	u
Anthracene	EPA 625	6C06054	3.0	9.4	ND	0.943	03/06/06	03/09/06	u
Benzidine	EPA 625	6C06054	4.9	19	ND	0.943	03/06/06	03/09/06	u
Benzoic acid	EPA 625	6C06054	2.5	19	ND	0.943	03/06/06	03/09/06	u
Benzo(a)anthracene	EPA 625	6C06054	3.5	9.4	ND	0.943	03/06/06	03/09/06	u
Benzo(b)fluoranthene	EPA 625	6C06054	2.5	9.4	ND	0.943	03/06/06	03/09/06	u
Benzo(k)fluoranthene	EPA 625	6C06054	3.2	9.4	ND	0.943	03/06/06	03/09/06	u
Benzo(g,h,i)perylene	EPA 625	6C06054	5.0	9.4	ND	0.943	03/06/06	03/09/06	u
Benzo(a)pyrene	EPA 625	6C06054	3.3	9.4	ND	0.943	03/06/06	03/09/06	u
Benzyl alcohol	EPA 625	6C06054	2.4	19	ND	0.943	03/06/06	03/09/06	u
Bis(2-chloroethoxy)methane	EPA 625	6C06054	3.7	9.4	ND	0.943	03/06/06	03/09/06	u
Bis(2-chloroethyl)ether	EPA 625	6C06054	4.2	9.4	ND	0.943	03/06/06	03/09/06	u
Bis(2-chloroisopropyl)ether	EPA 625	6C06054	4.3	9.4	ND	0.943	03/06/06	03/09/06	u
Bis(2-ethylhexyl)phthalate	EPA 625	6C06054	4.9	47	ND	0.943	03/06/06	03/09/06	u
4-Bromophenyl phenyl ether	EPA 625	6C06054	4.3	9.4	ND	0.943	03/06/06	03/09/06	u
Butyl benzyl phthalate	EPA 625	6C06054	3.3	19	ND	0.943	03/06/06	03/09/06	u
4-Chloroaniline	EPA 625	6C06054	5.7	9.4	ND	0.943	03/06/06	03/09/06	u
2-Chloronaphthalene	EPA 625	6C06054	3.8	9.4	ND	0.943	03/06/06	03/09/06	u
4-Chloro-3-methylphenol	EPA 625	6C06054	3.3	19	ND	0.943	03/06/06	03/09/06	u
2-Chlorophenol	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	u
4-Chlorophenyl phenyl ether	EPA 625	6C06054	2.8	9.4	ND	0.943	03/06/06	03/09/06	u
Chrysene	EPA 625	6C06054	2.6	9.4	ND	0.943	03/06/06	03/09/06	u
Dibenz(a,h)anthracene	EPA 625	6C06054	4.4	19	ND	0.943	03/06/06	03/09/06	u
Dibenzofuran	EPA 625	6C06054	2.5	9.4	ND	0.943	03/06/06	03/09/06	u
Di-n-butyl phthalate	EPA 625	6C06054	2.6	19	ND	0.943	03/06/06	03/09/06	u
1,3-Dichlorobenzene	EPA 625	6C06054	3.9	9.4	ND	0.943	03/06/06	03/09/06	u
1,4-Dichlorobenzene	EPA 625	6C06054	3.7	9.4	ND	0.943	03/06/06	03/09/06	u
1,2-Dichlorobenzene	EPA 625	6C06054	4.2	9.4	ND	0.943	03/06/06	03/09/06	u
3,3-Dichlorobenzidine	EPA 625	6C06054	10	19	ND	0.943	03/06/06	03/09/06	u
2,4-Dichlorophenol	EPA 625	6C06054	3.9	9.4	ND	0.943	03/06/06	03/09/06	u
Diethyl phthalate	EPA 625	6C06054	2.9	9.4	ND	0.943	03/06/06	03/09/06	u
2,4-Dimethylphenol	EPA 625	6C06054	4.2	19	ND	0.943	03/06/06	03/09/06	u
Dimethyl phthalate	EPA 625	6C06054	3.4	9.4	ND	0.943	03/06/06	03/09/06	u
4,6-Dinitro-2-methylphenol	EPA 625	6C06054	4.8	19	ND	0.943	03/06/06	03/09/06	u
2,4-Dinitrophenol	EPA 625	6C06054	5.0	19	ND	0.943	03/06/06	03/09/06	u
2,4-Dinitrotoluene	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	u
2,6-Dinitrotoluene	EPA 625	6C06054	3.0	9.4	ND	0.943	03/06/06	03/09/06	u
Di-n-octyl phthalate	EPA 625	6C06054	4.4	19	ND	0.943	03/06/06	03/09/06	u
Fluoranthene	EPA 625	6C06054	4.0	9.4	ND	0.943	03/06/06	03/09/06	u

*rel. qual. code*

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Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

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

*Level II*



## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Package ID: B4VO33  
 Task Order: 1261.001D.01  
 SDG No.: IPB2650

No. of Analyses: 2

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

Date: <u>April 10, 2006</u>
Reviewer's Signature: <i>L. Calvin</i>

ACTION ITEMS <sup>a</sup>	
Case Narrative	
Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	Qualifications were assigned for the following:
Holding Times	--r <sup>2</sup> value <0.995 in initial calibration
GC/MS Tune/Inst. Performance	--continuing calibration %D >20%
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
<b>COMMENTS<sup>b</sup></b>	

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



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 010

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB2650

Prepared by

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

## 1. INTRODUCTION

Task Order Title: NPDES  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2650  
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: April 10, 2006

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

**Table 1. Sample Identification**

Client ID	Laboratory ID	Matrix	COC Method
Outfall 010	IPB2650-01	Water	624
Trip Blank	IPB2650-02	Water	624

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C, at 5°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved. Unpreserved aliquots of the samples were also provided. 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 unpreserved aliquots of the water samples were analyzed for all target compounds within seven days of collection. No qualifications were required.

### 2.2 GC/MS TUNING

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

### 2.3 CALIBRATION

Two initial calibrations were associated with the sample analyses, dated 03/01/06 (acrolein and acrylonitrile only), 02/06/06 (all remaining target compounds). The average RRFs were ≥0.05 for all target compounds. The  $r^2$  value was <0.995 for 2-chloroethyl vinyl ether. The nondetect result for 2-chloroethyl vinyl ether was qualified as estimated, "UJ," in sample Outfall 010. Sample Trip Blank was a field QC sample and required no qualification. The %RSDs were ≤35% or  $r^2$  values ≥0.995 for the remaining target compounds listed on the sample result summary forms.

Two continuing calibrations were associated with the sample analyses, dated 03/03/06, one for acrolein and acrylonitrile and one for the remaining target compounds. The RRFs for were ≥0.05 and all %Ds were within the QC limit of ≤20%, with the exception of the %D for 2-chloroethyl vinyl ether. The nondetect result for 2-chloroethyl vinyl ether was qualified as estimated, "UJ," in sample Outfall 010. Sample Trip Blank was a field QC sample and required no qualification. No further qualifications were required.

## 2.4 BLANKS

One method blank (6C03009-BLK1) was analyzed with this SDG. No target compounds were detected above the MDLs in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (6C03009-BS1) was analyzed with this SDG. Target compounds acrolein and acrylonitrile were not included in the blank spike. All recoveries were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

## 2.6 SURROGATE RECOVERY

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

## 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with site sample Outfall 010. 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.



DATA VALIDATION REPORT

### 2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

## 2.9 INTERNAL STANDARDS PERFORMANCE

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

## 2.10 COMPOUND IDENTIFICATION

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

## 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

## 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

## 2.13 SYSTEM PERFORMANCE

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



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2320 E. Sunset Rd., #3, Las Vegas, NV 89120 (702) 790-3620 FAX (702) 798-3621

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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-01 (Outfall 010 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C03009	0.28	1.0	ND	1	03/03/06	03/03/06	<i>rel</i> <i>qual</i> <i>qual</i> <i>code</i> <hr/> <i>u</i>
Bromodichloromethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Bromoform	EPA 624	6C03009	0.32	5.0	ND	1	03/03/06	03/03/06	
Bromomethane	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
Carbon tetrachloride	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
Chlorobenzene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
Chloroethane	EPA 624	6C03009	0.40	5.0	ND	1	03/03/06	03/03/06	
Chloroform	EPA 624	6C03009	0.33	2.0	ND	1	03/03/06	03/03/06	
Chloromethane	EPA 624	6C03009	0.30	5.0	ND	1	03/03/06	03/03/06	
Dibromochloromethane	EPA 624	6C03009	0.28	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichlorobenzene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
1,3-Dichlorobenzene	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
1,4-Dichlorobenzene	EPA 624	6C03009	0.37	2.0	ND	1	03/03/06	03/03/06	
1,1-Dichloroethane	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloroethane	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
1,1-Dichloroethene	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
trans-1,2-Dichloroethene	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloropropane	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
cis-1,3-Dichloropropene	EPA 624	6C03009	0.22	2.0	ND	1	03/03/06	03/03/06	
trans-1,3-Dichloropropene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Ethylbenzene	EPA 624	6C03009	0.25	2.0	ND	1	03/03/06	03/03/06	
Methylene chloride	EPA 624	6C03009	0.70	5.0	ND	1	03/03/06	03/03/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C03009	0.24	2.0	ND	1	03/03/06	03/03/06	
Tetrachloroethene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Toluene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
1,1,1-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
1,1,2-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Trichloroethene	EPA 624	6C03009	0.26	2.0	ND	1	03/03/06	03/03/06	
Trichlorofluoromethane	EPA 624	6C03009	0.34	5.0	ND	1	03/03/06	03/03/06	
Vinyl chloride	EPA 624	6C03009	0.26	0.50	ND	1	03/03/06	03/03/06	
Xylenes, Total	EPA 624	6C03009	0.90	4.0	ND	1	03/03/06	03/03/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C03009	1.2	5.0	ND	1	03/03/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					108 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					94 %				

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

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

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
Received: 02/28/06

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2650-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C03009	0.28	1.0	ND	1	03/03/06	03/03/06	<i>real qual qual code</i> ↓
Bromodichloromethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Bromoform	EPA 624	6C03009	0.32	5.0	ND	1	03/03/06	03/03/06	
Bromomethane	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
Carbon tetrachloride	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
Chlorobenzene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
Chloroethane	EPA 624	6C03009	0.40	5.0	ND	1	03/03/06	03/03/06	
Chloroform	EPA 624	6C03009	0.33	2.0	ND	1	03/03/06	03/03/06	
Chloromethane	EPA 624	6C03009	0.30	5.0	ND	1	03/03/06	03/03/06	
Dibromochloromethane	EPA 624	6C03009	0.28	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichlorobenzene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
1,3-Dichlorobenzene	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
1,4-Dichlorobenzene	EPA 624	6C03009	0.37	2.0	ND	1	03/03/06	03/03/06	
1,1-Dichloroethane	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloroethane	EPA 624	6C03009	0.28	0.50	ND	1	03/03/06	03/03/06	
1,1-Dichloroethene	EPA 624	6C03009	0.42	5.0	ND	1	03/03/06	03/03/06	
trans-1,2-Dichloroethene	EPA 624	6C03009	0.27	2.0	ND	1	03/03/06	03/03/06	
1,2-Dichloropropane	EPA 624	6C03009	0.35	2.0	ND	1	03/03/06	03/03/06	
cis-1,3-Dichloropropene	EPA 624	6C03009	0.22	2.0	ND	1	03/03/06	03/03/06	
trans-1,3-Dichloropropene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Ethylbenzene	EPA 624	6C03009	0.25	2.0	ND	1	03/03/06	03/03/06	
Methylene chloride	EPA 624	6C03009	0.70	5.0	ND	1	03/03/06	03/03/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C03009	0.24	2.0	ND	1	03/03/06	03/03/06	
Tetrachloroethene	EPA 624	6C03009	0.32	2.0	ND	1	03/03/06	03/03/06	
Toluene	EPA 624	6C03009	0.36	2.0	ND	1	03/03/06	03/03/06	
1,1,1-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
1,1,2-Trichloroethane	EPA 624	6C03009	0.30	2.0	ND	1	03/03/06	03/03/06	
Trichloroethene	EPA 624	6C03009	0.26	2.0	ND	1	03/03/06	03/03/06	
Trichlorofluoromethane	EPA 624	6C03009	0.34	5.0	ND	1	03/03/06	03/03/06	
Vinyl chloride	EPA 624	6C03009	0.26	0.50	ND	1	03/03/06	03/03/06	
Xylenes, Total	EPA 624	6C03009	0.90	4.0	ND	1	03/03/06	03/03/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C03009	1.2	5.0	ND	1	03/03/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					106 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					92 %				

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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: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06

Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
<b>Sample ID: IPB2650-01 (Outfall 010 - Water)</b>										
Reporting Units: ug/l										
Acrolein	EPA 624	6C03009	4.6	50	ND	1	03/03/06	03/03/06	<i>see Qual Code</i> u ↓ UT C u ↓	
Acrylonitrile	EPA 624	6C03009	0.70	50	ND	1	03/03/06	03/03/06		
2-Chloroethyl vinyl ether	EPA 624	6C03009	1.8	5.0	ND	1	03/03/06	03/03/06		
Surrogate: Dibromofluoromethane (80-120%)					108 %					
Surrogate: Toluene-d8 (80-120%)					110 %					
Surrogate: 4-Bromofluorobenzene (80-120%)					94 %					
<b>Sample ID: IPB2650-02 (Trip Blank - Water)</b>										
Reporting Units: ug/l										
Acrolein	EPA 624	6C03009	4.6	50	ND	1	03/03/06	03/03/06		
Acrylonitrile	EPA 624	6C03009	0.70	50	ND	1	03/03/06	03/03/06		
2-Chloroethyl vinyl ether	EPA 624	6C03009	1.8	5.0	ND	1	03/03/06	03/03/06		
Surrogate: Dibromofluoromethane (80-120%)					106 %					
Surrogate: Toluene-d8 (80-120%)					110 %					
Surrogate: 4-Bromofluorobenzene (80-120%)					92 %					

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 Project Manager

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*Level IV*

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

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

Package ID: B4WC44  
 Task Order: 1261.001D.01  
 SDG No.: IPB2650

No. of Analyses: 1

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

Date: April 4, 2006  
 Reviewer's Signature  


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



# DATA VALIDATION REPORT

NPDES Sampling  
Outfall 010

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPB2650

Prepared by

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

## 1. INTRODUCTION

Task Order Title: NPDES Sampling  
MEC<sup>X</sup> Project Number: 1261.001D.01  
Sample Delivery Group: IPB2650  
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: April 4, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the *MEC<sup>X</sup> Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 160.2 and, 335.2*, 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 010	IPB2650-01	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 analyses presented in this SDG. As the sample was couriered directly from the field to the laboratory, custody seals were not necessary. No qualifications were required.

#### 2.1.3 Holding Times

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

### 2.2 CALIBRATION

For cyanide, the initial calibration correlation coefficient was  $\geq 0.995$  and the ICV and CCV recoveries were within the control limits of 90-110%. For TSS, 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 qualifications were required.

## 2.5 LABORATORY DUPLICATES

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

## 2.6 MATRIX SPIKES

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

## 2.8 FIELD QC SAMPLES

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

### 2.8.1 Field Blanks and Equipment Rinsates

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

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



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

Project ID: Annual Outfall 010

Sampled: 02/28/06

Report Number: IPB2650

Received: 02/28/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev	Qual
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.										
Reporting Units: mg/l										
Chloride	EPA 300.0	6B28141	0.26	0.50	4.5	1	02/28/06	03/01/06	*	
Nitrate/Nitrite-N	EPA 300.0	6B28141	0.072	0.26	0.27	1	02/28/06	03/01/06		J
Oil & Grease	EPA 413.1	6C08046	0.93	5.0	4.2	1	03/08/06	03/08/06		
Sulfate	EPA 300.0	6B28141	0.18	0.50	4.1	1	02/28/06	03/01/06		
Total Dissolved Solids	SM2540C	6C03069	10	10	110	1	03/03/06	03/03/06		
Total Suspended Solids	EPA 160.2	6C06085	10	10	14	1	03/06/06	03/06/06		

\* Analysis not validated

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

LEVEL IV

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 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 010

Report Number: IPB2650

Sampled: 02/28/06  
 Received: 02/28/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev Qual	Qual Code
Sample ID: IPB2650-01 (Outfall 010 - Water) - cont.										
Reporting Units: ug/l										
Total Cyanide	EPA 335.2	6C02125	2.2	5.0	ND	1	03/02/06	03/02/06	U	
Perchlorate	EPA 314.0	6C03066	0.80	4.0	ND	1	03/03/06	03/03/06	*	

\* Analysis not validated

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 Project Manager

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## **APPENDIX G**

### **Section 65**

Outfall 011, February 28, 2006

Del Mar Analytical Laboratory Report



LABORATORY REPORT

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

Project: Annual Outfall 011

Sampled: 02/28/06  
Received: 02/28/06  
Issued: 03/21/06 09:15

NELAP #01108CA California ELAP#1197 CSDLAC #10117

*The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.  
This entire report was reviewed and approved for release.*

SAMPLE CROSS REFERENCE

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

LABORATORY ID	CLIENT ID	MATRIX
IPB2641-01	Outfall 011	Water
IPB2641-02	Trip Blank	Water

Reviewed By:

*Michele Chamberlin*

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager



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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

**CORRECTIVE ACTION REPORT**

Department: Extractions

Date: 03/10/2006

Method: EPA 625

Matrix: Water

QC Batch: 6C06060

**Identification and Definition of Problem:**

BS/BSD recoveries were below the acceptance limits for Benzoic Acid (ND/ND, 30-125%), Dimethyl phthalate (36%/44%, 60-120%), and Benzidine (ND/ND, 20-180%).

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

Benzidine is known to be a problematic compound. According to the EPA, it can be subject to oxidative losses during solvent extraction and its chromatographic behavior is poor. Benzidine failure is typical of the low level method. Less than optimal extraction technique is the likely cause for the failure of benzoic acid and dimethyl phthalate.

**Corrective Action Taken:**

All results reported for Benzoic Acid, Dimethyl phthalate and Benzidine are potentially biased low and can be considered estimates only and are flagged with L2 qualifier.

Quality Assurance Approval:

Dave Dawes

Date: 03/28/2006 11:40 AM

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



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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2641-01 (Outfall 011 - Water)									
Reporting Units: mg/l									
Total Recoverable Hydrocarbons	EPA 418.1	6C06047	0.30	0.96	ND	0.962	03/06/06	03/06/06	

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Michele Chamberlin  
Project Manager

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06

Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01RE1 (Outfall 011 - Water) - cont.</b>									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	6C07098	0.043	0.48	<b>0.054</b>	0.952	03/07/06	03/07/06	J
Surrogate: <i>n</i> -Octacosane (40-125%)					87 %				

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 Michele Chamberlin  
 Project Manager

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Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06

Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.</b>									
<b>Reporting Units: mg/l</b>									
GRO (C4 - C12)	EPA 8015 Mod.	6C06046	0.050	0.10	ND	1	03/06/06	03/06/06	
<i>Surrogate: 4-BFB (FID) (65-140%)</i>					83 %				

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: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.									
Reporting Units: ug/l									
Benzene	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	
Bromodichloromethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/03/06	
Bromoform	EPA 624	6C02019	0.32	5.0	ND	1	03/02/06	03/03/06	
Bromomethane	EPA 624	6C02019	0.42	5.0	ND	1	03/02/06	03/03/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C02019	1.2	5.0	ND	1	03/02/06	03/03/06	
Carbon tetrachloride	EPA 624	6C02019	0.28	5.0	ND	1	03/02/06	03/03/06	
Chlorobenzene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/03/06	
Chloroethane	EPA 624	6C02019	0.40	5.0	ND	1	03/02/06	03/03/06	
Chloroform	EPA 624	6C02019	0.33	2.0	ND	1	03/02/06	03/03/06	
Chloromethane	EPA 624	6C02019	0.30	5.0	ND	1	03/02/06	03/03/06	
Dibromochloromethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	
1,2-Dichlorobenzene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/03/06	
1,3-Dichlorobenzene	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/03/06	
1,4-Dichlorobenzene	EPA 624	6C02019	0.37	2.0	ND	1	03/02/06	03/03/06	
1,1-Dichloroethane	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/03/06	
1,2-Dichloroethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	
1,1-Dichloroethene	EPA 624	6C02019	0.32	3.0	ND	1	03/02/06	03/03/06	
trans-1,2-Dichloroethene	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/03/06	
1,2-Dichloropropane	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/03/06	
cis-1,3-Dichloropropene	EPA 624	6C02019	0.22	2.0	ND	1	03/02/06	03/03/06	
trans-1,3-Dichloropropene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/03/06	
Ethylbenzene	EPA 624	6C02019	0.25	2.0	ND	1	03/02/06	03/03/06	
Methylene chloride	EPA 624	6C02019	0.70	5.0	ND	1	03/02/06	03/03/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C02019	0.24	2.0	ND	1	03/02/06	03/03/06	L
Tetrachloroethene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/03/06	
Toluene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/03/06	
1,1,1-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/03/06	
1,1,2-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/03/06	
Trichloroethene	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/03/06	
Trichlorofluoromethane	EPA 624	6C02019	0.34	5.0	ND	1	03/02/06	03/03/06	
Vinyl chloride	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/03/06	
Xylenes, Total	EPA 624	6C02019	0.52	4.0	ND	1	03/02/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					111 %				
Surrogate: Toluene-d8 (80-120%)					109 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					91 %				

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: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-02 (Trip Blank - Water)</b>									
<b>Reporting Units: ug/l</b>									
Benzene	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/02/06	
Bromodichloromethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/02/06	
Bromoform	EPA 624	6C02019	0.32	5.0	ND	1	03/02/06	03/02/06	
Bromomethane	EPA 624	6C02019	0.42	5.0	ND	1	03/02/06	03/02/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C02019	1.2	5.0	ND	1	03/02/06	03/02/06	
Carbon tetrachloride	EPA 624	6C02019	0.28	5.0	ND	1	03/02/06	03/02/06	
Chlorobenzene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/02/06	
Chloroethane	EPA 624	6C02019	0.40	5.0	ND	1	03/02/06	03/02/06	
Chloroform	EPA 624	6C02019	0.33	2.0	ND	1	03/02/06	03/02/06	
Chloromethane	EPA 624	6C02019	0.30	5.0	ND	1	03/02/06	03/02/06	
Dibromochloromethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichlorobenzene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/02/06	
1,3-Dichlorobenzene	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/02/06	
1,4-Dichlorobenzene	EPA 624	6C02019	0.37	2.0	ND	1	03/02/06	03/02/06	
1,1-Dichloroethane	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloroethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/02/06	
1,1-Dichloroethene	EPA 624	6C02019	0.32	3.0	ND	1	03/02/06	03/02/06	
trans-1,2-Dichloroethene	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloropropane	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/02/06	
cis-1,3-Dichloropropene	EPA 624	6C02019	0.22	2.0	ND	1	03/02/06	03/02/06	
trans-1,3-Dichloropropene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/02/06	
Ethylbenzene	EPA 624	6C02019	0.25	2.0	ND	1	03/02/06	03/02/06	
Methylene chloride	EPA 624	6C02019	0.70	5.0	ND	1	03/02/06	03/02/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C02019	0.24	2.0	ND	1	03/02/06	03/02/06	L
Tetrachloroethene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/02/06	
Toluene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/02/06	
1,1,1-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/02/06	
1,1,2-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/02/06	
Trichloroethene	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/02/06	
Trichlorofluoromethane	EPA 624	6C02019	0.34	5.0	ND	1	03/02/06	03/02/06	
Vinyl chloride	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/02/06	
Xylenes, Total	EPA 624	6C02019	0.52	4.0	ND	1	03/02/06	03/02/06	
Surrogate: Dibromofluoromethane (80-120%)									107 %
Surrogate: Toluene-d8 (80-120%)									109 %
Surrogate: 4-Bromofluorobenzene (80-120%)									99 %

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: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
 Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6C02019	4.6	50	ND	1	03/02/06	03/03/06	
Acrylonitrile	EPA 624	6C02019	0.70	50	ND	1	03/02/06	03/03/06	
2-Chloroethyl vinyl ether	EPA 624	6C02019	1.8	5.0	ND	1	03/02/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					111 %				
Surrogate: Toluene-d8 (80-120%)					109 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					91 %				
<b>Sample ID: IPB2641-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
Acrolein	EPA 624	6C02019	4.6	50	ND	1	03/02/06	03/02/06	pH
Acrylonitrile	EPA 624	6C02019	0.70	50	ND	1	03/02/06	03/02/06	
2-Chloroethyl vinyl ether	EPA 624	6C02019	1.8	5.0	ND	1	03/02/06	03/02/06	
Surrogate: Dibromofluoromethane (80-120%)					107 %				
Surrogate: Toluene-d8 (80-120%)					109 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					99 %				

Del Mar Analytical - Irvine  
 Michele Chamberlin  
 Project Manager

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NPDES - 2884



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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

**PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water)</b>									
Reporting Units: ug/l									
1,2-Dichloro-1,1,2-trifluoroethane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/03/06	
Cyclohexane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/03/06	
<b>Sample ID: IPB2641-02 (Trip Blank - Water)</b>									
Reporting Units: ug/l									
1,2-Dichloro-1,1,2-trifluoroethane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/02/06	
Cyclohexane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/02/06	

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water)</b>									
<b>Reporting Units: ug/l</b>									
Acenaphthene	EPA 625	6C06060	0.095	0.48	ND	0.952	03/06/06	03/09/06	
Acenaphthylene	EPA 625	6C06060	0.095	0.48	ND	0.952	03/06/06	03/09/06	
Aniline	EPA 625	6C06060	2.8	9.5	ND	0.952	03/06/06	03/09/06	
Anthracene	EPA 625	6C06060	0.079	0.48	ND	0.952	03/06/06	03/09/06	
Benzidine	EPA 625	6C06060	3.0	4.8	ND	0.952	03/06/06	03/10/06	L2
Benzoic acid	EPA 625	6C06060	3.5	19	ND	0.952	03/06/06	03/09/06	L2
Benzo(a)anthracene	EPA 625	6C06060	0.036	4.8	ND	0.952	03/06/06	03/09/06	
Benzo(a)pyrene	EPA 625	6C06060	0.13	1.9	ND	0.952	03/06/06	03/09/06	
Benzo(b)fluoranthene	EPA 625	6C06060	0.048	1.9	ND	0.952	03/06/06	03/09/06	
Benzo(g,h,i)perylene	EPA 625	6C06060	0.056	4.8	ND	0.952	03/06/06	03/09/06	
Benzo(k)fluoranthene	EPA 625	6C06060	0.050	0.48	ND	0.952	03/06/06	03/09/06	
Benzyl alcohol	EPA 625	6C06060	0.20	4.8	ND	0.952	03/06/06	03/09/06	
Bis(2-chloroethoxy)methane	EPA 625	6C06060	0.069	0.48	ND	0.952	03/06/06	03/09/06	
Bis(2-chloroethyl)ether	EPA 625	6C06060	0.080	0.48	ND	0.952	03/06/06	03/09/06	
Bis(2-chloroisopropyl)ether	EPA 625	6C06060	0.10	0.48	ND	0.952	03/06/06	03/09/06	
Bis(2-ethylhexyl)phthalate	EPA 625	6C06060	1.0	4.8	ND	0.952	03/06/06	03/09/06	
4-Bromophenyl phenyl ether	EPA 625	6C06060	0.11	0.95	ND	0.952	03/06/06	03/09/06	
<b>Butyl benzyl phthalate</b>	EPA 625	6C06060	0.32	4.8	<b>0.32</b>	0.952	03/06/06	03/09/06	J
4-Chloroaniline	EPA 625	6C06060	0.19	1.9	ND	0.952	03/06/06	03/09/06	
2-Chloronaphthalene	EPA 625	6C06060	0.056	0.48	ND	0.952	03/06/06	03/09/06	
4-Chloro-3-methylphenol	EPA 625	6C06060	0.32	1.9	ND	0.952	03/06/06	03/09/06	
4-Chlorophenyl phenyl ether	EPA 625	6C06060	0.053	0.48	ND	0.952	03/06/06	03/09/06	
2-Chlorophenol	EPA 625	6C06060	0.11	0.95	ND	0.952	03/06/06	03/09/06	
Chrysene	EPA 625	6C06060	0.069	0.48	ND	0.952	03/06/06	03/09/06	
Dibenz(a,h)anthracene	EPA 625	6C06060	0.079	0.48	ND	0.952	03/06/06	03/09/06	
Dibenzofuran	EPA 625	6C06060	0.071	0.48	ND	0.952	03/06/06	03/09/06	
Di-n-butyl phthalate	EPA 625	6C06060	0.25	1.9	ND	0.952	03/06/06	03/09/06	
1,2-Dichlorobenzene	EPA 625	6C06060	0.10	0.48	ND	0.952	03/06/06	03/09/06	
1,3-Dichlorobenzene	EPA 625	6C06060	0.12	0.48	ND	0.952	03/06/06	03/09/06	
1,4-Dichlorobenzene	EPA 625	6C06060	0.048	0.48	ND	0.952	03/06/06	03/09/06	
3,3-Dichlorobenzidine	EPA 625	6C06060	0.89	4.8	ND	0.952	03/06/06	03/09/06	
2,4-Dichlorophenol	EPA 625	6C06060	0.20	1.9	ND	0.952	03/06/06	03/09/06	
Diethyl phthalate	EPA 625	6C06060	0.11	0.95	ND	0.952	03/06/06	03/09/06	
2,4-Dimethylphenol	EPA 625	6C06060	0.30	1.9	ND	0.952	03/06/06	03/09/06	
Dimethyl phthalate	EPA 625	6C06060	0.077	0.48	ND	0.952	03/06/06	03/09/06	L2
4,6-Dinitro-2-methylphenol	EPA 625	6C06060	0.36	4.8	ND	0.952	03/06/06	03/09/06	
2,4-Dinitrophenol	EPA 625	6C06060	2.6	4.8	ND	0.952	03/06/06	03/09/06	
2,4-Dinitrotoluene	EPA 625	6C06060	0.22	4.8	ND	0.952	03/06/06	03/09/06	
2,6-Dinitrotoluene	EPA 625	6C06060	0.23	4.8	ND	0.952	03/06/06	03/09/06	
Di-n-octyl phthalate	EPA 625	6C06060	0.16	4.8	ND	0.952	03/06/06	03/09/06	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6C06060	0.083	0.95	ND	0.952	03/06/06	03/09/06	

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: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.									
Reporting Units: ug/l									
Fluoranthene	EPA 625	6C06060	0.085	0.48	ND	0.952	03/06/06	03/09/06	
Fluorene	EPA 625	6C06060	0.071	0.48	ND	0.952	03/06/06	03/09/06	
Hexachlorobenzene	EPA 625	6C06060	0.12	0.95	ND	0.952	03/06/06	03/09/06	
Hexachlorobutadiene	EPA 625	6C06060	0.36	1.9	ND	0.952	03/06/06	03/09/06	
Hexachlorocyclopentadiene	EPA 625	6C06060	1.7	4.8	ND	0.952	03/06/06	03/09/06	
Hexachloroethane	EPA 625	6C06060	0.49	2.9	ND	0.952	03/06/06	03/09/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6C06060	0.18	1.9	ND	0.952	03/06/06	03/09/06	
<b>Isophorone</b>	EPA 625	6C06060	0.056	0.95	<b>0.095</b>	0.952	03/06/06	03/09/06	J
2-Methylnaphthalene	EPA 625	6C06060	0.12	0.95	ND	0.952	03/06/06	03/09/06	
2-Methylphenol	EPA 625	6C06060	0.27	1.9	ND	0.952	03/06/06	03/09/06	
4-Methylphenol	EPA 625	6C06060	0.19	4.8	ND	0.952	03/06/06	03/09/06	
Naphthalene	EPA 625	6C06060	0.12	0.95	ND	0.952	03/06/06	03/09/06	
2-Nitroaniline	EPA 625	6C06060	0.17	4.8	ND	0.952	03/06/06	03/09/06	
3-Nitroaniline	EPA 625	6C06060	0.33	4.8	ND	0.952	03/06/06	03/09/06	
4-Nitroaniline	EPA 625	6C06060	0.47	4.8	ND	0.952	03/06/06	03/09/06	
Nitrobenzene	EPA 625	6C06060	0.095	0.95	ND	0.952	03/06/06	03/09/06	
2-Nitrophenol	EPA 625	6C06060	0.22	1.9	ND	0.952	03/06/06	03/09/06	
4-Nitrophenol	EPA 625	6C06060	0.70	4.8	ND	0.952	03/06/06	03/09/06	
N-Nitrosodimethylamine	EPA 625	6C06060	0.21	1.9	ND	0.952	03/06/06	03/09/06	
N-Nitroso-di-n-propylamine	EPA 625	6C06060	0.17	1.9	ND	0.952	03/06/06	03/09/06	
N-Nitrosodiphenylamine	EPA 625	6C06060	0.073	0.95	ND	0.952	03/06/06	03/09/06	
Pentachlorophenol	EPA 625	6C06060	0.74	1.9	ND	0.952	03/06/06	03/09/06	
Phenanthrene	EPA 625	6C06060	0.068	0.48	ND	0.952	03/06/06	03/09/06	
Phenol	EPA 625	6C06060	0.13	0.95	ND	0.952	03/06/06	03/09/06	
Pyrene	EPA 625	6C06060	0.056	0.48	ND	0.952	03/06/06	03/09/06	
1,2,4-Trichlorobenzene	EPA 625	6C06060	0.095	0.95	ND	0.952	03/06/06	03/09/06	
2,4,5-Trichlorophenol	EPA 625	6C06060	0.071	1.9	ND	0.952	03/06/06	03/09/06	
2,4,6-Trichlorophenol	EPA 625	6C06060	0.095	0.95	ND	0.952	03/06/06	03/09/06	
Surrogate: 2-Fluorophenol (35-120%)					61 %				
Surrogate: Phenol-d6 (45-120%)					70 %				
Surrogate: 2,4,6-Tribromophenol (50-125%)					73 %				
Surrogate: Nitrobenzene-d5 (45-120%)					80 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					67 %				
Surrogate: Terphenyl-d14 (45-135%)					74 %				

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.</b>									
Reporting Units: ug/l									
Aldrin	EPA 608	6C05031	0.029	0.098	ND	0.98	03/05/06	03/06/06	
alpha-BHC	EPA 608	6C05031	0.00048	0.0098	ND	0.98	03/05/06	03/06/06	
beta-BHC	EPA 608	6C05031	0.015	0.098	ND	0.98	03/05/06	03/06/06	
delta-BHC	EPA 608	6C05031	0.020	0.20	ND	0.98	03/05/06	03/06/06	
gamma-BHC (Lindane)	EPA 608	6C05031	0.020	0.098	ND	0.98	03/05/06	03/06/06	
Chlordane	EPA 608	6C05031	0.20	0.98	ND	0.98	03/05/06	03/06/06	
4,4'-DDD	EPA 608	6C05031	0.020	0.098	ND	0.98	03/05/06	03/06/06	
4,4'-DDE	EPA 608	6C05031	0.025	0.098	ND	0.98	03/05/06	03/06/06	
4,4'-DDT	EPA 608	6C05031	0.034	0.098	ND	0.98	03/05/06	03/06/06	
Dieldrin	EPA 608	6C05031	0.015	0.098	ND	0.98	03/05/06	03/06/06	
Endosulfan I	EPA 608	6C05031	0.015	0.098	ND	0.98	03/05/06	03/06/06	
Endosulfan II	EPA 608	6C05031	0.039	0.098	ND	0.98	03/05/06	03/06/06	
Endosulfan sulfate	EPA 608	6C05031	0.020	0.20	ND	0.98	03/05/06	03/06/06	
Endrin	EPA 608	6C05031	0.020	0.098	ND	0.98	03/05/06	03/06/06	
Endrin aldehyde	EPA 608	6C05031	0.044	0.098	ND	0.98	03/05/06	03/06/06	
Endrin ketone	EPA 608	6C05031	0.020	0.098	ND	0.98	03/05/06	03/06/06	
Heptachlor	EPA 608	6C05031	0.029	0.098	ND	0.98	03/05/06	03/06/06	
Heptachlor epoxide	EPA 608	6C05031	0.029	0.098	ND	0.98	03/05/06	03/06/06	
Methoxychlor	EPA 608	6C05031	0.034	0.098	ND	0.98	03/05/06	03/06/06	
Toxaphene	EPA 608	6C05031	1.5	4.9	ND	0.98	03/05/06	03/06/06	
Surrogate: Decachlorobiphenyl (45-120%)					65 %				
Surrogate: Tetrachloro-m-xylene (35-120%)					61 %				

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

## TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.</b>									
<b>Reporting Units: ug/l</b>									
Aroclor 1016	EPA 608	6C05031	0.20	0.98	ND	0.98	03/05/06	03/06/06	
Aroclor 1221	EPA 608	6C05031	0.098	0.98	ND	0.98	03/05/06	03/06/06	
Aroclor 1232	EPA 608	6C05031	0.25	0.98	ND	0.98	03/05/06	03/06/06	
Aroclor 1242	EPA 608	6C05031	0.25	0.98	ND	0.98	03/05/06	03/06/06	
Aroclor 1248	EPA 608	6C05031	0.25	0.98	ND	0.98	03/05/06	03/06/06	
Aroclor 1254	EPA 608	6C05031	0.25	0.98	ND	0.98	03/05/06	03/06/06	
Aroclor 1260	EPA 608	6C05031	0.39	0.98	ND	0.98	03/05/06	03/06/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					<i>103 %</i>				

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NPDES - 2889



MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 011  Report Number: IPB2641	Sampled: 02/28/06 Received: 02/28/06
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**METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.</b>									
Reporting Units: mg/l									
Barium	EPA 200.7	6C03084	0.0028	0.010	0.047	1	03/03/06	03/04/06	
Boron	EPA 200.7	6C03084	0.0080	0.050	0.073	1	03/03/06	03/07/06	
Iron	EPA 200.7	6C03084	0.0088	0.040	5.0	1	03/03/06	03/04/06	

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
 Received: 02/28/06

## METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.</b>									
Reporting Units: ug/l									
Antimony	EPA 200.8	6C02098	0.18	2.0	1.1	1	03/02/06	03/02/06	J
Arsenic	EPA 200.7	6C03084	3.8	5.0	4.7	1	03/03/06	03/04/06	J
Beryllium	EPA 200.7	6C03084	0.62	2.0	ND	1	03/03/06	03/04/06	
Cadmium	EPA 200.8	6C02098	0.015	1.0	0.15	1	03/02/06	03/02/06	B, J
Chromium	EPA 200.7	6C03084	0.68	5.0	5.9	1	03/03/06	03/04/06	B
Cobalt	EPA 200.7	6C03084	2.0	10	ND	1	03/03/06	03/04/06	
Copper	EPA 200.8	6C02098	0.49	2.0	7.5	1	03/02/06	03/02/06	
Lead	EPA 200.8	6C02098	0.13	1.0	6.5	1	03/02/06	03/02/06	
Manganese	EPA 200.7	6C03084	3.2	20	120	1	03/03/06	03/04/06	
Mercury	EPA 245.1	6C02097	0.063	0.20	ND	1	03/02/06	03/02/06	
Nickel	EPA 200.7	6C03084	2.0	10	5.0	1	03/03/06	03/04/06	J
Selenium	EPA 200.8	6C02098	0.36	2.0	1.2	1	03/02/06	03/02/06	B, J
Silver	EPA 200.8	6C02098	0.089	1.0	ND	1	03/02/06	03/02/06	
Thallium	EPA 200.8	6C02098	0.075	1.0	0.18	1	03/02/06	03/02/06	J
Vanadium	EPA 200.7	6C03084	3.0	10	10	1	03/03/06	03/04/06	
Zinc	EPA 200.7	6C03084	3.7	20	47	1	03/03/06	03/04/06	

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
 Received: 02/28/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.</b>									
<b>Reporting Units: mg/l</b>									
Ammonia-N (Distilled)	EPA 350.2	6C05021	0.30	0.50	<b>0.56</b>	1	03/05/06	03/05/06	
Biochemical Oxygen Demand	EPA 405.1	6C01114	0.59	2.0	<b>3.2</b>	1	03/01/06	03/06/06	
Chloride	EPA 300.0	6C01049	0.26	0.50	<b>24</b>	1	03/01/06	03/01/06	
Fluoride	EPA 300.0	6C01049	0.10	0.50	<b>0.27</b>	1	03/01/06	03/01/06	J
Nitrate/Nitrite-N	EPA 300.0	6C01049	0.072	0.26	<b>0.91</b>	1	03/01/06	03/01/06	
Oil & Grease	EPA 413.1	6C08046	0.93	5.0	ND	1	03/08/06	03/08/06	
Residual Chlorine	EPA 330.5	6B28145	0.10	0.10	ND	1	02/28/06	02/28/06	
Sulfate	EPA 300.0	6C01049	0.18	0.50	<b>35</b>	1	03/01/06	03/01/06	M2
Surfactants (MBAS)	SM5540-C	6C01108	0.044	0.10	ND	1	03/01/06	03/01/06	
Total Dissolved Solids	SM2540C	6C03069	10	10	<b>240</b>	1	03/03/06	03/03/06	
Total Organic Carbon	EPA 415.1	6C02064	0.25	1.0	<b>11</b>	1	03/01/06	03/01/06	
Total Suspended Solids	EPA 160.2	6C05025	10	10	<b>69</b>	1	03/05/06	03/05/06	

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06

Received: 02/28/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.</b>									
Reporting Units: ml/hr									
Total Settleable Solids	EPA 160.5	6B28095	0.10	0.10	ND	1	02/28/06	02/28/06	

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 Pasadena, CA 91101  
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
 Received: 02/28/06

## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.</b>									
Reporting Units: NTU									
Turbidity	EPA 180.1	6C01122	0.080	2.0	72	2	03/01/06	03/01/06	

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NPDES - 2894



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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06

Received: 02/28/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6C02125	2.2	5.0	3.0	1	03/02/06	03/02/06	J
Perchlorate	EPA 314.0	6C02068	0.80	4.0	ND	1	03/02/06	03/03/06	

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 011  Report Number: IPB2641	Sampled: 02/28/06 Received: 02/28/06
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## INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.</b>									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6C03067	1.0	1.0	380	1	03/03/06	03/03/06	

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 011  Report Number: IPB2641	Sampled: 02/28/06 Received: 02/28/06
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**1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
<b>Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.</b>									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B	P6C0311	0.49	1.0	ND	1	03/03/06	03/04/06	
Surrogate: Dibromofluoromethane (70-130%)					115 %				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

**SHORT HOLD TIME DETAIL REPORT**

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
<b>Sample ID: Outfall 011 (IPB2641-01) - Water</b>					
EPA 160.5	2	02/28/2006 13:00	02/28/2006 18:35	02/28/2006 20:45	02/28/2006 21:45
EPA 180.1	2	02/28/2006 13:00	02/28/2006 18:35	03/01/2006 15:15	03/01/2006 16:15
EPA 300.0	2	02/28/2006 13:00	02/28/2006 18:35	03/01/2006 08:00	03/01/2006 08:28
EPA 330.5	1	02/28/2006 13:00	02/28/2006 18:35	02/28/2006 21:30	02/28/2006 21:45
EPA 405.1	2	02/28/2006 13:00	02/28/2006 18:35	03/01/2006 14:15	03/06/2006 14:00
EPA 624	3	02/28/2006 13:00	02/28/2006 18:35	03/02/2006 00:00	03/03/2006 03:39
SM5540-C	2	02/28/2006 13:00	02/28/2006 18:35	03/01/2006 14:29	03/01/2006 15:25
<b>Sample ID: Trip Blank (IPB2641-02) - Water</b>					
EPA 624	3	02/28/2006 15:45	02/28/2006 18:35	03/02/2006 00:00	03/02/2006 22:39

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Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

**METHOD BLANK/QC DATA**

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b><u>Batch: 6C06047 Extracted: 03/06/06</u></b>											
<b>Blank Analyzed: 03/06/2006 (6C06047-BLK1)</b>											
Total Recoverable Hydrocarbons	ND	1.0	0.31	mg/l							
<b>LCS Analyzed: 03/06/2006 (6C06047-BS1)</b>											
Total Recoverable Hydrocarbons	4.47	1.0	0.31	mg/l	5.00		89	65-120			M-NRI
<b>LCS Dup Analyzed: 03/06/2006 (6C06047-BSD1)</b>											
Total Recoverable Hydrocarbons	4.11	1.0	0.31	mg/l	5.00		82	65-120	8	20	

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Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

**METHOD BLANK/QC DATA**

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C07098 Extracted: 03/07/06</b>											
<b>Blank Analyzed: 03/07/2006 (6C07098-BLK1)</b>											
EFH (C13 - C22)	ND	0.50	0.045	mg/l							
EFH (C13 - C40)	ND	0.50	0.045	mg/l							
Surrogate: n-Octacosane	0.142			mg/l	0.200		71	40-125			
<b>LCS Analyzed: 03/07/2006 (6C07098-BS1)</b>											
EFH (C13 - C40)	0.504	0.50	0.045	mg/l	0.750		67	40-120			M-NRI
Surrogate: n-Octacosane	0.146			mg/l	0.200		73	40-125			
<b>LCS Dup Analyzed: 03/07/2006 (6C07098-BSD1)</b>											
EFH (C13 - C40)	0.540	0.50	0.045	mg/l	0.750		72	40-120	7	25	
Surrogate: n-Octacosane	0.153			mg/l	0.200		76	40-125			

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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: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
 Received: 02/28/06

**METHOD BLANK/QC DATA**

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06046 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C06046-BLK1)</b>											
GRO (C4 - C12)	ND	0.10	0.050	mg/l							
Surrogate: 4-BFB (FID)	0.00732			mg/l	0.0100		73	65-140			
<b>LCS Analyzed: 03/06/2006 (6C06046-BS1)</b>											
GRO (C4 - C12)	0.827	0.10	0.050	mg/l	0.800		103	65-140			
Surrogate: 4-BFB (FID)	0.0414			mg/l	0.0300		138	65-140			
<b>Matrix Spike Analyzed: 03/06/2006 (6C06046-MS1)</b>						<b>Source: IPB2637-01</b>					
GRO (C4 - C12)	0.208	0.10	0.050	mg/l	0.220	ND	95	60-145			
Surrogate: 4-BFB (FID)	0.0115			mg/l	0.0100		115	65-140			
<b>Matrix Spike Dup Analyzed: 03/06/2006 (6C06046-MSD1)</b>						<b>Source: IPB2637-01</b>					
GRO (C4 - C12)	0.216	0.10	0.050	mg/l	0.220	ND	98	60-145	4	20	
Surrogate: 4-BFB (FID)	0.0117			mg/l	0.0100		117	65-140			

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 Michele Chamberlin  
 Project Manager

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Pasadena, CA 91101  
Attention: Bronwyn Kelly

Project ID: Annual Outfall 011

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Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>										
<b>Blank Analyzed: 03/02/2006 (6C02019-BLK1)</b>										
Benzene	ND	2.0	0.28	ug/l						
Benzene	ND	1.0	0.28	ug/l						
Bromodichloromethane	ND	2.0	0.30	ug/l						
Bromoform	ND	5.0	0.32	ug/l						
Bromomethane	ND	5.0	0.42	ug/l						
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l						
Carbon tetrachloride	ND	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	0.40	ug/l						
Chloroform	ND	2.0	0.33	ug/l						
Chloroform	ND	2.0	0.33	ug/l						
Chloromethane	ND	5.0	0.30	ug/l						
Dibromochloromethane	ND	2.0	0.28	ug/l						
1,2-Dichlorobenzene	ND	2.0	0.32	ug/l						
1,3-Dichlorobenzene	ND	2.0	0.35	ug/l						
1,4-Dichlorobenzene	ND	2.0	0.37	ug/l						
1,1-Dichloroethane	ND	2.0	0.27	ug/l						
1,1-Dichloroethane	ND	2.0	0.27	ug/l						
1,2-Dichloroethane	ND	2.0	0.28	ug/l						
1,2-Dichloroethane	ND	0.50	0.28	ug/l						
1,1-Dichloroethene	ND	5.0	0.42	ug/l						
1,1-Dichloroethene	ND	3.0	0.32	ug/l						
trans-1,2-Dichloroethene	ND	2.0	0.27	ug/l						
1,2-Dichloropropane	ND	2.0	0.35	ug/l						
cis-1,3-Dichloropropene	ND	2.0	0.22	ug/l						
trans-1,3-Dichloropropene	ND	2.0	0.32	ug/l						
Ethylbenzene	ND	2.0	0.25	ug/l						
Ethylbenzene	ND	2.0	0.25	ug/l						
Methylene chloride	1.16	5.0	0.70	ug/l						J
1,1,2,2-Tetrachloroethane	ND	2.0	0.24	ug/l						
Tetrachloroethene	ND	2.0	0.32	ug/l						
Tetrachloroethene	ND	2.0	0.32	ug/l						
Toluene	ND	2.0	0.36	ug/l						
Toluene	ND	2.0	0.36	ug/l						

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02019-BLK1)</b>											
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND	5.0	0.26	ug/l							
Trichloroethene	ND	2.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Vinyl chloride	ND	0.50	0.26	ug/l							
Vinyl chloride	ND	5.0	0.26	ug/l							
Xylenes, Total	ND	4.0	0.90	ug/l							
Xylenes, Total	ND	4.0	0.52	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l							
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		110	80-120			
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		96	80-120			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		96	80-120			
<b>LCS Analyzed: 03/02/2006 (6C02019-BS1)</b>											
Benzene	26.3	2.0	0.28	ug/l	25.0		105	70-120			
Benzene	26.3	1.0	0.28	ug/l	25.0		105	65-120			
Bromodichloromethane	25.5	2.0	0.30	ug/l	25.0		102	65-135			
Bromoform	21.8	5.0	0.32	ug/l	25.0		87	50-130			
Bromomethane	23.1	5.0	0.42	ug/l	25.0		92	60-140			
Carbon tetrachloride	24.8	5.0	0.28	ug/l	25.0		99	70-140			
Carbon tetrachloride	24.8	0.50	0.28	ug/l	25.0		99	65-140			
Chlorobenzene	26.0	2.0	0.36	ug/l	25.0		104	70-125			
Chloroethane	26.1	5.0	0.40	ug/l	25.0		104	55-140			
Chloroform	26.0	2.0	0.33	ug/l	25.0		104	75-130			
Chloroform	26.0	2.0	0.33	ug/l	25.0		104	65-130			
Chloromethane	23.7	5.0	0.30	ug/l	25.0		95	40-140			
Dibromochloromethane	25.8	2.0	0.28	ug/l	25.0		103	65-140			
1,2-Dichlorobenzene	27.1	2.0	0.32	ug/l	25.0		108	70-120			
1,3-Dichlorobenzene	24.9	2.0	0.35	ug/l	25.0		100	70-125			

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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: Annual Outfall 011  
Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>LCS Analyzed: 03/02/2006 (6C02019-BS1)</b>											
1,4-Dichlorobenzene	24.3	2.0	0.37	ug/l	25.0		97	70-125			
1,1-Dichloroethane	26.0	2.0	0.27	ug/l	25.0		104	65-130			
1,1-Dichloroethane	26.0	2.0	0.27	ug/l	25.0		104	70-135			
1,2-Dichloroethane	26.0	2.0	0.28	ug/l	25.0		104	60-150			
1,2-Dichloroethane	26.0	0.50	0.28	ug/l	25.0		104	60-140			
1,1-Dichloroethene	28.5	5.0	0.42	ug/l	25.0		114	70-130			
1,1-Dichloroethene	28.5	3.0	0.32	ug/l	25.0		114	75-135			
trans-1,2-Dichloroethene	27.9	2.0	0.27	ug/l	25.0		112	65-130			
1,2-Dichloropropane	26.7	2.0	0.35	ug/l	25.0		107	65-125			
cis-1,3-Dichloropropene	26.2	2.0	0.22	ug/l	25.0		105	70-130			
trans-1,3-Dichloropropene	26.9	2.0	0.32	ug/l	25.0		108	65-130			
Ethylbenzene	26.1	2.0	0.25	ug/l	25.0		104	80-120			
Ethylbenzene	26.1	2.0	0.25	ug/l	25.0		104	70-125			
Methylene chloride	28.2	5.0	0.70	ug/l	25.0		113	60-130			
1,1,2,2-Tetrachloroethane	36.9	2.0	0.24	ug/l	25.0		148	55-130			L
Tetrachloroethene	25.7	2.0	0.32	ug/l	25.0		103	75-125			
Tetrachloroethene	25.7	2.0	0.32	ug/l	25.0		103	65-125			
Toluene	25.6	2.0	0.36	ug/l	25.0		102	70-125			
Toluene	25.6	2.0	0.36	ug/l	25.0		102	75-120			
1,1,1-Trichloroethane	23.6	2.0	0.30	ug/l	25.0		94	75-140			
1,1,1-Trichloroethane	23.6	2.0	0.30	ug/l	25.0		94	65-135			
1,1,2-Trichloroethane	29.4	2.0	0.30	ug/l	25.0		118	70-125			
1,1,2-Trichloroethane	29.4	2.0	0.30	ug/l	25.0		118	65-125			
Trichloroethene	26.7	5.0	0.26	ug/l	25.0		107	80-120			
Trichloroethene	26.7	2.0	0.26	ug/l	25.0		107	70-125			
Trichlorofluoromethane	23.0	5.0	0.34	ug/l	25.0		92	60-140			
Trichlorofluoromethane	23.0	5.0	0.34	ug/l	25.0		92	65-145			
Vinyl chloride	25.2	5.0	0.26	ug/l	25.0		101	50-130			
Vinyl chloride	25.2	0.50	0.26	ug/l	25.0		101	50-130			
Surrogate: Dibromofluoromethane	27.8			ug/l	25.0		111	80-120			
Surrogate: Dibromofluoromethane	27.8			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		108	80-120			

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Matrix Spike Analyzed: 03/02/2006 (6C02019-MS1)</b>						<b>Source: IPB2639-01</b>					
Benzene	26.1	1.0	0.28	ug/l	25.0	ND	104	60-125			
Benzene	26.1	2.0	0.28	ug/l	25.0	ND	104	70-120			
Bromodichloromethane	25.1	2.0	0.30	ug/l	25.0	ND	100	65-135			
Bromoform	18.2	5.0	0.32	ug/l	25.0	ND	73	50-135			
Bromomethane	21.9	5.0	0.42	ug/l	25.0	ND	88	50-145			
Carbon tetrachloride	24.9	5.0	0.28	ug/l	25.0	ND	100	70-145			
Carbon tetrachloride	24.9	0.50	0.28	ug/l	25.0	ND	100	65-140			
Chlorobenzene	25.7	2.0	0.36	ug/l	25.0	ND	103	70-125			
Chloroethane	25.6	5.0	0.40	ug/l	25.0	ND	102	50-140			
Chloroform	25.6	2.0	0.33	ug/l	25.0	ND	102	65-135			
Chloroform	25.6	2.0	0.33	ug/l	25.0	ND	102	70-135			
Chloromethane	23.5	5.0	0.30	ug/l	25.0	ND	94	35-140			
Dibromochloromethane	24.0	2.0	0.28	ug/l	25.0	ND	96	60-140			
1,2-Dichlorobenzene	25.9	2.0	0.32	ug/l	25.0	ND	104	70-125			
1,3-Dichlorobenzene	24.0	2.0	0.35	ug/l	25.0	ND	96	70-125			
1,4-Dichlorobenzene	23.4	2.0	0.37	ug/l	25.0	ND	94	70-125			
1,1-Dichloroethane	25.6	2.0	0.27	ug/l	25.0	ND	102	60-130			
1,1-Dichloroethane	25.6	2.0	0.27	ug/l	25.0	ND	102	65-135			
1,2-Dichloroethane	25.8	2.0	0.28	ug/l	25.0	ND	103	60-150			
1,2-Dichloroethane	25.8	0.50	0.28	ug/l	25.0	ND	103	60-140			
1,1-Dichloroethene	27.2	3.0	0.32	ug/l	25.0	ND	109	65-140			
1,1-Dichloroethene	27.2	5.0	0.42	ug/l	25.0	ND	109	60-135			
trans-1,2-Dichloroethene	26.6	2.0	0.27	ug/l	25.0	ND	106	60-135			
1,2-Dichloropropane	26.6	2.0	0.35	ug/l	25.0	ND	106	60-125			
cis-1,3-Dichloropropene	25.8	2.0	0.22	ug/l	25.0	ND	103	65-135			
trans-1,3-Dichloropropene	26.4	2.0	0.32	ug/l	25.0	ND	106	65-140			
Ethylbenzene	25.7	2.0	0.25	ug/l	25.0	ND	103	70-130			
Ethylbenzene	25.7	2.0	0.25	ug/l	25.0	ND	103	65-130			
Methylene chloride	25.9	5.0	0.70	ug/l	25.0	ND	104	55-130			
1,1,2,2-Tetrachloroethane	35.2	2.0	0.24	ug/l	25.0	ND	141	55-140			MI
Tetrachloroethene	25.1	2.0	0.32	ug/l	25.0	ND	100	70-130			
Tetrachloroethene	25.1	2.0	0.32	ug/l	25.0	ND	100	60-130			
Toluene	25.5	2.0	0.36	ug/l	25.0	ND	102	70-120			
Toluene	25.5	2.0	0.36	ug/l	25.0	ND	102	65-125			
1,1,1-Trichloroethane	23.2	2.0	0.30	ug/l	25.0	ND	93	65-140			

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

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

Project ID: Annual Outfall 011  
Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Matrix Spike Analyzed: 03/02/2006 (6C02019-MS1)</b>					<b>Source: IPB2639-01</b>						
1,1,1-Trichloroethane	23.2	2.0	0.30	ug/l	25.0	ND	93	75-140			
1,1,2-Trichloroethane	28.0	2.0	0.30	ug/l	25.0	ND	112	60-130			
1,1,2-Trichloroethane	28.0	2.0	0.30	ug/l	25.0	ND	112	60-135			
Trichloroethene	28.2	2.0	0.26	ug/l	25.0	2.4	103	60-125			
Trichloroethene	28.2	5.0	0.26	ug/l	25.0	2.4	103	70-125			
Trichlorofluoromethane	22.3	5.0	0.34	ug/l	25.0	ND	89	55-145			
Trichlorofluoromethane	22.3	5.0	0.34	ug/l	25.0	ND	89	55-145			
Vinyl chloride	23.9	5.0	0.26	ug/l	25.0	ND	96	40-135			
Vinyl chloride	23.9	0.50	0.26	ug/l	25.0	ND	96	40-135			
Surrogate: Dibromofluoromethane	28.1			ug/l	25.0		112	80-120			
Surrogate: Dibromofluoromethane	28.1			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	28.1			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	28.1			ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	26.7			ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	26.7			ug/l	25.0		107	80-120			
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02019-MSD1)</b>					<b>Source: IPB2639-01</b>						
Benzene	26.7	1.0	0.28	ug/l	25.0	ND	107	60-125	2	20	
Benzene	26.7	2.0	0.28	ug/l	25.0	ND	107	70-120	2	20	
Bromodichloromethane	24.9	2.0	0.30	ug/l	25.0	ND	100	65-135	1	20	
Bromoform	16.4	5.0	0.32	ug/l	25.0	ND	66	50-135	10	25	
Bromomethane	25.1	5.0	0.42	ug/l	25.0	ND	100	50-145	14	25	
Carbon tetrachloride	26.4	5.0	0.28	ug/l	25.0	ND	106	70-145	6	25	
Carbon tetrachloride	26.4	0.50	0.28	ug/l	25.0	ND	106	65-140	6	25	
Chlorobenzene	26.2	2.0	0.36	ug/l	25.0	ND	105	70-125	2	20	
Chloroethane	28.5	5.0	0.40	ug/l	25.0	ND	114	50-140	11	25	
Chloroform	26.8	2.0	0.33	ug/l	25.0	ND	107	65-135	5	20	
Chloroform	26.8	2.0	0.33	ug/l	25.0	ND	107	70-135	5	20	
Chloromethane	25.4	5.0	0.30	ug/l	25.0	ND	102	35-140	8	25	
Dibromochloromethane	22.0	2.0	0.28	ug/l	25.0	ND	88	60-140	9	25	
1,2-Dichlorobenzene	25.9	2.0	0.32	ug/l	25.0	ND	104	70-125	0	20	
1,3-Dichlorobenzene	25.2	2.0	0.35	ug/l	25.0	ND	101	70-125	5	20	
1,4-Dichlorobenzene	24.6	2.0	0.37	ug/l	25.0	ND	98	70-125	5	20	
1,1-Dichloroethane	26.6	2.0	0.27	ug/l	25.0	ND	106	65-135	4	20	
1,1-Dichloroethane	26.6	2.0	0.27	ug/l	25.0	ND	106	60-130	4	20	
1,2-Dichloroethane	23.0	2.0	0.28	ug/l	25.0	ND	92	60-150	11	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: Annual Outfall 011  
Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02019-MSD1)</b>						<b>Source: IPB2639-01</b>					
1,2-Dichloroethane	23.0	0.50	0.28	ug/l	25.0	ND	92	60-140	11	20	
1,1-Dichloroethene	29.2	5.0	0.42	ug/l	25.0	ND	117	60-135	7	20	
1,1-Dichloroethane	29.2	3.0	0.32	ug/l	25.0	ND	117	65-140	7	20	
trans-1,2-Dichloroethene	28.2	2.0	0.27	ug/l	25.0	ND	113	60-135	6	20	
1,2-Dichloropropane	26.0	2.0	0.35	ug/l	25.0	ND	104	60-125	2	20	
cis-1,3-Dichloropropene	24.5	2.0	0.22	ug/l	25.0	ND	98	65-135	5	20	
trans-1,3-Dichloropropene	23.0	2.0	0.32	ug/l	25.0	ND	92	65-140	14	25	
Ethylbenzene	27.0	2.0	0.25	ug/l	25.0	ND	108	70-130	5	20	
Ethylbenzene	27.0	2.0	0.25	ug/l	25.0	ND	108	65-130	5	20	
Methylene chloride	26.8	5.0	0.70	ug/l	25.0	ND	107	55-130	3	20	
1,1,2,2-Tetrachloroethane	25.7	2.0	0.24	ug/l	25.0	ND	103	55-140	31	30	R-3
Tetrachloroethene	26.4	2.0	0.32	ug/l	25.0	ND	106	70-130	5	20	
Tetrachloroethene	26.4	2.0	0.32	ug/l	25.0	ND	106	60-130	5	20	
Toluene	26.5	2.0	0.36	ug/l	25.0	ND	106	70-120	4	20	
Toluene	26.5	2.0	0.36	ug/l	25.0	ND	106	65-125	4	20	
1,1,1-Trichloroethane	24.3	2.0	0.30	ug/l	25.0	ND	97	75-140	5	20	
1,1,1-Trichloroethane	24.3	2.0	0.30	ug/l	25.0	ND	97	65-140	5	20	
1,1,2-Trichloroethane	23.6	2.0	0.30	ug/l	25.0	ND	94	60-130	17	25	
1,1,2-Trichloroethane	23.6	2.0	0.30	ug/l	25.0	ND	94	60-135	17	25	
Trichloroethene	29.1	5.0	0.26	ug/l	25.0	2.4	107	70-125	3	20	
Trichloroethene	29.1	2.0	0.26	ug/l	25.0	2.4	107	60-125	3	20	
Trichlorofluoromethane	24.3	5.0	0.34	ug/l	25.0	ND	97	55-145	9	25	
Trichlorofluoromethane	24.3	5.0	0.34	ug/l	25.0	ND	97	55-145	9	25	
Vinyl chloride	25.6	0.50	0.26	ug/l	25.0	ND	102	40-135	7	30	
Vinyl chloride	25.6	5.0	0.26	ug/l	25.0	ND	102	40-135	7	30	
Surrogate: Dibromofluoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Dibromofluoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			

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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: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02019-BLK1)</b>											
Acrolein	ND	50	4.6	ug/l							
Acrylonitrile	ND	50	0.70	ug/l							
2-Chloroethyl vinyl ether	ND	5.0	1.8	ug/l							
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		96	80-120			
<b>LCS Analyzed: 03/02/2006 (6C02019-BS1)</b>											
2-Chloroethyl vinyl ether	17.8	5.0	1.8	ug/l	25.0		71	25-170			
Surrogate: Dibromofluoromethane	27.8			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		108	80-120			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02019-MS1)</b>					<b>Source: IPB2639-01</b>						
2-Chloroethyl vinyl ether	21.2	5.0	1.8	ug/l	25.0	ND	85	25-170			
Surrogate: Dibromofluoromethane	28.1			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	28.1			ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	26.7			ug/l	25.0		107	80-120			
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02019-MSD1)</b>					<b>Source: IPB2639-01</b>						
2-Chloroethyl vinyl ether	8.66	5.0	1.8	ug/l	25.0	ND	35	25-170	84	25	R
Surrogate: Dibromofluoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			

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 Project Manager

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

**METHOD BLANK/QC DATA**

**PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02019 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02019-BLK1)</b>											
1,2-Dichloro-1,1,2-trifluoroethane	ND	2.5	N/A	ug/l							
Cyclohexane	ND	2.5	N/A	ug/l							

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Pasadena, CA 91101  
Attention: Bronwyn Kelly

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Report Number: IPB2641

Sampled: 02/28/06  
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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
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/09/2006 (6C06060-BLK1)</b>											
Acenaphthene	ND	0.50	0.10	ug/l							
Acenaphthylene	ND	0.50	0.10	ug/l							
Aniline	ND	10	2.9	ug/l							
Anthracene	ND	0.50	0.083	ug/l							
Benzidine	ND	5.0	3.2	ug/l							
Benzoic acid	ND	20	3.7	ug/l							
Benzo(a)anthracene	ND	5.0	0.038	ug/l							
Benzo(a)pyrene	ND	2.0	0.14	ug/l							
Benzo(b)fluoranthene	ND	2.0	0.050	ug/l							
Benzo(g,h,i)perylene	ND	5.0	0.059	ug/l							
Benzo(k)fluoranthene	ND	0.50	0.053	ug/l							
Benzyl alcohol	ND	5.0	0.21	ug/l							
Bis(2-chloroethoxy)methane	ND	0.50	0.072	ug/l							
Bis(2-chloroethyl)ether	ND	0.50	0.084	ug/l							
Bis(2-chloroisopropyl)ether	ND	0.50	0.11	ug/l							
Bis(2-ethylhexyl)phthalate	ND	5.0	1.1	ug/l							
4-Bromophenyl phenyl ether	ND	1.0	0.12	ug/l							
Butyl benzyl phthalate	ND	5.0	0.34	ug/l							
4-Chloroaniline	ND	2.0	0.20	ug/l							
2-Chloronaphthalene	ND	0.50	0.059	ug/l							
4-Chloro-3-methylphenol	ND	2.0	0.34	ug/l							
4-Chlorophenyl phenyl ether	ND	0.50	0.056	ug/l							
2-Chlorophenol	ND	1.0	0.12	ug/l							
Chrysene	ND	0.50	0.072	ug/l							
Dibenz(a,h)anthracene	ND	0.50	0.083	ug/l							
Dibenzofuran	ND	0.50	0.075	ug/l							
Di-n-butyl phthalate	ND	2.0	0.26	ug/l							
1,2-Dichlorobenzene	ND	0.50	0.11	ug/l							
1,3-Dichlorobenzene	ND	0.50	0.13	ug/l							
1,4-Dichlorobenzene	ND	0.50	0.050	ug/l							
3,3-Dichlorobenzidine	ND	5.0	0.93	ug/l							
2,4-Dichlorophenol	ND	2.0	0.21	ug/l							
Diethyl phthalate	ND	1.0	0.12	ug/l							
2,4-Dimethylphenol	ND	2.0	0.31	ug/l							
Dimethyl phthalate	ND	0.50	0.081	ug/l							

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Report Number: IPB2641

Sampled: 02/28/06  
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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
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/09/2006 (6C06060-BLK1)</b>											
4,6-Dinitro-2-methylphenol	ND	5.0	0.38	ug/l							
2,4-Dinitrophenol	ND	5.0	2.7	ug/l							
2,4-Dinitrotoluene	ND	5.0	0.23	ug/l							
2,6-Dinitrotoluene	ND	5.0	0.24	ug/l							
Di-n-octyl phthalate	ND	5.0	0.17	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	1.0	0.087	ug/l							
Fluoranthene	ND	0.50	0.089	ug/l							
Fluorene	ND	0.50	0.075	ug/l							
Hexachlorobenzene	ND	1.0	0.13	ug/l							
Hexachlorobutadiene	ND	2.0	0.38	ug/l							
Hexachlorocyclopentadiene	ND	5.0	1.8	ug/l							
Hexachloroethane	ND	3.0	0.51	ug/l							
Indeno(1,2,3-cd)pyrene	ND	2.0	0.19	ug/l							
Isophorone	ND	1.0	0.059	ug/l							
2-Methylnaphthalene	ND	1.0	0.13	ug/l							
2-Methylphenol	ND	2.0	0.28	ug/l							
4-Methylphenol	ND	5.0	0.20	ug/l							
Naphthalene	ND	1.0	0.13	ug/l							
2-Nitroaniline	ND	5.0	0.18	ug/l							
3-Nitroaniline	ND	5.0	0.35	ug/l							
4-Nitroaniline	ND	5.0	0.49	ug/l							
Nitrobenzene	ND	1.0	0.10	ug/l							
2-Nitrophenol	ND	2.0	0.23	ug/l							
4-Nitrophenol	ND	5.0	0.73	ug/l							
N-Nitrosodimethylamine	ND	2.0	0.22	ug/l							
N-Nitroso-di-n-propylamine	ND	2.0	0.18	ug/l							
N-Nitrosodiphenylamine	ND	1.0	0.077	ug/l							
Pentachlorophenol	ND	2.0	0.78	ug/l							
Phenanthrene	ND	0.50	0.071	ug/l							
Phenol	ND	1.0	0.14	ug/l							
Pyrene	ND	0.50	0.059	ug/l							
1,2,4-Trichlorobenzene	ND	1.0	0.10	ug/l							
2,4,5-Trichlorophenol	ND	2.0	0.075	ug/l							
2,4,6-Trichlorophenol	ND	1.0	0.10	ug/l							
Surrogate: 2-Fluorophenol	14.2			ug/l	20.0		71	35-120			

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NPDES - 2911





MWH-Pasadena/Boeing  
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 Attention: Bronwyn Kelly

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Report Number: IPB2641

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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 Limit	Data Qualifiers
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>Blank Analyzed: 03/09/2006 (6C06060-BLK1)</b>											
Surrogate: Phenol-d6	14.6			ug/l	20.0		73	45-120			
Surrogate: 2,4,6-Tribromophenol	16.4			ug/l	20.0		82	50-125			
Surrogate: Nitrobenzene-d5	7.76			ug/l	10.0		78	45-120			
Surrogate: 2-Fluorobiphenyl	6.74			ug/l	10.0		67	45-120			
Surrogate: Terphenyl-d14	7.50			ug/l	10.0		75	45-135			
<b>LCS Analyzed: 03/09/2006 (6C06060-BS1)</b>											
Acenaphthene	7.90	0.50	0.10	ug/l	10.0		79	55-120			
Acenaphthylene	8.44	0.50	0.10	ug/l	10.0		84	55-120			
Aniline	7.02	10	2.9	ug/l	10.0		70	30-120			J
Anthracene	8.74	0.50	0.083	ug/l	10.0		87	60-120			
Benzidine	ND	5.0	3.2	ug/l	10.0			20-180			L2
Benzoic acid	ND	20	3.7	ug/l	10.0			30-125			L2
Benzo(a)anthracene	9.48	5.0	0.038	ug/l	10.0		95	65-120			
Benzo(a)pyrene	10.3	2.0	0.14	ug/l	10.0		103	55-125			
Benzo(b)fluoranthene	11.0	2.0	0.050	ug/l	10.0		110	50-125			
Benzo(g,h,i)perylene	12.0	5.0	0.059	ug/l	10.0		120	35-160			
Benzo(k)fluoranthene	10.1	0.50	0.053	ug/l	10.0		101	50-125			
Benzyl alcohol	7.00	5.0	0.21	ug/l	10.0		70	40-130			
Bis(2-chloroethoxy)methane	7.98	0.50	0.072	ug/l	10.0		80	55-120			
Bis(2-chloroethyl)ether	7.26	0.50	0.084	ug/l	10.0		73	50-120			
Bis(2-chloroisopropyl)ether	7.70	0.50	0.11	ug/l	10.0		77	50-120			
Bis(2-ethylhexyl)phthalate	10.0	5.0	1.1	ug/l	10.0		100	65-125			
4-Bromophenyl phenyl ether	8.36	1.0	0.12	ug/l	10.0		84	55-125			
Butyl benzyl phthalate	10.6	5.0	0.34	ug/l	10.0		106	60-125			
4-Chloroaniline	7.00	2.0	0.20	ug/l	10.0		70	55-120			
2-Chloronaphthalene	7.24	0.50	0.059	ug/l	10.0		72	60-120			
4-Chloro-3-methylphenol	9.26	2.0	0.34	ug/l	10.0		93	60-120			
4-Chlorophenyl phenyl ether	8.04	0.50	0.056	ug/l	10.0		80	55-120			
2-Chlorophenol	7.00	1.0	0.12	ug/l	10.0		70	45-120			
Chrysene	9.24	0.50	0.072	ug/l	10.0		92	65-120			
Dibenz(a,h)anthracene	11.0	0.50	0.083	ug/l	10.0		110	40-160			
Dibenzofuran	7.64	0.50	0.075	ug/l	10.0		76	60-120			
Di-n-butyl phthalate	9.46	2.0	0.26	ug/l	10.0		95	65-125			
1,2-Dichlorobenzene	6.56	0.50	0.11	ug/l	10.0		66	40-120			
1,3-Dichlorobenzene	6.48	0.50	0.13	ug/l	10.0		65	40-120			

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>LCS Analyzed: 03/09/2006 (6C06060-BS1)</b>											<b>M-NRI</b>
1,4-Dichlorobenzene	6.50	0.50	0.050	ug/l	10.0		65	40-120			
3,3-Dichlorobenzidine	8.90	5.0	0.93	ug/l	10.0		89	50-170			
2,4-Dichlorophenol	7.36	2.0	0.21	ug/l	10.0		74	55-120			
Diethyl phthalate	7.08	1.0	0.12	ug/l	10.0		71	60-120			
2,4-Dimethylphenol	7.40	2.0	0.31	ug/l	10.0		74	35-120			
Dimethyl phthalate	3.64	0.50	0.081	ug/l	10.0		36	60-120			L2
4,6-Dinitro-2-methylphenol	7.74	5.0	0.38	ug/l	10.0		77	55-120			
2,4-Dinitrophenol	6.30	5.0	2.7	ug/l	10.0		63	40-140			
2,4-Dinitrotoluene	8.12	5.0	0.23	ug/l	10.0		81	60-140			
2,6-Dinitrotoluene	7.88	5.0	0.24	ug/l	10.0		79	65-125			
Di-n-octyl phthalate	8.70	5.0	0.17	ug/l	10.0		87	60-130			
1,2-Diphenylhydrazine/Azobenzene	7.70	1.0	0.087	ug/l	10.0		77	60-120			
Fluoranthene	9.46	0.50	0.089	ug/l	10.0		95	55-125			
Fluorene	8.10	0.50	0.075	ug/l	10.0		81	60-120			
Hexachlorobenzene	8.70	1.0	0.13	ug/l	10.0		87	50-120			
Hexachlorobutadiene	7.32	2.0	0.38	ug/l	10.0		73	45-120			
Hexachlorocyclopentadiene	7.00	5.0	1.8	ug/l	10.0		70	10-130			
Hexachloroethane	6.46	3.0	0.51	ug/l	10.0		65	40-120			
Indeno(1,2,3-cd)pyrene	11.5	2.0	0.19	ug/l	10.0		115	35-150			
Isophorone	8.94	1.0	0.059	ug/l	10.0		89	55-120			
2-Methylnaphthalene	8.32	1.0	0.13	ug/l	10.0		83	50-120			
2-Methylphenol	7.04	2.0	0.28	ug/l	10.0		70	45-120			
4-Methylphenol	7.00	5.0	0.20	ug/l	10.0		70	45-120			
Naphthalene	7.92	1.0	0.13	ug/l	10.0		79	50-120			
2-Nitroaniline	7.90	5.0	0.18	ug/l	10.0		79	60-130			
3-Nitroaniline	6.74	5.0	0.35	ug/l	10.0		67	50-140			
4-Nitroaniline	6.76	5.0	0.49	ug/l	10.0		68	45-160			
Nitrobenzene	7.84	1.0	0.10	ug/l	10.0		78	50-120			
2-Nitrophenol	7.40	2.0	0.23	ug/l	10.0		74	55-120			
4-Nitrophenol	6.38	5.0	0.73	ug/l	10.0		64	50-135			
N-Nitrosodimethylamine	7.38	2.0	0.22	ug/l	10.0		74	40-120			
N-Nitroso-di-n-propylamine	7.84	2.0	0.18	ug/l	10.0		78	50-120			
N-Nitrosodiphenylamine	7.82	1.0	0.077	ug/l	10.0		78	60-120			
Pentachlorophenol	7.98	2.0	0.78	ug/l	10.0		80	50-125			
Phenanthrene	8.64	0.50	0.071	ug/l	10.0		86	55-120			

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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: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
 Received: 02/28/06

## METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>LCS Analyzed: 03/09/2006 (6C06060-BS1)</b>											<b>M-NRI</b>
Phenol	7.12	1.0	0.14	ug/l	10.0		71	45-120			
Pyrene	9.30	0.50	0.059	ug/l	10.0		93	50-120			
1,2,4-Trichlorobenzene	7.38	1.0	0.10	ug/l	10.0		74	50-120			
2,4,5-Trichlorophenol	7.50	2.0	0.075	ug/l	10.0		75	60-120			
2,4,6-Trichlorophenol	7.90	1.0	0.10	ug/l	10.0		79	60-120			
Surrogate: 2-Fluorophenol	10.9			ug/l	20.0		54	35-120			
Surrogate: Phenol-d6	12.1			ug/l	20.0		60	45-120			
Surrogate: 2,4,6-Tribromophenol	13.6			ug/l	20.0		68	50-125			
Surrogate: Nitrobenzene-d5	7.08			ug/l	10.0		71	45-120			
Surrogate: 2-Fluorobiphenyl	6.30			ug/l	10.0		63	45-120			
Surrogate: Terphenyl-d14	7.26			ug/l	10.0		73	45-135			
<b>LCS Dup Analyzed: 03/09/2006 (6C06060-BSD1)</b>											
Acenaphthene	8.18	0.50	0.10	ug/l	10.0		82	55-120	3	20	
Acenaphthylene	8.82	0.50	0.10	ug/l	10.0		88	55-120	4	20	
Aniline	7.34	10	2.9	ug/l	10.0		73	30-120	4	25	J
Anthracene	9.64	0.50	0.083	ug/l	10.0		96	60-120	10	20	
Benzidine	ND	5.0	3.2	ug/l	10.0			20-180		35	L2
Benzoic acid	ND	20	3.7	ug/l	10.0			30-125		30	L2
Benzo(a)anthracene	10.5	5.0	0.038	ug/l	10.0		105	65-120	10	20	
Benzo(a)pyrene	11.5	2.0	0.14	ug/l	10.0		115	55-125	11	25	
Benzo(b)fluoranthene	12.1	2.0	0.050	ug/l	10.0		121	50-125	10	25	
Benzo(g,h,i)perylene	13.1	5.0	0.059	ug/l	10.0		131	35-160	9	25	
Benzo(k)fluoranthene	11.3	0.50	0.053	ug/l	10.0		113	50-125	11	20	
Benzyl alcohol	7.60	5.0	0.21	ug/l	10.0		76	40-130	8	20	
Bis(2-chloroethoxy)methane	7.82	0.50	0.072	ug/l	10.0		78	55-120	2	20	
Bis(2-chloroethyl)ether	7.42	0.50	0.084	ug/l	10.0		74	50-120	2	20	
Bis(2-chloroisopropyl)ether	7.96	0.50	0.11	ug/l	10.0		80	50-120	3	20	
Bis(2-ethylhexyl)phthalate	11.3	5.0	1.1	ug/l	10.0		113	65-125	12	20	
4-Bromophenyl phenyl ether	8.82	1.0	0.12	ug/l	10.0		88	55-125	5	25	
Butyl benzyl phthalate	11.1	5.0	0.34	ug/l	10.0		111	60-125	5	20	
4-Chloroaniline	7.62	2.0	0.20	ug/l	10.0		76	55-120	8	25	
2-Chloronaphthalene	7.56	0.50	0.059	ug/l	10.0		76	60-120	4	20	
4-Chloro-3-methylphenol	9.84	2.0	0.34	ug/l	10.0		98	60-120	6	25	
4-Chlorophenyl phenyl ether	8.50	0.50	0.056	ug/l	10.0		85	55-120	6	20	
2-Chlorophenol	7.00	1.0	0.12	ug/l	10.0		70	45-120	0	25	

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

Project ID: Annual Outfall 011
Report Number: IPB2641

Sampled: 02/28/06
Received: 02/28/06

METHOD BLANK/QC DATA

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

Table with columns: Analyte, Result, Reporting Limit, MDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Data Qualifiers. Includes a list of 40 analytes such as Chrysene, Dibenz(a,h)anthracene, etc.

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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
<b>Batch: 6C06060 Extracted: 03/06/06</b>											
<b>LCS Dup Analyzed: 03/09/2006 (6C06060-BS01)</b>											
4-Nitrophenol	6.44	5.0	0.73	ug/l	10.0	64	50-135	1	25		
N-Nitrosodimethylamine	7.48	2.0	0.22	ug/l	10.0	75	40-120	1	20		
N-Nitroso-di-n-propylamine	8.20	2.0	0.18	ug/l	10.0	82	50-120	4	20		
N-Nitrosodiphenylamine	8.64	1.0	0.077	ug/l	10.0	86	60-120	10	20		
Pentachlorophenol	8.50	2.0	0.78	ug/l	10.0	85	50-125	6	25		
Phenanthrene	9.56	0.50	0.071	ug/l	10.0	96	55-120	10	20		
Phenol	7.22	1.0	0.14	ug/l	10.0	72	45-120	1	25		
Pyrene	10.2	0.50	0.059	ug/l	10.0	102	50-120	9	25		
1,2,4-Trichlorobenzene	7.26	1.0	0.10	ug/l	10.0	73	50-120	2	20		
2,4,5-Trichlorophenol	7.22	2.0	0.075	ug/l	10.0	72	60-120	4	20		
2,4,6-Trichlorophenol	7.64	1.0	0.10	ug/l	10.0	76	60-120	3	20		
Surrogate: 2-Fluorophenol	10.7			ug/l	20.0	54	35-120				
Surrogate: Phenol-d6	12.0			ug/l	20.0	60	45-120				
Surrogate: 2,4,6-Tribromophenol	13.7			ug/l	20.0	68	50-125				
Surrogate: Nitrobenzene-d5	7.24			ug/l	10.0	72	45-120				
Surrogate: 2-Fluorobiphenyl	6.58			ug/l	10.0	66	45-120				
Surrogate: Terphenyl-d14	7.58			ug/l	10.0	76	45-135				

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Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C05031-BLK1)</b>											
Aldrin	ND	0.10	0.030	ug/l							
alpha-BHC	ND	0.10	0.020	ug/l							
alpha-BHC	ND	0.010	0.0010	ug/l							
beta-BHC	ND	0.10	0.015	ug/l							
delta-BHC	ND	0.20	0.020	ug/l							
gamma-BHC (Lindane)	ND	0.10	0.020	ug/l							
Chlordane	ND	1.0	0.20	ug/l							
4,4'-DDD	ND	0.10	0.020	ug/l							
4,4'-DDE	ND	0.10	0.025	ug/l							
4,4'-DDT	ND	0.10	0.035	ug/l							
Dieldrin	ND	0.10	0.015	ug/l							
Endosulfan I	ND	0.10	0.015	ug/l							
Endosulfan II	ND	0.10	0.040	ug/l							
Endosulfan sulfate	ND	0.20	0.020	ug/l							
Endrin	ND	0.10	0.020	ug/l							
Endrin aldehyde	ND	0.10	0.045	ug/l							
Endrin ketone	ND	0.10	0.020	ug/l							
Heptachlor	ND	0.10	0.030	ug/l							
Heptachlor epoxide	ND	0.10	0.030	ug/l							
Methoxychlor	ND	0.10	0.035	ug/l							
Toxaphene	ND	5.0	1.5	ug/l							
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		70	35-115			
Surrogate: Decachlorobiphenyl	0.455			ug/l	0.500		91	45-120			
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		70	35-115			
Surrogate: Decachlorobiphenyl	0.455			ug/l	0.500		91	45-120			

LCS Analyzed: 03/06/2006 (6C05031-BS1)

M-NR1

Aldrin	0.389	0.10	0.030	ug/l	0.500		78	35-120			
alpha-BHC	0.434	0.010	0.0010	ug/l	0.500		87	45-120			
alpha-BHC	0.434	0.10	0.020	ug/l	0.500		87	45-120			
beta-BHC	0.426	0.10	0.015	ug/l	0.500		85	50-120			
delta-BHC	0.435	0.20	0.020	ug/l	0.500		87	50-120			
gamma-BHC (Lindane)	0.423	0.10	0.020	ug/l	0.500		85	40-120			
4,4'-DDD	0.438	0.10	0.020	ug/l	0.500		88	55-120			
4,4'-DDE	0.419	0.10	0.025	ug/l	0.500		84	50-120			
4,4'-DDT	0.458	0.10	0.035	ug/l	0.500		92	55-120			

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Received: 02/28/06

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>											
<b>LCS Analyzed: 03/06/2006 (6C05031-BS1)</b>											<b>M-NR1</b>
Dieldrin	0.431	0.10	0.015	ug/l	0.500		86	50-120			
Endosulfan I	0.406	0.10	0.015	ug/l	0.500		81	50-120			
Endosulfan II	0.421	0.10	0.040	ug/l	0.500		84	55-120			
Endosulfan sulfate	0.429	0.20	0.020	ug/l	0.500		86	60-120			
Endrin	0.449	0.10	0.020	ug/l	0.500		90	55-120			
Endrin aldehyde	0.410	0.10	0.045	ug/l	0.500		82	55-120			
Endrin ketone	0.429	0.10	0.020	ug/l	0.500		86	55-120			
Heptachlor	0.393	0.10	0.030	ug/l	0.500		79	40-115			
Heptachlor epoxide	0.409	0.10	0.030	ug/l	0.500		82	50-120			
Methoxychlor	0.435	0.10	0.035	ug/l	0.500		87	55-120			
Surrogate: Tetrachloro-m-xylene	0.361			ug/l	0.500		72	35-115			
Surrogate: Decachlorobiphenyl	0.412			ug/l	0.500		82	45-120			
Surrogate: Tetrachloro-m-xylene	0.361			ug/l	0.500		72	35-115			
Surrogate: Decachlorobiphenyl	0.412			ug/l	0.500		82	45-120			
<b>LCS Dup Analyzed: 03/06/2006 (6C05031-BSD1)</b>											
Aldrin	0.372	0.10	0.030	ug/l	0.500		74	35-120	4	30	
alpha-BHC	0.413	0.10	0.020	ug/l	0.500		83	45-120	5	30	
alpha-BHC	0.413	0.010	0.0010	ug/l	0.500		83	45-120	5	30	
beta-BHC	0.413	0.10	0.015	ug/l	0.500		83	50-120	3	30	
delta-BHC	0.425	0.20	0.020	ug/l	0.500		85	50-120	2	30	
gamma-BHC (Lindane)	0.406	0.10	0.020	ug/l	0.500		81	40-120	4	30	
4,4'-DDD	0.422	0.10	0.020	ug/l	0.500		84	55-120	4	30	
4,4'-DDE	0.411	0.10	0.025	ug/l	0.500		82	50-120	2	30	
4,4'-DDT	0.450	0.10	0.035	ug/l	0.500		90	55-120	2	30	
Dieldrin	0.424	0.10	0.015	ug/l	0.500		85	50-120	2	30	
Endosulfan I	0.397	0.10	0.015	ug/l	0.500		79	50-120	2	30	
Endosulfan II	0.415	0.10	0.040	ug/l	0.500		83	55-120	1	30	
Endosulfan sulfate	0.426	0.20	0.020	ug/l	0.500		85	60-120	1	30	
Endrin	0.434	0.10	0.020	ug/l	0.500		87	55-120	3	30	
Endrin aldehyde	0.404	0.10	0.045	ug/l	0.500		81	55-120	1	30	
Endrin ketone	0.424	0.10	0.020	ug/l	0.500		85	55-120	1	30	
Heptachlor	0.377	0.10	0.030	ug/l	0.500		75	40-115	4	30	
Heptachlor epoxide	0.398	0.10	0.030	ug/l	0.500		80	50-120	3	30	
Methoxychlor	0.434	0.10	0.035	ug/l	0.500		87	55-120	0	30	
Surrogate: Tetrachloro-m-xylene	0.339			ug/l	0.500		68	35-115			

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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: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>											
<b>LCS Dup Analyzed: 03/06/2006 (6C05031-BSD1)</b>											
Surrogate: Decachlorobiphenyl	0.407			ug/l	0.500		81	45-120			
Surrogate: Tetrachloro-m-xylene	0.339			ug/l	0.500		68	35-115			
Surrogate: Decachlorobiphenyl	0.407			ug/l	0.500		81	45-120			

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 011  Report Number: IPB2641	Sampled: 02/28/06 Received: 02/28/06
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**METHOD BLANK/QC DATA**

**TOTAL PCBS (EPA 608)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C05031 Extracted: 03/05/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C05031-BLK1)</b>											
Aroclor 1016	ND	1.0	0.20	ug/l							
Aroclor 1221	ND	1.0	0.10	ug/l							
Aroclor 1232	ND	1.0	0.25	ug/l							
Aroclor 1242	ND	1.0	0.25	ug/l							
Aroclor 1248	ND	1.0	0.25	ug/l							
Aroclor 1254	ND	1.0	0.25	ug/l							
Aroclor 1260	ND	1.0	0.40	ug/l							
Surrogate: Decachlorobiphenyl	0.512			ug/l	0.500		102	45-120			
<b>LCS Analyzed: 03/06/2006 (6C05031-BS2)</b>											
Aroclor 1016	3.60	1.0	0.20	ug/l	4.00		90	45-115			M-NR1
Aroclor 1260	3.91	1.0	0.40	ug/l	4.00		98	55-115			
Surrogate: Decachlorobiphenyl	0.458			ug/l	0.500		92	45-120			
<b>LCS Dup Analyzed: 03/06/2006 (6C05031-BSD2)</b>											
Aroclor 1016	3.74	1.0	0.20	ug/l	4.00		94	45-115	4	30	
Aroclor 1260	3.99	1.0	0.40	ug/l	4.00		100	55-115	2	25	
Surrogate: Decachlorobiphenyl	0.550			ug/l	0.500		110	45-120			

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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
<b>Batch: 6C02097 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02097-BLK1)</b>											
Mercury	ND	0.20	0.050	ug/l							
<b>LCS Analyzed: 03/02/2006 (6C02097-BS1)</b>											
Mercury	7.88	0.20	0.050	ug/l	8.00		98	85-115			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02097-MS1)</b>											
						<b>Source: IPB2608-01</b>					
Mercury	7.84	0.20	0.050	ug/l	8.00	ND	98	70-130			
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02097-MSD1)</b>											
						<b>Source: IPB2608-01</b>					
Mercury	7.88	0.20	0.050	ug/l	8.00	ND	98	70-130	1	20	
<b>Batch: 6C02098 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02098-BLK1)</b>											
Antimony	ND	2.0	0.18	ug/l							
Cadmium	0.0179	1.0	0.015	ug/l							J
Copper	ND	2.0	0.49	ug/l							
Lead	ND	1.0	0.13	ug/l							
Selenium	1.65	2.0	0.36	ug/l							J
Silver	ND	1.0	0.089	ug/l							
Thallium	ND	1.0	0.075	ug/l							
<b>LCS Analyzed: 03/02/2006 (6C02098-BS1)</b>											
Antimony	86.5	2.0	0.18	ug/l	80.0		108	85-115			
Cadmium	86.9	1.0	0.015	ug/l	80.0		109	85-115			
Copper	89.3	2.0	0.49	ug/l	80.0		112	85-115			
Lead	85.6	1.0	0.13	ug/l	80.0		107	85-115			
Selenium	85.7	2.0	0.36	ug/l	80.0		107	85-115			
Silver	84.6	1.0	0.089	ug/l	80.0		106	85-115			
Thallium	84.8	1.0	0.075	ug/l	80.0		106	85-115			

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02098 Extracted: 03/02/06</b>											
<b>Matrix Spike Analyzed: 03/02/2006 (6C02098-MS1)</b>						<b>Source: IPB2651-01</b>					
Antimony	84.3	2.0	0.18	ug/l	80.0	ND	105	70-130			
Cadmium	83.6	1.0	0.015	ug/l	80.0	ND	104	70-130			
Copper	81.5	2.0	0.49	ug/l	80.0	0.49	101	70-130			
Lead	83.1	1.0	0.13	ug/l	80.0	0.19	104	70-130			
Selenium	83.5	2.0	0.36	ug/l	80.0	0.95	103	70-130			
Silver	81.7	1.0	0.089	ug/l	80.0	0.052	102	70-130			
Thallium	81.3	1.0	0.075	ug/l	80.0	0.31	101	70-130			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02098-MS2)</b>						<b>Source: IPB2645-01</b>					
Antimony	85.1	2.0	0.18	ug/l	80.0	0.46	106	70-130			
Cadmium	82.7	1.0	0.015	ug/l	80.0	0.077	103	70-130			
Copper	78.9	2.0	0.49	ug/l	80.0	2.3	96	70-130			
Lead	82.4	1.0	0.13	ug/l	80.0	0.50	102	70-130			
Selenium	85.2	2.0	0.36	ug/l	80.0	2.9	103	70-130			
Silver	78.0	1.0	0.089	ug/l	80.0	0.050	97	70-130			
Thallium	81.6	1.0	0.075	ug/l	80.0	0.53	101	70-130			
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02098-MSD1)</b>						<b>Source: IPB2651-01</b>					
Antimony	82.9	2.0	0.18	ug/l	80.0	ND	104	70-130	2	20	
Cadmium	81.4	1.0	0.015	ug/l	80.0	ND	102	70-130	3	20	
Copper	78.3	2.0	0.49	ug/l	80.0	0.49	97	70-130	4	20	
Lead	80.8	1.0	0.13	ug/l	80.0	0.19	101	70-130	3	20	
Selenium	82.8	2.0	0.36	ug/l	80.0	0.95	102	70-130	1	20	
Silver	80.1	1.0	0.089	ug/l	80.0	0.052	100	70-130	2	20	
Thallium	80.7	1.0	0.075	ug/l	80.0	0.31	100	70-130	1	20	

**Batch: 6C03084 Extracted: 03/03/06**

**Blank Analyzed: 03/04/2006-03/07/2006 (6C03084-BLK1)**

Arsenic	ND	5.0	3.8	ug/l							
Barium	ND	0.010	0.0028	mg/l							
Beryllium	ND	2.0	0.62	ug/l							
Boron	ND	0.050	0.0074	mg/l							
Chromium	1.10	5.0	0.68	ug/l							J
Cobalt	ND	10	2.0	ug/l							
Iron	0.0327	0.040	0.0088	mg/l							J

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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	Data Qualifiers
<b>Batch: 6C03084 Extracted: 03/03/06</b>									
<b>Blank Analyzed: 03/04/2006-03/07/2006 (6C03084-BLK1)</b>									
Manganese	ND	20	3.2	ug/l					
Nickel	ND	10	2.0	ug/l					
Vanadium	ND	10	3.0	ug/l					
Zinc	ND	20	3.7	ug/l					
<b>LCS Analyzed: 03/04/2006-03/07/2006 (6C03084-BS1)</b>									
Arsenic	519	5.0	3.8	ug/l	500		104 85-115		
Barium	0.501	0.010	0.0028	mg/l	0.500		100 85-115		
Beryllium	524	2.0	0.62	ug/l	500		105 85-115		
Boron	0.501	0.050	0.0074	mg/l	0.500		100 85-115		
Chromium	518	5.0	0.68	ug/l	500		104 85-115		
Cobalt	505	10	2.0	ug/l	500		101 85-115		
Iron	0.529	0.040	0.0088	mg/l	0.500		106 85-115		
Manganese	520	20	3.2	ug/l	500		104 85-115		
Nickel	513	10	2.0	ug/l	500		103 85-115		
Vanadium	517	10	3.0	ug/l	500		103 85-115		
Zinc	499	20	3.7	ug/l	500		100 85-115		
<b>Matrix Spike Analyzed: 03/04/2006-03/07/2006 (6C03084-MS1)</b>									
					<b>Source: IPB2463-01</b>				
Arsenic	544	5.0	3.8	ug/l	500	8.8	107 70-130		
Barium	0.517	0.010	0.0028	mg/l	0.500	0.020	99 70-130		
Beryllium	520	2.0	0.62	ug/l	500	ND	104 70-130		
Boron	0.609	0.050	0.0074	mg/l	0.500	0.064	109 70-130		
Chromium	520	5.0	0.68	ug/l	500	ND	104 70-130		
Cobalt	495	10	2.0	ug/l	500	ND	99 70-130		
Iron	3.20	0.040	0.0088	mg/l	0.500	2.6	120 70-130		
Manganese	869	20	3.2	ug/l	500	350	104 70-130		
Nickel	503	10	2.0	ug/l	500	ND	101 70-130		
Vanadium	522	10	3.0	ug/l	500	ND	104 70-130		
Zinc	732	20	3.7	ug/l	500	480	50 70-130		

M2

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METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C03084 Extracted: 03/03/06</b>											
<b>Matrix Spike Analyzed: 03/04/2006-03/07/2006 (6C03084-MS2)</b>						<b>Source: IPB2463-02</b>					
Arsenic	527	5.0	3.8	ug/l	500	4.9	104	70-130			
Barium	0.515	0.010	0.0028	mg/l	0.500	0.023	98	70-130			
Beryllium	508	2.0	0.62	ug/l	500	ND	102	70-130			
Boron	0.554	0.050	0.0074	mg/l	0.500	0.037	103	70-130			
Chromium	511	5.0	0.68	ug/l	500	2.3	102	70-130			
Cobalt	484	10	2.0	ug/l	500	ND	97	70-130			
Iron	1.24	0.040	0.0088	mg/l	0.500	0.66	116	70-130			
Manganese	513	20	3.2	ug/l	500	10	101	70-130			
Nickel	493	10	2.0	ug/l	500	ND	99	70-130			
Vanadium	511	10	3.0	ug/l	500	ND	102	70-130			
Zinc	497	20	3.7	ug/l	500	ND	99	70-130			
<b>Matrix Spike Dup Analyzed: 03/04/2006-03/07/2006 (6C03084-MSD1)</b>						<b>Source: IPB2463-01</b>					
Arsenic	532	5.0	3.8	ug/l	500	8.8	105	70-130	2	20	
Barium	0.501	0.010	0.0028	mg/l	0.500	0.020	96	70-130	3	20	
Beryllium	504	2.0	0.62	ug/l	500	ND	101	70-130	3	20	
Boron	0.593	0.050	0.0074	mg/l	0.500	0.064	106	70-130	3	20	
Chromium	510	5.0	0.68	ug/l	500	ND	102	70-130	2	20	
Cobalt	485	10	2.0	ug/l	500	ND	97	70-130	2	20	
Iron	3.06	0.040	0.0088	mg/l	0.500	2.6	92	70-130	4	20	
Manganese	838	20	3.2	ug/l	500	350	98	70-130	4	20	
Nickel	492	10	2.0	ug/l	500	ND	98	70-130	2	20	
Vanadium	504	10	3.0	ug/l	500	ND	101	70-130	4	20	
Zinc	722	20	3.7	ug/l	500	480	48	70-130	1	20	M2

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6B28145 Extracted: 02/28/06</b>											
<b>Duplicate Analyzed: 02/28/2006 (6B28145-DUP1)</b>						<b>Source: IPB2637-01</b>					
Residual Chlorine	ND	0.10	0.10	mg/l		ND				20	
<b>Batch: 6C01049 Extracted: 03/01/06</b>											
<b>Blank Analyzed: 03/01/2006 (6C01049-BLK1)</b>											
Chloride	ND	0.50	0.26	mg/l							
Fluoride	ND	0.50	0.10	mg/l							
Nitrate/Nitrite-N	ND	0.26	0.072	mg/l							
Sulfate	ND	0.50	0.18	mg/l							
<b>LCS Analyzed: 03/01/2006 (6C01049-BS1)</b>											
Chloride	5.02	0.50	0.26	mg/l	5.00		100	90-110			
Fluoride	5.08	0.50	0.10	mg/l	5.00		102	90-110			
Sulfate	10.3	0.50	0.18	mg/l	10.0		103	90-110			
<b>Matrix Spike Analyzed: 03/01/2006 (6C01049-MS1)</b>						<b>Source: IPB2641-01</b>					
Chloride	28.9	0.50	0.26	mg/l	5.00	24	98	80-120			
Fluoride	5.04	0.50	0.10	mg/l	5.00	0.27	95	80-120			
Sulfate	42.7	0.50	0.18	mg/l	10.0	35	77	80-120			M2
<b>Matrix Spike Dup Analyzed: 03/01/2006 (6C01049-MSD1)</b>						<b>Source: IPB2641-01</b>					
Chloride	28.9	0.50	0.26	mg/l	5.00	24	98	80-120	0	20	
Fluoride	5.08	0.50	0.10	mg/l	5.00	0.27	96	80-120	1	20	
Sulfate	43.5	0.50	0.18	mg/l	10.0	35	85	80-120	2	20	
<b>Batch: 6C01108 Extracted: 03/01/06</b>											
<b>Blank Analyzed: 03/01/2006 (6C01108-BLK1)</b>											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							

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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
<b>Batch: 6C01108 Extracted: 03/01/06</b>											
<b>LCS Analyzed: 03/01/2006 (6C01108-BS1)</b>											
Surfactants (MBAS)	0.258	0.10	0.044	mg/l	0.250		103	90-110			
<b>Matrix Spike Analyzed: 03/01/2006 (6C01108-MS1)</b>											
Surfactants (MBAS)	0.343	0.10	0.044	mg/l	0.250	ND	137	50-125			MI
<b>Matrix Spike Dup Analyzed: 03/01/2006 (6C01108-MSD1)</b>											
Surfactants (MBAS)	0.336	0.10	0.044	mg/l	0.250	ND	134	50-125	2	20	MI
<b>Batch: 6C01114 Extracted: 03/01/06</b>											
<b>Blank Analyzed: 03/06/2006 (6C01114-BLK1)</b>											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
<b>LCS Analyzed: 03/06/2006 (6C01114-BS1)</b>											
Biochemical Oxygen Demand	190	100	30	mg/l	198		96	85-115			
<b>LCS Dup Analyzed: 03/06/2006 (6C01114-BSD1)</b>											
Biochemical Oxygen Demand	188	100	30	mg/l	198		95	85-115	1	20	
<b>Batch: 6C01122 Extracted: 03/01/06</b>											
<b>Blank Analyzed: 03/01/2006 (6C01122-BLK1)</b>											
Turbidity	ND	1.0	0.040	NTU							
<b>Duplicate Analyzed: 03/01/2006 (6C01122-DUP1)</b>											
Turbidity	4.96	1.0	0.040	NTU		4.9			1	20	

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**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02064 Extracted: 03/01/06</b>											
<b>Blank Analyzed: 03/01/2006 (6C02064-BLK1)</b>											
Total Organic Carbon	ND	1.0	0.25	mg/l							
<b>LCS Analyzed: 03/01/2006 (6C02064-BS1)</b>											
Total Organic Carbon	10.3	1.0	0.25	mg/l	10.0		103	90-110			
<b>Matrix Spike Analyzed: 03/01/2006 (6C02064-MS1)</b>											
Total Organic Carbon	8.69	1.0	0.25	mg/l	5.00	3.7	100	80-120			
						<b>Source: IPB2620-01</b>					
<b>Matrix Spike Dup Analyzed: 03/01/2006 (6C02064-MSD1)</b>											
Total Organic Carbon	8.83	1.0	0.25	mg/l	5.00	3.7	103	80-120	2	20	
<b>Batch: 6C02068 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02068-BLK1)</b>											
Perchlorate	ND	4.0	0.80	ug/l							
<b>LCS Analyzed: 03/02/2006 (6C02068-BS1)</b>											
Perchlorate	51.6	4.0	0.80	ug/l	50.0		103	85-115			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02068-MS1)</b>											
Perchlorate	53.2	4.0	0.80	ug/l	50.0	3.5	99	80-120			
						<b>Source: IPC0001-01</b>					
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02068-MSD1)</b>											
Perchlorate	54.3	4.0	0.80	ug/l	50.0	3.5	102	80-120	2	20	
<b>Batch: 6C02125 Extracted: 03/02/06</b>											
<b>Blank Analyzed: 03/02/2006 (6C02125-BLK1)</b>											
Total Cyanide	ND	5.0	2.2	ug/l							

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C02125 Extracted: 03/02/06</b>											
<b>LCS Analyzed: 03/02/2006 (6C02125-BS1)</b>											
Total Cyanide	194	5.0	2.2	ug/l	200		97	90-110			
<b>Matrix Spike Analyzed: 03/02/2006 (6C02125-MS1) Source: IPB2379-01</b>											
Total Cyanide	193	5.0	2.2	ug/l	200	2.5	95	70-115			
<b>Matrix Spike Dup Analyzed: 03/02/2006 (6C02125-MSD1) Source: IPB2379-01</b>											
Total Cyanide	205	5.0	2.2	ug/l	200	2.5	101	70-115	6	15	
<b>Batch: 6C03067 Extracted: 03/03/06</b>											
<b>Duplicate Analyzed: 03/03/2006 (6C03067-DUP1) Source: IPC0286-01</b>											
Specific Conductance	110	1.0	1.0	umhos/cm		110			0	5	
<b>Batch: 6C03069 Extracted: 03/03/06</b>											
<b>Blank Analyzed: 03/03/2006 (6C03069-BLK1)</b>											
Total Dissolved Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 03/03/2006 (6C03069-BS1)</b>											
Total Dissolved Solids	1000	10	10	mg/l	1000		100	90-110			
<b>Duplicate Analyzed: 03/03/2006 (6C03069-DUP1) Source: IPC0153-03</b>											
Total Dissolved Solids	285	10	10	mg/l		280			2	10	
<b>Batch: 6C05021 Extracted: 03/05/06</b>											
<b>Blank Analyzed: 03/05/2006 (6C05021-BLK1)</b>											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							

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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
<b>Batch: 6C05021 Extracted: 03/05/06</b>											
<b>LCS Analyzed: 03/05/2006 (6C05021-BS1)</b>											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0		115	80-115			
<b>Matrix Spike Analyzed: 03/05/2006 (6C05021-MS1)</b>											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	0.56	109	70-120			
<b>Matrix Spike Dup Analyzed: 03/05/2006 (6C05021-MSD1)</b>											
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0	0.56	106	70-120	3	15	
<b>Batch: 6C05025 Extracted: 03/05/06</b>											
<b>Blank Analyzed: 03/05/2006 (6C05025-BLK1)</b>											
Total Suspended Solids	ND	10	10	mg/l							
<b>LCS Analyzed: 03/05/2006 (6C05025-BS1)</b>											
Total Suspended Solids	982	10	10	mg/l	1000		98	85-115			
<b>Duplicate Analyzed: 03/05/2006 (6C05025-DUP1)</b>											
Total Suspended Solids	69.0	10	10	mg/l		69			0	10	
<b>Batch: 6C08046 Extracted: 03/08/06</b>											
<b>Blank Analyzed: 03/08/2006 (6C08046-BLK1)</b>											
Oil & Grease	ND	5.0	0.94	mg/l							
<b>LCS Analyzed: 03/08/2006 (6C08046-BS1)</b>											
Oil & Grease	15.7	5.0	0.94	mg/l	20.0		78	65-120			M-NR1

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**METHOD BLANK/QC DATA**

**INORGANICS**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
<b>Batch: 6C08046 Extracted: 03/08/06</b>											
<b>LCS Dup Analyzed: 03/08/2006 (6C08046-BSD1)</b>											
Oil & Grease	16.2	5.0	0.94	mg/l	20.0		81	65-120	3	20	

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
<b>Batch: P6C0311 Extracted: 03/03/06</b>											
<b>Blank Analyzed: 03/03/2006 (P6C0311-BLK1)</b>											
1,4-Dioxane	ND	1.0	0.49	ug/l							
Surrogate: Dibromofluoromethane	1.10			ug/l	1.00		110	70-130			
<b>LCS Analyzed: 03/03/2006 (P6C0311-BS1)</b>											
1,4-Dioxane	9.54	1.0	0.49	ug/l	10.0		95	70-130			
Surrogate: Dibromofluoromethane	1.08			ug/l	1.00		108	70-130			
<b>LCS Dup Analyzed: 03/03/2006 (P6C0311-BSD1)</b>											
1,4-Dioxane	8.45	1.0	0.49	ug/l	10.0		84	70-130	12	20	
Surrogate: Dibromofluoromethane	1.06			ug/l	1.00		106	70-130			
<b>Matrix Spike Analyzed: 03/03/2006 (P6C0311-MS1)</b>											
						<b>Source: PPB0885-01</b>					
1,4-Dioxane	9.27	1.0	0.49	ug/l	10.0	0.66	86	65-125			
Surrogate: Dibromofluoromethane	1.10			ug/l	1.00		110	70-130			
<b>Matrix Spike Dup Analyzed: 03/03/2006 (P6C0311-MSD1)</b>											
						<b>Source: PPB0885-01</b>					
1,4-Dioxane	10.9	1.0	0.49	ug/l	10.0	0.66	102	65-125	16	20	
Surrogate: Dibromofluoromethane	1.11			ug/l	1.00		111	70-130			

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 011  Report Number: IPB2641	Sampled: 02/28/06 Received: 02/28/06
--	--	---

### 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.
- L** Laboratory Control Sample recovery was above the method control limits. Analyte not detected, data not impacted.
- L2** Laboratory Control Sample recovery was below method control limits.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-NRI** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- pH** pH = 5
- R** The RPD exceeded the method control limit due to sample matrix effects. The individual analyte QA/QC recoveries, however, were within acceptance limits.
- R-3** The RPD exceeded the method control limit due to sample matrix effects.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

### ADDITIONAL COMMENTS

- For TICs:**  
All identifications are tentative and concentrations are estimates based upon spectral comparison to the EPA/NIH library.
- For 1,2-Diphenylhydrazine:**  
The result for 1,2-Diphenylhydrazine is based upon the reading of its breakdown product, Azobenzene.
- For GRO (C4-C12):**  
GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.
- For Extractable Fuel Hydrocarbons (EFH, DRO, ORO) :**  
Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
Calculation	Water	X	X
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 330.5	Water	X	X
EPA 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 415.1	Water	X	X
EPA 418.1	Water	X	X
EPA 608	Water	X	X
EPA 624 (MOD.)	Water		X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8015B	Water	X	X
EPA 8260B	Water	X	X
EPA 8315 Mod.	Water		
EPA 900.0	Water		
EPA 905.0	Water		
EPA 906.0	Water		
Haz Waste Scree	Water		
Level 4	Water		
SM2540C	Water	X	X
SM5540-C	Water	X	X

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

Subcontracted Laboratories

Alta Analytical NELAC Cert #02102CA, California Cert #1640, Nevada Cert #CA-413  
1104 Windfield Way - El Dorado Hills, CA 95762

Del Mar Analytical - Irvine

Michele Chamberlin  
Project Manager

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

Project ID: Annual Outfall 011

Report Number: IPB2641

Sampled: 02/28/06  
Received: 02/28/06

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

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta  
Samples: IPB2641-01

Analysis Performed: Level 4 + EDD  
Samples: IPB2641-01

**Aquatic Testing Laboratories-SUB** *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chronic  
Samples: IPB2641-01

Analysis Performed: Bioassay-Acute 96hr  
Samples: IPB2641-01

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

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

Method Performed: EPA 8260B  
Samples: IPB2641-01

**Eberline Services**

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: EDD + Level 4  
Samples: IPB2641-01

Analysis Performed: Gross Alpha  
Samples: IPB2641-01

Analysis Performed: Gross Beta  
Samples: IPB2641-01

Analysis Performed: Radium, Combined  
Samples: IPB2641-01

Analysis Performed: Strontium 90  
Samples: IPB2641-01

Analysis Performed: Tritium  
Samples: IPB2641-01

**Truesdail Laboratories-SUB** *California Cert #1237*

14201 Franklin Avenue - Tustin, CA 92680

Analysis Performed: Hydrazine  
Samples: IPB2641-01

Del Mar Analytical - Irvine  
Michele Chamberlin  
Project Manager

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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  
 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 # IPB2641

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

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

Analysis	Expiration	Due	Comments
<b>Sample ID: IPB2641-01 Water</b>	<b>Sampled: 02/28/06 13:00</b>		<b>Instant Notification</b>
Dioxane-8260B-out	03/14/06 13:00	03/09/06 12:00	sub to DMAP, J flags
Level 4 Data Package - Phoenix	03/28/06 13:00	03/09/06 12:00	Boeing, TAT= 17 days from receipt at Phoenix
<b>Containers Supplied:</b>			
40 ml VOA w/HCL (IPB2641-01AA)			
40 ml VOA w/HCL (IPB2641-01AB)			
40 ml VOA w/HCL (IPB2641-01Z)			PPC0069-01

**SAMPLE INTEGRITY:**

All containers intact:  Yes  No      Sample labels/COC agree:  Yes  No      Samples Received On Ice:  Yes  No  
 Custody Seals Present:  Yes  No      Samples Preserved Properly:  Yes  No      Samples Received at (temp): 2-0-0

Released By: [Signature] Date: \_\_\_\_\_ Time: \_\_\_\_\_      Received By: Fred-Ex Date: 3.01.06 Time: \_\_\_\_\_

Released By: FED-EX Date: \_\_\_\_\_ Time: \_\_\_\_\_      Received By: [Signature] Date: 03/16/06 Time: 08:40



**Del Mar Analytical**

Version 01/24/08

**CHAIN OF CUSTODY FORM**

IPB264

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

**Project:**  
 Boeing-SSFL NPDES  
 Annual Outfall 011

**Project Manager:** Bronwyn Kelly

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

**Sampler:** *Bronwyn & B...*

**ANALYSIS REQUIRED**

Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Settleable Solids	VOCs 624 + xylenes + Freon 113, Freon 123A, Cyclohexane	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5(20 degrees C)	Surfactants (MBAS)	Cl-, SO4, NO3+NO2-N, F, Perchlorate	Turbidity, TDS, TSS, Conductivity	Ammonia-N	2,4,6 Trichlorophenol, 2,4 Dinitrotoluene, Bis(2-ethylhexyl)phthalate, NDMA, pentachlorophenol (EPA 625) + PP	Field readings: Temp = 64.0 pH = 7.4	Comments
Outfall 011	W	Poly-1L	1	HNO3	1A	X												
Outfall 011-Dup	W	Poly-1L	1	HNO3	1B	X												
Outfall 011	W	Poly-1L	1	None	2													
Outfall 011	W	VOAS	5	HCl	3A, 3B, 3C, 3D, 3E		X											
Outfall 011	W	1L Amber	2	None	4A, 4B			X										
Outfall 011	W	1L Amber	2	HCL	5A, 5B				X									
Outfall 011	W	Poly-500 ml	1	NaOH	6					X								
Outfall 011	W	Poly-1L	1	None	7													
Outfall 011	W	Poly-500 ml	2	None	8A, 8B							X						
Outfall 011	W	Poly-500 ml	2	None	9A, 9B													
Outfall 011	W	Poly-500 ml	2	None	10A, 10B													
Outfall 011	W	Poly-500 ml	1	H2SO4	11													
Outfall 011	W	1L Amber	2	None	12A, 12B													
Outfall 011	W	1L Amber	2	None	13A, 13B													
Trip Blank	W	VOAs	3	HCL	14A, 14B, 14C		X											
Relinquished By	Date/Time: <i>1/24/08 1545</i> Received By: <i>[Signature]</i> Date/Time: <i>2/28/06 1545</i> Relinquished By: <i>[Signature]</i> Date/Time: <i>2/28/06 1835</i> Relinquished By: <i>[Signature]</i> Date/Time: <i>2/28/06 1835</i>																	
Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ Perchlorate Only 72 Hours _____ Metals Only 72 Hours _____ Sample integrity: (Check) <input checked="" type="checkbox"/> On lot: <input checked="" type="checkbox"/> <i>52</i>																		

*3*

**Del Mar Analytical** Version 01/24/06 **CHAIN OF CUSTODY FORM**

Client Name/Address:		Project:		ANALYSIS REQUIRED										Comments					
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Project Manager: Bronwyn Kelly Sampler: <i>Bronwyn Kelly</i>		Boeing-SSFL NPDES Annual Outfall 011 Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	1,4 Dioxane	Total Organic Carbon	Total Residual Chlorine	Gross Alpha, Gross Beta, Tritium (906.0), Sr-90 (905.0), Total Combined Radium 226 & Radium 228	PCBs	TPH = all fuels, gas, diesel, and jet fuel, modified 80156 and 418.1	Monomethylhydrazine	Acute and Chronic toxicity	VOCS 624+A+A+2CVE
Outfall 011	W	VOAs	3	2/18/06 17:00	HCl	15A, 15B, 15C	X												
Outfall 011	W	VOAs	2		HCl	16A, 16B					X								
Outfall 011	W	Poly-150 ml	1		None	17													
Outfall 011	W	2.5 Gal Cube Amber VOAs	1		None	18A, 25B, 25C					X								
Outfall 011	W	1L Amber	2		None	19A, 19B						X							
Outfall 011	W	VOAs	3		HCl	20A, 20B, 20C, 20D, 20E, 20F, 20G								X					
Outfall 011	W	1L Amber	2		None	21A, 21B									X				
Outfall 011	W	1 Gal	2		None	22A, 22B										X			
Outfall 011	W	VOAs	3		None	23A, 23B, 23C											X		
Trip Blank	W	VOAs	3		None	24A, 24B, 24C												X	
Relinquished By <i>Kelly Brown</i>				Date/Time: 2/18/06 1545	Received By <i>L. De Long</i>				Date/Time: 2/18/06 1545										
Relinquished By <i>L. De Long</i>				Date/Time: 2/18/06 1835	Received By <i>L. De Long</i>				Date/Time: 2/18/06 1835										
Relinquished By				Date/Time:	Received By <i>L. De Long</i>				Date/Time: 2-28-06	Turn around Time: (check) 24 Hours _____ 5 Days _____ 48 Hours _____ 10 Days _____ 72 Hours _____ Normal _____ Perchlorate Only 72 Hours _____ Metals Only 72 Hours _____ Sample Integrity: (Check) <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>									



March 08, 2006

**Alta Project I.D.: 27352**

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

Dear Ms. Chamberlin,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on March 02, 2006 under your Project Name "IPB2641". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

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

Sincerely,

A handwritten signature in cursive script, appearing to read "Martha M. Maier".

Martha M. Maier  
Director of HRMS Services



**Section I: Sample Inventory Report**

Date Received: 3/2/2006

Alta Lab. ID

Client Sample ID

27352-001

IPB2641-01

## SECTION II

Method Blank		EPA Method 1613					
Matrix:	Aqueous	QC Batch No.:	7807	Lab Sample:	0-MB001		
Sample Size:	1.00 L	Date Extracted:	5-Mar-06	Date Analyzed DB-5:	7-Mar-06		
				Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000119		13C-2,3,7,8-TCDD	82.1	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000130		13C-1,2,3,7,8-PeCDD	84.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000161		13C-1,2,3,4,7,8-HxCDD	82.1	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000170		13C-1,2,3,6,7,8-HxCDD	81.9	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000161		13C-1,2,3,4,6,7,8-HpCDD	79.4	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000167		13C-OCDD	54.4	17 - 157	
OCDD	ND	0.00000485		13C-2,3,7,8-TCDF	85.8	24 - 169	
2,3,7,8-TCDF	ND	0.00000138		13C-1,2,3,7,8-PeCDF	89.7	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000126		13C-2,3,4,7,8-PeCDF	92.9	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000115		13C-1,2,3,4,7,8-HxCDF	82.7	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000677		13C-1,2,3,6,7,8-HxCDF	82.0	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000623		13C-2,3,4,6,7,8-HxCDF	83.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000697		13C-1,2,3,7,8,9-HxCDF	77.1	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000951		13C-1,2,3,4,6,7,8-HpCDF	71.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.00000890		13C-1,2,3,4,7,8,9-HpCDF	80.8	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000780		13C-OCDF	59.4	17 - 157	
OCDF	ND	0.00000335		CRS 37Cl-2,3,7,8-TCDD	90.3	35 - 197	
<b>Totals</b>				<b>Footnotes</b>			
Total TCDD	ND	0.00000119		a. Sample specific estimated detection limit.			
Total PeCDD	ND	0.00000130		b. Estimated maximum possible concentration			
Total HxCDD	ND	0.00000164		c. Method detection limit.			
Total HpCDD	ND	0.00000167		d. Lower control limit - upper control limit.			
Total TCDF	ND	0.00000138					
Total PeCDF	ND	0.00000120					
Total HxCDF	ND	0.00000725					
Total HpCDF	ND	0.000009836					

Analyst: JMH

Approved By: Martha M. Maier 08-Mar-2006 13:46

Project 27352

OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No	7807	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	5-Mar-06	Date Analyzed DB-5:	7-Mar-06	
				Date Analyzed DB-225:	NA	
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	10.0	11.1	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	77.8	25 - 164
1,2,3,7,8-PeCDD	50.0	56.7	35 - 71	13C-1,2,3,7,8-PeCDD	81.0	25 - 181
1,2,3,4,7,8-HxCDD	50.0	54.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	74.4	32 - 141
1,2,3,6,7,8-HxCDD	50.0	53.3	38 - 67	13C-1,2,3,6,7,8-HxCDD	76.6	28 - 130
1,2,3,7,8,9-HxCDD	50.0	52.4	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	74.2	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	55.2	35 - 70	13C-OCDD	52.1	17 - 157
OCDD	100	109	78 - 144	13C-2,3,7,8-TCDF	78.6	24 - 169
2,3,7,8-TCDF	10.0	11.2	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	84.3	24 - 185
1,2,3,7,8-PeCDF	50.0	55.2	40 - 67	13C-2,3,4,7,8-PeCDF	87.3	21 - 178
2,3,4,7,8-PeCDF	50.0	56.1	34 - 80	13C-1,2,3,4,7,8-HxCDF	76.8	26 - 152
1,2,3,4,7,8-HxCDF	50.0	55.2	36 - 67	13C-1,2,3,6,7,8-HxCDF	76.9	26 - 123
1,2,3,6,7,8-HxCDF	50.0	56.7	42 - 65	13C-2,3,4,6,7,8-HxCDF	76.3	28 - 136
2,3,4,6,7,8-HxCDF	50.0	56.4	35 - 78	13C-1,2,3,7,8,9-HxCDF	69.6	29 - 147
1,2,3,7,8,9-HxCDF	50.0	54.9	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	70.6	28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	55.1	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	74.0	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	55.0	39 - 69	13C-OCDF	57.0	17 - 157
OCDF	100	105	63 - 170	CRS 37Cl-2,3,7,8-TCDD	94.1	35 - 197

Analyst: JMH

Approved By: Martha M. Maier 08-Mar-2006 13:46

Sample ID: IPB2641-01		EPA Method 1613					
Client Data		Sample Data		Laboratory Data			
Name	Del Mar Analytical, Irvine	Matrix	Aqueous	Lab Sample:	27352-001		
Project	IPB2641	Sample Size	1.01 L	QC Batch No.	7807		
Date Collected	28-Feb-06			Date Analyzed DB-5:	8-Mar-06		
Time Collected	1300			Date Analyzed DB-225	NA		
Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000143		13C-2,3,7,8-TCDD	105	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000117		13C-1,2,3,7,8-PeCDD	109	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.000000745		13C-1,2,3,4,7,8-HxCDD	99.5	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000148			13C-1,2,3,6,7,8-HxCDD	99.5	28 - 130	J
1,2,3,7,8,9-HxCDD	0.00000139			13C-1,2,3,4,6,7,8-HpCDD	104	23 - 140	J
1,2,3,4,6,7,8-HpCDD	0.00000307			13C-OCDD	74.5	17 - 157	
OCDD	0.000269			13C-2,3,7,8-TCDF	106	24 - 169	
2,3,7,8-TCDF	ND	0.00000132		13C-1,2,3,7,8-PeCDF	118	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000124		13C-2,3,4,7,8-PeCDF	115	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000130		13C-1,2,3,4,7,8-HxCDF	102	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000492		13C-1,2,3,6,7,8-HxCDF	102	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000472		13C-2,3,4,6,7,8-HxCDF	97.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000544		13C-1,2,3,7,8,9-HxCDF	97.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000731		13C-1,2,3,4,6,7,8-HpCDF	97.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000643			13C-1,2,3,4,7,8,9-HpCDF	109	26 - 138	J
1,2,3,4,7,8,9-HpCDF	ND	0.00000662		13C-OCDF	80.8	17 - 157	
OCDF	0.0000200			CRS 37Cl-2,3,7,8-TCDD	91.4	35 - 197	
<b>Totals</b>							
Total TCDD	ND	0.00000143					
Total PeCDD	ND	0.00000117					
Total HxCDD	0.0000124		0.0000137				
Total HpCDD	0.0000690						
Total TCDF	ND	0.00000132					
Total PeCDF	ND	0.00000127					
Total HxCDF	0.00000656						
Total HpCDF	0.0000186						

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

Analyst: JMH  
Approved By: Martha M. Maier 08-Mar-2006 13:46



**APPENDIX**

## DATA QUALIFIERS & ABBREVIATIONS

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

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

**CERTIFICATIONS**

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



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  
 9530 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3820 Fax (702) 798-3821

**SUBCONTRACT ORDER - PROJECT # IPB2641**

<p align="center"><b>SENDING LABORATORY:</b></p> <p>Del Mar Analytical, Irvine          17461 Derian Avenue, Suite 100          Irvine, CA 92614          Phone: (949) 261-1022          Fax: (949) 261-1228          Project Manager: Michele Chamberlin</p>	<p align="center"><b>RECEIVING LABORATORY:</b></p> <p>Alta Analytical          1104 Windfield Way          El Dorado Hills, CA 95762          Phone: (916) 933-1640          Fax: (916) 673-0106</p> <p align="right" style="font-size: 2em; font-family: cursive;">27352 0.2°C</p>
---	---

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

Analysis	Expiration	Comments
Sample ID: IPB2641-01 Water	Sampled: 02/28/06 13:00	Instant Notification
1613-Dioxin-HR-Alta	03/07/06 13:00	J flags, 17 congeners, no TEQ, ng/L, sub=Alta
Level 4 + EDD-OUT	03/28/06 13:00	**LEVEL IV QC, ACCESS 7 EDD**
<b>Containers Supplied:</b>		
1 L Amber (IPB2641-01I)		
1 L Amber (IPB2641-01J)		

**SAMPLE INTEGRITY:**

All containers intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Sample labels/COC agree: <input type="checkbox"/> Yes <input type="checkbox"/> No	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: *Del-Or* Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: *Fed Ex 3-01-06* Date: \_\_\_\_\_ Time: \_\_\_\_\_

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: *Bethna D. Pomedici* Date: *3/2/06* Time: *0850*

**SAMPLE LOG-IN CHECKLIST**

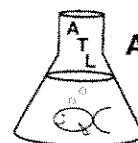
Alta Project #: 27352

Samples Arrival:	Date/Time 3/2/06 0850	Initials: UBB	Location: WR-2
Logged In:	Date/Time 3/3/06 3/2/06 0647 UBB	Initials: UBB	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	0.2°C	Time: 1015	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 #	7980 3107 8338		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> Preservation Documented?			None
Shipping Container	Alta	<input checked="" type="checkbox"/> Client	Retain
		<input checked="" type="checkbox"/> Return	Dispose

Comments:

# LABORATORY REPORT



**Aquatic  
Testing  
Laboratories**

*"dedicated to providing quality aquatic toxicity testing"*

4350 Transport Street, Unit 107  
Ventura, CA 93003  
(805) 650-0546 FAX (805) 650-0756  
CA DOHS ELAP Cert. No.: 1775

**Date:** March 8, 2006  
**Client:** Del Mar Analytical, Irvine  
17461 Derian Ave., Suite 100  
Irvine, CA 92614  
Attn: Michele Chamberlin

**Laboratory No.:** A-06030113-001  
**Sample ID.:** IPB2641-01

**Sample Control:** The sample was received by ATL within the recommended hold time, in a chilled state, and with the chain of custody record attached.

Date Sampled: 02/28/06  
Date Received: 03/01/06  
Temp. Received: 2°C  
Chlorine (TRC): 0.0 mg/l  
Date Tested: 03/01/06 to 03/07/06

**Sample Analysis:** The following analyses were performed on your sample:  
Fathead Minnow 96hr Percent Survival Bioassay (EPA Method 2000.0),  
*Ceriodaphnia dubia* Survival and Reproduction Test (EPA Method 1002).  
Attached are the test data generated from the analysis of your sample.

## Result Summary:

<b>Acute:</b>	<u>Survival</u>	<u>TUa</u>
Fathead Minnow:	100%	0.0
<b>Chronic:</b>	<u>NOEC</u>	<u>TUc</u>
<i>Ceriodaphnia</i> Survival:	100%	1.0
<i>Ceriodaphnia</i> Reproduction:	100%	1.0

**Quality Control:** Reviewed and approved by:

  
Joseph A. LeMay  
Laboratory Director

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of the Laboratory's name for advertising or publicity purpose without authorization is prohibited.

**FATHEAD MINNOW PERCENT SURVIVAL TEST**  
**EPA Method 2000.0**



Lab No.: A-06030113-001  
 Client/ID: Del Mar - IPB2641-01

Start Date: 03/01/2006

**TEST SUMMARY**

Species: *Pimephales promelas*.  
 Age: 13 (1-14) days.  
 Regulations: NPDES.  
 Test solution volume: 250 ml.  
 Feeding: prior to renewal at 48 hrs.  
 Number of replicates: 2.  
 Dilution water: Moderately hard reconstituted water.  
 Photoperiod: 16/8 hrs light/dark.

Source: In-laboratory Culture.  
 Test type: Static-Renewal.  
 Test Protocol: EPA-821-R-02-012.  
 Endpoints: Percent Survival at 96 hrs.  
 Test chamber: 600 ml beakers.  
 Temperature: 20 +/- 1°C.  
 Number of fish per chamber: 10.  
 QA/QC Batch No.: RT-060301.

**TEST DATA**

		°C	DO	pH	# Dead		Analyst & Time of Readings
					A	B	
INITIAL	Control	20.4	8.9	7.9	0	0	R 1200
	100%	19.7	8.5	7.3	0	0	
24 Hr	Control	19.2	8.0	7.7	0	0	R 1100
	100%	19.1	8.2	7.8	0	0	
48 Hr	Control	19.3	7.4	7.6	0	0	R 1230
	100%	19.3	7.2	7.7	0	0	
Renewal	Control	19.5	8.4	7.8	0	0	R 1300
	100%	19.3	9.0	7.4	0	0	
72 Hr	Control	19.4	8.0	7.6	0	0	R 1100
	100%	19.0	8.1	7.9	0	0	
96 Hr	Control	19.4	7.9	7.6	0	0	R 1130
	100%	19.2	7.8	7.9	0	0	

**Comments:**

Sample as received: Chlorine: 0.0 mg/l; pH: 7.3; Conductivity: 364 umho; Temp: 2°C;  
 DO: 8.5 mg/l; Alkalinity: 98 mg/l; Hardness: 125 mg/l; NH<sub>3</sub>-N: 0.4 mg/l.  
 Sample aerated moderately (approx. 500 ml/min) to raise or lower DO? Yes / No  
 Control: Alkalinity: 54 mg/l; Hardness: 94 mg/l; Conductivity: 325 umho.  
 Test solution aerated (not to exceed 100 bubbles/min) to maintain DO >4.0 mg/l? Yes / No  
 Sample used for renewal is the original sample kept at 0-6°C with minimal headspace.

**RESULTS**

Percent Survival In: Control: 100 %      100% Sample: 100 %

**CERIODAPHNIA CHRONIC BIOASSAY  
EPA METHOD 1002.0**



Lab No.: A-06030113  
Client/ID: Del Mar IPB2641-01 Outfall 011

Date Tested: 03/01/06 to 03/07/06

**TEST SUMMARY**

Test type: Daily static-renewal.  
Species: *Ceriodaphnia dubia*.  
Age: < 24 hrs; all released within 8 hrs.  
Test vessel size: 30 ml.  
Number of test organisms per vessel: 1.  
Temperature: 25 +/- 1°C.  
Dilution water: Mod. hard reconstituted (MHRW).  
QA/QC Batch No.: RT-060301.

Endpoints: Survival and Reproduction.  
Source: In-laboratory culture.  
Food: .1 ml YTC, algae per day.  
Test solution volume: 15 ml.  
Number of replicates: 10.  
Photoperiod: 16/8 hrs. light/dark cycle.  
Test duration: 6 days.  
Statistics: ToxCalc computer program.

**RESULTS SUMMARY**

Sample Concentration	Percent Survival	Mean Number of Young Per Female
Control	100%	21.2
6.25%	100%	24.7
12.5%	100%	29.3
25%	100%	29.9
50%	100%	29.4
100%	100%	29.0

No concentration statistically significantly less than control at P = 0.05 level.  
\*\* Reproduction data from concentrations greater than survival NOEC are excluded from statistical analysis.

**CHRONIC TOXICITY**

Parameter	Survival	Growth
NOEC	100%	100%
TUc	1.0	1.0

**QA/QC TEST ACCEPTABILITY**

Parameter	Result
Control survival ≥ 80%	Pass (100% survival)
≥ 15 young per surviving control female	Pass (21.2 young)
≥ 60% surviving controls had 3 broods	Pass (80% with 3 broods)
PMSD < 47% for reproduction; if > 47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 22.7%)
Statistically significantly different concentrations relative difference > 13%	NA - No stat. sig. diff. concentrations
Concentration response relationship acceptable	Pass (no response at conc. tested)



**Ceriodaphnia Survival and Reproduction Test-Survival Day 6**

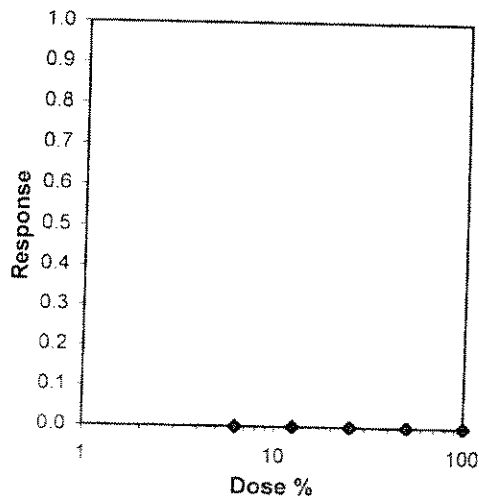
Start Date: 01 Mar-06 15:00 Test ID: 6030113c Sample ID: Del Mar IPB2641 Outfall 011  
 End Date: 07 Mar-06 16:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SRW2-Industrial stormwater  
 Sample Date: 28 Feb-06 00:00 Protocol: EPAF 91 Test Species: CD-Ceriodaphnia dubia  
 Comments:

Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
6.25	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
12.5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
25	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
50	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
100	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Conc-%	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's 1-Tailed		Isotonic	
							Exact P	Critical	Mean	N-Mean
D-Control	1.0000	1.0000	0	10	10	10			1.0000	1.0000
6.25	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
12.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
25	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
50	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000
100	1.0000	1.0000	0	10	10	10	1.0000	0.0500	1.0000	1.0000

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	100	>100		1

Point	%	SE	Log-Logit Interpolation (80 Resamples)	
			95% CL	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



**Ceriodaphnia Survival and Reproduction Test-Reproduction**

Start Date: 01 Mar-06 15:00 Test ID: 6030113c Sample ID: Del Mar IPB2641 Outfall 011  
 End Date: 07 Mar-06 16:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SRW2-Industrial stormwater  
 Sample Date: 28 Feb-06 00:00 Protocol: EPAF 91 Test Species: CD-Ceriodaphnia dubia  
 Comments:

Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	24.000	13.000	21.000	24.000	11.000	26.000	25.000	24.000	21.000	23.000
6.25	27.000	11.000	28.000	24.000	29.000	27.000	29.000	28.000	10.000	34.000
12.5	32.000	25.000	28.000	31.000	33.000	29.000	34.000	26.000	28.000	27.000
25	28.000	29.000	31.000	36.000	28.000	30.000	27.000	33.000	29.000	28.000
50	31.000	28.000	28.000	30.000	28.000	27.000	28.000	29.000	37.000	28.000
100	27.000	32.000	33.000	24.000	35.000	35.000	27.000	25.000	28.000	24.000

Conc-%	Mean	N-Mean	Transform: Untransformed					N	t-Stat	1-Tailed Critical	MSD	Isotonic	
			Mean	Min	Max	CV%	Mean					N-Mean	
D-Control	21.200	1.0000	21.200	11.000	26.000	24.134	10				27.250	1.0000	
6.25	24.700	1.1651	24.700	10.000	34.000	31.939	10	-1.662	2.287	4.815	27.250	1.0000	
12.5	29.300	1.3821	29.300	25.000	34.000	10.433	10	-3.847	2.287	4.815	27.250	1.0000	
25	29.900	1.4104	29.900	27.000	36.000	9.254	10	-4.132	2.287	4.815	27.250	1.0000	
50	29.400	1.3868	29.400	27.000	37.000	9.910	10	-3.894	2.287	4.815	27.250	1.0000	
100	29.000	1.3679	29.000	24.000	35.000	15.075	10	-3.704	2.287	4.815	27.250	1.0000	

**Auxiliary Tests**

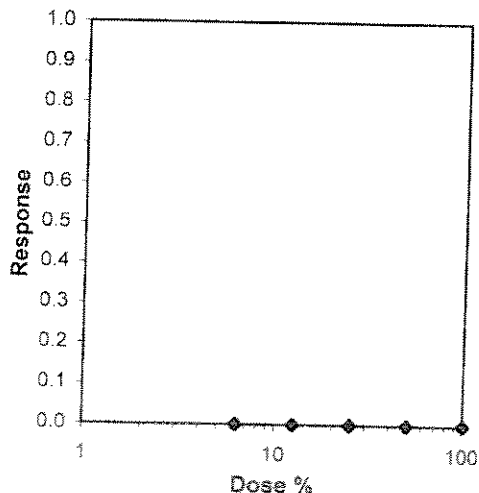
Statistic	Critical	Skew	Kurt
Kolmogorov D Test indicates normal distribution (p > 0.01)	1.02321	1.035	-0.9972
Bartlett's Test indicates unequal variances (p = 7.29E-03)	15.8482	15.0863	2.18967

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSB	MSE	F-Stat	F-Prob	df
Dunnett's Test	100	>100		1	4.81489	124.03	22.1685	5.59487	3.2E-04	5, 54

**Linear Interpolation (80 Resamples)**

Point	%	SE	95% CL	Skew
IC05	>100			
IC10	>100			
IC15	>100			
IC20	>100			
IC25	>100			
IC40	>100			
IC50	>100			



# CERIODAPHNIA DUBIA CHRONIC BIOASSAY

## Reproduction and Survival Raw Data Sheet



Lab No.: A-006030113-001  
 Client ID: Del Mar IPB2641-01

Start Date: 03/01/2006

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	4	4	3	2	3	4	0	4	3	4	31	10	R
	4	0	0	7	0	0	0	4	0	0	6	17	10	J
	5	8	9	0	7	8	8	9	9	8	0	66	10	R
	6	12	0	11	15	0	14	12	11	10	13	98	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	24	13	21	24	11	26	25	24	21	23	212	10	R
6.25%	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	3	3	4	4	4	6	8	5	3	0	40	10	R
	4	8	0	0	0	9	8	0	0	0	9	34	10	J
	5	16	8	9	8	0	0	9	8	7	8	73	10	R
	6	(10)	0	15	12	16	13	12	15	0	17	100	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	27	11	28	24	29	27	29	28	10	34	247	10	R
12.5%	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	0	2	5	0	4	4	7	4	4	3	33	10	R
	4	4	8	8	6	10	8	0	8	9	8	69	10	R
	5	12	15	15	8	0	0	9	0	0	16	75	10	R
	6	16	(23)	(19)	17	19	17	18	14	15	(12)	116	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	32	25	28	31	33	29	34	26	28	27	293	10	R

Note: Fourth broods (circled) are not counted in data analysis.

# CERIODAPHNIA DUBIA CHRONIC BIOASSAY

## Reproduction and Survival Raw Data Sheet



Lab No.: A-006030113-001  
 Client ID: Del Mar IPB2641-01

Start Date: 03/01/2006

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
25%	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	4	5	6	0	4	5	4	3	7	5	43	10	R
	4	8	9	0	10	8	9	8	8	9	8	77	10	R
	5	16	15	8	10	16	16	15	0	0	15	111	10	R
	6	(12)	(18)	17	16	0	(12)	(14)	22	13	(15)	68	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	28	29	31	36	28	30	27	33	29	28	299	10	R
50%	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	3	4	3	5	5	3	5	5	0	3	36	10	R
	4	0	9	8	9	8	9	9	10	8	9	79	10	R
	5	10	15	0	16	15	0	0	0	12	16	84	10	R
	6	18	0	17	0	(18)	15	14	14	17	(18)	95	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	31	28	28	30	28	27	28	29	37	28	294	10	R
100%	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	4	6	5	4	4	8	5	3	5	2	46	10	R
	4	8	10	0	10	0	10	0	9	8	8	63	10	R
	5	15	16	12	10	11	0	8	0	15	14	101	10	R
	6	(13)	(17)	16	(16)	20	17	14	13	(17)	(12)	80	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	27	32	33	24	35	35	27	25	28	24	290	10	R

Note: Fourth broods (circled) are not counted in data analysis.

# CERIODAPHNIA DUBIA CHRONIC BIOASSAY

## Water Chemistries Raw Data Sheet



Lab No.: A-006030113-001  
 Client ID: Del Mar IPB2641-01

Start Date: 03/01/2006

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst Initials:		PM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	—	—
Time of Readings:		1500	1600	1600	1600	1600	1700	1700	1800	1500	1500	1500	1600	—	—
Control	DO	8.0	7.9	8.0	7.9	8.3	8.0	8.1	7.9	8.1	7.9	8.0	7.9	—	—
	pH	7.7	8.0	8.0	8.0	7.8	7.9	7.9	7.9	7.8	7.9	7.8	7.9	—	—
	Temp	25.9	25.4	25.9	25.6	25.7	25.5	25.8	25.6	25.5	24.9	25.2	25.8	—	—
6.25%	DO	8.1	8.0	8.0	7.9	8.4	7.9	8.2	8.1	8.1	7.8	8.1	7.9	—	—
	pH	7.7	8.0	7.9	8.0	7.7	7.9	7.8	7.9	7.7	7.8	7.7	7.9	—	—
	Temp	25.9	25.4	25.9	25.6	25.7	25.6	25.8	25.6	25.5	25.2	24.9	25.8	—	—
12.5%	DO	8.1	8.0	8.1	7.9	8.4	7.9	8.2	8.1	8.1	8.1	8.2	8.0	—	—
	pH	7.6	8.0	7.8	8.0	7.7	7.9	7.7	7.9	7.6	7.9	7.7	7.9	—	—
	Temp	25.8	25.4	25.8	25.7	25.6	25.6	25.7	25.5	25.4	25.0	25.1	25.8	—	—
25%	DO	8.2	7.9	8.3	7.9	8.5	8.0	8.2	8.0	8.2	8.0	8.2	8.0	—	—
	pH	7.6	8.0	7.7	8.0	7.6	7.9	7.6	7.9	7.6	7.8	7.6	7.9	—	—
	Temp	25.7	25.4	25.8	25.7	25.5	25.6	25.5	25.6	25.3	24.9	24.8	25.8	—	—
50%	DO	8.2	7.9	8.4	8.0	8.5	8.0	8.3	8.0	8.2	7.9	8.2	8.0	—	—
	pH	7.5	8.0	7.6	8.0	7.4	7.9	7.6	7.9	7.5	7.8	7.6	7.9	—	—
	Temp	25.6	25.4	25.8	25.7	25.3	25.6	25.2	25.6	25.3	24.9	24.7	25.9	—	—
100%	DO	8.4	7.8	8.6	8.0	8.8	7.9	8.4	7.9	8.3	8.0	8.3	8.0	—	—
	pH	7.5	8.0	7.5	8.0	7.4	7.9	7.5	7.9	7.5	7.9	7.5	7.9	—	—
	Temp	25.4	25.4	25.6	25.7	25.0	25.6	24.7	25.7	25.2	25.1	24.6	25.9	—	—

Source of Neonates											
Replicate:	A	B	C	D	E	F	G	H	I	J	
Brood ID:	H2	H3	I1	I2	I3	J1	J2	J3	A4	A5	

Additional Parameters	Control	100% Effluent
Conductivity	325	364
Alkalinity	54	98
Hardness	94	125
Chlorine (TRC)	0	0
Ammonia (NH <sub>3</sub> -N)	0.2	0.4



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

## SUBCONTRACT ORDER - PROJECT # IPB2641

<b>SENDING LABORATORY:</b> Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	<b>RECEIVING LABORATORY:</b> Aquatic Testing Laboratories-SUB 4350 Transport Street, Unit 107 Ventura, CA 93003 Phone : (805) 650-0546 Fax: (805) 650-0756
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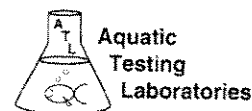
Standard TAT is requested unless specific due date is requested => **Due Date:** \_\_\_\_\_ **Initials:** \_\_\_\_\_

Analysis	Expiration	Comments
<b>Sample ID: IPB2641-01</b>	<b>Water</b>	<b>Sampled: 02/28/06 13:00</b>
Bioassay-7 dy Chrmc	03/02/06 01:00	<b>Instant Notification</b>
Bioassay-Acute 96hr	03/02/06 01:00	Cerio, EPA/821-R02-013, Sub to AqTox Labs
		FH minnow, EPA/821-R02-012, Sub to AqTox Labs
<b>Containers Supplied:</b>		
1 gal Poly (IPB2641-01AU)		
1 gal Poly (IPB2641-01AV)		

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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received On Ice::	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
			Samples Received at (temp):	<u>2°C</u>	

Released By <i>[Signature]</i>	Date	Time	Received By <i>[Signature]</i>	Date	Time
Released By <i>[Signature]</i>	3-1-06	10:20	Received By <i>[Signature]</i>	3-1-06	10:20

**FATHEAD MINNOW ACUTE**  
**Method 2000.0**  
**Reference Toxicant - SDS**



QA/QC Batch No.: RT-060301

**TEST SUMMARY**

Species: *Pimephales promelas*.  
 Age: 13 days old.  
 Regulations: NPDES.  
 Test chamber volume: 250 ml.  
 Feeding: Prior to renewal at 48 hrs.  
 Temperature: 20 +/- 1°C.  
 Number of replicates: 2.  
 Dilution water: MHSF.

Source: In-lab culture.  
 Test type: Static-Renewal.  
 Test Protocol: EPA-821-R-02-012.  
 Endpoints: LC50 at 96 hrs.  
 Test chamber: 600 ml glass beakers.  
 Aeration: None.  
 Number of organisms per chamber: 10.  
 Photoperiod: 16/8 hrs light/dark.

**TEST DATA**

Date/Time: Analyst:	INITIAL			24 Hr						48 Hr			
	<u>3-1-06 1200</u>			<u>3-2-06 1100</u>						<u>3-3-06 1300</u>			
	<u>[Signature]</u>			<u>[Signature]</u>						<u>[Signature]</u>			
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
							A	B				A	B
Control	20.4	8.9	7.9	19.8	7.8	7.5	0	0	20.0	7.1	7.6	0	0
1.0 mg/l	20.4	8.9	7.9	19.7	7.7	7.5	0	0	20.0	7.0	7.6	0	0
2.0 mg/l	20.5	9.0	7.9	19.7	7.4	7.4	0	0	20.0	6.9	7.5	0	0
4.0 mg/l	20.5	9.1	7.9	19.7	7.7	7.4	0	0	20.0	6.6	7.5	0	0
8.0 mg/l	20.5	9.1	7.9	19.7	5.3	7.2	10	10	—	—	—	—	—

Date/Time: Analyst:	RENEWAL			72 Hr						96 Hr			
	<u>3-3-06 1300</u>			<u>3-4-06 1100</u>						<u>3-5-06 1130</u>			
	<u>[Signature]</u>			<u>[Signature]</u>						<u>[Signature]</u>			
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
							A	B				A	B
Control	19.8	9.0	7.8	19.5	7.9	7.6	0	0	19.9	7.5	7.4	0	0
1.0 mg/l	19.8	9.0	7.8	19.6	8.3	7.6	0	0	19.9	7.6	7.4	0	0
2.0 mg/l	19.8	9.1	7.8	19.6	8.3	7.6	0	0	19.8	7.6	7.4	0	0
4.0 mg/l	19.9	9.1	7.8	19.6	7.7	7.5	0	0	19.8	7.6	7.4	0	0
8.0 mg/l	—	—	—	—	—	—	—	—	—	—	—	—	—

Comments:

Control: Alkalinity: 54 mg/l; Hardness: 94 mg/l; Conductivity: 325 umho.  
 SDS: Alkalinity: 53 mg/l; Hardness: 94 mg/l; Conductivity: 330 umho.

**Acute Fish Test-96 Hr Survival**

Start Date: 01 Mar-06 12:00 Test ID: RT-060301f Sample ID: REF-Ref Toxicant  
 End Date: 05 Mar-06 11:30 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SDS-Sodium dodecyl sulfate  
 Sample Date: 01 Mar-06 00:00 Protocol: EPAA 91-EPA Acute Test Species: PP-Pimephales promelas  
 Comments:

Conc-mg/L	1	2
D-Control	1.0000	1.0000
1	1.0000	1.0000
2	1.0000	1.0000
4	1.0000	1.0000
8	0.0000	0.0000

Conc-mg/L	Mean	N-Mean	Transform: Arcsin Square Root					N	Number Resp	Total Number
			Mean	Min	Max	CV%				
D-Control	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20	
1	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20	
2	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20	
4	1.0000	1.0000	1.4120	1.4120	1.4120	0.000	2	0	20	
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	0	20	
								20	20	

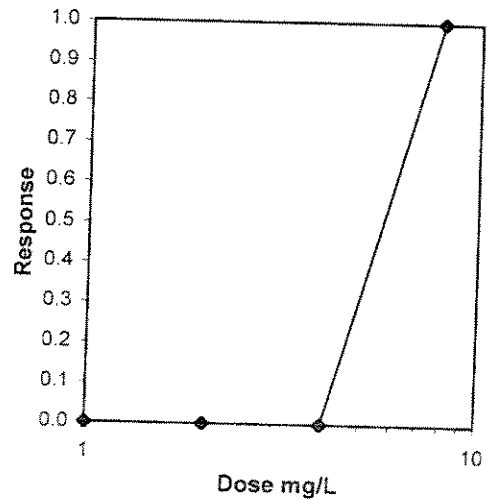
**Auxiliary Tests**

Normality of the data set cannot be confirmed  
 Equality of variance cannot be confirmed

Statistic	Critical	Skew	Kurt
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**Graphical Method**

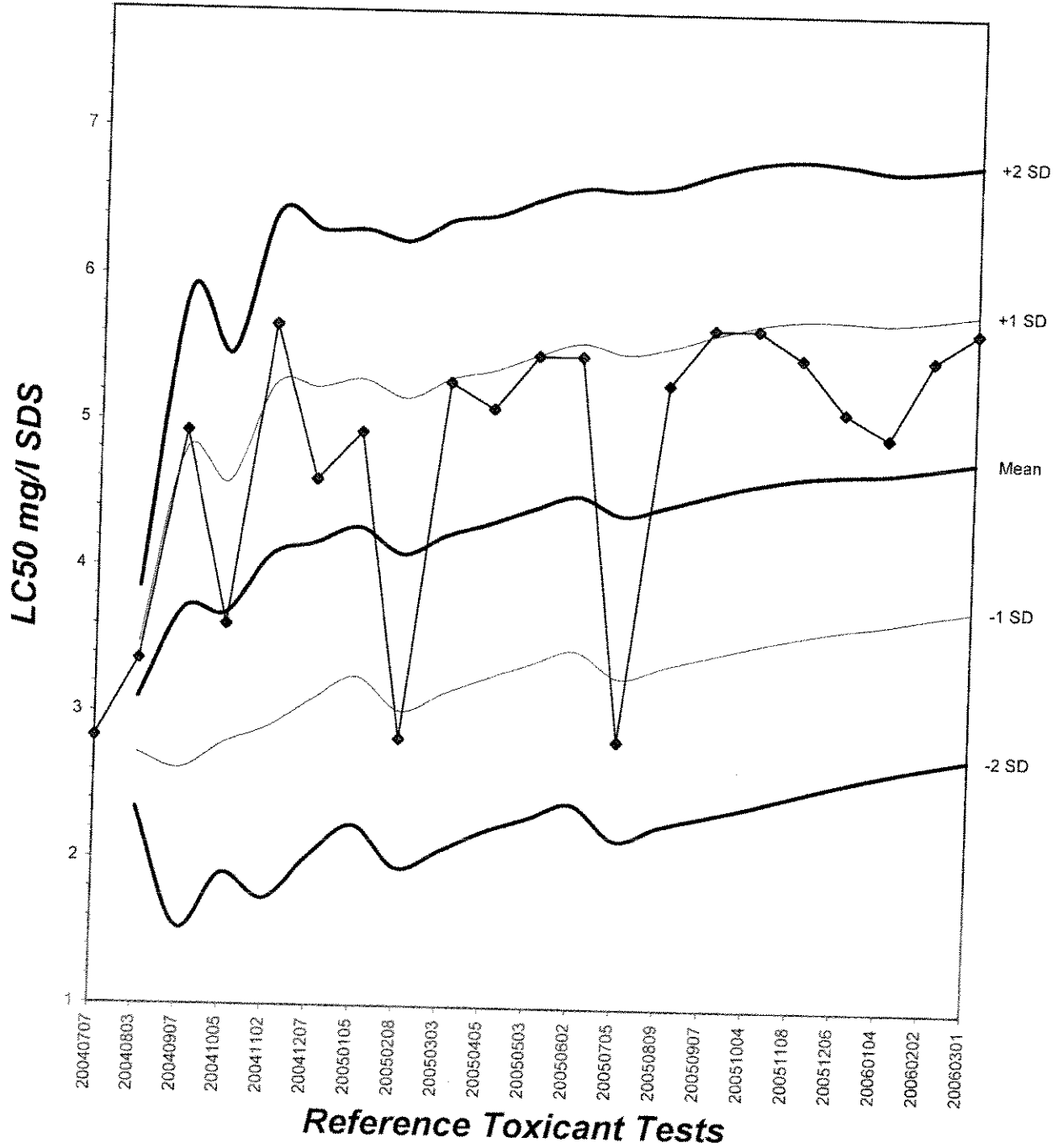
Trim Level	EC50
0.0%	5.6569





# Fathead Minnow Acute Laboratory Control Chart

CV% = 21.3



# TEST ORGANISM LOG

FATHEAD MINNOW - LARVAL  
(*Pimephales promelas*)



QA/QC BATCH NO.: RT-060301

SOURCE: In-Lab Culture

DATE HATCHED: 2-16-06

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

# MORTALITIES 48 HOURS PRIOR TO  
TO USE IN TESTING: 0

DATES USED IN LAB: 3/1/06  
to  
1/1/06

AVERAGE FISH WEIGHT: 0.006 gm

TEST LOADING LIMITS: 0.65 gm/liter

200 ml test solution volume = 0.013 gm mean fish weight limit

250 ml test solution volume = 0.016 gm mean fish weight limit

## ACCLIMATION WATER QUALITY:

Temp.: 20.4 °C      pH: 7.7      Ammonia: 0.2 mg/l NH<sub>3</sub>-N

DO: 7.8 mg/l      Alkalinity: 54 mg/l      Hardness: 91 mg/l

READINGS RECORDED BY: [Signature]      DATE: 3-5-06

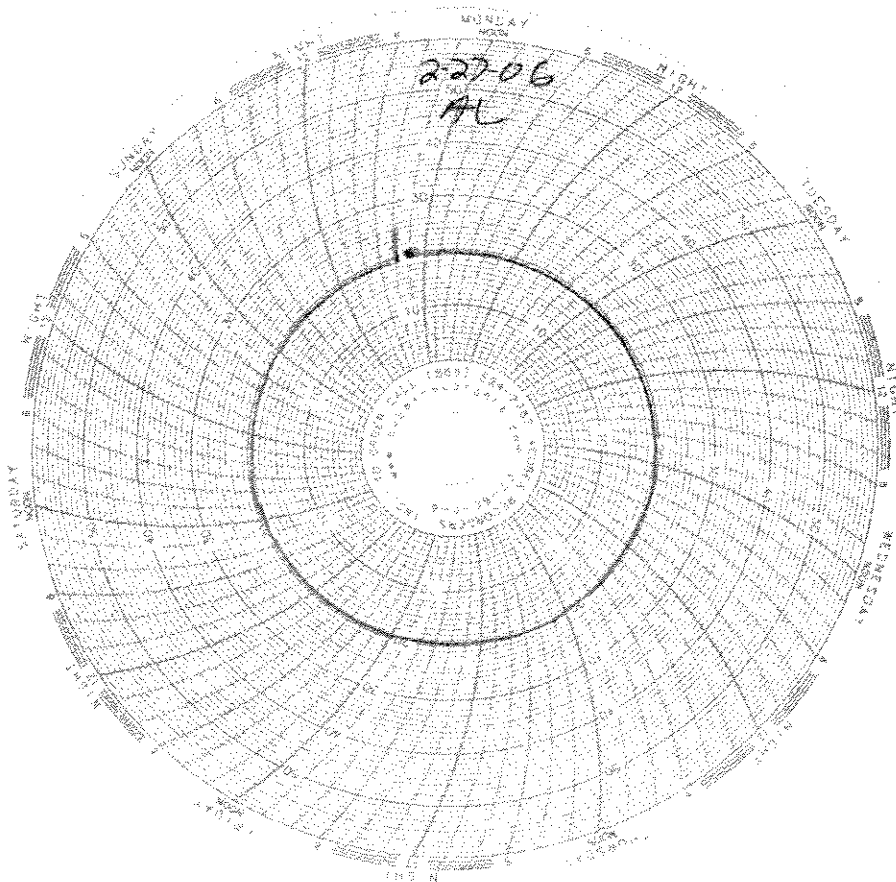


# Laboratory Temperature Chart

*QA/QC Batch No: RT-060301*

*Date Tested: 03/01/06 to 03/05/06*

*Acceptable Range: 20 +/- 1°C*



**CERIODAPHNIA CHRONIC BIOASSAY**  
**EPA METHOD 1002.0**  
**REFERENCE TOXICANT - NaCl**



QA/QC Batch No.: RT-060301

Date Tested: 03/01/06 to 03/07/06

**TEST SUMMARY**

Test type: Daily static-renewal.  
 Species: *Ceriodaphnia dubia*.  
 Age: < 24 hrs; all released within 8 hrs.  
 Test vessel size: 30 ml.  
 Number of test organisms per vessel: 1.  
 Temperature: 25 +/- 1°C.  
 Dilution water: Mod. hard reconstituted (MHRW).  
 Reference Toxicant: Sodium chloride (NaCl).

Endpoints: Survival and Reproduction.  
 Source: In-laboratory culture.  
 Food: .1 ml YTC, algae per day.  
 Test solution volume: 20 ml.  
 Number of replicates: 10.  
 Photoperiod: 16/8 hrs. light/dark cycle.  
 Test duration: 6 days.  
 Statistics: ToxCalc computer program.

**RESULTS SUMMARY**

Sample Concentration	Percent Survival		Mean Number of Young Per Female	
Control	100%		21.0	
0.5 g/l	100%		22.4	
1.0 g/l	100%		17.8	*
2.0 g/l	100%		2.4	*
4.0 g/l	0%	*	0	**

\* Statistically significantly less than control at P = 0.05 level  
 \*\* Reproduction data from concentrations greater than survival NOEC are excluded from statistical analysis.

**CHRONIC TOXICITY**

Survival LC50	2.8 g/l
Reproduction IC25	1.10 g/l

**QA/QC TEST ACCEPTABILITY**

Parameter	Result
Control survival > 80%	Pass (100% Survival)
> 15 young per surviving control female	Pass (21.0 young)
> 60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD < 47% for reproduction	Pass (PMSD = 8.3%)
Stat. sig. diff. conc. relative difference > 13%	Pass (Stat. sig. diff. conc. = 15.2%)
Concentration response relationship acceptable	Pass (Response curve normal)

**Ceriodaphnia Survival and Reproduction Test-Survival Day 6**

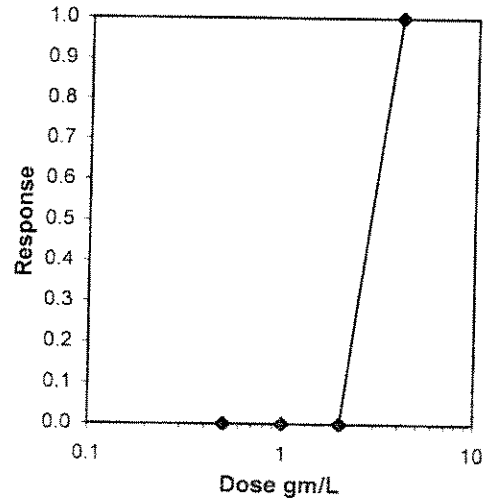
Start Date: 01 Mar-06 14:00 Test ID: RT-060301c Sample ID: REF-Ref Toxicant  
 End Date: 07 Mar-06 16:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: NACL-Sodium chloride  
 Sample Date: 01 Mar-06 00:00 Protocol: EPAF 91 Test Species: CD-Ceriodaphnia dubia  
 Comments:

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.5	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
2	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Conc-gm/L	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
D-Control	1.0000	1.0000	0	10	10	10			0	10
0.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
1	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
2	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
4	0.0000	0.0000	10	0	10	10			10	10

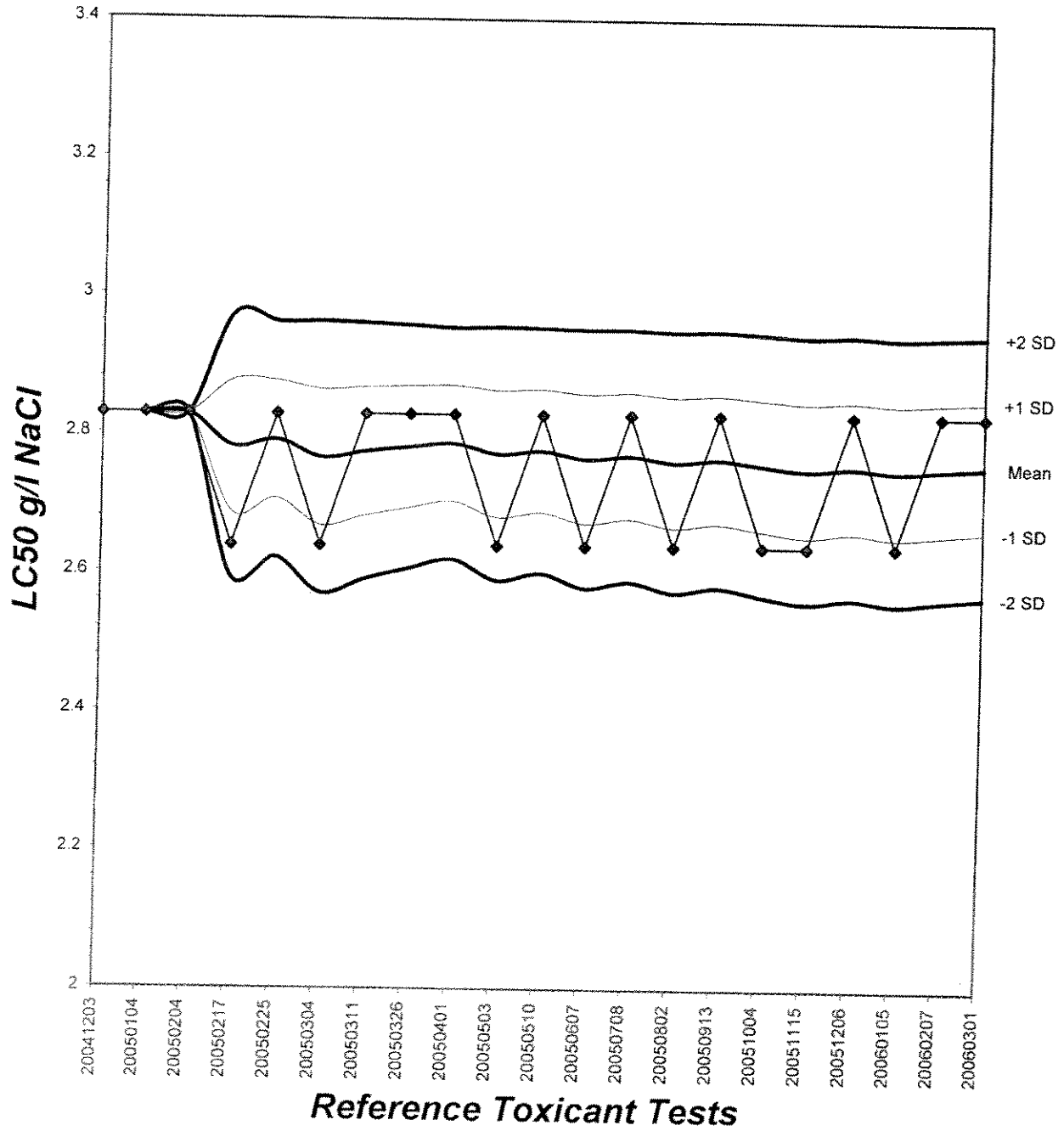
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	2	>4		

Trim Level	EC50	Graphical Method
0.0%	2.8284	



# Ceriodaphnia Chronic Survival Laboratory Control Chart

CV% = 3.4



**Ceriodaphnia Survival and Reproduction Test-Reproduction**

Start Date: 01 Mar-06 14:00 Test ID: RT-060301c Sample ID: REF-Ref Toxicant  
 End Date: 07 Mar-06 16:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: NACL-Sodium chloride  
 Sample Date: 01 Mar-06 00:00 Protocol: EPAF 91 Test Species: CD-Ceriodaphnia dubia  
 Comments:

Conc-gm/L	1	2	3	4	5	6	7	8	9	10
D-Control	20.000	22.000	19.000	18.000	20.000	21.000	26.000	22.000	22.000	20.000
0.5	22.000	20.000	20.000	24.000	23.000	24.000	25.000	23.000	22.000	21.000
1	19.000	18.000	20.000	15.000	19.000	20.000	16.000	14.000	20.000	17.000
2	2.000	2.000	2.000	2.000	4.000	3.000	2.000	2.000	2.000	3.000
4	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

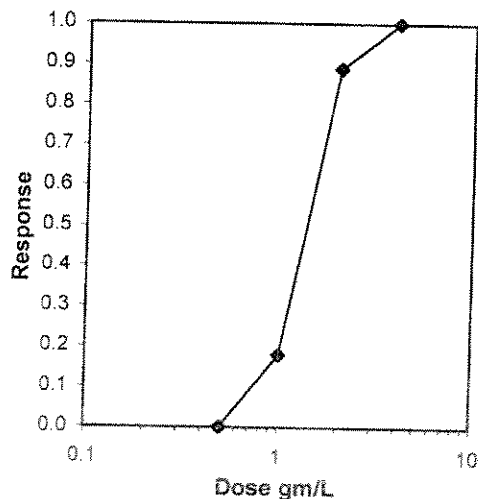
Conc-gm/L	Transform: Untransformed							1-Tailed			Isotonic	
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	21.000	1.0000	21.000	18.000	26.000	10.529	10				21.700	1.0000
0.5	22.400	1.0667	22.400	20.000	25.000	7.646	10	-1.726	2.137	1.733	21.700	1.0000
*1	17.800	0.8476	17.800	14.000	20.000	12.365	10	3.946	2.137	1.733	17.800	0.8203
*2	2.400	0.1143	2.400	2.000	4.000	29.134	10	22.934	2.137	1.733	2.400	0.1106
4	0.000	0.0000	0.000	0.000	0.000	0.000	10				0.000	0.0000

**Auxiliary Tests**

Statistic	Critical	Skew	Kurt							
Shapiro-Wilk's Test indicates normal distribution ( $p > 0.01$ )	0.97953	0.919	0.2143 0.71232							
Bartlett's Test indicates equal variances ( $p = 0.01$ )	10.6394	11.3449								
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSB	MSE	F-Stat	F-Prob	df
Dunnett's Test	0.5	1	0.70711		1.73291	847.067	3.28889	257.554	2.3E-24	3, 36

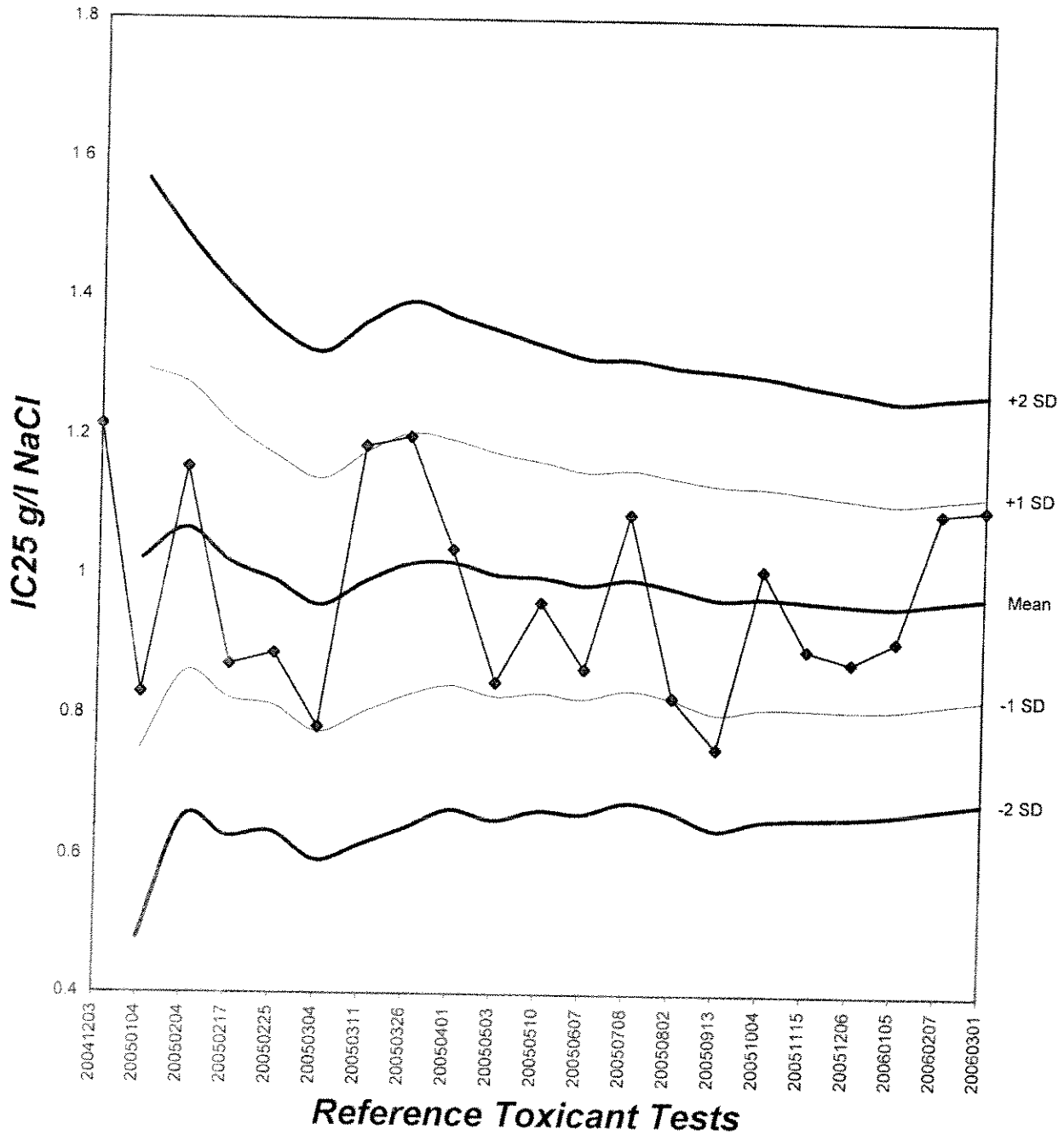
**Linear Interpolation (80 Resamples)**

Point	gm/L	SE	95% CL		Skew
IC05	0.6391	0.0359	0.5587	0.7148	0.5339
IC10	0.7782	0.0612	0.7030	0.9295	1.5066
IC15	0.9173	0.0675	0.8164	1.0435	0.5242
IC20	1.0286	0.0507	0.9218	1.1083	-0.0551
IC25	1.0990	0.0414	1.0199	1.1731	0.2340
IC40	1.3104	0.0319	1.2476	1.3675	0.1691
IC50	1.4513	0.0260	1.3973	1.4971	0.0934



# Ceriodaphnia Chronic Reproduction Laboratory Control Chart

CV% = 15.1





**CERIODAPHNIA DUBIA CHRONIC BIOASSAY**  
**Reference Toxicant - NaCl**  
**Reproduction and Survival Raw Data Sheet**



QA/QC No.: RT-060301

Start Date: 03/01/2006

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	4	3	3	5	0	4	4	3	4	0	30	10	R
	4	0	0	0	0	5	0	0	0	0	4	9	10	J
	5	8	9	8	6	7	8	9	9	7	8	79	10	J
	6	8	10	8	7	8	9	13	10	11	8	92	10	R
	7	0	-	-	-	-	-	-	-	-	-	-	-	-
	Total	20	22	19	18	20	21	26	22	22	20	220	10	R
0.5 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	3	2	0	4	4	4	3	4	4	3	31	10	R
	4	0	0	5	0	0	0	0	0	0	0	5	10	J
	5	8	7	7	8	9	8	9	9	8	7	80	10	J
	6	11	11	8	12	10	12	13	10	10	11	108	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	22	20	20	24	23	24	25	23	22	21	224	10	R
1.0 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	0	0	4	3	2	4	0	3	0	3	19	10	R
	4	3	3	0	0	0	0	4	0	4	0	14	10	J
	5	6	6	4	4	6	4	3	4	6	4	47	10	J
	6	10	9	12	8	11	12	9	7	10	10	98	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	19	18	20	15	19	20	16	14	20	17	178	10	R

Note: Fourth broods (circled) are not counted in data analysis.

**CERIODAPHNIA DUBIA CHRONIC BIOASSAY**  
**Reference Toxicant - NaCl**  
**Reproduction and Survival Raw Data Sheet**



QA/QC No.: RT-060301

Start Date: 03/01/2006

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
2.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	0	0	0	0	0	0	0	0	0	0	0	10	R
	4	0	0	0	0	2	3	0	2	0	0	7	10	R
	5	2	2	2	2	0	0	2	0	2	3	15	10	R
	6	0	0	0	0	2	0	0	0	0	0	2	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	2	2	2	2	4	3	2	2	2	3	24	10	R
4.0 g/l	1	X	X	X	X	X	X	X	X	X	0	0	R	
	2	-	-	-	-	-	-	-	-	-	-	-	-	
	3	-	-	-	-	-	-	-	-	-	-	-	-	
	4	-	-	-	-	-	-	-	-	-	-	-	-	
	5	-	-	-	-	-	-	-	-	-	-	-	-	
	6	-	-	-	-	-	-	-	-	-	-	-	-	
	7	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	0	0	0	0	0	0	0	0	0	0	0	0	R

Note: Fourth broods (circled) are not counted in data analysis.

**CERIODAPHNIA DUBIA CHRONIC BIOASSAY**  
**Reference Toxicant - NaCl**  
**Water Chemistries Raw Data Sheet**



QA/QC No.: RT-060301

Start Date: 03/01/2006

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst Initials:		LM	LM	LM	LM	LM	LM	LM	J	LM	J	LM	LM	—	—
Time of Readings:		1400	1500	1500	1500	1500	1600	1600	1400	1400	1330	1330	1600	—	—
Control	DO	8.1	7.8	8.0	8.2	8.4	8.0	8.1	7.8	8.1	8.1	8.0	8.0	—	—
	pH	7.8	7.9	8.0	8.0	7.8	7.8	7.8	7.8	7.9	7.8	7.6	7.7	—	—
	Temp	25.8	25.5	25.8	25.3	25.6	25.2	25.8	25.1	25.6	24.9	25.9	25.8	—	—
0.5 g/l	DO	8.1	7.9	8.0	8.3	8.4	8.0	8.1	7.7	8.1	8.1	7.8	8.0	—	—
	pH	7.8	7.9	8.0	8.0	7.8	7.9	7.8	7.9	7.8	7.9	7.8	7.8	—	—
	Temp	25.8	25.5	25.9	25.3	25.7	25.2	25.9	25.2	25.6	25.0	25.3	25.7	—	—
1.0 g/l	DO	8.1	7.9	8.0	8.3	8.4	7.9	8.1	7.9	8.1	7.7	8.0	7.9	—	—
	pH	7.8	7.9	8.0	8.0	7.8	7.9	7.9	7.9	7.9	7.9	7.8	7.8	—	—
	Temp	25.8	25.5	25.9	25.3	25.7	25.2	25.9	25.0	25.8	25.7	25.4	25.7	—	—
2.0 g/l	DO	8.1	8.0	7.9	8.2	8.3	7.9	8.0	7.8	8.0	7.8	8.0	7.9	—	—
	pH	7.9	7.9	8.0	8.0	7.8	7.9	7.9	7.8	7.9	7.8	7.8	7.8	—	—
	Temp	25.8	25.5	26.0	25.3	25.8	25.2	26.0	25.2	25.8	25.6	25.4	25.7	—	—
4.0 g/l	DO	8.1	8.0	—	—	—	—	—	—	—	—	—	—	—	—
	pH	7.8	7.9	—	—	—	—	—	—	—	—	—	—	—	—
	Temp	25.7	25.5	—	—	—	—	—	—	—	—	—	—	—	—

Additional Parameters	Control	High Concentration (4.0 g/l)
Conductivity	325	6340
Alkalinity	54	55
Hardness	94	93
Ammonia (NH <sub>3</sub> -N)	0.2	0.2

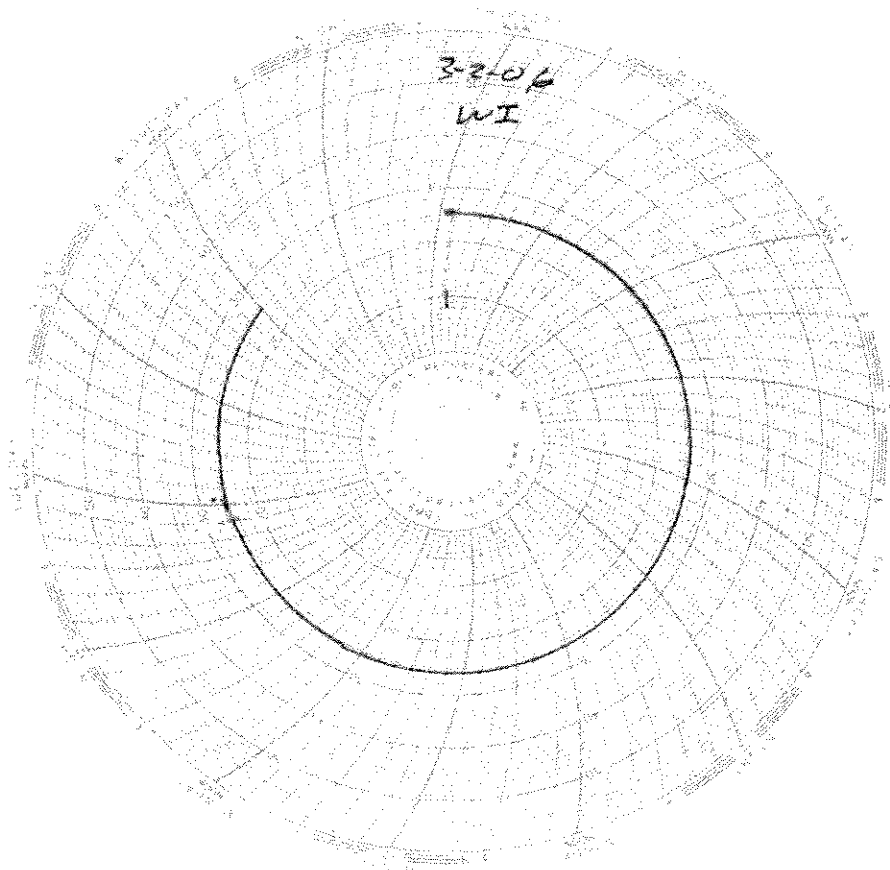
Source of Neonates										
Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	E1	E2	G6	H4	H5	H6	I4	I6	J4	J2

# *Laboratory Temperature Chart*

*QA/QC Batch No: RT-060301*

*Date Tested: 03/01/06 to 03/07/06*

*Acceptable Range: 25 $\pm$  1 $^{\circ}$ C*





# EBERLINE SERVICES

March 13, 2006

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

Reference: Del Mar Analytical Project No. IPB2641  
Eberline Services NELAP Cert #01120CA (exp. 01/31/07)  
Eberline Services Report R603018-8662

Dear Ms. Chamberlin:

Enclosed are results from the analysis of one water sample received at Eberline Services on March 2, 2006. The sample was analyzed according to the accompanying Del Mar Analytical Subcontract Order Form. The requested analysis was gross alpha/gross beta (EPA900.0). The batch QC LCS, blank analysis, duplicate analysis, and matrix spike results were within the limits defined in Eberline Services Quality Control Procedures Manual. No problems were encountered during the requested analysis.

Please call me if you have any questions concerning this report.

Regards,

Melissa Mannion  
Senior Program Manager

MCM/njv

Enclosure: Report  
Subcontract Form  
Receipt checklist  
Invoice


Analytical Services  
2030 Wright Avenue  
P.O. Box 4040  
Richmond, California 94804-0040  
(510) 235-2633 Fax (510) 235-0438  
Toll Free (800) 841-5487  
[www.eberlineservices.com](http://www.eberlineservices.com)  
**NPDES - 2972**

# Eberline Services

## ANALYSIS RESULTS

SDG <u>8662</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603018-01</u>	Contract <u>PROJECT# IPB2641</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

<u>Client</u>	<u>Lab</u>	<u>Sample ID</u>	<u>Collected</u>	<u>Analyzed</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>Units</u>	<u>MDA</u>
IPB2641-01	8662-001	02/28/06	03/06/06	GrossAlpha	5.24 ± 2.0	pCi/L	1.86	
			03/06/06	Gross Beta	7.59 ± 1.7	pCi/L	2.18	

Certified by   
Report Date 03/12/06  
Page 1

# Eberline Services

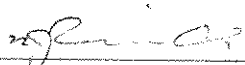
## QC RESULTS

SDG <u>8662</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603018-01</u>	Contract <u>PROJECT# IPB2641</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Lab	Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
<u>LCS</u>							
	8660-002	GrossAlpha	9.57 ± 1.3	pCi/Smpl	10.2	0.635	94% recovery
		Gross Beta	9.53 ± 0.77	pCi/Smpl	9.84	0.609	97% recovery
<u>BLANK</u>							
	8660-003	GrossAlpha	-0.067 ± 0.23	pCi/Smpl	NA	0.513	<MDA
		Gross Beta	0.136 ± 0.31	pCi/Smpl	NA	0.548	<MDA

<u>DUPLICATES</u>				<u>ORIGINALS</u>			
<u>Sample ID</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>Sample ID</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>RPD (Tot) Eval</u>
8660-004	GrossAlpha	1.33 ± 1.5	2.25	8660-001	2.64 ± 1.7	1.95	66 177 satis.
	Gross Beta	7.77 ± 1.8	2.37		7.69 ± 1.6	2.06	1 63 satis.

<u>SPIKED SAMPLE</u>				<u>ORIGINAL SAMPLE</u>				
<u>Sample ID</u>	<u>Nuclide</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>Sample ID</u>	<u>Results ± 2σ</u>	<u>MDA</u>	<u>Added</u>	<u>%Recv</u>
8660-005	GrossAlpha	92.9 ± 7.9	1.88	8660-001	2.64 ± 1.7	1.95	76.5	118
	Gross Beta	79.8 ± 3.9	1.99		7.69 ± 1.6	2.06	70.3	103

Certified by <u></u> Report Date <u>03/12/06</u> Page 2
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17461 Denan Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228  
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689  
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851  
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

## SUBCONTRACT ORDER - PROJECT # IPB2641

**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
<b>Sample ID: IPB2641-01</b> Water	<b>Sampled: 02/28/06 13:00</b>	<b>Instant Notification</b>
EDD + Level 4	03/28/06 13:00	Excel EDD email to pm, include Std logs for Lvl IV
Gross Alpha-O	02/28/07 13:00	900.0, IF RESULT > 15 pCi/L, run Radium 226 & 228
Gross Beta-O	02/28/07 13:00	900.0, IF RESULT > 50 pCi/L, run Radium 226 & 228
Radium, Combined-O	02/28/07 13:00	HOLD for Gross Alpha/Beta result; EPA 903.1 & 904.0
Strontium 90-O	02/28/07 13:00	905.0
Tritium-O	02/28/07 13:00	906

**Containers Supplied:**

- 2.5 gal Poly (IPB2641-01AF)
- 40 ml Amber Voa Vial (IPB2641-01AG)
- 40 ml Amber Voa Vial (IPB2641-01AH)
- 40 ml Amber Voa Vial (IPB2641-01AI)

**SAMPLE INTEGRITY:**

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

Released By: *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: *[Signature]* Date: 03/02/06 Time: 9:30

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_



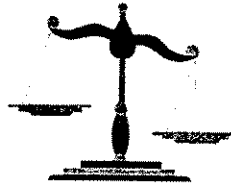




## **Del Mar Analytical**

**Laboratory Number: 952268**

**Project Name: IPB2641**



Prepared for:

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

Prepared by:

**Truesdail Laboratories, Inc.  
Tustin, CA 92780**

**March 20, 2006**

# TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

14201 FRANKLIN AVENUE  
TUSTIN, CALIFORNIA 92780-7008  
(714) 730-6239 - FAX (714) 730-6462  
www.truesdail.com

March 20, 2006

*Client:* Del Mar Analytical  
17461 Derian Avenue, Suite 100  
Irvine, CA 92614  
*Attention:* Michele Chamberlin

*Project Name:* IPB2641  
*Date Received:* 03/01/06

*Truesdail Project:* 952268

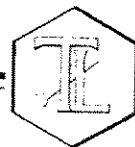
## Samples Cross-reference

<u>Sample ID</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Time Sampled</u>	<u>Analysis Requested</u>
952268-1	IPB2641-01	Water	02/28/06	1300	Hydrazines by EPA 8315M

Respectfully Submitted,  
TRUESDAIL LABORATORIES, INC.

K. R. P. Iyer  
K.R.P. Iyer  
Quality Control/Quality Assurance Officer

Xuan Huong Dang  
Xuan Huong Dang  
Project Manager



March 20, 2006

*Client:* Del Mar Analytical  
17461 Denan Avenue, Suite 100  
Irvine, CA 92614  
*Attention:* Michele Chamberlin

*Project Name:* IPB2641  
*Date Received:* 03/01/06

*Truesdail Project:* 952268

### Case Narrative

*Sample Receipt* The sample was received in good condition and no anomalies were noted during check-in. The sample was kept in a refrigerator until analysis. Thereafter, it is being kept in ambient storage for an additional 2 months before disposal.


*Analysis* The analysis was performed as requested on the chain-of-custody.


*Quality Control* The analytical results for each batch of samples performed include a minimum of one set of laboratory control sample/laboratory control sample duplicate (LCS/LCSD), one matrix spike (MS) and a reagent blank (Method blank). Any exceptions or problems would be noted in the "comments" section.

*Comments* The test results in this report meet all quality assurance requirements set forth by the method specification and all quality control recoveries were within the laboratory acceptance limits. No anomalies or nonconformance events occurred during the course of analysis.

On 3/20/06, client called to add a Level IV Data Package to the project. Since the request was made after the analysis was completed, the normal procedure for logging-in for Level IV was not followed. However, the data package for this project is completed as per the requirement.

Respectfully Submitted,  
TRUESDAIL LABORATORIES, INC.

  
K.R.P. Iyer  
Quality Control/Quality Assurance Officer

  
Xuan Huong Dang  
Project Manager



**Client:** Del Mar Analytical  
17461 Derian Ave., Suite 100  
Irvine, CA 92614

**Attention:** Michele Chamberlin  
**Sample:** Liquid / 1 Sample  
**Project Name:** IPB2641  
**P.O. Number:** IPB2641  
**Method Number:** 8315 (Modified)  
**Investigation:** Hydrazines in Liquid

### REPORT

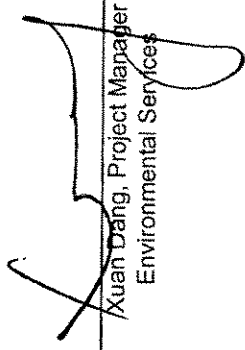
**Laboratory No:** 952268  
**Report Date:** March 20, 2006  
**Sampling Date:** February 28, 2006  
**Receiving Date:** March 1, 2006  
**Extraction Date:** March 1, 2006  
**Analysis Date:** March 3, 2006  
**Units:** µg/L  
**Dilution Factor:** 1  
**Reported By:** JS

### Analytical Results

Sample ID	Sample Description	Monomethyl		Unsymmetrical Dimethyl	
		Hydrazine	Hydrazine	Hydrazine	Hydrazine
705657-MB	Method Blank	ND	ND	ND	ND
952268	IPB2641-01	ND	ND	ND	ND
MDL		1.2	0.27	0.39	0.39
PQL		5.0	5.0	5.0	5.0

MDL: Method Detection Limit, ug/L  
PQL: Practical Quantitation Limit, ug/L  
ND: Not Detected at or above the MDL value.  
N/A: Not Applicable

Note: Results based on detector #1 (UV=365nm) data.

  
Xuan Dang, Project Manager  
Environmental Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from these laboratories.



Established 1937

14201 FRANKLIN AVENUE, TUSTIN, CALIFORNIA 92760-7008  
 (714) 730 6239 FAX (714) 730 6462 www.tuesdall.com

**Client:** Del Mar Analytical  
 17461 Derian Ave., Suite 100  
 Irvine, CA 92614

**Client Contact:** Michele Chamberlin  
**Sample:** Liquid / 1 Sample  
**Sample ID:** IPB2641  
**P.O. Number:** IPB2641  
**Method Number:** 8315 (Modified)  
**Run Batch No.:** Extraction: 3434; Analysis: 455  
**Investigation:** Hydrazines in Liquid

## REPORT

**QC Lab. No.:** 705657  
**Project Lab. No.:** 952268  
**Spiked Sample ID:** 952267  
**Report Date:** March 20, 2006  
**Sampling Date:** February 28, 2006  
**Receiving Date:** March 1, 2006  
**Extraction Date:** March 1, 2006  
**Analysis Date:** March 3, 2006  
**Units:** µg/L  
**Reported By:** JS

### Quality Control/Quality Assurance Calibration Report

#### CCV

Parameter	Theoretical Value	Measured Value	% Rec.		Control Limits	Flag
			Value	Rec.		
Monomethyl Hydrazine	50.0	46.1	92.2	92.2	85-115	PASS
u-Dimethyl Hydrazine	50.0	49.8	99.5	99.5	85-115	PASS
Hydrazine	10.0	9.86	98.6	98.6	85-115	PASS

#### QCS

Parameter	Theoretical Value	Measured Value	% Rec.		Control Limits	Flag
			Value	Rec.		
Monomethyl Hydrazine	50.0	46.8	93.6	93.6	85-115	PASS
u-Dimethyl Hydrazine	50.0	50.3	101	101	85-115	PASS
Hydrazine	10.0	10.2	102	102	85-115	PASS

### Quality Control/Quality Assurance Spikes Report

Parameter	LCS/LCSD				MS/MSD				Accuracy											
	Spiked Conc.	Recovered Concentration	Percent Recovery (%)		Spiked Conc.	Recovered Concentration	Percent Recovery (%)		MSD	MSD % D	MSD	MSD % D	Control Limits	% Rec.						
			LCS	LCSD			LCS	LCSD							MS	MSD	MS	MSD		
Monomethyl Hydrazine	50.0	48.6	50.0	0.0	97.2	100	2.81%	PASS	7.9	76-118	50.0	29.1	36.0	0.0	58.2	71.9	21.2%	PASS	23.4	11-134
u-Dimethyl Hydrazine	50.0	50.3	48.7	0.0	101	97.5	3.13%	PASS	4.8	81-110	50.0	47.5	49.0	0.0	94.9	98.1	3.28%	PASS	10.5	42-109
Hydrazine	10.0	9.97	10.7	0.0	99.7	107	6.76%	PASS	18	82-118	10.0	8.81	9.30	0.0	88.1	93.0	5.40%	PASS	32.9	37-128

ICV: Initial Calibration Verification  
 QCS: Quality Control Standard  
 LCS: Laboratory Control Spike  
 MS: Matrix Spike  
 %D: Percent Difference  
 Flag: "Pass" if within Control Limits, otherwise "Fail"

Note: Results based on detector #1 (UV=365nm) data.

Juan Dang, Project Manager  
 Environmental Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from these laboratories.



Del Mar Analytical

952268

SUBCONTRACT ORDER - PROJECT # IPB2641

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

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 Chamberlir

RECEIVING LABORATORY:
Truesdail Laboratories-SUB
14201 Franklin Avenue
Tustin, CA 92680
Phone : (714) 730-6239
Fax: (714) 730-6462

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

Table with columns: Analysis, Expiration, Comments. Row 1: Sample ID: IPB2641-01 Water, Expiration: 03/03/06 13:00, Comments: Instant Notification. Row 2: Hydrazine-OUT, Expiration: 03/03/06 13:00, Comments: Sub Truesdail for Monomethylhydrazine, J flags. Section: Containers Supplied: 1 L Amber (IPB2641-01AS), 1 L Amber (IPB2641-01AT)

Rec'd 03/01/06
s6b 952268

For Sample Conditions
See Form Attached

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

Released By: [Signature] Date: 03/01/06 Time: 0650
Received By: [Signature] Date: 03/01/06 Time: 0650
Released By: [Signature] Date: 03/01/06 Time: 0725
Received By: [Signature] Date: 3/01/06 Time: 7:29



1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4567 Fax (909) 370-1046  
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9996 Fax (619) 505-9999  
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0854  
 2520 E. Sunset Rd., Suite 93, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3921

**SUBCONTRACT ORDER - PROJECT # IPB2641**

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	Truesdail Laboratories-SUB 14201 Franklin Avenue Tustin, CA 92680 Phone: (714) 730-6239 Fax: (714) 730-6462

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

Analysis	Expiration	Comments
Sample ID: IPB2641-01 Water Hydrazine-OUT * Level II Data Package Containers Supplied: 1 L Amber (IPB2641-01AS) 1 L Amber (IPB2641-01AT)	Sampled: 02/28/06 13:00 03/03/06 13:00	Instant Notification Sub Truesdail for Monomethylhydrazine, J flags

\* revised 3/20/06  
 MC

**SAMPLE INTEGRITY:**

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

Released By: *[Signature]* Date: 03/01/06 Time: 0650  
 Received By: *[Signature]* Date: 03/01/06 Time: 0650  
 Released By: *[Signature]* Date: 03/01/06 Time: 0725  
 Received By: *[Signature]* Date: 3/01/06 Time: 7:20





# Sample Integrity & Analysis Discrepancy Form

Client: Del Mar Analytical Lab # 95-2268

Date Delivered: 3/01/06 Time: 7:27 By:  Mail  Field Service  Client

1. Was a Chain of Custody received and signed?  Yes  No  N/A
2. Does Customer require an acknowledgement of the COC?  Yes  No  N/A
3. Are there any special requirements or notes on the COC?  Yes  No  N/A
4. If a letter was sent with the COC, does it match the COC?  Yes  No  N/A
5. Were all requested analyses understood and acceptable?  Yes  No  N/A
6. Were samples received in a chilled condition?  
Temperature (if yes)? 4°C  Yes  No  N/A
7. Were samples received intact  
(i.e. broken bottles, leaks, air bubbles, etc..)?  Yes  No  N/A
8. Were sample custody seals intact?  Yes  No  N/A
9. Does the number of samples received agree with COC?  Yes  No  N/A
10. Did sample labels correspond with the client ID's?  Yes  No  N/A
11. Did sample labels indicate proper preservation?  
Preserved by:  Truesdail  Client  N/A
12. Were samples pH checked? pH = \_\_\_\_\_  Yes  No  N/A
13. Were all analyses within holding time at time of receipt?  
If not, notify the Project Manager.  Yes  No  N/A
14. Have Project due dates been checked and accepted?  
Turn Around Time (TAT):  RUSH  Std  Yes  No  N/A
15. Sample Matrix:  Liquid  Drinking Water  Ground Water  Waste Water  
 Sludge  Soil  Wipe  Paint  Solid  Other water
16. Comments: \_\_\_\_\_
17. Sample Check-In completed by Truesdail Log-In/Receiving: J. Brown

**Section 66**

Outfall 011, February 28, 2006

AMEC Data Validation Reports





# DATA VALIDATION REPORT

NPDES Monitoring Program  
Annual Outfall 011

ANALYSIS: DIOXINS/FURANS  
SAMPLE DELIVERY GROUP: IPB2641

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: IPB2641  
Project Manager: P. Costa  
Matrix: Water  
Analysis: Dioxins/Furans  
QC Level: Level IV  
No. of Samples: 1  
No. of Reanalyses/Dilutions: 0  
Reviewer: K. Shadowlight  
Date of Review: April 5, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the *MEC<sup>x</sup> Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form I 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 011	IPB2641-01	27352-001	Water	1613

## 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

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

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

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

#### 2.2.2 Mass Spectrometer Performance

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

## 2.3 CALIBRATION

### 2.3.1 Initial Calibration

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

### 2.3.2 Continuing Calibration

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

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

## 2.4 BLANKS

One method blank (0-7807-MB001) was extracted and analyzed with the sample in this SDG. There were no target compounds detected in the method blank. A review of the method blank raw data and chromatograms indicated no false negatives. No qualifications were required.

## 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (0-7807-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

## 2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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



## 2.7 FIELD QC SAMPLES

Following are findings associated with field QC:

### 2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualifications 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." These "J" values were annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. No further qualifications were required.

Sample ID: **IPB2641-01** *Out Fall 2011* **EPA Method 1613**

Client Data		Sample Data		Laboratory Data	
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27352-001
Project:	IPB2641	Sample Size:	1.01 L	QC Batch No.:	7807
Date Collected:	28-Feb-06			Date Analyzed DB-5:	8-Mar-06
Time Collected:	1300			Date Analyzed DB-225:	5-Mar-06
					NA

Analyte	Conc. (ug/L)	DL <sup>a</sup>	EMPC <sup>b</sup>	Qualifiers	Labeled Standard	%R	LCL-UCL <sup>d</sup>	Qualifiers
2,3,7,8-TCDD	ND	0.00000143			13C-2,3,7,8-TCDD	105	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000117			13C-1,2,3,7,8-PeCDD	109	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.000000745			13C-1,2,3,4,7,8-HxCDD	99.5	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000148			J	13C-1,2,3,6,7,8-HxCDD	99.5	28 - 130	
1,2,3,7,8,9-HxCDD	0.00000139			J	13C-1,2,3,4,6,7,8-HpCDD	104	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000307				13C-OCDD	74.5	17 - 157	
OCDD	0.000269				13C-2,3,7,8-TCDF	106	24 - 169	
2,3,7,8-TCDF	ND	0.00000132			13C-1,2,3,7,8-PeCDF	118	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000124			13C-2,3,4,7,8-PeCDF	115	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000130			13C-1,2,3,4,7,8-HxCDF	102	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000492			13C-1,2,3,6,7,8-HxCDF	102	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000472			13C-2,3,4,6,7,8-HxCDF	97.9	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000544			13C-1,2,3,7,8,9-HxCDF	97.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000731			13C-1,2,3,4,6,7,8-HpCDF	97.2	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000643			J	13C-1,2,3,4,7,8,9-HpCDF	109	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000662			13C-OCDF	80.8	17 - 157	
OCDF	0.0000200			J	CRS 37C/E-2,3,7,8-TCDD	91.4	35 - 197	
<b>Totals</b>								
Total TCDD	ND	0.00000143						
Total PeCDD	ND	0.00000117						
Total HxCDD	0.0000124		0.0000137					
Total HpCDD	0.00000690							
Total TCDF	ND	0.00000132						
Total PeCDF	ND	0.00000127						
Total HxCDF	0.00000656							
Total HpCDF	0.0000186							

Analyst: JMH  
 Approved By: Martha M. Maier 08-Mar-2006 13:46

**CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA**

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

Package ID: B4HZ1  
 Task Order: 1261.001D.01  
 SDG No.: Multiple

No. of Analyses: 4

Laboratory: Truesdail Laboratory  
 Reviewer: P. Meeks  
 Analysis/Method: Hydrazines

Date: April 10, 2006  
 Reviewer's Signature  


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



# DATA VALIDATION REPORT

NPDES Monitoring Program  
Outfalls 001, 002, 011, 018

ANALYSIS: HYDRAZINES

SAMPLE DELIVERY GROUP: IPB2637, IPB2639,  
IPB2641, IPB2643

Prepared by

MEC<sup>x</sup>, LLC  
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