



DATA VALIDATION REPORT

NPDES Monitoring Program
Outfalls 001, 002, 011, 018

ANALYSIS: HYDRAZINES

SAMPLE DELIVERY GROUP: IPB2637, IPB2639,
IPB2641, IPB2643

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2637, IPB2639, IPB2641, IPB2643
Project Manager: P. Costa
Matrix: Water
Analysis: Hydrazines
QC Level: Level IV
No. of Samples: 4
No. of Reanalyses/Dilutions: 0
Reviewer: P. Meeks
Date of Review: April 8, 2006

The samples listed in Table 1 were validated based on the general guidelines outlined in the USEPA *Contract Laboratory Program National Functional Guidelines for Organic Data Review (2/94)*, and USEPA SW-846 Method 8315. 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	Truesdail Laboratory ID	Del Mar Laboratory ID	Matrix	COC Method
Outfall 001	952266	IPB2637-01	Water	8315
Outfall 002	952267	IPB2639-01	Water	8315
Outfall 011	952268	IPB2641-01	Water	8315
Outfall 018	952265	IPB2643-01	Water	8315

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in these SDGs were received at Del Mar Analytical and the subcontract laboratory, Truesdail Laboratories, within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. The analysis did not require preservation, and no preservation was noted in the field. The case narratives for these SDGs noted that the samples were received intact at both laboratories. No qualifications were required.

2.1.2 Chain of Custody

The COCs from the field to Del Mar were signed and dated by field and laboratory personnel, and the transfer COCs from Del Mar to Truesdail Laboratories were signed and dated by personnel from both laboratories. The original COCs and transfer COCs requested only monomethyl hydrazine analysis; however, unsymmetrical dimethyl hydrazine and hydrazine were also reported and therefore, validated. Custody seals were not required as the samples were transported to Del Mar and then to Truesdail by courier. Truesdail Laboratories did not list the client IDs on the Form Is; therefore, the reviewer hand-corrected the Form Is to include this information. No qualifications were required.

2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analysis. The samples were extraction within the three-day holding time and analyzed within three days of extraction. No qualifications were required.

2.2 CALIBRATION

The five-point initial calibrations were analyzed 03/03/06, with correlation coefficients of ≥ 0.995 for all three hydrazines. The ICV and CCV bracketing the sample analyses had hydrazine recoveries within the QC limits of 85-115%. No qualifications were required.

2.3 BLANKS

One method blank was analyzed with these SDGs. The results reported on the method blank summary form and in the raw data for the instrument and method blank analyses associated with the samples were nondetects at the reporting limit. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One laboratory control sample/laboratory control sample duplicate pair was analyzed with these SDGs. The hydrazine recoveries and RPDs were within the laboratory-established control limits. No qualifications were required.

2.5 SURROGATES RECOVERY

Surrogates were not utilized in this analysis. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MSD/MSD analyses were performed on Outfall 002. The hydrazines recoveries and RPDs were within the laboratory-established control limits. No qualifications were required.

2.7 FIELD QC SAMPLES

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

2.7.1 Field Blanks and Equipment Rinsates

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

2.7.2 Field Duplicates

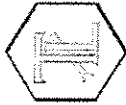
There were no field duplicate samples in these SDGs.

2.8 COMPOUND IDENTIFICATION

The samples were analyzed by HPLC for monomethyl hydrazine, unsymmetrical dimethyl hydrazine, and hydrazine by Method 8315. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

2.9 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. As there were no sample detects, compound quantification was verified from the raw data by recalculating LCS/LCSD and MS/MSD detects. No calculation or transcription error were noted. The hydrazine reporting limits were supported by the lower levels of the initial calibration. No qualifications were required.



REPORT

Client: Del Mar Analytical
17461 Derian Ave., Suite 100
Irvine, CA 92614

Attention: Michele Chamberlin
Sample: Liquid / 1 Sample
Project Name: IPB2637
P.O. Number: IPB2637
Method Number: 8315 (Modified)
Investigation: Hydrazines in Liquid

Laboratory No: 952266
Report Date: March 20, 2006
Sampling Date: February 28, 2006
Receiving Date: March 1, 2006
Extraction Date: March 1, 2006
Analysis Date: March 3, 2006
Units: µg/L
Dilution Factor: 1
Reported By: JS

Analytical Results

Sample ID	Sample Description	Monomethyl		Unsymmetrical Dimethyl		Hydrazine
		Hydrazine	Hydrazine	Hydrazine	Hydrazine	
705657-MB	Method Blank	ND	ND	ND	ND	ND
952266	IPB2637-01 Outfall Cool	ND	ND	ND	ND	ND
MDL		1.2	0.27	0.39	0.39	
PQL		5.0	5.0	1.0	1.0	

* Analysis not validated

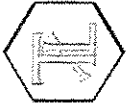
MDL: Method Detection Limit, ug/L
PQL: Practical Quantitation Limit, ug/L
ND: Not Detected at or above the MDL value.
N/A: Not Applicable

Note: Results based on detector #1 (UV=365nm) data.

Xuan Dang, Project Manager
Environmental Services

LEVEL IV

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.



REPORT

Client: Dal Mar Analytical
 17461 Derian Ave., Suite 100
 Irvine, CA 92614

Attention: Michele Chamberlin
Sample: Liquid / 1 Sample
Project Name: IPB2639
P.O. Number: IPB2639
Method Number: 8315 (Modified)
Investigation: Hydrazines in Liquid

Laboratory No: 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
Dilution Factor: 1
Reported By: JS

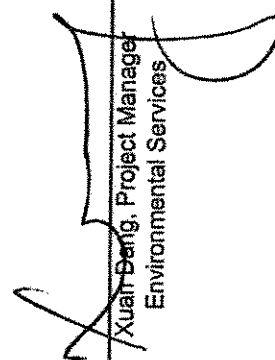
Page 1 of 1

Analytical Results

Sample ID	Sample Description	Monomethyl		Unsymmetrical Dimethyl		Hydrazine
		Hydrazine	Hydrazine	Hydrazine	Hydrazine	
705657-MB	Method Blank	ND	ND	ND	ND	ND
952267	IPB2639-01	ND	U	X	U	U
MDL	Outfall 002	1.2				
PQL		5.0	0.27	5.0	0.39	1.0

MDL: Method Detection Limit, ug/L
 PQL: Practical Quantitation Limit, ug/L
 ND: Not Detected at or above the MDL value.
 N/A: Not Applicable

Note: Results based on detector #1 (UV=365nm) data.


 Xuan-Dang, Project Manager
 Environmental Services



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

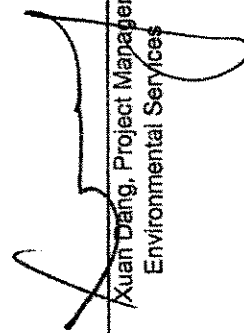
Analytical Results

Sample ID	Sample Description	Monomethyl		Unsymmetrical Dimethyl		Hydrazine	
		Hydrazine	Qual Code	Hydrazine	Qual Code	Hydrazine	Qual Code
705657-MB	Method Blank	ND	*	ND	*	ND	*
952268	IPB2641-01 Outfall Oil	ND	U	ND	U	ND	U
MDL		1.2		0.27		0.39	
PQL		5.0		5.0		1.0	

*Analysis not validated

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

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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.



Client: Del Mar Analytical
17461 Derian Ave., Suite 100
Irvine, CA 92614

Attention: Michele Chamberlin
Sample: Liquid / 1 Sample
Project Name: IPB2643
P.O. Number: IPB2643
Method Number: 8315 (Modified)
Investigation: Hydrazines in Liquid

REPORT

Laboratory No: 952265
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	Hydrazine	
705657-MB	Method Blank	ND	ND	ND	ND	ND
952265	outfall air IPB2643-01	ND	0.27	ND	ND	ND
MDL		1.2				0.39
PQL		5.0		5.0		1.0

*Analysis Not Validated

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.

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Xiran Dang, Project Manager
Environmental Services

Level IV

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.

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4MT46
 Task Order: 1261.001D.01
 SDG No.: IPB2637

No. of Analyses: 1

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

Date: April 4, 2006
 Reviewer's Signature


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



DATA VALIDATION REPORT

NPDES Sampling
Outfall 001

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPB2637

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2637
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^X *Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, EPA Methods 200.7, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPB2637-01	Water	200.7

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and analyses presented in this SDG. Outfall 001 was reanalyzed for iron and manganese. As the laboratory did not append the MWH IDs for the iron and manganese reanalyses with "RE1," the reviewer added this information to the Form Is. No sample qualifications were required.

2.1.3 Holding Times

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

2.2 ICP-MS TUNING

ICP-MS was not used to analyze this sample; therefore, this criterion is not applicable.

2.3 CALIBRATION

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

2.4 BLANKS

There were detects and negative results in the method blanks and CCBs associated with the ICP metals analyses; however, none were of sufficient concentration to qualify the site sample. While checking the summary data, the reviewer noted that cadmium was detected in method blank 6B28152-BLK1 at 0.0520 µg/L. Although the ICP-MS data was not reviewed, the reviewer checked the sample result for cadmium and determined that cadmium detected in Outfall 001 should be qualified as an estimated nondetect, "UJ." No further qualifications were required.

2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICP ICSA and ICSAB analyses were performed in association with the sample in this SDG. All recoveries and results were determined to be acceptable. No qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

2.7 LABORATORY DUPLICATES

MS/MSD analyses were performed on Outfall 001 for the ICP metals. All RPDs were within the laboratory-established control limits and no qualifications were required.

2.8 MATRIX SPIKES

MS/MSD analyses were performed on Outfall 001 for the ICP metals. All recoveries were within the laboratory-established control limits and no qualifications were required.

2.9 ICP/MS AND ICP SERIAL DILUTION

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

2.10 INTERNAL STANDARDS PERFORMANCE

ICP-MS was not used to analyze this sample; therefore, this criterion is not applicable.

2.11 SAMPLE RESULT VERIFICATION

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

Per a request from MWH personnel, the laboratory reanalyzed Outfall 001 for manganese and iron. As the reanalysis results were similar to the original results, the reanalysis results, Outfall 001 RE1, were rejected, "R," in favor of the original results. No further qualifications were required.

2.12 FIELD QC SAMPLES

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

2.12.1 Field Blanks and Equipment Rinsates

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

2.12.2 Field Duplicates

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



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 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3630 FAX (702) 798-3629

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001 Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
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METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont. Reporting Units: mg/l									
Barium	EPA 200.7	6B28151	0.0028	0.010	0.044	1	02/28/06	03/01/06	Low Qual
Boron	EPA 200.7	6B28151	0.0080	0.050	0.080	1	02/28/06	03/01/06	Low Qual
Iron	EPA 200.7	6B28151	0.0088	0.040	1.4	1	02/28/06	03/01/06	Low Qual

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

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 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3670 FAX (702) 798-3621

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

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	Rev. Qual	Out Code
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.											
Reporting Units: ug/l											
Antimony	EPA 200.8	6B28152	0.18	2.0	0.25	1	02/28/06	03/01/06	* J		
Arsenic	EPA 200.7	6B28151	3.8	5.0	ND	1	02/28/06	03/01/06	U		
Beryllium	EPA 200.7	6B28151	0.62	2.0	ND	1	02/28/06	03/01/06	U		
Cadmium	EPA 200.8	6B28152	0.015	1.0	0.093	1	02/28/06	03/01/06	* B, J	B	B
Chromium	EPA 200.7	6B28151	0.68	5.0	1.9	1	02/28/06	03/01/06	J J		DNQ
Cobalt	EPA 200.7	6B28151	2.0	10	ND	1	02/28/06	03/01/06	U		
Copper	EPA 200.8	6B28152	0.49	2.0	3.5	1	02/28/06	03/01/06	*		
Lead	EPA 200.8	6B28152	0.13	1.0	2.1	1	02/28/06	03/01/06	*		
Manganese	EPA 200.7	6B28151	3.2	20	62	1	02/28/06	03/01/06			
Mercury	EPA 245.1	6C01088	0.063	0.20	ND	1	03/01/06	03/01/06	*		
Nickel	EPA 200.7	6B28151	2.0	10	2.5	1	02/28/06	03/01/06	J J		DNQ
Selenium	EPA 200.8	6B28152	N/A	2.0	ND	1	02/28/06	03/01/06	*		
Silver	EPA 200.8	6B28152	0.089	1.0	ND	1	02/28/06	03/01/06	↓		
Thallium	EPA 200.8	6B28152	0.075	1.0	0.10	1	02/28/06	03/01/06	J		
Vanadium	EPA 200.7	6B28151	3.0	10	5.0	1	02/28/06	03/01/06	J J		DNQ
Zinc	EPA 200.7	6B28151	3.7	20	7.1	1	02/28/06	03/01/06	J J		↓

* Analysis not validated
 PM 4/6/06

LEVEL IV

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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NPDES - 151522



Del Mar Analytical

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 2320 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3821

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

Project ID: Annual Outfall 001

Report Number: IPB2637

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

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data	Qualifiers
Sample ID: IPB2637-01RE1 (Outfall 001 - Water) - cont.										
Reporting Units: ug/l										
Manganese	EPA 200.7	6C20082	7.0	20	60	1	03/20/06	03/20/06	R	D
		pm 4/6/06								

LEVEL IV

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3610 FAX (702) 798-3621

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001 Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
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METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data	Qualifiers
Sample ID: IPB2637-01RE1 (Outfall 001 - Water) - cont. Reporting Units: mg/l	outfall 001 RE1 EPA 200.7	6C20082	0.015	0.040	1.1	1	03/20/06	03/21/06	R B-1	Res Qual Col
Iron										D
	pm 4/6/06									

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4PP10
 Task Order: 1261.001D.01
 SDG No.: IPB2637

No. of Analyses: 1

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

Date: April 7, 2006
 Reviewer's Signature


ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	Qualifications applied for 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 ^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 001

ANALYSIS: PESTICIDES / PCBs

SAMPLE DELIVERY GROUP: IPB2637

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2637
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^X Data Validation Procedure for Organochlorine Pesticides and PCBs (DVP-4, Rev. 0), EPA Method 608, and the National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPB2637-01	Water	608

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C, at 5°C. According to the case narrative for this SDG, the sample was received intact and on ice. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 PESTICIDES INSTRUMENT PERFORMANCE

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

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

2.3 CALIBRATION

2.3.1 Analytical Sequence

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

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 ≥ 0.995 , except for the average %RSD for Aroclor 1260. The nondetects for Aroclors 1248, 1254, and 1260 in Outfall 001 were qualified as estimated, "UJ." The %RSDs for all pesticide target compounds were $\leq 10\%$ on the primary column or r^2 values ≥ 0.995 , with the exception of the %RSD for heptachlor. The nondetect for heptachlor was qualified as estimated, "UJ," in Outfall 001.

The pesticide and average Aroclor %RSDs were $\leq 10\%$ or r^2 values ≥ 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 001 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 001 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 rinse samples identified for this SDG. No qualifications were required.

2.9.2 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.10 COMPOUND IDENTIFICATION

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

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3670 FAX (702) 798-3671

MWH-Pasadena/Boeing Project ID: Annual Outfall 001
 300 North Lake Avenue, Suite 1200
 Pasadena, CA 91101 Report Number: IPB2637
 Attention: Bronwyn Kelly 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: IPB2637-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Aldrin	EPA 608	6C05031	0.029	0.096	ND	0.962	03/05/06	03/06/06	U
alpha-BHC	EPA 608	6C05031	0.00047	0.0096	ND	0.962	03/05/06	03/06/06	U
beta-BHC	EPA 608	6C05031	0.014	0.096	ND	0.962	03/05/06	03/06/06	U
delta-BHC	EPA 608	6C05031	0.019	0.19	ND	0.962	03/05/06	03/06/06	U
gamma-BHC (Lindane)	EPA 608	6C05031	0.019	0.096	ND	0.962	03/05/06	03/06/06	U
Chlordane	EPA 608	6C05031	0.19	0.96	ND	0.962	03/05/06	03/06/06	U
4,4'-DDD	EPA 608	6C05031	0.019	0.096	ND	0.962	03/05/06	03/06/06	U
4,4'-DDE	EPA 608	6C05031	0.024	0.096	ND	0.962	03/05/06	03/06/06	U
4,4'-DDT	EPA 608	6C05031	0.034	0.096	ND	0.962	03/05/06	03/06/06	U
Dieldrin	EPA 608	6C05031	0.014	0.096	ND	0.962	03/05/06	03/06/06	U
Endosulfan I	EPA 608	6C05031	0.014	0.096	ND	0.962	03/05/06	03/06/06	U
Endosulfan II	EPA 608	6C05031	0.038	0.096	ND	0.962	03/05/06	03/06/06	U
Endosulfan sulfate	EPA 608	6C05031	0.019	0.19	ND	0.962	03/05/06	03/06/06	U
Endrin	EPA 608	6C05031	0.019	0.096	ND	0.962	03/05/06	03/06/06	U
Endrin aldehyde	EPA 608	6C05031	0.043	0.096	ND	0.962	03/05/06	03/06/06	U
Endrin ketone	EPA 608	6C05031	0.019	0.096	ND	0.962	03/05/06	03/06/06	U
Heptachlor	EPA 608	6C05031	0.029	0.096	ND	0.962	03/05/06	03/06/06	U
Heptachlor epoxide	EPA 608	6C05031	0.029	0.096	ND	0.962	03/05/06	03/06/06	U
Methoxychlor	EPA 608	6C05031	0.034	0.096	ND	0.962	03/05/06	03/06/06	U
Toxaphene	EPA 608	6C05031	1.4	4.8	ND	0.962	03/05/06	03/06/06	U
Surrogate: Decachlorobiphenyl (45-120%)					69 %				
Surrogate: Tetrachloro-m-xylene (35-120%)					68 %				

Handwritten notes: "U" and "C" in the Data Qualifiers column, with arrows pointing to specific rows.

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. IPB2637 <Page 12 of 64>

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 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

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



DATA VALIDATION REPORT

NPDES Sampling Multiple Outfalls

ANALYSIS: RADIONUCLIDES

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

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: 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>8450</u>	Client <u>DEL MAR ANNI</u>
Work Order <u>REG2014-01</u>	Contract <u>PROJECT# IPB2637</u>
Received Date <u>03/02/06</u>	Matrix <u>WTRF</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MCA	Rev Qual	Qual Code
Outfall 001 IPB2637-01	5660-001		02/28/06	03/06/06	Gross Alpha	2.64 ± 1.7	pCi/L	1.95	J	R, H
				03/06/06	Gross Beta	7.69 ± 1.6	pCi/L	2.06	J	↓

LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>03/15/06</u>
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Eberline Services

ANALYSIS RESULTS

SDG <u>8661</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R503017-01</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	03/05/06	Gross Alpha	2.58 ± 1.6	pCi/L	1.93
				03/06/06	Gross Beta	4.50 ± 1.4	pCi/L	1.95

Rev Qual	Qual Code
H	R, H ↓

LEVEL IV

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Report Date <u>03/02/06</u>
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Eberline Services

ANALYSIS RESULTS

SDG <u>8652</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>8693018-01</u>	Contract <u>PROJECTS IPB2641</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA
Outfall 011		8462-001	02/28/06	03/06/06	GrossAlpha	5.24 ± 2.0	pCi/L	1.86
IPB2641-01				03/06/06	Gross Beta	7.59 ± 1.7	pCi/L	2.18

Raw Qual	Qual Code
J ↓	R, H ↓

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Report Date <u>03/12/06</u>
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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# IPR2643</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
<u>outfall 018</u>									
<u>IPR2643-01</u>	<u>8663-001</u>	<u>02/28/06</u>	<u>03/06/06</u>	<u>Gross Alpha</u>	<u>1.88 ± 1.1</u>	<u>pCi/L</u>	<u>1.40</u>	<u>J</u>	<u>R, H</u>
			<u>03/06/06</u>	<u>Gross Beta</u>	<u>5.59 ± 1.4</u>	<u>pCi/L</u>	<u>1.81</u>	<u>↓</u>	<u>↓</u>

LEVEL IV

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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>R601920-01</u>	Contract <u>PROJECT# 1PB2645</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
Outfall 005 IPB2645-01	8664-001	02/28/06	03/06/06	Gross Alpha	1.30 ± 1.0	pCi/L	1.45	45	R-H
			03/06/06	Gross Beta	6.96 ± 1.4	pCi/L	1.98		

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Report Date <u>03/12/06</u>
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Eberline Services

ANALYSIS RESULTS

SOG <u>8665</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603021-01</u>	Contract <u>PROJECT# IPB2647</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>OUTFALL 007</u>								
IPB2647-01	8665-001	02/20/06	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>[Signature]</u>
Report Date <u>03/12/06</u>
Page 1

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	Sample ID	Collected	Analyzed	Wt/Slide	Results ± 2σ	Units	MDA
		<u>Outfall 008</u>						
		IPB2648-01	02/28/06	03/06/06	Gross Alpha	1.01 ± 1.6	pCi/L	2.02
				03/06/06	Gross Beta	23.7 ± 2.2	pCi/L	1.92

Rev	Qual	QW	Code
UI	J	R.H	↓

LEVEL IV

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

Eberline Services
ANALYSIS RESULTS

SDG 8687	Client <u>DEI. MAR. ANAL.</u>
Work Order <u>8803023-01</u>	Contract <u>PROJECT# IPB2650</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± SD	Units	MCA	Rev Qual	Qual Code
IPB2650-01	8667-001	02/28/06	03/06/06	Gross Alpha	0.532 ± 0.98	pCi/L	1.55	UJ	R, H ↓	
				Gross Beta	4.02 ± 1.3	pCi/L	1.83			

LEVEL IV

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


CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4SV25
 Task Order: 1261.001D.01
 SDG No.: IPB2637

No. of Analyses: 1

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

Date: April 8, 2006
 Reviewer's Signature: 

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



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 001

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP IPB2637

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2637
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 8, 2006

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

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPB2637-01	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

Two initial calibrations were associated with the sample, analyzed 01/18/06 and 02/27/06. The calibration analyzed 02/27/06 was associated with a reanalysis of the sample for benzidine only. The %RSDs for all target compounds were ≤35% or r^2 values ≥0.995 in the respective initial calibrations. The continuing calibrations associated with the sample analyses were analyzed 03/09/06. The %Ds for all target compounds were ≤20% in the respective continuing calibrations. No qualifications were required.

DATA VALIDATION REPORT

2.4 BLANKS

One method blank (6C06060-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 (6C06060-BS1/BSD1) was extracted and analyzed with this SDG. Benzidine and benzoic acid were not recovered in the BS or BSD, and dimethylphthalate was recovered below the QC limits but $\geq 10\%$ in both the BS and BSD. Nondetect results for benzidine and benzoic acid were rejected, "R," and the nondetect result for dimethylphthalate was qualified as estimated, "UJ," in sample Outfall 001. All remaining recoveries and all RPDs were within the laboratory-established QC limits. No qualifications were required.

2.6 SURROGATE RECOVERY

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

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.8 FIELD QC SAMPLES

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

2.8.1 Field Blanks and Equipment Rinsates

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

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 ± 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). Any results reported between the reporting limit and the MDL were qualified as estimated, "J," and annotated with the "DNQ" qualifier code. No further qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

2.13 SYSTEM PERFORMANCE

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



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

Project ID: Annual Outfall 001

Report Number: IPB2637

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

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01 (Outfall 001 - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6C06060	0.095	0.48	ND	0.952	03/06/06	03/09/06	u
Acenaphthylene	EPA 625	6C06060	0.095	0.48	ND	0.952	03/06/06	03/09/06	u
Aniline	EPA 625	6C06060	2.8	9.5	ND	0.952	03/06/06	03/09/06	u
Anthracene	EPA 625	6C06060	0.079	0.48	ND	0.952	03/06/06	03/09/06	u
Benzidine	EPA 625	6C06060	3.0	4.8	ND	0.952	03/06/06	03/10/06	u
Benzoic acid	EPA 625	6C06060	3.5	19	ND	0.952	03/06/06	03/09/06	u
Benzo(a)anthracene	EPA 625	6C06060	0.036	4.8	ND	0.952	03/06/06	03/09/06	u
Benzo(a)pyrene	EPA 625	6C06060	0.13	1.9	ND	0.952	03/06/06	03/09/06	u
Benzo(b)fluoranthene	EPA 625	6C06060	0.048	1.9	ND	0.952	03/06/06	03/09/06	u
Benzo(g,h,i)perylene	EPA 625	6C06060	0.056	4.8	ND	0.952	03/06/06	03/09/06	u
Benzo(k)fluoranthene	EPA 625	6C06060	0.050	0.48	ND	0.952	03/06/06	03/09/06	u
Benzyl alcohol	EPA 625	6C06060	0.20	4.8	ND	0.952	03/06/06	03/09/06	u
Bis(2-chloroethoxy)methane	EPA 625	6C06060	0.069	0.48	ND	0.952	03/06/06	03/09/06	u
Bis(2-chloroethyl)ether	EPA 625	6C06060	0.080	0.48	ND	0.952	03/06/06	03/09/06	u
Bis(2-chloroisopropyl)ether	EPA 625	6C06060	0.10	0.48	ND	0.952	03/06/06	03/09/06	u
Bis(2-ethylhexyl)phthalate	EPA 625	6C06060	1.0	4.8	ND	0.952	03/06/06	03/09/06	u
4-Bromophenyl phenyl ether	EPA 625	6C06060	0.11	0.95	ND	0.952	03/06/06	03/09/06	u
Butyl benzyl phthalate	EPA 625	6C06060	0.32	4.8	0.34	0.952	03/06/06	03/09/06	u
4-Chloroaniline	EPA 625	6C06060	0.19	1.9	ND	0.952	03/06/06	03/09/06	u
2-Chloronaphthalene	EPA 625	6C06060	0.056	0.48	ND	0.952	03/06/06	03/09/06	u
4-Chloro-3-methylphenol	EPA 625	6C06060	0.32	1.9	ND	0.952	03/06/06	03/09/06	u
4-Chlorophenyl phenyl ether	EPA 625	6C06060	0.053	0.48	ND	0.952	03/06/06	03/09/06	u
2-Chlorophenol	EPA 625	6C06060	0.11	0.95	ND	0.952	03/06/06	03/09/06	u
Chrysene	EPA 625	6C06060	0.069	0.48	ND	0.952	03/06/06	03/09/06	u
Dibenz(a,h)anthracene	EPA 625	6C06060	0.079	0.48	ND	0.952	03/06/06	03/09/06	u
Dibenzofuran	EPA 625	6C06060	0.071	0.48	ND	0.952	03/06/06	03/09/06	u
Di-n-butyl phthalate	EPA 625	6C06060	0.25	1.9	ND	0.952	03/06/06	03/09/06	u
1,2-Dichlorobenzene	EPA 625	6C06060	0.10	0.48	ND	0.952	03/06/06	03/09/06	u
1,3-Dichlorobenzene	EPA 625	6C06060	0.12	0.48	ND	0.952	03/06/06	03/09/06	u
1,4-Dichlorobenzene	EPA 625	6C06060	0.048	0.48	ND	0.952	03/06/06	03/09/06	u
3,3-Dichlorobenzidine	EPA 625	6C06060	0.89	4.8	ND	0.952	03/06/06	03/09/06	u
2,4-Dichlorophenol	EPA 625	6C06060	0.20	1.9	ND	0.952	03/06/06	03/09/06	u
Diethyl phthalate	EPA 625	6C06060	0.11	0.95	ND	0.952	03/06/06	03/09/06	u
2,4-Dimethylphenol	EPA 625	6C06060	0.30	1.9	ND	0.952	03/06/06	03/09/06	u
Dimethyl phthalate	EPA 625	6C06060	0.077	0.48	ND	0.952	03/06/06	03/09/06	u
4,6-Dinitro-2-methylphenol	EPA 625	6C06060	0.36	4.8	ND	0.952	03/06/06	03/09/06	u
2,4-Dinitrophenol	EPA 625	6C06060	2.6	4.8	ND	0.952	03/06/06	03/09/06	u
2,4-Dinitrotoluene	EPA 625	6C06060	0.22	4.8	ND	0.952	03/06/06	03/09/06	u
2,6-Dinitrotoluene	EPA 625	6C06060	0.23	4.8	ND	0.952	03/06/06	03/09/06	u
Di-n-octyl phthalate	EPA 625	6C06060	0.16	4.8	ND	0.952	03/06/06	03/09/06	u

Handwritten notes and arrows on the right side of the table, including "Level III" and "DNQ".

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 001

ANALYSIS: TOTAL FUEL HYDROCARBONS

SAMPLE DELIVERY GROUP IPB2637

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2637
Project Manager: P. Costa
Matrix: Water
Analysis: TFH/EFH
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: P. Meeks
Date of Review: April 8, 2006

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

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPB2637-01	Water	8015B & 8015M

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

The water sample was analyzed within 14 days of collection for the gasoline range organics analysis (GRO). The sample for extractable fuel hydrocarbons (EFH) was extracted within seven days of collection and analyzed within 40 days of extraction. No qualifications were required.

2.2 CALIBRATION

Three initial calibrations, two for EFH analyzed 02/22/06 and 02/23/06, and one for GRO analyzed 01/28/06, were associated with the samples in this SDG. The %RSDs for target compounds GRO (C4-C12) and EFH (C13-C22) were \leq 20%. An initial calibration verification (ICV) was analyzed following each initial calibration, with %Ds for the target compounds within the QC limit of \leq 15%. The continuing calibrations bracketing the sample analyses had %Ds of \leq 15% for the EFH analyses. The %D for the opening GRO CCV was above the control limit. As the response was low, the nondetect for GRO in Outfall 001 was qualified as estimated, "UJ." No further qualifications were required.

2.3 BLANKS

Two method blanks, one GRO (606046-BLK1) and one EFH (607098-BLK1) were associated with this SDG. Target compounds GRO (C4-C12) and EFH (C13-C22) were not detected

above the MDLs in the respective method blanks. Review of the method blank raw data indicated no false negatives. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One GRO blank spike (606046-BS1) and one EFH blank spike/blank spike duplicate pair (607098-BS1/BSD1) were associated with this SDG. All recoveries were within the laboratory-established QC limits, and the RPD for the EFH BS/BSD pair was within the QC limit of $\leq 25\%$. No qualifications were required.

2.5 SURROGATE RECOVERY

The samples for GRO analysis were fortified with the surrogate compound 4-BFB, and for EFH analysis, n-octacosane. Surrogate recoveries were within the laboratory-established QC limits of 65-140% for 4-BFB and 40-125% for n-octacosane. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on Outfall 001 for the GRO analysis only. Both recoveries were within the laboratory-established QC limits, and the RPD was within the QC limit of $\leq 20\%$. For EFH, evaluation of method accuracy and precision was based on the blank spike and blank spike/blank spike duplicate results. No qualifications were required.

2.7 FIELD QC SAMPLES

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

2.7.1 Field Blanks and Equipment Rinsates

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

2.7.2 Trip Blanks

There was no trip blank associated with the GRO analysis of site sample Outfall 001. As GRO (C4-C12) was not detected above the MDL in Outfall 001, trip blank review was not necessary. No qualifications were required.

DATA VALIDATION REPORT

2.7.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.8 COMPOUND IDENTIFICATION

The laboratory analyzed for target compounds GRO (C4-C12) and EFH (C13-C22). Review of the sample chromatograms, retention times, and patterns indicated no problems with target compound identification. No qualifications were required.

2.9 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limit was supported by the low point of the initial calibration and the laboratory MDLs. Results were reported in mg/L (ppm). EFH detected below the reporting limit was qualified as estimated, "J," and annotated with "DNQ," in accordance with the NPDES permit. No further 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 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01RE1 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	6C07098	0.042	0.47	ND	0.943	03/07/06	03/07/06	U
Surrogate: n-Octacosane (40-125%)					66 %				

Rev Qual *Qual Code*

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

Level IV

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NPDES - 15580



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

Project ID: Annual Outfall 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6C06046	0.050	0.10	ND	1	03/06/06	03/06/06	VJ C
Surrogate: 4-BFB (FID) (65-140%)					89 %				

Res Qual
 Qual Code

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

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IPB2637 <Page 5 of 64>

NPDES - 1559 1



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 001

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB2637

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2637
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^X *Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 624*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPB2637-01	Water	624
Trip Blank	IPB2637-02	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 001. 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 (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 001. Sample Trip Blank was a field QC sample and required no qualification. No further qualifications were required.

2.4 BLANKS

One method blank (6C02019-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 (6C02019-BS1) was analyzed with this SDG. Target compounds acrolein and acrylonitrile were not included in the blank spike. The recovery for 1,1,2,2-tetrachloroethane was above the QC limits in the blank spike; however, the compound was not detected in the site sample of this SDG. The remaining recoveries were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

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

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.8 FIELD QC SAMPLES

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

2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with site sample Outfall 001. No target compounds were detected in the trip blank. No qualifications were required.

DATA VALIDATION REPORT

2.8.2 Field Blanks and Equipment Rinsates

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

2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for volatile target compounds by EPA Method 624. For two of the requested target compounds, 1,2-dichloro-1,1,2-trifluoroethane and cyclohexane, only a TIC search was performed. Calibration was performed for 1,2-dichloro-1,1,2-trifluoroethane but was not utilized, and no calibration was performed for cyclohexane. Neither compound was identified in the site sample or the trip blank. Nondetect results for both compounds were qualified as estimated, "UJ," in the site sample. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No further 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). Any results reported between the reporting limit and the MDL were qualified as estimated, "J," and annotated with the "DNQ" qualifier code. No further qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG; however, a TIC search was performed for two requested target compounds, 1,2-dichloro-1,1,2-trifluoroethane and cyclohexane (see section 2.10). No qualifications were required.

Project: NPDES
SDG: IPB2637
Analysis: VOCs

DATA VALIDATION REPORT

2.13 SYSTEM PERFORMANCE

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



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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 001

Report Number: IPB2637

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

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.									
Reporting Units: ug/l									
Benzene	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	<i>rel qual code</i> ↓ J DNQ U ↓
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	0.41	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	
Tetrachloroethene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/03/06	
Toluene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/03/06	
1,1,1-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/03/06	
1,1,2-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/03/06	
Trichloroethene	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/03/06	
Trichlorofluoromethane	EPA 624	6C02019	0.34	5.0	ND	1	03/02/06	03/03/06	
Vinyl chloride	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/03/06	
Xylenes, Total	EPA 624	6C02019	0.52	4.0	ND	1	03/02/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)					110 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					90 %				

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

L. Wet IV

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

Project ID: Annual Outfall 001

Report Number: IPB2637

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

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/02/06	<i>see qual sheet</i> <i>see qual sheet</i> ↓
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	
Tetrachloroethene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/02/06	
Toluene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/02/06	
1,1,1-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/02/06	
1,1,2-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/02/06	
Trichloroethene	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/02/06	
Trichlorofluoromethane	EPA 624	6C02019	0.34	5.0	ND	1	03/02/06	03/02/06	
Vinyl chloride	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/02/06	
Xylenes, Total	EPA 624	6C02019	0.52	4.0	ND	1	03/02/06	03/02/06	
Surrogate: Dibromofluoromethane (80-120%)					108 %				
Surrogate: Toluene-d8 (80-120%)					109 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					98 %				

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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 001

Report Number: IPB2637

Sampled: 02/28/06

Received: 02/28/06

PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01 (Outfall 001 - Water)									
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	rev qual code 10
Cyclohexane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/03/06	↓
Sample ID: IPB2637-02 (Trip Blank - Water)									
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	↓

*W/C
04-08-06*

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 Michele Chamberlin
 Project Manager

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DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 001

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB2637

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

Table 1. Sample Identification

Client ID	Laboratory ID (Irvine)	Laboratory ID (Phoenix)	Matrix	COC Method
Outfall 001	IPB2637-01	PPC0068-01	Water	8260B

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2637
Project Manager: P. Costa
Matrix: Water
Analysis: Volatiles (1,4-dioxane)
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: April 5, 2006

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

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$, at 2°C at Del Mar-Irvine. The 1,4-dioxane analysis was subcontracted to Del Mar-Phoenix, and the temperature recorded upon receipt was 2°C . According to the case narrative for this SDG, the sample was received intact, on ice, and properly preserved. Information regarding lack of headspace in the VOA vials was not provided. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 GC/MS TUNING

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

2.3 CALIBRATION

One initial calibration, dated 02/17/06, was associated with the sample in this SDG. The average RRF for target compound 1,4-dioxane was ≥ 0.05 and the %RSD was $\leq 15\%$. The continuing calibration associated with the sample analysis was dated 03/03/06. The laboratory reported the continuing calibration and the blank spike (P6C0311-BS1) of the blank spike/blank spike duplicate pair from the same analysis. As a single analysis can not be reported as both a CCV and a blank spike, the reviewer reported the analysis as the continuing calibration. The RRF for 1,4-dioxane was ≥ 0.05 and the %D was within the QC limit of $\leq 20\%$. The average RRF and %RSD in the initial calibration and RRF and %D in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

DATA VALIDATION REPORT

2.4 BLANKS

One method blank (P6C0311-BLK1) was analyzed with this SDG. Target compound 1,4-dioxane was not detected above the MDL in the method blank. Review of the method blank raw data indicated no false negative. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory analyzed one blank spike/blank spike duplicate pair (P6C0311-BS1/BSD1) with this SDG. As P6C0311-BS1 was reported as a CCV (see section 2.3), P6C0311-BSD1 was evaluated as a single blank spike. The recovery for 1,4-dioxane was within the QC limits of 70-130%. The recovery was calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The surrogate recovery was within the laboratory QC limits of 70-130% for this SDG. The recovery was calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy was based on the blank spike result. 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 sample. Following are findings associated with field QC samples:

2.8.1 Trip Blanks

There was no trip blank sample associated with this SDG. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

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

DATA VALIDATION REPORT

2.8.3 Field Duplicates

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

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

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

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limit was supported by the low point of the initial calibration and the laboratory MDL. 1,4-Dioxane detected between the MDL and the reporting limit was qualified as estimated, "J." No further qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

2.13 SYSTEM PERFORMANCE

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



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Del Mar Analytical - Irvine 17461 Derian Ave. Suite 100 Irvine, CA 92614 Attention: Michele Chamberlin	Project ID: IPB2637 Report Number: PPC0068	Sampled: 02/28/06 Received: 03/02/06
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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
Sample ID: PPC0068-01 (IPB2637-01 - Water)		Out fall 001							Rev Pul Pul Pul
Reporting Units: ug/l									J J DWQ
1,4-Dioxane	EPA 8260B	P6C0311	0.49	1.0	0.56 115 %	1	03/03/06	03/04/06	
Surrogate: Dibromofluoromethane (70-130%)									

Level IV

Del Mar Analytical - Phoenix
 Ken Baker
 Project Manager

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

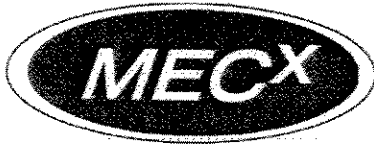
Package ID: B4WC42
 Task Order: 1261.001D.01
 SDG No.: IPB2637

No. of Analyses: 1

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

Date: April 4, 2006
 Reviewer's Signature
P. Meeks

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



DATA VALIDATION REPORT

NPDES Sampling
Outfall 001

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPB2637

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2637
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^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 120.1, 180.1, 335.2, 350.2, 415.1, and 418.1* and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPB2637-01	Water	General Minerals

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 CALIBRATION

For the applicable analyses, the initial calibration correlation coefficients were ≥ 0.995 and the ICV and CCV recoveries were within the control limits of 90-110%. The conductivity check limits were within control limits. For ammonia, no information for the titrant standardization was provided; therefore, as the LCS recovery was above the calibration control limits, ammonia detected in Outfall 001 was qualified as estimated, "J." No further qualifications were required.

2.3 BLANKS

Cyanide was detected in method blank 6C13106-BLK1; however, as the associated sample result was not retained, no qualification was required. There were no other detects in the method blanks or CCBs associated with the sample analyses. Raw data was reviewed to verify the blank data. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The reported LCS and LCSD (total recoverable hydrocarbons and cyanide only) recoveries were within the laboratory-established control limits. No qualifications were required.

2.5 LABORATORY DUPLICATES

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

2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to these criteria. Method accuracy was assessed based on LCS results. For total recoverable hydrocarbons and cyanide, method precision was evaluated based on LCS/LCSD results. No qualifications were required.

2.7 SAMPLE RESULT VERIFICATION

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

As cyanide was detected in the method blank associated with the cyanide reanalysis, the reviewer chose to reject, "R," the reanalysis, Outfall 001 RE1 and report the original result, Outfall 001. No further qualifications were required.

2.8 FIELD QC SAMPLES

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

2.8.1 Field Blanks and Equipment Rinsates

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

2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001 Report Number: IPB2637	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
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6C05021	0.30	0.50	2.0	1	03/05/06	03/05/06	J R
Biochemical Oxygen Demand	EPA 405.1	6C01114	0.59	2.0	2.6	1	03/01/06	03/06/06	*
Chloride	EPA 300.0	6C01049	1.3	2.5	32	5	03/01/06	03/01/06	
Fluoride	EPA 300.0	6C01049	0.10	0.50	0.29	1	03/01/06	03/01/06	J
Nitrate/Nitrite-N	EPA 300.0	6C01049	0.072	0.26	2.2	1	03/01/06	03/01/06	
Oil & Grease	EPA 413.1	6C01070	0.89	4.7	ND	1	03/01/06	03/01/06	
Residual Chlorine	EPA 330.5	6B28145	0.10	0.10	ND	1	02/28/06	02/28/06	
Sulfate	EPA 300.0	6C01049	0.90	2.5	70	5	03/01/06	03/01/06	
Surfactants (MBAS)	SM5540-C	6C01108	0.044	0.10	0.062	1	03/01/06	03/01/06	J
Total Dissolved Solids	SM2540C	6C02076	10	10	300	1	03/02/06	03/02/06	
Total Organic Carbon	EPA 415.1	6C02064	0.25	1.0	13	1	03/01/06	03/01/06	
Total Suspended Solids	EPA 160.2	6C05025	10	10	23	1	03/05/06	03/05/06	*

* Analysis not validated

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001 Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
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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: IPB2637-01 (Outfall 001 - Water)									
Reporting Units: mg/l									
Total Recoverable Hydrocarbons	EPA 418.1	6C06047	0.31	1.0	ND	1	03/06/06	03/06/06	U

Rev Qual / Qual Code

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001 Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers				
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.													
Reporting Units: NTU													
Turbidity	EPA 180.1	6C01122	0.040	1.0	22	1	03/01/06	03/01/06	<table border="1"> <tr> <td>Raw</td> <td>Qual</td> </tr> <tr> <td>Code</td> <td></td> </tr> </table>	Raw	Qual	Code	
Raw	Qual												
Code													

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 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 001 Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont. Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6B28158	2.2	5.0	7.3	1	02/28/06	03/01/06	Rev Qual Qual Code
Perchlorate	EPA 314.0	6C02068	0.80	4.0	ND	1	03/02/06	03/03/06	*
* Analysis not validated									

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001 Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data	Qualifiers
Sample ID: IPB2637-01RE1 (Outfall 001 - Water) - cont. Reporting Units: ug/l	outfall 001 RE1 EPA 335.2	6C13106	2.2	5.0	3.1	1	02/28/06	03/13/06	R, B, J	D

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 001 Report Number: IPB2637	Sampled: 02/28/06 Received: 02/28/06
--	--	---

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data	Qualifiers				
Sample ID: IPB2637-01 (Outfall 001 - Water) - cont.														
Reporting Units: umhos/cm														
Specific Conductance	EPA 120.1	6C02074	1.0	1.0	520	1	03/02/06	03/02/06		<table border="1"> <tr> <td>Per</td> <td>Qual</td> </tr> <tr> <td>Code</td> <td>Code</td> </tr> </table>	Per	Qual	Code	Code
Per	Qual													
Code	Code													

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APPENDIX G

Section 47

Outfall 002, 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 002

Sampled: 02/28/06
Received: 02/28/06
Issued: 03/21/06 18:24

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, 6 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
IPB2639-01	Outfall 002	Water
IPB2639-02	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 002

Report Number: IPB2639

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

CORRECTIVE ACTION REPORT

Department: Extractions
Method: EPA 625
QC Batch: 6C06060

Date: 03/10/2006
Matrix: Water

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 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water)									
Reporting Units: mg/l									
Total Recoverable Hydrocarbons	EPA 418.1	6C06047	0.30	0.95	ND	0.952	03/06/06	03/06/06	

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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 002

Report Number: IPB2639

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
Sample ID: IPB2639-01RE1 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	6C07098	0.042	0.47	0.043	0.943	03/07/06	03/07/06	J
Surrogate: n-Octacosane (40-125%)					83 %				

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Project Manager

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Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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
Sample ID: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6C06046	0.050	0.10	ND	1	03/06/06	03/06/06	
Surrogate: 4-BFB (FID) (65-140%)					89 %				

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
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, M1, R-3
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	2.4	1	03/02/06	03/02/06	J
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	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					<i>112 %</i>				
<i>Surrogate: Toluene-d8 (80-120%)</i>					<i>108 %</i>				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					<i>100 %</i>				

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-02 (Trip Blank - Water)									
Reporting Units: ug/l									
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%)					109 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					97 %				

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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 002

Report Number: IPB2639

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
Sample ID: IPB2639-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	6C02019	4.6	50	ND	1	03/02/06	03/02/06	
Acrylonitrile	EPA 624	6C02019	0.70	50	ND	1	03/02/06	03/02/06	
2-Chloroethyl vinyl ether	EPA 624	6C02019	1.8	5.0	ND	1	03/02/06	03/02/06	R
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					112 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					108 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					100 %				
Sample ID: IPB2639-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	6C02019	4.6	50	ND	1	03/02/06	03/02/06	
Acrylonitrile	EPA 624	6C02019	0.70	50	ND	1	03/02/06	03/02/06	
2-Chloroethyl vinyl ether	EPA 624	6C02019	1.8	5.0	ND	1	03/02/06	03/02/06	
<i>Surrogate: Dibromofluoromethane (80-120%)</i>					109 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>					110 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>					97 %				

pH

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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 002

Report Number: IPB2639

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
Sample ID: IPB2639-01 (Outfall 002 - Water)									
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	
Sample ID: IPB2639-02 (Trip Blank - Water)									
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	

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6C06060	0.094	0.47	ND	0.943	03/06/06	03/09/06	
Acenaphthylene	EPA 625	6C06060	0.094	0.47	ND	0.943	03/06/06	03/09/06	
Aniline	EPA 625	6C06060	2.7	9.4	ND	0.943	03/06/06	03/09/06	
Anthracene	EPA 625	6C06060	0.078	0.47	ND	0.943	03/06/06	03/09/06	
Benzidine	EPA 625	6C06060	3.0	4.7	ND	0.943	03/06/06	03/10/06	L2
Benzoic acid	EPA 625	6C06060	3.5	19	ND	0.943	03/06/06	03/09/06	L2
Benzo(a)anthracene	EPA 625	6C06060	0.036	4.7	ND	0.943	03/06/06	03/09/06	
Benzo(a)pyrene	EPA 625	6C06060	0.13	1.9	ND	0.943	03/06/06	03/09/06	
Benzo(b)fluoranthene	EPA 625	6C06060	0.047	1.9	ND	0.943	03/06/06	03/09/06	
Benzo(g,h,i)perylene	EPA 625	6C06060	0.056	4.7	ND	0.943	03/06/06	03/09/06	
Benzo(k)fluoranthene	EPA 625	6C06060	0.050	0.47	ND	0.943	03/06/06	03/09/06	
Benzyl alcohol	EPA 625	6C06060	0.20	4.7	ND	0.943	03/06/06	03/09/06	
Bis(2-chloroethoxy)methane	EPA 625	6C06060	0.068	0.47	ND	0.943	03/06/06	03/09/06	
Bis(2-chloroethyl)ether	EPA 625	6C06060	0.079	0.47	ND	0.943	03/06/06	03/09/06	
Bis(2-chloroisopropyl)ether	EPA 625	6C06060	0.10	0.47	ND	0.943	03/06/06	03/09/06	
Bis(2-ethylhexyl)phthalate	EPA 625	6C06060	1.0	4.7	ND	0.943	03/06/06	03/09/06	
4-Bromophenyl phenyl ether	EPA 625	6C06060	0.11	0.94	ND	0.943	03/06/06	03/09/06	
Butyl benzyl phthalate	EPA 625	6C06060	0.32	4.7	0.45	0.943	03/06/06	03/09/06	J
4-Chloroaniline	EPA 625	6C06060	0.19	1.9	ND	0.943	03/06/06	03/09/06	
2-Chloronaphthalene	EPA 625	6C06060	0.056	0.47	ND	0.943	03/06/06	03/09/06	
4-Chloro-3-methylphenol	EPA 625	6C06060	0.32	1.9	ND	0.943	03/06/06	03/09/06	
4-Chlorophenyl phenyl ether	EPA 625	6C06060	0.053	0.47	ND	0.943	03/06/06	03/09/06	
2-Chlorophenol	EPA 625	6C06060	0.11	0.94	ND	0.943	03/06/06	03/09/06	
Chrysene	EPA 625	6C06060	0.068	0.47	ND	0.943	03/06/06	03/09/06	
Dibenz(a,h)anthracene	EPA 625	6C06060	0.078	0.47	ND	0.943	03/06/06	03/09/06	
Dibenzofuran	EPA 625	6C06060	0.071	0.47	ND	0.943	03/06/06	03/09/06	
Di-n-butyl phthalate	EPA 625	6C06060	0.25	1.9	ND	0.943	03/06/06	03/09/06	
1,2-Dichlorobenzene	EPA 625	6C06060	0.10	0.47	ND	0.943	03/06/06	03/09/06	
1,3-Dichlorobenzene	EPA 625	6C06060	0.12	0.47	ND	0.943	03/06/06	03/09/06	
1,4-Dichlorobenzene	EPA 625	6C06060	0.047	0.47	ND	0.943	03/06/06	03/09/06	
3,3-Dichlorobenzidine	EPA 625	6C06060	0.88	4.7	ND	0.943	03/06/06	03/09/06	
2,4-Dichlorophenol	EPA 625	6C06060	0.20	1.9	ND	0.943	03/06/06	03/09/06	
Diethyl phthalate	EPA 625	6C06060	0.11	0.94	ND	0.943	03/06/06	03/09/06	
2,4-Dimethylphenol	EPA 625	6C06060	0.29	1.9	ND	0.943	03/06/06	03/09/06	
Dimethyl phthalate	EPA 625	6C06060	0.076	0.47	ND	0.943	03/06/06	03/09/06	L2
4,6-Dinitro-2-methylphenol	EPA 625	6C06060	0.36	4.7	ND	0.943	03/06/06	03/09/06	
2,4-Dinitrophenol	EPA 625	6C06060	2.5	4.7	ND	0.943	03/06/06	03/09/06	
2,4-Dinitrotoluene	EPA 625	6C06060	0.22	4.7	ND	0.943	03/06/06	03/09/06	
2,6-Dinitrotoluene	EPA 625	6C06060	0.23	4.7	ND	0.943	03/06/06	03/09/06	
Di-n-octyl phthalate	EPA 625	6C06060	0.16	4.7	ND	0.943	03/06/06	03/09/06	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6C06060	0.082	0.94	ND	0.943	03/06/06	03/09/06	

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Fluoranthene	EPA 625	6C06060	0.084	0.47	ND	0.943	03/06/06	03/09/06	
Fluorene	EPA 625	6C06060	0.071	0.47	ND	0.943	03/06/06	03/09/06	
Hexachlorobenzene	EPA 625	6C06060	0.12	0.94	ND	0.943	03/06/06	03/09/06	
Hexachlorobutadiene	EPA 625	6C06060	0.36	1.9	ND	0.943	03/06/06	03/09/06	
Hexachlorocyclopentadiene	EPA 625	6C06060	1.7	4.7	ND	0.943	03/06/06	03/09/06	
Hexachloroethane	EPA 625	6C06060	0.48	2.8	ND	0.943	03/06/06	03/09/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6C06060	0.18	1.9	ND	0.943	03/06/06	03/09/06	
Isophorone	EPA 625	6C06060	0.056	0.94	ND	0.943	03/06/06	03/09/06	
2-Methylnaphthalene	EPA 625	6C06060	0.12	0.94	ND	0.943	03/06/06	03/09/06	
2-Methylphenol	EPA 625	6C06060	0.26	1.9	ND	0.943	03/06/06	03/09/06	
4-Methylphenol	EPA 625	6C06060	0.19	4.7	ND	0.943	03/06/06	03/09/06	
Naphthalene	EPA 625	6C06060	0.12	0.94	0.15	0.943	03/06/06	03/09/06	J
2-Nitroaniline	EPA 625	6C06060	0.17	4.7	ND	0.943	03/06/06	03/09/06	
3-Nitroaniline	EPA 625	6C06060	0.33	4.7	ND	0.943	03/06/06	03/09/06	
4-Nitroaniline	EPA 625	6C06060	0.46	4.7	ND	0.943	03/06/06	03/09/06	
Nitrobenzene	EPA 625	6C06060	0.094	0.94	ND	0.943	03/06/06	03/09/06	
2-Nitrophenol	EPA 625	6C06060	0.22	1.9	ND	0.943	03/06/06	03/09/06	
4-Nitrophenol	EPA 625	6C06060	0.69	4.7	ND	0.943	03/06/06	03/09/06	
N-Nitrosodimethylamine	EPA 625	6C06060	0.21	1.9	ND	0.943	03/06/06	03/09/06	
N-Nitroso-di-n-propylamine	EPA 625	6C06060	0.17	1.9	ND	0.943	03/06/06	03/09/06	
N-Nitrosodiphenylamine	EPA 625	6C06060	0.073	0.94	ND	0.943	03/06/06	03/09/06	
Pentachlorophenol	EPA 625	6C06060	0.74	1.9	ND	0.943	03/06/06	03/09/06	
Phenanthrene	EPA 625	6C06060	0.067	0.47	ND	0.943	03/06/06	03/09/06	
Phenol	EPA 625	6C06060	0.13	0.94	ND	0.943	03/06/06	03/09/06	
Pyrene	EPA 625	6C06060	0.056	0.47	ND	0.943	03/06/06	03/09/06	
1,2,4-Trichlorobenzene	EPA 625	6C06060	0.094	0.94	ND	0.943	03/06/06	03/09/06	
2,4,5-Trichlorophenol	EPA 625	6C06060	0.071	1.9	ND	0.943	03/06/06	03/09/06	
2,4,6-Trichlorophenol	EPA 625	6C06060	0.094	0.94	ND	0.943	03/06/06	03/09/06	
Surrogate: 2-Fluorophenol (35-120%)					60 %				
Surrogate: Phenol-d6 (45-120%)					69 %				
Surrogate: 2,4,6-Tribromophenol (50-125%)					74 %				
Surrogate: Nitrobenzene-d5 (45-120%)					79 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					66 %				
Surrogate: Terphenyl-d14 (45-135%)					77 %				

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Aldrin	EPA 608	6C05031	0.028	0.094	ND	0.943	03/05/06	03/06/06	
alpha-BHC	EPA 608	6C05031	0.00046	0.0094	ND	0.943	03/05/06	03/06/06	
beta-BHC	EPA 608	6C05031	0.014	0.094	ND	0.943	03/05/06	03/06/06	
delta-BHC	EPA 608	6C05031	0.019	0.19	ND	0.943	03/05/06	03/06/06	
gamma-BHC (Lindane)	EPA 608	6C05031	0.019	0.094	ND	0.943	03/05/06	03/06/06	
Chlordane	EPA 608	6C05031	0.19	0.94	ND	0.943	03/05/06	03/06/06	
4,4'-DDD	EPA 608	6C05031	0.019	0.094	ND	0.943	03/05/06	03/06/06	
4,4'-DDE	EPA 608	6C05031	0.024	0.094	ND	0.943	03/05/06	03/06/06	
4,4'-DDT	EPA 608	6C05031	0.033	0.094	ND	0.943	03/05/06	03/06/06	
Dieldrin	EPA 608	6C05031	0.014	0.094	ND	0.943	03/05/06	03/06/06	
Endosulfan I	EPA 608	6C05031	0.014	0.094	ND	0.943	03/05/06	03/06/06	
Endosulfan II	EPA 608	6C05031	0.038	0.094	ND	0.943	03/05/06	03/06/06	
Endosulfan sulfate	EPA 608	6C05031	0.019	0.19	ND	0.943	03/05/06	03/06/06	
Endrin	EPA 608	6C05031	0.019	0.094	ND	0.943	03/05/06	03/06/06	
Endrin aldehyde	EPA 608	6C05031	0.042	0.094	ND	0.943	03/05/06	03/06/06	
Endrin ketone	EPA 608	6C05031	0.019	0.094	ND	0.943	03/05/06	03/06/06	
Heptachlor	EPA 608	6C05031	0.028	0.094	ND	0.943	03/05/06	03/06/06	
Heptachlor epoxide	EPA 608	6C05031	0.028	0.094	ND	0.943	03/05/06	03/06/06	
Methoxychlor	EPA 608	6C05031	0.033	0.094	ND	0.943	03/05/06	03/06/06	
Toxaphene	EPA 608	6C05031	1.4	4.7	ND	0.943	03/05/06	03/06/06	
Surrogate: Decachlorobiphenyl (45-120%)					68 %				
Surrogate: Tetrachloro-m-xylene (35-120%)					70 %				

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	6C05031	0.19	0.94	ND	0.943	03/05/06	03/06/06	
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	
Aroclor 1254	EPA 608	6C05031	0.24	0.94	ND	0.943	03/05/06	03/06/06	
Aroclor 1260	EPA 608	6C05031	0.38	0.94	ND	0.943	03/05/06	03/06/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					85 %				

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Barium	EPA 200.7	6B28151	0.0028	0.010	0.035	1	02/28/06	03/01/06	
Boron	EPA 200.7	6B28151	0.0080	0.050	0.068	1	02/28/06	03/01/06	
Iron	EPA 200.7	6B28151	0.0088	0.040	1.4	1	02/28/06	03/01/06	

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01RE1 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Iron	EPA 200.7	6C20082	0.015	0.040	1.5	1	03/20/06	03/21/06	B-1

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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 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Antimony	EPA 200.8	6B28152	0.18	2.0	ND	1	02/28/06	03/01/06	
Arsenic	EPA 200.7	6B28151	3.8	5.0	ND	1	02/28/06	03/01/06	
Beryllium	EPA 200.7	6B28151	0.62	2.0	ND	1	02/28/06	03/01/06	
Cadmium	EPA 200.8	6B28152	0.015	1.0	0.14	1	02/28/06	03/01/06	J
Chromium	EPA 200.7	6B28151	0.68	5.0	2.0	1	02/28/06	03/01/06	J
Cobalt	EPA 200.7	6B28151	2.0	10	ND	1	02/28/06	03/01/06	
Copper	EPA 200.8	6B28152	0.49	2.0	3.6	1	02/28/06	03/01/06	
Lead	EPA 200.8	6B28152	0.13	1.0	1.7	1	02/28/06	03/01/06	
Manganese	EPA 200.7	6B28151	3.2	20	44	1	02/28/06	03/01/06	
Mercury	EPA 245.1	6C01088	0.063	0.20	ND	1	03/01/06	03/01/06	
Nickel	EPA 200.7	6B28151	2.0	10	2.0	1	02/28/06	03/01/06	J
Selenium	EPA 200.8	6B28152	0.36	2.0	ND	1	02/28/06	03/01/06	
Silver	EPA 200.8	6B28152	0.089	1.0	ND	1	02/28/06	03/01/06	
Thallium	EPA 200.8	6B28152	0.075	1.0	0.19	1	02/28/06	03/01/06	J
Vanadium	EPA 200.7	6B28151	3.0	10	4.7	1	02/28/06	03/01/06	J
Zinc	EPA 200.7	6B28151	3.7	20	14	1	02/28/06	03/01/06	J

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6C05021	0.30	0.50	0.84	1	03/05/06	03/05/06	
Biochemical Oxygen Demand	EPA 405.1	6C01114	0.59	2.0	2.3	1	03/01/06	03/06/06	
Chloride	EPA 300.0	6C01049	0.26	0.50	21	1	03/01/06	03/01/06	
Fluoride	EPA 300.0	6C01049	0.10	0.50	0.27	1	03/01/06	03/01/06	J
Nitrate/Nitrite-N	EPA 300.0	6C01049	0.072	0.26	1.4	1	03/01/06	03/01/06	
Oil & Grease	EPA 413.1	6C01070	0.89	4.7	ND	1	03/01/06	03/01/06	
Residual Chlorine	EPA 330.5	6B28145	0.10	0.10	ND	1	02/28/06	02/28/06	
Sulfate	EPA 300.0	6C01049	1.8	5.0	71	10	03/01/06	03/01/06	
Surfactants (MBAS)	SM5540-C	6C01108	0.044	0.10	ND	1	03/01/06	03/01/06	M1
Total Dissolved Solids	SM2540C	6C02076	10	10	270	1	03/02/06	03/02/06	
Total Organic Carbon	EPA 415.1	6C02064	0.25	1.0	8.3	1	03/01/06	03/01/06	
Total Suspended Solids	EPA 160.2	6C05025	10	10	18	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 002 Report Number: IPB2639	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
Sample ID: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	6B28095	0.10	0.10	ND	1	02/28/06	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
Sample ID: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: NTU									
Turbidity	EPA 180.1	6C01122	0.040	1.0	21	1	03/01/06	03/01/06	

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Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6B28158	2.2	5.0	18	1	02/28/06	03/01/06	
Perchlorate	EPA 314.0	6C02068	0.80	4.0	ND	1	03/02/06	03/03/06	

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 300 North Lake Avenue, Suite 1200
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01RE1 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6C13106	2.2	5.0	3.0	1	02/28/06	03/13/06	B, J

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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	6C02074	1.0	1.0	440	1	03/02/06	03/02/06	

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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
Sample ID: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B	P6C0311	0.49	1.0	ND	1	03/03/06	03/04/06	
<i>Surrogate: Dibromofluoromethane (70-130%)</i>					<i>113 %</i>				

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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
Sample ID: Outfall 002 (IPB2639-01) - Water					
EPA 160.5	2	02/28/2006 14:30	02/28/2006 18:35	02/28/2006 20:45	02/28/2006 21:45
EPA 180.1	2	02/28/2006 14:30	02/28/2006 18:35	03/01/2006 15:15	03/01/2006 16:15
EPA 300.0	2	02/28/2006 14:30	02/28/2006 18:35	03/01/2006 08:00	03/01/2006 10:38
EPA 330.5	1	02/28/2006 14:30	02/28/2006 18:35	02/28/2006 21:30	02/28/2006 21:45
EPA 405.1	2	02/28/2006 14:30	02/28/2006 18:35	03/01/2006 14:15	03/06/2006 14:00
EPA 624	3	02/28/2006 14:30	02/28/2006 18:35	03/02/2006 00:00	03/02/2006 19:38
SM5540-C	2	02/28/2006 14:30	02/28/2006 18:35	03/01/2006 14:29	03/01/2006 15:25
Sample ID: Trip Blank (IPB2639-02) - Water					
EPA 624	3	02/28/2006 15:45	02/28/2006 18:35	03/02/2006 00:00	03/02/2006 22:09

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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
Batch: 6C06047 Extracted: 03/06/06											
Blank Analyzed: 03/06/2006 (6C06047-BLK1)											
Total Recoverable Hydrocarbons	ND	1.0	0.31	mg/l							
LCS Analyzed: 03/06/2006 (6C06047-BS1)											
Total Recoverable Hydrocarbons	4.47	1.0	0.31	mg/l	5.00		89	65-120			M-NR1
LCS Dup Analyzed: 03/06/2006 (6C06047-BSD1)											
Total Recoverable Hydrocarbons	4.11	1.0	0.31	mg/l	5.00		82	65-120	8	20	

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Project ID: Annual Outfall 002
Report Number: IPB2639

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
Batch: 6C07098 Extracted: 03/07/06											
Blank Analyzed: 03/07/2006 (6C07098-BLK1)											
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			
LCS Analyzed: 03/07/2006 (6C07098-BS1)											
EFH (C13 - C40)	0.504	0.50	0.045	mg/l	0.750		67	40-120			M-NR1
Surrogate: n-Octacosane	0.146			mg/l	0.200		73	40-125			
LCS Dup Analyzed: 03/07/2006 (6C07098-BSD1)											
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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Report Number: IPB2639

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
Batch: 6C06046 Extracted: 03/06/06											
Blank Analyzed: 03/06/2006 (6C06046-BLK1)											
GRO (C4 - C12)	ND	0.10	0.050	mg/l							
Surrogate: 4-BFB (FID)	0.00732			mg/l	0.0100		73	65-140			
LCS Analyzed: 03/06/2006 (6C06046-BS1)											
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			
Matrix Spike Analyzed: 03/06/2006 (6C06046-MS1) Source: IPB2637-01											
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			
Matrix Spike Dup Analyzed: 03/06/2006 (6C06046-MSD1) Source: IPB2637-01											
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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Sampled: 02/28/06
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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C02019 Extracted: 03/02/06											
Blank Analyzed: 03/02/2006 (6C02019-BLK1)											
Benzene	ND	2.0	0.28	ug/l							
Benzene	ND	1.0	0.28	ug/l							
Bromodichloromethane	ND	2.0	0.30	ug/l							
Bromoform	ND	5.0	0.32	ug/l							
Bromomethane	ND	5.0	0.42	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l							
Carbon tetrachloride	ND	5.0	0.28	ug/l							
Carbon tetrachloride	ND	0.50	0.28	ug/l							
Chlorobenzene	ND	2.0	0.36	ug/l							
Chloroethane	ND	5.0	0.40	ug/l							
Chloroform	ND	2.0	0.33	ug/l							
Chloroform	ND	2.0	0.33	ug/l							
Chloromethane	ND	5.0	0.30	ug/l							
Dibromochloromethane	ND	2.0	0.28	ug/l							
1,2-Dichlorobenzene	ND	2.0	0.32	ug/l							
1,3-Dichlorobenzene	ND	2.0	0.35	ug/l							
1,4-Dichlorobenzene	ND	2.0	0.37	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	2.0	0.28	ug/l							
1,2-Dichloroethane	ND	0.50	0.28	ug/l							
1,1-Dichloroethene	ND	5.0	0.42	ug/l							
1,1-Dichloroethene	ND	3.0	0.32	ug/l							
trans-1,2-Dichloroethene	ND	2.0	0.27	ug/l							
1,2-Dichloropropane	ND	2.0	0.35	ug/l							
cis-1,3-Dichloropropene	ND	2.0	0.22	ug/l							
trans-1,3-Dichloropropene	ND	2.0	0.32	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Methylene chloride	1.16	5.0	0.70	ug/l							J
1,1,2,2-Tetrachloroethane	ND	2.0	0.24	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	ug/l							
Toluene	ND	2.0	0.36	ug/l							

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting			Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
		Limit	MDL	Units							
Batch: 6C02019 Extracted: 03/02/06											
Blank Analyzed: 03/02/2006 (6C02019-BLK1)											
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND	5.0	0.26	ug/l							
Trichloroethene	ND	2.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Vinyl chloride	ND	5.0	0.26	ug/l							
Vinyl chloride	ND	0.50	0.26	ug/l							
Xylenes, Total	ND	4.0	0.52	ug/l							
Xylenes, Total	ND	4.0	0.90	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/l							
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		110	80-120			
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		96	80-120			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		96	80-120			
LCS Analyzed: 03/02/2006 (6C02019-BS1)											
Benzene	26.3	2.0	0.28	ug/l	25.0		105	70-120			
Benzene	26.3	1.0	0.28	ug/l	25.0		105	65-120			
Bromodichloromethane	25.5	2.0	0.30	ug/l	25.0		102	65-135			
Bromoform	21.8	5.0	0.32	ug/l	25.0		87	50-130			
Bromomethane	23.1	5.0	0.42	ug/l	25.0		92	60-140			
Carbon tetrachloride	24.8	0.50	0.28	ug/l	25.0		99	65-140			
Carbon tetrachloride	24.8	5.0	0.28	ug/l	25.0		99	70-140			
Chlorobenzene	26.0	2.0	0.36	ug/l	25.0		104	70-125			
Chloroethane	26.1	5.0	0.40	ug/l	25.0		104	55-140			
Chloroform	26.0	2.0	0.33	ug/l	25.0		104	65-130			
Chloroform	26.0	2.0	0.33	ug/l	25.0		104	75-130			
Chloromethane	23.7	5.0	0.30	ug/l	25.0		95	40-140			
Dibromochloromethane	25.8	2.0	0.28	ug/l	25.0		103	65-140			
1,2-Dichlorobenzene	27.1	2.0	0.32	ug/l	25.0		108	70-120			
1,3-Dichlorobenzene	24.9	2.0	0.35	ug/l	25.0		100	70-125			

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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 002

Report Number: IPB2639

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
Batch: 6C02019 Extracted: 03/02/06											
LCS Analyzed: 03/02/2006 (6C02019-BS1)											
1,4-Dichlorobenzene	24.3	2.0	0.37	ug/l	25.0		97	70-125			
1,1-Dichloroethane	26.0	2.0	0.27	ug/l	25.0		104	65-130			
1,1-Dichloroethane	26.0	2.0	0.27	ug/l	25.0		104	70-135			
1,2-Dichloroethane	26.0	2.0	0.28	ug/l	25.0		104	60-150			
1,2-Dichloroethane	26.0	0.50	0.28	ug/l	25.0		104	60-140			
1,1-Dichloroethene	28.5	3.0	0.32	ug/l	25.0		114	75-135			
1,1-Dichloroethene	28.5	5.0	0.42	ug/l	25.0		114	70-130			
trans-1,2-Dichloroethene	27.9	2.0	0.27	ug/l	25.0		112	65-130			
1,2-Dichloropropane	26.7	2.0	0.35	ug/l	25.0		107	65-125			
cis-1,3-Dichloropropene	26.2	2.0	0.22	ug/l	25.0		105	70-130			
trans-1,3-Dichloropropene	26.9	2.0	0.32	ug/l	25.0		108	65-130			
Ethylbenzene	26.1	2.0	0.25	ug/l	25.0		104	70-125			
Ethylbenzene	26.1	2.0	0.25	ug/l	25.0		104	80-120			
Methylene chloride	28.2	5.0	0.70	ug/l	25.0		113	60-130			
1,1,2,2-Tetrachloroethane	36.9	2.0	0.24	ug/l	25.0		148	55-130			L
Tetrachloroethene	25.7	2.0	0.32	ug/l	25.0		103	75-125			
Tetrachloroethene	25.7	2.0	0.32	ug/l	25.0		103	65-125			
Toluene	25.6	2.0	0.36	ug/l	25.0		102	75-120			
Toluene	25.6	2.0	0.36	ug/l	25.0		102	70-125			
1,1,1-Trichloroethane	23.6	2.0	0.30	ug/l	25.0		94	65-135			
1,1,1-Trichloroethane	23.6	2.0	0.30	ug/l	25.0		94	75-140			
1,1,2-Trichloroethane	29.4	2.0	0.30	ug/l	25.0		118	70-125			
1,1,2-Trichloroethane	29.4	2.0	0.30	ug/l	25.0		118	65-125			
Trichloroethene	26.7	2.0	0.26	ug/l	25.0		107	70-125			
Trichloroethene	26.7	5.0	0.26	ug/l	25.0		107	80-120			
Trichlorofluoromethane	23.0	5.0	0.34	ug/l	25.0		92	60-140			
Trichlorofluoromethane	23.0	5.0	0.34	ug/l	25.0		92	65-145			
Vinyl chloride	25.2	5.0	0.26	ug/l	25.0		101	50-130			
Vinyl chloride	25.2	0.50	0.26	ug/l	25.0		101	50-130			
Surrogate: Dibromofluoromethane	27.8			ug/l	25.0		111	80-120			
Surrogate: Dibromofluoromethane	27.8			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		108	80-120			

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MWH-Pasadena/Boeing
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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
Batch: 6C02019 Extracted: 03/02/06											
Matrix Spike Analyzed: 03/02/2006 (6C02019-MS1)						Source: IPB2639-01					
Benzene	26.1	2.0	0.28	ug/l	25.0	ND	104	70-120			
Benzene	26.1	1.0	0.28	ug/l	25.0	ND	104	60-125			
Bromodichloromethane	25.1	2.0	0.30	ug/l	25.0	ND	100	65-135			
Bromoform	18.2	5.0	0.32	ug/l	25.0	ND	73	50-135			
Bromomethane	21.9	5.0	0.42	ug/l	25.0	ND	88	50-145			
Carbon tetrachloride	24.9	0.50	0.28	ug/l	25.0	ND	100	65-140			
Carbon tetrachloride	24.9	5.0	0.28	ug/l	25.0	ND	100	70-145			
Chlorobenzene	25.7	2.0	0.36	ug/l	25.0	ND	103	70-125			
Chloroethane	25.6	5.0	0.40	ug/l	25.0	ND	102	50-140			
Chloroform	25.6	2.0	0.33	ug/l	25.0	ND	102	65-135			
Chloroform	25.6	2.0	0.33	ug/l	25.0	ND	102	70-135			
Chloromethane	23.5	5.0	0.30	ug/l	25.0	ND	94	35-140			
Dibromochloromethane	24.0	2.0	0.28	ug/l	25.0	ND	96	60-140			
1,2-Dichlorobenzene	25.9	2.0	0.32	ug/l	25.0	ND	104	70-125			
1,3-Dichlorobenzene	24.0	2.0	0.35	ug/l	25.0	ND	96	70-125			
1,4-Dichlorobenzene	23.4	2.0	0.37	ug/l	25.0	ND	94	70-125			
1,1-Dichloroethane	25.6	2.0	0.27	ug/l	25.0	ND	102	60-130			
1,1-Dichloroethane	25.6	2.0	0.27	ug/l	25.0	ND	102	65-135			
1,2-Dichloroethane	25.8	0.50	0.28	ug/l	25.0	ND	103	60-140			
1,2-Dichloroethane	25.8	2.0	0.28	ug/l	25.0	ND	103	60-150			
1,1-Dichloroethene	27.2	5.0	0.42	ug/l	25.0	ND	109	60-135			
1,1-Dichloroethene	27.2	3.0	0.32	ug/l	25.0	ND	109	65-140			
trans-1,2-Dichloroethene	26.6	2.0	0.27	ug/l	25.0	ND	106	60-135			
1,2-Dichloropropane	26.6	2.0	0.35	ug/l	25.0	ND	106	60-125			
cis-1,3-Dichloropropene	25.8	2.0	0.22	ug/l	25.0	ND	103	65-135			
trans-1,3-Dichloropropene	26.4	2.0	0.32	ug/l	25.0	ND	106	65-140			
Ethylbenzene	25.7	2.0	0.25	ug/l	25.0	ND	103	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	60-130			
Tetrachloroethene	25.1	2.0	0.32	ug/l	25.0	ND	100	70-130			
Toluene	25.5	2.0	0.36	ug/l	25.0	ND	102	65-125			
Toluene	25.5	2.0	0.36	ug/l	25.0	ND	102	70-120			
1,1,1-Trichloroethane	23.2	2.0	0.30	ug/l	25.0	ND	93	65-140			

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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
Batch: 6C02019 Extracted: 03/02/06											
Matrix Spike Analyzed: 03/02/2006 (6C02019-MS1)						Source: IPB2639-01					
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	60-135			
1,1,2-Trichloroethane	28.0	2.0	0.30	ug/l	25.0	ND	112	60-130			
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	0.50	0.26	ug/l	25.0	ND	96	40-135			
Vinyl chloride	23.9	5.0	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			
Matrix Spike Dup Analyzed: 03/02/2006 (6C02019-MSD1)						Source: IPB2639-01					
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	0.50	0.28	ug/l	25.0	ND	106	65-140	6	25	
Carbon tetrachloride	26.4	5.0	0.28	ug/l	25.0	ND	106	70-145	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	0.50	0.28	ug/l	25.0	ND	92	60-140	11	20	

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C02019 Extracted: 03/02/06											
Matrix Spike Dup Analyzed: 03/02/2006 (6C02019-MSD1)						Source: IPB2639-01					
1,2-Dichloroethane	23.0	2.0	0.28	ug/l	25.0	ND	92	60-150	11	20	
1,1-Dichloroethane	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-Dichloroethane	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	65-130	5	20	
Ethylbenzene	27.0	2.0	0.25	ug/l	25.0	ND	108	70-130	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	65-125	4	20	
Toluene	26.5	2.0	0.36	ug/l	25.0	ND	106	70-120	4	20	
1,1,1-Trichloroethane	24.3	2.0	0.30	ug/l	25.0	ND	97	75-140	5	20	
1,1,1-Trichloroethane	24.3	2.0	0.30	ug/l	25.0	ND	97	65-140	5	20	
1,1,2-Trichloroethane	23.6	2.0	0.30	ug/l	25.0	ND	94	60-130	17	25	
1,1,2-Trichloroethane	23.6	2.0	0.30	ug/l	25.0	ND	94	60-135	17	25	
Trichloroethene	29.1	2.0	0.26	ug/l	25.0	2.4	107	60-125	3	20	
Trichloroethene	29.1	5.0	0.26	ug/l	25.0	2.4	107	70-125	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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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
Batch: 6C02019 Extracted: 03/02/06											
Blank Analyzed: 03/02/2006 (6C02019-BLK1)											
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			
LCS Analyzed: 03/02/2006 (6C02019-BS1)											
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			
Matrix Spike Analyzed: 03/02/2006 (6C02019-MS1)						Source: IPB2639-01					
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			
Matrix Spike Dup Analyzed: 03/02/2006 (6C02019-MSD1)						Source: IPB2639-01					
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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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 002 Report Number: IPB2639	Sampled: 02/28/06 Received: 02/28/06
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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6C02019 Extracted: 03/02/06											
Blank Analyzed: 03/02/2006 (6C02019-BLK1)											
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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MWH-Pasadena/Boeing
 300 North Lake Avenue, Suite 1200
 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting			Spike Level	Source Result	%REC		RPD	Limit	Data Qualifiers
		Limit	MDL	Units			%REC	Limits			
Batch: 6C06060 Extracted: 03/06/06											
Blank Analyzed: 03/09/2006 (6C06060-BLK1)											
Acenaphthene	ND	0.50	0.10	ug/l							
Acenaphthylene	ND	0.50	0.10	ug/l							
Aniline	ND	10	2.9	ug/l							
Anthracene	ND	0.50	0.083	ug/l							
Benzidine	ND	5.0	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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 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002
 Report Number: IPB2639

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: 6C06060 Extracted: 03/06/06											
Blank Analyzed: 03/09/2006 (6C06060-BLK1)											
4,6-Dinitro-2-methylphenol	ND	5.0	0.38	ug/l							
2,4-Dinitrophenol	ND	5.0	2.7	ug/l							
2,4-Dinitrotoluene	ND	5.0	0.23	ug/l							
2,6-Dinitrotoluene	ND	5.0	0.24	ug/l							
Di-n-octyl phthalate	ND	5.0	0.17	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	1.0	0.087	ug/l							
Fluoranthene	ND	0.50	0.089	ug/l							
Fluorene	ND	0.50	0.075	ug/l							
Hexachlorobenzene	ND	1.0	0.13	ug/l							
Hexachlorobutadiene	ND	2.0	0.38	ug/l							
Hexachlorocyclopentadiene	ND	5.0	1.8	ug/l							
Hexachloroethane	ND	3.0	0.51	ug/l							
Indeno(1,2,3-cd)pyrene	ND	2.0	0.19	ug/l							
Isophorone	ND	1.0	0.059	ug/l							
2-Methylnaphthalene	ND	1.0	0.13	ug/l							
2-Methylphenol	ND	2.0	0.28	ug/l							
4-Methylphenol	ND	5.0	0.20	ug/l							
Naphthalene	ND	1.0	0.13	ug/l							
2-Nitroaniline	ND	5.0	0.18	ug/l							
3-Nitroaniline	ND	5.0	0.35	ug/l							
4-Nitroaniline	ND	5.0	0.49	ug/l							
Nitrobenzene	ND	1.0	0.10	ug/l							
2-Nitrophenol	ND	2.0	0.23	ug/l							
4-Nitrophenol	ND	5.0	0.73	ug/l							
N-Nitrosodimethylamine	ND	2.0	0.22	ug/l							
N-Nitroso-di-n-propylamine	ND	2.0	0.18	ug/l							
N-Nitrosodiphenylamine	ND	1.0	0.077	ug/l							
Pentachlorophenol	ND	2.0	0.78	ug/l							
Phenanthrene	ND	0.50	0.071	ug/l							
Phenol	ND	1.0	0.14	ug/l							
Pyrene	ND	0.50	0.059	ug/l							
1,2,4-Trichlorobenzene	ND	1.0	0.10	ug/l							
2,4,5-Trichlorophenol	ND	2.0	0.075	ug/l							
2,4,6-Trichlorophenol	ND	1.0	0.10	ug/l							
Surrogate: 2-Fluorophenol	14.2			ug/l	20.0		71	35-120			

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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: 6C06060 Extracted: 03/06/06											
Blank Analyzed: 03/09/2006 (6C06060-BLK1)											
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			
LCS Analyzed: 03/09/2006 (6C06060-BS1)											
Acenaphthene	7.90	0.50	0.10	ug/l	10.0		79	55-120			
Acenaphthylene	8.44	0.50	0.10	ug/l	10.0		84	55-120			
Aniline	7.02	10	2.9	ug/l	10.0		70	30-120			J
Anthracene	8.74	0.50	0.083	ug/l	10.0		87	60-120			
Benzidine	ND	5.0	3.2	ug/l	10.0			20-180			L2
Benzoic acid	ND	20	3.7	ug/l	10.0			30-125			L2
Benzo(a)anthracene	9.48	5.0	0.038	ug/l	10.0		95	65-120			
Benzo(a)pyrene	10.3	2.0	0.14	ug/l	10.0		103	55-125			
Benzo(b)fluoranthene	11.0	2.0	0.050	ug/l	10.0		110	50-125			
Benzo(g,h,i)perylene	12.0	5.0	0.059	ug/l	10.0		120	35-160			
Benzo(k)fluoranthene	10.1	0.50	0.053	ug/l	10.0		101	50-125			
Benzyl alcohol	7.00	5.0	0.21	ug/l	10.0		70	40-130			
Bis(2-chloroethoxy)methane	7.98	0.50	0.072	ug/l	10.0		80	55-120			
Bis(2-chloroethyl)ether	7.26	0.50	0.084	ug/l	10.0		73	50-120			
Bis(2-chloroisopropyl)ether	7.70	0.50	0.11	ug/l	10.0		77	50-120			
Bis(2-ethylhexyl)phthalate	10.0	5.0	1.1	ug/l	10.0		100	65-125			
4-Bromophenyl phenyl ether	8.36	1.0	0.12	ug/l	10.0		84	55-125			
Butyl benzyl phthalate	10.6	5.0	0.34	ug/l	10.0		106	60-125			
4-Chloroaniline	7.00	2.0	0.20	ug/l	10.0		70	55-120			
2-Chloronaphthalene	7.24	0.50	0.059	ug/l	10.0		72	60-120			
4-Chloro-3-methylphenol	9.26	2.0	0.34	ug/l	10.0		93	60-120			
4-Chlorophenyl phenyl ether	8.04	0.50	0.056	ug/l	10.0		80	55-120			
2-Chlorophenol	7.00	1.0	0.12	ug/l	10.0		70	45-120			
Chrysene	9.24	0.50	0.072	ug/l	10.0		92	65-120			
Dibenz(a,h)anthracene	11.0	0.50	0.083	ug/l	10.0		110	40-160			
Dibenzofuran	7.64	0.50	0.075	ug/l	10.0		76	60-120			
Di-n-butyl phthalate	9.46	2.0	0.26	ug/l	10.0		95	65-125			
1,2-Dichlorobenzene	6.56	0.50	0.11	ug/l	10.0		66	40-120			
1,3-Dichlorobenzene	6.48	0.50	0.13	ug/l	10.0		65	40-120			

M-NRI

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: 6C06060 Extracted: 03/06/06											
LCS Analyzed: 03/09/2006 (6C06060-BS1)											M-NR1
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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 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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: 6C06060 Extracted: 03/06/06											
LCS Analyzed: 03/09/2006 (6C06060-BS1)											M-NRI
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			
LCS Dup Analyzed: 03/09/2006 (6C06060-BSD1)											
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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 300 North Lake Avenue, Suite 1200
 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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: 6C06060 Extracted: 03/06/06											
LCS Dup Analyzed: 03/09/2006 (6C06060-BSD1)											
Chrysene	10.1	0.50	0.072	ug/l	10.0	101	65-120	9	20		
Dibenz(a,h)anthracene	12.6	0.50	0.083	ug/l	10.0	126	40-160	14	25		
Dibenzofuran	8.02	0.50	0.075	ug/l	10.0	80	60-120	5	20		
Di-n-butyl phthalate	10.6	2.0	0.26	ug/l	10.0	106	65-125	11	20		
1,2-Dichlorobenzene	6.10	0.50	0.11	ug/l	10.0	61	40-120	7	25		
1,3-Dichlorobenzene	5.78	0.50	0.13	ug/l	10.0	58	40-120	11	25		
1,4-Dichlorobenzene	5.88	0.50	0.050	ug/l	10.0	59	40-120	10	25		
3,3-Dichlorobenzidine	9.52	5.0	0.93	ug/l	10.0	95	50-170	7	25		
2,4-Dichlorophenol	7.34	2.0	0.21	ug/l	10.0	73	55-120	0	20		
Diethyl phthalate	7.48	1.0	0.12	ug/l	10.0	75	60-120	5	20		
2,4-Dimethylphenol	7.70	2.0	0.31	ug/l	10.0	77	35-120	4	25		
Dimethyl phthalate	4.40	0.50	0.081	ug/l	10.0	44	60-120	19	20		L2
4,6-Dinitro-2-methylphenol	8.12	5.0	0.38	ug/l	10.0	81	55-120	5	25		
2,4-Dinitrophenol	6.46	5.0	2.7	ug/l	10.0	65	40-140	3	25		
2,4-Dinitrotoluene	8.96	5.0	0.23	ug/l	10.0	90	60-140	10	20		
2,6-Dinitrotoluene	8.64	5.0	0.24	ug/l	10.0	86	65-125	9	20		
Di-n-octyl phthalate	10.3	5.0	0.17	ug/l	10.0	103	60-130	17	20		
1,2-Diphenylhydrazine/Azobenzene	8.60	1.0	0.087	ug/l	10.0	86	60-120	11	25		
Fluoranthene	10.7	0.50	0.089	ug/l	10.0	107	55-125	12	20		
Fluorene	8.66	0.50	0.075	ug/l	10.0	87	60-120	7	20		
Hexachlorobenzene	9.30	1.0	0.13	ug/l	10.0	93	50-120	7	20		
Hexachlorobutadiene	7.18	2.0	0.38	ug/l	10.0	72	45-120	2	25		
Hexachlorocyclopentadiene	7.16	5.0	1.8	ug/l	10.0	72	10-130	2	30		
Hexachloroethane	5.88	3.0	0.51	ug/l	10.0	59	40-120	9	25		
Indeno(1,2,3-cd)pyrene	12.9	2.0	0.19	ug/l	10.0	129	35-150	11	25		
Isophorone	9.40	1.0	0.059	ug/l	10.0	94	55-120	5	20		
2-Methylnaphthalene	8.46	1.0	0.13	ug/l	10.0	85	50-120	2	20		
2-Methylphenol	7.66	2.0	0.28	ug/l	10.0	77	45-120	8	20		
4-Methylphenol	7.64	5.0	0.20	ug/l	10.0	76	45-120	9	20		
Naphthalene	7.86	1.0	0.13	ug/l	10.0	79	50-120	1	20		
2-Nitroaniline	8.56	5.0	0.18	ug/l	10.0	86	60-130	8	20		
3-Nitroaniline	7.58	5.0	0.35	ug/l	10.0	76	50-140	12	25		
4-Nitroaniline	7.50	5.0	0.49	ug/l	10.0	75	45-160	10	20		
Nitrobenzene	8.26	1.0	0.10	ug/l	10.0	83	50-120	5	25		
2-Nitrophenol	7.72	2.0	0.23	ug/l	10.0	77	55-120	4	25		

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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: 6C06060 Extracted: 03/06/06											
LCS Dup Analyzed: 03/09/2006 (6C06060-BSD1)											
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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MWH-Pasadena/Boeing
 300 North Lake Avenue, Suite 1200
 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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
Batch: 6C05031 Extracted: 03/05/06											
Blank Analyzed: 03/06/2006 (6C05031-BLK1)											
Aldrin	ND	0.10	0.030	ug/l							
alpha-BHC	ND	0.010	0.0010	ug/l							
alpha-BHC	ND	0.10	0.020	ug/l							
beta-BHC	ND	0.10	0.015	ug/l							
delta-BHC	ND	0.20	0.020	ug/l							
gamma-BHC (Lindane)	ND	0.10	0.020	ug/l							
Chlordane	ND	1.0	0.20	ug/l							
4,4'-DDD	ND	0.10	0.020	ug/l							
4,4'-DDE	ND	0.10	0.025	ug/l							
4,4'-DDT	ND	0.10	0.035	ug/l							
Dieldrin	ND	0.10	0.015	ug/l							
Endosulfan I	ND	0.10	0.015	ug/l							
Endosulfan II	ND	0.10	0.040	ug/l							
Endosulfan sulfate	ND	0.20	0.020	ug/l							
Endrin	ND	0.10	0.020	ug/l							
Endrin aldehyde	ND	0.10	0.045	ug/l							
Endrin ketone	ND	0.10	0.020	ug/l							
Heptachlor	ND	0.10	0.030	ug/l							
Heptachlor epoxide	ND	0.10	0.030	ug/l							
Methoxychlor	ND	0.10	0.035	ug/l							
Toxaphene	ND	5.0	1.5	ug/l							
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		70	35-115			
Surrogate: Decachlorobiphenyl	0.455			ug/l	0.500		91	45-120			
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		70	35-115			
Surrogate: Decachlorobiphenyl	0.455			ug/l	0.500		91	45-120			

LCS Analyzed: 03/06/2006 (6C05031-BS1)

M-NR1

Aldrin	0.389	0.10	0.030	ug/l	0.500		78	35-120			
alpha-BHC	0.434	0.10	0.020	ug/l	0.500		87	45-120			
alpha-BHC	0.434	0.010	0.0010	ug/l	0.500		87	45-120			
beta-BHC	0.426	0.10	0.015	ug/l	0.500		85	50-120			
delta-BHC	0.435	0.20	0.020	ug/l	0.500		87	50-120			
gamma-BHC (Lindane)	0.423	0.10	0.020	ug/l	0.500		85	40-120			
4,4'-DDD	0.438	0.10	0.020	ug/l	0.500		88	55-120			
4,4'-DDE	0.419	0.10	0.025	ug/l	0.500		84	50-120			
4,4'-DDT	0.458	0.10	0.035	ug/l	0.500		92	55-120			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C05031 Extracted: 03/05/06											
LCS Analyzed: 03/06/2006 (6C05031-BS1)											M-NRI
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			
LCS Dup Analyzed: 03/06/2006 (6C05031-BSD1)											
Aldrin	0.372	0.10	0.030	ug/l	0.500		74	35-120	4	30	
alpha-BHC	0.413	0.010	0.0010	ug/l	0.500		83	45-120	5	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			

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 002 Report Number: IPB2639	Sampled: 02/28/06 Received: 02/28/06
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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C05031 Extracted: 03/05/06											
LCS Dup Analyzed: 03/06/2006 (6C05031-BSD1)											
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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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
Batch: 6C05031 Extracted: 03/05/06										
Blank Analyzed: 03/06/2006 (6C05031-BLK1)										
Aroclor 1016	ND	1.0	0.20	ug/l						
Aroclor 1221	ND	1.0	0.10	ug/l						
Aroclor 1232	ND	1.0	0.25	ug/l						
Aroclor 1242	ND	1.0	0.25	ug/l						
Aroclor 1248	ND	1.0	0.25	ug/l						
Aroclor 1254	ND	1.0	0.25	ug/l						
Aroclor 1260	ND	1.0	0.40	ug/l						
Surrogate: Decachlorobiphenyl	0.512			ug/l	0.500		102 45-120			
LCS Analyzed: 03/06/2006 (6C05031-BS2)										
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			
LCS Dup Analyzed: 03/06/2006 (6C05031-BSD2)										
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
Batch: 6B28151 Extracted: 02/28/06											
Blank Analyzed: 03/01/2006 (6B28151-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	0.0080	mg/l							
Chromium	ND	5.0	0.68	ug/l							
Cobalt	ND	10	2.0	ug/l							
Iron	ND	0.040	0.0088	mg/l							
Manganese	3.55	20	3.2	ug/l							J
Nickel	ND	10	2.0	ug/l							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	3.7	ug/l							
LCS Analyzed: 03/01/2006 (6B28151-BS1)											
Arsenic	515	5.0	3.8	ug/l	500		103	85-115			
Barium	0.489	0.010	0.0028	mg/l	0.500		98	85-115			
Beryllium	502	2.0	0.62	ug/l	500		100	85-115			
Boron	0.497	0.050	0.0080	mg/l	0.500		99	85-115			
Chromium	514	5.0	0.68	ug/l	500		103	85-115			
Cobalt	507	10	2.0	ug/l	500		101	85-115			
Iron	0.527	0.040	0.0088	mg/l	0.500		105	85-115			
Manganese	516	20	3.2	ug/l	500		103	85-115			
Nickel	504	10	2.0	ug/l	500		101	85-115			
Vanadium	506	10	3.0	ug/l	500		101	85-115			
Zinc	492	20	3.7	ug/l	500		98	85-115			
Matrix Spike Analyzed: 03/01/2006 (6B28151-MS1)											
Source: IPB2637-01											
Arsenic	529	5.0	3.8	ug/l	500	ND	106	70-130			
Barium	0.537	0.010	0.0028	mg/l	0.500	0.044	99	70-130			
Beryllium	505	2.0	0.62	ug/l	500	ND	101	70-130			
Boron	0.618	0.050	0.0080	mg/l	0.500	0.080	108	70-130			
Chromium	506	5.0	0.68	ug/l	500	1.9	101	70-130			
Cobalt	496	10	2.0	ug/l	500	ND	99	70-130			
Iron	1.87	0.040	0.0088	mg/l	0.500	1.4	94	70-130			
Manganese	563	20	3.2	ug/l	500	62	100	70-130			
Nickel	492	10	2.0	ug/l	500	2.5	98	70-130			
Vanadium	512	10	3.0	ug/l	500	5.0	101	70-130			

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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
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Batch: 6B28151 Extracted: 02/28/06

Matrix Spike Analyzed: 03/01/2006 (6B28151-MS1)

Source: IPB2637-01

Zinc	496	20	3.7	ug/l	500	7.1	98	70-130			
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Matrix Spike Dup Analyzed: 03/01/2006 (6B28151-MSD1)

Source: IPB2637-01

Arsenic	534	5.0	3.8	ug/l	500	ND	107	70-130	1	20	
Barium	0.536	0.010	0.0028	mg/l	0.500	0.044	98	70-130	0	20	
Beryllium	513	2.0	0.62	ug/l	500	ND	103	70-130	2	20	
Boron	0.621	0.050	0.0080	mg/l	0.500	0.080	108	70-130	1	20	
Chromium	516	5.0	0.68	ug/l	500	1.9	103	70-130	2	20	
Cobalt	501	10	2.0	ug/l	500	ND	100	70-130	1	20	
Iron	1.95	0.040	0.0088	mg/l	0.500	1.4	110	70-130	4	20	
Manganese	585	20	3.2	ug/l	500	62	105	70-130	4	20	
Nickel	498	10	2.0	ug/l	500	2.5	99	70-130	1	20	
Vanadium	517	10	3.0	ug/l	500	5.0	102	70-130	1	20	
Zinc	501	20	3.7	ug/l	500	7.1	99	70-130	1	20	

Batch: 6B28152 Extracted: 02/28/06

Blank Analyzed: 03/01/2006 (6B28152-BLK1)

Antimony	ND	2.0	0.18	ug/l							
Cadmium	0.0520	1.0	0.015	ug/l							J
Copper	ND	2.0	0.49	ug/l							
Lead	ND	1.0	0.13	ug/l							
Selenium	ND	2.0	0.36	ug/l							
Silver	ND	1.0	0.089	ug/l							
Thallium	ND	1.0	0.075	ug/l							

LCS Analyzed: 03/01/2006 (6B28152-BS1)

Antimony	87.9	2.0	0.18	ug/l	80.0		110	85-115			
Cadmium	86.5	1.0	0.015	ug/l	80.0		108	85-115			
Copper	82.2	2.0	0.49	ug/l	80.0		103	85-115			
Lead	83.3	1.0	0.13	ug/l	80.0		104	85-115			
Selenium	86.7	2.0	0.36	ug/l	80.0		108	85-115			
Silver	86.5	1.0	0.089	ug/l	80.0		108	85-115			
Thallium	84.8	1.0	0.075	ug/l	80.0		106	85-115			

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 002 Report Number: IPB2639	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	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B28152 Extracted: 02/28/06											
Matrix Spike Analyzed: 03/01/2006 (6B28152-MS1)						Source: IPB2637-01					
Antimony	88.5	2.0	0.18	ug/l	80.0	0.25	110	70-130			
Cadmium	83.9	1.0	0.015	ug/l	80.0	0.093	105	70-130			
Copper	82.7	2.0	0.49	ug/l	80.0	3.5	99	70-130			
Lead	82.1	1.0	0.13	ug/l	80.0	2.1	100	70-130			
Selenium	83.8	2.0	0.36	ug/l	80.0	1.7	103	70-130			
Silver	73.0	1.0	0.089	ug/l	80.0	ND	91	70-130			
Thallium	81.7	1.0	0.075	ug/l	80.0	0.10	102	70-130			
Matrix Spike Dup Analyzed: 03/01/2006 (6B28152-MSD1)						Source: IPB2637-01					
Antimony	88.9	2.0	0.18	ug/l	80.0	0.25	111	70-130	1	20	
Cadmium	85.4	1.0	0.015	ug/l	80.0	0.093	107	70-130	2	20	
Copper	81.9	2.0	0.49	ug/l	80.0	3.5	98	70-130	1	20	
Lead	81.9	1.0	0.13	ug/l	80.0	2.1	100	70-130	0	20	
Selenium	84.9	2.0	0.36	ug/l	80.0	1.7	104	70-130	1	20	
Silver	71.4	1.0	0.089	ug/l	80.0	ND	89	70-130	2	20	
Thallium	82.1	1.0	0.075	ug/l	80.0	0.10	102	70-130	1	20	
Batch: 6C01088 Extracted: 03/01/06											
Blank Analyzed: 03/01/2006 (6C01088-BLK1)											
Mercury	ND	0.20	0.063	ug/l							
LCS Analyzed: 03/01/2006 (6C01088-BS1)											
Mercury	8.14	0.20	0.063	ug/l	8.00		102	85-115			
Matrix Spike Analyzed: 03/01/2006 (6C01088-MS1)						Source: IPB2130-01					
Mercury	8.03	0.20	0.063	ug/l	8.00	ND	100	70-130			

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 002

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Sampled: 02/28/06
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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
Batch: 6C01088 Extracted: 03/01/06											
Matrix Spike Dup Analyzed: 03/01/2006 (6C01088-MSD1)						Source: IPB2130-01					
Mercury	7.95	0.20	0.063	ug/l	8.00	ND	99	70-130	1	20	
Batch: 6C20082 Extracted: 03/20/06											
Blank Analyzed: 03/21/2006 (6C20082-BLK1)											
Iron	0.0552	0.040	0.015	mg/l							B-1
LCS Analyzed: 03/20/2006 (6C20082-BS1)											
Iron	0.537	0.040	0.015	mg/l	0.500		107	85-115			
Matrix Spike Analyzed: 03/20/2006 (6C20082-MS1)						Source: IPC1775-03					
Iron	0.504	0.040	0.015	mg/l	0.500	ND	101	70-130			
Matrix Spike Dup Analyzed: 03/20/2006 (6C20082-MSD1)						Source: IPC1775-03					
Iron	0.505	0.040	0.015	mg/l	0.500	ND	101	70-130	0	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B28145 Extracted: 02/28/06											
Duplicate Analyzed: 02/28/2006 (6B28145-DUP1)						Source: IPB2637-01					
Residual Chlorine	ND	0.10	0.10	mg/l		ND				20	
Batch: 6B28158 Extracted: 02/28/06											
Blank Analyzed: 03/01/2006 (6B28158-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 03/01/2006 (6B28158-BS1)											
Total Cyanide	202	5.0	2.2	ug/l	200		101	90-110			
LCS Dup Analyzed: 03/01/2006 (6B28158-BSD1)											
Total Cyanide	210	5.0	2.2	ug/l	200		105	90-110	4	10	
Batch: 6C01049 Extracted: 03/01/06											
Blank Analyzed: 03/01/2006 (6C01049-BLK1)											
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							
LCS Analyzed: 03/01/2006 (6C01049-BS1)											
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			

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C01049 Extracted: 03/01/06											
Matrix Spike Analyzed: 03/01/2006 (6C01049-MS1)						Source: IPB2641-01					
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

Matrix Spike Dup Analyzed: 03/01/2006 (6C01049-MSD1)						Source: IPB2641-01					
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	

Batch: 6C01070 Extracted: 03/01/06											
Blank Analyzed: 03/01/2006 (6C01070-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 03/01/2006 (6C01070-BS1)											M-NR1
Oil & Grease	15.2	5.0	0.94	mg/l	20.0		76	65-120			
LCS Dup Analyzed: 03/01/2006 (6C01070-BSD1)											
Oil & Grease	16.9	5.0	0.94	mg/l	20.0		84	65-120	11	20	

Batch: 6C01108 Extracted: 03/01/06											
Blank Analyzed: 03/01/2006 (6C01108-BLK1)											
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 03/01/2006 (6C01108-BS1)											
Surfactants (MBAS)	0.258	0.10	0.044	mg/l	0.250		103	90-110			

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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
<u>Batch: 6C01108 Extracted: 03/01/06</u>											
Matrix Spike Analyzed: 03/01/2006 (6C01108-MS1)					Source: IPB2639-01						
Surfactants (MBAS)	0.343	0.10	0.044	mg/l	0.250	ND	137	50-125			MI
Matrix Spike Dup Analyzed: 03/01/2006 (6C01108-MSD1)					Source: IPB2639-01						
Surfactants (MBAS)	0.336	0.10	0.044	mg/l	0.250	ND	134	50-125	2	20	MI
<u>Batch: 6C01114 Extracted: 03/01/06</u>											
Blank Analyzed: 03/06/2006 (6C01114-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 03/06/2006 (6C01114-BS1)											
Biochemical Oxygen Demand	190	100	30	mg/l	198		96	85-115			
LCS Dup Analyzed: 03/06/2006 (6C01114-BSD1)											
Biochemical Oxygen Demand	188	100	30	mg/l	198		95	85-115	1	20	
<u>Batch: 6C01122 Extracted: 03/01/06</u>											
Blank Analyzed: 03/01/2006 (6C01122-BLK1)											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 03/01/2006 (6C01122-DUP1)					Source: IPB2571-01						
Turbidity	4.96	1.0	0.040	NTU		4.9			1	20	
<u>Batch: 6C02064 Extracted: 03/01/06</u>											
Blank Analyzed: 03/01/2006 (6C02064-BLK1)											
Total Organic Carbon	ND	1.0	0.25	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
Batch: 6C02064 Extracted: 03/01/06											
LCS Analyzed: 03/01/2006 (6C02064-BS1)											
Total Organic Carbon	10.3	1.0	0.25	mg/l	10.0		103	90-110			
Matrix Spike Analyzed: 03/01/2006 (6C02064-MS1) Source: IPB2620-01											
Total Organic Carbon	8.69	1.0	0.25	mg/l	5.00	3.7	100	80-120			
Matrix Spike Dup Analyzed: 03/01/2006 (6C02064-MSD1) Source: IPB2620-01											
Total Organic Carbon	8.83	1.0	0.25	mg/l	5.00	3.7	103	80-120	2	20	
Batch: 6C02068 Extracted: 03/02/06											
Blank Analyzed: 03/02/2006 (6C02068-BLK1)											
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 03/02/2006 (6C02068-BS1)											
Perchlorate	51.6	4.0	0.80	ug/l	50.0		103	85-115			
Matrix Spike Analyzed: 03/02/2006 (6C02068-MS1) Source: IPC0001-01											
Perchlorate	53.2	4.0	0.80	ug/l	50.0	3.5	99	80-120			
Matrix Spike Dup Analyzed: 03/02/2006 (6C02068-MSD1) Source: IPC0001-01											
Perchlorate	54.3	4.0	0.80	ug/l	50.0	3.5	102	80-120	2	20	
Batch: 6C02074 Extracted: 03/02/06											
Duplicate Analyzed: 03/02/2006 (6C02074-DUP1) Source: IPB2450-01											
Specific Conductance	220	1.0	1.0	umhos/cm		220			0	5	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C02076 Extracted: 03/02/06											
Blank Analyzed: 03/02/2006 (6C02076-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 03/02/2006 (6C02076-BS1)											
Total Dissolved Solids	998	10	10	mg/l	1000		100	90-110			
Duplicate Analyzed: 03/02/2006 (6C02076-DUP1)											
Total Dissolved Solids	641	10	10	mg/l		650			1	10	
						Source: IPB2487-01					
Batch: 6C05021 Extracted: 03/05/06											
Blank Analyzed: 03/05/2006 (6C05021-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 03/05/2006 (6C05021-BS1)											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0		115	80-115			
Matrix Spike Analyzed: 03/05/2006 (6C05021-MS1)											
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	0.56	109	70-120			
						Source: IPC0533-01					
Matrix Spike Dup Analyzed: 03/05/2006 (6C05021-MSD1)											
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0	0.56	106	70-120	3	15	
Batch: 6C05025 Extracted: 03/05/06											
Blank Analyzed: 03/05/2006 (6C05025-BLK1)											
Total Suspended Solids	ND	10	10	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
Batch: 6C05025 Extracted: 03/05/06											
LCS Analyzed: 03/05/2006 (6C05025-BS1)											
Total Suspended Solids	982	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 03/05/2006 (6C05025-DUP1)											
Total Suspended Solids	69.0	10	10	mg/l		69			0	10	
Batch: 6C13106 Extracted: 03/13/06											
Blank Analyzed: 03/13/2006 (6C13106-BLK1)											
Total Cyanide	2.70	5.0	2.2	ug/l							J
LCS Analyzed: 03/13/2006 (6C13106-BS1)											
Total Cyanide	198	5.0	2.2	ug/l	200		99	90-110			
Matrix Spike Analyzed: 03/13/2006 (6C13106-MS1)											
Total Cyanide	185	5.0	2.2	ug/l	200	ND	92	70-115			
Matrix Spike Analyzed: 03/13/2006 (6C13106-MS2)											
Total Cyanide	171	5.0	2.2	ug/l	200	2.9	84	70-115			
Matrix Spike Analyzed: 03/13/2006 (6C13106-MS3)											
Total Cyanide	172	5.0	2.2	ug/l	200	2.3	85	70-115			
Matrix Spike Dup Analyzed: 03/13/2006 (6C13106-MSD1)											
Total Cyanide	187	5.0	2.2	ug/l	200	ND	94	70-115	1	15	
Matrix Spike Dup Analyzed: 03/13/2006 (6C13106-MSD2)											
Total Cyanide	161	5.0	2.2	ug/l	200	2.9	79	70-115	6	15	

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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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 002

Report Number: IPB2639

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
Batch: 6C13106 Extracted: 03/13/06											
Matrix Spike Dup Analyzed: 03/13/2006 (6C13106-MSD3)						Source: IPC0548-01					
Total Cyanide	178	5.0	2.2	ug/l	200	2.3	88	70-115	3	15	

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Michele Chamberlin
Project Manager

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P6C0311 Extracted: 03/03/06											
Blank Analyzed: 03/03/2006 (P6C0311-BLK1)											
1,4-Dioxane	ND	1.0	0.49	ug/l							
Surrogate: Dibromofluoromethane	1.10			ug/l	1.00		110	70-130			
LCS Analyzed: 03/03/2006 (P6C0311-BS1)											
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			
LCS Dup Analyzed: 03/03/2006 (P6C0311-BSD1)											
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			
Matrix Spike Analyzed: 03/03/2006 (P6C0311-MS1)											
						Source: PPB0885-01					
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			
Matrix Spike Dup Analyzed: 03/03/2006 (P6C0311-MSD1)											
						Source: PPB0885-01					
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			

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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 002

Report Number: IPB2639

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
IPB2639-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.094	4.7	10.00
IPB2639-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0094	0.0100
IPB2639-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPB2639-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	2.40	5.0	5.00
IPB2639-01	625+NDMA, LL	2,4,6-Trichlorophenol	ug/l	0	0.94	6.50
IPB2639-01	625+NDMA, LL	2,4-Dinitrotoluene	ug/l	0	4.7	9.10
IPB2639-01	625+NDMA, LL	Bis(2-ethylhexyl)phthalate	ug/l	0.49	4.7	4.00
IPB2639-01	625+NDMA, LL	N-Nitrosodimethylamine	ug/l	0	1.9	8.10
IPB2639-01	625+NDMA, LL	Pentachlorophenol	ug/l	0	1.9	8.20
IPB2639-01	Antimony-200.8	Antimony	ug/l	0.13	2.0	6.00
IPB2639-01	Arsenic-200.7	Arsenic	ug/l	1.80	5.0	50
IPB2639-01	Barium-200.7	Barium	mg/l	0.035	0.010	1.00
IPB2639-01	Beryllium-200.7	Beryllium	ug/l	0	2.0	4.00
IPB2639-01	BOD	Biochemical Oxygen Demand	mg/l	2.30	2.0	20
IPB2639-01	Cadmium-200.8	Cadmium	ug/l	0.14	1.0	2.00
IPB2639-01	Chloride - 300.0	Chloride	mg/l	21	0.50	150
IPB2639-01	Chlorine, Residual	Residual Chlorine	mg/l	0	0.10	0.100
IPB2639-01	Chromium-200.7	Chromium	ug/l	2.00	5.0	8.10
IPB2639-01	Copper-200.8	Copper	ug/l	3.60	2.0	7.10
IPB2639-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	18	5.0	4.30
IPB2639-01	Fluoride-300.0	Fluoride	mg/l	0.27	0.50	1.60
IPB2639-01	Iron-200.7	Iron	mg/l	1.40	0.040	0.30
IPB2639-01	Lead-200.8	Lead	ug/l	1.70	1.0	2.60
IPB2639-01	Manganese-200.7	Manganese	ug/l	44	20	50
IPB2639-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.041	0.10	0.50
IPB2639-01	Mercury - 245.1	Mercury	ug/l	0.041	0.20	0.20
IPB2639-01	Nickel-200.7	Nickel	ug/l	2.00	10	35
IPB2639-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	1.40	0.26	8.00
IPB2639-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPB2639-01	Selenium-200.8	Selenium	ug/l	0	2.0	4.10
IPB2639-01	Settleable Solids	Total Settleable Solids	ml/l/hr	0	0.10	0.100
IPB2639-01	Silver-200.8	Silver	ug/l	0.071	1.0	2.00
IPB2639-01	Sulfate-300.0	Sulfate	mg/l	71	5.0	300
IPB2639-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	270	10	950
IPB2639-01	Thallium-200.8	Thallium	ug/l	0.19	1.0	2.00
IPB2639-01	TSS - EPA 160.2	Total Suspended Solids	mg/l	18	10	15
IPB2639-01	Zinc-200.7	Zinc	ug/l	14	20	54
IPB2639-01RE1	Cyanide-335.2 5ppb	Total Cyanide	ug/l	3.00	5.0	4.30
IPB2639-01RE1	Iron-200.7	Iron	mg/l	1.50	0.040	0.30
IPB2639-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20

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 002 Report Number: IPB2639	Sampled: 02/28/06 Received: 02/28/06
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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
IPB2639-02	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00

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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 002 Report Number: IPB2639	Sampled: 02/28/06 Received: 02/28/06
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DATA QUALIFIERS AND DEFINITIONS

- B** Analyte was detected in the associated Method Blank.
- B-1** Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10x the concentration found in the method blank.
- J** Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
- L** Laboratory Control Sample recovery was above the method control limits. Analyte not detected, data not impacted.
- L2** Laboratory Control Sample recovery was below method control limits.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M2** The MS and/or MSD were below the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- M-NRI** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- pH** pH = 4
- 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 002 Report Number: IPB2639	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

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 002

Report Number: IPB2639

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: IPB2639-01

Analysis Performed: Level 4 + EDD
Samples: IPB2639-01

Aquatic Testing Laboratories-SUB *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chrnk
Samples: IPB2639-01

Analysis Performed: Bioassay-Acute 96hr
Samples: IPB2639-01

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: IPB2639-01

Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: EDD + Level 4
Samples: IPB2639-01

Analysis Performed: Gross Alpha
Samples: IPB2639-01

Analysis Performed: Gross Beta
Samples: IPB2639-01

Analysis Performed: Radium, Combined
Samples: IPB2639-01

Analysis Performed: Strontium 90
Samples: IPB2639-01

Analysis Performed: Tritium
Samples: IPB2639-01

Truesdail Laboratories-SUB *California Cert #1237*

14201 Franklin Avenue - Tustin, CA 92680

Analysis Performed: Hydrazine
Samples: IPB2639-01

Del Mar Analytical - Irvine

Michele Chamberlin
Project Manager

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 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (480) 785-0043 Fax (480) 785-0851
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (702) 798-3620 Fax (702) 798-3621
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120

SUBCONTRACT ORDER - PROJECT # IPB2639

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
Sample ID: IPB2639-01	Water	Sampled: 02/28/06 14:30	Instant Notification
Dioxane-8260B-out	03/14/06 14:30	03/09/06 12:00	sub to DMAP, J flags
Level 4 Data Package - Phoenix	03/28/06 14:30	03/09/06 12:00	Boeing, TAT= 17 days from receipt at Phoenix
Containers Supplied:			
40 ml VOA w/HCL (IPB2639-01AA)			
40 ml VOA w/HCL (IPB2639-01AB)			
40 ml VOA w/HCL (IPB2639-01Z)			

PPC0071-01

SAMPLE INTEGRITY:

All containers intact: Yes No Sample labels/COC agree: Yes No Samples Received On Ice: Yes No
 Custody Seals Present: Yes No Samples Preserved Properly: Yes No Samples Received at (temp): 2.0-c

Released By: *[Signature]* Date: _____ Time: _____ Received By: *Fed-Ex 3.1.06* Date: _____ Time: _____
 Released By: *FED Ex* Date: _____ Time: _____ Received By: *[Signature]* Date: *3/2/06* Time: *09:40*

Del Mar Analytical

Version 5.8/12/04

CHAIN OF CUSTODY FORM

IPB 2639

Client Name/Address:		Project:		ANALYSIS REQUIRED										Field Readings:															
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101		Boeing-SSFL NPDES Annual Outfall 002		Sample Description	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, B, Ba, Fe, Mn, Ag, Tl, Zn, Co, V	Settleable Solids	VOCs 624 + xylenes + Freon 113, Freon 123A, Cyclohexane	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5(20 degrees C)	Surfactants (MBAS)	Cl ₂ , SO ₄ , NO ₃ +NO ₂ -N, F, Perchlorate	Turbidity, TDS, TSS, Conductivity	Ammonia-N	Alpha BHC (608) + PP	2,4,6 Trichlorophenol, 2,4-Dinitrotoluene, Bis(2-ethylhexyl)phthalate, NDMA, pentachlorophenol (EPA 625) + cp	Temp =	pH =	Comments				
Outfall 002	W	Poly-1L	1		HNO3	1A		X																			24 TAT		
Outfall 002-Dup	W	Poly-1L	1		HNO3	1B		X																			24 TAT		
Outfall 002	W	VOAs	5		HCl	3A, 3B, 3C, 3D, 3E					X																		
Outfall 002	W	1L Amber	2		None	4A, 4B					X																		
Outfall 002	W	1L Amber	2		HCL	5A, 5B					X																	24 TAT	
Outfall 002	W	Poly-500 ml	1		NaOH	6								X														24 TAT	
Outfall 002	W	Poly-1L	1		None	7									X														
Outfall 002	W	Poly-500 ml	2		None	8A, 8B										X													
Outfall 002	W	Poly-500 ml	2		None	9A, 9B											X												
Outfall 002	W	Poly-500 ml	2		None	10A, 10B												X											
Outfall 002	W	Poly-500 ml	1		H2SO4	11																							
Outfall 002	W	1L Amber	2		None	12A, 12B																							
Outfall 002	W	1L Amber	2		None	13A, 13B																							
Trip Blank	W	VOAs	3		HCL	14A, 14B, 14C						X																	
Relinquished By				Date/Time:				Received By				Date/Time:				Turn around Time: (check)													
X. DeLong 2/28/06 1835				2/28/06 1835				X. DeLong 2/28/06 1835				2/28/06 1835				24 Hours													
Relinquished By				Date/Time:				Received By				Date/Time:				48 Hours													
								W. J. N. 2-28-06 1835								72 Hours													
																Perchlorate Only 72 Hours													
																Metals Only 72 Hours													
																Sample Integrity: (Check) <input checked="" type="checkbox"/> On Ice: <input checked="" type="checkbox"/>													

Del Mar Analytical Version 01/24/06 CHAIN OF CUSTODY FORM

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

Project: **Boeing-SSFL NPDES Annual Outfall 002**

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

Sampler: **BANACO**

Sample Description	Sample Matrix	Container Type	# of Cont.	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, B, Ba, Fe, Mn, Sb, As, Be, Cd, Cr, Ni, Se, Ag, Tl, Zn, Co, V	Settleable Solids	VOCS 624 + xylenes + Freon 113, Freon 123A, Cyclohexane	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5(20 degrees C)	Surfactants (MBAS)	Cl-, SO4, NO3+NO2-N, F, Perchlorate	Turbidity, TDS, TSS, Conductivity	Ammonia-N	2,4,6-Trichlorophenol, 2,4-Dinitrotoluene, Bis(2-ethylhexyl)phthalate, NDMA, + PP	Field readings: Temp = 61.3, pH = 7.9	Comments
Outfall 002	W	Poly-1L	1	HNO3	1A	X												24 TAT	
Outfall 002-Dup	W	Poly-1L	1	HNO3	1B	X												24 TAT	
Outfall 002	W	Poly-1L	1	None	2		X												
Outfall 002	W	VOAs	5	HCl	3A, 3B, 3C, 3D, 3E			X											
Outfall 002	W	1L Amber	2	None	4A, 4B				X										
Outfall 002	W	1L Amber	2	HCl	5A, 5B					X								24 TAT	
Outfall 002	W	Poly-500 ml	1	NaOH	6						X							24 TAT	
Outfall 002	W	Poly-1L	1	None	7							X							
Outfall 002	W	Poly-500 ml	2	None	8A, 8B								X						
Outfall 002	W	Poly-500 ml	2	None	9A, 9B									X					
Outfall 002	W	Poly-500 ml	2	None	10A, 10B														
Outfall 002	W	Poly-500 ml	1	H2SO4	11											X			
Outfall 002	W	1L Amber	2	None	12A, 12B														
Outfall 002	W	1L Amber	2	None	13A, 13B												X		
Trip Blank	W	VOAs	3	HCl	14A, 14B, 14C														

Relinquished By: *Kenn Plour* Date/Time: 2-15-06
 Received By: *R. Kelly* Date/Time: 2-15-06

Relinquished By: _____ Date/Time: _____
 Received By: _____ Date/Time: _____

Relinquished By: _____ Date/Time: _____
 Received By: _____ Date/Time: _____

Turn around Time: (check) 24 Hours _____ 5 Days _____
 48 Hours _____ 10 Days _____
 72 Hours _____ Normal _____
 Perchlorate Only 72 Hours _____
 Metals Only 72 Hours _____
 Sample integrity: (Check) Intact _____ On Ice _____

IPB2639

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

Project: **Boeing-SSFL NPDES Annual Outfall 002**

Project Manager: **Bronwyn Kelly**

Sampler: _____

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

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Total Recoverable Metals: Cu, Pb, Hg, B, Ba, Fe, Mn, Sp, As, Be, Cd, Cr, Ni, Se, Ag, Tl, Zn, Co, V	Settleable Solids	VOCS 624 + xylenes + Freon 113, Freon 123A, Cyclohexane	TCDD (and all congeners)	Oil & Grease (EPA 413.1)	Cyanide (total recoverable)	BOD5(20 degrees C)	Surfactants (MBAS)	Cl-, SO4, NO3+NO2-N, F, Perchlorate	Turbidity, TDS, TSS, Conductivity	Ammonia-N	Field readings: Temp = pH =	Comments
Outfall 002	W	Poly-1L	1		HNO3	1A	X												24 TAT
Outfall 002-Dup	W	Poly-1L	1		HNO3	1B	X												24 TAT
Outfall 002	W	Poly-1L	1		None	2		X											
Outfall 002	W	VOAs	5		HCl	3A, 3B, 3C, 3D, 3E			X										
Outfall 002	W	1L Amber	2		None	4A, 4B				X									
Outfall 002	W	1L Amber	2		HCL	5A, 5B					X								24 TAT
Outfall 002	W	Poly-500 ml	1		NaOH	6					X								24 TAT
Outfall 002	W	Poly-1L	1		None	7						X							
Outfall 002	W	Poly-500 ml	2		None	8A, 8B							X						
Outfall 002	W	Poly-500 ml	2		None	9A, 9B								X					
Outfall 002	W	Poly-500 ml	2		None	10A, 10B										X			
Outfall 002	W	Poly-500 ml	1		H2SO4	11													
Outfall 002	W	1L Amber	2		None	12A, 12B													
Outfall 002	W	1L Amber	2		None	13A, 13B													
Trip Blank	W	VOAs	3		HCL	14A, 14B, 14C			X										

Relinquished By: _____ Date/Time: _____

Relinquished By: *L. Kelly* 2/28/06 1835 Date/Time: _____

Relinquished By: _____ Date/Time: _____

Received By: *L. Kelly* 2/28/06 1835 Date/Time: _____

Received By: _____ Date/Time: _____

Turn around Time: (check) 24 Hours _____ 48 Hours _____ 72 Hours _____ 5 Days _____ 10 Days _____ Normal _____

Perchlorate Only 72 Hours _____

Metals Only 72 Hours _____

Sample integrity: (Check) Intact _____ On Ice: 52

Del Mar Analytical Version 01/24/06 CHAIN OF CUSTODY FORM

Client Name/Address: MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Project Manager: Bronwyn Kelly Sampler: <i>ESAWACT</i> <i>5916250</i>		Project: Boeing-SSFL NPDES Annual Outfall 002 Phone Number: (626) 568-6691 Fax Number: (626) 568-6515		ANALYSIS REQUIRED													
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 8015 and 418.1	Monomethylhydrazine	Acute and Chronic toxicity	VOCS 624 + A+A+2CVF	Comments	
Outfall 002	W	VOAs	3	2-28-06 19:30	HCl	15A, 15B, 15C	X	X									
Outfall 002	W	VOAs	2		HCl	16A, 16B			X								
Outfall 002	W	Poly-150 ml	1		None	17											
Outfall 002	W	2.5 Gal Cube Amber VOAs	1		None	18A				X						• Analyze for Total Combined RA-228 & RA-228 only if Gross Alpha/Beta > 15pCi/L • Preserve 2.5 Gal Cube with HNO3 at lab.	
Outfall 002	W	Amber VOAs	3		None	25A, 25B, 25C					X						
Outfall 002	W	1L Amber	2		None	19A, 19B					X						
Outfall 002	W	VOAs	3		HCl	20A, 20B, 20C, 20D, 20E, 20F, 20G						X					
Outfall 002	W	1L Amber	2		HCl								X				
Outfall 002	W	1L Amber	2		None	21A, 21B											
Outfall 002	W	1 Gal	2		None	22A, 22B											
Outfall 002	W	VOAs	3	2-28-06 14:30	None	23A, 23B, 23C									X		
Trip Blank	W	VOAs	3		None	24A, 24B, 24C									X		
Relinquished By	<i>Kim Long</i>	Date/Time	2-28-06 15:45	Received By	<i>W Long</i>	Date/Time	2-28-06 15:45	Turn around Time: (check) 24 Hours	5 Days	48 Hours	10 Days	72 Hours	Normal	Perchlorate Only 72 Hours	Metals Only 72 Hours	Sample Integrity: (Check) Intact	On loc: <input checked="" type="checkbox"/>
Relinquished By	<i>W Long</i>	Date/Time	2-28-06 18:35	Received By	<i>W Long</i>	Date/Time	2-28-06 18:35										



March 09, 2006

Alta Project I.D.: 27351

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 "IPB2639". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

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

Sincerely,

Martha M. Maier
Director of HRMS Services



Section I: Sample Inventory Report

Date Received: 3/2/2006

Alta Lab. ID

Client Sample ID

27351-001

IPB2639-01

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 ^a	EMPC ^b	Labeled Standard	%R	LCL-UCL ^d	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	
Totals							
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 13:25

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 13:25

Sample ID: IPB2639-01		EPA Method 1613						
Client Data		Sample Data		Laboratory Data				
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27351-001			
Project:	IPB2639	Sample Size:	1.01 L	QC Batch No.:	7807			
Date Collected:	28-Feb-06			Date Analyzed DB-5:	8-Mar-06			
Time Collected:	1430			Date Analyzed DB-225:	NA			
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000116			13C-2,3,7,8-TCDD	98.3	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000113			13C-1,2,3,7,8-PeCDD	103	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000109			13C-1,2,3,4,7,8-HxCDD	92.8	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000203			J	13C-1,2,3,6,7,8-HxCDD	95.0	28 - 130	
1,2,3,7,8,9-HxCDD	0.00000219			J	13C-1,2,3,4,6,7,8-HpCDD	99.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000360				13C-OCDD	69.2	17 - 157	
OCDD	0.000345				13C-2,3,7,8-TCDF	97.9	24 - 169	
2,3,7,8-TCDF	ND	0.00000149			13C-1,2,3,7,8-PeCDF	108	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000130			13C-2,3,4,7,8-PeCDF	108	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000121			13C-1,2,3,4,7,8-HxCDF	94.8	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000828			13C-1,2,3,6,7,8-HxCDF	92.9	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000772			13C-2,3,4,6,7,8-HxCDF	93.2	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000858			13C-1,2,3,7,8,9-HxCDF	97.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000111			13C-1,2,3,4,6,7,8-HpCDF	92.5	28 - 143	
1,2,3,4,6,7,8-HpCDF	ND	0.000000472			13C-1,2,3,4,7,8,9-HpCDF	99.8	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.000000869			13C-OCDF	76.0	17 - 157	
OCDF	0.0000159			J	CRS 37Cl-2,3,7,8-TCDD	89.9	35 - 197	
Totals								
Total TCDD	ND	0.00000116						
Total PeCDD	ND	0.00000113						
Total HxCDD	0.0000135							
Total HpCDD	0.00000713							
Total TCDF	ND	0.00000149						
Total PeCDF	ND	0.00000125						
Total HxCDF	0.00000270		0.00000389					
Total HpCDF	0.00000904		0.0000138					

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 13:25

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



11701 Lakeside Drive, Suite 100, Irvine, CA 92618 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
 9630 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0651
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3820 Fax (702) 798-3821

SUBCONTRACT ORDER - PROJECT # IPB2639

<p align="center">SENDING LABORATORY:</p> <p>Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin</p>	<p align="center">RECEIVING LABORATORY:</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;">27351</p> <p align="right" style="font-size: 1.5em;">0.2°C</p>
---	--

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

Analysis	Expiration	Comments
Sample ID: IPB2639-01 Water	Sampled: 02/28/06 14:30	Instant Notification
1613-Dioxin-HR-Alta	03/07/06 14:30	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
Level 4 + EDD-OUT	03/28/06 14:30	**LEVEL IV QC, ACCESS 7 EDD**
Containers Supplied:		
1 L Amber (IPB2639-01I)		
1 L Amber (IPB2639-01J)		

SAMPLE INTEGRITY:

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

Released By: _____ Date: _____ Time: _____ Received By: *Fred - En* Date: *3-01-06* Time: _____
 Released By: _____ Date: _____ Time: _____ Received By: *Bethann DeBenedictis* Date: *3/2/06* Time: *0850*

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27351

Samples Arrival:	Date/Time 3/2/06 0850	Initials: BdB	Location: WR-2
Logged In:	Date/Time 3/3/06 0640 3/2/06 3/3/06	Initials: BdB	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 ₂ S ₂ O ₃ 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-06030112-001
Sample ID.: IPB2639-01

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:

Acute:	<u>Survival</u>	<u>TUa</u>
Fathead Minnow:	100%	0.0
Chronic:	<u>NOEC</u>	<u>TUc</u>
<i>Ceriodaphnia</i> Survival:	100%	1.0
<i>Ceriodaphnia</i> Reproduction:	100%	1.0

Quality Control: Reviewed and approved by:


Joseph A. LeMay
Laboratory Director

FATHEAD MINNOW PERCENT SURVIVAL TEST
EPA Method 2000.0



Lab No.: A-06030112-001
 Client/ID: Del Mar - IPB2639-01

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	LR 1200
	100%	19.5	9.1	7.5	0	0	
24 Hr	Control	19.2	8.0	7.7	0	0	LR 1100
	100%	19.1	8.2	7.8	0	0	
48 Hr	Control	19.3	7.4	7.6	0	0	2 1230
	100%	19.2	7.8	7.7	0	0	
Renewal	Control	19.5	8.4	7.8	0	0	2 1300
	100%	19.3	9.4	7.5	0	0	
72 Hr	Control	19.4	8.0	7.6	0	0	LR 1100
	100%	19.0	8.2	7.9	0	0	
96 Hr	Control	19.4	7.9	7.6	0	0	2 1130
	100%	19.1	8.4	7.9	0	0	

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.5; Conductivity: 403 umho; Temp: 2°C;
 DO: 9.1 mg/l; Alkalinity: 87 mg/l; Hardness: 143 mg/l; NH₃-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-06030112
Client/ID: Del Mar IPB2639-01 Outfall 002

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%	22.7
6.25%	100%	25.7
12.5%	100%	27.2
25%	100%	26.4
50%	100%	26.6
100%	100%	27.0

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 (22.7 young)
≥ 60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD < 47% for reproduction; if > 47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 9.5%)
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

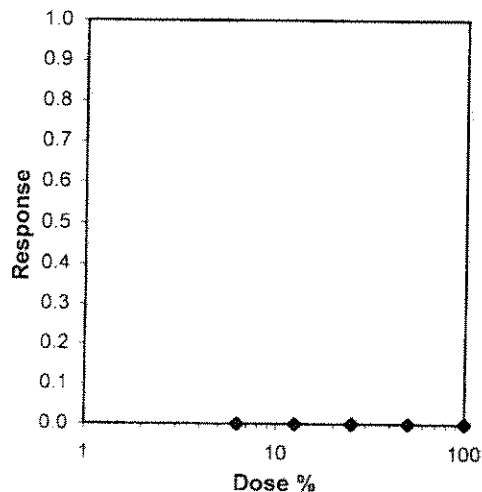
Start Date: 01 Mar-06 15:00 Test ID: 6030112c Sample ID: Del Mar IPB2639 Outfall 002
 End Date: 07 Mar-06 16:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SRW2-Industrial stormwater
 Sample Date: 28 Feb-06 00:00 Protocol: EPAF 91 Test Species: CD-Ceriodaphnia dubia
 Comments:

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

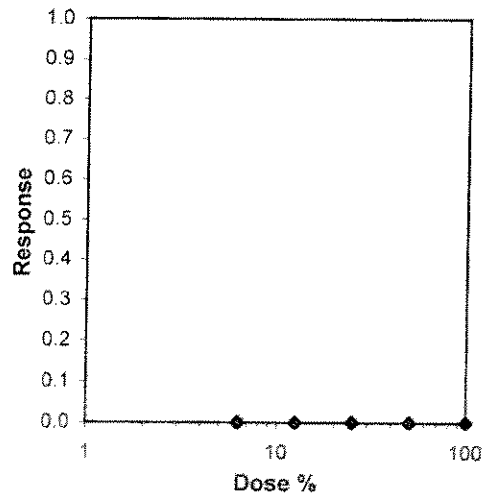
Start Date: 01 Mar-06 15:00 Test ID: 6030112c Sample ID: Del Mar IPB2639 Outfall 002
 End Date: 07 Mar-06 16:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SRW2-Industrial stormwater
 Sample Date: 28 Feb-06 00:00 Protocol: EPAF 91 Test Species: CD-Ceriodaphnia dubia
 Comments:

Conc-%	1	2	3	4	5	6	7	8	9	10
D-Control	23.000	23.000	20.000	20.000	22.000	23.000	27.000	21.000	25.000	23.000
6.25	25.000	25.000	27.000	26.000	24.000	27.000	26.000	24.000	26.000	27.000
12.5	29.000	24.000	27.000	27.000	26.000	28.000	30.000	29.000	24.000	28.000
25	25.000	28.000	25.000	29.000	26.000	30.000	25.000	22.000	26.000	28.000
50	29.000	29.000	26.000	26.000	26.000	26.000	28.000	23.000	24.000	29.000
100	28.000	30.000	24.000	27.000	24.000	25.000	30.000	24.000	30.000	28.000

Conc-%	Mean	N-Mean	Transform: Untransformed				N	t-Stat	1-Tailed Critical	MSD	Isotonic	
			Mean	Min	Max	CV%					Mean	N-Mean
D-Control	22.700	1.0000	22.700	20.000	27.000	9.528	10				25.933	1.0000
6.25	25.700	1.1322	25.700	24.000	27.000	4.512	10	-3.165	2.287	2.168	25.933	1.0000
12.5	27.200	1.1982	27.200	24.000	30.000	7.515	10	-4.747	2.287	2.168	25.933	1.0000
25	26.400	1.1630	26.400	22.000	30.000	8.964	10	-3.903	2.287	2.168	25.933	1.0000
50	26.600	1.1718	26.600	23.000	29.000	7.965	10	-4.114	2.287	2.168	25.933	1.0000
100	27.000	1.1894	27.000	24.000	30.000	9.563	10	-4.536	2.287	2.168	25.933	1.0000

Auxiliary Tests	Statistic	Critical	Skew	Kurt						
Kolmogorov D Test indicates normal distribution (p > 0.01)	0.52393	1.035	-0.0785	-0.6725						
Bartlett's Test indicates equal variances (p = 0.37)	5.38774	15.0863								
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSB	MSE	F-Stat	F-Prob	df
Dunnett's Test	100	>100		1	2.16754	27.8267	4.49259	6.1939	1.3E-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-006030112-001
 Client ID: Del Mar IPB2639-01

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	4	5	0	5	2	3	0	30	10	R
	4	0	8	0	0	0	4	0	0	8	5	25	10	R
	5	9	0	7	7	8	7	7	8	14	8	75	10	R
	6	10	11	10	9	9	12	15	11	(13)	10	97	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	23	23	20	20	22	23	27	21	25	23	227	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	4	0	4	4	3	4	4	2	0	4	29	10	R
	4	0	5	8	8	9	0	8	8	5	9	60	10	R
	5	8	8	15	14	12	9	14	14	8	14	116	10	R
	6	13	12	0	(14)	(16)	14	(15)	(15)	13	(15)	52	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	25	25	27	26	24	27	26	24	26	27	257	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	4	0	3	4	2	4	6	0	2	4	29	10	R
	4	0	4	10	8	8	0	0	5	9	8	57	10	R
	5	9	8	14	15	16	9	10	8	0	16	105	10	R
	6	16	12	(15)	(14)	(10)	15	14	16	13	(17)	86	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	29	24	27	27	26	28	30	29	24	28	272	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-006030112-001
 Client ID: Del Mar IPB2639-01

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	LR
	2	0	0	0	0	0	0	0	0	0	0	0	10	LR
	3	3	4	4	3	4	3	4	2	4	4	35	10	LR
	4	8	0	9	0	0	0	0	8	0	9	34	10	LR
	5	14	8	12	9	8	10	9	12	8	15	105	10	LR
	6	(14)	16	(16)	17	14	17	12	(12)	14	(16)	90	10	LR
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	25	28	25	29	26	30	25	22	26	28	264	10	LR
50%	1	0	0	0	0	0	0	0	0	0	0	10	LR	
	2	0	0	0	0	0	0	0	0	0	0	10	LR	
	3	5	5	2	2	2	3	4	3	2	0	28	10	LR
	4	0	0	8	9	8	0	9	8	8	6	56	10	LR
	5	8	9	16	15	16	9	15	12	14	8	122	10	LR
	6	16	15	(15)	(13)	(12)	14	(13)	(17)	(15)	15	60	10	LR
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	29	29	26	26	26	26	28	23	24	29	266	10	LR
100%	1	0	0	0	0	0	0	0	0	0	0	10	LR	
	2	0	0	0	0	0	0	0	0	0	0	10	LR	
	3	4	4	0	3	2	3	5	5	0	4	30	10	LR
	4	0	0	6	9	8	8	9	0	4	9	53	10	LR
	5	12	8	18	15	14	14	16	7	9	15	128	10	LR
	6	12	18	(13)	(15)	(13)	(14)	(18)	12	17	0	59	10	LR
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	28	30	24	27	24	25	30	24	30	28	270	10	LR

Note: Fourth broods (circled) are not counted in data analysis.

CERIODAPHNIA DUBIA CHRONIC BIOASSAY

Water Chemistries Raw Data Sheet



Lab No.: A-006030112-001
 Client ID: Del Mar IPB2639-01

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:		Am	Pm	Pm	Pm	Pm	Pm	Pm	Pm	Pm	Pm	Pm	Pm	-	-
Time of Readings:		1800	1600	1600	1600	1600	1630	1630	1540	1500	1430	1430	1600	-	-
Control	DO	8.0	8.0	8.0	8.0	8.3	7.9	8.1	7.7	8.0	7.9	8.1	8.0	-	-
	pH	7.7	7.9	8.0	8.0	7.8	7.9	7.9	7.9	7.9	7.8	7.8	7.9	-	-
	Temp	25.9	25.1	25.9	25.3	25.7	25.1	25.8	25.2	25.4	25.0	25.6	25.6	-	-
6.25%	DO	8.2	8.0	8.1	7.9	8.4	7.9	8.2	7.8	8.1	7.8	8.0	7.9	-	-
	pH	7.7	7.9	7.9	8.0	7.7	7.9	7.8	7.8	7.8	7.8	7.5	7.9	-	-
	Temp	25.9	25.2	25.9	25.3	25.7	25.1	25.7	25.3	25.4	24.9	25.4	25.6	-	-
12.5%	DO	8.3	7.9	8.3	7.9	8.5	7.8	8.3	7.7	8.1	7.7	8.1	7.9	-	-
	pH	7.7	7.9	7.8	8.0	7.7	7.8	7.8	7.8	7.8	7.8	7.8	7.8	-	-
	Temp	25.8	25.2	25.8	25.3	25.6	25.1	25.6	25.2	25.3	24.8	25.5	25.6	-	-
25%	DO	8.4	7.9	8.4	7.9	8.6	7.8	8.4	7.8	8.2	7.9	8.2	7.9	-	-
	pH	7.7	7.9	7.7	8.0	7.7	7.8	7.8	7.8	7.8	7.8	7.8	7.8	-	-
	Temp	25.8	25.2	25.8	25.3	25.4	25.6	25.3	25.1	25.2	25.1	25.6	25.6	-	-
50%	DO	8.5	7.9	8.7	7.9	8.8	7.8	8.5	7.7	8.4	7.8	8.4	7.8	-	-
	pH	7.7	7.9	7.6	8.0	7.6	7.9	7.7	7.8	7.7	7.7	7.8	7.8	-	-
	Temp	25.8	25.2	25.8	25.3	25.2	25.0	25.1	25.2	25.1	24.2	25.4	25.6	-	-
100%	DO	9.0	7.7	9.3	8.0	9.5	7.7	8.7	7.7	8.6	7.8	8.5	7.7	-	-
	pH	7.6	7.9	7.6	8.1	7.6	7.9	7.7	7.7	7.7	7.7	7.7	7.7	-	-
	Temp	25.7	25.2	25.7	25.3	24.8	25.1	24.7	25.3	24.9	25.0	25.1	25.6	-	-

Source of Neonates

Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	D2	D3	E1	E2	E3	F2	G1	G2	G3	H1

Additional Parameters	Control	100% Effluent
Conductivity	325	403
Alkalinity	54	87
Hardness	94	143
Chlorine (TRC)	0	0
Ammonia (NH ₃ -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) 798-3821

SUBCONTRACT ORDER - PROJECT # IPB2639

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	Sampled:	Comments
Sample ID: IPB2639-01	Water	02/28/06 14:30	Instant Notification
Bioassay-7 dy Chmic	03/02/06 02:30		Cerio, EPA/821-R02-013, Sub to AqTox Labs
Bioassay-Acute 96hr	03/02/06 02:30		FH minnow, EPA/821-R02-012, Sub to AqTox Labs

Containers Supplied:
 1 gal Poly (IPB2639-01AU)
 1 gal Poly (IPB2639-01AV)

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	Date	Time	Received By	Date	Time
Munyer	3/06	1020	Munyer	3/06	2:00
Released By	Date	Time	Received By	Date	Time
Munyer	3/06	1020	ATC	3-1-6	10220

FATHEAD MINNOW ACUTE
Method 2000.0
Reference Toxicant - SDS



QA/QC Batch No.: RT-060301

TEST SUMMARY

Species: *Pimephales promelas*.
 Age: 13 days old.
 Regulations: NPDES.
 Test chamber volume: 250 ml.
 Feeding: Prior to renewal at 48 hrs.
 Temperature: 20 +/- 1°C.
 Number of replicates: 2.
 Dilution water: MHSF.

Source: In-lab culture.
 Test type: Static-Renewal.
 Test Protocol: EPA-821-R-02-012.
 Endpoints: LC50 at 96 hrs.
 Test chamber: 600 ml glass beakers.
 Aeration: None.
 Number of organisms per chamber: 10.
 Photoperiod: 16/8 hrs light/dark.

TEST DATA

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

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

Comments:

Control: Alkalinity: 54 mg/l; Hardness: 94 mg/l; Conductivity: 325 umho.
 SDS: Alkalinity: 53 mg/l; Hardness: 94 mg/l; Conductivity: 330 umho.

Acute Fish Test-96 Hr Survival

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

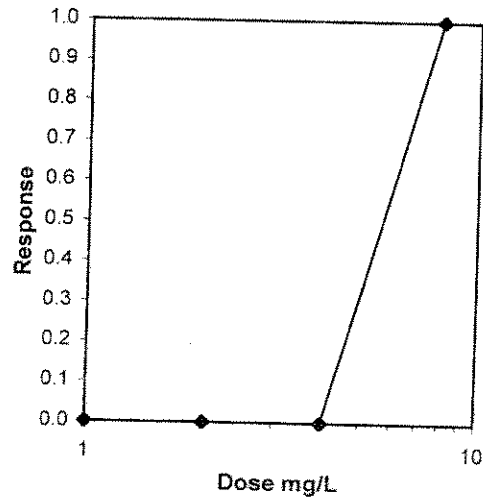
Auxiliary Tests

Normality of the data set cannot be confirmed
 Equality of variance cannot be confirmed

Statistic	Critical	Skew	Kurt
-----------	----------	------	------

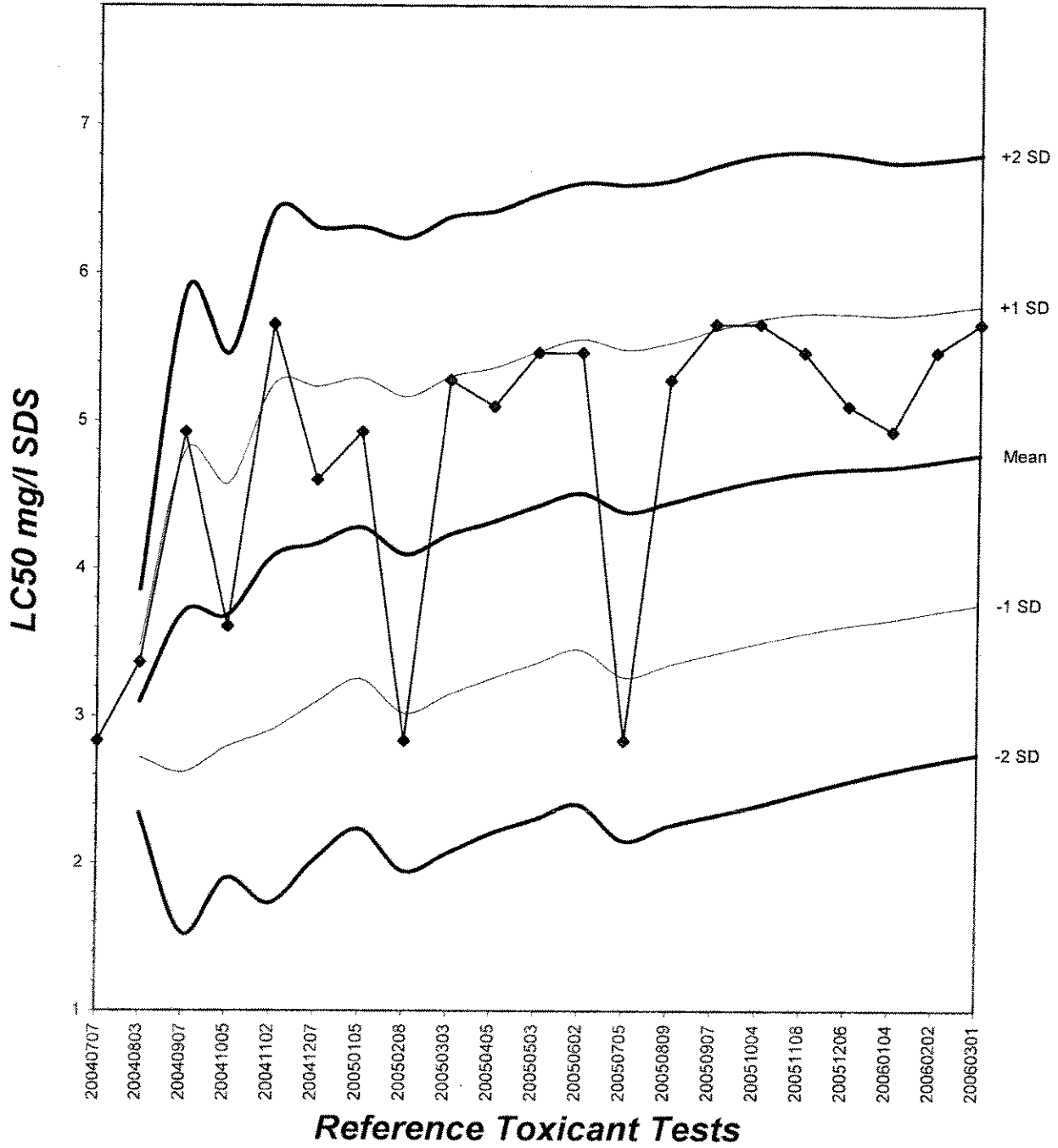
Graphical Method

Trim Level	EC50
0.0%	5.6569



Fathead Minnow Acute Laboratory Control Chart

CV% = 21.3



TEST ORGANISM LOG



FATHEAD MINNOW - LARVAL
(*Pimephales promelas*)

QA/QC BATCH NO.: RT-060301

SOURCE: In-Lab Culture

DATE HATCHED: 2-16-06

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

MORTALITIES 48 HOURS PRIOR TO
TO USE IN TESTING: 0

DATES USED IN LAB: 3/1/0
to
1/1

AVERAGE FISH WEIGHT: 0.006 gm

TEST LOADING LIMITS: 0.65 gm/liter

200 ml test solution volume = 0.013 gm mean fish weight limit
250 ml test solution volume = 0.016 gm mean fish weight limit

ACCLIMATION WATER QUALITY:

Temp.: 20.4 °C pH: 7.7 Ammonia: 0.2 mg/l NH₃-N
DO: 2.8 mg/l Alkalinity: 54 mg/l Hardness: 50 mg/l

READINGS RECORDED BY: [Signature] DATE: 3-5-06

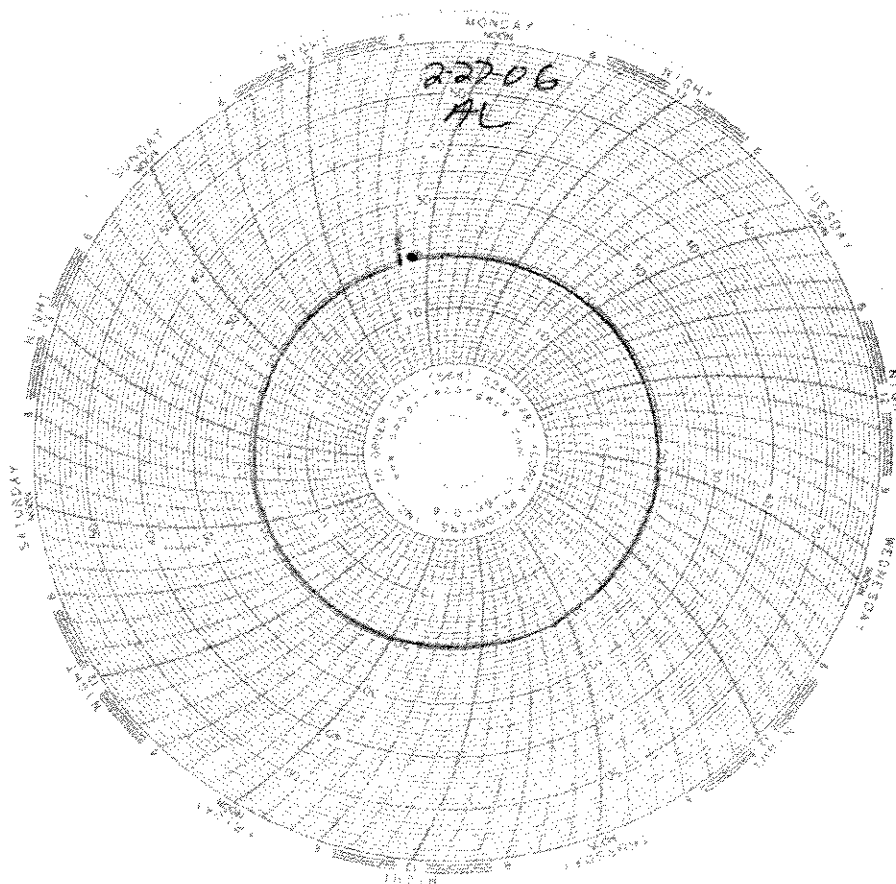


Laboratory Temperature Chart

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

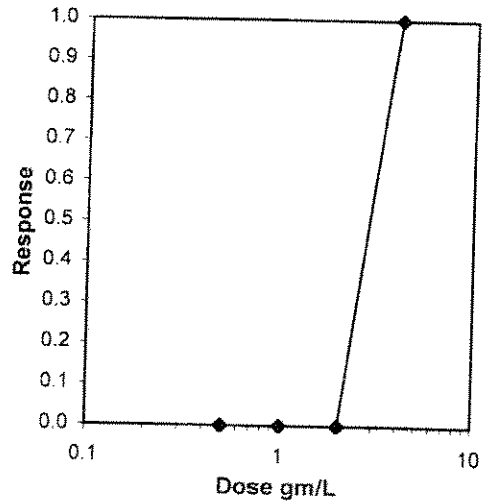
Start Date: 01 Mar-06 14:00 Test ID: RT-060301c Sample ID: REF-Ref Toxicant
 End Date: 07 Mar-06 16:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: NACL-Sodium chloride
 Sample Date: 01 Mar-06 00:00 Protocol: EPAF 91 Test Species: CD-Ceriodaphnia dubia
 Comments:

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

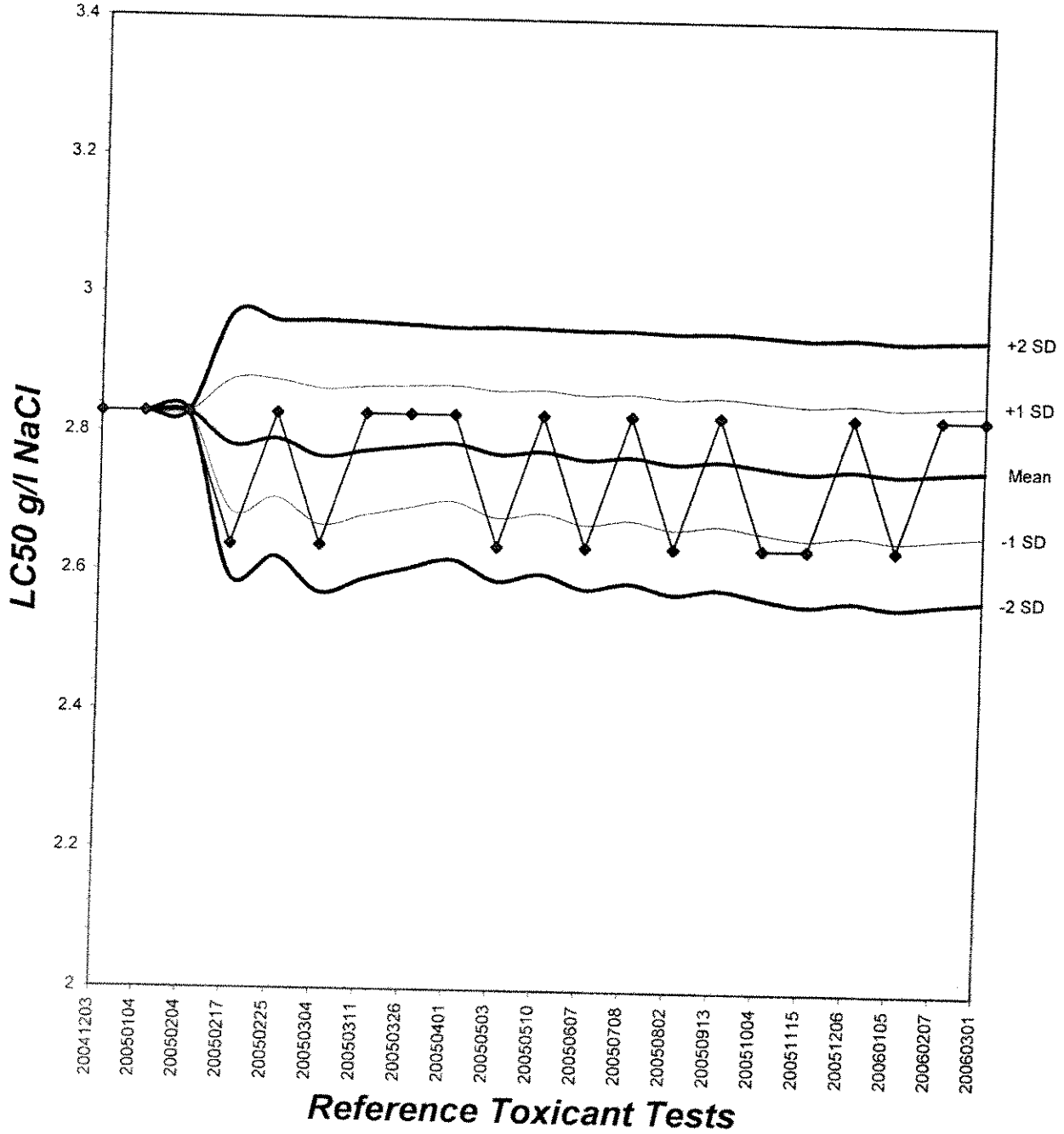
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU
Fisher's Exact Test	2	>4		

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

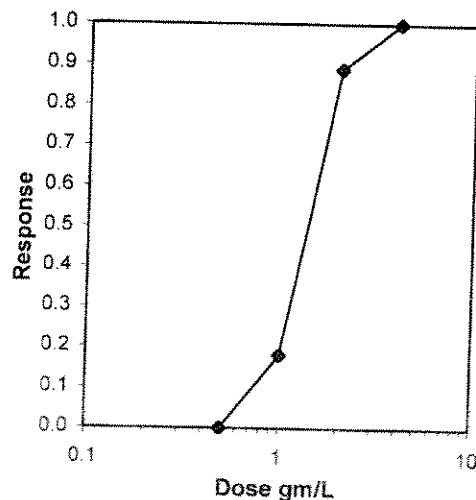
Conc-gm/L	Transform: Untransformed							1-Tailed			Isotonic	
	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean
D-Control	21.000	1.0000	21.000	18.000	26.000	10.529	10				21.700	1.0000
0.5	22.400	1.0667	22.400	20.000	25.000	7.646	10	-1.726	2.137	1.733	21.700	1.0000
*1	17.800	0.8476	17.800	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							
Bartlett's Test indicates equal variances ($p = 0.01$)	10.6394	11.3449	0.71232							
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

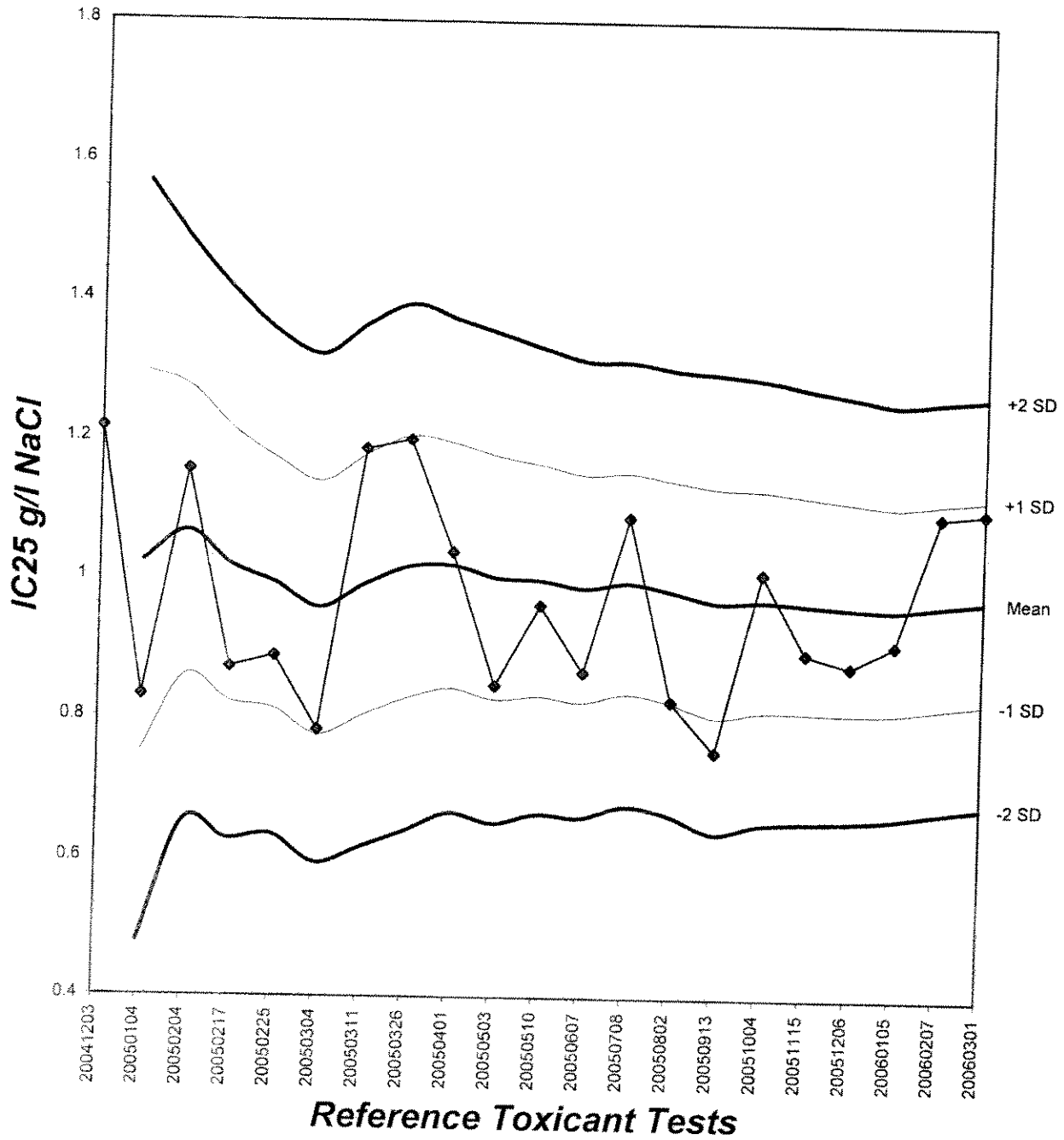
Linear Interpolation (80 Resamples)

Point	gm/L	SE	95% CL	Skew
IC05	0.6391	0.0359	0.5587	0.7148
IC10	0.7782	0.0612	0.7030	0.9295
IC15	0.9173	0.0675	0.8164	1.0435
IC20	1.0286	0.0507	0.9218	1.1083
IC25	1.0990	0.0414	1.0199	1.1731
IC40	1.3104	0.0319	1.2476	1.3675
IC50	1.4513	0.0260	1.3973	1.4971



Ceriodaphnia Chronic Reproduction Laboratory Control Chart

CV% = 15.1



CERIODAPHNIA DUBIA CHRONIC BIOASSAY
Reference Toxicant - NaCl
Reproduction and Survival Raw Data Sheet



QA/QC No.: RT-060301

Start Date: 03/01/2006

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
Control	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	4	3	3	5	0	4	4	3	4	0	30	10	R
	4	0	0	0	0	5	0	0	0	0	4	9	10	J
	5	8	9	8	6	7	8	9	9	7	8	79	10	M
	6	8	10	8	7	8	9	13	10	11	8	92	10	R
	7	0	-	-	-	-	-	-	-	-	-	-	-	-
	Total	20	22	19	18	20	21	26	22	22	20	220	10	R
0.5 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	3	2	0	4	4	4	3	4	4	3	31	10	R
	4	0	0	5	0	0	0	0	0	0	0	5	10	J
	5	8	7	7	8	9	8	9	9	8	7	80	10	M
	6	11	11	8	12	10	12	13	10	10	11	108	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	22	20	20	24	23	24	25	23	22	21	224	10	R
1.0 g/l	1	0	0	0	0	0	0	0	0	0	0	10	R	
	2	0	0	0	0	0	0	0	0	0	0	10	R	
	3	0	0	4	3	2	4	0	3	0	3	19	10	R
	4	3	3	0	0	0	0	4	0	4	0	14	10	J
	5	6	6	4	4	6	4	3	4	6	4	47	10	M
	6	10	9	12	8	11	12	9	7	10	10	98	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	19	18	20	15	19	20	16	14	20	17	178	10	R

Note: Fourth broods (circled) are not counted in data analysis.

CERIODAPHNIA DUBIA CHRONIC BIOASSAY
Reference Toxicant - NaCl
Reproduction and Survival Raw Data Sheet



QA/QC No.: RT-060301

Start Date: 03/01/2006

Sample	Day	Number of Young Produced										Total Live Young	No. Live Adults	Analyst Initials
		A	B	C	D	E	F	G	H	I	J			
2.0 g/l	1	0	0	0	0	0	0	0	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	R
	3	0	0	0	0	0	0	0	0	0	0	0	10	R
	4	0	0	0	0	2	3	0	2	0	0	7	10	R
	5	2	2	2	2	0	0	2	0	2	3	15	10	R
	6	0	0	0	0	2	0	0	0	0	0	2	10	R
	7	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	2	2	2	2	4	3	2	2	2	3	24	10	R
4.0 g/l	1	X	X	X	X	X	X	X	X	X	0	0	R	
	2	-	-	-	-	-	-	-	-	-	-	-	-	
	3	-	-	-	-	-	-	-	-	-	-	-	-	
	4	-	-	-	-	-	-	-	-	-	-	-	-	
	5	-	-	-	-	-	-	-	-	-	-	-	-	
	6	-	-	-	-	-	-	-	-	-	-	-	-	
	7	-	-	-	-	-	-	-	-	-	-	-	-	
	Total	0	0	0	0	0	0	0	0	0	0	0	0	R

Note: Fourth broods (circled) are not counted in data analysis.

CERIODAPHNIA DUBIA CHRONIC BIOASSAY
Reference Toxicant - NaCl
Water Chemistries Raw Data Sheet



QA/QC No.: RT-060301

Start Date: 03/01/2006

		DAY 1		DAY 2		DAY 3		DAY 4		DAY 5		DAY 6		DAY 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst Initials:		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 ₃ -N)	0.2	0.2

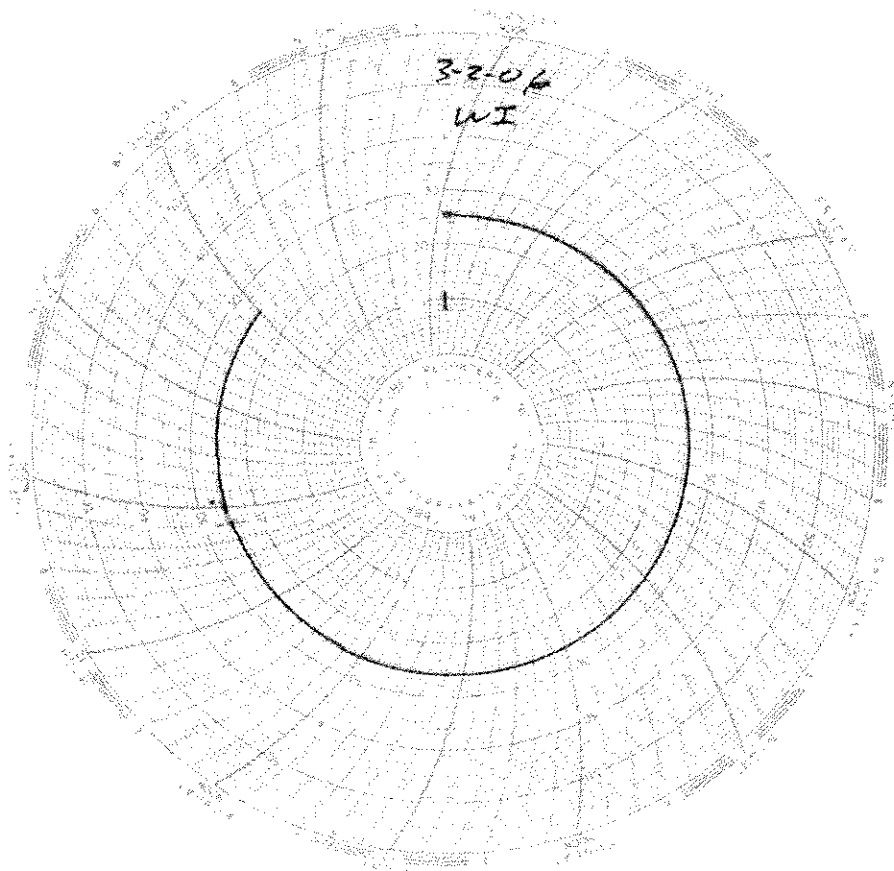
Source of Neonates										
Replicate:	A	B	C	D	E	F	G	H	I	J
Brood ID:	E1	E2	G6	H4	H5	H6	I4	I6	J4	J2

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





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. IPB2639
Eberline Services NELAP Cert #01120CA (exp. 01/31/07)
Eberline Services Report R603017-8661

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

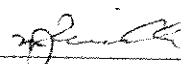
Analytical Services
2030 Wright Avenue
P.O. Box 4040
Richmond, California 94804-0040
(510) 235-2633 Fax (510) 235-0438
Toll Free (800) 841-5487
www.eberlineservices.com **NPDES 1696**

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						
<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>
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

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

Eberline Services

QC RESULTS

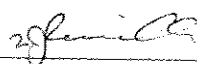
SDG <u>8661</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R603017-01</u>	Contract <u>PROJECT# IPB2639</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

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>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>3σ</u>	<u>RPD (Tot)</u>	<u>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
--



17461 Derian Ave. Suite 100, Irvine, CA 92617 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 # IPB2639

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Eberline Services 2030 Wright Avenue Richmond, CA 94804 Phone : (510) 235-2633 Fax: (510) 235-0438

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

Analysis	Expiration	Sampled:	Comments
Sample ID: IPB2639-01 Water		02/28/06 14:30	Instant Notification
EDD + Level 1	03/28/06 14:30		Excel EDD email to pm, include Std logs for Lvl IV
Gross Alpha-O	02/28/07 14:30		900.0, IF RESULT > 15 pCi/L, run Radium 226 & 228
Gross Beta-O	02/28/07 14:30		900.0, IF RESULT > 50 pCi/L, run Radium 226 & 228
Radium, Combined-O	02/28/07 14:30		HOLD for Gross Alpha/Beta result; EPA 903.1 & 904.0
Strontium 90-O	02/28/07 14:30		905.0
Tritium-O	02/28/07 14:30		906

- Containers Supplied:**
- 2.5 gal Poly (IPB2639-01AF)
 - 40 ml Amber Voa Vial (IPB2639-01AG)
 - 40 ml Amber Voa Vial (IPB2639-01AH)
 - 40 ml Amber Voa Vial (IPB2639-01AI)

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

Released By: _____ Date: 3/1/06 Time: 1700 Received By: *MPW* Date: 03/02/06 Time: 9:30

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

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

Del Mar Analytical

Laboratory Number: 952267

Project Name: IPB2639



Prepared for:

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

Prepared by:

Truesdail Laboratories, Inc.
Tustin, CA 92780

March 20, 2006

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

March 20, 2006

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

Client: Del Mar Analytical
17461 Derian Avenue, Suite 100
Irvine, CA 92614
Attention: Michele Chamberlin

Project Name: IPB2639
Date Received: 03/01/06

Truesdail Project: 952267

Samples Cross-reference

<u>Truesdail #</u>	<u>Client ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Time Sampled</u>	<u>Analysis Requested</u>
952267-1	IPB2639-01	Water	02/28/06	1430	Hydrazines by EPA 8315M

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

K. R. P. Iyer
K.R.P. Iyer
Quality Control/Quality Assurance Officer

Xuan Huong Dang
Xuan Huong Dang
Project Manager

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

March 20, 2006

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

Client: Del Mar Analytical
17461 Derian Avenue, Suite 100
Irvine, CA 92614
Attention: Michele Chamberlin

Project Name: IPB2639
Date Received: 03/01/06

Truesdail Project: 952267

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

REPORT

Laboratory No: 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
Dilution Factor: 1
Reported By: JS

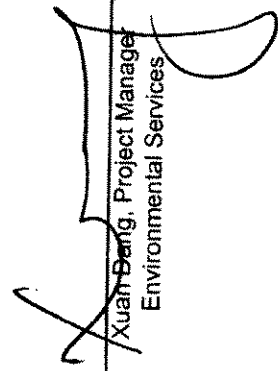
Attention: Michele Chamberlin
Sample: Liquid / 1 Sample
Project Name: IPB2639
P. O. Number: IPB2639
Method Number: 8315 (Modified)
Investigation: Hydrazines in Liquid

Analytical Results

Sample ID	Sample Description	Monomethyl		Unsymmetrical Dimethyl		Hydrazine
		Hydrazine	Hydrazine	Hydrazine	Hydrazine	
705657-MB	Method Blank	ND	ND	ND	ND	ND
952267	IPB2639-01	ND	ND	ND	ND	ND
MDL		1.2				
PQL		5.0		0.27	5.0	0.39
						1.0

MDL: Method Detection Limit, ug/L
PQL: Practical Quantitation Limit, ug/L
ND: Not Detected at or above the MDL value.
N/A: Not Applicable

Note: Results based on detector #1 (UV=365nm) data.


Xuan-Bang, 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.



Client: Del Mar Analytical
 17461 Derian Ave., Suite 100
 Irvine, CA 92614

Client Contact: Michele Chamberlin
 Sample: Liquid / 1 Sample
 Sample ID: IPB2639
 P.O. Number: IPB2639
 Method Number: 8315 (Modified)
 Run Batch No.: Extraction: 3434; Analysis: 455
 Investigation: Hydrazines in Liquid

REPORT

QC Lab. No.: 705657
Project Lab. No.: 952267
Spiked Sample ID: 952267
Reporting Date: March 20, 2006
Receiving Date: February 28, 2006
Extraction Date: March 1, 2006
Analysis Date: March 1, 2006
Units: µg/L
Reported By: JS

Quality Control/Quality Assurance Calibration Report

CCV

Parameter	Theoretical Value	Measured Value	% Rec.	Control Limits	Flag
Monomethyl Hydrazine	50.0	46.1	92.2	85-115	PASS
u-Dimethyl Hydrazine	50.0	49.8	99.5	85-115	PASS
Hydrazine	10.0	9.86	98.6	85-115	PASS

QCS

Parameter	Theoretical Value		Measured Value		% Rec.	Control Limits	Flag
	Value	MSD	Value	MSD			
Monomethyl Hydrazine	50.0		46.8		93.6	85-115	PASS
u-Dimethyl Hydrazine	50.0		50.3		101	85-115	PASS
Hydrazine	10.0		10.2		102	85-115	PASS

Quality Control/Quality Assurance Spikes Report

LCS/LCSD

Parameter	Spiked Conc.	Recovered Concentration		Percent Recovery (%)	LCS/LCSD %D	Control Limits	Flag
		LCS	MB				
Monomethyl Hydrazine	50.0	48.6	50.0	97.2	100	2.81%	PASS
u-Dimethyl Hydrazine	50.0	50.3	48.7	101	97.5	3.13%	PASS
Hydrazine	10.0	9.97	10.7	99.7	107	6.76%	PASS

MS/MSD

Spiked Conc.	Recovered Concentration		Percent Recovery (%)	MS/MSD %D	Control Limits	Flag
	MS	Sample				
50.0	29.1	36.0	0.0	58.2	71.9	21.2%
50.0	47.5	49.0	0.0	94.9	98.1	3.28%
10.0	8.81	9.30	0.0	88.1	93.0	5.40%

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.

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.



Del Mar Analytical
952 267

SUBCONTRACT ORDER - PROJECT # IPB2639

1014 E. Cooley Dr., Suite A, Cotton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
 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) 796-3620 Fax (702) 796-3621

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: _____

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

Sample ID: IPB2639-01 Hydrazine-OUT	Water 03/03/06 14:30	Sampled: 02/28/06 14:30 Instant Notification Sub Truesdail for Monomethylhydrazine, J flags
--	-------------------------	---

Containers Supplied:
 1 L Amber (IPB2639-01AS)
 1 L Amber (IPB2639-01AT)

Rec'd 03/03/06
 sb 952267

**For Sample Conditions
 See Form Attached**

SAMPLE INTEGRITY:

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

~~Released By _____ Date _____ Time _____~~ Received By *Emilia Cruz MAI* Date *03/01/06* Time *06:50*
 Released By *Emilia Cruz MAI* Date *03/01/06* Time *07:25* Received By *J. Nagler / TLJ* Date *3/1/06* Time *7:27*



1014 E. Cooley Dr., Suite A, Carlin, CA 92324 Ph (909) 370-1667 Fax (909) 370-1046
 9484 Chesapeake Drive, Suite 305, San Diego, CA 92123 Ph (619) 505-9996 Fax (619) 505-9999
 8830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0061
 2520 E. Sunset Rd., Suite 88, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPB2639

<p align="center">SENDING LABORATORY:</p> <p>Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin</p>	<p align="center">RECEIVING LABORATORY:</p> <p>Truesdail Laboratories-SUB 14201 Franklin Avenue Tustin, CA 92680 Phone: (714) 730-6239 Fax: (714) 730-6462</p>
---	---

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

Analysis	Expiration	Comments
Sample ID: IPB2639-01 Water Hydrazine-OUT * Level II Data Package Containers Supplied: 1 L Amber (IPB2639-01AS) 1 L Amber (IPB2639-01AT)	Sampled: 02/28/06 14:30 03/03/06 14:30	Instant Notification Sub Truesdail for Monomethylhydrazine, J flags

* revised 3/20/06
 MC

SAMPLE INTEGRITY:

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

Released By: _____ Date: 03/06 Time: 06:50 Received By: _____ Date: 03/06 Time: 06:50
 Released By: _____ Date: 03/06 Time: 07:25 Received By: _____ Date: 3/1/06 Time: 7:27



Sample Integrity & Analysis Discrepancy Form

Client: Del Mar Analytical

Lab # 45 2267

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 Yes No N/A
12. Were samples pH checked? pH = _____ Yes No N/A
13. Were all analyses within holding time at time of receipt?
If not, notify the Project Manager. Yes No N/A
14. Have Project due dates been checked and accepted?
Turn Around Time (TAT): RUSH Std Yes No N/A
15. **Sample Matrix:** Liquid Drinking Water Ground Water Waste Water
 Sludge Soil Wipe Paint Solid Other water
16. Comments. _____
17. Sample Check-In completed by Truesdail Log-In/Receiving: J Brown

APPENDIX G

Section 48

Outfall 002, February 28, 2006

AMEC Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

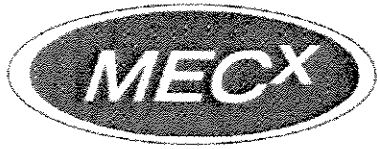
MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4DF48
 Task Order 1261.001D.01
 SDG No. IPB2639
 No. of Analyses 1

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

Date: April 5, 2006
 Reviewer's Signature
K. Shadowlight

ACTION ITEMS^a	
Case Narrative	
Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	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
COMMENTS^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 002

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPB2639

Prepared by
MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001D.01
Sample Delivery Group: IPB2639
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^x Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 002	IPB2639-01	27351-001	Water	1613

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C \pm 2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 0°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 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.

Sample ID: **IPB2639-01** *Duff Fall 002L*

EPA Method 1613

Client Data
 Name: Del Mar Analytical, Irvine
 Project: IPB2639
 Date Collected: 28-Feb-06
 Time Collected: 1430

Sample Data
 Matrix: Aqueous
 Sample Size: 1.01 L

Laboratory Data
 Lab Sample: 27351-001
 QC Batch No.: 7807
 Date Analyzed DB-5: 8-Mar-06
 Date Received: 2-Mar-06
 Date Extracted: 5-Mar-06
 Date Analyzed DB-225: NA

Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000116			13C-2,3,7,8-TCDD	98.3	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000113			13C-1,2,3,7,8-PeCDD	103	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000109			13C-1,2,3,4,7,8-HxCDD	92.8	32 - 141	
1,2,3,6,7,8-HxCDD	0.00000203			J	13C-1,2,3,6,7,8-HxCDD	95.0	28 - 130	
1,2,3,7,8,9-HxCDD	0.00000219			J	13C-1,2,3,7,8,9-HxCDD	99.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.00000360				13C-1,2,3,4,6,7,8-HpCDD	69.2	17 - 157	
OCDD	0.000345				13C-OCDD	97.9	24 - 169	
2,3,7,8-TCDF	ND	0.00000149			13C-2,3,7,8-TCDF	108	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000130			13C-1,2,3,7,8-PeCDF	108	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000121			13C-2,3,4,7,8-PeCDF	108	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.00000121			13C-1,2,3,4,7,8-HxCDF	94.8	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.000000772			13C-1,2,3,6,7,8-HxCDF	92.9	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.000000858			13C-2,3,4,6,7,8-HxCDF	93.2	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.00000111			13C-1,2,3,7,8,9-HxCDF	97.3	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND		0.00000472		13C-1,2,3,4,6,7,8-HpCDF	92.5	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND				13C-1,2,3,4,7,8,9-HpCDF	99.8	26 - 138	
OCDF	0.00000159			J	13C-OCDF	76.0	17 - 157	
Totals					CRS 37C1-2,3,7,8-TCDD	89.9	35 - 197	
Total TCDD	ND	0.00000116			Footnotes			
Total PeCDD	ND	0.00000113			a. Sample specific estimated detection limit			
Total HxCDD	0.00000135				b. Estimated maximum possible concentration.			
Total HpCDD	0.00000713				c. Method detection limit.			
Total TCDF	ND	0.00000149			d. Lower control limit - upper control limit.			
Total PeCDF	ND	0.00000125						
Total HxCDF	0.00000270							
Total HpCDF	0.00000904							

Analyst: JMH

Approved By: Martha M. Maier 08-Mar-2006 13:25

Project 27351

Lower IV


CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 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


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



DATA VALIDATION REPORT

NPDES Monitoring Program
Outfalls 001, 002, 011, 018

ANALYSIS: HYDRAZINES

SAMPLE DELIVERY GROUP: IPB2637, IPB2639,
IPB2641, IPB2643

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPB2637, IPB2639, IPB2641, IPB2643
Project Manager: P. Costa
Matrix: Water
Analysis: Hydrazines
QC Level: Level IV
No. of Samples: 4
No. of Reanalyses/Dilutions: 0
Reviewer: P. Meeks
Date of Review: April 8, 2006

The samples listed in Table 1 were validated based on the general guidelines outlined in the USEPA *Contract Laboratory Program National Functional Guidelines for Organic Data Review (2/94)*, and USEPA SW-846 Method 8315. 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	Truesdail Laboratory ID	Del Mar Laboratory ID	Matrix	COC Method
Outfall 001	952266	IPB2637-01	Water	8315
Outfall 002	952267	IPB2639-01	Water	8315
Outfall 011	952268	IPB2641-01	Water	8315
Outfall 018	952265	IPB2643-01	Water	8315

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in these SDGs were received at Del Mar Analytical and the subcontract laboratory, Truesdail Laboratories, within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. The analysis did not require preservation, and no preservation was noted in the field. The case narratives for these SDGs noted that the samples were received intact at both laboratories. No qualifications were required.

2.1.2 Chain of Custody

The COCs from the field to Del Mar were signed and dated by field and laboratory personnel, and the transfer COCs from Del Mar to Truesdail Laboratories were signed and dated by personnel from both laboratories. The original COCs and transfer COCs requested only monomethyl hydrazine analysis; however, unsymmetrical dimethyl hydrazine and hydrazine were also reported and therefore, validated. Custody seals were not required as the samples were transported to Del Mar and then to Truesdail by courier. Truesdail Laboratories did not list the client IDs on the Form Is; therefore, the reviewer hand-corrected the Form Is to include this information. No qualifications were required.

2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analysis. The samples were extraction within the three-day holding time and analyzed within three days of extraction. No qualifications were required.

2.2 CALIBRATION

The five-point initial calibrations were analyzed 03/03/06, with correlation coefficients of ≥ 0.995 for all three hydrazines. The ICV and CCV bracketing the sample analyses had hydrazine recoveries within the QC limits of 85-115%. No qualifications were required.

2.3 BLANKS

One method blank was analyzed with these SDGs. The results reported on the method blank summary form and in the raw data for the instrument and method blank analyses associated with the samples were nondetects at the reporting limit. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One laboratory control sample/laboratory control sample duplicate pair was analyzed with these SDGs. The hydrazine recoveries and RPDs were within the laboratory-established control limits. No qualifications were required.

2.5 SURROGATES RECOVERY

Surrogates were not utilized in this analysis. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MSD/MSD analyses were performed on Outfall 002. The hydrazines recoveries and RPDs were within the laboratory-established control limits. No qualifications were required.

2.7 FIELD QC SAMPLES

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

2.7.1 Field Blanks and Equipment Rinsates

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

2.7.2 Field Duplicates

There were no field duplicate samples in these SDGs.

2.8 COMPOUND IDENTIFICATION

The samples were analyzed by HPLC for monomethyl hydrazine, unsymmetrical dimethyl hydrazine, and hydrazine by Method 8315. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

2.9 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. As there were no sample detects, compound quantification was verified from the raw data by recalculating LCS/LCSD and MS/MSD detects. No calculation or transcription error were noted. The hydrazine reporting limits were supported by the lower levels of the initial calibration. No qualifications were required.



REPORT

Client: Del Mar Analytical
17461 Derian Ave., Suite 100
Irvine, CA 92614

Attention: Michele Chamberlin
Sample: Liquid / 1 Sample
Project Name: IPB2637
P.O. Number: IPB2637
Method Number: 8315 (Modified)
Investigation: Hydrazines in Liquid

Laboratory No: 952266
Report Date: March 20, 2006
Sampling Date: February 28, 2006
Receiving Date: March 1, 2006
Extraction Date: March 1, 2006
Analysis Date: March 3, 2006
Units: µg/L
Dilution Factor: 1
Reported By: JS

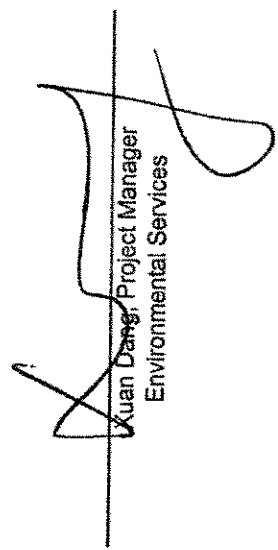
Analytical Results

Sample ID	Sample Description	Monomethyl		Unsymmetrical Dimethyl		Hydrazine
		Hydrazine	Hydrazine	Hydrazine	Hydrazine	
705657-MB	Method Blank	ND	ND	ND	ND	ND
952266	IPB2637-01 Outfall	ND	U	U	U	U
MDL		1.2				0.39
PQL		5.0				1.0

* Analysis not validated

MDL: Method Detection Limit, µg/L
PQL: Practical Quantitation Limit, µg/L
ND: Not Detected at or above the MDL value.
N/A: Not Applicable

Note: Results based on detector #1 (UV=365nm) data.


Juan Diego Project Manager
Environmental Services

LEVEL IV

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.



Client: Del Mar Analytical
 17461 Derian Ave., Suite 100
 Irvine, CA 92614

Attention: Michele Chamberlin
Sample: Liquid / 1 Sample
Project Name: IPB2639
P.O. Number: IPB2639
Method Number: 8315 (Modified)
Investigation: Hydrazines in Liquid

REPORT

Laboratory No: 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
Dilution Factor: 1
Reported By: JS

Analytical Results

Sample ID	Sample Description	Monomethyl		Unsymmetrical Dimethyl		Hydrazine	
		Hydrazine	Hydrazine	Hydrazine	Hydrazine	Hydrazine	Hydrazine
705657-MB	Method Blank	ND	ND	ND	ND	ND	ND
952267	IPB2639-01	1.2	0.27	0.39	1.0		
MDL							
PQL							

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.

Xuani Deng
 Xuani Deng, Project Manager
 Environmental Services

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REPORT

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: 8215 (Modified)
Investigation: Hydrazines in Liquid

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

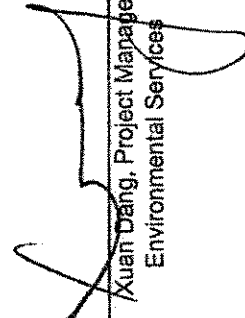
Analytical Results

Sample ID	Sample Description	Monomethyl		Unsymmetrical Dimethyl		Hydrazine	Hydrazine
		Hydrazine	Hydrazine	Hydrazine	Hydrazine		
705657-MB	Method Blank	ND	ND	ND	ND	ND	ND
952268	IPB2641-01	ND	ND	ND	ND	ND	ND
MDL	Outfall oil	1.2	0.27	0.39	0.39	0.39	0.39
PQL		5.0	5.0	5.0	5.0	5.0	5.0

*Analysis not validated

MDL: Method Detection Limit, µg/L
PQL: Practical Quantitation Limit, µg/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

LEVEL IV

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REPORT

Client: Del Mar Analytical
17461 Derian Ave., Suite 100
Irvine, CA 92614

Attention: Michele Chamberlin
Sample: Liquid / 1 Sample
Project Name: IPB2643
P.O. Number: IPB2643
Method Number: 8315 (Modified)
Investigation: Hydrazines in Liquid

Laboratory No: 952265
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

Page 1 of 1

Analytical Results

Sample ID	Sample Description	Monomethyl		Unsymmetrical Dimethyl		Hydrazine	
		Hydrazine	Hydrazine	Hydrazine	Hydrazine	Hydrazine	Hydrazine
705657-MB	Method Blank	ND	ND	ND	ND	ND	ND
952265	cut-fail 018 IPB2643-01	ND	U	ND	U	ND	U
MDL		1.2		0.27		0.39	
PQL		5.0		5.0		1.0	

*Analysis Not Validated

MDL: Method Detection Limit, ug/L
PQL: Practical Quantification 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.

Xian Dang, Project Manager
Environmental Services


Level IV

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.

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4MT48
 Task Order: 1261.001D.01
 SDG No.: IPB2639

No. of Analyses: 1
 Date: April 4, 2006
 Reviewer's Signature


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

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



DATA VALIDATION REPORT

NPDES Sampling
Outfall 002

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPB2639

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPB2639
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^x *Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0)*, EPA Methods 200.7, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPB2639-01	Water	200.7

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel and accounted for the sample and analyses presented in this SDG. Outfall 002 was reanalyzed for iron. As the laboratory did not append the MWH ID for the iron reanalysis with "RE1," the reviewer added this information to the Form I. No sample qualifications were required.

2.1.3 Holding Times

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

2.2 ICP-MS TUNING

ICP-MS was not used to analyze this sample; therefore, this criterion is not applicable.

2.3 CALIBRATION

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

2.4 BLANKS

There were detects and negative results in the method blanks and CCBs associated with the ICP metals analyses; however, none were of sufficient concentration to qualify the site sample.

While checking the summary data, the reviewer noted that cadmium was detected in method blank 6B28152-BLK1 at 0.0520 µg/L. Although the ICP-MS data was not reviewed, the reviewer checked the sample result for cadmium and determined that cadmium detected in Outfall 002 should be qualified as an estimated nondetect, "UJ." No further qualifications were required.

2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICP ICSA and ICSAB analyses were performed in association with the sample in this SDG. All recoveries and results were determined to be acceptable. No qualifications were required.

2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

2.7 LABORATORY DUPLICATES

No MS/MSD or laboratory 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 LSC results. No qualifications were required.

2.9 ICP/MS AND ICP SERIAL DILUTION

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

2.10 INTERNAL STANDARDS PERFORMANCE

ICP-MS was not used to analyze this sample; therefore, this criterion is not applicable.

2.11 SAMPLE RESULT VERIFICATION

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

Per a request from MWH personnel, the laboratory reanalyzed Outfall 002 for iron. As the reanalysis result was similar to the original result, the reanalysis result, Outfall 002 RE1, was rejected, "R," in favor of the original result. No further qualifications were required.

2.12 FIELD QC SAMPLES

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

2.12.1 Field Blanks and Equipment Rinsates

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

2.12.2 Field Duplicates

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

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

Project ID: Annual Outfall 002
Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Barium	EPA 200.7	6B28151	0.0028	0.010	0.035	1	02/28/06	03/01/06	Per Qual
Boron	EPA 200.7	6B28151	0.0080	0.050	0.068	1	02/28/06	03/01/06	Per Qual
Iron	EPA 200.7	6B28151	0.0088	0.040	1.4	1	02/28/06	03/01/06	Per Qual

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

LEVEL IV

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Del Mar Analytical

17461 Darian 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 002 Report Number: IPB2639	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: IPB2639-01RE1 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Iron	EPA 200.7	6C20082	0.015	0.040	1.5	1	03/20/06	03/21/06	R B-1 D

Outfall 002 RE1

for Qual
Qual

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

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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 002 Report Number: IPB2639	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	Raw Qual	Qual Code
Sample ID: IPB2639-01 (Outfall 002 - Water) - cont. Reporting Units: ug/l											
Antimony	EPA 200.8	6B28152	0.18	2.0	ND	1	02/28/06	03/01/06	*		
Arsenic	EPA 200.7	6B28151	3.8	5.0	ND	1	02/28/06	03/01/06	U		
Beryllium	EPA 200.7	6B28151	0.62	2.0	ND	1	02/28/06	03/01/06	U		
Cadmium	EPA 200.8	6B28152	0.015	1.0	0.14	1	02/28/06	03/01/06	U J		B
Chromium	EPA 200.7	6B28151	0.68	5.0	2.0	1	02/28/06	03/01/06	U J		DUK
Cobalt	EPA 200.7	6B28151	2.0	10	ND	1	02/28/06	03/01/06	U		
Copper	EPA 200.8	6B28152	0.49	2.0	3.6	1	02/28/06	03/01/06	*		
Lead	EPA 200.8	6B28152	0.13	1.0	1.7	1	02/28/06	03/01/06	*		
Manganese	EPA 200.7	6B28151	3.2	20	44	1	02/28/06	03/01/06			
Mercury	EPA 245.1	6C01088	0.063	0.20	ND	1	03/01/06	03/01/06	*		
Nickel	EPA 200.7	6B28151	2.0	10	2.0	1	02/28/06	03/01/06	U J		DUK
Selenium	EPA 200.8	6B28152	0.36	2.0	ND	1	02/28/06	03/01/06	*		
Silver	EPA 200.8	6B28152	0.089	1.0	ND	1	02/28/06	03/01/06	U		
Thallium	EPA 200.8	6B28152	0.075	1.0	0.19	1	02/28/06	03/01/06	U		
Vanadium	EPA 200.7	6B28151	3.0	10	4.7	1	02/28/06	03/01/06	U J		DUK
Zinc	EPA 200.7	6B28151	3.7	20	14	1	02/28/06	03/01/06	U J		DUK

* Analysis not validated

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

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

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4PP12
 Task Order: 1261.001D.01
 SDG No.: IPB2639

No. of Analyses: 1

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

Date: April 7, 2006
 Reviewer's Signature


ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	Qualifications applied for 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 ^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 002

ANALYSIS: PESTICIDES / PCBs

SAMPLE DELIVERY GROUP: IPB2639

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2639
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^X Data Validation Procedure for Organochlorine Pesticides and PCBs (DVP-4, Rev. 0)*, *EPA Method 608*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPB2639-01	Water	608

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C, at 5°C. According to the case narrative for this SDG, the sample was received intact and on ice. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 PESTICIDES INSTRUMENT PERFORMANCE

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

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

2.3 CALIBRATION

2.3.1 Analytical Sequence

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

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 ≥ 0.995 , except for the average %RSD for Aroclor 1260. The nondetects for Aroclors 1248, 154, and 1260 in Outfall 002 were qualified as estimated, "UJ." The %RSDs for all pesticide target compounds were $\leq 10\%$ on the primary column or r^2 values ≥ 0.995 , with the exception of the %RSD for heptachlor. The nondetect for heptachlor was qualified as estimated, "UJ," in Outfall 002.

The pesticide and average Aroclor %RSDs were $\leq 10\%$ or r^2 values ≥ 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 002 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 002 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 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.

2.10 COMPOUND IDENTIFICATION

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

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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



17461 Dorian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3287
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4657 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 002 Report Number: IPB2639	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: IPB2639-01 (Outfall 002 - 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	U
Aroclor 1232	EPA 608	6C05031	0.24	0.94	ND	0.943	03/05/06	03/06/06	U
Aroclor 1242	EPA 608	6C05031	0.24	0.94	ND	0.943	03/05/06	03/06/06	U
Aroclor 1248	EPA 608	6C05031	0.24	0.94	ND	0.943	03/05/06	03/06/06	U
Aroclor 1254	EPA 608	6C05031	0.24	0.94	ND	0.943	03/05/06	03/06/06	U
Aroclor 1260	EPA 608	6C05031	0.38	0.94	ND	0.943	03/05/06	03/06/06	U
Surrogate: Decachlorobiphenyl (45-120%)					85 %				

Rev
Qual
Code
C
C
C

PM 4/10/06

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

Level IV

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: 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

ACTION ITEMS*	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	Qualifications were applied for exceeded holding times and low detector efficiencies.
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*	
* Subcontracted analytical laboratory is not meeting contract and/or method requirements. * Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Sampling
Multiple Outfalls

ANALYSIS: RADIONUCLIDES

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

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: 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

SOG <u>8550</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R601014-01</u>	Contract <u>PROJECTS IPB2637</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MCA	Rev Qual	Qual Code
<u>Sample ID</u> <u>Outfall 001</u> IPB2637-01	<u>Sample ID</u> 8550-001	02/28/06	03/06/06	Gross Alpha	2.64 ± 1.7	pCi/L	1.95	J	R, H
			03/06/06	Gross Beta	7.69 ± 1.6	pCi/L	2.04	J	↓

LEVEL IV

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

Eberline Services

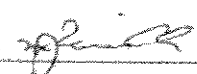
ANALYSIS RESULTS

SDG <u>A661</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R503017-01</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
Sample ID <i>Outfall 002</i> IPB2639-01		8661-001	02/28/06	03/06/06	Gross Alpha	2.58 ± 1.6	pCi/L	1.93
				03/06/06	Gross Beta	4.60 ± 1.4	pCi/L	1.85

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LEVEL IV

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Report Date <u>03/15/06</u>
Page 1

Eberline Services

ANALYSIS RESULTS

SDG <u>8552</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>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	Rev Qual	Qual Code
Outfall 011 IPB2641-01		8562-001	02/28/06	03/06/06	Gross Alpha	5.24 ± 2.0	pCi/L	1.86	J ↓	R, H ↓
				03/06/06	Gross Beta	7.59 ± 1.7	pCi/L	2.18		

LEVEL IV

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Report Date <u>03/13/06</u>
Page 1

Eberline Services

ANALYSIS RESULTS

SDG <u>8663</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>8603015-01</u>	Contract <u>PROJECT# IPB2643</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Noclide	Results - 2σ	Units	MDA	Rev Qual	Qual Code
		<u>outfall 018</u>								
		<u>IPB2643-01</u>								
		<u>8663-001</u>	<u>02/28/06</u>	<u>03/06/06</u>	<u>GrossAlpha</u>	<u>1.88 ± 1.1</u>	<u>pCi/L</u>	<u>1.40</u>	<u>J</u>	<u>R, H</u>
				<u>03/06/06</u>	<u>Gross Beta</u>	<u>9.89 ± 1.4</u>	<u>pCi/L</u>	<u>1.81</u>	<u>↓</u>	<u>↓</u>

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>8603020-01</u>	Contract <u>PROJECT# IPH2645</u>
Received Date <u>03/02/06</u>	Matrix <u>WATER</u>

Client	Lab	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MHA	Rev Qual	Qual Code
Sample ID <u>Outfall 005</u>	Sample ID								
IPH2645-01	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	6.96 ± 1.4	pCi/L	1.98	J	↓

LEVEL IV

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Report Date <u>03/16/06</u>
Page 1


Eberline Services

ANALYSIS RESULTS

SOG <u>8665</u>	Client <u>DEL MAR ANAD</u>
Work Order <u>8603821-01</u>	Contract <u>PROJECT# IP82647</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
Outfall 007										
IP82647-01	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 
Report Date <u>03/13/06</u>
Page 1

Eberline Services

ANALYSIS RESULTS

SDG <u>8556</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>8503022-01</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
Outfall 008		8666-001	02/28/06	03/06/06	GrossAlpha	1.01 ± 1.6	pCi/L	2.02	UI	R, H
IPB2648-01				03/06/06	Gross Beta	23.7 ± 2.2	pCi/L	1.92	J	↓

LEVEL IV

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

Eberline Services

ANALYSIS RESULTS

SDG 8667	Client DEL MAR ANAL
Work Order 8593823-01	Contract PROJECT# IPE2650
Received Date 03/02/06	Matrix WATER

Client	Lab	Sample ID	Collected	Analyzed	Exclude	Results ± 2σ	Units	MDA	PR	Qual Code
Outfall 010										
IPB2650-01	8667-001	02/28/06	03/06/06	Gross Alpha		0.532 ± 0.90	pCi/L	1.58	JH	R, H
			03/06/06	Gross Beta		4.02 ± 1.3	pCi/L	1.83		↓

LEVEL IV

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

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4SV27
 Task Order: 1261.001D.01
 SDG No.: IPB2639

No. of Analyses: 1

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

Date: April 8, 2006
 Reviewer's Signature: 

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



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 002

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP IPB2639

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2639
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 8, 2006

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

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPB2639-01	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

Two initial calibrations were associated with the sample, analyzed 01/18/06 and 02/27/06. The calibration analyzed 02/27/06 was associated with a reanalysis of the sample for benzidine only. The %RSDs for all target compounds were ≤35% or r^2 values ≥0.995 in the respective initial calibrations. The continuing calibrations associated with the sample analyses were analyzed 03/09/06. The %Ds for all target compounds were ≤20% in the respective continuing calibrations. No qualifications were required.

2.4 BLANKS

One method blank (6C06060-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 (6C06060-BS1/BSD1) was extracted and analyzed with this SDG. Benzidine and benzoic acid were not recovered in the BS or BSD, and dimethylphthalate was recovered below the QC limits but $\geq 10\%$ in both the BS and BSD. Nondetect results for benzidine and benzoic acid were rejected, "R," and the nondetect result for dimethylphthalate was qualified as estimated, "UJ," in sample Outfall 002. All remaining recoveries and all RPDs were within the laboratory-established QC limits. No qualifications were required.

2.6 SURROGATE RECOVERY

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

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.8 FIELD QC SAMPLES

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

2.8.1 Field Blanks and Equipment Rinsates

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

2.8.2 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for 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

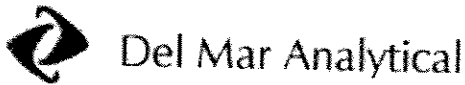
Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. Results were reported in $\mu\text{g/L}$ (ppb). Any results reported between the reporting limit and the MDL were qualified as estimated, "J," and annotated with the "DNQ" qualifier code. No further qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

2.13 SYSTEM PERFORMANCE

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



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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6C06060	0.094	0.47	ND	0.943	03/06/06	03/09/06	u
Acenaphthylene	EPA 625	6C06060	0.094	0.47	ND	0.943	03/06/06	03/09/06	u
Aniline	EPA 625	6C06060	2.7	9.4	ND	0.943	03/06/06	03/09/06	u
Anthracene	EPA 625	6C06060	0.078	0.47	ND	0.943	03/06/06	03/09/06	u
Benzidine	EPA 625	6C06060	3.0	4.7	ND	0.943	03/06/06	03/10/06	u
Benzoic acid	EPA 625	6C06060	3.5	19	ND	0.943	03/06/06	03/09/06	u
Benzo(a)anthracene	EPA 625	6C06060	0.036	4.7	ND	0.943	03/06/06	03/09/06	u
Benzo(a)pyrene	EPA 625	6C06060	0.13	1.9	ND	0.943	03/06/06	03/09/06	u
Benzo(b)fluoranthene	EPA 625	6C06060	0.047	1.9	ND	0.943	03/06/06	03/09/06	u
Benzo(g,h,i)perylene	EPA 625	6C06060	0.056	4.7	ND	0.943	03/06/06	03/09/06	u
Benzo(k)fluoranthene	EPA 625	6C06060	0.050	0.47	ND	0.943	03/06/06	03/09/06	u
Benzyl alcohol	EPA 625	6C06060	0.20	4.7	ND	0.943	03/06/06	03/09/06	u
Bis(2-chloroethoxy)methane	EPA 625	6C06060	0.068	0.47	ND	0.943	03/06/06	03/09/06	u
Bis(2-chloroethyl)ether	EPA 625	6C06060	0.079	0.47	ND	0.943	03/06/06	03/09/06	u
Bis(2-chloroisopropyl)ether	EPA 625	6C06060	0.10	0.47	ND	0.943	03/06/06	03/09/06	u
Bis(2-ethylhexyl)phthalate	EPA 625	6C06060	1.0	4.7	ND	0.943	03/06/06	03/09/06	u
4-Bromophenyl phenyl ether	EPA 625	6C06060	0.11	0.94	ND	0.943	03/06/06	03/09/06	u
Butyl benzyl phthalate	EPA 625	6C06060	0.32	4.7	0.45	0.943	03/06/06	03/09/06	u
4-Chloroaniline	EPA 625	6C06060	0.19	1.9	ND	0.943	03/06/06	03/09/06	u
2-Chloronaphthalene	EPA 625	6C06060	0.056	0.47	ND	0.943	03/06/06	03/09/06	u
4-Chloro-3-methylphenol	EPA 625	6C06060	0.32	1.9	ND	0.943	03/06/06	03/09/06	u
4-Chlorophenyl phenyl ether	EPA 625	6C06060	0.053	0.47	ND	0.943	03/06/06	03/09/06	u
2-Chlorophenol	EPA 625	6C06060	0.11	0.94	ND	0.943	03/06/06	03/09/06	u
Chrysene	EPA 625	6C06060	0.068	0.47	ND	0.943	03/06/06	03/09/06	u
Dibenz(a,h)anthracene	EPA 625	6C06060	0.078	0.47	ND	0.943	03/06/06	03/09/06	u
Dibenzofuran	EPA 625	6C06060	0.071	0.47	ND	0.943	03/06/06	03/09/06	u
Di-n-butyl phthalate	EPA 625	6C06060	0.25	1.9	ND	0.943	03/06/06	03/09/06	u
1,2-Dichlorobenzene	EPA 625	6C06060	0.10	0.47	ND	0.943	03/06/06	03/09/06	u
1,3-Dichlorobenzene	EPA 625	6C06060	0.12	0.47	ND	0.943	03/06/06	03/09/06	u
1,4-Dichlorobenzene	EPA 625	6C06060	0.047	0.47	ND	0.943	03/06/06	03/09/06	u
3,3-Dichlorobenzidine	EPA 625	6C06060	0.88	4.7	ND	0.943	03/06/06	03/09/06	u
2,4-Dichlorophenol	EPA 625	6C06060	0.20	1.9	ND	0.943	03/06/06	03/09/06	u
Diethyl phthalate	EPA 625	6C06060	0.11	0.94	ND	0.943	03/06/06	03/09/06	u
2,4-Dimethylphenol	EPA 625	6C06060	0.29	1.9	ND	0.943	03/06/06	03/09/06	u
Dimethyl phthalate	EPA 625	6C06060	0.076	0.47	ND	0.943	03/06/06	03/09/06	u
4,6-Dinitro-2-methylphenol	EPA 625	6C06060	0.36	4.7	ND	0.943	03/06/06	03/09/06	u
2,4-Dinitrophenol	EPA 625	6C06060	2.5	4.7	ND	0.943	03/06/06	03/09/06	u
2,4-Dinitrotoluene	EPA 625	6C06060	0.22	4.7	ND	0.943	03/06/06	03/09/06	u
2,6-Dinitrotoluene	EPA 625	6C06060	0.23	4.7	ND	0.943	03/06/06	03/09/06	u
Di-n-octyl phthalate	EPA 625	6C06060	0.16	4.7	ND	0.943	03/06/06	03/09/06	u
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6C06060	0.082	0.94	ND	0.943	03/06/06	03/09/06	u

rel. qual. code

u

DNZ

Level II

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: Broawyn Kelly

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Fluoranthene	EPA 625	6C06060	0.084	0.47	ND	0.943	03/06/06	03/09/06	<i>rel. qual. code</i> ↓ <i>J u</i> ↓
Fluorene	EPA 625	6C06060	0.071	0.47	ND	0.943	03/06/06	03/09/06	
Hexachlorobenzene	EPA 625	6C06060	0.12	0.94	ND	0.943	03/06/06	03/09/06	
Hexachlorobutadiene	EPA 625	6C06060	0.36	1.9	ND	0.943	03/06/06	03/09/06	
Hexachlorocyclopentadiene	EPA 625	6C06060	1.7	4.7	ND	0.943	03/06/06	03/09/06	
Hexachloroethane	EPA 625	6C06060	0.48	2.8	ND	0.943	03/06/06	03/09/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6C06060	0.18	1.9	ND	0.943	03/06/06	03/09/06	
Isophorone	EPA 625	6C06060	0.056	0.94	ND	0.943	03/06/06	03/09/06	
2-Methylnaphthalene	EPA 625	6C06060	0.12	0.94	ND	0.943	03/06/06	03/09/06	
2-Methylphenol	EPA 625	6C06060	0.26	1.9	ND	0.943	03/06/06	03/09/06	
4-Methylphenol	EPA 625	6C06060	0.19	4.7	ND	0.943	03/06/06	03/09/06	
Naphthalene	EPA 625	6C06060	0.12	0.94	0.15	0.943	03/06/06	03/09/06	
2-Nitroaniline	EPA 625	6C06060	0.17	4.7	ND	0.943	03/06/06	03/09/06	
3-Nitroaniline	EPA 625	6C06060	0.33	4.7	ND	0.943	03/06/06	03/09/06	
4-Nitroaniline	EPA 625	6C06060	0.46	4.7	ND	0.943	03/06/06	03/09/06	
Nitrobenzene	EPA 625	6C06060	0.094	0.94	ND	0.943	03/06/06	03/09/06	
2-Nitrophenol	EPA 625	6C06060	0.22	1.9	ND	0.943	03/06/06	03/09/06	
4-Nitrophenol	EPA 625	6C06060	0.69	4.7	ND	0.943	03/06/06	03/09/06	
N-Nitrosodimethylamine	EPA 625	6C06060	0.21	1.9	ND	0.943	03/06/06	03/09/06	
N-Nitroso-di-n-propylamine	EPA 625	6C06060	0.17	1.9	ND	0.943	03/06/06	03/09/06	
N-Nitrosodiphenylamine	EPA 625	6C06060	0.073	0.94	ND	0.943	03/06/06	03/09/06	
Pentachlorophenol	EPA 625	6C06060	0.74	1.9	ND	0.943	03/06/06	03/09/06	
Phenanthrene	EPA 625	6C06060	0.067	0.47	ND	0.943	03/06/06	03/09/06	
Phenol	EPA 625	6C06060	0.13	0.94	ND	0.943	03/06/06	03/09/06	
Pyrene	EPA 625	6C06060	0.056	0.47	ND	0.943	03/06/06	03/09/06	
1,2,4-Trichlorobenzene	EPA 625	6C06060	0.094	0.94	ND	0.943	03/06/06	03/09/06	
2,4,5-Trichlorophenol	EPA 625	6C06060	0.071	1.9	ND	0.943	03/06/06	03/09/06	
2,4,6-Trichlorophenol	EPA 625	6C06060	0.094	0.94	ND	0.943	03/06/06	03/09/06	
Surrogate: 2-Fluorophenol (35-120%)					60%				
Surrogate: Phenol-d6 (45-120%)					69%				
Surrogate: 2,4,6-Tribromophenol (30-125%)					74%				
Surrogate: Nitrobenzene-d5 (45-120%)					79%				
Surrogate: 2-Fluorobiphenyl (45-120%)					66%				
Surrogate: Terphenyl-d14 (45-135%)					77%				

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager


Level IV

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4TF4
 Task Order: 1261.001D.01
 SDG No.: IPB2639

No. of Analyses: 1
 Date: April 7, 2006
 Reviewer's Signature


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

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



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 002

ANALYSIS: TOTAL FUEL HYDROCARBONS

SAMPLE DELIVERY GROUP IPB2639

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2639
Project Manager: P. Costa
Matrix: Water
Analysis: TFH/EFH
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: P. Meeks
Date of Review: April 8, 2006

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

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPB2639-01	Water	8015B & 8015M

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

The water sample was analyzed within 14 days of collection for the gasoline range organics analysis (GRO). The sample for extractable fuel hydrocarbons (EFH) was extracted within seven days of collection and analyzed within 40 days of extraction. No qualifications were required.

2.2 CALIBRATION

Three initial calibrations, two for EFH analyzed 02/22/06 and 02/23/06, and one for GRO analyzed 01/28/06, were associated with the samples in this SDG. The %RSDs for target compounds GRO (C4-C12) and EFH (C13-C22) were ≤20%. An initial calibration verification (ICV) was analyzed following each initial calibration, with %Ds for the target compounds within the QC limit of ≤15%. The continuing calibrations bracketing the sample analyses had %Ds of ≤15% for the EFH analyses. The %D for the opening GRO CCV was above the control limit. As the response was low, the nondetect for GRO in Outfall 002 was qualified as estimated, "UJ." No further qualifications were required.

2.3 BLANKS

Two method blanks, one GRO (606046-BLK1) and one EFH (607098-BLK1) were associated with this SDG. Target compounds GRO (C4-C12) and EFH (C13-C22) were not detected

DATA VALIDATION REPORT

above the MDLs in the respective method blanks. Review of the method blank raw data indicated no false negatives. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One GRO blank spike (606046-BS1) and one EFH blank spike/blank spike duplicate pair (607098-BS1/BSD1) were associated with this SDG. All recoveries were within the laboratory-established QC limits, and the RPD for the EFH BS/BSD pair was within the QC limit of $\leq 25\%$. No qualifications were required.

2.5 SURROGATE RECOVERY

The samples for GRO analysis were fortified with the surrogate compound 4-BFB, and for EFH analysis, n-octacosane. Surrogate recoveries were within the laboratory-established QC limits of 65-140% for 4-BFB and 40-125% for n-octacosane. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.7 FIELD QC SAMPLES

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

2.7.1 Field Blanks and Equipment Rinsates

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

2.7.2 Trip Blanks

There was no trip blank associated with the GRO analysis of site sample Outfall 002. As GRO (C4-C12) was not detected above the MDL in Outfall 002, trip blank review was not necessary. No qualifications were required.

DATA VALIDATION REPORT

2.7.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.8 COMPOUND IDENTIFICATION

The laboratory analyzed for target compounds GRO (C4-C12) and EFH (C13-C22). Review of the sample chromatograms, retention times, and patterns indicated no problems with target compound identification. No qualifications were required.

2.9 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limit was supported by the low point of the initial calibration and the laboratory MDLs. Results were reported in mg/L (ppm). EFH detected below the reporting limit was qualified as estimated, "J," and annotated with "DNQ," in accordance with the NPDES permit. No further qualifications were required.



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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 002 Report Number: IPB2639	Sampled: 02/28/06 Received: 02/28/06
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EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2639-01RE1 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	6C07098	0.042	0.47	0.043	0.943	03/07/06	03/07/06	J J
Surrogate: n-Octacosane (40-125%)					83 %				DNQ

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

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IPB2639 <Page 4 of 63>



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 2520 E. Sunset Rd. #3, Las Vegas, NV 89139 (702) 798-3610 FAX (702) 798-3621

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 002 Report Number: IPB2639	Sampled: 02/28/06 Received: 02/28/06
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VOLATILE FUEL HYDROCARBONS (EPA 5030/CADHS Mod. 8015)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6C06046	0.050	0.10	ND	1	03/06/06	03/06/06	low Qual high Code
Surrogate: 4-BFB (PID) (65-140%)					89 %				

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

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DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 002

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB2639

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2639
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 8, 2006

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

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPB2639-01	Water	624
Trip Blank	IPB2639-02	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 for the analysis of target compound 2-chloroethyl vinyl ether; however, the instrument run log indicated the pH of sample Trip Blank was four rather than seven, indicating some acidification. The result for 2-chloroethyl vinyl ether in sample Trip Blank was not qualified; however, detection of that compound may have been affected. 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 002. 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 (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

DATA VALIDATION REPORT

002. Sample Trip Blank was a field QC sample and required no qualification. No further qualifications were required.

2.4 BLANKS

One method blank (6C02019-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 (6C02019-BS1) was analyzed with this SDG. Target compounds acrolein and acrylonitrile were not included in the blank spike. The recovery for 1,1,2,2-tetrachloroethane was above the QC limits in the blank spike; however, the compound was not detected in the site sample of this SDG. The remaining recoveries were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

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

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on the site sample in this SDG. The recovery for 1,1,2,2-tetrachloroethane was above the laboratory-established QC limits in the MS only, and the RPDs exceeded the QC limit for 2-chloroethyl vinyl ether and 1,1,2,2-tetrachloroethane. All remaining recoveries and RPDs were within the QC limits. No qualifications were required.

2.8 FIELD QC SAMPLES

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

2.8.1 Trip Blanks

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

2.8.2 Field Blanks and Equipment Rinsates

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

2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for volatile target compounds by EPA Method 624. For two of the requested target compounds, 1,2-dichloro-1,1,2-trifluoroethane and cyclohexane, only a TIC search was performed. Calibration was performed for 1,2-dichloro-1,1,2-trifluoroethane but was not utilized, and no calibration was performed for cyclohexane. Neither compound was identified in the site sample. Nondetect results for both compounds were qualified as estimated, "UJ," in the site sample. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No further 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). Any results reported between the reporting limit and the MDL were qualified as estimated, "J," and annotated with the "DNQ" qualifier code. No further qualifications were required.

Project: NPDES
SDG: IPB2639
Analysis: VOCs

DATA VALIDATION REPORT

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for this SDG; however, a TIC search was performed for two requested target compounds, 1,2-dichloro-1,1,2-trifluoroethane and cyclohexane (see section 2.10). No qualifications were required.

2.13 SYSTEM PERFORMANCE

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



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

Project ID: Annual Outfall 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Benzene	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/02/06	u
Bromodichloromethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/02/06	u
Bromoform	EPA 624	6C02019	0.32	5.0	ND	1	03/02/06	03/02/06	u
Bromomethane	EPA 624	6C02019	0.42	5.0	ND	1	03/02/06	03/02/06	u
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C02019	1.2	5.0	ND	1	03/02/06	03/02/06	u
Carbon tetrachloride	EPA 624	6C02019	0.28	5.0	ND	1	03/02/06	03/02/06	u
Chlorobenzene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/02/06	u
Chloroethane	EPA 624	6C02019	0.40	5.0	ND	1	03/02/06	03/02/06	u
Chloroform	EPA 624	6C02019	0.33	2.0	ND	1	03/02/06	03/02/06	u
Chloromethane	EPA 624	6C02019	0.30	5.0	ND	1	03/02/06	03/02/06	u
Dibromochloromethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/02/06	u
1,2-Dichlorobenzene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/02/06	u
1,3-Dichlorobenzene	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/02/06	u
1,4-Dichlorobenzene	EPA 624	6C02019	0.37	2.0	ND	1	03/02/06	03/02/06	u
1,1-Dichloroethane	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/02/06	u
1,2-Dichloroethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/02/06	u
1,1-Dichloroethene	EPA 624	6C02019	0.32	3.0	ND	1	03/02/06	03/02/06	u
trans-1,2-Dichloroethene	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/02/06	u
1,2-Dichloropropane	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/02/06	u
cis-1,3-Dichloropropene	EPA 624	6C02019	0.22	2.0	ND	1	03/02/06	03/02/06	u
trans-1,3-Dichloropropene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/02/06	u
Ethylbenzene	EPA 624	6C02019	0.25	2.0	ND	1	03/02/06	03/02/06	u
Methylene chloride	EPA 624	6C02019	0.70	5.0	ND	1	03/02/06	03/02/06	u
1,1,2,2-Tetrachloroethane	EPA 624	6C02019	0.24	2.0	ND	1	03/02/06	03/02/06	u
Tetrachloroethene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/02/06	u
Toluene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/02/06	u
1,1,1-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/02/06	u
1,1,2-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/02/06	u
Trichloroethene	EPA 624	6C02019	0.26	5.0	2.4	1	03/02/06	03/02/06	J, DNQ
Trichlorofluoromethane	EPA 624	6C02019	0.34	5.0	ND	1	03/02/06	03/02/06	u
Vinyl chloride	EPA 624	6C02019	0.26	5.0	ND	1	03/02/06	03/02/06	u
Xylenes, Total	EPA 624	6C02019	0.52	4.0	ND	1	03/02/06	03/02/06	u
Surrogate: Dibromofluoromethane (80-120%)					112 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					100 %				

Handwritten notes:
 new
 final
 code

Handwritten notes:
 M, M, R-3

Handwritten notes:
 DNQ

Handwritten notes:
 WAC
 excess etc

Handwritten notes:
 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 002

Report Number: IPB2639

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: IPB2639-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/02/06	<i>see EPA Method 8210 L</i>
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	
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%)					100 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					97 %				

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

Project ID: Annual Outfall 002

Report Number: IPB2639

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
Sample ID: IPB2639-01 (Outfall 002 - Water)									
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	u/s *10
Cyclohexane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/02/06	↓
Sample ID: IPB2639-02 (Trip Blank - Water)									
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	u
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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IPB2639 <Page 9 of 63>

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

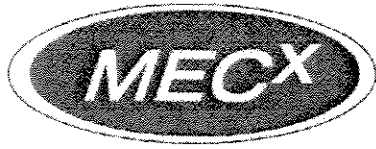
Package ID B4VO39
 Task Order 1261.001D.01
 SDG No. IPB2639

No. of Analyses 1

Laboratory Del Mar Analytical-Phoenix
 Reviewer K. Shadowlight
 Analysis/Method 1,4-Dioxane by Method 8260

Date: <u>April 5, 2006</u>
Reviewer's Signature <i>K. Shadowlight</i>

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



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 002

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB2639

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2639
Project Manager: P. Costa
Matrix: Water
Analysis: Volatiles (1,4-dioxane)
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
Reviewer: K. Shadowlight
Date of Review: April 5, 2006

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

Table 1. Sample Identification

Client ID	Laboratory ID (Irvine)	Laboratory ID (Phoenix)	Matrix	COC Method
Outfall 002	IPB2639-01	PPC0071-01	Water	8260B

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$, at 2°C at Del Mar-Irvine. The 1,4-dioxane analysis was subcontracted to Del Mar-Phoenix, and the temperature recorded upon receipt was 2°C . According to the case narrative for this SDG, the sample was received intact, on ice, and properly preserved. Information regarding lack of headspace in the VOA vials was not provided. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 GC/MS TUNING

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

2.3 CALIBRATION

One initial calibration, dated 02/17/06, was associated with the sample in this SDG. The average RRF for target compound 1,4-dioxane was ≥ 0.05 and the %RSD was $\leq 15\%$. The continuing calibration associated with the sample analysis was dated 03/03/06. The laboratory reported the continuing calibration and the blank spike (P6C0311-BS1) of the blank spike/blank spike duplicate pair from the same analysis. As a single analysis cannot be reported as both a CCV and a blank spike, the reviewer reported the analysis as the continuing calibration. The RRF for 1,4-dioxane was ≥ 0.05 and the %D was within the QC limit of $\leq 20\%$. The average RRF and %RSD in the initial calibration and RRF and %D in the continuing calibration were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

One method blank (P6C0311-BLK1) was analyzed with this SDG. Target compound 1,4-dioxane was not detected above the MDL in the method blank. Review of the method blank raw data indicated no false negative. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory analyzed one blank spike/blank spike duplicate pair (P6C0311-BS1/BSD1) with this SDG. As P6C0311-BS1 was reported as a CCV (see section 2.3), P6C0311-BSD1 was evaluated as a single blank spike. The recovery for 1,4-dioxane was within the QC limits of 70-130%. The recovery was calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The surrogate recovery was within the laboratory QC limits of 70-130% for this SDG. The recovery was calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed on the sample of this SDG. Evaluation of method accuracy was based on the blank spike result. 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 sample. Following are findings associated with field QC samples:

2.8.1 Trip Blanks

There was no trip blank sample associated with this SDG. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

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

DATA VALIDATION REPORT

2.8.3 Field Duplicates

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

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

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

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. As there were no detects, compound quantification was verified by recalculating the blank spike and surrogate recoveries. No calculation or transcription errors were found. The reporting limit was supported by the low point of the initial calibration and the laboratory MDL. No qualifications were required.

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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Del Mar Analytical - Irvine
 17461 Derian Ave. Suite 100
 Irvine, CA 92614
 Attention: Michele Chamberlin

Project ID: IPB2639

Report Number: PPC0071

Sampled: 02/28/06

Received: 03/02/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PPC0071-01 (IPB2639-01 - Water)		Outfall 002							Raw Data / Qual Code
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B	P6C0311	0.49	1.0	ND	1	03/03/06	03/04/06	u
Surrogate: Dibromofluoromethane (70-130%)					113 %				

Level IV

Del Mar Analytical - Phoenix
 Ken Baker
 Project Manager

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4WC43
 Task Order: 1261.001D.01
 SDG No.: IPB2639

No. of Analyses: 1

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

Date: April 4, 2006
 Reviewer's Signature


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



DATA VALIDATION REPORT

NPDES Sampling
Outfall 002

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPB2639

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB2639
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^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0)*, *USEPA Methods for Chemical Analysis of Water and Wastes Methods 120.1, 180.1, 335.2, 350.2, 415.1, and 418.1* and validation guidelines outlined in the *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPB2639-01	Water	General Minerals

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 CALIBRATION

For the applicable analyses, the initial calibration correlation coefficients were ≥ 0.995 and the ICV and CCV recoveries were within the control limits of 90-110%. The conductivity check limits were within control limits. For ammonia, no information for the titrant standardization was provided; therefore, as the LCS recovery was above the calibration control limits, ammonia detected in Outfall 002 was qualified as estimated, "J." No further qualifications were required.

2.3 BLANKS

Cyanide was detected in method blank 6C13106-BLK1; however, as the associated sample result was not retained, no qualification was required. There were no other detects in the method blanks or CCBs associated with the sample analyses. Raw data was reviewed to verify the blank data. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The reported LCS and LCSD (total recoverable hydrocarbons and cyanide only) recoveries were within the laboratory-established control limits. No qualifications were required.

2.5 LABORATORY DUPLICATES

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

2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to these criteria. Method accuracy was assessed based on LCS results. For total recoverable hydrocarbons and cyanide, method precision was evaluated based on LCS/LCSD results. No qualifications were required.

2.7 SAMPLE RESULT VERIFICATION

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

As cyanide was detected in the method blank associated with the cyanide reanalysis, the reviewer chose to reject, "R," the reanalysis, Outfall 002 RE1 and report the original result, Outfall 001. No further qualifications were required.

2.8 FIELD QC SAMPLES

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

2.8.1 Field Blanks and Equipment Rinsates

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

2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



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

MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 002 Report Number: IPB2639	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: IPB2639-01RE1 (Outfall 002 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6C13106	2.2	5.0	3.0	1	02/28/06	03/13/06	R, B, J, D

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 002

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

Report Number: IPB2639

INORGANICS

Analyte	Method	Batch	MDL Reporting		Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
			Limit	Limit					Raw Qual	Qual Code
Sample ID: IPB2639-01 (Outfall 002 - Water) - cont.										
Reporting Units: ug/l										
Total Cyanide	EPA 335.2	6B28158	2.2	5.0	18	1	02/28/06	03/01/06		
Perchlorate	EPA 314.0	6C02068	0.80	4.0	ND	1	03/02/06	03/03/06	*	

* Analysis not validated

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

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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 002 Report Number: IPB2639	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: IPB2639-01 (Outfall 002 - Water) - cont.										
Reporting Units: NTU										
Turbidity	EPA 180.1	6C01122	0.040	1.0	21	1	03/01/06	03/01/06		

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 002

Report Number: IPB2639

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: IPB2639-01 (Outfall 002 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6C05021	0.30	0.50	0.84	1	03/05/06	03/05/06	J
Biochemical Oxygen Demand	EPA 405.1	6C01114	0.59	2.0	2.3	1	03/01/06	03/06/06	*
Chloride	EPA 300.0	6C01049	0.26	0.50	21	1	03/01/06	03/01/06	J
Fluoride	EPA 300.0	6C01049	0.10	0.50	0.27	1	03/01/06	03/01/06	J
Nitrate/Nitrite-N	EPA 300.0	6C01049	0.072	0.26	1.4	1	03/01/06	03/01/06	J
Oil & Grease	EPA 413.1	6C01070	0.89	4.7	ND	1	03/01/06	03/01/06	J
Residual Chlorine	EPA 330.5	6B28145	0.10	0.10	ND	1	02/28/06	02/28/06	J
Sulfate	EPA 300.0	6C01049	1.8	5.0	71	10	03/01/06	03/01/06	M1
Surfactants (MBAS)	SM5540-C	6C01108	0.044	0.10	ND	1	03/01/06	03/01/06	M1
Total Dissolved Solids	SM2540C	6C02076	10	10	270	1	03/02/06	03/02/06	J
Total Organic Carbon	EPA 415.1	6C02064	0.25	1.0	8.3	1	03/01/06	03/01/06	J
Total Suspended Solids	EPA 160.2	6C05025	10	10	18	1	03/05/06	03/05/06	J

* Analysis not validated

pm 4/5/06

LEVEL IV

Del Mar Analytical - Irvine
 Berkeley
 Manager

APPENDIX G

Section 49

Outfall 003, February 19, 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 003

Sampled: 02/19/06
Received: 02/19/06
Revised: 03/28/06 17:54

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 3°C, on ice and with chain of custody documentation.
- HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.
- PRESERVATION: Samples requiring preservation were verified prior to sample analysis.
- QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers. 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
IPB1818-01	Outfall 003	Water
IPB1818-02	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 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

CORRECTIVE ACTION REPORT

Department: Extractions
Method: EPA 625
QC Batch: 6B24064

Date: 02/28/2006
Matrix: Water

Identification and Definition of Problem:

The percent recovery for dimethylphthalate in the LCS was below method acceptance limits.

Determination of the Cause of the Problem:

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

Corrective Action Taken:

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

Quality Assurance Approval:

Dave Dawes

Date: 03/14/2006 06:04 PM

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 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

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 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

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: IPB1818-01 (Outfall 003 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C02009	0.28	1.0	ND	1	03/02/06	03/02/06	
Bromodichloromethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
Bromoform	EPA 624	6C02009	0.32	5.0	ND	1	03/02/06	03/02/06	
Bromomethane	EPA 624	6C02009	0.42	5.0	ND	1	03/02/06	03/02/06	
Carbon tetrachloride	EPA 624	6C02009	0.28	0.50	ND	1	03/02/06	03/02/06	
Chlorobenzene	EPA 624	6C02009	0.36	2.0	ND	1	03/02/06	03/02/06	
Chloroethane	EPA 624	6C02009	0.40	5.0	ND	1	03/02/06	03/02/06	
Chloroform	EPA 624	6C02009	0.33	2.0	ND	1	03/02/06	03/02/06	
Chloromethane	EPA 624	6C02009	0.30	5.0	ND	1	03/02/06	03/02/06	
Dibromochloromethane	EPA 624	6C02009	0.28	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichlorobenzene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
1,3-Dichlorobenzene	EPA 624	6C02009	0.35	2.0	ND	1	03/02/06	03/02/06	
1,4-Dichlorobenzene	EPA 624	6C02009	0.37	2.0	ND	1	03/02/06	03/02/06	
1,1-Dichloroethane	EPA 624	6C02009	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloroethane	EPA 624	6C02009	0.28	0.50	ND	1	03/02/06	03/02/06	
1,1-Dichloroethene	EPA 624	6C02009	0.42	5.0	ND	1	03/02/06	03/02/06	
trans-1,2-Dichloroethene	EPA 624	6C02009	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloropropane	EPA 624	6C02009	0.35	2.0	ND	1	03/02/06	03/02/06	
cis-1,3-Dichloropropene	EPA 624	6C02009	0.22	2.0	ND	1	03/02/06	03/02/06	
trans-1,3-Dichloropropene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
Ethylbenzene	EPA 624	6C02009	0.25	2.0	ND	1	03/02/06	03/02/06	
Methylene chloride	EPA 624	6C02009	0.70	5.0	ND	1	03/02/06	03/02/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C02009	0.24	2.0	ND	1	03/02/06	03/02/06	L
Tetrachloroethene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
Toluene	EPA 624	6C02009	0.36	2.0	ND	1	03/02/06	03/02/06	
1,1,1-Trichloroethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
1,1,2-Trichloroethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
Trichloroethene	EPA 624	6C02009	0.26	2.0	ND	1	03/02/06	03/02/06	
Trichlorofluoromethane	EPA 624	6C02009	0.34	5.0	ND	1	03/02/06	03/02/06	
Vinyl chloride	EPA 624	6C02009	0.26	0.50	ND	1	03/02/06	03/02/06	
Xylenes, Total	EPA 624	6C02009	0.90	4.0	ND	1	03/02/06	03/02/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C02009	1.2	5.0	ND	1	03/02/06	03/02/06	
Surrogate: Dibromofluoromethane (80-120%)					110 %				
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 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

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: IPB1818-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C02009	0.28	1.0	ND	1	03/02/06	03/02/06	
Bromodichloromethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
Bromoform	EPA 624	6C02009	0.32	5.0	ND	1	03/02/06	03/02/06	
Bromomethane	EPA 624	6C02009	0.42	5.0	ND	1	03/02/06	03/02/06	
Carbon tetrachloride	EPA 624	6C02009	0.28	0.50	ND	1	03/02/06	03/02/06	
Chlorobenzene	EPA 624	6C02009	0.36	2.0	ND	1	03/02/06	03/02/06	
Chloroethane	EPA 624	6C02009	0.40	5.0	ND	1	03/02/06	03/02/06	
Chloroform	EPA 624	6C02009	0.33	2.0	ND	1	03/02/06	03/02/06	
Chloromethane	EPA 624	6C02009	0.30	5.0	ND	1	03/02/06	03/02/06	
Dibromochloromethane	EPA 624	6C02009	0.28	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichlorobenzene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
1,3-Dichlorobenzene	EPA 624	6C02009	0.35	2.0	ND	1	03/02/06	03/02/06	
1,4-Dichlorobenzene	EPA 624	6C02009	0.37	2.0	ND	1	03/02/06	03/02/06	
1,1-Dichloroethane	EPA 624	6C02009	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloroethane	EPA 624	6C02009	0.28	0.50	ND	1	03/02/06	03/02/06	
1,1-Dichloroethene	EPA 624	6C02009	0.42	5.0	ND	1	03/02/06	03/02/06	
trans-1,2-Dichloroethene	EPA 624	6C02009	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloropropane	EPA 624	6C02009	0.35	2.0	ND	1	03/02/06	03/02/06	
cis-1,3-Dichloropropene	EPA 624	6C02009	0.22	2.0	ND	1	03/02/06	03/02/06	
trans-1,3-Dichloropropene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
Ethylbenzene	EPA 624	6C02009	0.25	2.0	ND	1	03/02/06	03/02/06	
Methylene chloride	EPA 624	6C02009	0.70	5.0	ND	1	03/02/06	03/02/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C02009	0.24	2.0	ND	1	03/02/06	03/02/06	L
Tetrachloroethene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
Toluene	EPA 624	6C02009	0.36	2.0	ND	1	03/02/06	03/02/06	
1,1,1-Trichloroethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
1,1,2-Trichloroethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
Trichloroethene	EPA 624	6C02009	0.26	2.0	ND	1	03/02/06	03/02/06	
Trichlorofluoromethane	EPA 624	6C02009	0.34	5.0	ND	1	03/02/06	03/02/06	
Vinyl chloride	EPA 624	6C02009	0.26	0.50	ND	1	03/02/06	03/02/06	
Xylenes, Total	EPA 624	6C02009	0.90	4.0	ND	1	03/02/06	03/02/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C02009	1.2	5.0	ND	1	03/02/06	03/02/06	
Surrogate: Dibromofluoromethane (80-120%)					112 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					102 %				

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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 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

PURGEABLES-- GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	6B20035	4.6	50	ND	1	02/20/06	02/20/06	
Acrylonitrile	EPA 624	6B20035	0.70	50	ND	1	02/20/06	02/20/06	
2-Chloroethyl vinyl ether	EPA 624	6B20035	1.8	5.0	ND	1	02/20/06	02/20/06	
Surrogate: Dibromofluoromethane (80-120%)					114 %				
Surrogate: Toluene-d8 (80-120%)					114 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					110 %				
Sample ID: IPB1818-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	6B20035	4.6	50	ND	1	02/20/06	02/20/06	
Acrylonitrile	EPA 624	6B20035	0.70	50	ND	1	02/20/06	02/20/06	
2-Chloroethyl vinyl ether	EPA 624	6B20035	1.8	5.0	ND	1	02/20/06	02/20/06	
Surrogate: Dibromofluoromethane (80-120%)					113 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					112 %				

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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 003

Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

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: IPB1818-01 (Outfall 003 - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6B24064	4.1	9.5	ND	0.952	02/24/06	02/28/06	
Acenaphthylene	EPA 625	6B24064	3.0	9.5	ND	0.952	02/24/06	02/28/06	
Aniline	EPA 625	6B24064	2.8	9.5	ND	0.952	02/24/06	02/28/06	
Anthracene	EPA 625	6B24064	3.0	9.5	ND	0.952	02/24/06	02/28/06	
Benzidine	EPA 625	6B24064	5.0	19	ND	0.952	02/24/06	02/28/06	
Benzoic acid	EPA 625	6B24064	2.5	19	ND	0.952	02/24/06	02/28/06	
Benzo(a)anthracene	EPA 625	6B24064	3.5	9.5	ND	0.952	02/24/06	02/28/06	
Benzo(b)fluoranthene	EPA 625	6B24064	2.6	9.5	ND	0.952	02/24/06	02/28/06	
Benzo(k)fluoranthene	EPA 625	6B24064	3.2	9.5	ND	0.952	02/24/06	02/28/06	
Benzo(g,h,i)perylene	EPA 625	6B24064	5.0	9.5	ND	0.952	02/24/06	02/28/06	
Benzo(a)pyrene	EPA 625	6B24064	3.3	9.5	ND	0.952	02/24/06	02/28/06	
Benzyl alcohol	EPA 625	6B24064	2.4	19	ND	0.952	02/24/06	02/28/06	
Bis(2-chloroethoxy)methane	EPA 625	6B24064	3.7	9.5	ND	0.952	02/24/06	02/28/06	
Bis(2-chloroethyl)ether	EPA 625	6B24064	4.2	9.5	ND	0.952	02/24/06	02/28/06	
Bis(2-chloroisopropyl)ether	EPA 625	6B24064	4.4	9.5	ND	0.952	02/24/06	02/28/06	
Bis(2-ethylhexyl)phthalate	EPA 625	6B24064	5.0	48	ND	0.952	02/24/06	02/28/06	
4-Bromophenyl phenyl ether	EPA 625	6B24064	4.4	9.5	ND	0.952	02/24/06	02/28/06	
Butyl benzyl phthalate	EPA 625	6B24064	3.3	19	ND	0.952	02/24/06	02/28/06	
4-Chloroaniline	EPA 625	6B24064	5.7	9.5	ND	0.952	02/24/06	02/28/06	
2-Chloronaphthalene	EPA 625	6B24064	3.8	9.5	ND	0.952	02/24/06	02/28/06	
4-Chloro-3-methylphenol	EPA 625	6B24064	3.3	19	ND	0.952	02/24/06	02/28/06	
2-Chlorophenol	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	
4-Chlorophenyl phenyl ether	EPA 625	6B24064	2.9	9.5	ND	0.952	02/24/06	02/28/06	
Chrysene	EPA 625	6B24064	2.7	9.5	ND	0.952	02/24/06	02/28/06	
Dibenz(a,h)anthracene	EPA 625	6B24064	4.5	19	ND	0.952	02/24/06	02/28/06	
Dibenzofuran	EPA 625	6B24064	2.5	9.5	ND	0.952	02/24/06	02/28/06	
Di-n-butyl phthalate	EPA 625	6B24064	2.7	19	ND	0.952	02/24/06	02/28/06	
1,3-Dichlorobenzene	EPA 625	6B24064	3.9	9.5	ND	0.952	02/24/06	02/28/06	
1,4-Dichlorobenzene	EPA 625	6B24064	3.7	9.5	ND	0.952	02/24/06	02/28/06	
1,2-Dichlorobenzene	EPA 625	6B24064	4.3	9.5	ND	0.952	02/24/06	02/28/06	
3,3-Dichlorobenzidine	EPA 625	6B24064	10	19	ND	0.952	02/24/06	02/28/06	
2,4-Dichlorophenol	EPA 625	6B24064	3.9	9.5	ND	0.952	02/24/06	02/28/06	
Diethyl phthalate	EPA 625	6B24064	3.0	9.5	ND	0.952	02/24/06	02/28/06	
2,4-Dimethylphenol	EPA 625	6B24064	4.2	19	ND	0.952	02/24/06	02/28/06	
Dimethyl phthalate	EPA 625	6B24064	3.4	9.5	ND	0.952	02/24/06	02/28/06	L2
4,6-Dinitro-2-methylphenol	EPA 625	6B24064	4.9	19	ND	0.952	02/24/06	02/28/06	
2,4-Dinitrophenol	EPA 625	6B24064	5.0	19	ND	0.952	02/24/06	02/28/06	
2,4-Dinitrotoluene	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	
2,6-Dinitrotoluene	EPA 625	6B24064	3.0	9.5	ND	0.952	02/24/06	02/28/06	
Di-n-octyl phthalate	EPA 625	6B24064	4.5	19	ND	0.952	02/24/06	02/28/06	
Fluoranthene	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	

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 Michele Chamberlin
 Project Manager

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

Project ID: Annual Outfall 003

Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

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: IPB1818-01 (Outfall 003 - Water) - cont.									
Reporting Units: ug/l									
Fluorene	EPA 625	6B24064	3.7	9.5	ND	0.952	02/24/06	02/28/06	
Hexachlorobenzene	EPA 625	6B24064	4.6	9.5	ND	0.952	02/24/06	02/28/06	
Hexachlorobutadiene	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	
Hexachlorocyclopentadiene	EPA 625	6B24064	3.2	19	ND	0.952	02/24/06	02/28/06	
Hexachloroethane	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6B24064	5.1	19	ND	0.952	02/24/06	02/28/06	
Isophorone	EPA 625	6B24064	3.5	9.5	ND	0.952	02/24/06	02/28/06	
2-Methylnaphthalene	EPA 625	6B24064	2.9	9.5	ND	0.952	02/24/06	02/28/06	
2-Methylphenol	EPA 625	6B24064	3.5	9.5	ND	0.952	02/24/06	02/28/06	
4-Methylphenol	EPA 625	6B24064	3.6	9.5	ND	0.952	02/24/06	02/28/06	
Naphthalene	EPA 625	6B24064	4.3	9.5	ND	0.952	02/24/06	02/28/06	
2-Nitroaniline	EPA 625	6B24064	3.7	19	ND	0.952	02/24/06	02/28/06	
3-Nitroaniline	EPA 625	6B24064	4.3	19	ND	0.952	02/24/06	02/28/06	
4-Nitroaniline	EPA 625	6B24064	4.7	19	ND	0.952	02/24/06	02/28/06	
Nitrobenzene	EPA 625	6B24064	4.0	19	ND	0.952	02/24/06	02/28/06	
2-Nitrophenol	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	
4-Nitrophenol	EPA 625	6B24064	6.3	19	ND	0.952	02/24/06	02/28/06	
N-Nitrosodiphenylamine	EPA 625	6B24064	3.8	9.5	ND	0.952	02/24/06	02/28/06	
N-Nitroso-di-n-propylamine	EPA 625	6B24064	3.4	9.5	ND	0.952	02/24/06	02/28/06	
Pentachlorophenol	EPA 625	6B24064	3.8	19	ND	0.952	02/24/06	02/28/06	
Phenanthrene	EPA 625	6B24064	3.1	9.5	ND	0.952	02/24/06	02/28/06	
Phenol	EPA 625	6B24064	3.8	9.5	ND	0.952	02/24/06	02/28/06	
Pyrene	EPA 625	6B24064	3.7	9.5	ND	0.952	02/24/06	02/28/06	
1,2,4-Trichlorobenzene	EPA 625	6B24064	4.2	9.5	ND	0.952	02/24/06	02/28/06	
2,4,5-Trichlorophenol	EPA 625	6B24064	3.4	19	ND	0.952	02/24/06	02/28/06	
2,4,6-Trichlorophenol	EPA 625	6B24064	3.9	19	ND	0.952	02/24/06	02/28/06	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6B24064	4.8	19	ND	0.952	02/24/06	02/28/06	
N-Nitrosodimethylamine	EPA 625	6B24064	3.5	19	ND	0.952	02/24/06	02/28/06	
Surrogate: 2-Fluorophenol (30-120%)					58 %				
Surrogate: Phenol-d6 (35-120%)					66 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					62 %				
Surrogate: Nitrobenzene-d5 (45-120%)					67 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					72 %				
Surrogate: Terphenyl-d14 (45-120%)					105 %				

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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 003

Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - 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	
<i>Surrogate: Tetrachloro-m-xylene (35-115%)</i>					72 %				
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					89 %				

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 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	6B24053	0.19	0.96	ND	0.962	02/24/06	02/25/06	
Aroclor 1221	EPA 608	6B24053	0.096	0.96	ND	0.962	02/24/06	02/25/06	
Aroclor 1232	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/25/06	
Aroclor 1242	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/25/06	
Aroclor 1248	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/25/06	
Aroclor 1254	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/25/06	
Aroclor 1260	EPA 608	6B24053	0.38	0.96	ND	0.962	02/24/06	02/25/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					89 %				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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Del Mar Analytical

17461 Denian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Annual Outfall 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.									
Reporting Units: mg/l									
Boron	EPA 200.7	6B20080	0.0074	0.050	ND	1	02/20/06	02/27/06	

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

Project ID: Annual Outfall 003

Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.									
Reporting Units: ug/l									
Aluminum	EPA 200.7	6B20080	40	50	400	1	02/20/06	02/28/06	
Antimony	EPA 200.8	6B21089	0.18	2.0	1.4	1	02/21/06	02/22/06	J
Arsenic	EPA 200.7	6B20080	4.4	5.0	11	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	0.015	1.0	0.044	1	02/21/06	02/22/06	J
Chromium	EPA 200.7	6B20080	2.0	5.0	2.1	1	02/20/06	02/25/06	J
Copper	EPA 200.8	6B21089	0.49	2.0	6.3	1	02/21/06	02/22/06	
Lead	EPA 200.8	6B21089	0.040	1.0	0.71	1	02/21/06	02/22/06	J
Mercury	EPA 245.1	6B21083	0.063	0.20	ND	1	02/21/06	02/21/06	
Nickel	EPA 200.7	6B20080	2.0	10	ND	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 200.8	6B21089	0.075	1.0	ND	1	02/21/06	02/22/06	
Vanadium	EPA 200.7	6B20080	3.0	10	ND	1	02/20/06	02/25/06	
Zinc	EPA 200.7	6B20080	15	20	91	1	02/20/06	02/25/06	B

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MWH-Pasadena/Boeing Project ID: Annual Outfall 003
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101 Report Number: IPB1818
Attention: Bronwyn Kelly
Sampled: 02/19/06
Received: 02/19/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6B20053	0.26	0.50	22	1	02/20/06	02/20/06	
Nitrate/Nitrite-N	EPA 300.0	6B20053	0.072	0.26	0.74	1	02/20/06	02/20/06	
Oil & Grease	EPA 413.1	6B28050	0.90	4.8	ND	1	02/28/06	02/28/06	
Sulfate	EPA 300.0	6B20053	0.18	0.50	27	1	02/20/06	02/20/06	
Total Dissolved Solids	SM2540C	6B22069	10	10	140	1	02/22/06	02/22/06	
Total Suspended Solids	EPA 160.2	6B23099	10	10	ND	1	02/23/06	02/23/06	

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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 003 Report Number: IPB1818	Sampled: 02/19/06 Received: 02/19/06
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INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6B22127	2.2	5.0	ND	1	02/22/06	02/22/06	
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 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 003 (IPB1818-01) - Water					
EPA 300.0	2	02/19/2006 10:30	02/19/2006 13:25	02/20/2006 07:00	02/20/2006 10:33
EPA 624	3	02/19/2006 10:30	02/19/2006 13:25	02/20/2006 00:00	02/20/2006 21:57
Sample ID: Trip Blanks (IPB1818-02) - Water					
EPA 624	3	02/19/2006 10:30	02/19/2006 13:25	02/20/2006 00:00	02/20/2006 22:49

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

Project ID: Annual Outfall 003
 Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Qualifiers
Batch: 6C02009 Extracted: 03/02/06										
Blank Analyzed: 03/02/2006 (6C02009-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	27.1			ug/l	25.0		108	80-120		
Surrogate: Toluene-d8	27.4			ug/l	25.0		110	80-120		
Surrogate: 4-Bromofluorobenzene	25.7			ug/l	25.0		103	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 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Table with columns: Analyte, Result, Reporting Limit, MDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Data Qualifiers. Includes sub-sections for Batch: 6C02009 and LCS Analyzed: 03/02/2006.

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Project Manager

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

Project ID: Annual Outfall 003
 Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C02009 Extracted: 03/02/06											
Matrix Spike Analyzed: 03/02/2006 (6C02009-MS1)						Source: IPB2085-01					
Benzene	26.4	1.0	0.28	ug/l	25.0	ND	106	60-125			
Bromodichloromethane	25.1	2.0	0.30	ug/l	25.0	ND	100	65-135			
Bromoform	16.8	5.0	0.32	ug/l	25.0	ND	67	50-135			
Bromomethane	23.8	5.0	0.42	ug/l	25.0	ND	95	50-145			
Carbon tetrachloride	25.5	0.50	0.28	ug/l	25.0	ND	102	65-140			
Chlorobenzene	25.9	2.0	0.36	ug/l	25.0	ND	104	70-125			
Chloroethane	28.2	5.0	0.40	ug/l	25.0	ND	113	50-140			
Chloroform	26.4	2.0	0.33	ug/l	25.0	ND	106	65-135			
Chloromethane	24.8	5.0	0.30	ug/l	25.0	ND	99	35-140			
Dibromochloromethane	22.5	2.0	0.28	ug/l	25.0	ND	90	60-140			
1,2-Dichlorobenzene	26.1	2.0	0.32	ug/l	25.0	ND	104	70-125			
1,3-Dichlorobenzene	25.2	2.0	0.35	ug/l	25.0	ND	101	70-125			
1,4-Dichlorobenzene	24.2	2.0	0.37	ug/l	25.0	ND	97	70-125			
1,1-Dichloroethane	26.1	2.0	0.27	ug/l	25.0	ND	104	60-130			
1,2-Dichloroethane	24.4	0.50	0.28	ug/l	25.0	ND	98	60-140			
1,1-Dichloroethene	28.5	5.0	0.42	ug/l	25.0	0.49	112	60-135			
trans-1,2-Dichloroethene	27.4	2.0	0.27	ug/l	25.0	ND	110	60-135			
1,2-Dichloropropane	26.2	2.0	0.35	ug/l	25.0	ND	105	60-125			
cis-1,3-Dichloropropene	25.0	2.0	0.22	ug/l	25.0	ND	100	65-135			
trans-1,3-Dichloropropene	24.3	2.0	0.32	ug/l	25.0	ND	97	65-140			
Ethylbenzene	26.6	2.0	0.25	ug/l	25.0	ND	106	65-130			
Methylene chloride	27.0	5.0	0.70	ug/l	25.0	ND	108	55-130			
1,1,2,2-Tetrachloroethane	28.0	2.0	0.24	ug/l	25.0	ND	112	55-140			
Tetrachloroethene	26.2	2.0	0.32	ug/l	25.0	0.43	103	60-130			
Toluene	25.9	2.0	0.36	ug/l	25.0	ND	104	65-125			
1,1,1-Trichloroethane	24.1	2.0	0.30	ug/l	25.0	ND	96	65-140			
1,1,2-Trichloroethane	25.4	2.0	0.30	ug/l	25.0	ND	102	60-130			
Trichloroethene	28.7	2.0	0.26	ug/l	25.0	2.5	105	60-125			
Trichlorofluoromethane	22.8	5.0	0.34	ug/l	25.0	ND	91	55-145			
Vinyl chloride	27.0	0.50	0.26	ug/l	25.0	ND	108	40-135			
Surrogate: Dibromofluoromethane	28.2			ug/l	25.0		113	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	27.3			ug/l	25.0		109	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 003

Report Number: IPB1818

Sampled: 02/19/06

Received: 02/19/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C02009 Extracted: 03/02/06											
Matrix Spike Dup Analyzed: 03/02/2006 (6C02009-MSD1)						Source: IPB2085-01					
Benzene	26.0	1.0	0.28	ug/l	25.0	ND	104	60-125	2	20	
Bromodichloromethane	26.0	2.0	0.30	ug/l	25.0	ND	104	65-135	4	20	
Bromoform	20.1	5.0	0.32	ug/l	25.0	ND	80	50-135	18	25	
Bromomethane	22.4	5.0	0.42	ug/l	25.0	ND	90	50-145	6	25	
Carbon tetrachloride	25.8	0.50	0.28	ug/l	25.0	ND	103	65-140	1	25	
Chlorobenzene	26.0	2.0	0.36	ug/l	25.0	ND	104	70-125	0	20	
Chloroethane	26.5	5.0	0.40	ug/l	25.0	ND	106	50-140	6	25	
Chloroform	26.4	2.0	0.33	ug/l	25.0	ND	106	65-135	0	20	
Chloromethane	23.6	5.0	0.30	ug/l	25.0	ND	94	35-140	5	25	
Dibromochloromethane	25.4	2.0	0.28	ug/l	25.0	ND	102	60-140	12	25	
1,2-Dichlorobenzene	26.9	2.0	0.32	ug/l	25.0	ND	108	70-125	3	20	
1,3-Dichlorobenzene	24.9	2.0	0.35	ug/l	25.0	ND	100	70-125	1	20	
1,4-Dichlorobenzene	24.2	2.0	0.37	ug/l	25.0	ND	97	70-125	0	20	
1,1-Dichloroethane	25.9	2.0	0.27	ug/l	25.0	ND	104	60-130	1	20	
1,2-Dichloroethane	26.6	0.50	0.28	ug/l	25.0	ND	106	60-140	9	20	
1,1-Dichloroethene	28.7	5.0	0.42	ug/l	25.0	0.49	113	60-135	1	20	
trans-1,2-Dichloroethene	27.5	2.0	0.27	ug/l	25.0	ND	110	60-135	0	20	
1,2-Dichloropropane	26.4	2.0	0.35	ug/l	25.0	ND	106	60-125	1	20	
cis-1,3-Dichloropropene	25.8	2.0	0.22	ug/l	25.0	ND	103	65-135	3	20	
trans-1,3-Dichloropropene	26.6	2.0	0.32	ug/l	25.0	ND	106	65-140	9	25	
Ethylbenzene	26.4	2.0	0.25	ug/l	25.0	ND	106	65-130	1	20	
Methylene chloride	27.4	5.0	0.70	ug/l	25.0	ND	110	55-130	1	20	
1,1,2,2-Tetrachloroethane	35.6	2.0	0.24	ug/l	25.0	ND	142	55-140	24	30	M7
Tetrachloroethene	26.3	2.0	0.32	ug/l	25.0	0.43	103	60-130	0	20	
Toluene	25.7	2.0	0.36	ug/l	25.0	ND	103	65-125	1	20	
1,1,1-Trichloroethane	24.2	2.0	0.30	ug/l	25.0	ND	97	65-140	0	20	
1,1,2-Trichloroethane	28.5	2.0	0.30	ug/l	25.0	ND	114	60-130	12	25	
Trichloroethene	28.3	2.0	0.26	ug/l	25.0	2.5	103	60-125	1	20	
Trichlorofluoromethane	23.3	5.0	0.34	ug/l	25.0	ND	93	55-145	2	25	
Vinyl chloride	23.9	0.50	0.26	ug/l	25.0	ND	96	40-135	12	30	
Surrogate: Dibromofluoromethane	28.1			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	27.6			ug/l	25.0		110	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 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

METHOD BLANK/QC DATA

PURGEABLES-- GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Limit	Qualifiers
Batch: 6B20035 Extracted: 02/20/06											
Blank Analyzed: 02/20/2006 (6B20035-BLK1)											
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	26.4			ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	27.7			ug/l	25.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			
LCS Analyzed: 02/20/2006 (6B20035-BS1)											
2-Chloroethyl vinyl ether	38.8	5.0	1.8	ug/l	25.0		155	25-170			
Surrogate: Dibromofluoromethane	28.0			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	28.0			ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	28.9			ug/l	25.0		116	80-120			
Matrix Spike Analyzed: 02/20/2006 (6B20035-MS1)						Source: IPB1817-01					
2-Chloroethyl vinyl ether	34.2	5.0	1.8	ug/l	25.0	ND	137	25-170			
Surrogate: Dibromofluoromethane	27.4			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	28.2			ug/l	25.0		113	80-120			
Surrogate: 4-Bromofluorobenzene	27.8			ug/l	25.0		111	80-120			
Matrix Spike Dup Analyzed: 02/20/2006 (6B20035-MSD1)						Source: IPB1817-01					
2-Chloroethyl vinyl ether	21.8	5.0	1.8	ug/l	25.0	ND	87	25-170	44	25	R
Surrogate: Dibromofluoromethane	24.0			ug/l	25.0		96	80-120			
Surrogate: Toluene-d8	27.3			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	25.9			ug/l	25.0		104	80-120			

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Michele Chamberlin
Project Manager

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Attention: Bronwyn Kelly

Project ID: Annual Outfall 003
Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

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	Data Limit	Qualifiers
Batch: 6B24064 Extracted: 02/24/06											
Blank Analyzed: 02/27/2006 (6B24064-BLK1)											
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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MWH-Pasadena/Boeing
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Annual Outfall 003
Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

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
Batch: 6B24064 Extracted: 02/24/06										
Blank Analyzed: 02/27/2006 (6B24064-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	114			ug/l	200		57		30-120	

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

Project ID: Annual Outfall 003
 Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6B24064 Extracted: 02/24/06											
Blank Analyzed: 02/27/2006 (6B24064-BLK1)											
Surrogate: Phenol-d6	132			ug/l	200		66	35-120			
Surrogate: 2,4,6-Tribromophenol	150			ug/l	200		75	45-120			
Surrogate: Nitrobenzene-d5	53.3			ug/l	100		53	45-120			
Surrogate: 2-Fluorobiphenyl	56.1			ug/l	100		56	45-120			
Surrogate: Terphenyl-d14	81.8			ug/l	100		82	45-120			
LCS Analyzed: 02/27/2006 (6B24064-BS1)											
Acenaphthene	79.6	10	4.3	ug/l	100		80	55-120			
Acenaphthylene	87.8	10	3.2	ug/l	100		88	55-120			
Aniline	73.9	10	2.9	ug/l	100		74	35-120			
Anthracene	90.3	10	3.2	ug/l	100		90	55-120			
Benzidine	94.5	20	5.2	ug/l	100		94	20-160			
Benzoic acid	80.6	20	2.6	ug/l	100		81	35-120			
Benzo(a)anthracene	90.6	10	3.7	ug/l	100		91	60-120			
Benzo(b)fluoranthene	86.4	10	2.7	ug/l	100		86	50-120			
Benzo(k)fluoranthene	87.7	10	3.4	ug/l	100		88	50-120			
Benzo(g,h,i)perylene	91.5	10	5.3	ug/l	100		92	40-125			
Benzo(a)pyrene	87.5	10	3.5	ug/l	100		88	55-120			
Benzyl alcohol	73.8	20	2.5	ug/l	100		74	45-120			
Bis(2-chloroethoxy)methane	73.2	10	3.9	ug/l	100		73	55-120			
Bis(2-chloroethyl)ether	71.6	10	4.4	ug/l	100		72	50-120			
Bis(2-chloroisopropyl)ether	75.5	10	4.6	ug/l	100		76	45-120			
Bis(2-ethylhexyl)phthalate	89.3	50	5.2	ug/l	100		89	60-130			
4-Bromophenyl phenyl ether	79.6	10	4.6	ug/l	100		80	50-120			
Butyl benzyl phthalate	87.4	20	3.5	ug/l	100		87	55-125			
4-Chloroaniline	75.1	10	6.0	ug/l	100		75	50-120			
2-Chloronaphthalene	76.6	10	4.0	ug/l	100		77	55-120			
4-Chloro-3-methylphenol	78.9	20	3.5	ug/l	100		79	60-120			
2-Chlorophenol	71.5	10	4.2	ug/l	100		72	45-120			
4-Chlorophenyl phenyl ether	87.4	10	3.0	ug/l	100		87	55-120			
Chrysene	94.1	10	2.8	ug/l	100		94	60-120			
Dibenz(a,h)anthracene	96.7	20	4.7	ug/l	100		97	45-130			
Dibenzofuran	81.4	10	2.6	ug/l	100		81	60-120			
Di-n-butyl phthalate	87.1	20	2.8	ug/l	100		87	55-125			
1,3-Dichlorobenzene	43.4	10	4.1	ug/l	100		43	35-120			
1,4-Dichlorobenzene	48.0	10	3.9	ug/l	100		48	35-120			

M-NR1

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

Project ID: Annual Outfall 003
 Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6B24064 Extracted: 02/24/06											
LCS Analyzed: 02/27/2006 (6B24064-BS1)											
1,2-Dichlorobenzene	49.7	10	4.5	ug/l	100		50	35-120			M-NR1
3,3-Dichlorobenzidine	103	20	11	ug/l	100		103	45-130			
2,4-Dichlorophenol	71.1	10	4.1	ug/l	100		71	55-120			
Diethyl phthalate	62.2	10	3.1	ug/l	100		62	55-120			
2,4-Dimethylphenol	63.6	20	4.4	ug/l	100		64	30-120			
Dimethyl phthalate	28.8	10	3.6	ug/l	100		29	30-120			L2
4,6-Dinitro-2-methylphenol	82.9	20	5.1	ug/l	100		83	50-120			
2,4-Dinitrophenol	87.6	20	5.3	ug/l	100		88	40-120			
2,4-Dinitrotoluene	87.8	10	4.2	ug/l	100		88	60-120			
2,6-Dinitrotoluene	81.6	10	3.2	ug/l	100		82	60-120			
Di-n-octyl phthalate	81.7	20	4.7	ug/l	100		82	60-130			
Fluoranthene	92.2	10	4.2	ug/l	100		92	55-120			
Fluorene	86.5	10	3.9	ug/l	100		86	60-120			
Hexachlorobenzene	87.4	10	4.8	ug/l	100		87	50-120			
Hexachlorobutadiene	50.0	10	4.2	ug/l	100		50	40-120			
Hexachlorocyclopentadiene	69.2	20	3.4	ug/l	100		69	15-120			
Hexachloroethane	42.1	10	4.2	ug/l	100		42	35-120			
Indeno(1,2,3-cd)pyrene	89.1	20	5.4	ug/l	100		89	40-130			
Isophorone	67.7	10	3.7	ug/l	100		68	50-120			
2-Methylnaphthalene	69.4	10	3.0	ug/l	100		69	50-120			
2-Methylphenol	74.0	10	3.7	ug/l	100		74	45-120			
4-Methylphenol	77.3	10	3.8	ug/l	100		77	45-120			
Naphthalene	65.9	10	4.5	ug/l	100		66	50-120			
2-Nitroaniline	89.4	20	3.9	ug/l	100		89	60-120			
3-Nitroaniline	94.0	20	4.5	ug/l	100		94	55-120			
4-Nitroaniline	98.6	20	4.9	ug/l	100		99	50-125			
Nitrobenzene	68.0	20	4.2	ug/l	100		68	50-120			
2-Nitrophenol	72.7	10	4.2	ug/l	100		73	55-120			
4-Nitrophenol	91.3	20	6.6	ug/l	100		91	45-120			
N-Nitrosodiphenylamine	82.7	10	4.0	ug/l	100		83	55-120			
N-Nitroso-di-n-propylamine	79.2	10	3.6	ug/l	100		79	45-120			
Pentachlorophenol	97.1	20	4.0	ug/l	100		97	50-120			
Phenanthrene	88.3	10	3.3	ug/l	100		88	55-120			
Phenol	73.6	10	4.0	ug/l	100		74	45-120			
Pyrene	89.7	10	3.9	ug/l	100		90	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 003
Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

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 sections for LCS Analyzed (02/27/2006) and LCS Dup Analyzed (02/27/2006).

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Michele Chamberlin
Project Manager



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

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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.

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Report Number: IPB1818

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 Received: 02/19/06

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B24064 Extracted: 02/24/06											
LCS Dup Analyzed: 02/27/2006 (6B24064-BSD1)											
N-Nitrosodiphenylamine	93.2	10	4.0	ug/l	100		93	55-120	12	20	
N-Nitroso-di-n-propylamine	80.0	10	3.6	ug/l	100		80	45-120	1	20	
Pentachlorophenol	95.4	20	4.0	ug/l	100		95	50-120	2	25	
Phenanthrene	99.3	10	3.3	ug/l	100		99	55-120	12	20	
Phenol	78.3	10	4.0	ug/l	100		78	45-120	6	25	
Pyrene	94.8	10	3.9	ug/l	100		95	50-120	6	25	
1,2,4-Trichlorobenzene	60.1	10	4.4	ug/l	100		60	45-120	13	20	
2,4,5-Trichlorophenol	89.0	20	3.6	ug/l	100		89	60-120	7	20	
2,4,6-Trichlorophenol	86.6	20	4.1	ug/l	100		87	60-120	6	20	
1,2-Diphenylhydrazine/Azobenzene	95.6	20	5.0	ug/l	100		96	60-120	7	25	
N-Nitrosodimethylamine	66.8	20	3.7	ug/l	100		67	40-120	1	20	
Surrogate: 2-Fluorophenol	129			ug/l	200		64	30-120			
Surrogate: Phenol-d6	150			ug/l	200		75	35-120			
Surrogate: 2,4,6-Tribromophenol	170			ug/l	200		85	45-120			
Surrogate: Nitrobenzene-d5	71.8			ug/l	100		72	45-120			
Surrogate: 2-Fluorobiphenyl	86.0			ug/l	100		86	45-120			
Surrogate: Terphenyl-d14	92.4			ug/l	100		92	45-120			

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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 003 Report Number: IPB1818	Sampled: 02/19/06 Received: 02/19/06
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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
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Batch: 6B24053 Extracted: 02/24/06

Blank Analyzed: 02/24/2006 (6B24053-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	0.376			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)

M-NRI

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			

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METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Table with columns: Analyte, Result, Reporting Limit, MDL, Units, Spike Level, Source Result, %REC, %REC Limits, RPD, RPD Limit, Data Qualifiers. Includes sections for LCS Analyzed (02/24/2006) and LCS Dup Analyzed (02/24/2006).

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 003 Report Number: IPB1818	Sampled: 02/19/06 Received: 02/19/06
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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
Batch: 6B24053 Extracted: 02/24/06											
Blank Analyzed: 02/26/2006 (6B24053-BLK1)											
Aroclor 1016	ND	1.0	0.20	ug/l							
Aroclor 1221	ND	1.0	0.10	ug/l							
Aroclor 1232	ND	1.0	0.25	ug/l							
Aroclor 1242	ND	1.0	0.25	ug/l							
Aroclor 1248	ND	1.0	0.25	ug/l							
Aroclor 1254	ND	1.0	0.25	ug/l							
Aroclor 1260	ND	1.0	0.40	ug/l							
Surrogate: Decachlorobiphenyl	0.473			ug/l	0.500		95	45-120			
LCS Analyzed: 02/26/2006 (6B24053-BS2)											
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			
LCS Dup Analyzed: 02/26/2006 (6B24053-BSD2)											
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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 Received: 02/19/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	RPD Limits	RPD RPD	Data Qualifiers
Batch: 6B20080 Extracted: 02/20/06										
Blank Analyzed: 02/25/2006-02/27/2006 (6B20080-BLK1)										
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						
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		
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		
Vanadium	566	10	3.0	ug/l	500	ND	113	70-130		
Zinc	634	20	15	ug/l	500	150	97	70-130		

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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 003
Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 6B20080 Extracted: 02/20/06

Matrix Spike Analyzed: 02/25/2006-02/27/2006 (6B20080-MS2)

Source: IPB1673-02

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			
Vanadium	538	10	3.0	ug/l	500	ND	108	70-130			
Zinc	662	20	15	ug/l	500	190	94	70-130			

Matrix Spike Dup Analyzed: 02/25/2006-02/27/2006 (6B20080-MSD1)

Source: IPB1673-01

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	
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

Batch: 6B21083 Extracted: 02/21/06

Blank Analyzed: 02/21/2006 (6B21083-BLK1)

Mercury	ND	0.20	0.050	ug/l							
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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 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B21083 Extracted: 02/21/06											
LCS Analyzed: 02/21/2006 (6B21083-BS1)											
Mercury	8.63	0.20	0.050	ug/l	8.00		108	85-115			
Matrix Spike Analyzed: 02/21/2006 (6B21083-MS1)											
Mercury	8.06	0.20	0.050	ug/l	8.00	ND	101	70-130			
Matrix Spike Dup Analyzed: 02/21/2006 (6B21083-MSD1)											
Mercury	8.48	0.20	0.050	ug/l	8.00	ND	106	70-130	5	20	
Batch: 6B21089 Extracted: 02/21/06											
Blank Analyzed: 02/22/2006 (6B21089-BLK1)											
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							J
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.075	ug/l							
LCS Analyzed: 02/22/2006 (6B21089-BS1)											
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			
Thallium	80.4	1.0	0.075	ug/l	80.0		100	85-115			
Matrix Spike Analyzed: 02/22/2006 (6B21089-MS1)											
Source: IPB1597-01											
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			
Thallium	79.5	1.0	0.075	ug/l	80.0	ND	99	70-130			

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Michele Chamberlin
Project Manager

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MWH-Pasadena/Boeing Project ID: Annual Outfall 003
300 North Lake Avenue, Suite 1200 Report Number: IPB1818
Pasadena, CA 91101 Sampled: 02/19/06
Attention: Bronwyn Kelly Received: 02/19/06

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B21089 Extracted: 02/21/06											
Matrix Spike Analyzed: 02/22/2006 (6B21089-MS2)						Source: IPB1597-02					
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			
Thallium	80.9	1.0	0.075	ug/l	80.0	ND	101	70-130			
Matrix Spike Dup Analyzed: 02/22/2006 (6B21089-MSD1)						Source: IPB1597-01					
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	
Thallium	81.4	1.0	0.075	ug/l	80.0	ND	102	70-130	2	20	

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MWH-Pasadena/Boeing 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 Attention: Bronwyn Kelly	Project ID: Annual Outfall 003 Report Number: IPB1818	Sampled: 02/19/06 Received: 02/19/06
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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B20053 Extracted: 02/20/06											
Blank Analyzed: 02/20/2006 (6B20053-BLK1)											
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							
LCS Analyzed: 02/20/2006 (6B20053-BS1)											
Chloride	4.91	0.50	0.26	mg/l	5.00		98	90-110			
Sulfate	9.96	0.50	0.18	mg/l	10.0		100	90-110			
Matrix Spike Analyzed: 02/20/2006 (6B20053-MS1) Source: IPB1817-01											
Chloride	22.7	0.50	0.26	mg/l	5.00	18	94	80-120			
Sulfate	24.5	0.50	0.18	mg/l	10.0	14	105	80-120			
Matrix Spike Dup Analyzed: 02/20/2006 (6B20053-MSD1) Source: IPB1817-01											
Chloride	22.6	0.50	0.26	mg/l	5.00	18	92	80-120	0	20	
Sulfate	24.4	0.50	0.18	mg/l	10.0	14	104	80-120	0	20	
Batch: 6B22069 Extracted: 02/22/06											
Blank Analyzed: 02/22/2006 (6B22069-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 02/22/2006 (6B22069-BS1)											
Total Dissolved Solids	982	10	10	mg/l	1000		98	90-110			
Duplicate Analyzed: 02/22/2006 (6B22069-DUP1) Source: IPB1656-01											
Total Dissolved Solids	500	10	10	mg/l		490			2	10	

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

Project ID: Annual Outfall 003

Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B22127 Extracted: 02/22/06											
Blank Analyzed: 02/22/2006 (6B22127-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 02/22/2006 (6B22127-BS1)											
Total Cyanide	194	5.0	2.2	ug/l	200		97	90-110			
Matrix Spike Analyzed: 02/22/2006 (6B22127-MS1)											
						Source: IPB1567-02					
Total Cyanide	177	5.0	2.2	ug/l	200	2.5	87	70-115			
Matrix Spike Dup Analyzed: 02/22/2006 (6B22127-MSD1)											
						Source: IPB1567-02					
Total Cyanide	175	5.0	2.2	ug/l	200	2.5	86	70-115	1	15	
Batch: 6B23071 Extracted: 02/23/06											
Blank Analyzed: 02/23/2006 (6B23071-BLK1)											
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 02/23/2006 (6B23071-BS1)											
Perchlorate	50.9	4.0	0.80	ug/l	50.0		102	85-115			
Matrix Spike Analyzed: 02/23/2006 (6B23071-MS1)											
						Source: IPB1972-03					
Perchlorate	61.6	4.0	0.80	ug/l	50.0	13	97	80-120			
Matrix Spike Dup Analyzed: 02/23/2006 (6B23071-MSD1)											
						Source: IPB1972-03					
Perchlorate	63.5	4.0	0.80	ug/l	50.0	13	101	80-120	3	20	
Batch: 6B23099 Extracted: 02/23/06											
Blank Analyzed: 02/23/2006 (6B23099-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							

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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 003 Report Number: IPB1818	Sampled: 02/19/06 Received: 02/19/06
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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B23099 Extracted: 02/23/06											
LCS Analyzed: 02/23/2006 (6B23099-BS1)											
Total Suspended Solids	1020	10	10	mg/l	1000		102	85-115			
Duplicate Analyzed: 02/23/2006 (6B23099-DUP1)											
Total Suspended Solids	640	10	10	mg/l		600			6	10	
Batch: 6B28050 Extracted: 02/28/06											
Blank Analyzed: 02/28/2006 (6B28050-BLK1)											
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 02/28/2006 (6B28050-BS1)											
Oil & Grease	17.0	5.0	0.94	mg/l	20.0		85	65-120			M-NRI
LCS Dup Analyzed: 02/28/2006 (6B28050-BSD1)											
Oil & Grease	17.2	5.0	0.94	mg/l	20.0		86	65-120	1	20	

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

Project ID: Annual Outfall 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IPB1818-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.48	4.8	15
IPB1818-01	Antimony-200.8	Antimony	ug/l	1.40	2.0	6.00
IPB1818-01	Boron-200.7	Boron	mg/l	0	0.050	1.00
IPB1818-01	Cadmium-200.8	Cadmium	ug/l	0.044	1.0	4.00
IPB1818-01	Chloride - 300.0	Chloride	mg/l	22	0.50	150
IPB1818-01	Copper-200.8	Copper	ug/l	6.30	2.0	14
IPB1818-01	Mercury - 245.1	Mercury	ug/l	0	0.20	0.20
IPB1818-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.74	0.26	10.00
IPB1818-01	Perchlorate 314.0	Perchlorate	ug/l	0.26	4.0	6.00
IPB1818-01	Sulfate-300.0	Sulfate	mg/l	27	0.50	250
IPB1818-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	140	10	850
IPB1818-01	Thallium-200.8	Thallium	ug/l	0	1.0	2.00

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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 003 Report Number: IPB1818	Sampled: 02/19/06 Received: 02/19/06
--	--	---

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).
- M7** The MS and/or MSD were above the acceptance limits. See Blank Spike (LCS).
- M-NR1** There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
- R** The RPD exceeded the method control limit due to sample matrix effects. The individual analyte QA/QC recoveries, however, were within 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.

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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 003 Report Number: IPB1818	Sampled: 02/19/06 Received: 02/19/06
--	--	---

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		
EPA 905.0	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

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: IPB1818-01

Analysis Performed: Level 4 + EDD
Samples: IPB1818-01

Aquatic Testing Laboratories-SUB *California Cert #1775*

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr
Samples: IPB1818-01

Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: EDD + Level 4
Samples: IPB1818-01

Analysis Performed: Gross Alpha
Samples: IPB1818-01

Analysis Performed: Gross Beta
Samples: IPB1818-01

Del Mar Analytical - Irvine

Michele Chamberlin
Project Manager



Del Mar Analytical

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

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

Project ID: Annual Outfall 003

Report Number: IPB1818

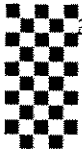
Sampled: 02/19/06
Received: 02/19/06

Eberline Services

2030 Wright Avenue - Richmond, CA 94804
Analysis Performed: Strontium 90
Samples: IPB1818-01

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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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

Fax No: 949-260-3297

Krissi Mellvanna / MWH

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 003	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 _____ X _____

Other: Containers mislabeled _____

This Change Order supersedes all previous change orders submitted.

Thank you

2PB 1818

Del Mar Analytical Version 01/24/06 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 003 Stormwater at RMHF		Total Recoverable Metals: <input type="checkbox"/> Al + PP <input type="checkbox"/> Sp, Cd, Cu, Pb, Hg, B, V, <input type="checkbox"/> X TCDD (and all congeners) <input type="checkbox"/> X Oil & Grease (EPA 413.1) <input type="checkbox"/> X Cl-, SO4, NO3+NO2-N, Perchlorate <input type="checkbox"/> X TDS, TSS <input type="checkbox"/> X VOCs (624), NPDES + PP <input type="checkbox"/> X VOCs A+A+2CVE <input type="checkbox"/> X Pesticides/PCBs - PP <input type="checkbox"/> X Gross Alpha, Gross Beta, Tritium (90S, Sr-90) (90S) Total Combined Radium 226 & 228 <input type="checkbox"/> X SVOCs - PP <input type="checkbox"/> X Acute Toxicity <input type="checkbox"/> X Cyanide <input type="checkbox"/> X														Temp = 52.2 pH = 7.3	
Sample Description	Sample Matrix	Container Type	# of Cont	Preservative	Bottle #	Sampling Date/Time	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 (90S, Sr-90) (90S) Total Combined Radium 226 & 228	SVOCs - PP	Acute Toxicity	Cyanide	Comments		
Outfall 003	W	1L Poly	1	HNO3	1A	2/19/06 08:00													
Outfall 003-Dup	W	1L Poly	1	HNO3	1B														
Outfall 003	W	1L Amber	2	None	2A, 2B														
Outfall 003	W	1L Amber	2	HCl	3A, 3B		X												
Outfall 003	W	Poly-500 ml	2	None	4A, 4B		X												
Outfall 003	W	Poly-500 ml	2	None	5A, 5B			X											
Outfall 003	W	VOAs	3	HCl	6A, 6B, 6C				X										
Outfall 003	W	VOAs	3	None	7A, 7B, 7C					X									
Outfall 003	W	1L Amber	2	None	8A, 8B							X							
Outfall 003	W	2.5 Gal Cube 100 ml Amber VOAs	1	None	9A								X						
Outfall 003	W	1L Amber	2	None	10A, 10B									X					
Outfall 003	W	1 Gal Poly	1	None	11A														
Outfall 003	W	500ml Poly	1	NaOH	12														
Trip Blanks	W	VOAs	3	None	13A, 13B, 13C						X								
Trip Blank	W	VOAs	3	HCl	14A, 14B, 14C					X									
Relinquished By				Received By		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:		Date/Time:			
Relinquished By: Linda Hayes				Received By: Jennifer Ann		2/19/06 13:25		2/19/06 13:25		2/19/06 0600									
Relinquished By: Michelle				Received By: SC		2/19/06 1800		2/19/06 1800		2/20/06 0600									
Relinquished By: FROM SC Rec Fridge				Received By: (Signature)		2/20/06		2/20/06		0600									

9-



March 03, 2006

Alta Project I.D.: 27311

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 "IPB1818". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

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

Sincerely,

A handwritten signature in black ink, 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

27311-001

IPB1818-01

SECTION II



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 ^a	EMPC ^b	Qualifiers	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000121			13C-2,3,7,8-TCDD	77.9	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000169			13C-1,2,3,7,8-PeCDD	79.6	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000158			13C-1,2,3,4,7,8-HxCDD	71.3	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000166			13C-1,2,3,6,7,8-HxCDD	77.6	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000157			13C-1,2,3,4,6,7,8-HpCDD	65.5	23 - 140	
1,2,3,4,6,7,8-HpCDD	ND	0.00000137			13C-OCDD	35.1	17 - 157	
OCDD	0.00000377			J				
2,3,7,8-TCDF	ND	0.00000151			13C-2,3,7,8-TCDF	85.3	24 - 169	
1,2,3,7,8-PeCDF	ND	0.00000212			13C-1,2,3,7,8-PeCDF	92.7	24 - 185	
2,3,4,7,8-PeCDF	ND	0.00000198			13C-2,3,4,7,8-PeCDF	97.9	21 - 178	
1,2,3,4,7,8-HxCDF	ND	0.00000509			13C-1,2,3,4,7,8-HxCDF	76.4	26 - 152	
1,2,3,6,7,8-HxCDF	ND	0.00000514			13C-1,2,3,6,7,8-HxCDF	66.4	26 - 123	
2,3,4,6,7,8-HxCDF	ND	0.00000550			13C-2,3,4,6,7,8-HxCDF	79.6	28 - 136	
1,2,3,7,8,9-HxCDF	ND	0.00000908			13C-1,2,3,7,8,9-HxCDF	75.0	29 - 147	
1,2,3,4,6,7,8-HpCDF	ND	0.00000130			13C-1,2,3,4,6,7,8-HpCDF	62.0	28 - 143	
1,2,3,4,7,8,9-HpCDF	ND	0.00000125			13C-1,2,3,4,7,8,9-HpCDF	70.3	26 - 138	
OCDF	ND		0.00000518		13C-OCDF	44.2	17 - 157	
Totals					CRS 37Cl-2,3,7,8-TCDD	95.0	35 - 197	
Footnotes								
Total TCDD	ND	0.00000121						a. Sample specific estimated detection limit.
Total PeCDD	ND	0.00000169						b. Estimated maximum possible concentration.
Total HxCDD	ND	0.00000160						c. Method detection limit.
Total HpCDD	ND	0.00000137						d. Lower control limit - upper control limit.
Total TCDF	ND	0.00000151						
Total PeCDF	ND	0.00000205						
Total HxCDF	ND	0.00000611						
Total HpCDF	ND	0.00000128						

Analyst: RAS

Approved By: Martha M. Maier 02-Mar-2006 11:01



OPR Results		EPA Method 1613				
Matrix:	Aqueous	QC Batch No.:	7782	Lab Sample:	0-OPR001	
Sample Size:	1.00 L	Date Extracted:	23-Feb-06	Date Analyzed DB-5:	24-Feb-06	
				Date Analyzed DB-225:	NA	
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL
2,3,7,8-TCDD	10.0	10.0	6.7 - 15.8	<u>IS</u> 13C-2,3,7,8-TCDD	70.1	25 - 164
1,2,3,7,8-PeCDD	50.0	57.5	35 - 71	13C-1,2,3,7,8-PeCDD	73.4	25 - 181
1,2,3,4,7,8-HxCDD	50.0	53.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	63.8	32 - 141
1,2,3,6,7,8-HxCDD	50.0	53.1	38 - 67	13C-1,2,3,6,7,8-HxCDD	69.0	28 - 130
1,2,3,7,8,9-HxCDD	50.0	52.8	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	58.3	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	53.1	35 - 70	13C-OCDD	34.1	17 - 157
OCDD	100	106	78 - 144	13C-2,3,7,8-TCDF	75.7	24 - 169
2,3,7,8-TCDF	10.0	10.3	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	81.7	24 - 185
1,2,3,7,8-PeCDF	50.0	50.0	40 - 67	13C-2,3,4,7,8-PeCDF	85.2	21 - 178
2,3,4,7,8-PeCDF	50.0	51.3	34 - 80	13C-1,2,3,4,7,8-HxCDF	68.1	26 - 152
1,2,3,4,7,8-HxCDF	50.0	51.4	36 - 67	13C-1,2,3,6,7,8-HxCDF	66.4	26 - 123
1,2,3,6,7,8-HxCDF	50.0	52.1	42 - 65	13C-2,3,4,6,7,8-HxCDF	69.5	28 - 136
2,3,4,6,7,8-HxCDF	50.0	51.5	35 - 78	13C-1,2,3,7,8,9-HxCDF	70.1	29 - 147
1,2,3,7,8,9-HxCDF	50.0	50.1	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	55.0	28 - 143
1,2,3,4,6,7,8-HpCDF	50.0	50.3	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	62.6	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	52.7	39 - 69	13C-OCDF	42.4	17 - 157
OCDF	100	97.3	63 - 170	<u>CRS</u> 37Cl-2,3,7,8-TCDD	83.6	35 - 197

Analyst: RAS

Approved By: Martha M. Maier 02-Mar-2006 11:01



Sample ID: IPB1818-01		EPA Method 1613					
Client Data		Sample Data		Laboratory Data			
Name: Del Mar Analytical, Irvine	Matrix: Aqueous	Lab Sample: 27311-001	Date Received: 21-Feb-06				
Project: IPB1818	Sample Size: 1.01 L	QC Batch No: 7782	Date Extracted: 23-Feb-06				
Date Collected: 19-Feb-06		Date Analyzed DB-5: 25-Feb-06	Date Analyzed DB-225: NA				
Time Collected: 1030							
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000141		13C-2,3,7,8-TCDD	68.8	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000246		13C-1,2,3,7,8-PeCDD	71.9	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000140		13C-1,2,3,4,7,8-HxCDD	62.6	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000145		13C-1,2,3,6,7,8-HxCDD	70.1	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000138		13C-1,2,3,4,6,7,8-HpCDD	58.9	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000109		J	13C-OCDD	39.2	17 - 157	
OCDD	0.000111		B	13C-2,3,7,8-TCDF	81.2	24 - 169	
2,3,7,8-TCDF	ND	0.00000177		13C-1,2,3,7,8-PeCDF	79.5	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000346		13C-2,3,4,7,8-PeCDF	84.6	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000307		13C-1,2,3,4,7,8-HxCDF	67.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.000000857		13C-1,2,3,6,7,8-HxCDF	68.5	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.000000885		13C-2,3,4,6,7,8-HxCDF	69.4	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.000000506		13C-1,2,3,7,8,9-HxCDF	65.3	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.000000909		13C-1,2,3,4,6,7,8-HpCDF	57.4	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000275		J	13C-1,2,3,4,7,8,9-HpCDF	61.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND			13C-OCDF	46.7	17 - 157	
OCDF	0.00000426		J	CRS 37Cl-2,3,7,8-TCDD	87.1	35 - 197	
Totals							
Total TCDD	ND	0.00000141					
Total PeCDD	ND		0.00000254				
Total HxCDD	0.00000403						
Total HpCDD	0.00000295						
Total TCDF	ND	0.00000177					
Total PeCDF	ND	0.00000327					
Total HxCDF	ND	0.00000107					
Total HpCDF	0.00000556						
Footnotes							
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: Martha M. Maier 02-Mar-2006 11:01

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

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



17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 506-9596 Fax (619) 506-9689
 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851
 2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89126 Ph (702) 798-3820 Fax (702) 798-3821

SUBCONTRACT ORDER - PROJECT # IPB1818

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Alta Analytical 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106 <div style="text-align: right; font-size: 2em; font-family: cursive;"> 27311 0.2°C </div>

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

Analysis	Expiration	Comments
Sample ID: IPB1818-01	Water	Sampled: 02/19/06 10:30
1613-Dioxin-HR-Alta	02/26/06 10:30	Instant Notification
Level 4 + EDD-OUT	03/19/06 10:30	J flags, 17 congeners, no TEQ, ug/L, sub=Alta
		Excel EDD email to pm, Include Std logs for Lvl IV
Containers Supplied:		
1 L Amber (IPB1818-01C)		
1 L Amber (IPB1818-01D)		

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: C. R. Date: 2-20-06 Time: 1700 Received By: Bettina A. Benedict Date: 2/20/06 Time: 0910

SAMPLE LOG-IN CHECKLIST

Alta Project #: 27311

Samples Arrival:	Date/Time 2/21/06 0910	Initials: BBB	Location: WR-2
Logged In:	Date/Time 2/21/06 1552	Initials: BBB	Location: WR-2
Delivered By:	<u>FedEx</u> UPS	Cal	DHL Hand Delivered Other
Preservation:	<u>Ice</u>	Blue Ice	Dry Ice None
Temp °C	0.2°C	Time: 1:00	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 #	7913 8038 2475		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓
Na ₂ S ₂ O ₃ Preservation Documented?		COC	Sample Container <u>None</u>
Shipping Container	Alta	<u>Client</u>	Retain <u>Return</u> Dispose

Comments:

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: February 26, 2006
Client: Del Mar Analytical, Irvine
17461 Derian Ave., Suite 100
Irvine, CA 92614
Attn: Michele Chamberlin

Laboratory No.: A-06022002-001
Sample ID.: IPB1818-01

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: 02/19/06
Date Received: 02/20/06
Temp. Received: 4°C
Chlorine (TRC): 0.0 mg/l
Date Tested: 02/20/06 to 02/24/06

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>
IPB1818-01	100% Survival (TU _a = 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-06022002-001
 Client/ID: Del Mar - IPB1818-01

Start Date: 02/20/2006

TEST SUMMARY

Species: *Pimephales promelas*.
 Age: 14 (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	19.5	8.6	7.8	0	0	Jm 1100
	100%	19.5	10.0	7.5	0	0	
24 Hr	Control	19.3	8.0	7.5	0	0	Lr 1030
	100%	19.5	8.0	7.9	0	0	
48 Hr	Control	19.5	7.3	7.4	0	0	Lr 1130
	100%	19.4	7.7	7.4	0	0	
Renewal	Control	19.8	8.8	7.8	0	0	Lr 1130
	100%	19.2	11.0	7.4	0	0	
72 Hr	Control	19.8	7.6	7.5	0	0	Lr 1130
	100%	19.8	8.0	7.4	0	0	
96 Hr	Control	19.9	7.7	7.6	0	0	Lr 1130
	100%	19.9	7.8	7.3	0	0	

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.5; Conductivity: 256 umho; Temp: 4°C;
 DO: 10.0 mg/l; Alkalinity: 45 mg/l; Hardness: 48 mg/l; NH₃-N: 0.3 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 %



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 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
 9484 Chesapeake Drive, Suite 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 # IPB1818

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	Sampled:	Comments
Sample ID: IPB1818-01 Water Bioassay-Acute 96hr	02/20/06 22:30	02/19/06 10:30	Instant Notification FH minnow, EPA/821-R02-012, Sub to AqTox Labs
Containers Supplied: 1 gal Poly (IPB1818-01Y)			

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>4°C</u>			

<i>C.R.</i>	02/20/06	800	<i>Ernie's Ocean</i>	02/20/06	800
Released By	Date	Time	Received By	Date	Time
<i>Ernie's Ocean</i>	02/20/06	1023	<i>Phil...</i>	2-20-06	1023
Released By	Date	Time	Received By	Date	Time

FATHEAD MINNOW ACUTE
Method 2000.0
Reference Toxicant - SDS



QA/QC Batch No.: RT-060202

TEST SUMMARY

Species: *Pimephales promelas*.
 Age: 10 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>2-2-06</u> <u>LM</u>			<u>2-3-06</u> <u>1100</u>					<u>2-4-06</u> <u>1130</u>				
	<u>1200</u> <u>LM</u>			<u>LM</u>					<u>LM</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	20.9	8.7	7.8	20.8	5.5	7.5	0	0	20.9	5.5	7.5	0	0
1.0 mg/l	20.9	8.8	7.8	20.8	5.2	7.4	0	0	20.8	5.1	7.4	0	0
2.0 mg/l	21.0	8.8	7.8	20.7	5.4	7.2	0	0	20.8	5.0	7.4	0	0
4.0 mg/l	21.0	8.9	7.8	20.7	5.1	7.2	0	0	20.9	5.1	7.3	0	1
8.0 mg/l	21.0	8.9	7.8	20.8	4.3	7.0	10	10	-	-	-	-	-

Date/Time:	RENEWAL			72 Hr					96 Hr				
	<u>2-4-06</u> <u>1130</u>			<u>2-5-06</u> <u>1100</u>					<u>2-6-06</u> <u>1100</u>				
	<u>LM</u>			<u>LM</u>					<u>LM</u>				
	°C	DO	pH	°C	DO	pH	# Dead		°C	DO	pH	# Dead	
A							B	A				B	
Control	21.0	8.6	7.8	20.8	6.5	7.4	0	0	20.2	7.0	7.4	0	0
1.0 mg/l	20.9	8.7	7.8	20.8	6.6	7.4	0	0	20.2	7.0	7.4	0	0
2.0 mg/l	20.9	8.8	7.8	20.7	5.9	7.4	0	0	20.1	6.8	7.4	0	0
4.0 mg/l	20.9	8.8	7.8	20.7	6.2	7.4	0	0	20.2	6.9	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: 95 mg/l; Conductivity: 330 umho.

Acute Fish Test-96 Hr Survival

Start Date: 02 Feb-06 12:00 Test ID: RT-060202 Sample ID: REF-Ref Toxicant
 End Date: 06 Feb-06 11:00 Lab ID: CAATL-Aquatic Testing Labs Sample Type: SDS-Sodium dodecyl sulfate
 Sample Date: 02 Feb-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	0.9000
8	0.0000	0.0000

Conc-mg/L	Mean	N-Mean	Transform: Arcsin Square Root				CV%	N	Number Resp	Total Number
			Mean	Min	Max					
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	0.9500	0.9500	1.3305	1.2490	1.4120	8.661	2	1	20	
8	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20	

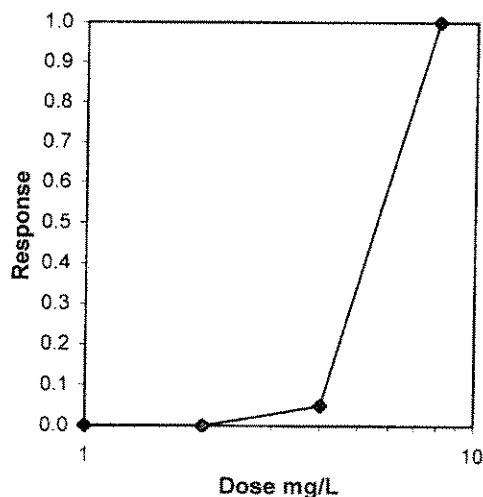
Auxiliary Tests

Normality of the data set cannot be confirmed
 Equality of variance cannot be confirmed

Statistic Critical Skew Kurt

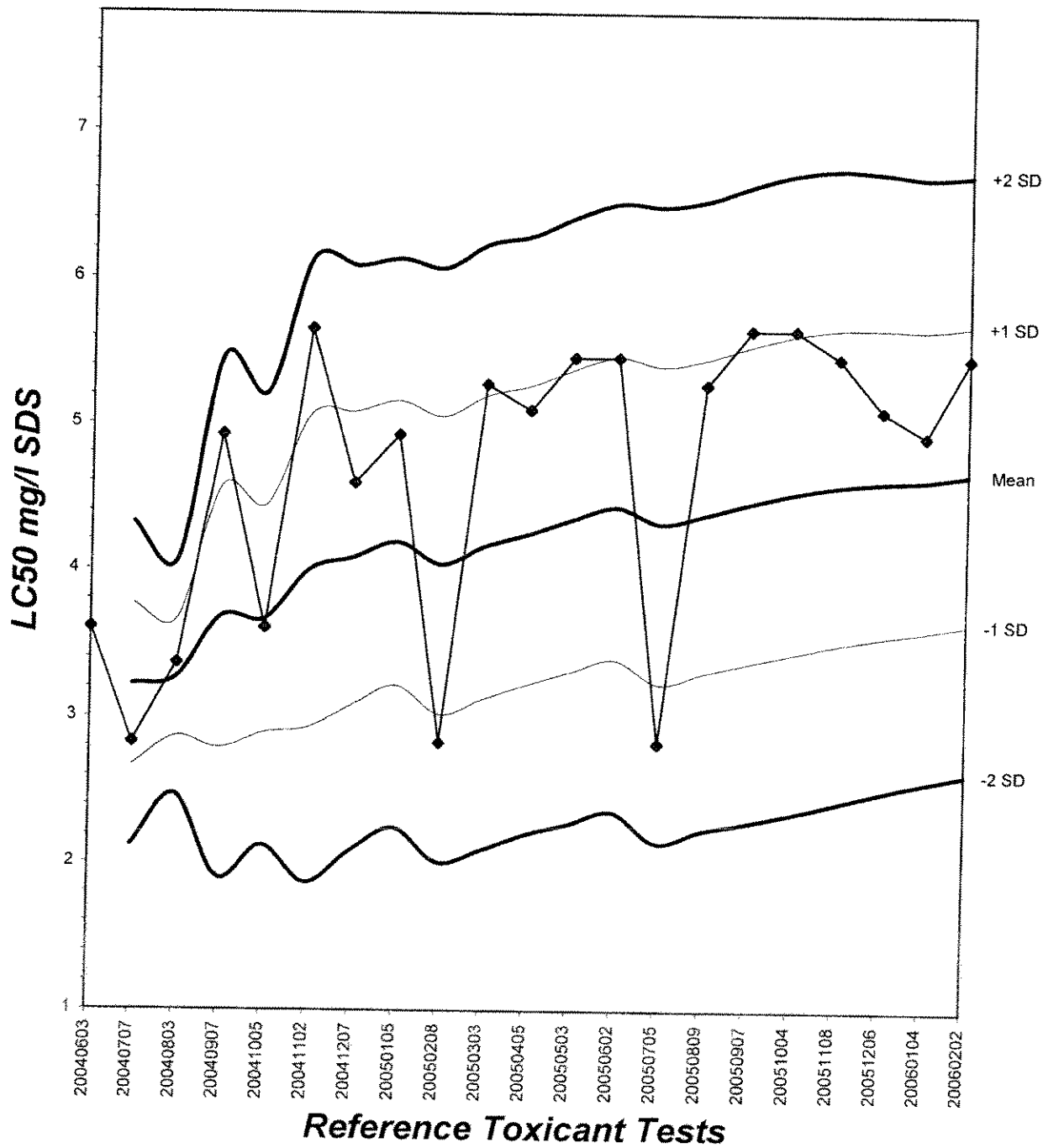
Trimmed Spearman-Kärber

Trim Level	EC50	95% CL	
0.0%	5.4642	5.1072	5.8461
5.0%	5.5546	5.3505	5.7664
10.0%	5.5546	5.3505	5.7664
20.0%	5.5546	5.3505	5.7664
Auto-0.0%	5.4642	5.1072	5.8461



Fathead Minnow Acute Laboratory Control Chart

CV% = 21.9



TEST ORGANISM LOG



FATHEAD MINNOW - LARVAL (*Pimephales promelas*)

QA/QC BATCH NO.: RT-060202

SOURCE: In-Lab Culture

DATE HATCHED: 1-23-06

APPROXIMATE QUANTITY: 400

GENERAL APPEARANCE: good

MORTALITIES 48 HOURS PRIOR TO
TO USE IN TESTING: 0

DATES USED IN LAB: 2/2/6
to
-1-1-

AVERAGE FISH WEIGHT: 0.006 gm

TEST LOADING LIMITS: 0.65 gm/liter

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

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

ACCLIMATION WATER QUALITY:

Temp.: 20.9 °C pH: 7.8 Ammonia: 0.2 mg/l NH₃-N

DO: 8.7 mg/l Alkalinity: 53 mg/l Hardness: 94 mg/l

READINGS RECORDED BY: [Signature] DATE: 2-6-06

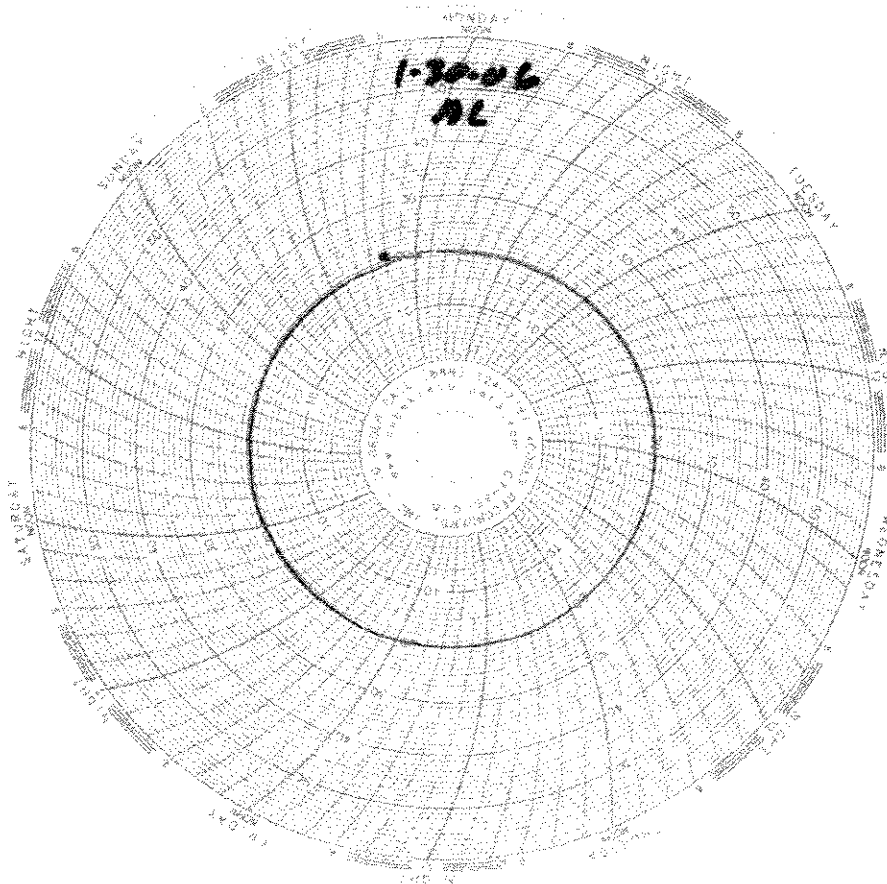


Laboratory Temperature Chart

QA/QC Batch No: RT-060202

Date Tested: 02/02/06 to 02/06/06

Acceptable Range: 20+/- 1°C





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. IPB1818
Eberline Services NELAP Cert #01120CA (exp. 01/31/07)
Eberline Services Report R602147-8653

Dear Ms. Chamberlin:

Enclosed are results from the analyses 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 analyses were gross alpha/gross beta (EPA900.0), and strontium-90 (Sr-90, EPA905.0). The batch QC LCS, blank analyses, sample duplicates, and matrix spike results were within the limits defined in Eberline Services Quality Control Procedures Manual. Analyses that involve the yielding of an analytical tracer or carrier, such as Sr-90, do not require matrix spike analyses to be performed.

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

Regards,

Melissa Mannion
Senior Program Manager

MCM/njv

*Enclosure. Report
Subcontract Form
Receipt checklist
Invoice*

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

NPDES - 1874

Eberline Services

ANALYSIS RESULTS

SDG <u>8653</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>R602147-01</u>	Contract <u>PROJECT# IPB1818</u>
Received Date <u>02/21/06</u>	Matrix <u>WATER</u>

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>
IPB1818-01	8653-001	02/19/06	03/14/06	GrossAlpha	0.735 ± 0.45	pCi/L	0.587
			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

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

Eberline Services

QC RESULTS

SDG <u>8653</u> Work Order <u>R602147-01</u> Received Date <u>02/21/06</u>	Client <u>DEL MAR ANAL</u> Contract <u>PROJECT# IPB1818</u> Matrix <u>WATER</u>
--	---

Lab	Sample ID	Nuclide	Results	Units	Amount Added	MDA	Evaluation
<u>LCS</u>							
	8653-002	GrossAlpha	9.32 ± 0.63	pCi/Smpl	10.2	0.306	91% recovery
		Gross Beta	9.96 ± 0.37	pCi/Smpl	9.83	0.271	101% recovery
		Sr-90	11.2 ± 0.61	pCi/Smpl	10.8	0.229	104% recovery
<u>BLANK</u>							
	8653-003	GrossAlpha	-0.408 ± 0.18	pCi/Smpl	NA	0.376	<MDA
		Gross Beta	0.080 ± 0.24	pCi/Smpl	NA	0.414	<MDA
		Sr-90	-0.073 ± 0.16	pCi/Smpl	NA	0.418	<MDA

<u>DUPLICATES</u>			
Sample ID	Nuclide	Results ± 2σ	MDA
8653-004	GrossAlpha	0.122 ± 0.53	0.893
	Gross Beta	6.92 ± 0.71	0.869
	Sr-90	0.358 ± 0.39	0.771

<u>ORIGINALS</u>						
Sample ID	Results ± 2σ	MDA	RPD (Tot)	Eval	3σ	
8653-001	0.735 ± 0.45	0.587	143	249	satis.	
	7.03 ± 0.74	0.906	2	48	satis.	
	0.317 ± 0.31	0.594	-	0	satis.	

<u>SPIKED SAMPLE</u>			
Sample ID	Nuclide	Results ± 2σ	MDA
8653-005	GrossAlpha	74.0 ± 2.9	0.626
	Gross Beta	66.0 ± 1.7	0.891

<u>ORIGINAL SAMPLE</u>					
Sample ID	Results ± 2σ	MDA	Added	%Recv	
8653-001	0.735 ± 0.45	0.587	71.4	103	
	7.03 ± 0.74	0.906	65.5	90	

Certified by <u>[Signature]</u> Report Date <u>03/20/06</u> Page 2
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17461 Denian 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) 570-4857 Fax (909) 370-1046
 9484 Chesapeake Drive, Suite 505, San Diego, CA 92123 Ph (619) 505-6996 Fax (619) 505-9289
 9890 South 81st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 755-0043 Fax (480) 785-0881
 1520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 790-3820 Fax (702) 706-3021

SUBCONTRACT ORDER - PROJECT # IPB1818

<p>SENDING LABORATORY: Del Mar Analytical, Irvine 17461 Denian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin</p>	<p>RECEIVING LABORATORY: Eberline Services 2030 Wright Avenue Richmond, CA 94804 Phone: (510) 235-2633 Fax: (510) 235-0438</p>
--	--

Standard TAT is requested unless specific due date is requested => Due Date: 4 weeks Initials: _____

Analysis	Expiration	Comments
Sample ID: IPB1818-01 Water	Sampled: 02/19/06 10:30	Instant Notification
EDD + Level 4	03/19/06 10:30	
Gross Alpha-O	02/19/07 10:30	900.0, IF RESULT>15 pCi/L, run Radium 226 & 228
Gross Beta-O	02/19/07 10:30	900.0, IF RESULT>50 pCi/L, run Radium 226 & 228
Radium, Combined-O	02/19/07 10:30	HOLD for Gross A&B results; EPA 903.1 & 904.0
Strontium 90-O	02/19/07 10:30	HOLD for Ra 226 & Ra 228 results, EPA 905.0 - analyze
Tritium-O	02/19/07 10:30	HOLD for Ra 226+Ra 228 results, EPA 906.0

Containers Supplied:
 2.5 gal Poly (IPB1818-01S)
 40 ml Amber Voa Vial (IPB1818-01T)
 40 ml Amber Voa Vial (IPB1818-01U)
 40 ml Amber Voa Vial (IPB1818-01V)

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

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. 1PB1818

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: 11:20

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

Ion Chamber Ser. No. _____ Calibration date _____
 Alpha Meter Ser. No. _____ Calibration date _____
 Beta/Gamma Meter Ser. No. _____ Calibration date _____

APPENDIX G

Section 50

Outfall 003, February 19, 2006
AMEC Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID B4DF40
 Task Order 1261.001D.01
 SDG No. IPB1818

No. of Analyses 1

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

Date: April 2, 2006
 Reviewer's Signature
K. Shadowlight

ACTION ITEMS^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	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
COMMENTS^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 003

ANALYSIS: DIOXINS/FURANS
SAMPLE DELIVERY GROUP: IPB1818

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

1. INTRODUCTION

Task Order Title: NPDES
Contract Task Order: 1261.001.01
Sample Delivery Group: IPB1818
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^x Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 0)*, *USEPA Method 1613*, and the *National Functional Guidelines for Chlorinated Dioxin/Furan Data Review (8/02)*. Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 003	IPB1818-01	27311-001	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 (0-7782-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

Client Data		Sample Data		Laboratory Data	
Sample ID: IPB1818-01 Outfall 003	Del Mar Analytical, Irvine IPB1818 Date Collected: 19-Feb-06 Time Collected: 1030	Matrix: Aqueous Sample Size: 1.01 L	Lab Sample: 27311-001 QC Batch No.: 7782 Date Analyzed DB-5: 25-Feb-06	Date Received: 21-Feb-06 Date Extracted: 23-Feb-06 Date Analyzed DB-225: NA	
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Labeled Standard	%R LCL-UCL ^d Qualifiers
2,3,7,8-TCDD	ND	0.00000141		13C-2,3,7,8-TCDD	68.8 25 - 164
1,2,3,7,8-PeCDD	ND	0.00000246		13C-1,2,3,7,8-PeCDD	71.9 25 - 181
1,2,3,4,7,8-HxCDD	ND	0.00000140		13C-1,2,3,4,7,8-HxCDD	62.6 32 - 141
1,2,3,6,7,8-HxCDD	ND	0.00000145		13C-1,2,3,6,7,8-HxCDD	70.1 28 - 130
1,2,3,7,8,9-HxCDD	ND	0.00000138		13C-1,2,3,7,8,9-HxCDD	58.9 23 - 140
1,2,3,4,6,7,8-HpCDD	0.0000109			13C-OCDD	39.2 17 - 157
OCDD	0.000111			13C-2,3,7,8-TCDF	81.2 24 - 169
2,3,7,8-TCDF	ND	0.00000177		13C-1,2,3,7,8-PeCDF	79.5 24 - 185
1,2,3,7,8-PeCDF	ND	0.00000346		13C-2,3,4,7,8-PeCDF	84.6 21 - 178
2,3,4,7,8-PeCDF	ND	0.00000307		13C-1,2,3,4,7,8-HxCDF	67.2 26 - 152
1,2,3,4,7,8-HxCDF	ND	0.000000857		13C-1,2,3,6,7,8-HxCDF	68.5 26 - 123
1,2,3,6,7,8-HxCDF	ND	0.000000885		13C-2,3,4,6,7,8-HxCDF	69.4 28 - 136
2,3,4,6,7,8-HxCDF	ND	0.000000506		13C-1,2,3,7,8,9-HxCDF	65.3 29 - 147
1,2,3,7,8,9-HxCDF	ND	0.000000909		13C-1,2,3,4,6,7,8-HpCDF	57.4 28 - 143
1,2,3,4,6,7,8-HpCDF	0.00000275			13C-1,2,3,4,7,8,9-HpCDF	61.6 26 - 138
1,2,3,4,7,8,9-HpCDF	ND	0.00000109		13C-OCDF	46.7 17 - 157
OCDF	0.00000426			CRS-97C-2,3,7,8-TCDD	87.1 35 - 197
Totals					
Total TCDD	ND	0.00000141			
Total PeCDD	ND		0.00000254		
Total HxCDD	0.00000403				
Total HpCDD	0.00000295				
Total TCDF	ND	0.00000177			
Total PeCDF	ND	0.00000327			
Total HxCDF	ND	0.00000107			
Total HpCDF	0.00000556				

Footnotes

- 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: Martha M. Maier 02-Mar-2006 11:01

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4MT41
 Task Order: 1261.001D.01
 SDG No.: IPB1818

No. of Analyses: 1

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

Date: April 4, 2006
 Reviewer's Signature


ACTION ITEMS^a	
1. Case Narrative Deficiencies	_____
2. Out of Scope Analyses	_____
3. Analyses Not Conducted	_____
4. Missing Hardcopy Deliverables	_____
5. Incorrect Hardcopy Deliverables	_____
6. Deviations from Analysis Protocol, e.g.,	Qualifications applied for 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	_____
COMMENTS^b	_____
<p>^a Subcontracted analytical laboratory is not meeting contract and/or method requirements.</p> <p>^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.</p>	



DATA VALIDATION REPORT

NPDES Sampling
Outfall 003

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPB1818

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB1818
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^X 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.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 003	IPB1818-01	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 003 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 interferents in Outfall 003 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 80-125%. 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

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 003

Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev	Qual
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.										
Reporting Units: mg/l										
Boron	EPA 200.7	6B20080	0.0074	0.050	ND	1	02/20/06	02/27/06	U	

LEVEL IV

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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

Project ID: Annual Outfall 003

Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									Rev	Qual Code
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.										
Reporting Units: ug/l										
Aluminum	EPA 200.7	6B20080	40	50	400	1	02/20/06	02/28/06		
Antimony	EPA 200.8	6B21089	0.18	2.0	1.4	1	02/21/06	02/22/06	JJ	DNQ
Arsenic	EPA 200.7	6B20080	4.4	5.0	11	1	02/20/06	02/25/06		
Beryllium	EPA 200.7	6B20080	0.90	2.0	ND	1	02/20/06	02/25/06	U	
Cadmium	EPA 200.8	6B21089	0.015	1.0	0.044	1	02/21/06	02/22/06	JJ	DNQ
Chromium	EPA 200.7	6B20080	2.0	5.0	2.1	1	02/20/06	02/25/06	JJ	DNQ
Copper	EPA 200.8	6B21089	0.49	2.0	6.3	1	02/21/06	02/22/06		
Lead	EPA 200.8	6B21089	0.040	1.0	0.71	1	02/21/06	02/22/06	JJ	DNQ
Mercury	EPA 245.1	6B21083	0.063	0.20	ND	1	02/21/06	02/21/06	U	
Nickel	EPA 200.7	6B20080	2.0	10	ND	1	02/20/06	02/25/06	U	
Selenium	EPA 200.7	6B20080	8.0	10	ND	1	02/20/06	02/25/06	U	
Silver	EPA 200.7	6B20080	3.0	10	ND	1	02/20/06	02/25/06	U	B
Thallium	EPA 200.8	6B21089	0.075	1.0	ND	1	02/21/06	02/22/06	U	
Vanadium	EPA 200.7	6B20080	3.0	10	ND	1	02/20/06	02/25/06	U	
Zinc	EPA 200.7	6B20080	15	20	91	1	02/20/06	02/25/06	B	

LEVEL IV

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4PP9
 Task Order: 1261.001D.01
 SDG No.: IPB1818

No. of Analyses: 1

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

Date: April 6, 2006
 Reviewer's Signature: 

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



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 003

ANALYSIS: PESTICIDES / PCBs

SAMPLE DELIVERY GROUP: IPB1818

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB1818
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^X *Data Validation Procedure for Organochlorine Pesticides and PCBs (DVP-4, Rev. 0)*, EPA Method 608, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 003	IPB1818-01	Water	608

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$, at 3°C . According to the case narrative for this SDG, the sample was received intact and on ice. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 PESTICIDES INSTRUMENT PERFORMANCE

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

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

2.3 CALIBRATION

2.3.1 Analytical Sequence

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

2.3.2 Initial Calibration

There was one initial calibration dated 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 ≥ 0.995 on the primary analytical column (Channel B). The %RSDs were $\leq 10\%$ or r^2 values ≥ 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 ≥ 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 benchsheets, no cleanups were performed on the water sample. No qualifications were required.

2.9 FIELD QC SAMPLES

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

2.9.1 Field Blanks and Equipment Rinsates

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

2.9.2 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.10 COMPOUND IDENTIFICATION

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

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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



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

Project ID: Annual Outfall 003

Report Number: IPB1818

Sampled: 02/19/06

Received: 02/19/06

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.									
Reporting Units: ug/l									
Aldrin	EPA 608	6B24053	0.029	0.096	ND	0.962	02/24/06	02/24/06	<i>Level III</i> <i>Final</i> <i>Results</i>
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%)					72 %				
Surrogate: Decachlorobiphenyl (45-120%)					89 %				

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

Level III

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IPB1818 <Page 9 of 41>



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 003

Report Number: IPB1818

Sampled: 02/19/06

Received: 02/19/06

TOTAL PCBs (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	6B24053	0.19	0.96	ND	0.962	02/24/06	02/25/06	<i>See Data Table</i> ↓
Aroclor 1221	EPA 608	6B24053	0.096	0.96	ND	0.962	02/24/06	02/25/06	
Aroclor 1232	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/25/06	
Aroclor 1242	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/25/06	
Aroclor 1248	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/25/06	
Aroclor 1254	EPA 608	6B24053	0.24	0.96	ND	0.962	02/24/06	02/25/06	
Aroclor 1260	EPA 608	6B24053	0.38	0.96	ND	0.962	02/24/06	02/25/06	
Surrogate: Decachlorobiphenyl (45-120%)					89 %				

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

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IPB1818 <Page 10 of 41>



DATA VALIDATION REPORT

NPDES Sampling
Multiple Outfalls

ANALYSIS: RADIONUCLIDES

SAMPLE DELIVERY GROUPS: IPB1810, IPB1811, IPB1817,
IPB1818

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: 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 006	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>2602144-01</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
<u>Sample ID</u>	<u>Sample ID</u>								
<u>Outfall 004</u>									
<u>IPB1810-01</u>	<u>8650-001</u>	<u>02/18/06</u>	<u>02/14/06</u>	<u>Gross Alpha</u>	<u>0.526 ± 0.63</u>	<u>pCi/L</u>	<u>0.916</u>	<u>VJ</u>	<u>R, #1</u>
			<u>03/14/06</u>	<u>Gross Beta</u>	<u>21.4 ± 1.0</u>	<u>pCi/L</u>	<u>0.873</u>	<u>J</u>	<u>↓</u>

LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>03/28/06</u>
Page 1

Eberline Services

ANALYSIS RESULTS

SDG <u>8652</u>	Client <u>DEL MAR ANAL</u>
Work Order <u>8602146-01</u>	Contract <u>PROJECT# IPB1817</u>
Received Date <u>02/21/06</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± 2σ	Units	MDA	Raw Qual	Qual Code
IPB1817-01	8652-001		02/19/06	03/14/06	Gross Alpha	-0.117 ± 0.44	pCi/L	0.798	UJ	R _s #1
				03/14/06	Gross Beta	4.33 ± 0.66	pCi/L	0.885	J	↓

Outfall 006

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>8502147-01</u>	Contract <u>PROJECT# IPB1818</u>
Received Date <u>02/21/06</u>	Matrix <u>WATER</u>

Client	Lab	Sample ID	Collected	Analyzed	Nuclide	Results ± SD	Units	MDA
Sample ID <u>Outfall 003</u>								
IPB1818-01	8651-001	02/19/06	03/14/06	GrossAlpha	0.735 ± 0.45	pCi/L	0.587	
			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/W Q/W 5/4/06	Gen. Check R X ←
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LEVEL IV

Certified by <u>[Signature]</u>
Report Date <u>02/23/06</u>
Page 1



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 003

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP IPB1818

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB1818
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^X Data Validation Procedure for Levels C and D Semivolatile Organics (DVP-3, Rev. 0), EPA Method 625, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 003	IPB1818-01	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 3°C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

The water sample was extracted 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 003 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 (6B24064-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 (6B24064-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 recovery below the QC limits but $\geq 10\%$ for dimethylphthalate in the blank spike only. No qualifications were required.

2.6 SURROGATE RECOVERY

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

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.8 FIELD QC SAMPLES

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

2.8.1 Field Blanks and Equipment Rinsates

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

2.8.2 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for 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 003
Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

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: IPB1818-01 (Outfall 003 - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6B24064	4.1	9.5	ND	0.952	02/24/06	02/28/06	u
Acenaphthylene	EPA 625	6B24064	3.0	9.5	ND	0.952	02/24/06	02/28/06	
Aniline	EPA 625	6B24064	2.8	9.5	ND	0.952	02/24/06	02/28/06	
Anthracene	EPA 625	6B24064	3.0	9.5	ND	0.952	02/24/06	02/28/06	
Benzidine	EPA 625	6B24064	5.0	19	ND	0.952	02/24/06	02/28/06	
Benzoic acid	EPA 625	6B24064	2.5	19	ND	0.952	02/24/06	02/28/06	
Benzo(a)anthracene	EPA 625	6B24064	3.5	9.5	ND	0.952	02/24/06	02/28/06	
Benzo(b)fluoranthene	EPA 625	6B24064	2.6	9.5	ND	0.952	02/24/06	02/28/06	
Benzo(k)fluoranthene	EPA 625	6B24064	3.2	9.5	ND	0.952	02/24/06	02/28/06	
Benzo(g,h,i)perylene	EPA 625	6B24064	5.0	9.5	ND	0.952	02/24/06	02/28/06	
Benzo(a)pyrene	EPA 625	6B24064	3.3	9.5	ND	0.952	02/24/06	02/28/06	
Benzyl alcohol	EPA 625	6B24064	2.4	19	ND	0.952	02/24/06	02/28/06	
Bis(2-chloroethoxy)methane	EPA 625	6B24064	3.7	9.5	ND	0.952	02/24/06	02/28/06	
Bis(2-chloroethyl)ether	EPA 625	6B24064	4.2	9.5	ND	0.952	02/24/06	02/28/06	
Bis(2-chloroisopropyl)ether	EPA 625	6B24064	4.4	9.5	ND	0.952	02/24/06	02/28/06	
Bis(2-ethylhexyl)phthalate	EPA 625	6B24064	5.0	48	ND	0.952	02/24/06	02/28/06	
4-Bromophenyl phenyl ether	EPA 625	6B24064	4.4	9.5	ND	0.952	02/24/06	02/28/06	
Butyl benzyl phthalate	EPA 625	6B24064	3.3	19	ND	0.952	02/24/06	02/28/06	
4-Chloroaniline	EPA 625	6B24064	5.7	9.5	ND	0.952	02/24/06	02/28/06	
2-Chloronaphthalene	EPA 625	6B24064	3.8	9.5	ND	0.952	02/24/06	02/28/06	
4-Chloro-3-methylphenol	EPA 625	6B24064	3.3	19	ND	0.952	02/24/06	02/28/06	
2-Chlorophenol	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	
4-Chlorophenyl phenyl ether	EPA 625	6B24064	2.9	9.5	ND	0.952	02/24/06	02/28/06	
Chrysene	EPA 625	6B24064	2.7	9.5	ND	0.952	02/24/06	02/28/06	
Dibenz(a,h)anthracene	EPA 625	6B24064	4.5	19	ND	0.952	02/24/06	02/28/06	
Dibenzofuran	EPA 625	6B24064	2.5	9.5	ND	0.952	02/24/06	02/28/06	
Di-n-butyl phthalate	EPA 625	6B24064	2.7	19	ND	0.952	02/24/06	02/28/06	
1,3-Dichlorobenzene	EPA 625	6B24064	3.9	9.5	ND	0.952	02/24/06	02/28/06	
1,4-Dichlorobenzene	EPA 625	6B24064	3.7	9.5	ND	0.952	02/24/06	02/28/06	
1,2-Dichlorobenzene	EPA 625	6B24064	4.3	9.5	ND	0.952	02/24/06	02/28/06	
3,3-Dichlorobenzidine	EPA 625	6B24064	10	19	ND	0.952	02/24/06	02/28/06	
2,4-Dichlorophenol	EPA 625	6B24064	3.9	9.5	ND	0.952	02/24/06	02/28/06	
Diethyl phthalate	EPA 625	6B24064	3.0	9.5	ND	0.952	02/24/06	02/28/06	
2,4-Dimethylphenol	EPA 625	6B24064	4.2	19	ND	0.952	02/24/06	02/28/06	
Dimethyl phthalate	EPA 625	6B24064	3.4	9.5	ND	0.952	02/24/06	02/28/06	
4,6-Dinitro-2-methylphenol	EPA 625	6B24064	4.9	19	ND	0.952	02/24/06	02/28/06	
2,4-Dinitrophenol	EPA 625	6B24064	5.0	19	ND	0.952	02/24/06	02/28/06	
2,4-Dinitrotoluene	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	
2,6-Dinitrotoluene	EPA 625	6B24064	3.0	9.5	ND	0.952	02/24/06	02/28/06	
Di-n-octyl phthalate	EPA 625	6B24064	4.5	19	ND	0.952	02/24/06	02/28/06	
Fluoranthene	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	

see qual code

L2

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 003

Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifier
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.									
Reporting Units: ug/l									
Fluorene	EPA 625	6B24064	3.7	9.5	ND	0.952	02/24/06	02/28/06	u
Hexachlorobenzene	EPA 625	6B24064	4.6	9.5	ND	0.952	02/24/06	02/28/06	u
Hexachlorobutadiene	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	u
Hexachlorocyclopentadiene	EPA 625	6B24064	3.2	19	ND	0.952	02/24/06	02/28/06	u
Hexachloroethane	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	u
Indeno(1,2,3-cd)pyrene	EPA 625	6B24064	5.1	19	ND	0.952	02/24/06	02/28/06	u
Isophorone	EPA 625	6B24064	3.5	9.5	ND	0.952	02/24/06	02/28/06	u
2-Methylnaphthalene	EPA 625	6B24064	2.9	9.5	ND	0.952	02/24/06	02/28/06	u
2-Methylphenol	EPA 625	6B24064	3.5	9.5	ND	0.952	02/24/06	02/28/06	u
4-Methylphenol	EPA 625	6B24064	3.6	9.5	ND	0.952	02/24/06	02/28/06	u
Naphthalene	EPA 625	6B24064	4.3	9.5	ND	0.952	02/24/06	02/28/06	u
2-Nitroaniline	EPA 625	6B24064	3.7	19	ND	0.952	02/24/06	02/28/06	u
3-Nitroaniline	EPA 625	6B24064	4.3	19	ND	0.952	02/24/06	02/28/06	u
4-Nitroaniline	EPA 625	6B24064	4.7	19	ND	0.952	02/24/06	02/28/06	u
Nitrobenzene	EPA 625	6B24064	4.0	19	ND	0.952	02/24/06	02/28/06	u
2-Nitrophenol	EPA 625	6B24064	4.0	9.5	ND	0.952	02/24/06	02/28/06	u
4-Nitrophenol	EPA 625	6B24064	6.3	19	ND	0.952	02/24/06	02/28/06	u
N-Nitrosodiphenylamine	EPA 625	6B24064	3.8	9.5	ND	0.952	02/24/06	02/28/06	u
N-Nitroso-di-n-propylamine	EPA 625	6B24064	3.4	9.5	ND	0.952	02/24/06	02/28/06	u
Pentachlorophenol	EPA 625	6B24064	3.8	19	ND	0.952	02/24/06	02/28/06	u
Phenanthrene	EPA 625	6B24064	3.1	9.5	ND	0.952	02/24/06	02/28/06	u
Phenol	EPA 625	6B24064	3.8	9.5	ND	0.952	02/24/06	02/28/06	u
Pyrene	EPA 625	6B24064	3.7	9.5	ND	0.952	02/24/06	02/28/06	u
1,2,4-Trichlorobenzene	EPA 625	6B24064	4.2	9.5	ND	0.952	02/24/06	02/28/06	u
2,4,5-Trichlorophenol	EPA 625	6B24064	3.4	19	ND	0.952	02/24/06	02/28/06	u
2,4,6-Trichlorophenol	EPA 625	6B24064	3.9	19	ND	0.952	02/24/06	02/28/06	u
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6B24064	4.8	19	ND	0.952	02/24/06	02/28/06	u
N-Nitrosodimethylamine	EPA 625	6B24064	3.5	19	ND	0.952	02/24/06	02/28/06	u
Surrogate: 2-Fluorophenol (30-120%)					38 %				
Surrogate: Phenol-d6 (35-120%)					66 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					62 %				
Surrogate: Nitrobenzene-d5 (45-120%)					67 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					72 %				
Surrogate: Terphenyl-d14 (45-120%)					103 %				

See Qual Code

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u/c
04-06-06

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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Level IV



DATA VALIDATION REPORT

NPDES Monitoring Program
Annual Outfall 003

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB1818

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES
MEC^x Project Number: 1261.001D.01
Sample Delivery Group: IPB1818
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^x *Data Validation Procedure for Volatile Organics (DVP-2, Rev. 0)*, *EPA Method 624*, and the *National Functional Guidelines for Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 003	IPB1818-01	Water	624
Trip Blank	IPB1818-02	Water	624

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±2°C, at 3°C. According to the case narrative for this SDG, the samples were received intact, on ice, and properly preserved. Information regarding lack of headspace in the VOA vials was not provided. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

The unpreserved aliquots of the water samples were analyzed for a portion of the target compounds within seven days of collection, and the preserved aliquots were analyzed for the remaining target compounds within 14 days. 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

Three initial calibrations were associated with the sample analyses, dated 10/19/05 (acrolein and acrylonitrile only), 02/06/06 (2-chloroethyl vinyl ether 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 ≥0.05, and the %RSDs were ≤35% or $r^2 \geq 0.995$ for the target compounds listed on the sample result summary forms.

Three continuing calibrations were associated with the sample analyses, two dated 02/20/06 (one for 2-chloroethyl vinyl ether and one for acrolein and acrylonitrile), and one dated 03/02/06 (all remaining target compounds). 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 ≥0.05 and all %Ds were within the QC limit of ≤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 003. Sample Trip Blank was a field QC sample and required no

DATA VALIDATION REPORT

qualification. As acrolein was previously rejected for RRFs <0.05, the results were not further qualified. No further qualifications were required.

2.4 BLANKS

Two method blanks (6B20035-BLK1 and 6C02009-BLK1) were analyzed with this SDG. No target compounds were detected in the method blanks. Review of the method blank raw data indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two blank spikes (6B20035-BS1 and 6C02009-BS1) were analyzed with this SDG. Target compounds acrolein and acrylonitrile were not included in associated blank spike 6B20035-BS1. The recovery for 1,1,2,2-tetrachloroethane was above the QC limits in 6C02009-BS1; however, the compound was not detected in the site sample of this SDG. The remaining recoveries were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

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

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.8 FIELD QC SAMPLES

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

DATA VALIDATION REPORT

2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with site sample Outfall 003. No target compounds were detected in the trip blank. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

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

2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

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

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

2.13 SYSTEM PERFORMANCE

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



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

Project ID: Annual Outfall 003

Report Number: IPB1818

Sampled: 02/19/06

Received: 02/19/06

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: IPB1818-01 (Outfall 003 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C02009	0.28	1.0	ND	1	03/02/06	03/02/06	<i>see qual qual code</i>
Bromodichloromethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
Bromoform	EPA 624	6C02009	0.32	5.0	ND	1	03/02/06	03/02/06	
Bromomethane	EPA 624	6C02009	0.42	5.0	ND	1	03/02/06	03/02/06	
Carbon tetrachloride	EPA 624	6C02009	0.28	0.50	ND	1	03/02/06	03/02/06	
Chlorobenzene	EPA 624	6C02009	0.36	2.0	ND	1	03/02/06	03/02/06	
Chloroethane	EPA 624	6C02009	0.40	5.0	ND	1	03/02/06	03/02/06	
Chloroform	EPA 624	6C02009	0.33	2.0	ND	1	03/02/06	03/02/06	
Chloromethane	EPA 624	6C02009	0.30	5.0	ND	1	03/02/06	03/02/06	
Dibromochloromethane	EPA 624	6C02009	0.28	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichlorobenzene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
1,3-Dichlorobenzene	EPA 624	6C02009	0.35	2.0	ND	1	03/02/06	03/02/06	
1,4-Dichlorobenzene	EPA 624	6C02009	0.37	2.0	ND	1	03/02/06	03/02/06	
1,1-Dichloroethane	EPA 624	6C02009	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloroethane	EPA 624	6C02009	0.28	0.50	ND	1	03/02/06	03/02/06	
1,1-Dichloroethene	EPA 624	6C02009	0.42	5.0	ND	1	03/02/06	03/02/06	
trans-1,2-Dichloroethene	EPA 624	6C02009	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloropropane	EPA 624	6C02009	0.35	2.0	ND	1	03/02/06	03/02/06	
cis-1,3-Dichloropropene	EPA 624	6C02009	0.22	2.0	ND	1	03/02/06	03/02/06	
trans-1,3-Dichloropropene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
Ethylbenzene	EPA 624	6C02009	0.25	2.0	ND	1	03/02/06	03/02/06	
Methylene chloride	EPA 624	6C02009	0.70	5.0	ND	1	03/02/06	03/02/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C02009	0.24	2.0	ND	1	03/02/06	03/02/06	
Tetrachloroethene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
Toluene	EPA 624	6C02009	0.36	2.0	ND	1	03/02/06	03/02/06	
1,1,1-Trichloroethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
1,1,2-Trichloroethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
Trichloroethene	EPA 624	6C02009	0.26	2.0	ND	1	03/02/06	03/02/06	
Trichlorofluoromethane	EPA 624	6C02009	0.34	5.0	ND	1	03/02/06	03/02/06	
Vinyl chloride	EPA 624	6C02009	0.26	0.50	ND	1	03/02/06	03/02/06	
Xylenes, Total	EPA 624	6C02009	0.90	4.0	ND	1	03/02/06	03/02/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C02009	1.2	5.0	ND	1	03/02/06	03/02/06	
Surrogate: Dibromofluoromethane (80-120%)					110 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					100 %				

Del Mar Analytical - Irvine
 Michela Chamberlin
 Project Manager

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Level IV
 IPB1818 <Page 4 of 41>



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

Project ID: Annual Outfall 003

Report Number: IPB1818

Sampled: 02/19/06
 Received: 02/19/06

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: IPB1818-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	6C02009	0.28	1.0	ND	1	03/02/06	03/02/06	<i>See Qual Code</i> ↓
Bromodichloromethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
Bromoform	EPA 624	6C02009	0.32	5.0	ND	1	03/02/06	03/02/06	
Bromomethane	EPA 624	6C02009	0.42	5.0	ND	1	03/02/06	03/02/06	
Carbon tetrachloride	EPA 624	6C02009	0.28	0.50	ND	1	03/02/06	03/02/06	
Chlorobenzene	EPA 624	6C02009	0.36	2.0	ND	1	03/02/06	03/02/06	
Chloroethane	EPA 624	6C02009	0.40	5.0	ND	1	03/02/06	03/02/06	
Chloroform	EPA 624	6C02009	0.33	2.0	ND	1	03/02/06	03/02/06	
Chloromethane	EPA 624	6C02009	0.30	5.0	ND	1	03/02/06	03/02/06	
Dibromochloromethane	EPA 624	6C02009	0.28	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichlorobenzene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
1,3-Dichlorobenzene	EPA 624	6C02009	0.35	2.0	ND	1	03/02/06	03/02/06	
1,4-Dichlorobenzene	EPA 624	6C02009	0.37	2.0	ND	1	03/02/06	03/02/06	
1,1-Dichloroethane	EPA 624	6C02009	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloroethane	EPA 624	6C02009	0.28	0.50	ND	1	03/02/06	03/02/06	
1,1-Dichloroethene	EPA 624	6C02009	0.42	5.0	ND	1	03/02/06	03/02/06	
trans-1,2-Dichloroethene	EPA 624	6C02009	0.27	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichloropropane	EPA 624	6C02009	0.35	2.0	ND	1	03/02/06	03/02/06	
cis-1,3-Dichloropropene	EPA 624	6C02009	0.22	2.0	ND	1	03/02/06	03/02/06	
trans-1,3-Dichloropropene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
Ethylbenzene	EPA 624	6C02009	0.25	2.0	ND	1	03/02/06	03/02/06	
Methylene chloride	EPA 624	6C02009	0.70	5.0	ND	1	03/02/06	03/02/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C02009	0.24	2.0	ND	1	03/02/06	03/02/06	
Tetrachloroethene	EPA 624	6C02009	0.32	2.0	ND	1	03/02/06	03/02/06	
Toluene	EPA 624	6C02009	0.36	2.0	ND	1	03/02/06	03/02/06	
1,1,1-Trichloroethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
1,1,2-Trichloroethane	EPA 624	6C02009	0.30	2.0	ND	1	03/02/06	03/02/06	
Trichloroethene	EPA 624	6C02009	0.26	2.0	ND	1	03/02/06	03/02/06	
Trichlorofluoromethane	EPA 624	6C02009	0.34	5.0	ND	1	03/02/06	03/02/06	
Vinyl chloride	EPA 624	6C02009	0.26	0.50	ND	1	03/02/06	03/02/06	
Xylenes, Total	EPA 624	6C02009	0.90	4.0	ND	1	03/02/06	03/02/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C02009	1.2	5.0	ND	1	03/02/06	03/02/06	
Surrogate: Dibromofluoromethane (80-120%)					112 %				
Surrogate: Toluene-d8 (80-130%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					102 %				

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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 003

Report Number: IPB1818

Sampled: 02/19/06
Received: 02/19/06

PURGEABLES- GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	6B20035	4.6	50	ND	1	02/20/06	02/20/06	U
Acrylonitrile	EPA 624	6B20035	0.70	50	ND	1	02/20/06	02/20/06	U
2-Chloroethyl vinyl ether	EPA 624	6B20035	1.8	5.0	ND	1	02/20/06	02/20/06	U
Surrogate: Dibromofluoromethane (80-120%)					114 %				
Surrogate: Toluene-d8 (80-120%)					114 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					110 %				
Sample ID: IPB1818-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
Acrolein	EPA 624	6B20035	4.6	50	ND	1	02/20/06	02/20/06	U
Acrylonitrile	EPA 624	6B20035	0.70	50	ND	1	02/20/06	02/20/06	U
2-Chloroethyl vinyl ether	EPA 624	6B20035	1.8	5.0	ND	1	02/20/06	02/20/06	U
Surrogate: Dibromofluoromethane (80-120%)					113 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					112 %				

Handwritten notes in the Data Qualifiers column: "see Qualifier Code" and "U" with a downward arrow.

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

Level III

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC^x
 12269 East Vassar Drive
 Aurora, CO 80014

Package ID: B4WC29
 Task Order: 1261.001D.01
 SDG No.: IPB1818

No. of Analyses: 1

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

Date: April 3, 2006
 Reviewer's Signature


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



DATA VALIDATION REPORT

NPDES Sampling
Outfall 003

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPB1818

Prepared by

MECX, LLC
12269 East Vassar Drive
Aurora, CO 80014

1. INTRODUCTION

Task Order Title: NPDES Sampling
MEC^X Project Number: 1261.001D.01
Sample Delivery Group: IPB1818
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^X 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 003	IPB1818-01	Water	General Minerals

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$, at 3°C . No preservation problems were noted by the laboratory. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 CALIBRATION

For cyanide, the initial calibration correlation coefficients were ≥ 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 003

Report Number: IPB1818

Sampled: 02/19/06

Received: 02/19/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6B20053	0.26	0.50	22	1	02/20/06	02/20/06	* Rev Qual
Nitrate/Nitrite-N	EPA 300.0	6B20053	0.072	0.26	0.74	1	02/20/06	02/20/06	↓
Oil & Grease	EPA 413.1	6B28050	0.90	4.8	ND	1	02/28/06	02/28/06	↓
Sulfate	EPA 300.0	6B20053	0.18	0.50	27	1	02/20/06	02/20/06	↓
Total Dissolved Solids	SM2540C	6B22069	10	10	140	1	02/22/06	02/22/06	↓
Total Suspended Solids	EPA 160.2	6B23099	10	10	ND	1	02/23/06	02/23/06	↓

*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) 785-0043 FAX (480) 785-0851
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-0620 FAX (702) 798-3631

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

Project ID: Annual Outfall 003

Report Number: IPB1818

Sampled: 02/19/06

Received: 02/19/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1818-01 (Outfall 003 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6B22127	2.2	5.0	ND	1	02/22/06	02/22/06	U
Perchlorate	EPA 314.0	6B23071	0.80	4.0	ND	1	02/23/06	02/23/06	*

*Analysis not validated

Raw	Qual
Qual	Code
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*	

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

LEVEL IV

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IPB1818 <Page 14 of 41>

APPENDIX G

Section 51

Outfall 004, 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 004

Sampled: 02/18/06
Received: 02/18/06
Issued: 03/28/06 17:14

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 3°C, on ice and with chain of custody documentation.
- HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.
- PRESERVATION: Samples requiring preservation were verified prior to sample analysis.
- QA/QC CRITERIA: All analyses met method criteria, except as noted in the report with data qualifiers.
- COMMENTS: Results that fall between the MDL and RL are 'J' flagged.
- SUBCONTRACTED: Refer to the last page for specific subcontract laboratory information included in this report.
- ADDITIONAL INFORMATION: The report was revised to correct the date analyzed for the EPA 608 PCB blank.

LABORATORY ID	CLIENT ID	MATRIX
IPB1810-01	Outfall 004	Water
IPB1810-02	Trip Blanks	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 004
Report Number: IPB1810

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: IPB1810-01 (Outfall 004 - Water)									
Reporting Units: ug/l									
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%)									114 %
Surrogate: Toluene-d8 (80-120%)									110 %
Surrogate: 4-Bromofluorobenzene (80-120%)									106 %

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 004

Report Number: IPB1810

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: IPB1810-02 (Trip Blanks - Water)									
Reporting Units: ug/l									
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%) 111 %
 Surrogate: Toluene-d8 (80-120%) 110 %
 Surrogate: 4-Bromofluorobenzene (80-120%) 105 %

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 004

Report Number: IPB1810

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: IPB1810-01 (Outfall 004 - Water)									
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%)					114 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					106 %				
Sample ID: IPB1810-02 (Trip Blanks - Water)									
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%)					111 %				
Surrogate: Toluene-d8 (80-120%)					110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					105 %				

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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Del Mar Analytical

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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 004

Report Number: IPB1810

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: IPB1810-01 (Outfall 004 - Water)									
Reporting Units: ug/l									
Acenaphthene	EPA 625	6B19029	4.1	9.5	ND	0.952	02/19/06	02/28/06	
Acenaphthylene	EPA 625	6B19029	3.0	9.5	ND	0.952	02/19/06	02/28/06	
Aniline	EPA 625	6B19029	2.8	9.5	ND	0.952	02/19/06	02/28/06	
Anthracene	EPA 625	6B19029	3.0	9.5	ND	0.952	02/19/06	02/28/06	
Benzidine	EPA 625	6B19029	5.0	19	ND	0.952	02/19/06	02/28/06	
Benzoic acid	EPA 625	6B19029	2.5	19	ND	0.952	02/19/06	02/28/06	
Benzo(a)anthracene	EPA 625	6B19029	3.5	9.5	ND	0.952	02/19/06	02/28/06	
Benzo(b)fluoranthene	EPA 625	6B19029	2.6	9.5	ND	0.952	02/19/06	02/28/06	
Benzo(k)fluoranthene	EPA 625	6B19029	3.2	9.5	ND	0.952	02/19/06	02/28/06	
Benzo(g,h,i)perylene	EPA 625	6B19029	5.0	9.5	ND	0.952	02/19/06	02/28/06	
Benzo(a)pyrene	EPA 625	6B19029	3.3	9.5	ND	0.952	02/19/06	02/28/06	
Benzyl alcohol	EPA 625	6B19029	2.4	19	ND	0.952	02/19/06	02/28/06	
Bis(2-chloroethoxy)methane	EPA 625	6B19029	3.7	9.5	ND	0.952	02/19/06	02/28/06	
Bis(2-chloroethyl)ether	EPA 625	6B19029	4.2	9.5	ND	0.952	02/19/06	02/28/06	
Bis(2-chloroisopropyl)ether	EPA 625	6B19029	4.4	9.5	ND	0.952	02/19/06	02/28/06	
Bis(2-ethylhexyl)phthalate	EPA 625	6B19029	5.0	48	ND	0.952	02/19/06	02/28/06	
4-Bromophenyl phenyl ether	EPA 625	6B19029	4.4	9.5	ND	0.952	02/19/06	02/28/06	
Butyl benzyl phthalate	EPA 625	6B19029	3.3	19	ND	0.952	02/19/06	02/28/06	
4-Chloroaniline	EPA 625	6B19029	5.7	9.5	ND	0.952	02/19/06	02/28/06	
2-Chloronaphthalene	EPA 625	6B19029	3.8	9.5	ND	0.952	02/19/06	02/28/06	
4-Chloro-3-methylphenol	EPA 625	6B19029	3.3	19	ND	0.952	02/19/06	02/28/06	
2-Chlorophenol	EPA 625	6B19029	4.0	9.5	ND	0.952	02/19/06	02/28/06	
4-Chlorophenyl phenyl ether	EPA 625	6B19029	2.9	9.5	ND	0.952	02/19/06	02/28/06	
Chrysene	EPA 625	6B19029	2.7	9.5	ND	0.952	02/19/06	02/28/06	
Dibenz(a,h)anthracene	EPA 625	6B19029	4.5	19	ND	0.952	02/19/06	02/28/06	
Dibenzofuran	EPA 625	6B19029	2.5	9.5	ND	0.952	02/19/06	02/28/06	
Di-n-butyl phthalate	EPA 625	6B19029	2.7	19	ND	0.952	02/19/06	02/28/06	
1,3-Dichlorobenzene	EPA 625	6B19029	3.9	9.5	ND	0.952	02/19/06	02/28/06	
1,4-Dichlorobenzene	EPA 625	6B19029	3.7	9.5	ND	0.952	02/19/06	02/28/06	
1,2-Dichlorobenzene	EPA 625	6B19029	4.3	9.5	ND	0.952	02/19/06	02/28/06	
3,3-Dichlorobenzidine	EPA 625	6B19029	10	19	ND	0.952	02/19/06	02/28/06	
2,4-Dichlorophenol	EPA 625	6B19029	3.9	9.5	ND	0.952	02/19/06	02/28/06	
Diethyl phthalate	EPA 625	6B19029	3.0	9.5	ND	0.952	02/19/06	02/28/06	
2,4-Dimethylphenol	EPA 625	6B19029	4.2	19	ND	0.952	02/19/06	02/28/06	
Dimethyl phthalate	EPA 625	6B19029	3.4	9.5	ND	0.952	02/19/06	02/28/06	
4,6-Dinitro-2-methylphenol	EPA 625	6B19029	4.9	19	ND	0.952	02/19/06	02/28/06	
2,4-Dinitrophenol	EPA 625	6B19029	5.0	19	ND	0.952	02/19/06	02/28/06	
2,4-Dinitrotoluene	EPA 625	6B19029	4.0	9.5	ND	0.952	02/19/06	02/28/06	
2,6-Dinitrotoluene	EPA 625	6B19029	3.0	9.5	ND	0.952	02/19/06	02/28/06	
Di-n-octyl phthalate	EPA 625	6B19029	4.5	19	ND	0.952	02/19/06	02/28/06	
Fluoranthene	EPA 625	6B19029	4.0	9.5	ND	0.952	02/19/06	02/28/06	

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 004
Report Number: IPB1810

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: IPB1810-01 (Outfall 004 - Water) - cont.									
Reporting Units: ug/l									
Fluorene	EPA 625	6B19029	3.7	9.5	ND	0.952	02/19/06	02/28/06	
Hexachlorobenzene	EPA 625	6B19029	4.6	9.5	ND	0.952	02/19/06	02/28/06	
Hexachlorobutadiene	EPA 625	6B19029	4.0	9.5	ND	0.952	02/19/06	02/28/06	
Hexachlorocyclopentadiene	EPA 625	6B19029	3.2	19	ND	0.952	02/19/06	02/28/06	
Hexachloroethane	EPA 625	6B19029	4.0	9.5	ND	0.952	02/19/06	02/28/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6B19029	5.1	19	ND	0.952	02/19/06	02/28/06	
Isophorone	EPA 625	6B19029	3.5	9.5	ND	0.952	02/19/06	02/28/06	
2-Methylnaphthalene	EPA 625	6B19029	2.9	9.5	ND	0.952	02/19/06	02/28/06	
2-Methylphenol	EPA 625	6B19029	3.5	9.5	ND	0.952	02/19/06	02/28/06	
4-Methylphenol	EPA 625	6B19029	3.6	9.5	ND	0.952	02/19/06	02/28/06	
Naphthalene	EPA 625	6B19029	4.3	9.5	ND	0.952	02/19/06	02/28/06	
2-Nitroaniline	EPA 625	6B19029	3.7	19	ND	0.952	02/19/06	02/28/06	
3-Nitroaniline	EPA 625	6B19029	4.3	19	ND	0.952	02/19/06	02/28/06	
4-Nitroaniline	EPA 625	6B19029	4.7	19	ND	0.952	02/19/06	02/28/06	
Nitrobenzene	EPA 625	6B19029	4.0	19	ND	0.952	02/19/06	02/28/06	
2-Nitrophenol	EPA 625	6B19029	4.0	9.5	ND	0.952	02/19/06	02/28/06	
4-Nitrophenol	EPA 625	6B19029	6.3	19	ND	0.952	02/19/06	02/28/06	
N-Nitrosodiphenylamine	EPA 625	6B19029	3.8	9.5	ND	0.952	02/19/06	02/28/06	
N-Nitroso-di-n-propylamine	EPA 625	6B19029	3.4	9.5	ND	0.952	02/19/06	02/28/06	
Pentachlorophenol	EPA 625	6B19029	3.8	19	ND	0.952	02/19/06	02/28/06	
Phenanthrene	EPA 625	6B19029	3.1	9.5	ND	0.952	02/19/06	02/28/06	
Phenol	EPA 625	6B19029	3.8	9.5	ND	0.952	02/19/06	02/28/06	
Pyrene	EPA 625	6B19029	3.7	9.5	ND	0.952	02/19/06	02/28/06	
1,2,4-Trichlorobenzene	EPA 625	6B19029	4.2	9.5	ND	0.952	02/19/06	02/28/06	
2,4,5-Trichlorophenol	EPA 625	6B19029	3.4	19	ND	0.952	02/19/06	02/28/06	
2,4,6-Trichlorophenol	EPA 625	6B19029	3.9	19	ND	0.952	02/19/06	02/28/06	
1,2-Diphenylhydrazine/Azobenzene	EPA 625	6B19029	4.8	19	ND	0.952	02/19/06	02/28/06	
N-Nitrosodimethylamine	EPA 625	6B19029	3.5	19	ND	0.952	02/19/06	02/28/06	
Surrogate: 2-Fluorophenol (30-120%)									57 %
Surrogate: Phenol-d6 (35-120%)									66 %
Surrogate: 2,4,6-Tribromophenol (45-120%)									55 %
Surrogate: Nitrobenzene-d5 (45-120%)									67 %
Surrogate: 2-Fluorobiphenyl (45-120%)									68 %
Surrogate: Terphenyl-d14 (45-120%)									83 %

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

Project ID: Annual Outfall 004

Report Number: IPB1810

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
Sample ID: IPB1810-01 (Outfall 004 - Water) - cont.									
Reporting Units: ug/l									
Aldrin	EPA 608	6B24053	0.029	0.095	ND	0.952	02/24/06	02/24/06	
alpha-BHC	EPA 608	6B24053	0.019	0.095	ND	0.952	02/24/06	02/24/06	
beta-BHC	EPA 608	6B24053	0.014	0.095	ND	0.952	02/24/06	02/24/06	
delta-BHC	EPA 608	6B24053	0.019	0.19	ND	0.952	02/24/06	02/24/06	
gamma-BHC (Lindane)	EPA 608	6B24053	0.019	0.095	ND	0.952	02/24/06	02/24/06	
Chlordane	EPA 608	6B24053	0.19	0.95	ND	0.952	02/24/06	02/24/06	
4,4'-DDD	EPA 608	6B24053	0.019	0.095	ND	0.952	02/24/06	02/24/06	
4,4'-DDE	EPA 608	6B24053	0.024	0.095	ND	0.952	02/24/06	02/24/06	
4,4'-DDT	EPA 608	6B24053	0.033	0.095	ND	0.952	02/24/06	02/24/06	
Dieldrin	EPA 608	6B24053	0.014	0.095	ND	0.952	02/24/06	02/24/06	
Endosulfan I	EPA 608	6B24053	0.014	0.095	ND	0.952	02/24/06	02/24/06	
Endosulfan II	EPA 608	6B24053	0.038	0.095	ND	0.952	02/24/06	02/24/06	
Endosulfan sulfate	EPA 608	6B24053	0.019	0.19	ND	0.952	02/24/06	02/24/06	
Endrin	EPA 608	6B24053	0.019	0.095	ND	0.952	02/24/06	02/24/06	
Endrin aldehyde	EPA 608	6B24053	0.043	0.095	ND	0.952	02/24/06	02/24/06	
Endrin ketone	EPA 608	6B24053	0.019	0.095	ND	0.952	02/24/06	02/24/06	
Heptachlor	EPA 608	6B24053	0.029	0.095	ND	0.952	02/24/06	02/24/06	
Heptachlor epoxide	EPA 608	6B24053	0.029	0.095	ND	0.952	02/24/06	02/24/06	
Methoxychlor	EPA 608	6B24053	0.033	0.095	ND	0.952	02/24/06	02/24/06	
Toxaphene	EPA 608	6B24053	1.4	4.8	ND	0.952	02/24/06	02/24/06	
Surrogate: Tetrachloro-m-xylene (35-115%)									35 %
Surrogate: Decachlorobiphenyl (45-120%)									45 %

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MWH-Pasadena/Boeing
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IPB1810

Sampled: 02/18/06
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TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1810-01 (Outfall 004 - Water) - cont.									
Reporting Units: ug/l									
Aroclor 1016	EPA 608	6B24053	0.19	0.95	ND	0.952	02/24/06	02/28/06	
Aroclor 1221	EPA 608	6B24053	0.095	0.95	ND	0.952	02/24/06	02/28/06	
Aroclor 1232	EPA 608	6B24053	0.24	0.95	ND	0.952	02/24/06	02/28/06	
Aroclor 1242	EPA 608	6B24053	0.24	0.95	ND	0.952	02/24/06	02/28/06	
Aroclor 1248	EPA 608	6B24053	0.24	0.95	ND	0.952	02/24/06	02/28/06	
Aroclor 1254	EPA 608	6B24053	0.24	0.95	ND	0.952	02/24/06	02/28/06	
Aroclor 1260	EPA 608	6B24053	0.38	0.95	ND	0.952	02/24/06	02/28/06	
<i>Surrogate: Decachlorobiphenyl (45-120%)</i>					39 %				ZX

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IPB1810

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
Sample ID: IPB1810-01 (Outfall 004 - Water) - cont.									
Reporting Units: mg/l									
Boron	EPA 200.7	6B20080	0.0080	0.050	ND	1	02/20/06	02/27/06	

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METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1810-01 (Outfall 004 - Water) - cont.									
Reporting Units: ug/l									
Aluminum	EPA 200.7	6B20080	40	50	1700	1	02/20/06	02/28/06	
Antimony	EPA 200.8	6B21089	0.050	2.0	1.1	1	02/21/06	02/22/06	J
Arsenic	EPA 200.7	6B20080	4.4	5.0	11	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	0.10	1	02/21/06	02/22/06	J
Chromium	EPA 200.7	6B20080	2.0	5.0	3.4	1	02/20/06	02/25/06	J
Copper	EPA 200.8	6B21089	0.25	2.0	3.8	1	02/21/06	02/22/06	
Lead	EPA 200.8	6B21089	0.040	1.0	1.5	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	4.1	1	02/20/06	02/25/06	J
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 200.8	6B21089	0.15	1.0	ND	1	02/21/06	02/22/06	
Vanadium	EPA 200.7	6B20080	3.0	10	5.7	1	02/20/06	02/25/06	J
Zinc	EPA 200.7	6B20080	15	20	18	1	02/20/06	02/25/06	B, J

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

Project ID: Annual Outfall 004
 Report Number: IPB1810

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
Sample ID: IPB1810-01 (Outfall 004 - Water) - cont.									
Reporting Units: mg/l									
Chloride	EPA 300.0	6B19038	0.75	2.5	39	5	02/19/06	02/19/06	
Nitrate/Nitrite-N	EPA 300.0	6B19038	0.080	0.15	0.59	1	02/19/06	02/19/06	
Oil & Grease	EPA 413.1	6B22047	0.90	4.8	ND	1	02/22/06	02/22/06	
Sulfate	EPA 300.0	6B19038	0.45	0.50	6.3	1	02/19/06	02/19/06	
Total Dissolved Solids	SM2540C	6B22069	10	10	190	1	02/22/06	02/22/06	
Total Suspended Solids	EPA 160.2	6B22101	10	10	43	1	02/22/06	02/22/06	

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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
Sample ID: IPB1810-01 (Outfall 004 - Water) - cont.									
Reporting Units: ug/l									
Total Cyanide	EPA 335.2	6B22127	2.2	5.0	ND	1	02/22/06	02/22/06	
Perchlorate	EPA 314.0	6B23071	0.80	4.0	ND	1	02/23/06	02/23/06	

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IPB1810

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
Sample ID: Outfall 004 (IPB1810-01) - Water					
EPA 300.0	2	02/18/2006 09:45	02/18/2006 18:15	02/19/2006 17:30	02/19/2006 18:25
EPA 624	3	02/18/2006 09:45	02/18/2006 18:15	02/19/2006 00:00	02/19/2006 15:09
Sample ID: Trip Blanks (IPB1810-02) - Water					
EPA 624	3	02/18/2006 13:20	02/18/2006 18:15	02/19/2006 00:00	02/19/2006 15:34

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Project ID: Annual Outfall 004
 Report Number: IPB1810

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	RPD Limits	RPD RPD	Data Limit	Qualifiers
Batch: 6B19012 Extracted: 02/19/06											
Blank Analyzed: 02/19/2006 (6B19012-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	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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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
 Report Number: IPB1810

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	RPD RPD	RPD Limit	Data Qualifiers
Batch: 6B19012 Extracted: 02/19/06										
LCS Analyzed: 02/19/2006 (6B19012-BS1)										
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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MWH-Pasadena/Boeing
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IPB1810

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	RPD Limits	RPD RPD	Data Limit	Qualifiers
Batch: 6B19012 Extracted: 02/19/06											
Matrix Spike Analyzed: 02/19/2006 (6B19012-MS1)						Source: IPB0811-01					
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			
1,1,2,2-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
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
Report Number: IPB1810

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	RPD Limits	RPD RPD	Data Qualifiers
Batch: 6B19012 Extracted: 02/19/06										
Matrix Spike Dup Analyzed: 02/19/2006 (6B19012-MSD1)						Source: IPB0811-01				
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 004

Report Number: IPB1810

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 Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B19012 Extracted: 02/19/06											
Blank Analyzed: 02/19/2006 (6B19012-BLK1)											
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			
LCS Analyzed: 02/19/2006 (6B19012-BS1)											
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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 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 004

Report Number: IPB1810

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 Limits	RPD RPD	Data Limit	Qualifiers
Batch: 6B19029 Extracted: 02/19/06											
Blank Analyzed: 02/27/2006 (6B19029-BLK1)											
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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 300 North Lake Avenue, Suite 1200
 Pasadena, CA 91101
 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
 Report Number: IPB1810

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 Limits	RPD RPD	Data Qualifiers
Batch: 6B19029 Extracted: 02/19/06										
Blank Analyzed: 02/27/2006 (6B19029-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	138			ug/l	200		69	30-120		

Del Mar Analytical - Irvine
 Michele Chamberlin
 Project Manager

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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004
 Report Number: IPB1810

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 Limits	RPD Limit	Data Qualifiers
Batch: 6B19029 Extracted: 02/19/06										
Blank Analyzed: 02/27/2006 (6B19029-BLK1)										
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		
LCS Analyzed: 02/27/2006 (6B19029-BS1)										
Acenaphthene	80.1	10	4.3	ug/l	100		80	55-120		
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		

M-NRI

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 Michele Chamberlin
 Project Manager

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MWH-Pasadena/Boeing
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 Attention: Bronwyn Kelly

Project ID: Annual Outfall 004

Report Number: IPB1810

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
Batch: 6B19029 Extracted: 02/19/06											
LCS Analyzed: 02/27/2006 (6B19029-BS1)											M-NR1
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 004
 Report Number: IPB1810

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
Batch: 6B19029 Extracted: 02/19/06											
LCS Analyzed: 02/27/2006 (6B19029-BS1)											
1,2,4-Trichlorobenzene	54.2	10	4.4	ug/l	100		54	45-120			M-NR1
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			
LCS Dup Analyzed: 02/27/2006 (6B19029-BSD1)											
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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 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 004
 Report Number: IPB1810

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
Batch: 6B19029 Extracted: 02/19/06											
LCS Dup Analyzed: 02/27/2006 (6B19029-BSD1)											
Chrysene	81.4	10	2.8	ug/l	100	81	60-120	3	20		
Dibenz(a,h)anthracene	89.1	20	4.7	ug/l	100	89	45-130	1	25		
Dibenzofuran	74.2	10	2.6	ug/l	100	74	60-120	6	20		
Di-n-butyl phthalate	77.9	20	2.8	ug/l	100	78	55-125	3	20		
1,3-Dichlorobenzene	45.6	10	4.1	ug/l	100	46	35-120	1	25		
1,4-Dichlorobenzene	46.6	10	3.9	ug/l	100	47	35-120	5	25		
1,2-Dichlorobenzene	52.3	10	4.5	ug/l	100	52	35-120	2	25		
3,3-Dichlorobenzidine	89.1	20	11	ug/l	100	89	45-130	1	25		
2,4-Dichlorophenol	72.8	10	4.1	ug/l	100	73	55-120	11	20		
Diethyl phthalate	60.6	10	3.1	ug/l	100	61	55-120	1	20		
2,4-Dimethylphenol	55.5	20	4.4	ug/l	100	56	30-120	3	25		
Dimethyl phthalate	42.0	10	3.6	ug/l	100	42	30-120	24	20		R-7
4,6-Dinitro-2-methylphenol	87.9	20	5.1	ug/l	100	88	50-120	11	25		
2,4-Dinitrophenol	86.1	20	5.3	ug/l	100	86	40-120	19	25		
2,4-Dinitrotoluene	77.9	10	4.2	ug/l	100	78	60-120	4	20		
2,6-Dinitrotoluene	72.2	10	3.2	ug/l	100	72	60-120	9	20		
Di-n-octyl phthalate	69.4	20	4.7	ug/l	100	69	60-130	3	20		
Fluoranthene	80.2	10	4.2	ug/l	100	80	55-120	1	20		
Fluorene	76.8	10	3.9	ug/l	100	77	60-120	4	20		
Hexachlorobenzene	76.0	10	4.8	ug/l	100	76	50-120	6	20		
Hexachlorobutadiene	47.7	10	4.2	ug/l	100	48	40-120	3	25		
Hexachlorocyclopentadiene	55.6	20	3.4	ug/l	100	56	15-120	16	30		
Hexachloroethane	41.4	10	4.2	ug/l	100	41	35-120	1	25		
Indeno(1,2,3-cd)pyrene	81.9	20	5.4	ug/l	100	82	40-130	3	25		
Isophorone	63.5	10	3.7	ug/l	100	64	50-120	8	20		
2-Methylnaphthalene	67.0	10	3.0	ug/l	100	67	50-120	6	20		
2-Methylphenol	70.9	10	3.7	ug/l	100	71	45-120	5	20		
4-Methylphenol	74.1	10	3.8	ug/l	100	74	45-120	4	20		
Naphthalene	64.6	10	4.5	ug/l	100	65	50-120	4	20		
2-Nitroaniline	76.5	20	3.9	ug/l	100	76	60-120	9	20		
3-Nitroaniline	81.5	20	4.5	ug/l	100	82	55-120	5	25		
4-Nitroaniline	82.2	20	4.9	ug/l	100	82	50-125	8	20		
Nitrobenzene	65.9	20	4.2	ug/l	100	66	50-120	6	25		
2-Nitrophenol	75.9	10	4.2	ug/l	100	76	55-120	16	25		
4-Nitrophenol	92.7	20	6.6	ug/l	100	93	45-120	4	25		

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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 004

Report Number: IPB1810

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
Batch: 6B19029 Extracted: 02/19/06											
LCS Dup Analyzed: 02/27/2006 (6B19029-BSD1)											
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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 Michele Chamberlin
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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 004
Report Number: IPB1810

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	RPD Limits	RPD RPD	Data Limit	Qualifiers
Batch: 6B24053 Extracted: 02/24/06											
Blank Analyzed: 02/24/2006 (6B24053-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	0.376			ug/l	0.500		75	35-115			
Surrogate: Decachlorobiphenyl	0.480			ug/l	0.500		96	45-120			

M-NR1

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			

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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 004

Report Number: IPB1810

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	RPD Limits	RPD RPD	Data Qualifiers
Batch: 6B24053 Extracted: 02/24/06										
LCS Analyzed: 02/24/2006 (6B24053-BS1)										
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- <i>m</i> -xylene	0.399			ug/l	0.500		80	35-115		
Surrogate: Decachlorobiphenyl	0.519			ug/l	0.500		104	45-120		
LCS Dup Analyzed: 02/24/2006 (6B24053-BSD1)										
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- <i>m</i> -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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 Project Manager

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NPDES - 1972



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

Project ID: Annual Outfall 004

Report Number: IPB1810

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

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
Batch: 6B24053 Extracted: 02/24/06											
Blank Analyzed: 02/26/2006 (6B24053-BLK1)											
Aroclor 1016	ND	1.0	0.20	ug/l							
Aroclor 1221	ND	1.0	0.10	ug/l							
Aroclor 1232	ND	1.0	0.25	ug/l							
Aroclor 1242	ND	1.0	0.25	ug/l							
Aroclor 1248	ND	1.0	0.25	ug/l							
Aroclor 1254	ND	1.0	0.25	ug/l							
Aroclor 1260	ND	1.0	0.40	ug/l							
Surrogate: Decachlorobiphenyl	0.473			ug/l	0.500		95	45-120			
LCS Analyzed: 02/26/2006 (6B24053-BS2)											
Aroclor 1016	4.07	1.0	0.20	ug/l	4.00		102	45-115			
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			
LCS Dup Analyzed: 02/26/2006 (6B24053-BSD2)											
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			

M-NRI

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

Project ID: Annual Outfall 004
 Report Number: IPB1810

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 Limit	Data Qualifiers
Batch: 6B20080 Extracted: 02/20/06										
Blank Analyzed: 02/25/2006-02/27/2006 (6B20080-BLK1)										
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						
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		
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		
Vanadium	566	10	3.0	ug/l	500	ND	113	70-130		
Zinc	634	20	15	ug/l	500	150	97	70-130		

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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 Qualifiers
Batch: 6B20080 Extracted: 02/20/06										
Matrix Spike Analyzed: 02/25/2006-02/27/2006 (6B20080-MS2)					Source: IPB1673-02					
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		
Vanadium	538	10	3.0	ug/l	500	ND	108	70-130		
Zinc	662	20	15	ug/l	500	190	94	70-130		

Matrix Spike Dup Analyzed: 02/25/2006-02/27/2006 (6B20080-MSD1)					Source: IPB1673-01					
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
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

Batch: 6B21083 Extracted: 02/21/06

Blank Analyzed: 02/21/2006 (6B21083-BLK1)

Mercury	ND	0.20	0.050	ug/l						
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METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B21083 Extracted: 02/21/06											
LCS Analyzed: 02/21/2006 (6B21083-BS1)											
Mercury	8.63	0.20	0.050	ug/l	8.00		108	85-115			
Matrix Spike Analyzed: 02/21/2006 (6B21083-MS1) Source: IPB1786-01											
Mercury	8.06	0.20	0.050	ug/l	8.00	ND	101	70-130			
Matrix Spike Dup Analyzed: 02/21/2006 (6B21083-MSD1) Source: IPB1786-01											
Mercury	8.48	0.20	0.050	ug/l	8.00	ND	106	70-130	5	20	
Batch: 6B21089 Extracted: 02/21/06											
Blank Analyzed: 02/22/2006 (6B21089-BLK1)											
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							J
Lead	ND	1.0	0.040	ug/l							
Thallium	ND	1.0	0.075	ug/l							
LCS Analyzed: 02/22/2006 (6B21089-BS1)											
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			
Thallium	80.4	1.0	0.075	ug/l	80.0		100	85-115			
Matrix Spike Analyzed: 02/22/2006 (6B21089-MS1) Source: IPB1597-01											
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			
Thallium	79.5	1.0	0.075	ug/l	80.0	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
Batch: 6B21089 Extracted: 02/21/06											
Matrix Spike Analyzed: 02/22/2006 (6B21089-MS2)						Source: IPB1597-02					
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			
Thallium	80.9	1.0	0.075	ug/l	80.0	ND	101	70-130			
Matrix Spike Dup Analyzed: 02/22/2006 (6B21089-MSD1)						Source: IPB1597-01					
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	
Thallium	81.4	1.0	0.075	ug/l	80.0	ND	102	70-130	2	20	

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METHOD BLANK/QC DATA

INORGANICS

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

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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
Batch: 6B22069 Extracted: 02/22/06											
LCS Analyzed: 02/22/2006 (6B22069-BS1)											
Total Dissolved Solids	982	10	10	mg/l	1000		98	90-110			
Duplicate Analyzed: 02/22/2006 (6B22069-DUP1) Source: IPB1656-01											
Total Dissolved Solids	500	10	10	mg/l		490			2	10	
Batch: 6B22101 Extracted: 02/22/06											
Blank Analyzed: 02/22/2006 (6B22101-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 02/22/2006 (6B22101-BS1)											
Total Suspended Solids	989	10	10	mg/l	1000		99	85-115			
Duplicate Analyzed: 02/22/2006 (6B22101-DUP1) Source: IPB1942-01											
Total Suspended Solids	236	10	10	mg/l		250			6	10	
Batch: 6B22127 Extracted: 02/22/06											
Blank Analyzed: 02/22/2006 (6B22127-BLK1)											
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 02/22/2006 (6B22127-BS1)											
Total Cyanide	194	5.0	2.2	ug/l	200		97	90-110			
Matrix Spike Analyzed: 02/22/2006 (6B22127-MS1) Source: IPB1567-02											
Total Cyanide	177	5.0	2.2	ug/l	200	2.5	87	70-115			

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INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC %REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B22127 Extracted: 02/22/06											
Matrix Spike Dup Analyzed: 02/22/2006 (6B22127-MSD1)						Source: IPB1567-02					
Total Cyanide	175	5.0	2.2	ug/l	200	2.5	86	70-115	1	15	
Batch: 6B23071 Extracted: 02/23/06											
Blank Analyzed: 02/23/2006 (6B23071-BLK1)											
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 02/23/2006 (6B23071-BS1)											
Perchlorate	50.9	4.0	0.80	ug/l	50.0		102	85-115			
Matrix Spike Analyzed: 02/23/2006 (6B23071-MS1)						Source: IPB1972-03					
Perchlorate	61.6	4.0	0.80	ug/l	50.0	13	97	80-120			
Matrix Spike Dup Analyzed: 02/23/2006 (6B23071-MSD1)						Source: IPB1972-03					
Perchlorate	63.5	4.0	0.80	ug/l	50.0	13	101	80-120	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
IPB1810-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.095	4.8	15
IPB1810-01	Antimony-200.8	Antimony	ug/l	1.10	2.0	6.00
IPB1810-01	Boron-200.7	Boron	mg/l	0	0.050	1.00
IPB1810-01	Cadmium-200.8	Cadmium	ug/l	0.100	1.0	4.00
IPB1810-01	Chloride - 300.0	Chloride	mg/l	39	2.5	150
IPB1810-01	Copper-200.8	Copper	ug/l	3.80	2.0	14
IPB1810-01	Mercury - 245.1	Mercury	ug/l	0.0078	0.20	0.20
IPB1810-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.59	0.15	10.00
IPB1810-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPB1810-01	Sulfate-300.0	Sulfate	mg/l	6.30	0.50	250
IPB1810-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	190	10	850
IPB1810-01	Thallium-200.8	Thallium	ug/l	0.041	1.0	2.00

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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.
- 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.
- ZX** Due to sample matrix effects, the surrogate recovery was outside the acceptance limits.
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

ADDITIONAL COMMENTS

For 1,2-Diphenylhydrazine:

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

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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

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: IPB1810-01

Analysis Performed: Level 4 + EDD

Samples: IPB1810-01

Aquatic Testing Laboratories-SUB California Cert #1775

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-Acute 96hr

Samples: IPB1810-01

Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: EDD + Level 4

Samples: IPB1810-01

Analysis Performed: Gross Alpha

Samples: IPB1810-01

Analysis Performed: Gross Beta

Samples: IPB1810-01

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager

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



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 004

Report Number: IPB1810

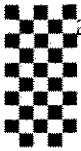
Sampled: 02/18/06
Received: 02/18/06

Del Mar Analytical - Irvine
Michele Chamberlin
Project Manager

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NPDES - 1984



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 **Fax No:** 949-260-3297
Krissi McIlvenna / MWH 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 003	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* X
- Other: Containers mislabeled* _____

This Change Order supersedes all previous change orders submitted.

Thank you



March 02, 2006

Alta Project I.D.: 27308

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 "IPB1810". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A standard turnaround time was provided for this work.

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

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

Sincerely,

A handwritten signature in cursive script that reads "Martha M. Maier".

Martha M. Maier
Director of HRMS Services





Section I: Sample Inventory Report

Date Received: 2/21/2006

Alfa Lab. ID

Client Sample ID

27308-001

IPB1810-01

SECTION II



Method Blank		EPA Method 1613			
Matrix:	Aqueous	QC Batch No.:	7782	Lab Sample:	0-MB001
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 ^a	EMPC ^b	%R	LCL-UCL ^d 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		J	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	0.00000509		66.4	26 - 123
1,2,3,6,7,8-HxCDF	ND	0.00000514		79.6	28 - 136
2,3,4,6,7,8-HxCDF	ND	0.00000550		75.0	29 - 147
1,2,3,7,8,9-HxCDF	ND	0.00000908		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
Totals					
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	0.00000611			
Total HpCDF	ND	0.00000128			
Footnotes					
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		Date Analyzed DB-5: 24-Feb-06		Date Analyzed DB-225: NA	
Matrix:	Aqueous	QC Batch No.:	7782	Date Extracted:	23-Feb-06		
Sample Size:	1.00 L						
Analyte	Spike Conc.	Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	LCL-UCL	
2,3,7,8-TCDD	10.0	10.0	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	70.1	25 - 164	
1,2,3,7,8-PeCDD	50.0	57.5	35 - 71	13C-1,2,3,7,8-PeCDD	73.4	25 - 181	
1,2,3,4,7,8-HxCDD	50.0	53.3	35 - 82	13C-1,2,3,4,7,8-HxCDD	63.8	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	53.1	38 - 67	13C-1,2,3,6,7,8-HxCDD	69.0	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	52.8	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	58.3	23 - 140	
1,2,3,4,6,7,8-HpCDD	50.0	53.1	35 - 70	13C-OCDD	34.1	17 - 157	
OCDD	100	106	78 - 144	13C-2,3,7,8-TCDF	75.7	24 - 169	
2,3,7,8-TCDF	10.0	10.3	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	81.7	24 - 185	
1,2,3,7,8-PeCDF	50.0	50.0	40 - 67	13C-2,3,4,7,8-PeCDF	85.2	21 - 178	
2,3,4,7,8-PeCDF	50.0	51.3	34 - 80	13C-1,2,3,4,7,8-HxCDF	68.1	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	51.4	36 - 67	13C-1,2,3,6,7,8-HxCDF	66.4	26 - 123	
1,2,3,6,7,8-HxCDF	50.0	52.1	42 - 65	13C-2,3,4,6,7,8-HxCDF	69.5	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	51.5	35 - 78	13C-1,2,3,7,8,9-HxCDF	70.1	29 - 147	
1,2,3,7,8,9-HxCDF	50.0	50.1	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	55.0	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	50.3	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	62.6	26 - 138	
1,2,3,4,7,8,9-HpCDF	50.0	52.7	39 - 69	13C-OCDF	42.4	17 - 157	
OCDF	100	97.3	63 - 170	CRS 37Cl-2,3,7,8-TCDD	83.6	35 - 197	

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



Sample ID: IPB1810-01		EPA Method 1613					
Client Data		Sample Data		Laboratory Data			
Name:	Del Mar Analytical, Irvine	Matrix:	Aqueous	Lab Sample:	27308-001		
Project:	IPB1810	Sample Size:	1.01 L	QC Batch No.:	7782		
Date Collected:	18-Feb-06			Date Analyzed DB-5:	25-Feb-06		
Time Collected:	0945			Date Analyzed DB-225:	NA		
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Labeled Standard	%R	LCL-UCL ^d	Qualifiers
2,3,7,8-TCDD	ND	0.00000246		IS 13C-2,3,7,8-TCDD	63.7	25 - 164	
1,2,3,7,8-PeCDD	ND	0.00000658		13C-1,2,3,7,8-PeCDD	62.5	25 - 181	
1,2,3,4,7,8-HxCDD	ND	0.00000402		13C-1,2,3,4,7,8-HxCDD	53.8	32 - 141	
1,2,3,6,7,8-HxCDD	ND	0.00000386		13C-1,2,3,6,7,8-HxCDD	64.3	28 - 130	
1,2,3,7,8,9-HxCDD	ND	0.00000379		13C-1,2,3,4,6,7,8-HpCDD	66.6	23 - 140	
1,2,3,4,6,7,8-HpCDD	0.0000265			13C-OCDD	40.8	17 - 157	
OCDD	0.000334			13C-2,3,7,8-TCDF	52.8	24 - 169	
2,3,7,8-TCDF	ND	0.00000270	B	13C-1,2,3,7,8-PeCDF	59.4	24 - 185	
1,2,3,7,8-PeCDF	ND	0.00000470		13C-2,3,4,7,8-PeCDF	58.1	21 - 178	
2,3,4,7,8-PeCDF	ND	0.00000478		13C-1,2,3,4,7,8-HxCDF	61.2	26 - 152	
1,2,3,4,7,8-HxCDF	ND	0.00000130		13C-1,2,3,6,7,8-HxCDF	61.1	26 - 123	
1,2,3,6,7,8-HxCDF	ND	0.00000129		13C-2,3,4,6,7,8-HxCDF	61.8	28 - 136	
2,3,4,6,7,8-HxCDF	ND	0.00000137		13C-1,2,3,7,8,9-HxCDF	63.7	29 - 147	
1,2,3,7,8,9-HxCDF	ND	0.00000227		13C-1,2,3,4,6,7,8-HpCDF	63.8	28 - 143	
1,2,3,4,6,7,8-HpCDF	0.00000314		J	13C-1,2,3,4,7,8,9-HpCDF	68.1	26 - 138	
1,2,3,4,7,8,9-HpCDF	ND	0.00000160		13C-OCDF	48.1	17 - 157	
OCDF	0.00000977		J	CRS 37Cl-2,3,7,8-TCDD	93.7	35 - 197	
Totals							
Total TCDD	ND	0.00000246					
Total PeCDD	ND	0.00000658					
Total HxCDD	ND	0.00000387					
Total HpCDD	0.0000540						
Total TCDF	ND	0.00000270					
Total PeCDF	ND	0.00000474					
Total HxCDF	0.00000133						
Total HpCDF	0.0000129						
Footnotes							
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

APPENDIX

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

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



17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9589
 8630 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851
 2520 E. Sunset Rd., Suite 83, Las Vegas, NV 89120 Ph (702) 796-3620 Fax (702) 796-3621

SUBCONTRACT ORDER - PROJECT # IPB1810

SENDING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvine 17461 Derian Avenue, Suite 100 Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele Chamberlin	Alta Analytical 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106 <div style="text-align: right; font-size: 1.5em; margin-top: 10px;"> 27308 0.6°C </div>

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

Analysis	Expiration	Sampled:	Comments
Sample ID: IPB1810-01	Water	02/18/06 09:45	Instant Notification
1613-Dioxin-HR-Alta	02/25/06 09:45		J flags, 17 congeners, no TEQ, ug/L, sub=Alta
Level 4 + EDD-OUT	03/18/06 09:45		Excel EDD email to pm, include Std logs for Lvl IV
Containers Supplied:			
1 L Amber (IPB1810-01C)			
1 L Amber (IPB1810-01D)			

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

Released By	<i>[Signature]</i>	Date	Time	Received By	Date	Time
		2/20/06		<i>[Signature]</i>	2/21/06	0910
Released By		Date	Time	Received By	Date	Time

Project 27308