NPDES

SDG No.:

Multiple

Analysis:

Hydrazines

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

DATA VALIDATION REPORT

IPB2637, IPB2639, IPB2641, IPB2643

Project Manager:

P. Costa

Matrix.

Water

Analysis:

Hydrazines

QC Level:

Level IV

4

No. of Samples:

No. or Samples.

No. of Reanalyses/Dilutions:

P. Meeks

Reviewer: 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.

NPDES

SDG No.:

Multiple

Analysis:

Hydrazines

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

DATA VALIDATION REPORT

2

NPDES

SDG No.: Analysis: Multiple Hydrazines

DATA VALIDATION REPORT

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in these SDGs were received at Del Mar Analytical and the subcontract laboratory, Truesdail Laboratories, within the temperature limits of 4° C \pm 2° 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.

NPDES

SDG No.: Analysis: Multiple Hydrazines

DATA VALIDATION REPORT

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.

B4HZ1

Revision 0

NPDES

SDG No.: Analysis:

Multiple Hydrazines

DATA VALIDATION REPORT

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.

84HZ1 5 Revision 0

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

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

Cilent: Del Mar Analytical

17461 Derian Ave., Suite 100

rvine, CA 92614

Michele Chamberlin

iquid / 1 Sample

Attention: Sample:

Project Name:
P.O. Number;
Method Number;
Investigation:

REPORT

Laboratory No: 952266
Report Date: March 2

Report Date: March 20, 2006 Sampling Date: February 28, 2006 Receiving Date: March 1, 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

Hydrazines in Liquid

8315 (Modified)

PB2637 PB2637 Page 1 of 1

Analytical Results

Hydrazine Aug Sual	ON ON	0.39
Unsymmetrical Dimethyl Hydrazine	ND C *	0.27
Monomethyl Hydrazine 紀 別	ND C	1.2 5.0
Sample Description	Method Blank IPB2637-01 ハットイ・リー	
Sample ID	952266 Method Blan 952266 IPB2637-01	AND

MDL: Method Detection Limit, ug/L.

POL: 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.

Kuan Dang, Project Manager Environmental Services

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* Analysis not

This report applies only to the 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.

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INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



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Client: Del Mar Analytical

17461 Derian Ave., Suite 100 Irvine, CA 92614

Michele Chamberlin

Liquid / 1 Sample

Sample: Project Name: P.O. Number:

Attention:

PB2639 PB2639

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

Hydrazines in Liquid

8315 (Modified)

Method Number: Investigation:

Reported By: JS

Page 1 of 1

Analytical Results

Hydrazine					
Unsymmetrical Dimethyl	Hydrazine Nydrazine	N ON	No.	0.27	5.0
Monomethyl (1) ((1) Un	Mydrazine (La. Call	ND ON		12	5.0
í	Sample Description	Wethod Blank	IPB2639-01 Cof-full 002	тем	
	Validitie ID		35.267 35.267	WIAL	F. P. S.

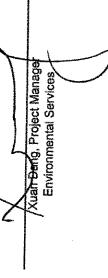
MDL: Method Defection Limit, ug/L.

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.



This report applies only to the 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.

TRUESDAL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

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Del Mar Analytical Client

17461 Derian Ave., Suite 100 Irvine, CA 92614

Michele Chamberlin

Attention: Sample: Project Name: P.O. Number: Method Number: Investigation:

Journal / Sample

PB2641 PB2641

REPORT

March 20, 2006 952268 Laboratory No: Report Date:

February 28, 2006 March 1, 2006 Sampling Date: Receiving Date:

March 1, 2006 March 3, 2006 Extraction Date:

HO/F Analysis Date: Chits:

3 Dilution Factor: Reported By:

Hydrazines in Liquid

8315 (Modified)

Page 1 of 1

Analytical Results

Sample ID	Sample Description	Monome	Unsymmetrical Dimethy	methy.	Hydrazine ₂	30
705657-MB Method Blank	Method Blank	2	ON .		2	
952268	IPB2641-01	9		According to the contract of t	Z	
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Ō.		5,0	25	Account of the part of the party of the part	C L	A A January or Administration of Broadward and Area Community or A

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 Mapager Environmental Seryice:

validated

*ARIYSS ACT

731,27

This report applies only to the 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 eccepted 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.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

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Del Mar Analytical Client

17461 Derian Ave., Suite 100 Irvine, CA 92614

Michele Chamberlin

Attention: Sample: Project Name:

Jauld / 1 Sample

FB2643 PB2643

P.O. Number:

Method Number: Investigation;

REPORT

March 20, 2006 952265 Laboratory No: Report Date:

ebruary 28, 2006 March 1, 2006 Receiving Date: Sampling Date:

March 1, 2006 March 3, 2006 Extraction Date: Analysis Date:

Light. Units:

Dilution Factor: Reported By: Page 1 of 1

Analytical Results

Hydrazines in Liquid

8315 (Modified)

		Monomethyl	Can A Com	Jusymmetrical Dimethyl	ethyl C	Hydrazine	
Sample ID	Sample Description	Hydrazine		Hydrazine			
705657-MB Method Blanl	Method Blank	2		9	X.	2	*
952265 CUFFell 이웃 IPB2643-01	ኖ iPB2643-01	Q	O	QN	Ų	S	>
		1,2		0.27		0.39	
		5.0	Von stille for a von de voner de statiste de destada de statiste de voner de la constanta de voner de voner de	5.0	AND THE PROPERTY OF THE PROPER	1.0	And the management of the second of the seco

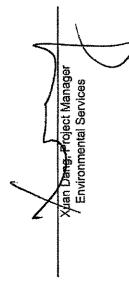
MDL: Mathod Detection Limit, ug/l.

POL: 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.



Validatize

ton

* Analysis

7070)

This report applies only to the 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

Package ID: B4MT47

12	269 East Vassar Drive		Task Order	1261.001D.01
A_{L}	rora, CO 80014		SDG No.:	
			No. of Analyses:	
	Laboratory: Del Mar	Analytical	Date: April 4,	
	Reviewer: P. Meek			
	Analysis/Method: Metals		Reviewer's S	gnature
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6.	Deviations from Analysis	Onsidiration analysis	4 for a blood state at a 2 s	
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	Holding Times	reporting limit.		
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	Matrix Spike/Dup LCS			
	Field QC			
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MECX

12269 East Vassar Drive



DATA VALIDATION REPORT

NPDES Sampling Outfall 011

ANALYSIS: METALS

SAMPLE DELIVERY GROUP IPB2641

Prepared by

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

Project: NPDES SDG: IPB2641 Analysis: Metals

DATA VALIDATION REPORT

1. INTRODUCTION

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

Sample Delivery Group: IPB2641

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

B4MT47

NPDES

SDG: Analysis: IPB2541 Metals

DATA VALIDATION REPORT

Table 1. Sample Identification

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Client ID	Laboratory ID	Matrix	COC Method
Outfall 011	iPB2641-01	Water	200.7, 200.8, 245.1

Project: NPDES SDG: IPB2641 Analysis: Metals

DATA VALIDATION REPORT

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 ICP-MS TUNING

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

2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP and ICP-MS metals and 85-115% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and the recoveries were considered to be acceptable.

The initial calibration measured mean intensities for selenium indicated that the instrument response for selenium was approximately the same in the 1 µg/L standard as in the blank. The 10 µg/L standard exhibited a reasonable response. Due to the poor response of the 1 µg/L standard, the reviewer raised the selenium MDL to 1 µg/L. No qualifications were required.

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Project:	NPDES
SDG:	IP82641
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DATA VALIDATION REPORT

2.4 BLANKS

Selenium, antimony, and thallium were detected in a bracketing CCB at 1.2, 0.45, and 0.27 µg/L, respectively; therefore, antimony, selenium, and thallium detected in Outfall 011 were qualified as estimated nondetects, "UJ." No further qualifications were required.

2.5 ICP INTERFERENCE CHECK SAMPLE (ICS A/AB)

ICSA and ICSAB analyses were performed in association with the sample in this SDG for the ICP metals. 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 011 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.

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Project: NPDES SDG: IP82641 Analysis: Metals

DATA VALIDATION REPORT

2.10 INTERNAL STANDARDS PERFORMANCE

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

2.11 SAMPLE RESULT VERIFICATION

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

2.12 FIELD QC SAMPLES

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

2.12.1 Field Blanks and Equipment Rinsates

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

2.12.2 Field Duplicates

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

PANT47 5 Revision 0



17461 Derian Ave., Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-3797 1014 E. Cooley Dx., Suite A. Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South S1st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2641

Sampled: 02/28/06

Attention: Bronwyn Keily

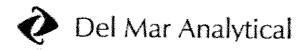
Received: 02/28/06

METALS

Analyte	Method	Batch	MDL I Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifie	7 S
Sample ID: IPB2641-01 (Outfall 01) Reporting Units: ug/l	- Water) - cont								Ru Qual	
Antimony	EPA 200.8	6C02098	0.18	2.0	1.1	1	03/02/06	03/02/06	VIJ	8
Arsenic	EPA 200.7	6C03084	3.8	5.0	4.7	1	03/03/06	03/04/06	T	
Beryllium	EPA 200.7	6C03084	0.62	2.0	ND	*	03/03/06	03/04/06		
Cadmium	EPA 200.8	6C02098	0.015	1.0	0.15	ì	03/02/06	03/02/06	J B, J	DNG
Chromium	EPA 200.7	6C03084	0.68	5.0	5.9	i	03/03/06	03/04/06	» <i>Б</i> , 3	
Cobalt	EPA 200.7	6C03084	2.0	10	ND	. 1	03/03/06	03/04/06	J	
Copper	EPA 200.8	6C02098	0.49	2.0	7.5	î	03/02/06	03/02/06	No.	· ·
Lead	EPA 200.8	6C02098	0.13	1.0	6.5	1	03/02/06	03/02/06		and the second
Manganese	EPA 200.7	6C03084	3.2	20	120	1	03/03/06	03/04/06		VAC SERVICE
Mercury	EPA 245.1	6C02097	0.063	0.20	ND	a. T	03/02/06	03/02/06	J	Veny Veny
Nickel	EPA 200.7	6C03084	2.0	10	5.0	*	03/03/06	03/04/06	Ĭı	DNG
Selenium	EPA 200.8	6C02098	0.36		1.2	1	03/02/06	03/02/06		
Silver	EPA 200.8	6C02098	0.089	1.0	ND	*	03/02/06		"	W.4
Thallium	EPA 200.8	6C02098	0.075	1.0	0.18	4		03/02/06	ا م	
Vanadium	EPA 200.7	6C03084	3.0	10		*	03/02/06	03/02/06	V3 j	\$
Zine	EPA 200.7	6C03084	3.7		10	1	03/03/06	03/04/06		
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Del Mar Analytical - Irvine Michele Chamberlin Project Manager

LEVEL IV



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MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2641

Sampled: 02/28/06

Received: 02/28/06

METALS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		 Date Analyzed Qu	
Sample ID: IPB2641-01 (Outfall 01 Reporting Units: mg/l	I - Water) - cont	Ĺ						
Barium Boron Iron	EPA 200.7 EPA 200.7 EPA 200.7	6C03084 6C03084 6C03084			0.047 0.073 5.0	Parity from Bond	 03/04/06 03/07/06 03/04/06	

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID: B4PP11

122	69 East Vassar Drive			Task Order:	1261.001D.01
Aur	ora, CO 80014			SDG No.	IPB2641
			No.	of Analyses:	1
	Laboratory: Del Mar	Analytical		Date: April 6,	2006
	Reviewer: P. Meeks	\$	Mary er munerope	Reviewer's Si	gnature
	Analysis/Method: Pesticide	·/PCBs	inderinania com	Y. Mus	
			terrorine table		
AC.	TION ITEMS*				
v.	Case Narrative				enteriore de la companya de la comp
	Deficiencies		COCCOO MILITARIA DI COCCOO COCC		MON ANNO SECTION RECEIVE SECTION CONTRACTOR
		AND THE RESIDENCE OF THE PROPERTY OF THE PROPE	***************************************	·	
2.	Out of Scope Analyses				
· ·			industrial medicing belongs on the		
3.	Analyses Not Conducted				
				500-100-100-100-100-100-100-100-100-100-	
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4.	Missing Hardcopy		Olerania de Maria de La Caración de Ca		
	Deliverables		·		
5.	Incorrect Hardcopy			Ottoma variation de la Colonia	
IJ.	Deliverables				
	Deliverationes		***************************************		
6.	Deviations from Analysis	Qualifications applied for	ar initi:	al calibration P.C	Commence of the contract of th
	Protocol, e.g.,	calibration %Os.	OH HISTOR	ar Camuranour 7015	on and continuing
	Hoding Times				·
	GC/MS Tune/Inst. Performance				
	Calibration		***************************************		akkan na manakan kan pangan kanina manakan kanan na pangan panan na pandanga manan na pandanga manan na bangan
	Method blanks		idioninale de la companya de la comp		
	Surrogates		20 4-2 0-20-20-20-20-20-20-20-20-20-20-20-20-20		
	Matrix Spike/Dup LCS				iki ja mangangan manangan melalah kananan mangan penggan penggan kanangan kananan dalah salah s
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	Internal Standard Performance			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	and the second s
	Compound Identification		-	e describer de la como de la companya de la company La companya de la co	Order Holes Mille British South Continue (1900) - 1900
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	System Performance		Technology and the contract of		
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وسادية برهسانية معد					and the second at the second at 2000 to the second and an include a second and a second as a second and a second a second and a second and a second and a second and a second
:	en e	granden von den gegelengten hab er lendte den linden er minniske kein den den den den den keine er minnisk immen son de			
- Aich	names compression (March Marchaelle and Marchaelle (Marchaelle Anna Bartine Anna Anna Anna ann an Aire, ann am de	and a state of the same and the			-

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

MECX

12269 East Vassar Drive



DATA VALIDATION REPORT

NPDES Monitoring Program Annual Outfall 011

ANALYSIS: PESTICIDES / PCBs

SAMPLE DELIVERY GROUP: IPB2641

Prepared by

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

NPOES

SDG: Analysis:

Pest/PCBs

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

DATA VALIDATION REPORT

IP82641

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Pesticides

QC Level:

Level IV

No. of Samples:

4

No. of Reanalyses/Dilutions:

s/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.

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Project. SDG:

NPOES

SDG: Analysis:

iP92641 : Pest/PC8s

Table 1. Sample Identification

DATA VALIDATION REPORT

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	Client ID	4 market a consideration in the second		li i	ā.
ž		Laboratory ID	Matrix	Committee and the second	į.
- 8			PROBLEM.	COC Method	į.
- 5			Contract of the Contract of th	E	Ė
ŧ				The second secon	į.
- 8	Outfall 011	STORY COLUMN TO A STORY	5.86.8°		Ė
- 3	Ougus O : 1	IPB2641-01	Water	608	Ė
8			* * ***********	000	ŧ
		A CONTRACTOR OF THE PROPERTY O			ŧ

Project. SDG:

NPDES

DATA VALIDATION REPORT

SDG: IPB2641 Analysis: Pest/PC8s

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of $4^{\circ}C$ $\pm 2^{\circ}C$, at $5^{\circ}C$. 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.

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Project: NPDES SDG: IPB2641 Analysis: Pest/PCBs

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 ≤10% on the primary analytical column (Channel A) or the r² values were ≥0.995, except for the average %RSD for Aroclor 1260. The nondetects for Aroclors 1248, 1254, and 1260 in Outfall 011 were qualified as estimated, "UJ." The %RSDs for all pesticide target compounds were ≤10% on the primary column or r² values ≥0.995, with the exception of the %RSD for heptachlor. The nondetect for heptachlor was qualified as estimated, "UJ," in Outfall 011.

The pesticide and average Aroclor %RSDs were ≤10% or r² 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 ≤15% on the primary column. No further qualifications were required.

2.3.3 Continuing Calibration

The pesticide and Aroclor analyses of Outfall 011 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 ≤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 0131 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.

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Project NPDES SDG: IPB2641 Analysis: Pest/PCBs

DATA VALIDATION REPORT

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

2.6 SURROGATE RECOVERY

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

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.8 SAMPLE CLEANUP PERFORMANCE

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

2.9 FIELD QC SAMPLES

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

2.9.1 Field Blanks and Equipment Rinsates

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

2.9.2 Field Duplicates

There were no field duplicate samples identified for this SDG.

Project	NPDES
SDG:	IP82641
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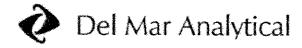
DATA VALIDATION REPORT

2.10 COMPOUND IDENTIFICATION

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

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1021 FAX (949) 260-3397 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite 8-120, Phoenix, AZ 83044 (480) 785-0043 FAX (480) 785-0831 2520 E. Sumer Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2641

Sampled: 02/28/06

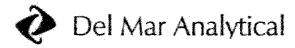
Received: 02/28/06

TOTAL PCBS (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor		Date Analyzed	Data Qualifiers
Sample ID: IPB2641-01 (Outf: Reporting Units: ng/i	ill 011 - Water) - con	£.							<u>Elia</u>
Aroclar 1016	EPA 608	6C05031	0.20	0.98	ND	0.98	03/05/06	03/06/06	E.
Aroclor 1221	EPA 608	6C05031	0.098	0.98	ND	0.98	03/05/06	03/06/06	
Aroclor 1232	EPA 608	6C05031	0.25	0.98	ND	0.98	03/05/06	03/06/06	
Aroclor 1242	EPA 608	6C05031	0.25	0.98	ND	0.98	03/05/06	03/06/06	
Aroclor 1248	EPA 608	6C05031	0.25	0.98	ND	0.98	03/05/06	03/06/06	
Aroclor 1254	EPA 608	6C05031	0.25	0.98	ND	0.98	03/05/06	03/06/06	
Aroclor 1260	EPA 608	6C05031	0.39	0.98	ND	0.98	03/05/06	03/06/06	U3 C
Surrogate: Decachlorobiphenyl	(45-120%)				103 %				Chin of group the
								4/10/0	l _o

Dei Mar Analytical - Irvine Michele Chamberlin Project Manager

LEVEL N



17461 Denin Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-329° 1014 E. Cooley Dr., Suite A, Cokon, CA 92324 (909) 370-4667 FAX (909) 370-1046-9830 South S1st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sureet Rd. #3, Las Vegas, NV 89120 7021 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Report Number: IPB2641

Sampled: 02/28/06

Received: 02/28/06

ORGANOCHLORINE PESTICIDES (EPA 608)

				Reporting		Dilution		Date	Dat	
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	abo.	
Sample ID: IPB2641-01 (Outfall Reporting Units: ug/i	011 - Water) - cor	it.							Ewi Guri	Coal
Aldrin	EPA 608	6C05031	0.029	0.098	ND	0.98	03/05/06	03/06/06		
alpha-BHC	EPA 608	6C05031	0.00048	0.0098	ND	0.98	03/05/06	03/06/06	A Dominated	
beta-BHC	EPA 608	6C05031	0.015	0.098	ND	0.98	03/05/06	03/06/06		
delta-BHC	EPA 608	6C05031	0.020	0.20	ND	0.98	03/05/06	03/06/06	Militaria	
gamma-BHC (Lindane)	EPA 608	6C05031	0.020	0.098	ND	0.98	03/05/06	03/06/06	and the same	
Chlordane	EPA 608	6C05031	0.20	0.98	ND	0.98	03/05/06	03/06/06	37.7	
4,4'-DDD	EPA 608	6C05031	0.020	0.098	ND	0.98	03/05/06	03/06/06		
4,4'-DDE	EPA 608	6C05031	0.025	0.098	ND	0.98	03/05/06	03/06/06		
4,4'-DDT	EPA 608	6C05031	0.034	0.098	ND	0.98	03/05/06	03/06/06	UJ	San San
n ing pangangang maganikan pangkan pang DETATA	EPA 608	6C05031	0.015	0.098	ND	0.98	03/05/06	03/06/06	U	Ĭ
Endosulfan I	EPA 608	6C05031	0.015	0.098	ND	0.98	03/05/06	03/06/06		į
Endosulfan II	EPA 608	6C05031	0.039	0.098	ND	0.98	03/05/06	03/06/06		
Endosulfan sulfate	EPA 608	6C05031	0.020	0.20	ND	0.98	03/05/06	03/06/06	· ·	
Endrin	EPA 608	6C05031	0.020	0.098	ND	0.98	03/05/06	03/06/06		
Endrin aldelsyde	EPA 608	6C05031	0.044	0.098	ND	0.98	03/05/06	03/06/06	o de la companya de l	
Endrin ketone	EPA 608	6C05031	0.020	0.098	ND	0.98	03/05/06	03/06/06	1	
Heptachlor	EPA 608	6C05031	0.029	0.098	ND	0.98	03/05/06	03/06/06		- <
Heptachlor epoxide	EPA 608	6C05031	0.029	0.098	ND	0.98	03/05/06	03/06/06	U	
Methoxychlor	EPA 608	6C05031	0.034	0.098	ND	0.98	03/05/06	03/06/06	CIT	<u> </u>
Toxaphene	EPA 608	6C05031	1.5	4.9	ND	0.98	03/05/06	03/06/06	U	
Surrogate: Decachlorobiphenyl (4					65 %					ě -
Surrogate: Tetrachloro-m-xylene (61%					į.

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

LEVEL (V

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MECX	Package ID: B4RA3
12269 East Vassar Drive	Task Order: 1261.001D.05
Aurora, CO 80014	SDG No.: Multiple
	No. of Analyses: 8
Laboratory: Ebeline	Date: April 1, 2006
Reviewer: P. Meeks	Reviewer's Signature
Analysis/Method: Radionuc	lides P. Mus
* owicedisadoroumonimoside experimento entre de companyo de compan	
ACTION ITEMS ^a	
Case Narrative	i de la companya del la companya de la companya del la companya de
Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
·	CONTROL OF THE ACTION AND ADMINISTRATION AND ADMINISTRA
4. Missing Hardcopy	
Deliverables	
5. Incorrect Hardcopy	
Deliverables	
·	
6. Deviations from Analysis	
Protocol, e.g.,	Qualifications were applied for exceeded holding times and low
Holding Times	detector efficiencies.
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Sunogales	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS	
	t meeting contract and/or method requirements. Id by the laboratory but no action against the laboratory is required.



DATA VALIDATION REPORT

NPDES Sampling Multiple Outfalls

ANALYSIS: RADIONUCLIDES

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

Prepared by

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

Analysis

NPDES Multiple Rads

1. INTRODUCTION

Task Order Title:

NPDES Sampling

MEC^X Project Number:

1261.001D.01

P. Costa

Sample Delivery Group:

IPB2637, IPB2639, IPB2641, IPB2643. IPB2645.

IPB2647, IPB2648, IPB2650

Project Manager:

Matrix:

Water Analysis: Radionulcides

QC Level: Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

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.

Project: SDG: Analysis: NPDES Multiple Rads

DATA VALIDATION REPORT

Table 1. Sample identification

Client ID	Cel 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	IP82647-01	8665-001	water	900.0
Outfall 008	IP82648-01	8666-001	water	900.0
Outfall 010	IPB2650-01	8667-001	water	900.0
	ž	\$	8 8	

Project: SDG: Analysis: NPDES Multiple Rads

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 $4\pm2^{\circ}$ C. No temperature information was provided by Eberline, the subcontract laboratory; however, as it is not necessary to chill radiological samples, no qualifications were required. The 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.

Barka3 4 Revision 0

Project: NPDES SDG: Multiple Analysis: Rads

DATA VALIDATION REPORT

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

Fried Warrent Community of the Special commendation of the Community of th				
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SDG	3650	C.15316	DEL MAK ASAL	
Work Order	2603016-01	Contract		:
Received Date	03/02/06	**trix	<u> </u>	
		and the second s	ا استان میشود به بازد و	ŧ,

Client Seeple ID Outfall 001	Lab Significant		<u>Analyzad</u>	Melide	Results : 10	Unit:	XOA	Qual	Qui Code
1083634-01	8550-001	02/26/06	03/06/06	GrossAlpha Gross Beta	2.64 ± 1.7 7.69 ± 1.6	9C1/L	2.95	3	7. H

Level V

Eberline Services

ANALYSIS RESULTS

500 8661 Client <u>DEL MAR ANAL</u> Work Order R503017-01 Contract PROJECTS 1992639 Matrix Ware Received Date 03/02/05

Client	Lab							Red Quel
Sample ID	Sample ID	Collected	Amalyzed	Nuclide	Results : 20	Units	MOA	
outfall coz								treconstruction and the state of the state o
1902639-01	8661-901	02/26/06	03/06/06	GrossAlpha	2.58 2 1.6	pCi/L	1.93	- Kith
			03/06/06	Gross Beta	4.60 ± 1.4	pCi/L	1.85	7 4

Certified by APC 2 Report Date 02/12/05 Page 1

ANALYSIS RESULTS

SDG 8662 Client DEL MAR ANAL Work Order RE03018-01 Contract PROJECT# 1993641 Received Date 03/02/06 Matrix WATER

Client Sample ID Sample ID Collected Analyzed Sholide Out-fall on 1PB2541-01 8662-901 02/28/06 03/06/06 Grossalpha 5.24 ± 2.0 pCi/L 63/06/06 Gross Bata 7.59 : 1.7 pCi/L 2.18

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Level IV

comment by Maria Report Date 93/12/06

Page 1

ANALYSIS RESULTS

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00000	306	Section of the second of the s	Client	DEL MAR ARAL	
Ī	Work Order	R603019-01	Contract	2802323 133343	
	Received Date	03/02/05	Matrix	WATER	į
-					

Client Sample ID	Lab Sample ID	Collected	Analyzed	Nuclide	Results + 20	<u> Onite</u>		247 0321	
OUTFAIL OIS	8663-001	02/28/06	03/06/06	GrossAlpha Gross Beta	1,58 & 1.1	pCi/L pCi/L	1.40		marine constitution of the control o

LEVEL IV

Certified by W.C. C. Report Date 03/12/05
Page 1

ANALYSIS RESULTS

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- 1			•		į
	SiXi	S. S. S. A. Commission of the	Client	DEL MAR AMAL	
	Work Order	R603020-01	Contract	PROJECT# 1PB2645	
	Received Date	03/02/06	Matrix		
- 1		والمتناز والمتناف والمتناف والمتناز والمتناف والمتناف والمتناف والمتاف والمتاف والمتناف والمتناف والمتناف والمتناف			

Client Sample ID Outfull	~	Lab Sample ID	Collected	Analyzed	Meclida	Regults : 20	Toite	W.A.	Rev Qual	(Gdz
1782645-01		\$654-001	02/28/06		GrossAlpha Gross Seta	1.30 ± 1.6	pci/L pci/L	1,45 1.98	UT I	RH

ANALYSIS RESULTS

ŠĐĢ		Client	DEL MAR ANAL
Work Order	ES 0.3 CZ 1 - 0.1	Costract	PROJECTA 1982447
Received Date	<u>93/93/05</u>	Matrix	
g. Yan wasan sanan-ar-ar-ar ar-ar-ar-ar-ar-ar-ar-ar-ar-ar-ar-ar-ar-a	iki yimkan aran ara ara sa	and All delignments in the contract of the con	

Citent Servic ID OUTFALL 007	Sample ID	<u> Gallected</u>	Ansiyzed	<u> Nacide</u>	žesulta <u>+</u> 20	<u>Vaite</u>	<u> </u>	- Rev - Ressle	
1PB2647-01	8665-001	02/28/06	03/06/06	GrossAlphs Gross Bets	2.56 ± 1.2 5.38 ± 1.8	pCi/L pCi/L	1.09 2.54		edigic ordinary control of the contr

Certified by 75 C C
Report Date 93/12/06
Page 1

ANALYSIS RESULTS

Client DEL MAR ANAL SDG <u>8666</u> Work Order <u>8503022-01</u> Contract PROJECT# IP82648 Received Date 03/02/06 Matrix WATER

client Semple to Outfall 08	Lab Sample TD	Collected	Analyzed	Ruglide	Results + 20	Unite	MOA	Ray Qual	Q.J.
1992648-01	8666-001		03/06/06 03/06/06	Grosskipha Gross Beta	1.61 ± 1.6	pci/L	2.02		

LEVEL IV

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Page L

ANALYSIS RESULTS

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803		Cliest	DRIT HAR YEAT	000000
Nork Order	2602021-01	Contract	<u> </u>	and Modern
Received Date	03/93/96	Matrix	ALL STATES	-
				š

Client Samue ID	ias <u>Sampla IV</u>	Collected	Analyzed	Mellé			SCA 	Red Code
outfall of o	8667-001	02/28/06	03/06/06	Gross Beta	2.532 ± 5.30 4.02 ± 1.3	pCi/L	1.55	T R, H

Level IV

Certified by ASS Certif

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

	x 9 East Vassar Drive ra, CO 80014 Laboratory: <u>Dei Mar Ar</u>		SDG No.: of Analyses: Date: April 8	1261.001D.01 IPB2641 1 2006
	Reviewer: L. Calvin Analysis/Method: Semivolati		Reviewers	ignature.
ACT	ON ITEMS			
* .	Case Narrative Deficiencies			
2.	Out of Scope Analyses			
3.	Analyses Not Conducted			
4.	Missing Hardcopy Deliverables			
5.	Incorrect Hardcopy Deliverables			
C)	Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/inst. Performance	Qualifications were assigne —BS/BSD recoveries below —detects reported between	QC limits or no	recovery
describedo resignados e e destra de ser trames en con describa e destra de la composição de	Calibration Method blanks Surrogates Matrix Spike/Dup LCS			
ay keesaasa da dhaadaa ee ee kaasaa kaabaa dhaadaa ahaa ahaa ahaa ahaa ahaa a	Field QC Internal Standard Performance Compound Identification Quantitation			
d	System Performance MMENTS ^a			
Name of the second seco				
*	Subcontracted analytical leboratory is not. Differences in protocol have been adopted	meeting contract and/or method require	meris.	



DATA VALIDATION REPORT

NPDES Monitoring Program Annual Outfall 011

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP IPB2641

Prepared by

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

Project SDG:

NPDES P82641

Analysis

NOMA

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

DATA VALIDATION REPORT

IPB2641

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Semivolatiles

QC Level:

Level IV

No. of Samples:

0

No. of Reanalyses/Dilutions:

L. Calvin

Reviewer: Date of Review.

April 8, 2006

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

Project: NPDES SDG: IPB2641 Analysis: NDMA

DATA VALIDATION REPORT

Table 1. Sample Identification

		Martin Committee (Martin Committee) (Martin Committee) (Martin Committee) (Martin Committee) (Martin Committee)	
Client ID	Laboratory ID	Marix	COC Method
Outfall 011	IP82641-01	Water	625

Project: SDG: Analysis:

NPDES IPB2641 NDMA

DATA VALIDATION REPORT

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C at 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 r² 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.

Review 0

Project: NPDES SDG: IPB2641 Analysis: NOMA

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 ≥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 011. 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.

Revision 0

Project: NPDES SDG: IPB2641 Analysis: NDMA

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 µg/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.

Revision 0



Del Mar Analytical

17447 Decign And, Jude 1986, Seden CA 97364 STAN 264-1932 (AL 6946) CHA-1767
1074 E. Condey Ca., Sador A. Ochino, CA 97324 (1989) 379-4467 (AL 6946) CHA-1764
1889 South Stat Su., Sador & P. V., Franklik, AZ 88344 (1986) 785-6884) (AR 1486) 785-6871
1889 S. Sador Stat Su., Sador & P. V., Franklik, AZ 88744 (1986) 785-6884) (AR 1486) 785-6884)
1889 S. Sador Bal, S. Lan Pegga, AN 887237 (1982) 786-38087 (AR 1788) (1984) (AR 1788)

MWH-Pasadena/Boeing

Project ID: Annual Outfail 011

3(8) North Lake Avenue, Suite 1200

DOMESTIC CONTRACTOR OF THE SAME

Pasadena, CA 91101 Attention: Brownyn Kelly Report Number: IPB2641

Sampled: 02/28/06

Received: 02/28/06

Data

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

			MDL	Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
** . ·	96° . 'A							1	
Sample ID: IPB2641-01 (Outfall 911 - W	(ater)								Germania Series Companyana (Companyana Companyana Companyanyana Companyana Co
Reporting Units: ug/l	10 to 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	6('06060	0.095	0.48	ND	0.952	03/06/06	03/09/06	Å.
Acenaphibene	EPA 625	6C06060	0.095	0.48	ND	0.952	03/06/06	03/09/06	
Acenaphthylene	EPA 625	6C06060	2.8	9.5	ND	0.952	03/06/06	03/09/06	
Aniline	EPA 625		0.079	0.48	ND	0.952	03/06/06		y
Anthracene	EPA 625	6C06060		4.5	ND	0.952	03/06/06	03/10/06	
Benzidine	EPA 625	6C06060	3.0	19	ND	0.952	03/06/06		
Bearoic acid	EPA 625	6C06060	3,5 0,036	4.8	ND	0.952	03/06/06	03/09/06	
Benzo(a)anthracene	EPA 625	6C06060			ND	0.952	03/06/06	03/09/06	V ^o .
Benzo(a)pyrene	EPA 625	6C06060	0,13	1.9	ND	0.952	03/06/06	03/09/06	V Anniel III.
Benzo(b)fluoranthene	EPA 625	6C06060	0.048	1.9		0.952	03/06/06	03/09/06	And the state of t
Benzo(g.h.i)perylene	EPA 625	600000	0.056	4.8	ND	0.952	03/06/06	03/09/06	No.
Bestzo(k)fluoranthese	EPA 625	6C060 60	0.050	0.48	ND		03/06/06	03/09/06	
Benzyl alcohol	EPA 625	6C06060	0.20	4.8	ND	0.952		03/09/06	(Real princes
Bis(2-chloroethoxy)methane	EPA 625	6C06060	0.069	0.48	ND	0.952	03/06/06	03/09/06	ubout added
Bis(2-chloroethyl)ether	EPA 625	6C06060	0.080	0.48	ND	0.952	03/06/06	03/09/06	A. Constant
Bis(2-chloroisopropyl)ether	EPA 625	6C06060	0.10	0.48	ND	0.952	03/06/06		in a second
Bis(2-ethylhexyl)phthalate	EPA 625	6C06060	1.0	4.8	ND	0.952	03/06/06	03/09/06	
4-Evosiophenyl phenyl ether	EPA 625	6C06060	0.11	0.95	ND	0.952	03/06/06	03/09/06	MANNO
Butyl benzył phthalate	EPA 625	6C06060	0.32	4.8	0.32	0.952	03/06/06	03/09/06	
4-Chloroaniline	EPA 625	6C06060	0.19	1.9	ND	0.952	03/06/06	03/09/06	
2-Chloronaphthalene	EPA 625	6C06060	0.056	0.48	ND	0.952	03/06/06	03/09/06	- XX
4-Chloro-3-methylphenol	EPA 625	6C06060	0.32	1.9	ND	0.952	03/06/06	03/09/06	Constitution of the Consti
4-Chloropheavi phenyl ether	EPA 625	6C06060	0.053	0.48	ND	0.952	03/06/06	03/09/06	8000
2-Chlorophenol	EPA 625	6C06060	0.11	0.95	ND	0.952	03/06/06	03/09/06	(political de la constante de
Chrysene	EPA 625	6C06060	0,069	0.48	ND	0.952	03/06/06	03/09/06	10 mm mm m m m m m m m m m m m m m m m m
Dibenz(a,h)anthracene	EPA 625	6C06060	0.079	0.48	ND	0.952	03/06/06	03/09/06	W. (1)
Dibenzyfuran	EPA 625	6C06060	0.071	0.48	ND	0.952	03/06/06	03/09/06	And the second s
Di-n-buryl phthalate	EPA 625	6C06060	0.25	1.9	ND	0.952	03/06/06	03/09/06	
2-Dichlorobenzene	EPA 625	6C06060	0.10	0.48	ND	0.952	03/06/06	03/09/06	NC-MAZPATAN
13-Dichiorobenzene	EPA 625	6C06060	0.12	0,48	ND	0.952	03/06/06	03/09/06	
1,4-Dichlorobenzene	EPA 625	6C06060.	0.048	0.48	ND	0.952	03/06/06	03/09/06	in year
3.3-Dichlorobenzidine	EPA 625	6C06060	0.89	4.8	ND	0.952	03/06/06	03/09/06	
2,4-Dichlorophenol	EPA 625	6C05060	0.20	1.9	ND	0.952	03/06/06	03/09/06	and the second s
Diethyl phihalase	EPA 625	6C06060	0.11	0.95	ND	0.952	03/04/06	03/09/06	atesai en de de la companya de la co
Z.4-Dimethy iphenci	EPA 625	6C06060	0.30	1.9	ND	0.952	03/06/06	03/09/06	-
Dimethy'i phobalate	EPA 625	6C06060	0.077	0.48	ND	0.952			
4.6-Dinigro-2-methylphenol	EPA 625	6(2)(6060	9.36	4.8	ND	0.952	(0)/66/06	03/09/06	
Z.4-Diciscobend	EPA 635	6006060	2.6	4.8	ND	0.952		03/09/06	PA Dilamonto
2,4-Dinitrotoliscos	EPA 625	6C06060	0.22	4.8	ND	0.952		03/09/06	saparini Saparini
Z.G-Denitrospiese	EPA 625	6C06060	0.23	4.8	ND	0.952		03/09/06	ACCEPAÇA MARI
Di-n-ocivi phthalate	EPA 625	6006060	0.16	4.8	ND	0.952	03/06/06	03/09/06	AND
1.2-Dipheny lby drazine/Azobenzene	EPA 625	6006060	0.083	0.95	ND	0,932	03/06/06	03/19/06	
o Americana a Maratan mendir. mendirika saman pengengan pengenan sama saman sama menengan penga	***		•						

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager

of or Level

IPB2641 <Page 19 of 58>

The reside parameters to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del hilar Analytical.



17481 Clerkin Ave., State 100, Indire, CA 92614 6409 245-1027 FAX 6165-100-1251 TOTALE CONSINTER, SUBJECT COMPANY, CARREST PROPERTY STREETING SERVICES L'ESTITUBLE 98.30 South State S. South B-120, Photology, AL 20044 (1886) 183-4044 (1886) 183-4045 (183-405) 25/20 E. Sammel Rid. #3, Use Yegas, NV 95/126 (F02):746-56/20 1/AX (7/2):778-14/2)

MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

Sampled: 02/28/06

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2641

Received: 02/28/06

Data

Anention: Bronwyn Kelly

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

			MDL	Reporting	Sample	Dilution	Date	Date	27.0	
A X	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Quali	HICI'S
Analyte										
Sample ID: IPB2641-01 (Outfall 011 - Wat	ter) - cont.							4		
Reporting Units: ug/l			A 200 E .	0,48	ND	0.952	03/06/06	03/09/06	A	
Fluoranthene	EPA 625	6C06060	0.085	0.48	ND	0.952	03/06/06	03/09/06	Name of the last	
Fluorene	EPA 625	6C06060	0.071	0.95	ND	0.952	03/06/06	03/09/06	V4-2609	
Hexacalcrobenzene	EPA 625	600000	0.12	1.9	ND	0.952	03/06/06	03/09/06	haran da	
Hexachlorobutadiene	EPA 625	6C06060	0.36	4.8	ND	0.952	03/06/06	03/09/06	District Co	
Hexachiorocyclopentadiene	EPA 625	6C06060	1.7	2.9	ND	0.952	03/06/06	03/09/06	Application 1	
Hexachiorosthane	EPA 625	6C06060	0.49	1.9	ND	0.952	03/06/06	03/09/06	V	
Indeno(1,2,3-cd)pyrene	EPA 625	6C06060	0.18	0.95	0.095	0.952	03/06/06	03/09/06	3	17046
Isophorous	EPA 625	6006060	0,056	0.95	ND	0.952	03/06/06	03/09/06		
2-Methylnaphthalene	EPA 625	6C06060	0.12	1.9	ND	0.952	03/06/06	03/09/06	3	
2-Methylphenol	EPA 625	6C06060	0.27	4.8	ND	0.952	03/06/06	03/09/06	opension.	ghillional administration
4-Methy lphenol	EPA 625	6C06060	0.19	0.95	ND	0.952	03/06/06	03/09/06	Š.	w Ed-
Naphthalene	EPA 625	6C06060	0.12 0.17	4.8	ND	0.952	03/06/06	03/09/06	Çiyothiline.	1
2-Nitroaniline	EPA 625	6C06060		4.8	ND	0.952	03/06/06	03/09/06	V. G. Air	
3-Nitroaniliae	EPA 625	6C06060	0.33	4.8	ND	0.952	03/06/06	03/09/06	active where	(v. m. 144)
4-Nitrosniline	EPA 625	6C06060	0.47		ND	0.952	03/06/06	03/09/06	34	Control Marie
Nitrobenzene	EPA 625	6C06060	0.095	1.9	ND	0.952	03/06/06	03/09/06		Manada 1995
2-Nitrophenol	EPA 625	6C06060	0.22		ND	0.952	03/06/06	03/09/06		600-100 m
4-Nicrophenol	EPA 625	6C06060	0.70	1.9	ND	0.952		03/09/06	2,14,150	Average of the second
N-Ninosodimethy lamine	EPA 625	6C06060	0.21	1.9	ND	0.932	03/06/06	03/09/06	Washington,	W) TO STATE OF THE
N-Nitroso-di-a-propylamine	EPA 625	6C06060	0.17		ND	0.952	03/06/06	03/09/06	A110000	programa in the contract of th
N-Naroastiphenylamine	EPA 625	6C06060	0.073		ND	0.952	-	03/09/06		Car
Pentachiorophonol	EPA 625	6C06060	0.74		ND	0.952		03/09/06		- Anna Anna
Facuanthrene	EPA 625	6C06060			ND	0.952		03/09/06	222	Name of the last o
Phenol	EPA 625	6C06060			ND	0.952			June 1	Mr.
Pyrone	EPA 625	6C06060			ND	0.952			AC global	, p.
1,2,4-Trichlorobenzene	EPA 625	6C06060			ND	0.952			440	**
2,4.5-Trichlorophenol	EPA 625	6C06060			ND	0.952			*	y.
2,4,6-Trichiorophenoi	EPA 625	6C06060	0.09) 0.93	61 %		, 2041 241 241		*	•
Surrogate: 2-Fluorophenol (33-120%)					70 %					
Surrogate: Phenol-36 (45-120%)					73 %					
Surrogate: 2,4.6-Tribromophenol (50-12:	5%)				73 % 80 %					
Surrogate: Nitrobenzene-d5 (45-120%)					67 %					
Surrogate: 2-Plasorshiphenyl (45-120%)					74.94					
Surrogote: Terphenyl-di 4 (45-13394)					7 M. 78	9				
~ .										

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

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CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID: <u>B4TF5</u>

иEC ^X				Package ID:	B4TF5
	East Vassar Drive			Task Order.	1261.001D.01
	a. CO 80014			SDG No.:	IP82641
71.44 WH C	2, 00 000 14		No.	of Analyses:	1
	Laboratory: Del Mar A	nalytical		Date: April 7	
	Reviewer P Meeks	and the second s	eliteriya sayi aliku terremeninin	Reviewers	gnature
£	Analysis/Method: EFH/GRO		ACCESSION OF THE PERSON OF THE	1. K.M.	
•	Monotonia en la maria de la maria della ma		Se encochamber annua.		
ACTIC	N ITEMS*				
Č	ase Narrative	·	ACCURATE STATE OF THE STATE OF		
Ľ	>eficiencies				
	*	AND AND THE PROPERTY OF THE PR			
2. (Out of Scope Analyses				
	•				
3. /	Analyses Not Conducted		والمتعادد والمتعاد والمتعادد والمتعا		
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DATA VALIDATION REPORT

NPDES Monitoring Program Annual Outfall 011

ANALYSIS: TOTAL FUEL HYDROCARBONS
SAMPLE DELIVERY GROUP IPB2641

Prepared by

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

NPOES Project. IPB2641 SDG: TFH Analysis:

DATA VALIDATION REPORT

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

IPB2641

Project Manager:

P. Costa

Matrix:

Water TFH/EFH

Analysis:

QC Level:

Level IV

No. of Samples.

0

No. of Reanalyses/Dilutions: Reviewer:

P. Meeks

Date of Review:

April 8, 2006

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

Revision 0

Project: NPDES SDG: IPB2641 Analysis: TFH

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
	IPB2641-01	Water	8015B & 8015M
Outfall 011	P52541-01	vyd03l	20102404

Project: NPDES SDG: IPB2641 Analysis: TFH

DATA VALIDATION REPORT

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in this SDG were received at the laboratory within the temperature limits of 4° C $\pm 2^{\circ}$ 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 both GRO and EFH analyses. No 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.

Revision 0

Project

NPDES

SOG: Analysis: IPB2541 TFH

DATA VALIDATION REPORT

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 ≤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 011. As GRO (C4-C12) was not detected above the MDL in Outfall 011, trip blank review was not necessary. No qualifications were required.

2.7.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

Revision 0

Project: NPDES SDG: IPB2641 Analysis: TFH

DATA VALIDATION REPORT

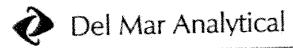
2.8 COMPOUND IDENTIFICATION

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.

BYTES 5 Revision 0



1746) Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 280-3297 1014 E. Cooley Dr., Shite A. Colton, CA 92324 (90%) 370-4667 FAX (90%) 370-1046 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sianset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2641

Batch

Sampled: 02/28/06

Received: 02/28/06

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Data MDL Reporting Sample Dilution Date Result Factor Extracted Analyzed Qualifiers Limit

Sample ID: IPB2641-01RE1 (Outfall 011 - Water) - cont.

Reporting Units: mg/l

Analyte

EFH (C13 - C22)

FPA 8015B

Method

6C07098 0.043

0.48

0.054

87 %

0.952 03/07/06 03/07/06

Surrogate: n-Octacosane (40-125%)

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

Level W



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1914 E. Cooley Ox., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite B-128, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0631 2520 E. Sunst Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena Boeing

Project ID: Annual Outfall 011

Sampled: 02/28/06

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Analyte

GRO (C4 - C12)

Report Number: IPB2641

Attention: Bronwyn Kelly

Received: 02/28/06

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

MDL Reporting Sample Dilution Date Date Data

Batch Limit Limit Result Factor Extracted Analyzed Qualifiers

Sample ID: IPB2641-01 (Outfall 011 - Water) - cont.

Reporting Units: mg/l

Method

EPA 8015 Mod. 6C06046 0.050

0.10

03/06/06 03/06/06 U

Surrogate: 4-BFB (FID) (65-140%)

ND 83 %

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

Lever IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC	×	Package ID: B4VO31
1226	9 East Vassar Drive	Task Order: <u>1261.001D.01</u>
Auro	ra, CO 80014	SDG No.: <u>IPB2641</u>
	,	No. of Analyses: 2
	Laboratory: Del Mar Ai	nalytical Date: April 8, 2006
	Reviewer: L. Calvin	Reviewer's Signature •
	Analysis/Method: Volatiles b	y Method 624 Calvin
	1110	
ACT	ION ITEMS	
	Case Narrative	
	Deficiencies	
2.	Out of Scope Analyses	
3.	Analyses Not Conducted	
	•	
4.	Missing Hardcopy	
	Deliverables	
5.	Incorrect Hardcopy	
	Deliverables	
6.	Deviations from Analysis	Qualifications were assigned for the following:
and the same of th	Protocol, e.g.,	-r² value <0.995 in initial calibration
	Holding Times	-continuing calibration %D >20%
	GC/MS Tune/Inst. Performance	-TIC search only for two target compounds
	Calibration	
	Method blanks	
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and in contrast	Internal Standard Performance	
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*	Subcontracted enalytical laboratory is not t	meeting contract and/or method requirements.

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



DATA VALIDATION REPORT

NPDES Monitoring Program Annual Outfall 011

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB2641

Prepared by

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

Project: NPDES SDG: IPB2641 Analysis: VOCs

DATA VALIDATION REPORT

Table 1. Sample Identification

Confederation Schools	Client ID	Laboratory ID	Matrix	COC Method	
ACAPTACISCO ACCORDING	Outfail 011	IPB2641-01	Water	624	· · · · · · · · · · · · · · · · · · ·
and the second s	Trip Blank	IPB2641-02	Water	624	

Project: SDG: NPDES IPB2641

VOCs

DATA VALIDATION REPORT

SDG: Analysis:

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 five 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 further 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 r² 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 011. Sample Trip Blank was a field QC sample and required no qualification. The %RSDs were ≤35% or r² 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

B4VO31 3 Revision 0

Project: NPDES SDG: IPB2641 Analysis: VOCs

DATA VALIDATION REPORT

011. 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 011. No target compounds were detected in the trip blank. No qualifications were required.

Revision 0

Project: NPDES SDG: iPB2641 Analysis: VOCs

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. 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 µg/L (ppb). No 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.

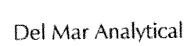
Revision 0

NPDE8 Project: IPB2641 SDG: VOCs Analysis:

DATA VALIDATION REPORT

2.13 SYSTEM PERFORMANCE

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



17401 Denson Arol. Sider 1921. Hidner, CA 92514 (946) 251-1522 FAX (946) 251-1527 1574 E. Cludery Dr., Sude A. College, CA 22224 (956) 275-4667 FAX 1906: 275-1546 9830 Scott: 514: St., Solie 5-135, Photonic, AZ 82344 (485) 783-0043 FAX (486) 783-0857 2520 E. Suder Rd. #1. Lak Vegas, NV 89120 (702) 796-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

300 North Lake Avenue, Suite 1200

Report Number: JP92641

Sampled: 02/28/06

Received: 02/28/06

Pasadena, CA 91101 Attention: Bronwyn Kelly

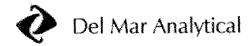
PURGEABLES BY GC/MS (EPA 624)

			MDL	Reporting	Sample	Dilution	Date	Date	Data	
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers	
**				**				4		
Sample ID: IPB2641-01 (Outfall 011 - Wat	er) - cont.									
Reporting Units: agil			A 764	2.0	ND	*	03/02/06	03/03/06	t V	
Benzene	EPA 624	6C02019	0.28	2.0	ND	ē Ž	03/02/06	03/03/06	Was and	
Bromodichloromethane	EPA 624	6C02019	0.30	2.0	ND	*	03/02/06	03/03/06	Metalline Metalline	
Bromoform	EPA 624	6C02019	0.32		ND CM	*	03/02/06	03/03/06	Avadina,	
Bromomethane	EPA 624	6C02019	0.42	5.0	ND	ì	03/02/06	03/03/06	i de maistre de la companya de la co	
Tricidesocrifluoroethane (Freon 113)	EPA 624	6C02019	1.2	5.0		3. I	03/02/06	03/03/06	samurar	
Carbon tetrachloxide	EPA 624	6C02019	0.28	5.0	ND	***	03/02/06	03/03/06	GACAYA MARKA	
Chlorobenzené	EPA 624	6C02019	0.36	2.0	ND	1		03/03/06	## ** ** ** ** ** ** ** ** ** ** ** ** *	
Chloroethane	EPA 624	6C02019	0.40	5.0	ND	-	03/02/06		po joj camano	
Chloreform	EPA 624	6C02019	0.33	2.0	ND	904a4	03/02/06	03/03/06	(Andrews	
Chloromethate	EPA 624	6C02019	0.30	5.0	ND	Ã.	03/02/06	03/03/06	NAME OF THE PERSONS ASSESSMENT ASSESSMENT AS	
Distrimochiosomethane	EPA 624	6C02019	0.28	2.0	ND	and a	03/02/06	03/03/06	and the same of th	
1.2-Dichlorobenzene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/03/06	des constitution of the co	
1.3-Dichlorobenzene	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/03/06	CRC 44000	
i 4-Dichlorobenzene	EPA 624	6C02019	0.37	2.0	ND	**	03/02/06	03/03/06	an visit de la company de la c	
I. I-Dichloroethane	EPA 624	6C02019	0.27	2.0	ND	i	03/02/06	03/03/06	.hts	
1,2-Dichloroethane	EPA 624	6C02019	0.28	2.0	ND	ž.	03/02/06	03/03/06	Note the second	
1.1-Dichloroethese	EPA 624	6C02019	0.32	3.0	ND	1	03/02/06	03/03/06	NAME OF THE PARTY	
trans-1,2-Dichlorocthene	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/03/06	ant wavelet	
1,2-Dichloropropane	EPA 624	6C02019	0.35	2.6	ND	Ĺ	03/02/06	03/03/06	ale very constant of the const	
cis-1,3-Dichloropropent	EPA 624	6C02019	0.22	2.0	ND	1	03/02/06	03/03/06	NAMES OF THE PARTY	
trans-1.3-Dichloropropene	EPA 624	6C02019	0.32	2.0	ND	Ĭ.	03/02/06	03/03/06	A CONTRACTOR	
Eirybeazene	EPA 624	6C02019	0.25	2.0	ND	I	03/02/06	03/03/06	department	
Meny lene chloride	EPA 624	6C02019	0.70	5.0	ND	I	03/02/06	03/03/06	www.iacho	
1,1,22-Tetrachloroethane	EPA 624	6C02019	0.24	2.0	ND	1	03/02/06	03/03/06	i i	
Tepachloroethene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/03/06	ego, yygan	
Toluene	EPA 624	6C02019	0.36	2.0	ND	i -	03/02/06	03/03/06	MA II (Panama	
Louisae L. L. Trichloroethane	EPA 624	6C02019	11.	2.0	ND	1	03/02/06	03/03/06	Cherry Control	
W. W. C.	EPA 624	6C02019		2.0	ND	ŧ	03/02/06	03/03/06	ALTERNATION OF THE PROPERTY OF	
1,1,2-Trichloroethane	EPA 624	£02019		5.0	ND	ł	03/02/06	03/03/06	erennike.	
Trichioroethene Trichiorofluoromethane	EPA 624	6C02019		5.0	ND	###.	03/02/06	03/03/06	. 2004	
	EPA 624	6C02019		5.0	ND	ï	03/02/06	03/03/06		
Vinyt chloride	EPA 624	6C02019		4.0	ND	1	03/02/06	03/03/06	V	
Xylenes, Total		value de la company de la comp	M. S. S.	71.79	111.96	~				
Surrogase: Dibromoftworomethase (80-12)	176)				100 %					
Surrogate: Toluene-dh (80-120%)	8 A'				91%					
Surragaie: 4-Bromoftworobenzene (80-12)	70)				# # P. 65					

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

The results pursum unly to the complex texted in the laboratory. This report shall not be reproduced, except in full, without written permission from Oel Max Analytical.

Lord Adula Marie



17461 Cerisa Aus., Sude 1921 Irvine, CA 30614 (846) 261-1022 FAX (849) 301-1037 1014-L. Cackey Dr., Sude A. Colton, CA 62324 (839) 370-4667 FAX (909) 370-4046 9838 Soudi 512 St., Sude 6-100, Promiss, AZ 85044 (460) 785-6843 FAX (460) 785-6857 2520 E. Sudvet Rú, #1, 144 Viggel, NV 89120 (702) 786-3820 FAX (460) 786-6824

MWH-Pasadena/Boxing

Project ID: Annual Outfall 011

300 North Lake Avenue, Suite 1200

Pasadesa, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2641

Sampled: 02/28/06

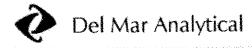
Received: 02/28/06

PURGEABLES BY GC/MS (EPA 624)

			MDL	Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
The state of the s								A.	Mark Delivery
Sample ID: IPB2641-02 (Trip Blank - Water	•							Ą	4 1800
Reporting Units: ug/t	tina 201	6C02019	0.28	2.0	ND	***************************************	03/02/06	03/02/06	K.
Benzene	EPA 624	6C02019	0.30	2.0	ND	*	03/02/06	03/02/06	Second Second
Bromodichloromethane	EPA 624	6C02019	0.32	5.0	ND	3	03/02/06	03/02/06	Security in the security is a security in the
Bromoform	EPA 624	6C02019	0.42	5.0	ND	k.	03/02/06	03/02/06	
Bromomethane	EPA 624	6C02019	1.2	5.0	ND	s.	03/02/06	03/02/06	
Trichlerotrifluoroethane (Freon 113)	EPA 624		0.28	5.0	ND	*	03/02/06	03/02/06	Contraction of
Carbon tetrachloride	EPA 624	6C02019	0.2 5 0.36	2.0	ND	*	03/02/06	03/02/06	Commission of the Commission o
Chlorobenzene	EPA 624	6C02019		5.0	ND	a ž	03/02/06	03/02/06	One-Orders
Chloroethane	EPA 624	6C02019	0.40	2.0	ND	sk. 1900 1800	03/02/06	03/02/06	90,000
Chloroform	EPA 624	6C02019	0.33	2.0 5.0	ND	76. 100.	03/02/06	03/02/06	46H/38
Culoromethane	EPA 624	6C02019	0.30		ND CX	ä. <u>E</u>	03/02/06	03/02/06	idos acedoramies
Dibromochloromethane	EPA 624	6C02019	0.28	2.0	ND GK	ŧ	05/02/06	03/02/06	We will be a second of the sec
1,2-Dichlorobenzone	EPA 624	6C02019	0.32	2.0		A.	03/02/06	03/02/06	de populario de
1,3-Dichlorobenzene	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/02/06	And Andreas
1,4-Dichlorobenzene	EPA 624	6C02019	0.37	2.0	ND	ž.	03/02/06	03/02/06	100 mm 10
1.1-Dichloroethane	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/02/06	
i,2-Dichlorechuse	EPA 624	6C02019	0.28	2.0	ND	-	03/02/06	03/02/06	3
i,i-Dichkroethese	EPA 624	6C02019	0.32	3.0	ND	ye.		03/02/06	an Angeles
trans-1,2-Dichloroethene	EPA 624	6C02019	0.27	2,0	ND	steelik.	03/02/06	03/02/06	arthur de le
1,2-Dichloropropane	EPA 624	6C02019	0.35	2.0	ND	ì	03/02/06	03/02/06	
cis-1,3-Dichloropropene	EPA 624	6C02019	0.22	2.0	ND	1.	03/02/06		
trans-1,3-Dichloropropene	EPA 624	6C02019	0.32	2.0	ND	*	03/02/06	03/02/06	
Ethy ibenzene	EPA 624	6C02019	0.25	2.0	ND	¥	03/02/06	03/02/06	Carlos Ca
Methylene chloride	EPA 624	6C02019	0,70	5,0	ND	I .	03/02/06	03/02/06	W January
1,1,2,2-Tetrachloroethane	EPA 624	6C02019	0.24	2.0	ND	1	03/02/06	03/02/06	The state of the s
Tetrachloroethese	EPA 624	6C02019	0.32	2.0	ND	1.	03/02/06	03/02/06	
Toluene	EPA 624	6C02019	0.36	2,0	ND	I.	03/02/06	03/02/06	
1.1.1-Trichkwoethane	EPA 624	6C02019	0:30	2.0	ND	1	03/02/06	03/02/06	y de coming
1,1,2-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	Ĭ.	03/02/06	03/02/06	ş feketinde
Trichloroethose	EPA 624	6C02019	0.26	5.0	ND	Ī	03/02/06	03/02/06	n/anikw
Trichkyroffuoromethane	EPA 624	6C02019	0.34	5,0	NO	ă.	03/02/06	03/02/06	relative and the second
Visiyi chlorida	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	ali-	03/02/06	03/02/06	
Surrogate: Dibramofisoromethane (80-120%	<i>)</i>				107 %				
Sarrogate: Tohiene-dii (80-12096)					109 %				
Surregule: 4-Bromofluiurobenzene (80-120%)				99 %				

Del Mar Analyticai - Irvine Michele Chamberlin Project Manager LULI

IPB2641 < Page 7 of 58>



17461 Detian Anel Solve 103, hvine, CA 92614 (849) 261-1022 FAX (849) 262-1297 1014 E. Codey Ch., Suite A. Cobon, CA 92324 (809) 370-4667 FAX (809) 370-1045 3830 South Stat St., Suite B-130, Phonesis, AZ 83044 (480) 783-0041 FAX (480) 783-0651 2520 E. Sunted Rd. 47), Las Vegas, AV 82120 7023 798-3620 FAX (702) 788-3621

MWH-Pasadona/Boeing

Project ID: Annual Outfall 011

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: 1PB2641

Sampled: 02/28/06

Received: 02/28/06

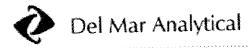
PURGEABLES- GC/MS (EPA 624)

		99 - 4 - 8-	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Analyte	Method	Batch	Limit	THOR	wester	e ascres	AZIGAR BIGGINANA	•	
Sample ID: IPB2641-01 (Outfall 011 - Wate	r)							3.0 12.	
Reporting Units: ug/l Acrolein Acrylonitrile 2-Chloroethyl vinyl ethet Surrogate: Dibromofluoromethane (80-120%) Surrogate: Toluene-d8 (80-120%) Surrogate: 4-Bromofluorobenzene (80-120%)		6C02019 6C02019 6C02019	4.6 0.70 1.8	50 50 5.0	ND ND ND 111 % 109 % 91 %	park park	03/02/06 03/02/06 03/02/06	03/03/06	K.
Sample ID: IPB2641-02 (Trip Blank - Water									PII .
Reporting Units: ug/l Acrolein Acrylonitrile 2-Chloroethyl vinyl ether Surrogate: Dibromofluoromethane (80-120% Surrogate: Toluene-d8 (80-120%) Surrogate: 4-Bromofluorobenzene (80-120%)		6C02019 6C02019 6C02019	4,6 0,70 1.8	50 50 5.0	ND ND ND 107 % 109 %	1 1	03/02/06 03/02/06 03/02/06	03/02/06 03/02/06 03/02/06	And the second s

Project Manager

Level III.





MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Browyn Kelly Report Number: IPB2641

Sampled: 02/28/06

Received: 02/28/06

PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

		•	MDL	Reporting	Sample	Dilution	Date	Date	Data _«
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	*	Qualifiers
Sample ID: IPB2641-01 (Outfall 011 - Reporting Units: ug/l 1,2-Dichloro-1,1,2-trifluoroethane Cyclohexane	Water) EPA 624 (MOD.) EPA 624 (MOD.)	6C02019 6C02019	N/A N/A	2.5 2.5	ND ND	Associa installed	03/02/06 03/02/06	03/03/06 03/03/06	Va ko
Sample ID: IPB2641-02 (Trip Blank- Reporting Units: ug/l 1,2-Dichloro-1,1,2-trifluoroethane Cyclohexane	Water) EPA 624 (MOD.) EPA 624 (MOD.)	6C02019 6C02019	N/A N/A	2.5 2.5	ND ND	and the second	03/02/06 03/02/06	03/02/06 03/02/06	1. 1

Del Mar Analytical - Irvine Michele Chamberlin Project Manager Leve III

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MECX

MEC ^X	Package ID B4VO4O
12269 East Vassar Drive	Task Order 1261,001D.01
Aurora, CO 80014	SDG No. IPB2641
	No. of Analyses 1
Laboratory Del Mar A	
Reviewer K. Shadov	
Analysis/Method 1,4-Dioxar	ne by Method 8260 K. Kradnat
ACTION ITEMS*	
. 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	Acceptable as reviewed.
3	
 Subcontracted analytical laboratory is not n Differences in protocol have been princted. 	reeting contract and/or method requirements.



DATA VALIDATION REPORT

NPDES Monitoring Program Annual Outfall 011

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB2641

Prepared by

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

Project:

NPDES

SDG: Analysis: IPB2641 VOCs

DATA VALIDATION REPORT

 Client ID	Laboratory ID (Irvine)	Laboratory ID (Phoenix)	Matrix	COC Method
Outfall 011	IPB2641-01	PPC0069-01	Water	8260B

Table 1. Sample Identification

Project: SDG: NPDES

Analysis:

IPB2641 VOCs

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

DATA VALIDATION REPORT

1261.001D.01

Sample Delivery Group:

IPB2641

Project Manager:

P. Costa

Matrix:

Water

1

0

Analysis:

Volatiles (1,4-dioxane)

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

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.

Project: SOG: NPDES

DATA VALIDATION REPORT

SDG: Analysis:

VOCs

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

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

Project: NPDES SDG: IPB2641 Analysis: VOCs

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.

Revision 0

Project: NPDES SDG: IP82641 Analysis: VOCs

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

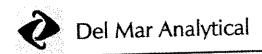
Compound quantification is verified at a Level IV data validation. As there were no detects, compound quantification was verified by recalculating the blank spike and surrogate recoveries. No calculation or transcription errors were found. The reporting limit was supported by the low point of the initial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



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cookey Dr., Suite A. Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Del Mar Analytical - Irvine

17461 Derian Ave. Suite 100

Irvine, CA 92614

Attention: Michele Chamberlin

Project ID: IPB2641

Report Number: PPC0069

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: PPC0069-01 (IPB2641-01	-Water) Out fa	A consistence of the constant							Wal Lide
Reporting Units: ug/l 1,4-Dioxane Surrogate: Dibromofluoromethane (70-	EPA 8260B -130%)	P6C0311	0.49	1.0	ND 115 %	1	03/03/06	03/04/06	eeymaan oo waxaa ah a

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

VIEC	x		Package ID:	B4WCP3
	9 East Vassar Drive		Task Order:	1261.001D.01
	ra, CO 80014		SDG No.:	***************************************
-wi-w	14, 00 010 1	No	of Analyses:	
	Laboratory: Del Mar Ai	nalytical	Date: April 4	
	Reviewer: P. Meeks		Reviewer's S	
	Analysis/Method: General M	linerals	Now	
	7d lary Slot (2) de la Company			
ACT	ON ITEMS ^a			
	Case Narrative			
	Deficiencies			
				<u> </u>
2.	Out of Scope Analyses			
		<u></u>		
3.	Analyses Not Conducted			
		VIII. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		
4.	Missing Hardcopy	***************************************		
	Deliverables			
5.	Incorrect Hardcopy			
	Deliverables			
		Qualification applied for a d	etect below the	reporting limit and a CCV
6.	Deviations from Analysis	·	Cicot Doiot.	
	Protocol, e.g.,	recovery.		
	Holding Times			
	GC/MS Tune/Inst. Performance	**************************************		
	Calibration			
	Method blanks			
	Surrogates			
	Matrix Spike/Dup LCS			
	Field QC			
	Internal Standard Performance			
	Compound Identification			
	Quantitation			
	System Performance			
CC	MMENTS ^b			
	arreignississen storage den karte for termes storage helden and the sensitive dense per person and accompany of the sense			
-				
				
¥		······································		
	Subcontracted analytical laboratory is no	At	·· /iromonte	



DATA VALIDATION REPORT

NPDES Sampling Outfall 011

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPB2641

Prepared by

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

Project: SDG: Analysis:

NPDES IPB2641 Gen. Min.

DATA VALIDATION REPORT

1. INTRODUCTION

Task Order Title:

NPDES Sampling

MECX Project Number:

1261.001D.01

Sample Delivery Group:

IPB2641

Project Manager:

P. Costa

Matrix:

Water

Analysis:

General Minerals

QC Level:

Level IV

Date of Review:

No. of Samples:

No. of Reanalyses/Dilutions:

P. Meeks

Reviewer:

April 5, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the MECX Data Validation Procedure for General Minerals (DVP-6, Rev. 0), USEPA Methods for Chemical Analysis of Water and Wastes Methods 120.1, 160.1, 160.2, 160.5, 180.1, 300.0, 314.0, 330.5, 335.2, 350.2, 405.1, 413.1, 415.1, and 418.1 and Standard Methods for the Examination of Water and Wastewater Method SM2540-C, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data ware is required. Deta qualifiers were placed on Form Is with the associated qualification coded. 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.

Revision 0

Project: NPDES SDG: IPB2641 Analysis: Gen. Min.

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 011	IPB2641-01	Water	General Minerals

2. DATA VALIDATION FINDINGS

SAMPLE MANAGEMENT 2.1

Following are findings associated with sample management:

Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ± 2°C. No preservation problems were noted by the laboratory. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 CALIBRATION

For all applicable analyses, the initial calibration correlation coefficients were ≥0.995 and the ICV and CCV recoveries were within the control limits of 90-110%. For those methods requiring weight determinations, balance calibration logs were reviewed and found to be acceptable. For ammonia, no information regarding the standardization of the titrant was provided; therefore, as the LCS recovery was above the calibration control limit, at 115%, ammonia detected in Outfall 011 was qualified as estimated, "J." No further qualifications were required.

BLANKS 2.3

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.

Project: SDG: NPDES

Gen. Min.

DATA VALIDATION REPORT Analysis:

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

2.5 LABORATORY DUPLICATES

MS/MSD analyses were performed on Outfall 011 for chloride, sulfate, fluoride, and nitrate/nitrite. The reported RPDs were within the laboratory-established control limits. No RPD was listed for nitrate; however, the reviewer checked the raw data and found that nitrate was spiked into the MS/MSD pair and had an acceptable RPD. No qualifications were required.

2.6 MATRIX SPIKES

MS/MSD analyses were performed on Outfall 011 for chloride, sulfate, fluoride, and nitrate/nitrite. The reported recoveries were within the laboratory-established control limits. Sulfate was recovered below the control limit in the MS only; therefore, sulfate detected in outfall 011 was qualified as estimated, "J." No recoveries were listed for nitrate; however, the reviewer checked the raw data and found that nitrate was spiked into the MS/MSD pair and was recovered acceptably. No other MS/MSD analyses were performed in association with this SDG. Evaluation of method accuracy and precision (for BOD and oil and grease) for all other methods was 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 chapter of the properties of the chapter of the performance of the properties of the chapter of the performance of the properties of the prop

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:

Revision 0

Project: NPDES SDG: IPB2641 Analysis: Gen. Min.

DATA VALIDATION REPORT

2.8.1 Field Blanks and Equipment Rinsates

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

2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.

Revision 0



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

MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

Sampled: 02/28/06

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2641

Received: 02/28/06

Attention: Bronwyn Kelly

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte Method Batch Limit Limit Result Factor Extracted Analyzed Qualifiers

Sample ID: IPB2641-01 (Outfall 011 - Water)
Reporting Units: mg/l

Total Recoverable Hydrocarbons EPA 418.1 6C06047 0.30 0.96 ND 0.962 03/06/06 03/06/06

Del Mar Analytical - Irvine Michele Chamberlin Project Manager 

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

MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

300 North Lake Avenue, Suite 1200

Report Number: IPB2641 Pasadena, CA 91101

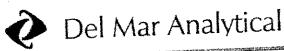
Attention: Bronwyn Kelly

Sampled: 02/28/06

Received: 02/28/06

INO	R	(x)	٠N	Ι	C	S

		3.1.3.	2447							
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted			
Sample ID: IPB2641-01 (Outfall 01: Reporting Units: mg/l	I - Water) - cont							Down	Qual_	COLL
Ammonia-N (Distilled)	EPA 350.2	6C05021	0.30	0.50	0.56	1	03/05/06 03/01/06	03/05/06	فسيه	R.
Biochemical Oxygen Demand	EPA 405.1 EPA 300.0	6C01114 6C01049	0.59 0.26	2.0 0.50	3.2 24	1	03/01/06	03/01/06		- Commission
Chloride Fluoride	EPA 300.0 EPA 300.0	6C01049	0.10	0.50	0.27	1	03/01/06	03/01/06		DNG
Nitrate/Nitrite-N	EPA 300.0	6C01049 6C08046	0.072	0,26 5.0	0.91 ND	i I	03/01/06 03/08/06	03/01/06	s 1	Name of Part of State
Oil & Grease Residual Chlorine	EPA 413.1 EPA 330.5	6B28145	0.10	0.10	ND	1	02/28/06	02/28/06 03/01/06		Q
Sulfate	EPA 300.0	6C01049	0.18 0.044	0.50 0.10	35 ND	1	03/01/06 03/01/06	03/01/06		i Valle
Surfactants (MBAS) Total Dissolved Solids	SM5540-C SM2540C	6C01108 6C03069	10	10	240	1	03/03/06			
Total Organic Carbon	EPA 415.1	6C02064	0.25	1.0	11 69	1	03/01/06 03/05/06			- Constant
Total Suspended Solids	EPA 160.2	6C05025	10	10	69	k	92,05,00			sulterary several



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

MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

Sampled: 02/28/06

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

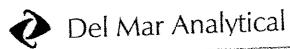
Report Number: IPB2641

Received: 02/28/06

Attention: Bronwyn Kelly

INORGANICS

		INO	KGA	NICS			•	Date	Data
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Analyzed	Qualifiers RW Quad Quad Code
Sample ID: IPB2641-01 (Outfall 011 -	Water) - cont.								* **
Reporting Units: ml/l/hr	EPA 160.5	6B28095	0.10	0.10	ND	1	02/28/06	02/28/06	Tour services and and



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

MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

Sampled: 02/28/06

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2641

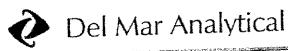
Received: 02/28/06

Attention: Bronwyn Kelly

INORGANICS

) Fute	Method		RGA MDL Limit		Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers Low Qua
Analyte	www.a. 3								axi Coly
Sample ID: IPB2641-01 (Outfall 011	- Water) - cont.							02/01/06	Anadronia na nasipuaka distributura kanana (pandari) Afrikan kanana kanana kanana
Reporting Units: NTU	EPA 180.1	6C01122	0.080	2.0	72	2	03/01/06	03/01/00	
Turbidity	LILL I I COLI	•							





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

MWH-Pasadena/Boeing

Project ID: Annual Outfall 011

300 North Lake Avenue, Suite 1200

Sampled: 02/28/06

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2641

Received: 02/28/06

1	V	R	G	A	VĬ	CS
	3.5		•	Z 3		~~~

		INO	KGA	NIC2				Y 2 . 4 .	Data
Analyte	Method	Batch	MDL Limit		Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Qualifiers Ru Qual Qual Code
Sample ID: IPB2641-01 (Outfall 011 - Reporting Units: ug/l Total Cyanide Perchlorate	EPA 335.2	6C02125 6C02068	2.2 0.80	5.0 4.0	3.0 ND	1	OO, 0	03/02/06 03/03/06	I J DAX

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

LEVEL IV



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 011

Sampled: 02/28/06

Report Number: IPB2641

Received: 02/28/06

INORGANICS

			MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Analyte	Method	Batch	1.411111	LILILA	1400041				AND AND
Sample ID: IPB2641-01 (Outfall 011	- Water) - cont.								2000 (000)
Reporting Units: umbos/cm Specific Conductance	EPA 120.1	6C03067	1.0	1.0	380	1	03/03/06	03/03/06	

APPENDIX G

Section 67

Outfall 012, February 10, 2006 Del Mar Analytical Laboratory Report



LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing

Project: Alfa Outfall 012 - During Test 300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Sampled: 02/10/06 Received: 02/10/06 Revised: 03/20/06 13:42

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

Samples were received intact, at 4°C, on ice and with chain of custody documentation. SAMPLE RECEIPT:

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.

All analyses met method criteria, except as noted in the report with data qualifiers. QA/QC CRITERIA:

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 value reported for Ammonia.

> LABORATORY ID CLIENT ID MATRIX IPB1064-01 Outfall 012 Water IPB1064-02 Trip Blank Water

Reviewed By:

Del Mar Analytical - Irvine

Michile Chamberlin

Michele Chamberlin Project Manager



Pasadena, CA 91101

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

| Sampled: 02/10/06 | Report Number: IPB1064 | Received: 02/10/06 |

Attention: Bronwyn Kelly

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: IPB1064-01 (Outfall 012 - W	ater)								
Reporting Units: mg/l									
Total Recoverable Hydrocarbons	EPA 418.1	6B16050	0.31	1.0	8.4	1	02/16/06	02/16/06	





Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

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: IPB1064-01 (Outfall 012 - Wa	iter) - cont.								
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	6B15104	0.043	0.48	1.8	0.952	02/15/06	02/16/06	
Surrogate: n-Octacosane (40-125%)					73 %				



Pasadena, CA 91101

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

0 Sampled: 02/10/06 Report Number: IPB1064 Received: 02/10/06

Attention: Bronwyn Kelly

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: IPB1064-01 (Outfall 012 -	Water) - cont.								
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6B20002	0.25	0.50	1.3	5	02/20/06	02/20/06	
Surrogate: 4-BFB (FID) (65-140%)					102 %				
Sample ID: IPB1064-02 (Trip Blank -	Water)								
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	6B17047	0.050	0.10	ND	1	02/17/06	02/17/06	
Surrogate: 4-BFB (FID) (65-140%)					96 %				





Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

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: IPB1064-01 (Outfall 012 - Water	er)								
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	6B23012	0.32	2.0	ND	I	02/23/06	02/23/06	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6B23012	0.32	5.0	ND	1	02/23/06	02/23/06	
1,2,3-Trichloropropane	EPA 624	6B23012	0.40	10	ND	1	02/23/06	02/23/06	
Di-isopropyl Ether (DIPE)	EPA 624	6B23012	0.25	5.0	ND	1	02/23/06	02/23/06	
tert-Butanol (TBA)	EPA 624	6B23012	3.1	25	ND	1	02/23/06	02/23/06	
Surrogate: Dibromofluoromethane (80-120%)				111%				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%))				107 %				
Sample ID: IPB1064-02 (Trip Blank - Wate	r)								
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	6B23012	0.32	2.0	ND	1	02/23/06	02/23/06	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6B23012	0.32	5.0	ND	· ·	02/23/06	02/23/06	
1,2,3-Trichloropropane	EPA 624	6B23012	0.40	10	ND	I	02/23/06	02/23/06	
Di-isopropyl Ether (DIPE)	EPA 624	6B23012	0.25	5.0	ND	1	02/23/06	02/23/06	
tert-Butanol (TBA)	EPA 624	6B23012	3.1	25	ND	1	02/23/06	02/23/06	
Surrogate: Dibromofluoromethane (80-120%)				108 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)	ŧ.				97 %				



MWH-Pasadena/Boeing Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

Attention: Bronwyn Kelly

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1064-01 (Outfall 012 - Wate	er)								
Reporting Units: ug/l									
Naphthalene	EPA 625	6B14057	4.3	9.6	47	0.962	02/14/06	02/18/06	
N-Nitrosodimethylamine	EPA 625	6B14057	3.6	19	ND	0.962	02/14/06	02/18/06	
Surrogate: 2-Fluorophenol (30-120%)					53 %				
Surrogate: Phenal-d6 (35-120%)					68 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					53 %				
Surrogate: Nitrobenzene-d5 (45-120%)					81%				
Surrogate: 2-Fluorobiphenyl (45-120%)					78 %				
Surrogate: Terphenyl-d14 (45-120%)					123 %				ZX



MWH-Pasadena/Boeing Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200 Sampled: 02/10/06

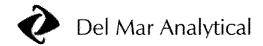
Pasadena, CA 91101 Report Number: IPB1064 Received: 02/10/06

Attention: Bronwyn Kelly

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1064-01 (Outfall 012 - Wa	ter) - cont.								
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	6B21111	0.60	1.0	5.6	1	02/21/06	02/21/06	
Biochemical Oxygen Demand	EPA 405.1	6B11057	0.59	2.0	3.3	1	02/11/06	02/16/06	
Oil & Grease	EPA 413.1	6B20049	0.90	4.8	ND	1	02/20/06	02/20/06	
Total Dissolved Solids	SM2540C	6B16084	10	10	240	1	02/16/06	02/16/06	
Total Suspended Solids	EPA 160.2	6B13121	10	10	28	1	02/13/06	02/13/06	
Sample ID: IPB1064-01 (Outfall 012 - Wa Reporting Units: ml/l/hr	ter)								
Total Settleable Solids	EPA 160.5	6B10136	0.10	0.10	1.0	1	02/10/06	02/10/06	
Sample ID: IPB1064-01 (Outfall 012 - Wa Reporting Units: NTU	ter)								
Turbidity	EPA 180.1	6B11058	0.040	1.0	20	1	02/11/06	02/11/06	
Sample ID: IPB1064-01 (Outfall 012 - Wa Reporting Units: ug/l	ter)								
Perchlorate	EPA 314.0	6B13069	0.80	4.0	ND	1	02/13/06	02/13/06	





Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 02/10/06 Report Number: IPB1064 Received: 02/10/06 Pasadena, CA 91101

Attention: Bronwyn Kelly

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: IPB1064-01 (Outfall 012 - Wat	er) - cont.								
Reporting Units: ug/l									
I,4-Dioxane	EPA 8260B	P6B2203	0.49	1.0	ND	1	02/22/06	02/22/06	
Surrogate: Dibromofluoromethane (70-130%	6)				117%				





Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 02/10/06 Report Number: IPB1064 Received: 02/10/06 Pasadena, CA 91101

Attention: Bronwyn Kelly

SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 012 (IPB1064-01) - Wate	r				
EPA 160.5	2	02/10/2006 15:15	02/10/2006 18:45	02/10/2006 20:30	02/10/2006 21:30
EPA 180.1	2	02/10/2006 15:15	02/10/2006 18:45	02/11/2006 09:00	02/11/2006 10:00
EPA 405.1	2	02/10/2006 15:15	02/10/2006 18:45	02/11/2006 15:00	02/16/2006 13:20





Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B16050 Extracted: 02/16/06	•										
Blank Analyzed: 02/16/2006 (6B16050-Bl	LK1)										
Total Recoverable Hydrocarbons	ND	1.0	0.31	mg/l							
LCS Analyzed: 02/16/2006 (6B16050-BS1)										M-NR1
Total Recoverable Hydrocarbons	3.87	1.0	0.31	mg/l	5.00		77	65-120			
LCS Dup Analyzed: 02/16/2006 (6B16050)-BSD1)										
Total Recoverable Hydrocarbons	3.99	1.0	0.31	mg/l	5.00		80	65-120	3	20	

Del Mar Analytical - Irvine Michele Chamberlin Project Manager



Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 02/10/06

Pasadena, CA 91101

Report Number: IPB1064

Received: 02/10/06

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: 6B15104 Extracted: 02/15/06	_										
Blank Analyzed: 02/15/2006 (6B15104-B	LK1)										
EFH (C13 - C22)	ND	0.50	0.045	mg/l							
EFH (C13 - C40)	0.0781	0.50	0.045	mg/l							f
Surrogate: n-Octacosane	0.180			mg/l	0.200		90	40-125			
LCS Analyzed: 02/16/2006 (6B15104-BS)	1)										M-NR1
EFH (C13 - C40)	0.575	0.50	0.045	mg/l	0.750		77	40-120			
Surrogate: n-Octacosane	0.137			mg/l	0.200		68	40-125			
LCS Dup Analyzed: 02/16/2006 (6B1510-	4-BSD1)										
EFH (C13 - C40)	0.582	0.50	0.045	mg/l	0.750		78	40-120	1	25	
Surrogate: n-Octacosane	0.148			mg/l	0.200		74	40-125			



Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B17047 Extracted: 02/17/06	<u>5</u>										
Blank Analyzed: 02/17/2006 (6B17047-B	,										
GRO (C4 - C12)	ND	0.10	0.050	mg/l							
Surrogate: 4-BFB (FID)	0.00942			mg/l	0.0100		94	65-140			
LCS Analyzed: 02/17/2006 (6B17047-BS	1)										
GRO (C4 - C12)	0.760	0.10	0.050	mg/l	0.800		95	65-140			
Surrogate: 4-BFB (FID)	0.0229			mg/l	0.0300		76	65-140			
Matrix Spike Analyzed: 02/17/2006 (6B1	7047-MS1)				Sour	rce: IPB0	961-01				
GRO (C4 - C12)	0.270	0.10	0.050	mg/I	0.220	ND	123	60-145			
Surrogate: 4-BFB (FID)	0.0114			mg/l	0.0100		114	65-140			
Matrix Spike Dup Analyzed: 02/17/2006	(6B17047-MSI	D1)			Sour	rce: IPB0	961-01				
GRO (C4 - C12)	0.224	0.10	0.050	mg/l	0.220	ND	102	60-145	19	20	
Surrogate: 4-BFB (FID)	0.00985			mg/l	0.0100		98	65-140			
Batch: 6B20002 Extracted: 02/20/06	<u>.</u>										
	~ ~~.										
Blank Analyzed: 02/20/2006 (6B20002-B	•										
GRO (C4 - C12)	ND	0.10	0.050	mg/l							
Surrogate: 4-BFB (FID)	0.0107			mg/l	0.0100		107	65-140			
LCS Analyzed: 02/20/2006 (6B20002-BS	1)										
GRO (C4 - C12)	0.940	0.10	0.050	mg/i	0.800		118	65-140			
Surrogate: 4-BFB (FID)	0.0322			mg/l	0.0300		107	65-140			
Matrix Spike Analyzed: 02/20/2006 (6B2	0002-MS1)				Sour	ce: IPB1	040-01				
GRO (C4 - C12)	0.229	0.10	0.050	mg/l	0.220	ND	104	60-145			
Surrogate: 4-BFB (FID)	0.0113			mg/l	0.0100		113	65-140			

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager





Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

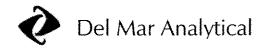
Attention: Bronwyn Kelly

Pasadena, CA 91101

METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B20002 Extracted: 0	2/20/06										
Matrix Spike Dup Analyzed: 02/	20/2006 (6B20002-M	SD1)			Sou	rce: IPB	1040-01				
GRO (C4 - C12)	0.273	0.10	0.050	mg/l	0.220	ND	124	60-145	18	20	
Surrogate: 4-BFB (FID)	0.0118			mg/l	0.0100		118	65-140			



Pasadena, CA 91101

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 02/10/06
Report Number: IPB1064 Received: 02/10/06

Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source	%REC	%REC	RPD	RPD Limit	Data Qualifiers
•		1./iiiii	HDL	Umns	Lever	Mesure	POINT	LAMING	KQ D	ASSESS	Quantitiers
Batch: 6B23012 Extracted: 02/23/06	.										
Blank Analyzed: 02/23/2006 (6B23012-B	LKI)										
1,2-Dibromoethane (EDB)	ND	2.0	0.32	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	0.32	ug/l							
1,2,3-Trichloropropane	ND	10	0.40	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	0.25	ug/l							
tert-Butanol (TBA)	ND	25	3.1	ug/l							
Surrogate: Dibromofluoromethane	27.0			ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	25.7			ug/l	25.0		103	80-120			
Surrogate: 4-Bromofluorobenzene	25.1			ug/l	25.0		100	80-120			
LCS Analyzed: 02/23/2006 (6B23012-BS)	1)										
1,2-Dibromoethane (EDB)	27.9	2.0	0.32	ug/l	25.0	,	112	70-125			
Methyl-tert-butyl Ether (MTBE)	30.3	5.0	0.32	ug/l	25.0		121	55-140			
1,2,3-Trichloropropane	24.6	10	0.40	ug/l	25.0		98	55-130			
Di-isopropyl Ether (DIPE)	26.6	5.0	0.25	ug/l	25.0		106	60-135			
tert-Butanol (TBA)	120	25	3.1	ug/l	125		96	65-135			
Surrogate: Dibromofluoromethane	27.9			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	26.0			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	27.2			ug/l	25.0		109	80-120			
Matrix Spike Analyzed: 02/23/2006 (6B2:	3012-MS1)				Sou	rce: IPB1	064-01				
1,2-Dibromoethane (EDB)	24.6	2.0	0.32	ug/l	25.0	ND	98	65-130			
Methyl-tert-butyl Ether (MTBE)	26.2	5.0	0.32	ug/l	25.0	ND	105	50-150			
1,2,3-Trichloropropane	23.4	10	0.40	ug/l	25.0	ND	94	50-135			
Di-isopropyl Ether (DIPE)	20.6	5.0	0.25	ug/I	25.0	ND	82	60-140			
tert-Butanol (TBA)	94.6	25	3.1	ug/l	125	ND	76	60-145			
Surrogate: Dibromofluoromethane	26.9			ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	26.3			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	27.1			ug/l	25.0		108	80-120			

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

Attention: Bronwyn Kelly

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: 6B23012 Extracted: 02/23/00	<u>5</u>										
Matrix Spike Dup Analyzed: 02/23/2006 (6B23012-MSD1)				Source: IPB1064-01							
1,2-Dibromoethane (EDB)	24.0	2.0	0.32	ug/l	25.0	ND	96	65-130	2	25	
Methyl-tert-butyl Ether (MTBE)	23.3	5.0	0.32	ug/l	25.0	ND	93	50-150	12	25	
1,2,3-Trichloropropane	19.8	10	0.40	ug/l	25.0	ND	79	50-135	17	30	
Di-isopropyl Ether (DIPE)	21.6	5.0	0.25	ug/l	25.0	ND	86	60-140	5	25	
tert-Butanol (TBA)	120	25	3.1	ug/l	125	ND	96	60-145	24	25	
Surrogate: Dibromofluoromethane	25.6			ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	26.3			ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	26.6			ug/t	25.0		106	80-120			



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

Attention: Bronwyn Kelly

Pasadena, CA 91101

METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B14057 Extracted: 02/14/06	5										
Blank Analyzed: 02/17/2006 (6B14057-E	LKI)										
Naphthalene	ND	10	4.5	ug/l							
N-Nitrosodimethylamine	ND	20	3.7	ug/l							
Surrogate: 2-Fluorophenol	118			ug/l	200		59	30-120			
Surrogate: Phenol-d6	148			ug/l	200		74	35-120			
Surrogate: 2,4,6-Tribromophenol	141			ug/l	200		70	45-120			
Surrogate: Nitrobenzene-d5	72.2			ug/l	100		72	45-120			
Surrogate: 2-Fluorobiphenyl	81.3			ug/l	100		81	45-120			
Surrogate: Terphenyl-dl4	95.0			ug/l	100		95	45-120			
LCS Analyzed: 02/17/2006 (6B14057-BS	1)										M-NR1
Naphthalene	69.4	10	4.5	ug/l	100		69	50-120			
N-Nitrosodimethylamine	57.2	20	3.7	ug/l	100		57	40-120			
Surrogate: 2-Fluorophenol	136			ug/l	200		68	30-120			
Surrogate: Phenol-d6	150			ug/l	200		75	35-120			
Surrogate: 2,4,6-Tribromophenol	159			ug/l	200		80	45-120			
Surrogate: Nitrobenzene-d5	65.3			ug/l	100		65	45-120			
Surrogate: 2-Fluorobiphenyl	78.4			ug/l	100		78	45-120			
Surrogate: Terphenyl-d14	88.4			ug/l	100		88	45-120			
LCS Dup Analyzed: 02/17/2006 (6B1405	7-BSD1)										
Naphthalene	71.3	10	4.5	ug/l	100		71	50-120	3	20	
N-Nitrosodimethylamine	64.1	20	3.7	ug/l	100		64	40-120	11	20	
Surrogate: 2-Fluorophenol	137			ug/l	200		68	30-120			
Surrogate: Phenol-d6	151			ug/I	200		76	35-120			
Surrogate: 2,4,6-Tribromophenol	148			ug/l	200		74	45-120			
Surrogate: Nitrobenzene-d5	69.3			ug/l	100		69	45-120			
Surrogate: 2-Fluorobiphenyl	77.7			ug/l	100		78	45-120			
Surrogate: Terphenyl-d14	90.0			ug/l	100		90	45-120			

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager





MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 02/10/06

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB1064 Received: 02/10/06

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6B11057 Extracted: 02/11/06	·										-
Blank Analyzed: 02/16/2006 (6B11057-B.	LK1)										
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 02/16/2006 (6B11057-BS	•			_							
Biochemical Oxygen Demand	218	100	30	mg/I	198		110	85-115			
LCS Dup Analyzed: 02/16/2006 (6B1105' Biochemical Oxygen Demand	7-BSD1) 208	100	30	mg/l	198		105	85-115	5	20	
Batch: 6B11058 Extracted: 02/11/06	-			-							
Blank Analyzed: 02/11/2006 (6B11058-B	LK1)										
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 02/11/2006 (6B1105	8-DUP1)				Sou	rce: IPB1	060-01				
Turbidity	1.53	1.0	0.040	NTU		1.6			4	20	
Batch: 6B13069 Extracted: 02/13/06	-										
Blank Analyzed: 02/13/2006 (6B13069-B)	LK1)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 02/13/2006 (6B13069-BS)	-										
Perchlorate	51.0	4.0	0.80	ug/I	50.0		102	85-115			
Matrix Spike Analyzed: 02/13/2006 (6B1:				.,		rce: IPA2					
Perchlorate	55.6	4.0	0.80	ug/l	50.0	6.2	99	80-120			

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

Sampled: 02/10/06



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IPB1064 Received: 02/10/06

METHOD BLANK/QC DATA

INORGANICS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B13069 Extracted: 02/13/06	w;										
Matrix Spike Dup Analyzed: 02/13/2006	(6B13069-N	ISD1)			Sou	rce: IPA2	241-04R	E1			
Perchlorate	55.5	4.0	0.80	ug/I	50.0	6.2	99	80-120	0	20	
Batch: 6B13121 Extracted: 02/13/06	•										
Blank Analyzed: 02/13/2006 (6B13121-Bl	LK1)										
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 02/13/2006 (6B13121-BS1)										
Total Suspended Solids	996	10	10	mg/l	1000		100	85-115			
Duplicate Analyzed: 02/13/2006 (6B13121	-DUP1)				Sou	rce: IPB1	056-01				
Total Suspended Solids	314	10	10	mg/l		330			5	10	
Batch: 6B16084 Extracted: 02/16/06											
Blank Analyzed: 02/16/2006 (6B16084-BI	.K1)										
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 02/16/2006 (6B16084-BS1)										
Total Dissolved Solids	982	10	10	mg/l	1000		98	90-110			
Duplicate Analyzed: 02/16/2006 (6B16084	-DUP1)				Sou	rce: IPB1	283-01				
Total Dissolved Solids	8840	10	10	mg/l		8900			1	10	
Batch: 6B20049 Extracted: 02/20/06											
Blank Analyzed: 02/20/2006 (6B20049-BL	.K1)										
Oil & Grease	ND	5.0	0.94	mg/l							

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

| Sampled: 02/10/06 | Report Number: IPB1064 | Received: 02/10/06

Pasadena, CA 91101 Attention: Bronwyn Kelly

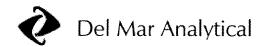
METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPÐ	RPD Limit	Data Qualifiers
Batch: 6B20049 Extracted: 02/20/06	 -										
LCS Analyzed: 02/20/2006 (6B20049-BS	1)										M-NR1
Oil & Grease	17.9	5.0	0.94	mg/l	20.0		90	65-120			
LCS Dup Analyzed: 02/20/2006 (6B2004)	9-BSD1)										
Oil & Grease	17.8	5.0	0.94	mg/l	20.0		89	65-120	1	20	
Batch: 6B21111 Extracted: 02/21/06	•										
Blank Analyzed: 02/21/2006 (6B21111-B	LK1)										
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 02/21/2006 (6B21111-BS	1)										
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0		109	80-115			
Matrix Spike Analyzed: 02/21/2006 (6B2	1111-MS1)				Sou	rce: IPB1	543-01				
Ammonia-N (Distilled)	12.0	0.50	0.30	mg/l	10.0	1.1	109	70-120			
Matrix Spike Dup Analyzed: 02/21/2006	(6B21111-M	SD1)			Sour	rce: IPB1	543-01				
Ammonia-N (Distilled)	11.8	0.50	0.30	mg/l	10.0	1.1	107	70-120	2	15	

Project Manager

Sampled: 02/10/06



MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

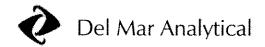
Report Number: IPB1064 Received: 02/10/06

METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: P6B2203 Extracted: 02/22/00	<u> </u>										
Blank Analyzed: 02/22/2006 (P6B2203-B	ILK1)										
1,4-Dioxane	ND	1.0	0.49	ug/l							
Surrogate: Dibromofluoromethane	1.16			ug/l	1.00		116	70-130			
LCS Analyzed: 02/22/2006 (P6B2203-BS	1)										
1,4-Dioxane	10.2	1.0	0.49	ug/l	10.0		102	70-130			
Surrogate: Dibromoftuoromethane	1.13			ug/l	1.00		113	70-130			
LCS Dup Analyzed: 02/22/2006 (P6B220	3-BSD1)										
1,4-Dioxane	10.5	1.0	0.49	ug/l	10.0		105	70-130	3	20	
Surrogate: Dibromofluoromethane	1.11			ug/l	1.00		III	70-130			
Matrix Spike Analyzed: 02/22/2006 (P6B	2203-MS1)				Soui	rce: PPB(378-01				
1,4-Dioxane	12.7	1.0	0.49	ug/l	10.0	0.49	122	65-125			
Surrogate: Dibromofluoromethane	1.14			ug/l	1.00		114	70-130			
Matrix Spike Dup Analyzed: 02/22/2006	(P6B2203-MS	SD1):			Sour	rce: PPB0	378-01				
1,4-Dioxane	10.8	1.0	0.49	ug/l	10.0	0.49	103	65-125	16	20	
Surrogate: Dibromofluoromethane	1.13			ug/l	1.00		113	70-130			

Michele Chamberlin Project Manager



MWH-Pasadena/Boeing Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

Attention: Bronwyn Kelly

DATA QUALIFIERS AND DEFINITIONS

J Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.

M-NR1 There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike

Duplicate.

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

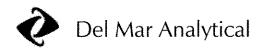
For GRO (C4-C12):

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 - IrvineMichele Chamberlin
Project Manager



Project ID: Alfa Outfall 012 - During Test MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Sampled: 02/10/06 Report Number: IPB1064 Pasadena, CA 91101 Received: 02/10/06

Attention: Bronwyn Kelly

Certification Summary

Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 314.0	Water	N/A	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 418.1	Water	X	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
Level 4	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

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

EPA 8260B Method Performed: Samples: IPB1064-01

Del Mar Analytical - Irvine Michele Chamberlin Project Manager



17461 Derian Ave., Suite 100, Irving, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228 1014 E. Cooley Dr., Suite A. Colton, CA 92324

9484 Chesapeake Drive, Sulte 805, San Diego, CA 92123 9830 South 51st Street, Suite 8-120, Phoenix, AZ 85044

2520 E. Sunest Rd., Suite #3, Les Vegas, NV 80120

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

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

Fax (702) 798-3621

Ph (702) 796-3620

SUBCONTRACT ORDER - PROJECT # IPB1064

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

02/24/06 15:15

Due

Comments

Sampled: 02/10/06 15:15 Sample ID: IPB1064-01 Water

Dioxane-8260B-out

02/21/06 12:00

Level 4 Data Package - Phoenix-03/10/06 15:15

02/21/06 12:00

Boeing-permit, sub DMAP, J flags, ID=DMA+Outfall 012 Boeing, TAT= 17 days from receipt at Phoenix

Containers Supplied:

40 ml VOA w/HCL (IPB1064-01M) 40 ml VOA w/HCL (IPB1064-01N) 40 ml VOA w/HCL (IPB1064-010)

1PB0416-1

							SAMP	LE IN	TEG	UT	Y:								<u> </u>	***************************************
All containers intact: Custody Seals Preser	ŧ	Yes Yes				ampie labels/ amples Preser			J Ye			No No		Samples R Samples R			/b	Yes 2+6	□ № `	
Sta	7	1	分	na	الصريا				F		d	<u>~ (</u> -	外				05			
Released By	2/2/	14	//	06	Date	Tim		Rec	eived Z	Ву		٣	داور	2e_5	I - ව.	Date 2//	4/2		09.	<u>ځ</u> -5
Released By	······································				Date	Pion	·	Rec	eived	Ву					I)atè	ı	Tin	ne	

Del Mar Analytical version 02/17/05 CHAIN OF CUSTODY FORM

Page 1 of

Comments Field readings: Temp = 73 Ŧ Turn eround Time: (check) 24 Hours 5 De Settleable Solids × Turbidity, TDS, TSS ANALYSIS REQUIRED × Perchlorate ISID /M × (\$5.03E) Titr. (350.2) eieylene AMQN+ × × 625 Naphthalene × BOD5(20 degrees C) MTBE, OPE, TBA) × × × 624 (EDB, 1,2,3-TCP, (F.814 A93) × Petroleum Hydrocarbons × TRPH,=Total Rec. 80928-enexoiO-4,1 × × Date/Time leuf felvleseib-2108 × × × × seg-2108 × (1.514 × A93) esesto & liO 12A, 12B, 12C, 12D, 12E, 12F Bottle # 28, 2C 4B, 4C 6B, 6C ğ 11A 8 8 ð K 8 88 ₹ ģ 8 8 8 \$ Š Project: Boeing-SSFL NPDES During Test -- Outfall 012 Preservative Received By H2S04 None None None None None None None 오 걒 오 Ÿ Ş 오 오 오 宁 Š Ÿ (626) 568-6691 Fax Number: (626) 568-6515 Alfa Test Stand Phone Number Sampling Date/Time 20.01 Date/Time: RUBON BARROSO C0 # N N --O Container Type 500ml Poly 11. Amber 11. Poly 11. Poly 11. Poly VOAs VOAs VOAs VOAs VOAs VOAs VOAs Sample Matrix Client Name/Address ≥ ≥ ₹ ≥ ₹ \geq ₹ ≥ ₹ ≥ ₹ ≥ \geq ≥ ≥ > ≥ 3 ≥ Relinquished By Trip Blank

Sampler Rick BANAGA Project Manager. Bronwyn Kelly 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101 MWH-Pasadena Description Outfall 012 duplicate Outfall 012 Outfall 012 Outfall 012 Outfall 012 Outfall 012 duplicate Outfall 012 Cutfall 012 duplicate duplicate duplicate duplicate duplicate

Relinquished By

Normal 10 Days

Perchiorate Only 72 Hours Metals Only 72 Hours

5 Days

48 Hours 72 Hours

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Date/Time

Received By

 $C \ V$

5

Date/Time:

Refinquiehed By

3-10-06

Sample Integrity: (Check) Inteot On los:

ttoo

Received By

2-/408

Date/Time:

APPENDIX G

Section 68

Outfall 012, February 10, 2006 AMEC Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

ME	2 X		Package ID: <u>B4SV20</u>	
1220	69 East Vassar Drive		Task Order: <u>1261.001D.01</u>	
Auro	ora, CO 80014		SDG No.: <u>IPB1064</u>	
		1	No. of Analyses: 1	
	Laboratory: Del Mar A	nalytical	Date: March 20, 2006	
	Reviewer: L. Calvin		Reviewer's Signature ·	
	Analysis/Method: Semivolat	iles by Method 625	Macalvu	
	*			
ACT	ION ITEMS*			
1.	Case Narrative			
	Deficiencies			
				
2.	Out of Scope Analyses			******
		······································		

3.	Analyses Not Conducted			-
	•			

4.	Missing Hardcopy	<u> </u>		
	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			name (i
,	System Performance			
CON	MENTS ^b	Acceptable as reviewed.		
	bcontracted analytical laboratory is not me			
עו	fferences in protocol have been adopted b	y use radoratory dut no action again	SLUIC MIDDINUNY IS LEGAMEGO.	



DATA VALIDATION REPORT

NPDES Monitoring Program Outfall 012

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IPB1064

Prepared by

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

NPDES

SDG: Analysis: IPB1064 SVOC

DATA VALIDATION REPORT

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

IPB1064

Project Manager:

P. Costa

Matrix:

T. CUSIA

IVICILIA.

Water

Analysis:

Semivolatiles

QC Level:

Level IV

No. of Samples:

1

0

No. of Reanalyses/Dilutions:

Reviewer:

L. Calvin

Date of Review:

March 20, 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.

NPDES

SDG:

IPB1064

Analysis:

svoc

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPB1064-01	Water	625

DATA VALIDATION REPORT

NPDES

SDG: Analysis:

IPB1064 SVOC

DATA VALIDATION REPORT

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 GC/MS TUNING

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

2.3 CALIBRATION

One initial calibration analyzed 02/03/06 was associated with the sample in this SDG. The %RSDs were \leq 35% for target compounds naphthalene and NDMA. The continuing calibration associated with the sample was analyzed 02/17/06. The %Ds for both target compounds were within the QC limit of \leq 20%. No qualifications were required.

NPDES

SDG: Analysis: IPB1064 SVOC

DATA VALIDATION REPORT

2.4 BLANKS

One method blank (6B14057-BLK1) was extracted and analyzed with this SDG. Neither target compound was detected above the MDL in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (6B14057-BS1/BSD1) was extracted and analyzed with this SDG. All recoveries and RPDs were within the laboratory-established QC limits. No qualifications were required.

2.6 SURROGATE RECOVERY

Surrogate recoveries for the sample were within the laboratory QC limits, with the exception of a recovery above the QC limits for terphenyl-d14. No qualifications were required for the single surrogate recovery outlier.

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 and 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.

NPDES

SDG: Analysis: IPB1064 SVOC

DATA VALIDATION REPORT

2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area counts and retention times for the sample were within the control limits established by the continuing calibration standards of -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 naphthalene and NDMA 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 $\mu g/L$ (ppb). No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

2.13 SYSTEM PERFORMANCE

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



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

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

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

Amakas	3.5			Reporting	-	Dilution		Date	Da	
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Quali	fiere
Sample ID: IPB1064-01 (Outfall 012 Reporting Units: ug/l	- Water)							4	والعام	je ga
Naphthalene	EPA 625	6B14057	4.3	9.6	47	0.962	02/14/06	02/18/06		
N-Nitrosodimethylamine	EPA 625	6B14057	3.6	19	ND	0.962	02/14/06	02/18/06	u	
Surrogate: 2-Fluorophenol (30-120%)					53 %				-	
Surrogate: Phenol-d6 (35-120%)		•			68 %				Ę.	
Surrogate: 2,4,6-Tribromophenol (45-1	20%)				53 %					
Surrogate: Nitrobenzene-d5 (45-120%)					81 %					
Surrogate: 2-Fluorobiphenyl (45-120%)					78 %					
Surrogate: Terphenyl-d14 (45-120%)	-,				123 %	•			Z	¥

Del Mar Analytical, Irvine Michele Chamberlin Project Manager Level II

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MECX	Package ID: <u>B4TF3</u>
12269 East Vassar Drive	Task Order: _1261.001D.01
Aurora, CO 80014	SDG No.: <u>IPB1064</u>
	No. of Analyses: 2
Laboratory: Del Mar Analytical	Date: March 20, 2006
Reviewer: L. Calvin	Reviewer/s Signarure
Analysis/Method: TFH by Methods 8015	
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	y y i y politico politico nego per una mandia de de inaciani a contra de permanente de la composición del composición de la composición de la composición del composición de la composición de la composición de la composición del composición de la composición de la composición del composición del composición del composición del composición del composic
COMMENTS ^b Acceptable a	e ravioued
Total	
* 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.

MECX



DATA VALIDATION REPORT

NPDES Monitoring Program Outfall 012

ANALYSIS: TOTAL FUEL HYDROCARBONS
SAMPLE DELIVERY GROUP IPB1064

Prepared by

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

NPDES

SDG: Analysis:

IPB1064 **TFH**

DATA VALIDATION REPORT

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

IPB1064

Project Manager:

P. Costa

Matrix:

Water

Analysis:

TFH

QC Level:

Level IV

No. of Samples:

2

No. of Reanalyses/Dilutions:

Reviewer:

L. Calvin

Date of Review:

March 20, 2006

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

NPDES

SDG: Analysis:

IPB1064 TFH

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPB1064-01	Water	8015B & 8015M
Trip Blank	IPB1064-02	Water	8015M

NPDES

TFH

SDG: Analysis:

IPB1064

DATA VALIDATION REPORT

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. The COC accounted for the 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 samples were 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 GRO analyzed 01/19/06 and 01/25/06, and one for EFH analyzed 01/16/06, 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 both GRO and EFH analyses. No qualifications were required.

2.3 BLANKS

Two method blanks, one GRO (6B17047-BLK1) and one EFH (6B15104-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.

NPDES

SDG:

IPB1064

Analysis:

TFH

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One GRO blank spike (6B17047-BS1) and one EFH blank spike/blank spike duplicate pair (6B15104-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 ≤25%. No qualifications were required.

2.5 SURROGATE RECOVERY

DATA VALIDATION REPORT

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 samples. 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

Sample Trip Blank was the trip blank sample associated with the GRO analysis of site sample Outfall 012. GRO (C4-C12) was not detected above the MDL in the trip blank. No qualifications were required.

2.7.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

Project: SDG: NPDES

Analysis:

TFH

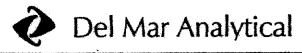
DATA VALIDATION REPORT

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). No qualifications were required.



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

MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Sampled: 02/10/06

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB1064

Received: 02/10/06

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

MDL Reporting Sample Dilution Date Deade Result Factor Extracted Analyzed Qualifiets Method Limit Analyte Batch

Sample ID: IPB1064-01 (Outfall 012 - Water) - cont.

Reporting Units: mg/l

Surrogate: n-Octacosane (40-125%)

EFH (C13 - C22)

EPA 8015B

6B15104 0.043

0.48

73 %

0.952 02/15/06 02/16/06

Del Mar Analytical, Irvine Michele Chamberlin Project Manager

Level I



17461 Derson Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A. Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor		Date Analyzed 6	Data Jualifiers
Sample ID: IPB1064-01 (Outfall 0) Reporting Units: mg/l GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-140%)	12 - Water) - cont. EPA 8015 Mod.	6B20002	0.25	0.50	1.3 102 %	5	02/20/06	02/20/06	1 grad
Sample ID: IPB1064-02 (Trip Blan Reporting Units: mg/l GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-140%)	k - Water) EPA 8015 Mod.	6B17047	0.050	0.10	ND 96 %	1	02/17/06	02/17/06 V	

Del Mar Analytical, Irvine Michele Chamberlin Project Manager

Level

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

CONTRACTICOM	PLIANCE SCREENING FURN				
MEC ^X 12269 East Vassar Drive Aurora, CO 80014		Task Order: SDG No.:	B4VO22 3 1/3/- 1/3 1261.001D.01 IPB1064		
Laboratory: Del M		of Analyses: Date: March			
Reviewer: L. Calvin Analysis/Method: 1,4-Dioxane by Method 8260B		Reviewer's Signature .			
. 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	Acceptable as reviewed.				
	ot meeting contract and/or method requiremented by the laboratory but no action against the		<u>d.</u>		



DATA VALIDATION REPORT

NPDES Monitoring Program Outfall 012

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB1064

Prepared by

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

NPDES

SDG:

IPB1064

Analysis:

VOCs

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

DATA VALIDATION REPORT

1261.001D.01

Sample Delivery Group:

IPB1064

Project Manager:

P. Costa

roject manager.

Matrix:

Water

Analysis:

Volatiles (1,4-dioxane)

QC Level:

Level IV

No. of Samples:

FCAGI

No. of Reanalyses/Dilutions:

L. Calvin

Reviewer: Date of Review:

March 20, 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.

NPDES

SDG: Analysis:

IPB1064 VOCs

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPB1064-01	Water	8260B

NPDES

SDG: Analysis: IPB1064 VOCs

DATA VALIDATION REPORT

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 4°C at Del Mar – Irvine. The 1,4-dioxane analysis was subcontracted to Del Mar – Phoenix, and the sample was received within the temperature limits at 3°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 not present on the cooler upon receipt at Del Mar – Phoenix. 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 time. No qualifications were required.

2.3 CALIBRATION

One initial calibration was associated with the sample in this SDG, dated 02/17/06. The average RRF for target compound 1,4-dioxane was ≥0.05 and the %RSD was ≤15%. The continuing calibration associated with the sample in this SDG was dated 02/22/06. The RRF for 1,4-dioxane was ≥0.05 and the %D was within the QC limit of ≤20%. No qualifications were required.

2.4 BLANKS

One method blank (P6B2203-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.

NPDES

SDG: Analysis: IPB1064 VOCs

DATA VALIDATION REPORT

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike/blank spike duplicate pair (P6B2203-BS1/BSD1) was analyzed with this SDG. The recoveries for 1,4-dioxane were within the QC limits of 70-130%, and the RPD was within the QC limit of ≤20%. No qualifications were required.

2.6 SURROGATE RECOVERY

The surrogate recovery was within the laboratory QC limits of 70-130% for the sample in 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 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 Trip Blanks

There was no trip blank sample associated with the sample in this SDG; however, as 1,4-dioxane was not detected in the sample, evaluation of possible trip blank contamination was not necessary. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

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

2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

NPDES

SDG: Analysis: IPB1064 VOCs

DATA VALIDATION REPORT

2.9 INTERNAL STANDARDS PERFORMANCE

The internal standard area count and retention time were within the control limits established by the continuing calibration standard: -50%/+100% for internal standard areas and ±30 seconds for retention times. The recovery was 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 for 1,4-dioxane 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.



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

MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

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

MDL Reporting Sample Dilution Date Date Data
Analyte Method Batch Limit Limit Result Factor Extracted Analyzed Qualifier

Sample ID: IPB1064-01 (Outfall 012 - Water) - cont.

Reporting Units: ug/l

1,4-Dioxane EPA 8260B P6B2203 0.49 1.0 ND 1 02/22/06 02/22/06
Surrogate: Dibromofluoromethane (70-130%) 117 %

Del Mar Analytical, Irvine Michele Chamberlin Project Manager

Level II

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

ME			Package ID: <u>B4VO24</u>		
122	269 East Vassar Drive		Task Order: <u>1261.001D.01</u>		
Aur	ora, CO 80014		SDG No.: <u>IPB1064</u>		
			No. of Analyses: 2		
	Laboratory: Del Mar	Analytical	Date: March 20, 2006		
	Reviewer: L. Calvin		Reviewer/s Signat/re		
	Analysis/Method: Volatiles		- Malven		
	The state of the s	Dy Mounou 024	- Corcawai		
AC.	TION ITEMS*				
A. 8.44	Case Narrative				
٠	Deficiencies				
	Denciencies				
2.	Out of Scope Analyses				
tu.	Out of Scope Arialyses				
•					
3.	Analyses Not Conducted				
4.	Missing Hardcopy				
	Deliverables	+5-4-11-11-11-11-11-11-11-11-11-11-11-11-1			
5.	Engage of Handage				
Ö,	Incorrect Hardcopy Deliverables				
	Deliverables				
6.	Deviations from Analysis				
•	Protocol, e.g.,				
	Holding Times				
	GC/MS Tune/Inst. Performance				
	Calibration				
	Method blanks				
	Surrogates				
	Matrix Spike/Dup LCS				
	Field OC				
	Internal Standard Performance				
	Compound Identification	·			
	Quantitation				
	System Performance				
		4			
CO	MMENTS ⁶	Acceptable as review	ved.		
·······························					

* 6.	described and and the first telescope at the second				
	ubcontracted analytical laboratory is not mifferences in protocol have been adopted				
	THE REPORT OF THE PARTY OF THE	AT ANY IGHT AND ANY INTERPRETATION	CHOING DE HULFACUAY IS I CLAREU.		



DATA VALIDATION REPORT

NPDES Monitoring Program Outfall 012

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB1064

Prepared by

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

NPDES

SDG:

IPB1064 Analysis: **VOCs**

DATA VALIDATION REPORT

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

IPB1064

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Volatiles

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

0 L. Calvin

Reviewer: Date of Review:

March 20, 2006

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

NPDES

SDG: Analysis:

IPB1064 VOCs

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPB1064-01	Water	624
Trip Blank	IPB1064-02	Water	624

NPDES

VOCs

SDG: Analysis: IPB1064

DATA VALIDATION REPORT

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 GC/MS TUNING

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

2.3 CALIBRATION

One initial calibration was associated with the samples in this SDG, dated 01/21/06. The average RRFs were \geq 0.05 and the %RSDs were \leq 35% for the target compounds listed on the sample result summary forms. The continuing calibration associated with the sample analyses was dated 02/23/06. The RRFs were \geq 0.05 and all %Ds were within the QC limit of \leq 20% for the target compounds. No qualifications were required.

2.4 BLANKS

One method blank (6B23012-BLK1) was analyzed with this SDG. No target compounds were detected in the method blank. Review of the method blank raw data indicated no false negatives. No qualifications were required.

NPDES

SDG: Analysis: IPB1064 VOCs

DATA VALIDATION REPORT

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (6B23012-BS1) was analyzed with this SDG. The recoveries were within the laboratory-established QC limits. No qualifications were required.

2.6 SURROGATE RECOVERY

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

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were performed on sample Outfall 012. Recoveries were within the laboratory-established QC limits and the RPDs were within the QC limit of ≤15%. 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 012. 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

Project: **NPDES** SDG: IPB1064

Analysis: **VOCs**

DATA VALIDATION REPORT

for retention times. The recoveries were checked from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.10 **COMPOUND IDENTIFICATION**

The laboratory analyzed for five 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

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

Pasadena, CA 91101 Attention: Bronwyn Kelly

PURGEABLES BY GC/MS (EPA 624)

			MDL	Reporting	Sample	Dilution	Date	Date	I)ata
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qu	alifieks
Sample ID: IPB1064-01 (Outfall 01 Reporting Units: ug/l	2 - Water)							44		grade
1,2-Dibromoethane (EDB)	EPA 624	6B23012	0.32	2.0	ND	1	02/23/06	02/23/06	U	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6B23012	0.32	5.0	ND	1	02/23/06	02/23/06		
1,2,3-Trichloropropane	EPA 624	6B23012	0.40	10	ND	Ĭ	02/23/06	02/23/06		
Di-isopropyl Ether (DIPE)	EPA 624	6B23012	0.25	5.0	ND	1	02/23/06	02/23/06		
tert-Butanol (TBA)	EPA 624	6B23012	3.1	25	ND	1	02/23/06	02/23/06	Ψ	
Surrogate: Dibromofluoromethane (80-120%)				111%		•			
Surrogate: Toluene-d8 (80-120%)	*				104%	4.	*		Ī	
Surrogate: 4-Bromofluorobenzene (8	70-120%)				107 %					
Sample ID: IPB1064-02 (Trip Blan Reporting Units: ug/l	k - Water)									
1,2-Dibromoethane (EDB)	EPA 624	6B23012	0.32	2.0	ND	1	02/23/06	02/23/06	u	
Methyl-tert-butyl Ether (MTBE)	EPA 624	6B23012	0.32	5.0	ND	1	02/23/06	02/23/06		
1,2,3-Trichloropropane	EPA 624	6B23012	0.40	10	ND	1	02/23/06	02/23/06	,	ŀ
Di-isopropyl Ether (DIPE)	EPA 624	6B23012	0.25	5.0	ND	1	02/23/06	02/23/06	,	
tert-Butanol (TBA)	EPA 624	6B23012	3.1	25	ND	1	02/23/06	02/23/06	V	
Surrogate: Dibromofluoromethane (80-120%)				108 %				•	
Surrogate: Toluene-d8 (80-120%)	•				104 %					ı
Surrogate: 4-Bromofluorobenzene (8	30-120%)				97%					
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Del Mar Analytical, Irvine Michele Chamberlin Project Manager LEVEL IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC ^X 12269 East Vassar Drive Aurora, CO 80014		Package ID: <u>B4WPC2</u> Task Order: <u>1261.001D.01</u> SDG No.: <u>IPB1064</u>
Laboratory: Del Mar Reviewer: P. Meek Analysis/Method: General	Analytical s	No. of Analyses: 1 Date: February 15, 2006 Reviewer's Signature
ACTION ITEMS*		
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	Acceptable as reviewed.	
Subcontracted analytical laboratory is not Differences in protocol have been adopte	meeting contract and/or method requ	quirements.



DATA VALIDATION REPORT

NPDES Sampling Outfall 012

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPB1064

Prepared by

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

SDG: Analysis: IPB1064 Gen. Min.

1. INTRODUCTION

Task Order Title:

NPDES Sampling

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

1201.0010.01

pie Delivery Group.

IPB1064

Project Manager:

P. Costa

Matrix:

Water

Analysis:

General Minerals

QC Level:

Level IV

No. of Samples:

1

No. of Reanalyses/Dilutions:

-

Reviewer:

eviewer: P. Meeks

Date of Review:

March 15, 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 160.1, 160.2, 160.5, 180.1, 314.0, 350.2, 405.1, 413.1, 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.

NPDES

SDG: Analysis: IPB1064 Gen. Min.

DATA VALIDATION REPORT

Table 1. Sample Identification

		:	
Client ID	Laboratory ID	Matrix	COC Method
Outfall 012	IPB1064-01	Water	General Minerals

NPDES

DATA VALIDATION REPORT

SDG: Analysis:

IPB1064 Gen. Min.

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analysis. All samples were analyzed 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%. For ammonia, no information for the titrant standardization was provided; however, as the LCS recovery was within the calibration control limits, no qualifications were required. Balance calibration logs were included for oil and grease, TDS, and TSS. Calibration is not applicable to BOD or settleable solids. 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.

Project: NPDES SDG: IPB1064

Gen. Min.

Analysis:

DATA VALIDATION REPORT

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The reported LCS recoveries were within the laboratory-established control limits. No qualifications were required.

2.5 LABORATORY DUPLICATES

No 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 or matrix spike analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Method accuracy was assessed based on LCS results. No qualifications were required.

2.7 SAMPLE RESULT VERIFICATION

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

2.8 FIELD QC SAMPLES

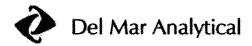
Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated sample. The following are findings associated with field QC samples:

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

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IPB1064

Sampled: 02/10/06

Pasadena, CA 91101 Attention: Bronwyn Kelly Received: 02/10/06

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB1064-01 (Outfail 012 -	- Water) - cont.								Rev 1 gun
Reporting Units: mg/l									And Cogr
Ammonia-N (Distilled)	EPA 350.2	6B21111	0.60	1.0	5,6	1	02/21/06	02/21/06	***************************************
Biochemical Oxygen Demand	EPA 405.1	6B11057	0.59	2.0	3.3	1	02/11/06	02/16/06	
Oil & Grease	EPA 413.1	6B20049	0.90	4.8	ND	1	02/20/06	02/20/06	U
Total Dissolved Solids	SM2540C	6B16084	10	10	240	1	02/16/06	02/16/06	
Total Suspended Solids	EPA 160.2	6B13121	10	10	28	ı	02/13/06	02/13/06	
Sample ID: IPB1064-01 (Outfall 012 - Reporting Units: ml/l/hr	-Water)								Jeggy ∕ chape shi — ⊒ip
Total Settleable Solids	EPA 160.5	6B10136	0.10	0.10	1.0	1	02/10/06	02/10/06	i head work of the second of t
Sample ID: IPB1064-01 (Outfall 012 - Reporting Units: NTU	- Water)								
Turbidity	EPA 180.1	6B11058	0.040	1.0	20	1	02/11/06	02/11/06	-Nii de Add
Sample ID: IPB1064-01 (Outfall 012 - Reporting Units: ug/l	-Water)								
Perchlorate	EPA 314.0	6B13069	0.80	4.0	ND	1	02/13/06	02/13/06	U

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

Level IV



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9830 South 51st St., Suite 8-120, Phoenix, AZ 65044 (460) 785-0043 FAX (460) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IPB1064

Sampled: 02/10/06

Received: 02/10/06

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

			MDL	Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: IPB1064-01 (Outfall 012 - V	Vater)								Ben Ord
Reporting Units: mg/t	mma eso s	/TO1/050	0.21		0.4	•	00/11//06	001111101	
Total Recoverable Hydrocarbons	EPA 418.1	6B16050	0.31	1.0	8.4	i	02/16/06	02/16/06	1001

Del Mar Analytical, Irvine Michele Chamberlin Project Manager

LEVEL IV

APPENDIX G

Section 69

Outfall 018, February 28, 2006

Del Mar Analytical Laboratory Report



LABORATORY REPORT

Prepared For:

MWH-Pasadena/Boeing

Project: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Sampled: 02/28/06

Received: 02/28/06

Issued: 03/20/06 18:30

NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

SUBCONTRACTED:

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

LABORATORY ID

CLIENT ID

MATRIX

IPB2643-01

Outfall 018

Water

IPB2643-02

Trip Blank

Water

Reviewed By:

Del Mar Analytical - Irvine Michele Chamberlin

Michile Chamberein

Project Manager



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

MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2643

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

Attention: Bronwyn Kelly

CORRECTIVE ACTION REPORT

Department: Extractions

Date: 03/10/2006

Method: EPA 625

Matrix: Water

QC Batch: 6C06060

Identification and Definition of Problem:

BS/BSD recoveries were below the acceptance limits for Benzoic Acid (ND/ND, 30-125%), Dimethyl phthalate (36%/44%, 60-120%), and Benzidine (ND/ND, 20-180%).

Determination of the Cause of the Problem:

Benzidine is known to be a problematic compound. According to the EPA, it can be subject to oxidative losses during solvent extraction and its chromatographic behavior is poor. Benzidine failure is typical of the low level method. Less than optimal extraction technique is the likely cause for the failure of benzoic acid and dimethyl phthalate.

Corrective Action Taken:

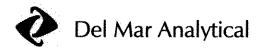
All results reported for Benzoic Acid, Dimethyl phthalate and Benzidine are potentially biased low and can be considered estimates only and are flagged with L2 qualifier.

Quality Assurance Approval:

Dave Dawes

Date: 03/28/2006 11:40 AM

Del Mar Analytical - Irvine Michele Chamberlin Project Manager



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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, Łas Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Report Number: IPB2643

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

Attention: Bronwyn Kelly

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: IPB2643-01 (Outfall 018 - Wat Reporting Units: mg/l	er)								
Total Recoverable Hydrocarbons	EPA 418.1	6C06047	0.30	0.96	ND	0.962	03/06/06	03/06/06	





Attention: Bronwyn Kelly

MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

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 Analyzed	Data Qualifiers
Sample ID: IPB2643-01RE1 (Outfall 018 -	Water) - cont.								
Reporting Units: mg/l EFH (C13 - C22) Surrogate: n-Octacosane (40-125%)	EPA 8015B	6C07098	0.043	0.48	ND 84 %	0.952	03/07/06	03/08/06	



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MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2643

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		Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2643-01 (Outfall 018 - V Reporting Units: mg/l	Vater) - cont.								
GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-140%)	EPA 8015 Mod.	6C06046	0.050	0.10	ND 88 %	I	03/06/06	03/06/06	



Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

Sampled: 02/28/06

Received: 02/28/06

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution	Date Extracted	Date Analyzed	Data Qualifiers
Anatyte	MICEROU	DAICE	LHHIL	Lamit	Meanic	ractor	Extracted	Amaryzau	&marrier o
Sample ID: IPB2643-01 (Outfall 018 - Wat	er) - cont.								
Reporting Units: ug/l									
Benzene	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	
Bromodichloromethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/03/06	
Bromoform	EPA 624	6C02019	0.32	5.0	ND	1	03/02/06	03/03/06	
Bromomethane	EPA 624	6C02019	0.42	5.0	ND	1	03/02/06	03/03/06	
Trichlorotrifluoroethane (Freon 113)	EPA 624	6C02019	1.2	5.0	ND	1	03/02/06	03/03/06	
Carbon tetrachloride	EPA 624	6C02019	0.28	5.0	ND	1	03/02/06	03/03/06	
Chlorobenzene	EPA 624	6C02019	0.36	2.0	ND	1	03/02/06	03/03/06	
Chloroethane	EPA 624	6C02019	0.40	5.0	ND	1	03/02/06	03/03/06	
Chloroform	EPA 624	6C02019	0.33	2.0	ND	1	03/02/06	03/03/06	
Chloromethane	EPA 624	6C02019	0.30	5.0	ND	1	03/02/06	03/03/06	
Dibromochloromethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	
1,2-Dichlorobenzene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/03/06	
1,3-Dichlorobenzene	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/03/06	
1,4-Dichlorobenzene	EPA 624	6C02019	0.37	2.0	ND	1	03/02/06	03/03/06	
1,1-Dichloroethane	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/03/06	
1,2-Dichloroethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	
1,1-Dichloroethene	EPA 624	6C02019	0.32	3.0	ND	1	03/02/06	03/03/06	
trans-1,2-Dichloroethene	EPA 624	6C02019	0.27	2.0	ND	1	03/02/06	03/03/06	
1,2-Dichloropropane	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/03/06	
cis-1,3-Dichloropropene	EPA 624	6C02019	0.22	2.0	ND	1	03/02/06	03/03/06	
trans-1,3-Dichloropropene	EPA 624	6C02019	0.32	2.0	ND	1	03/02/06	03/03/06	
Ethylbenzene	EPA 624	6C02019	0.25	2.0	ND	1	03/02/06	03/03/06	
Methylene chloride	EPA 624	6C02019	0.70	5.0	ND	1	03/02/06	03/03/06	
1,1,2,2-Tetrachloroethane	EPA 624	6C02019	0.24	2.0	ND	1	03/02/06	03/03/06	L
Tetrachioroethene	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%)	•				109 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				90 %				
• • • • • • • • • • • • • • • • • • • •									

Del Mar Analytical - Irvine Michele Chamberlin Project Manager



Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2643

2000

Sampled: 02/28/06

Received: 02/28/06

PURGEABLES BY GC/MS (EPA 624)

	101		, ,,, ,				_		T) - 4 -
			MDL	Reporting	_	Dilution	Date	Date	Data Qualifiers
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Quantiers
Sample ID: IPB2643-02 (Trip Blank - Wate	r)								pН
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	I	03/02/06	03/02/06	
Surrogate: Dibromofluoromethane (80-120%)					110 %				
Surrogate: Toluene-d8 (80-120%)	,				108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)	}				97%				
surrogue. Thromojuorocentene (00-1207)	•								

Del Mar Analytical - Irvine Michele Chamberlin Project Manager



Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2643

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: IPB2643-01 (Outfall 018 - Water	r)								
Reporting Units: ug/l								22/22/24	
Acrolein	EPA 624	6C02019	4.6	50	ND	1	03/02/06	03/03/06	
Acrylonitrile	EPA 624	6C02019	0.70	50	ND	1	03/02/06	03/03/06	
2-Chloroethyl vinyl ether	EPA 624	6C02019	1.8	5.0	ND	1	03/02/06	03/03/06	
Surrogate: Dibromofluoromethane (80-120%)				110 %				
Surrogate: Toluene-d8 (80-120%)					109 %				
Surrogate: 4-Bromofluorobenzene (80-120%,)				90 %				
Sample ID: IPB2643-02 (Trip Blank - Wate	r)								pН
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	
Surrogate: Dibromofluoromethane (80-120%))				110 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%,)				97 %				



Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2643

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: IPB2643-01 (Outfall 018	- Water)								
Reporting Units: ug/l									
1,2-Dichloro-1,1,2-trifluoroethane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	l	03/02/06	03/03/06	
Cyclohexane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/03/06	
Sample ID: IPB2643-02 (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	



Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

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: IPB2643-01 (Outfall 018	- Water)								
Reporting Units: ug/l									
Acenaphthene	EPA 625	6C06060	0.096	0.48	ND	0.962	03/06/06	03/09/06	
Acenaphthylene	EPA 625	6C06060	0.096	0.48	ND	0.962	03/06/06	03/09/06	
Aniline	EPA 625	6C06060	2.8	9.6	ND	0.962	03/06/06	03/09/06	
Anthracene	EPA 625	6C06060	0.080	0.48	ND	0.962	03/06/06	03/09/06	
Benzidine	EPA 625	6C06060	3.1	4.8	ND	0.962	03/06/06	03/10/06	L2
Benzoic acid	EPA 625	6C06060	3.6	19	ND	0.962	03/06/06	03/09/06	L2
Benzo(a)anthracene	EPA 625	6C06060	0.037	4.8	ND	0.962	03/06/06	03/09/06	
Benzo(a)pyrene	EPA 625	6C06060	0.13	1.9	ND	0.962	03/06/06	03/09/06	
Benzo(b)fluoranthene	EPA 625	6C06060	0.048	1.9	ND	0.962	03/06/06	03/09/06	
Benzo(g,h,i)perylene	EPA 625	6C06060	0.057	4.8	ND	0.962	03/06/06	03/09/06	
Benzo(k)fluoranthene	EPA 625	6C06060	0.051	0.48	ND	0.962	03/06/06	03/09/06	
Benzyl alcohol	EPA 625	6C06060	0.20	4.8	ND	0.962	03/06/06	03/09/06	
Bis(2-chloroethoxy)methane	EPA 625	6C06060	0.069	0.48	ND	0.962	03/06/06	03/09/06	
Bis(2-chloroethyl)ether	EPA 625	6C06060	0.081	0.48	ND	0.962	03/06/06	03/09/06	
Bis(2-chloroisopropyl)ether	EPA 625	6C06060	0.11	0.48	ND	0.962	03/06/06	03/09/06	
Bis(2-ethylhexyl)phthalate	EPA 625	6C06060	1.1	4.8	ND	0.962	03/06/06	03/09/06	
4-Bromophenyl phenyl ether	EPA 625	6C06060	0.12	0.96	ND	0.962	03/06/06	03/09/06	
Butyl benzyl phthalate	EPA 625	6C06060	0.33	4.8	1.4	0.962	03/06/06	03/09/06	J
4-Chloroaniline	EPA 625	6C06060	0.19	1.9	ND	0.962	03/06/06	03/09/06	
2-Chloronaphthalene	EPA 625	6C06060	0.057	0.48	ND	0.962	03/06/06	03/09/06	
4-Chloro-3-methylphenol	EPA 625	6C06060	0.33	1.9	ND	0.962	03/06/06	03/09/06	
4-Chlorophenyl phenyl ether	EPA 625	6C06060	0.054	0.48	ND	0.962	03/06/06	03/09/06	
2-Chlorophenol	EPA 625	6C06060	0.12	0.96	ND	0.962	03/06/06	03/09/06	
Chrysene	EPA 625	6C06060	0.069	0.48	ND	0.962	03/06/06	03/09/06	
Dibenz(a,h)anthracene	EPA 625	6C06060	0.080	0.48	ND	0.962	03/06/06	03/09/06	
Dibenzofuran	EPA 625	6C06060	0.072	0.48	ND	0.962	03/06/06	03/09/06	
Di-n-butyl phthalate	EPA 625	6C06060	0.25	1.9	ND	0.962	03/06/06	03/09/06	
1,2-Dichlorobenzene	EPA 625	6C06060	0.11	0.48	ND	0.962	03/06/06	03/09/06	
1,3-Dichlorobenzene	EPA 625	6C06060	0.12	0.48	ND	0.962	03/06/06	03/09/06	
1,4-Dichlorobenzene	EPA 625	6C06060	0.048	0.48	ND	0.962	03/06/06	03/09/06	
3,3-Dichlorobenzidine	EPA 625	6C06060	0.89	4.8	ND	0.962	03/06/06	03/09/06	
2,4-Dichlorophenol	EPA 625	6C06060	0.20	1.9	ND	0.962	03/06/06	03/09/06	
Diethyl phthalate	EPA 625	6C06060	0.12	0.96	ND	0.962	03/06/06	03/09/06	
2,4-Dimethylphenol	EPA 625	6C06060	0.30	1.9	ND	0.962	03/06/06	03/09/06	
Dimethyl phthalate	EPA 625	6C06060	0.078	0.48	ND	0.962	03/06/06	03/09/06	L2
4,6-Dinitro-2-methylphenol	EPA 625	6C06060	0.37	4.8	ND	0.962	03/06/06	03/09/06	
2,4-Dinitrophenol	EPA 625	6C06060	2.6	4.8	ND	0.962	03/06/06	03/09/06	
2,4-Dinitrotoluene	EPA 625	6C06060	0.22	4.8	ND	0.962	03/06/06	03/09/06	
2,4-Dinitrotoluene	EPA 625	6C06060	0.23	4.8	ND	0.962	03/06/06	03/09/06	
	EPA 625	6C06060	0.16	4.8	ND	0.962	03/06/06	03/09/06	
Di-n-octyl phthalate	EPA 625	6C06060	0.084	0.96	ND	0.962	03/06/06	03/09/06	
1,2-Diphenylhydrazine/Azobenzene	EFA UAJ	000000	0.004	0.20					

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager



Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2643

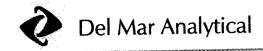
Sampled: 02/28/06

Received: 02/28/06

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

•	icip w							Th. 4.	Data
			MDL	Reporting	Sample		Date	Date Analyzed	Qualifiers
Analyte	Method	Batch	Limit	Limit	Result	Pactor	Extracted	Anatyzeu	Quantities
Sample ID: IPB2643-01 (Outfall 018 - Wate	er) - cont.								
Reporting Units: ug/l									
Fluoranthene	EPA 625	6C06060	0.086	0.48	ND	0.962	03/06/06	03/09/06	
Fluorene	EPA 625	6C06060	0.072	0.48	ND	0.962	03/06/06	03/09/06	
Hexachlorobenzene	EPA 625	6C06060	0.12	0.96	ND	0.962	03/06/06	03/09/06	
Hexachlorobutadiene	EPA 625	6C06060	0.37	1.9	ND	0.962	03/06/06	03/09/06	
Hexachlorocyclopentadiene	EPA 625	6C06060	1.7	4.8	ND	0.962	03/06/06	03/09/06	
Hexachloroethane	EPA 625	6C06060	0.49	2.9	ND	0.962	03/06/06	03/09/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6C06060	0.18	1.9	ND	0.962	03/06/06	03/09/06	
Isophorone	EPA 625	6C06060	0.057	0.96	ND	0.962	03/06/06	03/09/06	
2-Methylnaphthalene	EPA 625	6C06060	0.12	0.96	ND	0.962	03/06/06	03/09/06	
2-Methylphenol	EPA 625	6C06060	0.27	1.9	ND	0.962	03/06/06	03/09/06	
4-Methylphenol	EPA 625	6C06060	0.19	4.8	ND	0.962	03/06/06	03/09/06	
Naphthalene	EPA 625	6C06060	0.12	0.96	ND	0.962	03/06/06	03/09/06	
2-Nitroaniline	EPA 625	6C06060	0.17	4.8	ND	0.962	03/06/06	03/09/06	
3-Nitroaniline	EPA 625	6C06060	0.34	4.8	ND	0.962	03/06/06	03/09/06	
4-Nitroaniline	EPA 625	6C06060	0.47	4.8	ND	0.962	03/06/06	03/09/06	
Nitrobenzene	EPA 625	6C06060	0.096	0.96	ND	0.962	03/06/06	03/09/06	
2-Nitrophenol	EPA 625	6C06060	0.22	1.9	ND	0.962	03/06/06	03/09/06	
4-Nitrophenol	EPA 625	6C06060	0.70	4.8	ND	0.962	03/06/06	03/09/06	
N-Nitrosodimethylamine	EPA 625	6C06060	0.21	1,9	ND	0.962	03/06/06	03/09/06	
N-Nitroso-di-n-propylamine	EPA 625	6C06060	0.17	1.9	ND	0.962	03/06/06	03/09/06	
N-Nitrosodiphenylamine	EPA 625	6C06060	0.074	0.96	ND	0.962	03/06/06	03/09/06	
Pentachlorophenol	EPA 625	6C06060	0.75	1.9	ND	0.962	03/06/06	03/09/06	
Phenanthrene	EPA 625	6C06060	0.068	0.48	ND	0.962	03/06/06	03/09/06	
Phenol	EPA 625	6C06060	0.13	0.96	ND	0.962	03/06/06	03/09/06	
Pyrene	EPA 625	6C06060	0.057	0.48	ND	0.962	03/06/06	03/09/06	
1.2.4-Trichlorobenzene	EPA 625	6C06060	0.096	0.96	ND	0.962	03/06/06	03/09/06	
2,4,5-Trichlorophenol	EPA 625	6C06060	0.072	1.9	ND	0.962	03/06/06	03/09/06	
2,4,6-Trichlorophenol	EPA 625	6C06060	0.096	0.96	ND	0.962	03/06/06	03/09/06	
Surrogate: 2-Fluorophenol (35-120%)	2272 0				54 %				
Surrogate: Phenol-d6 (45-120%)					64 %				
Surrogate: 2,4,6-Tribromophenol (50-125%)					66 %				
Surrogate: 2,4,0-1710romophenol (30-12579) Surrogate: Nitrobenzene-d5 (45-120%)					75 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					62 %				
Surrogate: 2-r-titorosiphenyi (43-120%) Surrogate: Terphenyi-d14 (45-135%)					72 %				
omiogue: resphenyeuse (40-100/0)									

Del Mar Analytical - IrvineMichele Chamberlin
Project Manager



Project ID: Annual Outfall 018

Sampled: 02/28/06

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2643

Received: 02/28/06

Attention: Bronwyn Kelly

ORGANOCHLORINE PESTICIDES (EPA 608)

	OROZETO					•			
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2643-01 (Outfall 018 - Water Reporting Units: ug/l	r) - cont.						02/05/06	03/07/06	
Aldrin	EPA 608	6C05031	0.029	0.095	ND	0.952	03/05/06		
alpha-BHC	EPA 608	6C05031	0.00047	0.0095	ND	0.952	03/05/06	03/07/06	
-	EPA 608	6C05031	0.014	0.095	ND	0.952	03/05/06	03/07/06	
beta-BHC	EPA 608	6C05031	0.019	0.19	ND	0.952	03/05/06	03/07/06	
delta-BHC	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	
gamma-BHC (Lindane)	EPA 608	6C05031	0.19	0.95	ND	0.952	03/05/06	03/07/06	
Chlordane	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	
4,4'-DDD	EPA 608	6C05031	0.024	0.095	ND	0.952	03/05/06	03/07/06	
4,4'-DDE		6C05031	0.033	0.095	ND	0.952	03/05/06	03/07/06	
4,4'-DDT	EPA 608	6C05031	0.033	0.095	ND	0.952	03/05/06	03/07/06	
Dieldrin	EPA 608		0.014	0.095	ND	0.952	03/05/06	03/07/06	
Endosulfan I	EPA 608	6C05031		0.095	ND	0.952	03/05/06	03/07/06	
Endosulfan II	EPA 608	6C05031	0.038	0.093	ND	0.952	03/05/06	03/07/06	
Endosulfan sulfate	EPA 608	6C05031	0.019	0.19	ND ND	0.952	03/05/06	03/07/06	
Endrin	EPA 608	6C05031	0.019	*·	ND ND	0.952	03/05/06	03/07/06	
Endrin aldehyde	EPA 608	6C05031	0.043	0.095			03/05/06	03/07/06	
Endrin ketone	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	
Heptachlor	EPA 608	6C05031	0.029	0.095	ND	0.952		03/07/06	
Heptachlor epoxide	EPA 608	6C05031	0.029	0.095	ND	0.952	03/05/06		
Methoxychlor	EPA 608	6C05031	0.033	0.095	ND	0.952	03/05/06	03/07/06	
Toxaphene	EPA 608	6C05031	1.4	4.8	ND	0.952	03/05/06	03/07/06	
Surrogate: Decachlorobiphenyl (45-120%)					67 %				
Surrogate: Tetrachloro-m-xylene (35-120%)					66 %				

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MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

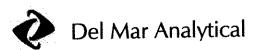
Sampled: 02/28/06

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Attention: Bronwyn Kelly

TOTAL PCBS (EPA 608)

		T CL T T T T T							
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2643-01 (Outfall 018 - Wate	er) - cont.								
Reporting Units: ug/l									
Aroclor 1016	EPA 608	6C05031	0.19	0.95	ND	0.952	03/05/06	03/06/06	
Aroclor 1221	EPA 608	6C05031	0.095	0.95	ND	0.952	03/05/06	03/06/06	
	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	
Aroclor 1232	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	
Aroclor 1242				•	ND	0.952	03/05/06	03/06/06	
Aroclor 1248	EPA 608	6C05031	0.24	0.95					
Aroclor 1254	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	
Aroclor 1260	EPA 608	6C05031	0.38	0.95	ND	0.952	03/05/06	03/06/06	
Surrogate: Decachlorobiphenyl (45-120%)					107 %				



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MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Sampled: 02/28/06

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2643

Received: 02/28/06

		ľ	VIETA	LS					
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2643-01 (Outfall 018 - V Reporting Units: mg/l Barium Boron Iron	Water) - cont. EPA 200.7 EPA 200.7 EPA 200.7	6C03084 6C03084 6C03084	0.0028 0.0080 0.0088	0.010 0.050 0.040	0.041 0.046 4.0	1 1	03/03/06 03/03/06 03/03/06	03/04/06 03/07/06 03/04/06	J





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Sampled: 02/28/06

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2643

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Add Addition of the second of									
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2643-01 (Outfall 0)	18 - Water) - cont.								
Reporting Units: ug/l							02/02/04	03/02/06	J
Antimony	EPA 200.8	6C02098	0.18	2.0	0.45	1	03/02/06		J
Arsenic	EPA 200.7	6C03084	3.8	5.0	ND	1	03/03/06	03/04/06	
	EPA 200.7	6C03084	0.62	2.0	ND	1	03/03/06	03/04/06	
Beryllium	EPA 200.8	6C02098	0.015	1.0	0.20	1	03/02/06	03/02/06	J
Cadmium	EPA 200.7	6C03084	0.68	5.0	6.5	1	03/03/06	03/04/06	В
Chromium		6C03084	2.0	10	ND	1	03/03/06	03/04/06	
Cobalt	EPA 200.7		0.49	2.0	5.9	ī	03/02/06	03/02/06	
Copper	EPA 200.8	6C02098		****	3.6	î	03/02/06	03/02/06	
Lead	EPA 200.8	6C02098	0.13	1.0			03/03/06	03/04/06	
Manganese	EPA 200.7	6C03084	3.2	20	110	1		03/04/06	
Mercury	EPA 245.1	6C02097	0.063	0.20	ND	1	03/02/06		*
Nickel	EPA 200.7	6C03084	2.0	10	4.3	1	03/03/06	03/04/06	J
Selenium	EPA 200.8	6C02098	0.36	2.0	0.47	1	03/02/06	03/02/06	B, J
	EPA 200.8	6C02098	0.089	1.0	0.11	1	03/02/06	03/02/06	J
Silver	EPA 200.8	6C02098	0.075	1.0	0.089	1	03/02/06	03/02/06	J
Thallium		6C03084	3.0	10	9,9	1	03/03/06	03/04/06	J
Vanadium	EPA 200.7		3.7	20	270	1	03/03/06	03/04/06	
Zinc	EPA 200.7	6C03084	3.1	20	2,0	•	55.00.00		





Pasadena, CA 91101

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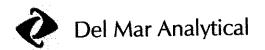
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E (OKOLE 1200									
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2643-01 (Outfall 018	- Water) - cont.								
Reporting Units: mg/l					0.56		03/05/06	03/05/06	
Ammonia-N (Distilled)	EPA 350.2	6C05021	0.30	0.50	0.56	1	*		
Biochemical Oxygen Demand	EPA 405.1	6C01115	0.59	2.0	2.9	1	03/01/06	03/06/06	
· ·	EPA 300.0	6C01049	0.26	0.50	14	1	03/01/06	03/01/06	
Chloride			0.10	0.50	0.20	1	03/01/06	03/01/06	J
Fluoride	EPA 300.0	6C01049				1	03/01/06	03/01/06	
Nitrate/Nitrite-N	EPA 300.0	6C01049	0.072	0.26	1.3	ı	*********		
Oil & Grease	EPA 413.1	6C08046	0.91	4.9	ND	1	03/08/06	03/08/06	
	EPA 330.5	6B28145	0.10	0.10	ND	1	02/28/06	02/28/06	
Residual Chlorine	EPA 300.0	6C01049	0.18	0.50	32	1	03/01/06	03/01/06	
Sulfate			0.044	0.10	ND	1	03/01/06	03/01/06	
Surfactants (MBAS)	SM5540-C	6C01108				•	03/03/06	03/03/06	
Total Dissolved Solids	SM2540C	6C03069	10	10	180	1			
Total Organic Carbon	EPA 415.1	6C02064	0.25	1.0	9.8	1	03/01/06	03/01/06	
Total Suspended Solids	EPA 160.2	6C05025	10	10	39	1	03/05/06	03/05/06	



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Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

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Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2643

Received: 02/28/06

Mondantes										
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers	
Sample ID: IPB2643-01 (Outfall 018 - 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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Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
Sample ID: IPB2643-01 (Outfall 018 - Wa	iter) - cont.									
Reporting Units: NTU Turbidity	EPA 180.1	6C01122	0.080	2.0	62	2	03/01/06	03/01/06		





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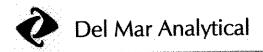
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Sampled: 02/28/06

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Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2643-01 (Outfall 018 - Wa	ater) - cont.								
Reporting Units: ug/l Total Cyanide Perchlorate	EPA 335.2 EPA 314.0	6C02125 6C02068	2.2 0.80	5.0 4.0	ND ND	1	03/02/06 03/02/06	03/02/06 03/03/06	



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INORGANICS											
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers		
Sample ID: IPB2643-01 (Outfall 018 - Wat	ter) - cont.										
Reporting Units: umhos/cm Specific Conductance	EPA 120.1	6C03067	1.0	1.0	230	1	03/03/06	03/03/06			

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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: IPB2643-01 (Outfall 018 - Wa	ater) - cont.								
Reporting Units: ug/l 1,4-Dioxane	EPA 8260B	P6C0311	0.49	1.0	0.60 112 %	1	03/03/06	03/04/06	J
Surrogate: Dibromofluoromethane (70-130	170)				112 70				





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Sampled: 02/28/06

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SHORT HOLD TIME DETAIL REPORT

	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
Sample ID: Outfall 018 (IPB2643-01) - Water			00 100 1000 C 10.35	02/28/2006 20:45	02/28/2006 21:45
EPA 160.5	2	02/28/2006 10:00	02/28/2006 18:35	V =	• — · — · — · · ·
EPA 180.1	2	02/28/2006 10:00	02/28/2006 18:35	03/01/2006 15:15	03/01/2006 16:15
EPA 300.0	2	02/28/2006 10:00	02/28/2006 18:35	03/01/2006 08:00	03/01/2006 09:01
	1	02/28/2006 10:00	02/28/2006 18:35	02/28/2006 21:30	02/28/2006 21:45
EPA 330.5	•	02/28/2006 10:00	02/28/2006 18:35	03/01/2006 18:45	03/06/2006 15:30
EPA 405.1	2			03/02/2006 00:00	03/03/2006 04:09
EPA 624	3	02/28/2006 10:00	02/28/2006 18:35	03/02/2006 00:00	
SM5540-C	2	02/28/2006 10:00	02/28/2006 18:35	03/01/2006 14:29	03/01/2006 15:25
Sample ID: Trip Blank (IPB2643-02) - Wate			(PO (POO / 10 O/	03/02/2006 00:00	03/02/2006 23:09
EPA 624	3	02/28/2006 15:45	02/28/2006 18:35	03/02/2006 00:00	03/02/2000 23.07



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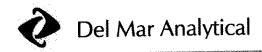
Received: 02/28/06

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte Batch: 6C06047 Extracted: 03/06/06	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Blank Analyzed: 03/06/2006 (6C06047-B) Total Recoverable Hydrocarbons		1.0	0.31	mg/l							
LCS Analyzed: 03/06/2006 (6C06047-BS Total Recoverable Hydrocarbons	1) 4.47	1.0	0.31	mg/l	5.00		89	65-120			M-NR1
LCS Dup Analyzed: 03/06/2006 (6C0604) Total Recoverable Hydrocarbons	7-BSD1) 4.11	1.0	0.31	mg/l	5.00		82	65-120	8	20	





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METHOD BLANK/QC DATA

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte Batch: 6C07098 Extracted: 03/07/06	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Blank Analyzed: 03/07/2006 (6C07098-E	LK1)			_							
EFH (C13 - C22)	ND	0.50	0.045	mg/l							
EFH (C13 - C40)	ND	0.50	0.045	mg/l				40.100			
Surrogate: n-Octacosane	0.142			mg/l	0.200		71	40-125			
LCS Analyzed: 03/07/2006 (6C07098-BS	51)										M-NR1
EFH (C13 - C40)	0.504	0.50	0.045	mg/l	0.750		67	40-120			
Surrogate: n-Octacosane	0.146			mg/l	0.200		73	40-125			
LCS Dup Analyzed: 03/07/2006 (6C0709	98-BSD1)							10 100	~	26	
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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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: 0	3/06/06_										
Blank Analyzed: 03/06/2006 (6C	06046-BLK1)										
GRO (C4 - C12)	ND	0.10	0.050	mg/l				65.140			
Surrogate: 4-BFB (FID)	0.00732			mg/l	0.0100	•	73	65-140			
LCS Analyzed: 03/06/2006 (6C0	6046-BS1)							<5.140			
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: 03/06/2	006 (6C06046-MS1)				Sou	rce: IPB	2637-01				
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-N	MSD1)			Sou	ırce: IPB	2637-01				
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			
			医壁门 安儿	1.7	1000						Constitution of the



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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

		Reporting			Spike	Source		%REC	_	RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C02019 Extracted: 03/02/0	<u>6</u>										
Blank Analyzed: 03/02/2006 (6C02019-I	BLK1)										
Benzene	ND	2.0	0.28	ug/l							
Benzene	ND	1.0	0.28	ug/l							
Bromodichloromethane	ND	2.0	0.30	ug/I							
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/I							
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/i							
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	0.50	0.28	ug/l							
1,2-Dichloroethane	ND	2.0	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/i							
Ethylbenzene	ND	2.0	0.25	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							j
Methylene chloride	1.16	5.0	0.70	ug/I							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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300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2643

Received: 02/28/06

Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

		Reporting			Spike	Source		%REC		RPD	Data
	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Analyte		#JAESANA									
Batch: 6C02019 Extracted: 03/02/0	<u>6</u>										
Blank Analyzed: 03/02/2006 (6C02019-1			0.00	/1							
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	35.0		110	80-120			
Surrogate: Dibromofluoromethane	27.6		•	ug/l	25.0	:	110	80-120	4.5		
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		96	80-120			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		96	80-120			
Surrogate: 4-Bromofluorobenzene	24.1			ug/l	25.0		90	00-120			
	(C1)										
LCS Analyzed: 03/02/2006 (6C02019-B	26.3	1.0	0.28	ug/l	25.0		105	65-120			
Benzene	26.3	2.0	0.28	ug/l	25.0		105	70-120			
Benzene	25.5	2.0	0.30	ug/l	25.0		102	65-135			
Bromodichloromethane	21.8	5.0	0.32	ug/l	25.0		87	50-130			
Bromoform	23.1	5.0	0.42	ug/l	25.0		92	60-140			
Bromomethane	24.8	5.0	0.28	ug/l	25.0		99	70-140			
Carbon tetrachloride	24.8	0.50	0.28	ug/l	25.0		99	65-140			
Carbon tetrachloride	26.0	2.0	0.36	ug/l	25.0		104	70-125			
Chlorobenzene	26.1	5.0	0.40	ug/l	25.0		104	55-140			
Chloroethane		2.0	0.33	ug/l	25.0		104	75-130			
Chloroform	26.0	2.0	0.33	ug/l	25.0		104	65-130			
Chloroform	26.0	5.0	0.30	ug/l	25.0		95	40-140			
Chloromethane	23.7	2.0	0.30	ug/l	25.0		103	65-140			
Dibromochloromethane	25.8		0.20	ug/l	25.0		108	70-120			
1,2-Dichlorobenzene	27.1	2.0 2.0	0.32	ug/i ug/i	25.0		100	70-125			
1,3-Dichlorobenzene	24.9	2.0	0.33	u ₈ /1	20.0						

Del Mar Analytical - Irvine

Michele Chamberlin



Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

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

Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

		Reporting			Spike	Source		%REC		RPD	Data
A Winds	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Analyte											
Batch: 6C02019 Extracted: 03/02/0	<u>)6 </u>										
LCS Analyzed: 03/02/2006 (6C02019-B	IST)										
	24.3	2.0	0.37	ug/l	25.0		97	70-125			
1,4-Dichlorobenzene	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			
1,1-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			
1,2-Dichloroethane	28.5	5.0	0.42	ug/I	25.0		114	70-130			
1,1-Dichloroethene	28.5	3.0	0.32	ug/l	25.0		114	75-135			
1,1-Dichloroethene	27.9	2.0	0.27	ug/l	25.0		112	65-130			
trans-1,2-Dichloroethene	26.7	2.0	0.35	ug/l	25.0		107	65-125			
1,2-Dichloropropane	26.2	2.0	0.22	ug/l	25.0		105	70-130			
cis-1,3-Dichloropropene	26.9	2.0	0.32	ug/l	25.0		108	65-130			
trans-1,3-Dichloropropene	26.1	2.0	0.25	ug/l	25.0		104	80-120			
Ethylbenzene	26.1	2.0	0.25	ug/l	25.0		104	70-125			
Ethylbenzene	28.2	5.0	0.70	ug/l	25.0		113	60-130			
Methylene chloride	36.9	2.0	0.24	ug/i	25.0		148	55-130			\boldsymbol{L}
1,1,2,2-Tetrachloroethane	25.7	2.0	0.32	ug/l	25.0		103	75-125			
Tetrachloroethene	25.7 25.7	2.0	0.32	ug/l	25.0		103	65-125			
Tetrachloroethene		2.0	0.36	ug/l	25.0		102	75-120			
Toluene	25.6 25.6	2.0	0.36	ug/l	25.0		102	70-125			
Toluene		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			
1,1,1-Trichloroethane	23.6		0.30	ug/l	25.0		118	65-125			
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 2.0	0.26	ug/l	25.0		107	70-125			
Trichloroethene	26.7		0.26	ug/l	25.0		107	80-120			
Trichloroethene	26.7	5.0	0.34	ug/l	25.0		92	60-140			
Trichlorofluoromethane	23.0	5.0		ug/l	25.0		92	65-145			
Trichlorofluoromethane	23.0	5.0	0.34		25.0		101	50-130			
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		111	80-120			
Surrogate: Dibromofluoromethane	27.8			ug/l			111	80-120			
Surrogate: Dibromofluoromethane	27.8			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		108	80-120 80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		100	00-120			

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IPB2643

Sampled: 02/28/06

Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte Result Limit MDI Units Level Result %REC Limit PID Limit Qualifore Batch: 6CQ2019 Extracted: 03/02/2006 (6CQ2019-MSI) Secure 20.0 02.0

e/ DEC



MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2643

Sampled: 02/28/06

Received: 02/28/06

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C02019 Extracted: 03/0	2/06										
Matrix Spike Analyzed: 03/02/2006	(6C02019-MS1)				Sou	irce: IPB2	639-01				
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	60-130			
1,1,2-Trichloroethane	28.0	2.0	0.30	ug/l	25.0	ND	112	60-135			
Trichloroethene	28.2	5.0	0.26	ug/l	25.0	2.4	103	70-125			
Trichloroethene	28.2	2.0	0.26	ug/l	25.0	2.4	103	60-125			
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/I	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	· · · · · · · · · · · · · · · · · · ·	100	ug/l	25.0		107	80-120			
Matrix Spike Dup Analyzed: 03/02/2	2006 (6C02019-M	SD1)			Sou	ırce: IPB2					
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	
Вготобогт	16.4	5.0	0.32	ug/l	25.0	ND	6 6	50-135	10	25	
Bromomethane	25.1	5.0	0.42	ug/l	25.0	ND	100	50-145	14	25	
Carbon tetrachloride	26.4	5.0	0.28	ug/l	25.0	ND	106	70-145	6	25	
Carbon tetrachloride	26.4	0.50	0.28	ug/l	25.0	ND	106	65-140	6	25	
Chlorobenzene	26.2	2.0	0.36	ug/l	25.0	ND	105	70-125	2	20	
Chloroethane	28.5	5.0	0.40	ug/l	25.0	ND	114	50-140	11	25	
Chloroform	26.8	2.0	0.33	ug/l	25.0	ND	107	70-135	5	20	
Chloroform	26.8	2.0	0.33	ug/i	25.0	ND	107	65-135	5	20	
Chloromethane	25.4	5.0	0.30	ug/l	25.0	ND	102	35-140	8	25	
Dibromochioromethane	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/I	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	

Del Mar Analytical - Irvine

Michele Chamberlin



Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

Sampled: 02/28/06

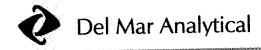
Received: 02/28/06

Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C02019 Extracted: 03/02/	<u>'06</u>										*
Matrix Spike Dup Analyzed: 03/02/20	06 (6C02019-M	ISD1)			Sou	rce: IPB	2639-01				
1,2-Dichloroethane	23.0	2.0	0.28	ug/l	25.0	ND	92	60-150	11	20	
1.1-Dichloroethene	29.2	5.0	0.42	ug/I	25.0	ND	117	60-135	7	20	
1,1-Dichloroethene	29.2	3.0	0.32	ug/l	25.0	ND	117	65-140	7	20	
trans-1,2-Dichloroethene	28.2	2.0	0.27	ug/l	25.0	ND	113	60-135	6	20	
1,2-Dichloropropane	26.0	2.0	0.35	ug/l	25.0	ND	104	60-125	2	20	
cis-1,3-Dichloropropene	24.5	2.0	0.22	ug/l	25.0	ND	98	65-135	5	20	
trans-1,3-Dichloropropene	23.0	2.0	0.32	ug/l	25.0	ND	92	65-140	14	25	
Ethylbenzene	27.0	2.0	0.25	ug/l	25.0	ND	108	70-130	5	20	
Ethylbenzene	27.0	2.0	0.25	ug/l	25.0	ND	108	65-130	5	20	
Methylene chloride	26.8	5.0	0.70	ug/l	25.0	ND	107	55-130	3	20	
1,1,2,2-Tetrachloroethane	25.7	2.0	0.24	ug/l	25.0	ND	103	55-140	31	30	R-3
Tetrachloroethene	26.4	2.0	0.32	ug/l	25.0	ND	106	70-130	5	20	
Tetrachloroethene	26.4	2.0	0.32	ug/l	25.0	ND	106	60-130	5	20	
Toluene	26.5	2.0	0.36	ug/l	25.0	ND	106	70-120	4	20	
Toluene	26.5	2.0	0.36	ug/l	25.0	ND	106	65-125	4	20	*
1.1.1-Trichloroethane	24.3	2.0	0.30	ug/l	25.0	ND	97	75-140	5	20	
1.1.1-Trichloroethane	24.3	2.0	0.30	ug/l	25.0	ND	97	65-140	5	20	
1.1.2-Trichloroethane	23.6	2.0	0.30	ug/l	25.0	ND	94	60-130	17	25	
1.1.2-Trichloroethane	23.6	2.0	0.30	ug/l	25.0	ND	94	60-135	17	25	
Trichloroethene	29.1	5.0	0.26	ug/l	25.0	2.4	107	70-125	3	20	
Trichloroethene	29.1	2.0	0.26	ug/l	25.0	2.4	107	60-125	3	20	
Trichlorofluoromethane	24.3	5.0	0.34	ug/l	25.0	ND	97	55-145	9	25	
Trichlorofluoromethane	24.3	5.0	0.34	ug/l	25.0	ND	97	55-145	9	25	
Vinyl chloride	25.6	0.50	0.26	ug/l	25.0	ND	102	40-135	7	30	
Vinyl chloride	25.6	5.0	0.26	ug/l	25.0	ND	102	40-135	7	30	
Surrogate: Dibromofluoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Dibromofluoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IPB2643

Sampled: 02/28/06

Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES- GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C02019 Extracted: 03/02/06	<u>5</u>										
Blank Analyzed: 03/02/2006 (6C02019-E	LK1)										
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			110	80-120			
Surrogate: Dibromofluoromethane	27.6			ug/l	25.0		110				
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-BS	61)							05.120			
2-Chloroethyl vinyl ether	17.8	5.0	1.8	ug/I	25.0		71	25-170			
Surrogate: Dibromoftuoromethane	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 (6C	02019-MS1)				Sou	urce: IPB	7 P. C. C.				
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: 03/02/2000	6 (6C02019-N	MSD1)			So	urce: IPB	2639-01				
2-Chloroethyl vinyl ether	8.66	5.0	1.8	ug/l	25.0	ND	35	25-170	84	25	R
Surrogate: Dibromoftuoromethane	27.7			ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			
Surrogate: 1-diuene-uo Surrogate: 4-Bromofluorobenzene	26.4			ug/l	25.0		106	80-120			



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

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Project ID: Annual Outfall 018

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Received: 02/28/06

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C02019 Extracted: 03/02/0	<u>6</u>									
Blank Analyzed: 03/02/2006 (6C02019-1 Cyclohexane 1,2-Dichloro-1,1,2-trifluoroethane	BLK1) ND ND	2.5 2.5	N/A N/A	ug/l ug/l						



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Annual Outfall 018

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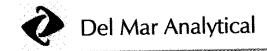
METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C06060 Extracted: 03/06/0	<u>16</u>										
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							

Del Mar Analytical - Irvine

Michele Chamberlin



Project ID: Annual Outfall 018

Sampled: 02/28/06

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2643

Received: 02/28/06

Attention: Bronwyn Kelly

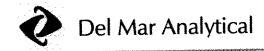
METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
*	•										
Batch: 6C06060 Extracted: 03/06/0	<u>b.</u>		•	•							
Blank Analyzed: 03/09/2006 (6C06060-I	RLK1\										
	ND	5.0	0.38	ug/l							
4,6-Dinitro-2-methylphenol	ND	5.0	2.7	ug/l							
2,4-Dinitrophenol	ND	5.0	0.23	ug/I							
2,4-Dinitrotoluene	ND	5.0	0.24	ug/l							
2,6-Dinitrotoluene	ND	5.0	0.17	ug/l							
Di-n-octyl phthalate	ND	1.0	0.087	ug/l							
1,2-Diphenylhydrazine/Azobenzene	ND	0.50	0.089	ug/l							
Fluoranthene	ND	0.50	0.075	ug/l							
Fluorene	ND	1.0	0.13	ug/l							
Hexachlorobenzene	ND	2.0	0.38	ug/l							
Hexachlorobutadiene	ND	5.0	1.8	ug/l							
Hexachlorocyclopentadiene	ND ND	3.0	0.51	ug/l							
Hexachloroethane	ND	2.0	0.19	ug/l							
Indeno(1,2,3-cd)pyrene	ND	1.0	0.059	ug/i							
Isophorone	ND ND	1.0	0.13	ug/l				•			•
2-Methylnaphthalene		2.0	0.28	ug/l							
2-Methylphenol	ND	5.0	0.20	ug/l							
4-Methylphenol	ND	1,0	0.13	ug/l							
Naphthalene	ND	5.0	0.13	ug/l							
2-Nitroaniline	ND	5.0	0.15	ug/l							
3-Nitroaniline	ND	5.0	0.49	ug/l							
4-Nitroaniline	ND		0.10	ug/l							
Nitrobenzene	ND	1.0	0.10	ug/l							
2-Nitrophenol	ND	2.0 5.0	0.73	ug/l							
4-Nitrophenol	ND		0.73	ug/l							
N-Nitrosodimethylamine	NĐ	2.0	0.18	ug/î							
N-Nitroso-di-n-propylamine	ND	2.0	0.18	ug/l ug/l							
N-Nitrosodiphenylamine	ND	1.0	0.77	ug/l							
Pentachlorophenol	ND	2.0		ug/l							
Phenanthrene	ND	0.50	0.071								
Phenol	ND	1.0	0.14 0.059	ug/l ug/l							
Pyrene	ND	0.50									
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	20.0		71	35-120			
Surrogate: 2-Fluorophenol	14.2			ug/l	20.0		,,	22			

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



300 North Lake Avenue, Suite 1200

Project ID: Annual Outfall 018

Sampled: 02/28/06

ACTION

Pasadena, CA 91101

Report Number: IPB2643

Received: 02/28/06

Date

Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

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

Part			Reporting			Spike	Source		%REC		RPD	Data
Batch SCO6666 Extracted; 93/96/06 Salva Salv	A mažerta	Result		MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Samk Analyzed: 03/09/2006 (6C06060-BLKT) Surrogate: Phenol-ds	•											
Surrogate: Phenol-lob	Batch: 6C06060 Extracted: 03/06	<u> </u>										
Surrogate: Phenol-lob		0 DI V1)										
Surrogate: Af-Tribromophenol 16.4					na/1	20.0		73	45-120			
Survegate: 1,4,6-1ritorengement 1,76 1,97 10,0 78 45-120 10,0 1					-			82	50-125			
Surrogate: Nitrobentered Surrogate: Selementhy Surrogate: Selementhy Surrogate: Terpheny Surrogate:					-			78	45-120			
Surrogate: Zerlburothiphenyl					_				45-120			
Mary	-				-			75	45-135			
Acenaphthene 7.90 0.50 0.10 ug/l 10.0 79 55-120 Acenaphthylylene 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 Aniline 8.74 0.50 0.83 ug/l 10.0 70 30-120 J Aniline ND 5.0 3.2 ug/l 10.0 70 30-125 L2 Benzidine ND 5.0 3.2 ug/l 10.0 30-125 L2 Benzidine ND 20 3.7 ug/l 10.0 56-5120 Benzido(a) ND 20 3.7 ug/l 10.0 103 55-125 Benzido(a) ND 2.0 0.038 ug/l 10.0 103 55-125 Benzido(a) ND 2.0 0.038 ug/l 10.0 103 55-125 Benzido(a) ND 2.0 0.050 ug/l 10.0 110 50-125 Benzido(a) ND 2.0 0.050 ug/l 10.0 110 50-125 Benzido(b) ND 2.0 0.050 ug/l 10.0 120 35-160 Benzido(b) ND 5.0 0.053 ug/l 10.0 120 35-160 Benzido(b) ND 5.0 0.059 ug/l 10.0 120 35-160 Benzido(b) ND 5.0 0.050 ug/l 10.0 101 50-125 Benzido(b) ND 5.0 0.050 ug/l 10.0 70 40-130 Bis(2-chloroethoxy) methane 10.1 0.50 0.053 ug/l 10.0 70 40-130 Bis(2-chloroethy) benz 7.70 0.50 0.21 ug/l 10.0 70 40-130 Bis(2-chloroethy) benz 7.70 0.50 0.84 ug/l 10.0 77 50-120 Bis(2-chloroethy) benz 7.70 0.50 0.84 ug/l 10.0 77 50-120 Bis(2-chloroethy) benz 8.36 1.0 0.12 ug/l 10.0 77 50-120 Bis(2-chloroethy) benz 8.36 1.0 0.12 ug/l 10.0 77 50-120 Bis(2-chloroethy) benz 10.6 5.0 0.34 ug/l 10.0 77 50-120 Bix(2-chloroethy) benz 10.0 5.0 0.050 ug/l 10.0 77 50-120 Bix(2-chloroethy) benz 10.0 5.0 0.050 ug/l 10.0 77 50-120 Bix(2-chloroethy) benz 10.0 5.0 0.050 ug/l 10.0 70 55-120 Butyl benzyl phthalate 10.0 5.0 0.050 ug/l 10.0 70 55-120 Chloromaphthalene 7.24 0.50 0.050 ug/l 10.0 70 55-120 Chloromaphthalene 7.24 0.50 0.050 ug/l 10.0 70 55-120 Chlorophenyl phenyl ether 8.04 0.50 0.056 ug/l 10.0 70 45-120 Chlorophenyl phenyl ether 8.04 0.50 0.056 ug/l 10.0 70 45-120 Chlorophenyl phenyl ether 9.24 0.50 0.075 ug/l 10.0 70 45-120 Dibenz(a,h) anthracene 11.0 0.50 0.083 ug/l 10.0 70 45-120 Dibenz(a,h) anthracene 11.0 0.50 0.083 ug/l 10.0 75 66-125 Dibenz(a,h) anthracene 11.0 0.0 0.075 ug/l 10.0 66 40-120	Surrogate: Terphenyl-d14	7.30			***							NE NIDS
Acenaphthene	LCS Analyzed: 03/09/2006 (6C06060	-BS1)										MI-INICI
Acenaphthylene 8.44 0.50 0.10 ug/l 10.0 70 30-120 J Aniline 7.02 10 2.9 ug/l 10.0 70 30-120 J Anthracene 8.74 0.50 0.83 ug/l 10.0 87 60-120 Benzidine ND 5.0 3.2 ug/l 10.0 20-180 30-125 L2 Benziciacid ND 20 3.7 ug/l 10.0 30-125 L2 Benziciacid ND 20 3.7 ug/l 10.0 50-125 Benziciacid ND 20 3.7 ug/l 10.0 50-125 Benziciacid ND 20 0.038 ug/l 10.0 103 55-120 Benzicially pryrene 10.3 2.0 0.14 ug/l 10.0 103 55-125 Benzicially pryrene 11.0 2.0 0.050 ug/l 10.0 110 50-125 Benzicigli hyperylene 12.0 5.0 0.059 ug/l 10.0 110 50-125 Benzicigli hyperylene 10.0 5.0 0.053 ug/l 10.0 101 50-125 Benzicigli hyperylene 10.0 5.0 0.053 ug/l 10.0 101 50-125 Benzicigli hyperylene 10.0 5.0 0.053 ug/l 10.0 101 50-125 Benzicigli hyperylene 10.0 5.0 0.053 ug/l 10.0 101 50-125 Bis(2-chloroethy) prether 7.70 0.50 0.084 ug/l 10.0 70 40-130 Bis(2-chloroethy) prether 7.70 0.50 0.84 ug/l 10.0 77 50-120 Bis(2-chloroethylpether 7.70 0.50 0.11 ug/l 10.0 77 50-120 Bis(2-chlorosty) phthalate 10.0 5.0 1.1 ug/l 10.0 100 65-125 Butyl benzyl phthalate 10.0 5.0 1.1 ug/l 10.0 100 66-125 4-Bromophenyl phenyl ether 8.36 1.0 0.12 ug/l 10.0 100 65-125 Butyl benzyl phthalate 10.6 5.0 0.34 ug/l 10.0 70 55-120 2-Chloroanpithalene 7.24 0.50 0.059 ug/l 10.0 70 55-120 2-Chloroaphthalene 7.24 0.50 0.059 ug/l 10.0 93 60-120 2-Chloroaphthylened 8.04 0.50 0.059 ug/l 10.0 93 60-120 2-Chloroaphthylened 8.04 0.50 0.056 ug/l 10.0 93 65-120 Chrysene 9.24 0.50 0.063 ug/l 10.0 70 45-120 Dibenzichran 7.64 0.50 0.072 ug/l 10.0 95 65-120 Dibenzichran 7.64 0.50 0.072 ug/l 10.0 95 65-120 Dibenzichran 7.64 0.50 0.072 ug/l 10.0 66 40-120 Dibenzichran 7.64 0.50 0.072 ug/l 10.0 66 40-120 Dibenzichran 7.64 0.50 0.072 ug/l 10.0 66 40-120 Dibenzichran 7.64 0.50 0.075 ug/l 10.0 66 40-120 Dibenzichran 8.04 0.50 0.075 ug/l 10.0 66 40-120 Dibenzichran 8.04 0.50 0.075 ug/l 10.0 66 40-120	*		0.50	0.10	-							
Aniline 7.0.2 10 2.9 ug/l 10.0 70 30-120 Anthracene 8.7.4 0.50 0.083 ug/l 10.0 87 60-120 Benzidine ND 5.0 3.2 ug/l 10.0 20-180 L2 Benzidine ND 20 3.7 ug/l 10.0 30-125 Benzida ND 20 3.7 ug/l 10.0 95 65-120 Benzida)mthracene 10.3 2.0 0.14 ug/l 10.0 103 55-125 Benzida)mthracene 11.0 2.0 0.050 ug/l 10.0 110 50-125 Benzida)mithracene 11.0 0.50 0.059 ug/l 10.0 110 50-125 Benzida,hi)perylene 12.0 5.0 0.059 ug/l 10.0 120 35-160 Benzida,hi)perylene 10.1 0.50 0.053 ug/l 10.0 101 50-125 Benzidalohol 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-chlorosiopropyl)ether 7.70 0.50 0.11 ug/l 10.0 77 50-120 Bis(2-chlorosiopropyl)ether 8.36 1.0 0.12 ug/l 10.0 100 65-125 Bis(2-chlyhexyl)phthalate 10.0 5.0 0.11 ug/l 10.0 84 55-125 Bis(2-chlyhexyl)phthalate 10.6 5.0 0.34 ug/l 10.0 100 65-125 Bistyl benzyl phthalate 10.6 5.0 0.34 ug/l 10.0 70 55-120 Bistyl benzyl phthalate 10.6 5.0 0.34 ug/l 10.0 84 55-125 Bistyl benzyl phthalate 10.6 5.0 0.34 ug/l 10.0 84 55-125 Chloroaniline 7.00 2.0 0.20 ug/l 10.0 70 55-120 2-Chloroaniline 7.00 2.0 0.009 ug/l 10.0 70 55-120 Chrysene 9.24 0.50 0.059 ug/l 10.0 93 60-120 Chrysene 11.0 0.50 0.072 ug/l 10.0 92 65-120 Chrysene 11.0 0.50 0.083 ug/l 10.0 70 66 60-120 Dibenzofuran 7.64 0.50 0.072 ug/l 10.0 76 60-120 Dibenzofuran 7.64 0.50 0.072 ug/l 10.0 65 40-120 Dibenzofuran 7.64 0.50 0.072 ug/l 10.0 66 40-120		8.44	0.50	0.10								7
Anthracene 8.74 0.50 0.083 ug/l 10.0 87 60-120 Benzidine ND 20 3.7 ug/l 10.0 30-125 L2 Benzoic acid ND 20 3.7 ug/l 10.0 95 65-120 Benzo(a)pyrene 10.3 2.0 0.14 ug/l 10.0 103 55-125 Benzo(a)pyrene 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 10.0 110 50-125 Benzo(g)h,i)perylene 10.1 0.50 0.053 ug/l 10.0 101 50-125 Bis(2-chloroethoxy)methane 7.98 0.50 0.072 ug/l 10.0 80 55-120 Bis(2-chloroethoxy)methane 7.26 0.50 0.084 ug/l 10.0 73 50-120 Bis(2-chlorosthyl)pether 7.70 0.50 0.11 ug/l 10.0 77 50-120 Bis(2-chlorosthyl)pether 8.36 1.0 0.12 ug/l 10.0 84 55-125 Butyl benzyl phthalate 10.0 5.0 1.1 ug/l 10.0 84 55-125 Butyl benzyl phthalate 10.6 5.0 0.34 ug/l 10.0 84 55-125 Butyl benzyl phthalate 10.6 5.0 0.34 ug/l 10.0 70 55-120 4-Chloroanliine 7.00 2.0 0.20 ug/l 10.0 70 55-120 4-Chloroanliine 7.00 0.0 0.059 ug/l 10.0 93 60-120 4-Chloro-3-methylphenol 9.26 2.0 0.34 ug/l 10.0 93 60-120 4-Chlorophenol 7.00 1.0 0.12 ug/l 10.0 92 65-120 Chrysene 9.24 0.50 0.072 ug/l 10.0 70 45-120 Chrysene 9.24 0.50 0.075 ug/l 10.0 70 45-120 Dibenzofuran 7.64 0.50 0.075 ug/l 10.0 76 60-120 Dibenzofuran 7.64 0.50 0.075 ug/l 10.0 95 65-125		7.02	10	2.9	ug/l							J
Benzidine ND S.0 3.2 ug/1 10.0 30-125 L2		8.74	0.50	0.083	-			87				12
Benzoic acid ND 20 3.7 ug/l 10.0 95 65-120	Benzidine	ND	5.0	3.2	-							
Benzo(a)anthracene	Benzoic acid	ND	20	3.7	ug/l							Lo2
Benzo(a)pyrene 10.3 2.0 0.14 ug/l 10.0 103 55-125		9,48	5.0	0.038	ug/l							
Benzo(b)fluoranthene 11.0 2.0 0.050 ug/l 10.0 110 50-125		10.3	2.0	0.14	-							
Benzo(g,h,i)perylene 12.0 5.0 0.059 ug/l 10.0 12.0 35-160		11.0	2.0	0.050								
Benzo(k)fluoranthene 10.1 0.50 0.053 ug/l 10.0 101 30-125		12.0	5.0	0.059	ug/l	10.0						
Benzyl alcohol 7.00 5.0 0.21 ug/l 10.0 70 40-130	· -	10.1	0.50	0.053	ug/l							
Bis(2-chloroethoxy)methane 7.98 0.50 0.072 0.71 10.0 80 55-120 80 55-120 815(2-chloroethyl)ether 7.26 0.50 0.084 0.71 10.0 73 50-120 80 80 55-120 815(2-chloroisopropyl)ether 7.70 0.50 0.11 0.50 1.1 0.12 0.12 0.11 0.10 65-125 8.36 1.0 0.12 0.11 0.12 0.10 84 55-125 84-Bromophenyl phenyl ether 8.36 1.0 0.12 0.34 0.31 10.0 106 60-125 84-Chloroaniline 7.00 2.0 0.20 0.20 0.34 0.31 10.0 70 55-120 2-Chloronaphthalene 7.24 0.50 0.059 0.059 0.071 10.0 93 60-120 4-Chloro-3-methylphenol 4-Chloro-3-methylphenol 4-Chlorophenyl phenyl ether 8.04 0.50 0.056 0.076 0.071 0.012 0.01 0.012 0.01 0.010	- · · · · · · · ·	7.00	5.0		-							
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-chloroisopropyl)ether 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 4-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 76 60-120 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	· · · · •	7.98	0.50	0.072								
Bis(2-chloroisopropyl)ether Bis(2-ethylhexyl)phthalate 10.0 5.0 1.1 ug/l 10.0 84 55-125 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 4-Chlorophenyl phenyl ether 8.04 0.50 0.056 ug/l 10.0 93 60-120 4-Chlorophenyl phenyl ether 7.00 1.0 1.0 1.0 1.0 1.0 1.0 1.		7.26	0.50	0.084	-							
Bis(2-ethylhexyl)phthalate 10.0 5.0 1.1 ug/l 10.0 100 65-123	Bis(2-chloroisopropyl)ether	7.70	0.50	0.11	ug/l							
4-Bromophenyl phenyl ether 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 4-Chlorophenol 7.00 1.0 0.12 ug/l 10.0 80 55-120 Chrysene 9.24 0.50 0.072 ug/l 10.0 92 65-120 Chrysene 11.0 0.50 0.083 ug/l 10.0 110 40-160 Dibenz(a,h)anthracene 11.0 0.50 0.075 ug/l 10.0 76 60-120 Dibenzofuran 7.64 0.50 0.075 ug/l 10.0 76 60-120 Dibenzofuran 7.64 0.50 0.075 0.075 0.071 0.00 0.	· ·	10.0	5.0	1.1	ug/l							
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	* * * * * * * * * * * * * * * * * * * *	8.36	1.0	0.12	ug/l							
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	Butyl benzyl phthalate	10.6	5.0	0.34	_							
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	• "	7.00	2.0	0.20	_							
4-Chlorop-a-methylphenol 9.26 2.0 0.34 agr 10.0 80 55-120 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		7.24	0.50	0.059	ug/l							
4-Chlorophenyl phenyl ether 2-Chlorophenol 7.00 1.0 0.12 0.12 0.12 0.12 0.13 0.12 0.14 1.0.0 70 45-120 70 45-120 70 Chrysene 9.24 0.50 0.072 0.083 0.072 0.083 0	4-Chloro-3-methylphenol	9.26	2.0		_							
2-Chlorophenol 7.00 1.0 0.12 ug/l 10.0 70 43-120 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	- ·	8.04	0.50	0.056	ug/l							
Chrysene 9.24 0.50 0.072 ug/l 10.0 92 63-120 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	·	7.00	1.0	0.12	_							
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		9.24	0.50	0.072								
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 1,2-Dichlorobenzene 0.50 0.13 ug/l 10.0 65 40-120	•	11.0	0.50	0.083								
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		7.64	0.50	0.075	ug/l							
1,2-Dichlorobenzene 6.56 0.50 0.11 ug/l 10.0 66 40-120		9.46	2.0	0.26	ug/l							
0.50 0.12 well 10.0 65 40-120		6.56	0.50	0.11								
['7-7\dillo!otocupate	1,3-Dichlorobenzene	6.48	0.50	0.13	ug/l	10.0		65	40-120			

Del Mar Analytical - Irvine

Michele Chamberlin



Project ID: Annual Outfall 018

Sampled: 02/28/06

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Received: 02/28/06

Attention: Bronwyn Kelly

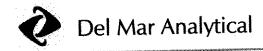
Report Number: IPB2643

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)							10.100			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/I	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 60-120			L.2
Dimethyl phthalate	3.64	0.50	0.081	ug/l	10.0		36	**			1.12
4,6-Dinitro-2-methylphenol	7.74	5.0	0.38	ug/i	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/I	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			
	7.40	2.0	0.23	ug/l	10:0		74	55-120			
2-Nitrophenol	6.38	5.0	0.73	ug/l	10.0		64	50-135			
4-Nitrophenol	7.38	2.0	0.22	ug/l	10.0		74	40-120			
N-Nitrosodimethylamine	7.84	2.0	0.18	ug/l	10.0		78	50-120			
N-Nitroso-di-n-propylamine	7.82	1.0	0.077	ug/l	10.0		78	60-120			
N-Nitrosodiphenylamine	7.98	2.0	0.78	ug/l	10.0		80	50-125			
Pentachlorophenol	8.64	0.50	0.071	ug/l	10.0		86	55-120			
Phenanthrene	0.04	0.20	V.IV. 1	O'-							

Del Mar Analytical - Irvine Michele Chamberlin



Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

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: 03/0	06/06										
LCS Analyzed: 03/09/2006 (6C0606	0-BS1)						~.	45-120			M-NR1
Phenol	7.12	1.0	0.14	ug/l	10.0		71	50-120			
Pyrene	9.30	0.50	0.059	ug/l	10.0		93				
1,2,4-Trichlorobenzene	7.38	1.0	0.10	ug/l	10.0		74 75	50-120 60-120			
2,4,5-Trichlorophenol	7.50	2.0	0.075	ug/l	10.0		75 70	60-120			
2,4,6-Trichlorophenol	7.90	1.0	0.10	ug/l	10.0		79	35-120			
Surrogate: 2-Fluorophenol	10.9			ug/l	20.0		54	45-120			
Surrogate: Phenol-d6	12.1			ug/l	20.0		60				
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 (60	C06060-BSD1)						00	55-120	3	20	
Acenaphthene	8.18	0,50	0.10	ug/l	10.0		82	55-120	4	20	
Acenaphthylene	8.82	0.50	0.10	ug/l	10.0		88	1.	4	25	J
Aniline	7.34	10	2.9	ug/I	10.0		73	30-120 60-120	10	20	
Anthracene	9.64	0.50	0.083	ug/l	10.0		96	*	10	35	L2
Benzidine	ND	5.0	3.2	ug/l	10.0			20-180		30	L2
Benzoic acid	ND	20	3.7	ug/l	10.0			30-125	10	20	112
Benzo(a)anthracene	10.5	5.0	0.038	ug/i	10.0		105	65-120	10		
Benzo(a)pyrene	11.5	2.0	0.14	ug/l	10.0		115	55-125	11	25 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		25	
Benzo(k)fluoranthene	11.3	0.50	0.053	ug/l	10.0		113	50-125		20	
Benzyl alcohol	7.60	5.0	0.21	ug/l	10.0		76	40-130		20	
Bis(2-chloroethoxy)methane	7.82	0.50	0.072	ug/l	10.0		78	55-120		20	
Bis(2-chloroethyl)ether	7.42	0.50	0.084	ug/l	10.0		74	50-120		20	
Bis(2-chloroisopropyl)ether	7.96	0.50	0.11	ug/l	10.0		80	50-120		20	
Bis(2-ethylhexyl)phthalate	11.3	5.0	1.1	ug/l	10.0		113	65-125		20	
4-Bromophenyl phenyl ether	8.82	1.0	0.12	ug/l	10.0		88	55-125		25	
*	11.1	5.0	0.34	ug/l	10.0		111	60-125	5	20	
Butyl benzyl phthalate	7.62	2.0	0.20	ug/l	10.0		76	55-120		25	
4-Chloroaniline	7.56	0.50	0.059	ug/l	10.0		76	60-120	4	20	
2-Chioronaphthalene	9.84	2.0	0.34	ug/l	10.0		98	60-120	6	25	
4-Chloro-3-methylphenol	8.50	0.50	0.056	ug/l	10.0		85	55-120	6	20	
4-Chlorophenyl phenyl ether	7.00	1.0	0.12	ug/l	10.0		70	45-120	0	25	
2-Chlorophenol	7.00	1.0	21.2								

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Annual Outfall 018

Report Number: IPB2643

Sampled: 02/28/06

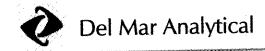
Received: 02/28/06

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/	<u>′06</u>										
LCS Dup Analyzed: 03/09/2006 (6C06	i060-BSD1)								•	20	
Chrysene	10.1	0.50	0.072	ug/l	10.0		101	65-120	9	20 25	
Dibenz(a,h)anthracene	12.6	0.50	0.083	ug/l	10.0		126	40-160	14	20	
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 7	25 25	
1.2-Dichlorobenzene	6.10	0.50	0.11	ug/l	10.0		61	40-120		25 25	
1,3-Dichlorobenzene	5.78	0.50	0.13	ug/l	10.0		58	40-120	11	25 25	
1.4-Dichlorobenzene	5.88	0.50	0.050	ug/l	10.0		59	40-120	10	25 25	
3,3-Dichlorobenzidine	9.52	5.0	0.93	ug/l	10.0		95	50-170	7		
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	L2
Dimethyl phthalate	4.40	0.50	0.081	ug/l	10.0		44	60-120	19	20	Li
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	
	7.86	1.0	0.13	ug/l	10.0		79	50-120		20	
Naphthalene	8.56	5.0	0.18	ug/l	10.0		86	60-130		20	
2-Nitroaniline	7.58	5.0	0.35	ug/l	10.0		76	50-140		25	
3-Nitroaniline	7.50	5.0	0.49	ug/l	10.0		75	45-160		20	
4-Nitroaniline	8.26	1.0	0.10	ug/i	10.0		83	50-120	5	25	
Nitrobenzene	7.72	2.0	0.23	ug/l	10.0		77	55-120	4	25	
2-Nitrophenol	1.12	AL. V	J	· 🕶 -							

Del Mar Analytical - Irvine Michele Chamberlin



Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

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

Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C06060 Extracted: 03/06/0	<u>)6</u>	· · · · ·									
LCS Dup Analyzed: 03/09/2006 (6C060	160-BSD1)								,	25	
4-Nitrophenol	6.44	5.0	0.73	ug/l	10.0		64	50-135	1		
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	
-	8.50	2.0	0.78	ug/l	10.0		85	50-125	6	25	
Pentachlorophenol	9.56	0.50	0.071	ug/l	10.0		96	55-120	10	20	
Phenanthrene	7.22	1.0	0.14	ug/i	10.0		72	45-120	1	25	
Phenoi	10.2	0.50	0.059	ug/l	10.0		102	50-120	9	25	
Pyrene		1.0	0.10	ug/l	10.0		73	50-120	2	20	
1,2,4-Trichlorobenzene	7.26	2.0	0.075	ug/l	10.0		72	60-120	4	20	
2,4,5-Trichlorophenol	7.22		0.10	ug/l	10.0		76	60-120	3	20	
2,4,6-Trichlorophenol	7.64	1.0	0.10	-	20.0		54	35-120			
Surrogate: 2-Fluorophenol	10.7			ug/l	20.0		60	45-120			
Surrogate: Phenol-d6	12.0		- A. 1	ug/l			68	50-125			
Surrogate: 2,4,6-Tribromophenol	13.7		11.	ug/l	20.0		72	45-120			
Surrogate: Nitrobenzene-d5	7.24	•		ug/l	10.0			45-120			
Surrogate: 2-Fluorobiphenyl	6.58			ug/l	10.0		66				
Surrogate: Terphenyl-d14	7.58			ug/l	10.0		76	45-135			



Project ID: Annual Outfall 018

Sampled: 02/28/06

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2643

Received: 02/28/06

Attention: Bronwyn Kelly

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

		Reporting			Spike	Source		%REC		RPD	Data
A m a Broto	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Analyte											
Batch: 6C05031 Extracted: 03/05/	<u>06</u>										
	DI K1\										
Blank Analyzed: 03/06/2006 (6C05031	-BLKI) ND	0.10	0.030	ug/l							
Aldrin	ND	0.010	0.0010	ug/l							
alpha-BHC	ND	0.10	0.020	ug/l							
alpha-BHC	ND	0.10	0.015	ug/l							
beta-BHC	ND ND	0.20	0.020	ug/l							
delta-BHC	ND	0.10	0.020	ug/l							
gamma-BHC (Lindane)	ND ND	1.0	0.20	ug/l							
Chlordane	ND	0.10	0.020	ug/l							
4,4'-DDD		0.10	0.025	ug/l							
4,4'-DDE	ND	0.10	0.025	ug/I							
4,4'-DDT	ND	0.10	0.033	ug/l							
Dieldrin	ND		0.015	ug/l							
Endosulfan I	ND	0.10	0.015	ug/l							
Endosulfan II	ND	0.10	0.020	ug/l							
Endosulfan sulfate	ND	0.20	0.020	ug/l							
Endrin	ND	0.10		ug/l							
Endrin aldehyde	ND	0.10	0.045								
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	0.500		70	35-115			
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		91	45-120			
Surrogate: Decachlorobiphenyl	0.455			ug/l	0.500		70	35-115			
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		91	45-120			
Surrogate: Decachlorobiphenyl	0.455			ug/l	0.500		91	43-140			
LCS Analyzed: 03/06/2006 (6C05031-	BS1)										M-NR1
Aldrin	0.389	0.10	0.030	ug/l	0.500		78	35-120			
	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			
alpha-BHC	0.426	0.10	0.015	ug/l	0.500		85	50-120			
beta-BHC	0.435	0.20	0.020	ug/l	0.500		87	50-120			
delta-BHC	0.423	0.10	0.020	ug/l	0.500		85	40-120			
gamma-BHC (Lindane)	0.438	0.10	0.020	ug/l	0.500		88	55-120			
4,4'-DDD	0.419	0.10	0.025	ug/l	0.500		84	50-120			
4,4'-DDE	0.419	0.10	0.035	ug/l	0.500		92	55-120			
4,4'-DDT	ひくすいひ	0.10		~ ~							
Del Mar Analytical - Irvine											

Michele Chamberlin Project Manager



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

Sampled: 02/28/06

Received: 02/28/06

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

		Reporting		** 1.	Spike	Source	A/ 75/E/C	%REC	nnn	RPD Limit	Data Qualifiers
Analyte	Result	Limit	MDL	Units	Level	Resuit	%REC	Limits	RPD	LAMIL	Quantitiers
Batch: 6C05031 Extracted: 03/05/06	L										
		•									M NIDs
LCS Analyzed: 03/06/2006 (6C05031-BS	1)										M-NR1
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			
Methoxychior	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	4.		ug/l	0.500	• • •	82	45-120			•
	. nona)										
LCS Dup Analyzed: 03/06/2006 (6C0503		0.10	0.020		0.500		74	35-120	4	30	
Aldrin	0.372	0.10	0.030	ug/l	0.500		83	45-120	5	30	
alpha-BHC	0.413	0.10	0.020	ug/l			83	45-120	5	30	
alpha-BHC	0.413	0.010	0.0010	ug/l	0.500 0.500		83	50-120	3	30	
beta-BHC	0.413	0.10	0.015	ug/l	0.500		85	50-120	2	30	
delta-BHC	0.425	0.20	0.020	ug/l			83 81	40-120	4	30	
gamma-BHC (Lindane)	0.406	0.10	0.020	ug/l	0.500			55-120	4	30	
4,4'-DDD	0.422	0.10	0.020	ug/l	0.500		84 82	50-120	2	30	
4,4'-DDE	0.411	0.10	0.025	ug/l	0.500			55-120	2	30	
4,4'-DDT	0.450	0.10	0.035	ug/l	0.500		90		2	30	
Dieldrin	0.424	0.10	0.015	ug/l	0.500		85	50-120	2	30	
Endosulfan l	0.397	0.10	0.015	ug/l	0.500		79	50-120	1	30	
Endosulfan II	0.415	0.10	0.040	ug/l	0.500		83	55-120			
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	0.16	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/I	0.500		87	55-120	0	30	
Surrogate: Tetrachloro-m-xylene	0.339			ug/l	0.500		68	35-115			

Del Mar Analytical - Irvine

Michele Chamberlin



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Project ID: Annual Outfall 018

Sampled: 02/28/06

Pasadena, CA 91101

Report Number: IPB2643

Received: 02/28/06

Attention: Bronwyn Kelly

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: 03/05/0	<u>)6</u>	÷									
LCS Dup Analyzed: 03/06/2006 (6C050 Surrogate: Decachlorobiphenyl Surrogate: Tetrachloro-m-xylene Surrogate: Decachlorobiphenyl	0.407 0.339 0.407			ug/l ug/l ug/l	0.500 0.500 0.500		81 68 81	45-120 35-115 45-120			



Pasadena, CA 91101 Attention: Bronwyn Kelly

300 North Lake Avenue, Suite 1200

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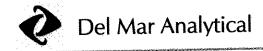
Received: 02/28/06

METHOD BLANK/QC DATA

Project ID: Annual Outfall 018

TOTAL PCBS (EPA 608)

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C05031 Extracted: 03/05/0	<u>)6</u>										
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				45 130			
Surrogate: Decachlorobiphenyl	0.512			ug/l	0.500		102	45-120			
LCS Analyzed: 03/06/2006 (6C05031-B	IS2)										M-NR1
Aroclor 1016	3.60	1.0	0.20	ug/l	4.00		90	45-115			
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 (6C050	031-BSD2)	4		200			•			+ 1 - 1	
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: 6C02097 Extracted: 03/02/00	<u>6</u>										
Blank Analyzed: 03/02/2006 (6C02097-F Mercury	BLK1) ND	0.20	0.050	ug/l							
LCS Analyzed: 03/02/2006 (6C02097-BS Mercury	51) 7.88	0.20	0.050	ug/l	8.00		98	85-115			
Matrix Spike Analyzed: 03/02/2006 (6C	02097-MS1)					rce: IPB					
Mercury	7.84	0.20	0.050	ug/l	8.00	ND	98	70-130			
Matrix Spike Dup Analyzed: 03/02/2000	6 (6C02097-N	(SD1)			Sou	irce: IPB	2608-01				
Mercury	7.88	0.20	0.050	ug/l	8.00	ND	98	70-130	1	20	
Batch: 6C02098 Extracted: 03/02/0	<u>6</u>										
Blank Analyzed: 03/02/2006 (6C02098-)	BLK1)										
Antimony	ND	2.0	0.18	ug/l							j
Cadmium	0.0179	1.0	0.015	ug/l	,				٠.		•
Copper	ND	2.0	0.49	ug/l							
Lead	ND	1.0	0.13	ug/l							J
Selenium	1.65	2.0	0.36 0.089	ug/l ug/l							
Silver	ND	1.0 1.0	0.009	ug/l ug/l							
Thallium	ND	1.0	0.075	ng. i							
LCS Analyzed: 03/02/2006 (6C02098-B	S1)						100	85-115			
Antimony	86.5	2.0	0.18	ug/l	80.0		108 109	85-115 85-115			
Cadmium	86.9	1.0	0.015	ug/l	80.0		112	85-115			
Copper	89.3	2.0	0.49	ug/l	80.0		107	85-115			
Lead	85.6	1.0	0.13	ug/I	80.0		107	85-115			
Selenium	85.7	2.0	0.36	ug/l	80.0 80.0		107	85-115			
Silver	84.6	1.0	0.089	ug/l	80.0 80.0		106	85-115			
Thailium	84.8	1.0	0.075	ug/l	00.0		.00	Q# 110			



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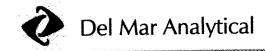
METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C02098 Extracted: 03/02/0	6										
					~	YDYDA	Z#1 01				
Matrix Spike Analyzed: 03/02/2006 (6C						rce: IPB2		70-130			
Antimony	84.3	2.0	0.18	ug/l	80.0	ND	105	70-130			
Cadmium	83.6	1.0	0.015	ug/l	80.0	ND	104 101	70-130			
Copper	81.5	2.0	0.49	ug/l	80.0	0.49	104	70-130			
Lead	83.1	1.0	0.13	ug/l	80.0	0.19	103	70-130			
Selenium	83.5	2.0	0.36	ug/l	80.0	0.95	103	70-130			
Silver	81.7	1.0	0.089	ug/l	80.0	0.052	102	70-130			
Thallium	81.3	1.0	0.075	ug/l	80.0	0.31	101	70-130			
Matrix Spike Analyzed: 03/02/2006 (6C	02098-MS2)				Sou	rce: IPB2	2645-01				
Antimony	85.1	2.0	0.18	ug/l	80.0	0.46	106	70-130			
Cadmium	82.7	1.0	0.015	ug/l	80.0	0.077	103	70-130			
Copper	78.9	2.0	0.49	ug/l	80.0	2.3	9 6	70-130			
Lead	82.4	1.0	0.13	ug/I	80.0	0.50	102	70-130			
Selenium	85.2	2.0	0.36	ug/l	80.0	2.9	103	70-130			
Silver	78.0	1.0	0.089	ug/l	80.0	0.050	97	70-130			
Thallium	81.6	1.0	0.075	ug/l	80.0	0.53	101	70-130			
Matrix Spike Dup Analyzed: 03/02/2000	6 (6C02098-N	(SD1)			Sou	rce: IPB	2651-01				
Antimony	82.9	2.0	0.18	ug/l	80.0	ND	104	70-130	2	20	
Cadmium	81.4	1.0	0.015	ug/l	80.0	ND	102	70-130	3	20	
Copper	78.3	2.0	0.49	ug/l	80.0	0.49	97	70-130	4	20	
Lead	80.8	1.0	0.13	ug/l	80.0	0.19	101	70-130	3	20	
Selenium	82.8	2.0	0.36	ug/l	80.0	0.95	102	70-130	1	20	
Silver	80.1	1.0	0.089	ug/l	80.0	0.052	100	70-130	2	20	
Thallium	80.7	1.0	0.075	ug/l	80.0	0.31	100	70-130	1	20	
Batch: 6C03084 Extracted: 03/03/0	<u>6</u>										
Blank Analyzed: 03/04/2006-03/07/2006	(6C03084-B	LK1)									
Arsenic	ND	5.0	3.8	ug/l							
Barium	ND	0.010	0.0028	mg/l							
Beryllium	ND	2.0	0.62	ug/l							
Boron	ND	0.050	0.0074	mg/l							j
Chromium	1.10	5.0	0.68	ug/l							J
Cobalt	ND	10	2.0	ug/l							J
Iron	0.0327	0.040	0.0088	mg/l							J

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Project ID: Annual Outfall 018

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300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

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METHOD BLANK/QC DATA

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C03084 Extracted: 03/03/06	í										
	••••										
Blank Analyzed: 03/04/2006-03/07/2006	(6C03084-BL	K1)									
Manganese	ND	20	3.2	ug/l							
Nickel	ND	10	2.0	ug/I							
Vanadium	ND	10	3.0	ug/l							
Zinc	ND	20	3.7	ug/l							
LCS Analyzed: 03/04/2006-03/07/2006 (0	5C03084-BS1)	ı									
Arsenic	519	5.0	3.8	ug/l	500		104	85-115			
Barium	0.501	0.010	0.0028	mg/l	0.500		100	85-115			
Beryllium	524	2.0	0.62	ug/l	500		105	85-115			
Boron	0.501	0.050	0.0074	mg/l	0.500		100	85-115			
Chromium	518	5.0	0.68	ug/l	500		104	85-115			
Cobalt	505	10	2.0	ug/l	500		101	85-115			
Iron	0.529	0.040	0.0088	mg/l	0.500		106	85-115			
Manganese	520	20	3.2	ug/l	500		104	85-115			
Nickel	513	10	2.0	ug/l	500		103	85-115			
Vanadium	517	10	3.0	ug/l	500		103	85-115			
Zinc	499	20	3.7	ug/l	500		100	85-115			
Matrix Spike Analyzed: 03/04/2006-03/0	7/2006 (6C03	084-MS1)			Sou	rce: IPB	2463-01				
Arsenic	544	5.0	3.8	ug/l	500	8.8	107	70-130			
Barium	0.517	0.010	0.0028	mg/l	0.500	0.020	99	70-130			
Beryllium	520	2.0	0.62	ug/l	500	ND	104	70-130			
Boron	0.609	0.050	0.0074	mg/l	0.500	0.064	109	70-130			
Chromium	520	5.0	0.68	ug/l	500	ND	104	70-130			
Cobalt	495	10	2.0	ug/l	500	ND	99	70-130			
Iron	3.20	0.040	0.0088	mg/l	0.500	2.6	120	70-130			
Manganese	869	20	3.2	ug/l	500	350	104	70-130			
Nickel	503	10	2.0	ug/l	500	ND	101	70-130			
Vanadium	522	10	3.0	ug/l	500	ND	104	70-130			
Zinc	732	20	3.7	ug/l	500	480	50	70-130			M2



Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

Sampled: 02/28/06

Received: 02/28/06

METHOD BLANK/QC DATA

METALS

		Reporting		WY 14	Spike	Source Result	%REC	%REC	RPD	RPD Limit	Data Oualifiers
Analyte	Result	Limit	MDL	Units	Level	Kesun	76REC	Limits	KI M	1753344	Quantition
Batch: 6C03084 Extracted: 03/03/0	<u>6</u>										
Matrix Spike Analyzed: 03/04/2006-03/0	17/2006 (6C03	084-MS2)			Sou	rce: IPB2	463-02				
Arsenic	527	5.0	3.8	ug/l	500	4.9	104	70-130			
Barium	0.515	0.010	0.0028	mg/l	0.500	0.023	98	70-130			
Beryllium	508	2.0	0.62	ug/l	500	ND	102	70-130			
Boron	0.554	0.050	0.0074	mg/l	0.500	0.037	103	70-130			
Chromium	511	5.0	0.68	ug/l	500	2.3	102	70-130			
Cobalt	484	10	2.0	ug/l	500	ND	97	70-130			
Iron	1.24	0.040	0.0088	mg/l	0.500	0.66	116	70-130			
Manganese	513	20	3.2	ug/l	500	10	101	70-130			
Nickel	493	10	2.0	ug/l	500	ND	99	70-130			
Vanadium	511	10	3.0	ug/l	500	ND	102	70-130			
Zinc	497	20	3.7	ug/l	500	ND	99	70-130			
Matrix Spike Dup Analyzed: 03/04/200	S.A3/07/2006 (KC03084-M	SD1)		Sou	rce: IPB2	2463-01				
	532	5.0	3.8	ug/l	500	8.8	105	70-130	2	20	
Arsenic Barium	0.501	0.010	0.0028	mg/l	0.500	0.020	96	70-130	3	20	
Beryllium	504	2.0	0.62	ug/l	500	ND	101	70-130	3	20	
Boron	0.593	0.050	0.0074	mg/l	0.500	0.064	106	70-130	3	20	
Chromium	510	5.0	0.68	ug/l	500	ND	102	70-130	2	20	
Cobalt	485	10	2.0	ug/l	500	ND	97	70-130	2	20	
Iron	3.06	0.040	0.0088	mg/l	0.500	2.6	92	70-130	4	20	
Manganese	838	20	3.2	ug/l	500	350	98	70-130	4	20	
Nickel	492	10	2.0	ug/l	500	ND	98	70-130	2	20	
Vanadium	504	10	3.0	ug/l	500	ND	101	70-130	4	20	
Zinc	722	20	3.7	ug/l	500	480	48	70-130	ì	20	M2



Attention: Bronwyn Kelly

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300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

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

METHOD BLANK/QC DATA

INORGANICS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6B28145 Extracted: 02/28/06	<u>i_</u>										
Duplicate Analyzed: 02/28/2006 (6B2814	5-DUP1)				Sou	ırce: IPB2	2637-01				
Residual Chlorine	ND	0.10	0.10	mg/l		ND				20	
Batch: 6C01049 Extracted: 03/01/00	<u>.</u>										
Blank Analyzed: 03/01/2006 (6C01049-B	LK1)										
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-BS	1)										
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			* *
Matrix Spike Analyzed: 03/01/2006 (6C))1049-MS1)			÷	Sou	ırce: IPB	2641-01				
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-N	ISD1)			Sou	arce: IPB	2641-01				
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: 6C01108 Extracted: 03/01/0	<u>6</u>										
Blank Analyzed: 03/01/2006 (6C01108-F	BLK1)										
Surfactants (MBAS)	ND	0.10	0.044	mg/l							



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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C01108 Extracted: 03/01/06	•••										
LCS Analyzed: 03/01/2006 (6C01108-BS	1) 0.258	0.10	0.044	mg/l	0.250		103	90-110			
Surfactants (MBAS)	-	0.10	0.044	mg/ i		rce: IPB2					
Matrix Spike Analyzed: 03/01/2006 (6C0 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-MS	D1)			Sou	rce: IPB2	639-01				
Surfactants (MBAS)	0.336	0.10	0.044	mg/l	0.250	ND	134	50-125	2	20	MI
Batch: 6C01115 Extracted: 03/01/06	<u>-</u>										
Blank Analyzed: 03/06/2006 (6C01115-B	LK1)										
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 03/06/2006 (6C01115-BS Biochemical Oxygen Demand	1) 180	100	30	mg/l	198	4 44	91	85-115			e
LCS Dup Analyzed: 03/06/2006 (6C0111	5-BSD1)		•							,	
Biochemical Oxygen Demand	173	100	30	mg/l	198		87	85-115	4	20	
Batch: 6C01122 Extracted: 03/01/06	<u>.</u>										
Blank Analyzed: 03/01/2006 (6C01122-B											
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 03/01/2006 (6C0112			0.040	NTU	Sou	irce: IPB 4.9	2571-01	•	1	20	
Turbidity	4.96	1.0	0.040	NIU		4.9			1	40	





300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Annual Outfall 018

Report Number: IPB2643

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: 6C02064 Extracted: 03/01/06	<u>í</u> _												
Blank Analyzed: 03/01/2006 (6C02064-B	LK1)												
Total Organic Carbon	ND	1.0	0.25	mg/l									
LCS Analyzed: 03/01/2006 (6C02064-BS			0.25	/I	10.0		103	90-110					
Total Organic Carbon	10.3	1.0	0.25	mg/l				,,,,,,					
Matrix Spike Analyzed: 03/01/2006 (6C)	02064-MS1)					ırce: IPB		80-120					
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-I	MSD1)			Sou	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: 03/02/0	<u>6</u>												
Blank Analyzed: 03/02/2006 (6C02068-1	BLK1)												
Perchlorate	ND	4.0	0.80	ug/l									
LCS Analyzed: 03/02/2006 (6C02068-BS	S1)						• • • •	05.115					
Perchlorate	51.6	4.0	0.80	ug/l	50.0		103	85-115					
Matrix Spike Analyzed: 03/02/2006 (6C	02068-MS1)	•			Sou	urce: IPC	0001-01						
Perchlorate	53.2	4.0	0.80	ug/l	50.0	3.5	99	80-120					
Matrix Spike Dup Analyzed: 03/02/200	6 (6C02068-	MSD1)			Son	urce: IPC	0001-01						
Perchlorate	54.3	4.0	0.80	ug/l	50.0	3.5	102	80-120	2	20			
Batch: 6C02125 Extracted: 03/02/0	6												
Blank Analyzed: 03/02/2006 (6C02125-	BLK1)												
Total Cyanide	ND	5.0	2.2	ug/l									





300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

Report Number: IPB2643

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: 6C02125 Extracted: 03/02/06	**										
LCS Analyzed: 03/02/2006 (6C02125-BS) Total Cyanide	1) 194	5.0	2.2	ug/l	200		97	90-110			
Matrix Spike Analyzed: 03/02/2006 (6C0 Total Cyanide	2125-MS1) 193	5.0	2.2	ug/l	200	rce: IPB2 2.5	2 379-01 95	70-115			
•	(6C02125-N	(SD1)			Sou	arce: IPB	2379-01				
Matrix Spike Dup Analyzed: 03/02/2006 Total Cyanide	205	5.0	2.2	ug/l	200	2.5	101	70-115	6	15	
Batch: 6C03067 Extracted: 03/03/06	_										
2 0 10 2 /0 0 0 C (C C B 2 0 C	7 DED11				So	arce: IPC	0286-01				
Duplicate Analyzed: 03/03/2006 (6C0306 Specific Conductance	110	1.0	1.0	umhos/em		110			0	5	
Batch: 6C03069 Extracted: 03/03/06	<u>5</u> _										
ALMANDAS (CONTACT)	T 121)			4	-,		· *			,	
Blank Analyzed: 03/03/2006 (6C03069-B Total Dissolved Solids	ND	10	10	mg/l		. '					
LCS Analyzed: 03/03/2006 (6C03069-BS	51)	••	10	mg/l	1000		100	90-110			
Total Dissolved Solids	1000	10	10	IIIE/1							
Duplicate Analyzed: 03/03/2006 (6C030	69-DUP1)				So	urce: IPC	0153-03		•	10	
Total Dissolved Solids	285	10	10	mg/l		280			2	10	
Batch: 6C05021 Extracted: 03/05/0	<u>6</u>										
Blank Analyzed: 03/05/2006 (6C05021-1	BLK1)										
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							



Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2643

Sampled: 02/28/06

Received: 02/28/06

METHOD BLANK/QC DATA

INORGANICS

Analyte 1	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C05021 Extracted: 03/05/06	٠										
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 (6C050	21-MS1)				Sou	rce: IPC(533-01				
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	0.56	109	70-120			
Matrix Spike Dup Analyzed: 03/05/2006 (6	C05021-M	ISD1)			Sou	rce: IPC	533-01				
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-BL	K1)										
Total Suspended Solids	ND	10	10	mg/i							
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)	•	•		Sou	rce: IPB	2641-01				
Total Suspended Solids	69.0	10	10	mg/l		69			0	10	
Batch: 6C08046 Extracted: 03/08/06											
Blank Analyzed: 03/08/2006 (6C08046-BL	K1)										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 03/08/2006 (6C08046-BS1)											M-NR1
Oil & Grease	15.7	5.0	0.94	mg/l	20.0		78	65-120			



Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Sampled: 02/28/06 Report Number: IPB2643 Received: 02/28/06 Pasadena, CA 91101

Attention: Bronwyn Kelly

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		\mathbf{X}
EPA 405.1	Water	X	X
EPA 413.1	Water	X	\mathbf{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



MWH-Pasadena/Boeing Project ID: Annual Outfall 018

 300 North Lake Avenue, Suite 1200
 Sampled: 02/28/06

 Pasadena, CA 91101
 Report Number: IPB2643
 Received: 02/28/06

Attention: Bronwyn Kelly

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: IPB2643-01

Analysis Performed: Level 4 + EDD

Samples: IPB2643-01

Aquatic Testing Laboratories-SUB California Cert #1775

4350 Transport Street, Unit 107 - Ventura, CA 93003

Analysis Performed: Bioassay-7 dy Chrnic

Samples: IPB2643-01

Analysis Performed: Bioassay-Acute 96hr

Samples: IPB2643-01

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: IPB2643-01

Eberline Services

2030 Wright Avenue - Richmond, CA 94804

Analysis Performed: EDD + Level 4

Samples: IPB2643-01

Analysis Performed: Gross Alpha

Samples: IPB2643-01

Analysis Performed: Gross Beta

Samples: iPB2643-01

Analysis Performed: Radium, Combined

Samples: IPB2643-01

Analysis Performed: Strontium 90

Samples: IPB2643-01

Analysis Performed: Tritium

Samples: IPB2643-01

Truesdail Laboratories-SUB California Cert #1237

14201 Franklin Avenue - Tustin, CA 92680

Analysis Performed: Hydrazine

Samples: IPB2643-01

Del Mar Analytical - Irvine Michele Chamberlin



17461 Derlan Ave. Suite 100, Invine, 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 Cheseponike Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 2520 E. Sumet Rd., Suite #5, Las Vegas, NV 80120

Ph (702) 798-3620

SUBCONTRACT ORDER - PROJECT # IPB2643

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 Due Comments Expiration

Sample ID: IPB2643-01 Water Sampled: 02/28/06 10:00

03/14/06 10:00 03/09/06 12:00 Dioxane-8260B-out

Level 4 Data Package - Phoenix-03/28/06 10:00

03/09/06 12:00

Instant Notication sub to DMAP, J flags

Boeing, TAT= 17 days from receipt at Phoenix

Containers Supplied:

40 ml VOA w/HCL (IPB2643-01AA) 40 ml VOA w/HCL (IPB2643-01AB) 40 ml VOA w/HCL (IPB2643-01Z)

PPC0066-01

			SAMPLI	E INTEGRIT	ΓY:			<u> </u>
All containers intact:			abels/COC agree:	45	□ No	Samples Rece		Yes O No
Custody Scals Present:	Yes No	Samples	Preserved Property	Yes	□ No	Samples Rece	sived at (temp):	2-2-6
The Contract of the Contract o	ÜL.			Fe	ed-Ex	3.1.	06	
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Released By		Date	Time	Received By	7		Date	Time

工行32643 Page 1 of 2

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

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***************************************	NDO TO	III 018			_ 	Preservative	HNO3	HNO3	None	HCI	None	HZ	NaOH	None	None	None	None	H2S04	None	None	НСГ		Received By		Received By))
Drojact	Project.	Annual Outfall 018		Phone Number	(626) 568-6515 (626) 568-6515	Sampling Date/Time	38 66										****		ø	138.06		Time:	Date/Time:	85°	Date/Ime:		
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P/Ardra		Isadene ake Aven	CA 91101	nager. E	X. Ž	Sample	×	3	*	3	*	3	3	*	3	3	. ≥	3	×	3	3	No.	DA BY	3	o 0		
Client Name/Ardirece		MWH-Pasadena 300 North Lake Avenue. Suite 1200	Pasadena, CA 91101	Project Manager: Bronwyn Kelly	Sampler:	Sample	Outfall 018	Outfall 018- Dup	Outfall 018	Outfall 018	Outfall 018	Outfall 018	Outfail 018	Outfall 018	Outfall 018	Ouffall 018	Outfall 018	Outfall 018	Ouffall 018	Outfall 018	Trip Blank	Relinquished By	Relinguished By			······	

Del Ma	r Ana	lytical	Vers	Del Mar Analytical version 01/24/06 CHAIN	-	OF CUSTODY FORM	Y F	ORN	=					Page 2 of 2
Client Name/Address	e/Addre	58;		Project	And the second s	Annual designation of the second of the seco				ANALYSIS REQUIRED	SISR	9	IRED	
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101	sadene	a ue, Suite 1	200	Boeing-SSFL NPDES Annual Outfall 018	DES 18				,steB es 09 benidn	Jeseib , 25 3108 bei	əuiz	c toxicity	SCAE	
Project Manager. Bronwyn Kelly Sampler. $\angle \beta \beta \gamma \beta \zeta \beta$	Sav/	Forward P	(ell)	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515			Dioxane	al Organic Car ————————————————————————————————————	erio Alpha, Gros nun (906.0), Si Cor Si S	35 = 3 fuels, gs et fuel: modif 418.1	a romethylhydra	inondO bns et	C8 624 +A+A+	
Sample	Sample	Container	Cont.	ļ	Preservative	Bottle * #			Gro 11-17 (909) Rad	pue		n⊃∀	OΛ	Comments
Outfall 018		VOAs	6	2.48.00	호	15A, 15B, 15C	×	_						
Outfall 018	3	VOAs	8		Ю	16A, 16B		×						
Outfall 018	3	Poly-450 E	+		Nane	4.		×						
Outfall 018	*	2.5 Gat Cube Amper VOAs	-10		None	18A 25A, 25B, 25C			×					Analyze for Total Combined RA. 2288,228 only if Gross Alpha > 15pC/lt. Preserve 2.5 Gal Cube with HNO3 st lab.
Outfall 018	3	1L Amber	N	The state of the s	None	19A, 19B				×				
Outfall 018	3	VOAs 1L Amber 1L Amber	60 CH CH		D D S	20A,20B,20C, 20D, 20E, 20F, 20G				×				
Outfall 018	3	1L. Amber	7		None	21A, 21B					×			
Outfall 018	3	1 Cai	ei.	A	None	22A, 22B						×	•	
Outfall 018	*	VOAs	6.5	0010181-1	None	23A, 23B, 23C							×	
Trip Blank	3	VOAs	6		None	24A, 24B, 24C							×	
		personal de cominado administra de subsensal esta												
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													Sample h	Sample Integrity: (Check) Intact On Ice:



March 09, 2006

Alta Project I.D.: 27353

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 "IPB2643". 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

1621.10 16.00



neta

Section I: Sample Inventory Report
Date Received: 3/2/2006

Alta Lab. ID

Client Sample ID

27353-001

IPB2643-01

SECTION II

Project 27353 Page 3 of 232

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)	DI a EX	EMPC b Qualifiers	Labeled Standard	%R LCL-UCL ^d Oualifiers
2,3,7,8-TCDD ND	0.00000119		<u>IS</u> 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 CO	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	0.000000677		13C-1,2,3,6,7,8-HxCDF	82.0 26 - 123
1,2,3,6,7,8-HxCDF ND	0.000000623		13C-2,3,4,6,7,8-HxCDF	83.9 28 - 136
2,3,4,6,7,8-HxCDF ND	0.000000697		13C-1,2,3,7,8,9-HxCDF	77.1 29 - 147
1,2,3,7,8,9-HxCDF ND	0.000000051		13C-1,2,3,4,6,7,8-HpCDF	71.7 28 - 143
1,2,3,4,6,7,8-HpCDF ND	0.000000890	En	13C-1,2,3,4,7,8,9-HpCDF	80.8 26 - 138
1,2,3,4,7,8,9-HpCDF ND	0.000000780		13C-OCDF	59.4 17 - 157
OCDF	0.00000335		CRS 37Cl-2,3,7,8-TCDD	90.3 35 - 197
Totals			Footnotes	
Total TCDD ND	0.00000119		a. Sample specific estimated detection limit.	
Total PeCDD ND	0.00000130	J. P.	b. Estimated maximum possible concentration.	
Total HxCDD ND	0.00000164		c. Method detection limit.	
Total HpCDD	0.00000167		d. Lower control limit - upper control limit.	
Total TCDF ND	0.00000138			
Total PeCDF ND	0.00000120			
Total HxCDF ND	0.000000725	;		
Total HpCDF ND	0.000000836	A PARTY OF THE PAR		
Analyst: JMH			Approved By: Martha M. Maier	1aier 08-Mar-2006 13:49

OPR Results				EPA	EPA Method 1613
Matrix. Aqueous	(X. Batch No	7807	Lab Sample: 0-OPR001		
Sample Stze. 1.00 L	Date Extracted:	5-Mar-06	Date Analyzed DB-5: 7-Mar-06	Date Analyzed DB-225;	I DB-225: NA
Analyte Spike	Spike Conc. Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	ICL-UCL
2,3,7,8-TCDD	10.0	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	38 - 67	13C-1,2,3,6,7,8-HxCDD	3,97	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
8-HpCDD	50.0 55.2	35 - 70	13C-OCDD	52.1	17 - 157
OCDD	100 100	78 - 144	13C-2,3,7,8-TCDF	78.6	24 - 169
2.3,7,8-TCDF	10.0	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	9.69	29 - 147
1,2,3,7,8,9-HxCDF	50.0 54.9	39 - 62	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	63 - 170	CRS 37Cl-2,3,7,8-TCDD	94.1	35 - 197

Approved By: Martha M. Maier 08-Mar-2006 13:49

Analyst: JMH

Sample ID: 1PB2	IPB2643-01					Anna de de descrito de descrit	EPA	EPA Method 1613
Client Data Name Del N Project: IPBZ Date Collected: 28-F Time Collected: 1000	Del Mar Analytical, Irvine IPB2643 28-Feb-06 1000		Sample Data Matrix: Sample Size:	Aqueous 1.01 L	Laboratory Data Lab Sample: QC: Batch No.: Date Analyzed DB-5:	27353-001 7807 8-Mar-06	Date Received: Date Extracted: Date Analyzed DB-225	2-Mar-06 5-Mar-06 NA
Analyte	Conc. (ug/L)	DL ^a	EMPC ^b	Qualifiers	Labeled Standard	ırd	%R LCL-UCL ^d	d Oualifiers
2,3,7,8-TCDD	N	0.00000166	99	444444444	<u>IS</u> 13C-2,3,7,8-TCDD	D		And the state of t
1,2,3,7,8-PeCDD	Q.	0.00000208	80 **		13C-1,2,3,7,8-PeCDD	CDD		
1,2,3,4,7,8-11xCDD	0.00000180	•	:		13C-1,2,3,4,7,8-HxCDD	4xCDD		
1.2.3.6.7.8-HxCDD	0.00000441	en oo	+174		13C-1,2,3,6,7,8-HxCDD	txCDD	81.1 28-130 76.6 23.140	
1,2,3,4,6,7,8-HpCDD	0.000109			•	13C-0CDD			
OCDO	0.00113	1			13C-2,3,7,8-TCDF		85.5 24 - 169	
2,3,7,8-TCDF	Q	0.00000116	91		13C-1,2,3,7,8-PeCDF	CDF	96.2 24 - 185	
1,2,3,7,8-PeCDF	Q	0.00000112	7	Tark Na Roje	13C-2,3,4,7,8-PeCDF	CDF	93.9 21 - 178	
2,3,4,7,8-PeCDF	S	0.00000119			13C-1,2,3,4,7,8-HxCDF	4xCDF	73.3 26 - 152	
1,2,3,4,7,8-HxCDF	QN .	0.000000818	818	, en	13C-1,2,3,6,7,8-HxCDF	L XCDF	74.9 26 - 123	**************************************
1,2,3,6,7,8-HxCDF	2	0.000000760	160		13C-2,3,4,6,7,8-HxCDF	IXCDF	77.8 28-136	
2,3,4,6,7,8-HxCDF	Q	0.000000784	784		13C-1,2,3,7,8,9-HxCDF	IxCDF	77.9 29 - 147	
1,2,3,7,8,9-HxCDF	ş	0.00000101	_		13C-1,2,3,4,6,7,8-HpCDF	HPCDF	73.1 28 - 143	
1,2,3,4,6,7,8-HpCDF	0.0000156			-	13C-1,2,3,4,7,8,9-HpCDF	-HpCDF	78.5 26 - 138	
1,2,3,4,7,8,9-HpCDF		0.00000136			13C-OCDF	:	61.6 17-157	
OCDF	0.0000493	A STATE OF THE STA		**	CRS 37Cl-2,3,7,8-TCDD	QQ	84.6 35 - 197	
Totals					Footnotes			
Total TCDD	S	0.00000166	99		a. Sample specific estimated detection limit.	detection limit		
Total PeCDD	QN CONTRACTOR	0.00000208	08		b Estimated maximum possible concentration	tible concentration.		
Total HxCDD	0.0000352	:			c. Method detection limit.		٠	
Total HpCDD	0.000215				d. Lower control limit - upper control limit.	er control limit.		:
Total TCDF	Q	0.00000116	91					
Total PeCDF	0.00000232	7			1 T	1		
Total HxCDF	0.0000146							
TATES IN THE STATE OF THE STATES OF THE STAT		***************************************						ulujinajuriminah eduseren erususeren munikujurimingia falimoa
Analysi: JMH					Approved By:	Martha M. Maier	ier 08-Mar-2006 13:49	:49

Project 27353

APPENDIX

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DATA QUALIFIERS & ABBREVIATIONS

В	This compound was also detected in the method blank.
D	The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference.
E	The reported value exceeds the calibration range of the instrument.
Н	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.

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CERTIFICATIONS

Accrediting Authority	Certificate Number
State of Alaska, DEC	CA413-02
State of Arizona	AZ0639
State of Arkansas, DEQ	05-013-0
State of Arkansas, DOH	Reciprocity through CA
State of California – NELAP Primary AA	02102CA
State of Colorado	
State of Connecticut	PH-0182
State of Florida, DEP	E87777
Commonwealth of Kentucky	90063
State of Louisiana, Health and Hospitals	LA050001
State of Louisiana, DEQ	01977
State of Maine	CA0413
State of Michigan	81178087
State of Mississippi	Reciprocity through CA
Naval Facilities Engineering Service Center	
State of Nevada	CA413
State of New Jersey	CA003
State of New Mexico	Reciprocity through CA
State of New York, DOH	11411
State of North Carolina	06700
State of North Dakota, DOH	R-078
State of 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



17451 Derlan Ave. Suite 100, Invine, CA 52614 Ph (949) 261-1022 Fax (949) 251-1228

9484 Chesapeake Drive, Suite 605, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 506-9689

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

Ph (480) 785-0043 Fax (480) 785-0851

9630 South 51st Street, Suite B-120, Phoenix, AZ 85044

SUBCONTRACT ORDER - PROJECT # IPB2643

ي په په په په	78877 8 1 MAN 1 MAN 1	
	DING LABORATORY:	RECEIVING LABORATORY:
Del Mar Analytical, Irvir		Alta Analytical
17461 Derian Avenue. St	uite 100	1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fox: (916) 673 0106
Irvine, CA 92614		El Dorado Hills, CA 95762
Phone: (949) 261-1022		Phone :(916) 933-1640
Fax: (949) 261-1228		Fax: (916) 673-0106
Project Manager: Michele	: Chamberlin	
Standard TAT is reques	ited unless specific due date is requeste	ed => Due Date: Initials:
Analysis	Expiration	Comments
Sample ID: IPB2643-01 1613-Dioxin-HR-Alta Level 4 + EDD-OUT	Water Sampled: 02/28/06 10:00 03/07/06 10:00 03/28/06 10:00	Instant Notication J flags,17 congeners,no TEQ,ug/L,sub=Alta **LEVEL IV QC, ACCESS 7 EDD**
Containers Supplied: I L Amber (IPB2643-01I) I L Amber (IPB2643-01J)		
	· ·	
		•
		•
		•
	·	
		•
	e leater	LE INTEGRITY:
	· ·	
All containers intact:		
11-11		
Released By	Date Time	Received By Date Time
coreased by	Date lime	Received By Penedict 3/2/06 080
leleased By	Date Time	Received By Date Time

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SAMPLE LOG-IN CHECKLIST

Alta Project #: 2 + 353

Samples Arrival:	Date/Time	000	Initials	31B	Location	"WR-	7
Logged in: 1306	Date/Time	3/3/06	Initials	3db	Location	"WR	-2
Delivered By:	FedEx	UPS	Cal	DHL	Hai Deliv		Other
Preservation:	(Ice)	Blu	e ice	Dry I	ce	No	ne
Temp °C 0.2	00	Time: /	015		Thermor	neter ID	: DT-20

						YEŞ	NO	NA
Adequate Sample	e Volume Received?)				V /	-	
Holding Time Ac	ceptable?					V		
Shipping Contain	er(s) Intact?		·			\checkmark		
Shipping Custod	y Seals Intact?					V		
Shipping Docum	entation Present?					V		
Airbill	Trk# 792	310	7833	38		/		
Sample Contains						V		ļ
Sample Custody			V					
Chain of Custody	/ / Sample Documer	ntation Pr	esent?			V	<u> </u>	<u> </u>
COC Anomaly/S	ample Acceptance F	orm com	pleted?			<u> </u>	IV.	<u></u>
If Chlorinated or	Drinking Water Sam	ples, Acc	ceptable P	reservation?				V
	ation Documented?			coc	San Cont	nple ainer	No	one
Shipping Contain	ner	Alta	Client	Retain	Re	turn	Dis	oose

Comments:

LABORATORY REPORT

Date:

March 8, 2006

Client:

Del Mar Analytical, Irvine

17461 Derian Ave., Suite 100

Irvine, CA 92614

Attn: Michele Chamberlin



"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

Laboratory No.:

A-06030114-001

Sample ID.:

IPB2643-01

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):

 $0.0 \, \text{mg/l}$

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:	Survival	TUa
Fathead Minnow:	100%	0.0
Chronic:	NOEC	TUc
Ceriodaphnia Survival:	100%	1.0
Ceriodaphnia 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-06030114-001

Client/ID: Del Mar - IPB2643-01

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.

א אחר א אום ושווים יהפוחני

		l l	EST DAT	4			
		°C	DO		# I	Dead	Analyst & Time
	-			рН	A	В	of Readings
INITIAL	Control	20.4	3.9	29	0	U	Ru
	100%	19.6	9.0	2.1	U	0	1200
24 Hr	Control	19.2	8.0	7.7	0	0	la
	100%	19.2	8.3	7.6	0	0	1100
48 Hr	Control	19-3	7.4	7-6	0	0	2
	100%	19-2	7-7	7.5	0	0	1230
Renewal	Control	19-5	8.4	7.8	0	0	
Ronewar	100%	11.2	9.2	7.4	\mathcal{O}	0	1300
72 Hr	Control	19.4	8,0	2.6	0	0	1300 Lr
(4.11)	100%	19.1	8.2	26	0	U	1100
96 Hr	Control	19-4	29	26	U	0	1
/ / / / / / / / / / / / / / / / / / / /	100%	19-4	8.0	7-7		0	1130

Comments:

Sample as received: Chlorine: 0.0 mg/l; pH: 7.1; Conductivity: 240 umho; Temp: 2°C;

DO: 9.0 mg/l; Alkalinity: 52 mg/l; Hardness: 86 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% Sample: 100

CERIODAPHNIA CHRONIC BIOASSAY EPA METHOD 1002.0



Lab No.: A-06030114

Client/ID: Del Mar IPB2643-01 Outfall 018

Date Tested: 03/01/06 to 03/07/06

TEST SUMMARY

Test type: Daily static-renewal. Species: Ceriodaphnia dubia.

Age: < 24 hrs; all released within 8 hrs.

Test vessel size: 30 ml.

Number of test organisms per vessel: 1.

Temperature: 25 +/- 1°C.

Dilution water: Mod. hard reconstituted (MHRW).

QA/QC Batch No.: RT-060301.

Endpoints: Survival and Reproduction.

Source: In-laboratory culture. Food: .1 ml YTC, algae per day. Test solution volume: 15 ml.

Number of replicates: 10.

Photoperiod: 16/8 hrs. light/dark cycle.

Test duration: 6 days.

Statistics: ToxCalc computer program.

RESULTS SUMMARY

Sample Concentration	Percent Survival	Mean Number of Young Per Female
Control	100%	21.3
6.25%	100%	26.8
12.5%	100%	30.1
25%	100%	28.6
50%	100%	31.1
100%	100%	30.6

No concentration statistically significantly less than control at P = 0.05 level.

** Reproduction data from concentrations greater than survival NOEC are excluded from statistical analysis.

CHRONIC TOXICITY

Parameter	Survival	Growth
NOEC	100%	100%
TUc	1.0	1.0

QA/QC TEST ACCEPTABILITY

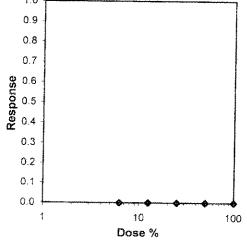
Parameter	Result
Control survival ≥80%	Pass (100% survival)
≥15 young per surviving control female	Pass (21.3 young)
≥60% surviving controls had 3 broods	Pass (90% with 3 broods)
PMSD < 47% for reproduction; if > 47% and no toxicity at IWC, the test must be repeated	Pass (PMSD = 19.0%)
Statistically significantly different concentrations relative difference > 13%	NA - No stat. sig. diff. concentrations
Concentration response relationship acceptable	Pass (no response at conc. tested)

			Ceriod	aphnia Su	rvival and	l Reprod	uction Tes	st-Surviv	al Day 6		
Start Date:	01 Mar-00		Test ID:	6030114c		**************************************	Sample ID			B2643 Outfall 018	
End Date:	07 Mar-06	3 16:00	Lab ID:	CAATL-Ad	uatic Tes	ting Labs	Sample To				
Sample Date: Comments:	28 Feb-06	3 00:00		EPAF 91	,	ang Labo	Test Spec		SRW2-Industrial stormwater CD-Ceriodaphnia dubia		
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	
25	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	

0	**			Not			Fisher's	1-Tailed	Isotonic	
Conc-%	Mean	N-Mean	Resp	Resp	Total	N	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		
100	1.0000	1.0000	Ō	10	10	10	1.0000	0.0500	1.0000 1.0000	1.0000 1.0000

Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	
Fisher's Exact Test	100	>100		1	

			Log	-Logit Interpolation	n (80 Resamples)	
Point	%	SE	95% CL	Skew	•	
IC05	>100					
IC10	>100					
IC15	>100				1.0	
IC20	>100				1.0	
IC25	>100				0.9	
IC40	>100				0.8	
IC50	>100					
					0.7	
					a l	į



			Ceriod	aphnia Su	rvival and	Reprod	uction Te	st-Repro	duction		
Start Date:	01 Mar-0	3 15:00	Test ID:	6030114c			Sample ID			PB2643 Outfall 018	
End Date:	07 Mar-00	3 16:00	Lab ID:	CAATL-A	uatic Tes	ting Lahs	Sample Ty				
Sample Date: Comments:	28 Feb-0	00:00	Protocol:	EPAF 91	,		Test Spec		SRW2-Industrial stormwater CD-Ceriodaphnia dubia		
Conc-%	1	2	3	4	5	6	7	8	9	10	
D-Control	21.000	22.000	18.000	21.000	23.000	14.000	22.000	23.000	26.000	23.000	
6.25	25.000	27.000	26.000	27.000	25.000	26.000	32.000	25.000		26.000	
12.5	25.000	38.000	34.000	27.000	26.000	29.000	37.000	30.000		27.000	
25	26.000	29.000	36.000	26.000	29.000	27.000		25.000		27.000	
50	24.000	30.000	35.000	27.000	26,000	43.000	32.000	31.000		32.000	
100	29.000	30.000	33.000	33.000	23.000	26.000	37.000	28.000		35.000	

_				Transforn	n: Untran	sformed			1-Tailed		Isotonic		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD	Mean	N-Mean	
D-Control	21.300	1.0000	21.300	14.000	26.000	15.341	10			1214545	28.083	1.0000	
6.25	26.800	1.2582	26.800	25.000	32.000	8.213	10	-3.107	2.287	4.048	28.083		
12.5	30.100	1.4131	30.100	25.000	38.000	15.381	10	-4.971	2.287			1.0000	
25	28,600	1.3427	28,600	25.000	36.000	11.561	10			4.048	28.083	1.0000	
50	31.100	1.4601	31.100	24.000				-4.123	2.287	4.048	28.083	1.0000	
					43.000	17.045	10	-5.535	2.287	4.048	28.083	1.0000	
100	30.600	1.4366	30.600	23.000	37.000	13.882	10	-5.253	2.287	4.048	28.083	1.0000	

Auxiliary Tests			··············		Statistic	***************************************	Critical		Skew	Kurt
Kolmogorov D Test indicates nor			0.01)		0.8323		1.035		0.57932	
Bartlett's Test indicates equal var	riances (p =	= 0.18)			7.5917		15.0863		0.01002	U.U.TEEE.
Hypothesis Test (1-tail, 0.05)	NOEC	LOEC	ChV	TU	MSDu	MSB	MSE	F-Stat	F-Prob	df
Dunnett's Test	100	>100		1	4.0484	134.857	15.6722	8.60482	4.8E-06	5, 54

			Li	near Interpolat	ion (80 Resamples)	
Point	%	SE	95% CL	Skew	(
IC05	>100	······································				
IC10	>100					
IC15	>100				1.0	
C20	>100				1.9	
IC25	>100				0.9	
IC40	>100				0.8	
C50	>100				***	
***************************************		······			0.7	1
					9 , 0.6	
					6 0.5	4
					9.0.6 0.5 0.4	***************************************
					0.3	**************************************
					0.2	

0.0

10

Dose %

100

CERIODAPHNIA DUBIA CHRONIC BIOASSAY Reproduction and Survival Raw Data Sheet

Aquatic Testing Laboratories

Lab No.: A-006030114-001 Client ID: Del Mar IPB2643-01

Start Date: 03/01/2006

				N	n m h	~= ~ · · · · · ·	V Z	g Pro						7
Sample	Day	A	В	T	D			-			J	Total Live	Live	Analyst Initials
	1		10	10	10		- 	+-				Young		
	2	0			T					.			10	
	3	4	3	2	0						_	31	10	
	4	0		1		1	10		10			23		
Control	5	9		1	15	18	9		8			li .	10	1
	6	8		10		 	+		10			╢┈┈┈		
	7		1_	-		#	†≃		1/-	12	1	# ===	10	
	Total	ລາ	22	18	コ	23	114	2:	1 23	120	23	213	10	10
]	0	0	U	0	0	T		1	10			10	
	2	0	0	U	U	U	0		10				10	
	3	4	4	3	<	3	4		3	6	-	37	10	2
6.25%	4	9	9	8	8	8	フ	6		1	0	63	10	
0.23%	5	12	14	15	14	14	15	9	9	15	******	125	10	1
-	6	15	112	12	(17)	(14)	(12	1/2	13		13	и3	10	3
	7	Y.							1		-			
	Total	25	7 7	26	27	7-5	26	32	25	29	26	268	10	6
	ì	0	0	0	0	U	0	0		0	0	0	10	
	2	0	0	0	O	0	0	0	U	0	0	0	10	
	3	5	10	6	2	3	4	9	5	7	4	55	10	
12.5%	4	0	0	0	8	9	10	0	8	8	0	43	10	The state of the s
1,4.376	5	8	11	10	17	14	15	12	0	0	8	95	10	
	6	12	17	181		(5)	1	16	/7	13	15	108	10	
	7			-			<u> </u>		-					
	Total	25	38	34 ·	27	スレ	29	37	30	28	27	301	10	

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

CERIODAPHNIA DUBIA CHRONIC BIOASSAY Reproduction and Survival Raw Data Sheet

Aquatic Testing Laboratories

Lab No.: A-006030114-001 Client ID: Del Mar IPB2643-01

Start Date: 03/01/2006

				<u> </u>	Jumi	er of	Youn	r Dead	luand			T 75.4.1	T .	1
Sample	Day	A	В	T				g Frot	H	I	J	Total Live Young	No. Live Adults	Analyst Initials
	1	\cup	10	10	$ _{\mathcal{L}}$	0	10		10	7	10	0	10	
	2	<u></u>	0	10	0	0	0	0			0	U	10	
	3	3	8	8	3	6		3	5	8	4		10	Lin
25%	4	9	0	0	8	5 0			10	8	~		10	2
	5	14	18	10	115	5 11	16			16		123	10	1
	6	16	1/3	1	14)/2	13		 	(5)			10	0
	7		_	_				-	-	-		-	1	
	Total	24	29	36	26	29	่าวา	29	25	32	27	284	10	
	1	U	0	0	0	10	0	0	0	0	0		10	R
	2	0	0	0	0	0	0	0	0	0	0		10	ا مر
	3	4	2	9	2	T .	0	4	6	6	4	46	10	2
50%	4	8	0	0	9	8	10	1	10	9	0	54	10	2
3076	5	12	8	10	16	14	15	***************************************	15	16	11	128	10	
	6	(6)	15	16	(12)	(14)	18		(16)	(17)	— <u> </u>	83	10	0
	7								_		_			
	Total	ત્ર્પ	30	35	27	26	43	32	31	3/	32	3//	10	1
	1	0	0	0	0	U	0	0	0	0	0	0	10	9
	2	0	0	0	0	\mathcal{C}	0	\mathcal{O}	0	0	0	0		
A Company of the Comp	3	2	4	ラ	6	2	2	6	4	5	4		10	
IANAZ	4	9	0	U	U	8	10	11	9	11	0	47	10	
100%	5	18	8		10	13	IU	12	10	16	12	179	10	
	6	(77)	18	75	17/	15)	(17)	191	10	0	19	88	10	
	7						9	*_	4	7	네			
	Total	29	30	33	33	23	26	37	28	32	35	306	10	72

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

CERIODAPHNIA DUBIA CHRONIC BIOASSAY Water Chemistries Raw Data Sheet



Lab No.: A-006030114-001 Client ID: Del Mar IPB2643-01

Start Date: 03/01/2006

			AY i	D.	Y 2			1		1		1		7	
		-	1	1	Т	D/	AY 3	<u> </u>	AY 4	<u> </u>	AY 5	D.	AY 6	D	AY 7
<u>F</u>		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr
Analyst	Initials:	Lm	Sm	2-	Lan	Ra	Rom	4	1	L	1_	7	20		
Time of	Readings:	1530	1600	llwo	1700	1700	100	1700	Bev	sa	isa	1500	1600		
	DO	8.1)	8.0	8.0	2.9	8.3	29	8.1	7.8	8-1	77	8-0	11123		
Control	pН	2.2	8-0	8.0	8.0	7.8			7.0		/ <u>-</u> /	=	7.9		1
	Temp	25.9	T				20	2.9	1-6	7-0	1.0	71	7.9		
	T			259	249	25.7	<u> 1818</u>	25.8	25-2	25-7	246	251	255		_
	DO	8.1	80	80/	7.9	8.4	29	8.2	29	8,2	7.8	8-1	29		
6.25%	pH	7.6	8-0	2.9	2.9	7.7	2.6	7.7	7-6	7.7	7.8	26	2.9		
	Temp	259	25.3	25.8	24.9	25.7	<u>.2</u> \$\.S	25.7	25.3	25.2	24,)	26-1	256		
	DO	8.2	8.0	8.2	2.9	8.4	7.9	8.2	7-8	81	79	8-0	29		-
12.5%	рН	2.5	8.0	7.8	7.8	2.6	7.9	2.6	7.9	7.6	78	7.5	26		
	Temp	25.8	25.3	25.8	24.9	25.6	25.5	25.6	/	249	350	252	25%	Man-	
	DO	8.3	7.9	8.3	7.9	8.5	29	8.2	7.2	5.2	>.9	8-2	29		
25%	pН	7.4	8.0	2.7	7.7	25	7.6	- 1	7.6	1	7-7	7-5	7.8		
	Temp	25.7	25.4	25.8	24.9	25.4	255	25.4	25.2	24.9		7	25%		
	DO	8.4	7.9	8.4	8.0	8.7	28	8.3	7.8	T.	6	5-1	29		_
50%	рН	7.2	8.1	7.5	2.7		7.6	2.3	7.6		_ 1		2.2		
	Temp (25.5	25.4	25.7:	25.0 :			25.2	25.3	25.1	7	_ / "" !	25.6	<u> </u>	
	DO	8.7	2.2	8.6	8.0	9.2	7.8	8.4		8.3	7		7.8		_
100%			8.1	7.4	7.6			-	7.5	73	7-6	74	2.7		
	Temp 6	25.4/a	5.4	25.6	25,06	25.1	25.4	24.7	25.2	24.9	74-6	25.3	25.6		-

				Source of	Neonates					
Replicate:	A	В	С	а	E	F	G	Ĩž	1	T i
Brood ID;	AL	34	85	Ble	CH	C3	06	45	F4	69

Additional Parameters	Control	100% Effluent
Conductivity	325	240
Alkalinity	54	70
Hardness	34	
Chlorine (TRC)	0	
Ammonía (NH _Y -N)	0.2	0.4



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

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

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

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

Ph (909) 370-4667 Fax (909) 370-1046 Ph (619) 505-9596 Fax (619) 505-9689

Ph (480) 785-0043 Fax (480) 785-0851

Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPB2643

SENDING LABORATORY:

Del Mar Analytical, Irvine

17461 Derian Avenue. Suite 100

Irvine, CA 92614

Phone: (949) 261-1022 Fax: (949) 261-1228

1 gal Poly (IPB2643-01AV)

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 requ	ested unles	s specific due date is request	ed => Due Date: Initials:	
Analysis	Exp	iration	Comments	
Sample ID: IPB2643-01	Water	Sampled: 02/28/06 10:00	Instant Nofication	
Bioassay-7 dy Chrnic	03/0	1/06 22:00	Cerio, EPA/821-R02-013, Sub to AqTox Labs	
Bioassay-Acute 96hr	03/0	1/06 22:00	FH minnow, EPA/821-R02-012, Sub to AqTox Labs	
Containers Supplied:				
1 gal Poly (IPB2643-01)	AU)			

		SAMPL	E INTEGRIT	Y:			
All containers intact: Yes Custody Seals Present: Yes	•	e labels/COC agree: es Preserved Properly	•	□ No □ No	Samples Recei		Yes No
Coli Ol		/	Sunh			3106	7:00
Rejeased By	Date	Time	Received By	<i>a</i> ,	1_	Date	Time
Luye	3486	1620		ll S	TIC	3-1-6	1020
Released By	Date	Time	Received By			Date	Time
,							Page 1 of 1

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

		INITIA	L.			24 Hr					48 Hr			
Date/Time:	3-/-	06	1200	3-2	3-2-06			מי	3-3-	Ola	/300			
Analyst:			-		~	<u> </u>	La							
	l °C	DO	pН	°C	DO	pΗ	# [Dead	°C	DO		# D	ead	
							А	В			pН	А	В	
Control	204	8.9	2.9	19.8	2.8	2.5	0	0	20.0	2.1	26	/)	0	
1.0 mg/l	20.4	8.9	29	19.7	<i>2</i> .7	7.5	0	U	20.1)	2.0	7.6	/)	0	
2.0 mg/l	<i>20</i> .5	9.0	7.9	19.7	7.4	7.4	0	0	20.0	69	7.5	1)	0	
4.0 mg/l	<i>205</i>	9.1	7.9	197	22	24	0	0	7	6.6	7.5	0	/)	
8.0 mg/l	205	9.1	7.9	19.7	5.3	2.2	10	10						

		RENEW	AL.			72 Hr				96 Hr			
Date/Time:	3-3	-06	1300	3-5	1-06		1100	>	3-5	-04	130		
Analyst:		<u> </u>							n				
	°C	DO	l pH	°C	DO	pН	# [Dead	°C	OQ		# L	Dead
						r	A	В		<i>D</i> 0	pH	A	В
Control	19.8	9.0	2.8	19.5	2.9	2.6	0	0	19.9	75	74	0	
1.0 mg/I	19.8	90	2.8	19.6	8.3	7.6	0	0	19.9	26	24		
2.0 mg/l	19.8	9.1	7.8	19.6	8.3	26	O	0	19.8	7-6	24		
4.0 mg/l	19.9	9.1	2.8	19.6	27	2.5	0	U	19.8	7.6	24	0	0
8.0 mg/l			_		•	-					_		

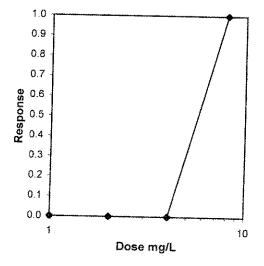
Comments:

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

				Acute Fish Test-96	Hr Survival	
Start Date: End Date: Sample Date: Comments:	01 Mar-0 05 Mar-0 01 Mar-0	6 11:30	Lab ID:	RT-060301f CAATL-Aquatic Testing Labs EPAA 91-EPA Acute	Sample ID:	REF-Ref Toxicant SDS-Sodium dodecyl sulfate PP-Pimephales promelas
Conc-mg/L	1	2				
D-Control	1.0000	1.0000			***************************************	
1	1.0000	1.0000				
2	1.0000	1.0000				
4	1.0000	1.0000				
8	0.0000	0.0000				

•			Number	Total					
Conc-mg/L	Mean	N-Mean	Mean	Min	Max	CV%	N		
D-Control	1.0000	1.0000	1 4120	1,4120	1,4120	0.000	2	Resp	Number
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		2.	0	20
4	1.0000	1.0000	1.4120			0.000	2	0	20
8	0.0000			1.4120	1.4120	0.000	2	0	20
O	0.0000	0.0000	0.1588	0.1588	0.1588	0.000	2	20	20

Auxiliary Test	T. T.	annot be confirmed	Statistic	Critical	Skew	Kurt
Equality of vari	iance cannot	be confirmed				***************************************
Trim Level	EC50	•	Graphical Method			
0.0%	5.6569					



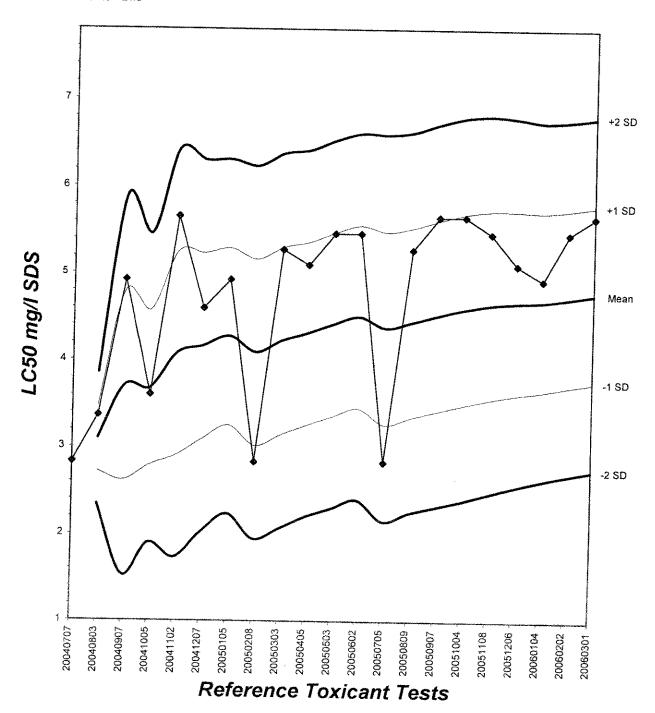
Page 1

ToxCalc v5.0

Reviewed by:

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: 2-16-0 b
APPROXIMATE QUANTITY: 400
GENERAL APPEARANCE:
MORTALITIES 48 HOURS PRIOR TO TO USE IN TESTING:
DATES USED IN LAB: 3/1/0 to
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: 0.7 mg/l NH ₃ -N
DO: 28 mg/l Alkalinity: 54 mg/l Hardness: 4 mg/l
READINGS RECORDED BY: DATE: 3-5-06

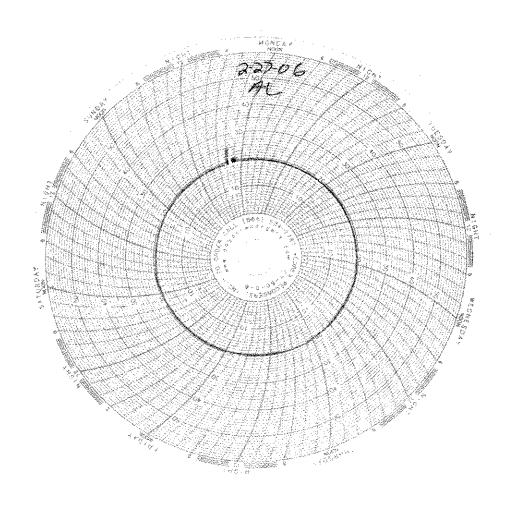


Laboratory Temperature Chart

QA/QC Batch No: RT-060301

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

Acceptable Range: 20+/- 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 Surv	ival	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

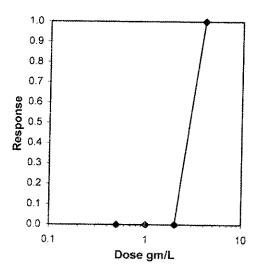
Parameter	Result
Control survival ≥80%	Pass (100% Survival)
≥ 15 young per surviving control female	Pass (21.0 young)
≥60% surviving controls had 3 broods	Pass (100% with 3 broods)
PMSD <47% for reproduction	Pass (PMSD = 8.3%)
Stat. sig. diff. conc. relative difference > 13%	Pass (Stat. sig. diff. conc. = 15.2%)
Concentration response relationship acceptable	Pass (Response curve normal)

	····		Ceriod	aphnia Su	rvival and	Reprod	uction Tes	st-Surviv	al Day 6	······································			
Start Date:	01 Mar-0	6 14:00	Test ID:	RT-06030	1c	·····	Sample ID			REF-Ref Toxicant			
End Date:	07 Mar-06	6 16:00	Lab ID:	CAATL-A	ruatic Tes	ting I ahe				dium chloride			
Sample Date: Comments:	01 Mar-06	6 00:00	Protocol:	EPAF 91	,	and Educ	Test Spec			daphnia dubia			
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	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			
4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			

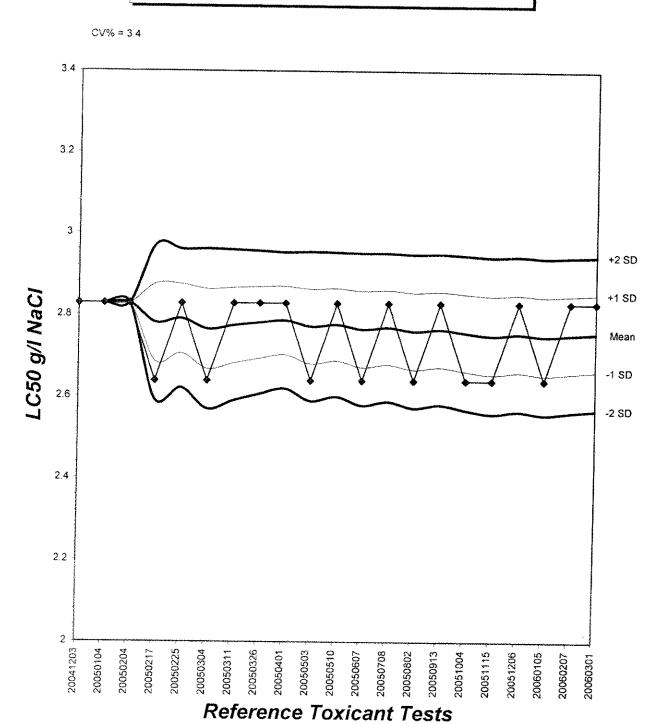
Conc-gm/L	Mean	N-Mean	Resp	Not Resp	Total	N	Fisher's Exact P	1-Tailed Critical	Number Resp	Total Number
D-Control	1.0000	1.0000	0	10	10	10	***************************************		n	10
0.5	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
1	1.0000	1.0000	0	10	10	10	1,0000	0.0500	0	10
2	1.0000	1.0000	0	10	10	10	1.0000	0.0500	0	10
4	0.0000	0.0000	10	0	10	10	,	0.0000	10	10

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

	Graphical Method
Trim Level	EC50
0.0%	2.8284



Ceriodaphnia Chronic Survival Laboratory Control Chart

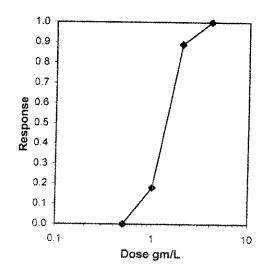


			Cerioc	laphnia Su	rvival and	d Reproc	uction Te	st-Repro	duction				
Start Date:	01 Mar-0	6 14:00	Test ID:	RT-06030	0301c Sample ID:					REF-Ref Toxicant			
End Date:	07 Mar-0	6 16:00	Lab ID:	CAATL-A	CAATL-Aquatic Testing Labs Samp								
Sample Date: Comments:	01 Mar-06	6 00:00	Protocol:	EPAF 91	40000	ong Luce	Test Spec			dium chloride daphnia dubia			
Conc-gm/L	1	2	3	4	5	6	7	8	q	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		21.000			
1	19.000	18.000	20.000	15.000	19.000	20.000	16.000	14.000		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			

				Transforr	n: Untran	sformed			1-Tailed	·····	isot	onic
Conc-gm/L	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			111020	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	0.0203
4	0.000	0.0000	0.000	0.000	0.000	0.000	10		2.101	,,,,,,	0.000	0.0000

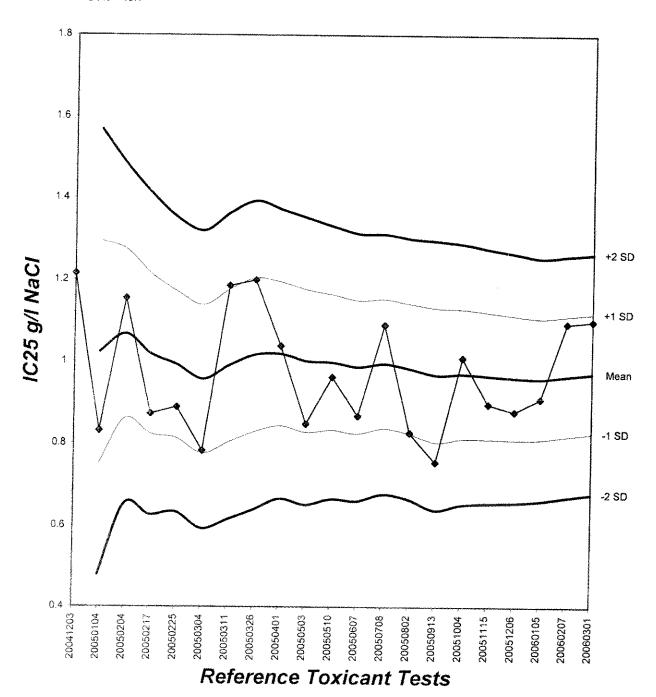
Auxiliary Tests		······································			Statistic		Critical		Skew	Kurt
Shapiro-Wilk's Test indicates nor	mal distribu	ıtion (p >	0.01)	······································	0.97953		0.919			0.71232
Bartlett's Test indicates equal var	iances (p =	: 0.01)			10.6394		11.3449		U.L. 1 TO	0.11202
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			

				Line	ar Interpolat	ion (80 Resamples)
Point	gm/L	SE	95%		Skew	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
IC05	0.6391	0.0359	0.5587	0.7148	0.5339	······································
IC10	0.7782	0.0612	0.7030	0.9295	1.5066	
IC15	0.9173	0.0675	0.8164	1.0435	0.5242	1.0
IC20	1.0286	0.0507	0.9218	1.1083	-0.0551	1.0
IC25	1.0990	0.0414	1.0199	1.1731	0.2340	0.9
IC40	1.3104	0.0319	1.2476	1.3675	0.1691	0.8
IC50	1.4513	0.0260	1.3973	1.4971	0.0934	0.0



Ceriodaphnia Chronic Reproduction Laboratory Control Chart





NPDES - 3243

CERIODAPHNIA DUBIA CHRONIC BIOASSAY

Reference Toxicant - NaCl Reproduction and Survival Raw Data Sheet



QA/QC No.: RT-060301

Start Date: 03/01/2006

	1	n -										T	-11-	
Sample	Day		·	Nı	umbe	r of Y	oung	Proc	luced			Total Live	No. Live	Analyst
		A	В	C	D	E	F	G	H	I	J	Young	Adults	Initials
Control	1	0		0	6	0	\perp_{O}	\Box	U	10	1/)		10	
	2	0	U	0	U	0	0	U	0	0	0	0	10	R
	3	4	3	3	5	0	4	4	3	4	0	30	10	~
	4	0	0	0	0	5	0	0	0	0	4	9	10	1/2
Control	5	8	9	8	6	フ	8	9	9	17	8	29	10	1
	6	8	10	8	7	8	9	13	10	11	8	Xaz	10	
	7	0										A-1-		
	Total	20	22	19	18	20	21	26	22	22	20	220	10	12
	1	0	0	U	0	0	0	U	0	10	7)	0	10	2
	2	0	U	U	O	0	0	0	0	0	0	Ŏ	10	R
	3	3	2	0	4	4	4	3	4	1	1	31	10	6
0.6. //	4	0	0	5	0		0	0	0	0	0	5	10	1/1
0.5 g/I	5	8	\supset	ラ	δ	9	8	9	9	8	7	80	10	
	6	//	11	8	12	10	12	13	10	10	11	108	10	
	7				•									
	Total	22	20	20	24	23	24	کر	23	22	21	224	10	1
	1	0	0	0	0	0	0	0	0	0	0	0	10	k
v over 1	2	0	0	0	0	0	0	0	0	1)	Ω	Ò	10	Ru
Andrew An	3	0	0	4	3	2	4	0	3	0	3	10	10	
10.79	4	3	3	0	0	0	0	4	0	U.	0	JU	10	10
1.0 g/l	5	6	4	U	Lĺ	6	4	て	4	6	И	47	1U	1/1
	6		9	12	8	11	12	9	フ	10	10	48	10	~
	7		_		+					_				
	Total	19	18	20	15	19	20	16	ıd	70	17	178	, /5	

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	No.	Analyst
		A	В	С	D	E	F	G	н	I	J	Live Young	Live Adults	Initials
	1	10	0	0	0	0	0	Q	0	0	0	0	10	R
	2	0	0	0	0	0	0	0	0	0	0	0	10	2
	3	0	0	0	0	0	0	0	0	0	0	0	10	
2.0 g/I	4	0	0	0	0	2	3	0	2	0	0	7	10	1
	5	2	2	2	2	U	0	2	0	2	N	15	10	1/2
	6	U	0	0	0	2	U	0	0	0	0	2_	10	2
	. 7	_		_					-				****	
	Total	2	7_	7_	ح	и	3	٧	7	<u>ح</u> ـــ	3	24	10	2
	1	X	×	X	\times	火	乂	X	乂	×	×	0	0	a-
	2					•				_	-	-		
	3										-			
4.0 g/l	4				-	-					_			
	5				-					4000+17				
	6	_	مسي											
	7										-1			
	Total	0	0	0	0	0	0	0	0					

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				DAY 3 DAY										
			<u> </u>	D/	4 Y Z	D/	4 Y 3	D/	AY 4	D/	Y 5	D/	4Y 6	DA	Y 7	
		0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	0 hr	24hr	
Analyst	Initials:	2m	2m	2m	Lm	Rm	Sm	en	1	1	-6	1	-2			
Time of R	leadings:	1400	ISOU	! S W	1500	1500	1600	1600	1400	1400	1370	1370	1600			
	DO	8:1	2.8	8,0	8.2	8.4	8.0	8.1	7.8	8.1	81	80	8.0			
Control	pН	7.8	29	8:0	8.0	2.8	2.8		7-5	7.9	78	7-6	7.7		•	
	Temp	25.8	25,5	25.8	1	11	25.2	25.8	25-1	25/2	24.9	,	25.8			
	DO	8.1	7.9	8:0	8.3	8.4	8.0	8.1	27	81	8-1	7.8	8:0			
0.5 g/l	pН	7.8	2.9	8.0	8.0	28	2.9	7.8	29	7.8	7-9	7.8	7.8			
	Temp	25.8	25.5	25.9	25.3	25.7	25.2	25.9	26.2	25.6	25.0		<i>2</i> s: 7			
	DO	8.1	29	8-0	8.3	8.4	7.9	8./	29	81	プフ	8.0	29			
1.0 g/l	pН	2.8	2.9	8-0	8:0	28	29	29	29	7.9	7.9	7.8	28			
	Temp	25.8	<u> 25.5</u>	25.9	25,3	25.7	25.2	25.9	250	758		25.4	25:7			
	DO	8.1	8.0	7.9	8.2	8.3	7.9		75	8.0	7.8	80	7.9			
2.0 g/l	рН	2.9	7.9	8.0	8.0	7.8	29	7.9		7.9	7.8	7-8	28			
	Temp	25.8	25.5	26.0	25.3	25.8	25.2	26.0	25.2		25.6		25:7			
	DO	8.1	8.0			•										
4.0 g/l	pН	28	2-9					-			-	_	_	DA'		
	Temp	25.7	25.5			-				-		_				

Additional Parameters	Control	High Concentration (4.0 g/l)			
Conductivity	325	6340			
Alkalinity	54	55			
Hardness	94	92			
Ammonia (NH ₃ -N)	0.2	0.2			

			S	ource of l	Neonates					
Replicate:	L A	В	С	D	Е	F	G	Н	1	J
Brood ID:	<u>EI</u>	E2_	66	44	H3	HU	IY	IZG	J 4	JZ

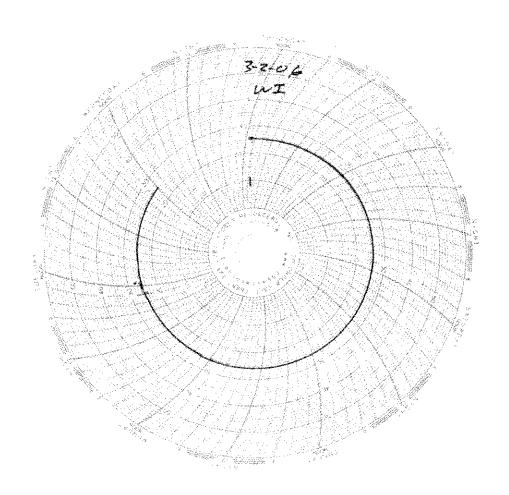


Laboratory Temperature Chart

QA/QC Batch No: RT-060301

Date Tested: 03/01/06 to 03/07/06

Acceptable Range: 25+/- 1°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. IPB2643

Eberline Services NELAP Cert #01120CA (exp. 01/31/07)

Eberline Services Report R603019-8663

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

Me Manni

MCM/njv

Enclosure: Report

Subcontract Form

Receipt checklist

Invoice

Eberline Services

ANALYSIS RESULTS

 SDG 8663
 Client DEL MAR ANAL

 Work Order R603019-01
 Contract PROJECT# IPB2643

 Received Date 03/02/06
 Matrix WATER

Certified by Africa Control Date 03/12/06
Page 1

Eberline Services

QC RESULTS

-					į
The Same	SDG	8663	Client	DEL MAR ANAL	[
	Work Order	R603019-01	Contract	PROJECT# IPB2643	,
-	Received Date	03/02/06	Matrix	WATER	
ž					

Receive	ed Date <u>03/02/</u>	<u>06</u>			Matrix WAT	TER		
Lab	<u>Nuclide</u>	Results	<u>Units</u>	Amount	Added	MDA	Evaluation	1
LCS 8660-002	GrossAlpha Gross Beta	9.57 ± 1.3 9.53 ± 0.77	pCi/Smj pCi/Smj	-		0.635 0.609	94% recove	_
<u>BLANK</u> 8660-003	GrossAlpha Gross Beta	-0.067 ± 0.23 -0.136 ± 0.31	pCi/Smp	N'	av Av	0.513	<mda <mda< td=""><td></td></mda<></mda 	
	DUPLICATES	······································			ORIGINALS	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		30
<u>Sample ID</u> 8660-004	Nuclide GrossAlpha Gross Beta	Results + 20 1.33 ± 1.5 7.77 ± 1.8	MDA 2.25 2.37	<u>Sample ID</u> 8660-001	Results ± 2 2.64 ± 1.7 7.69 ± 1.6	1.9	5 66	fot) Eval 177 satis. 63 satis.
	SPIKED SAMPLE			OR:	IGINAL SAMPLE			
<u>Sample ID</u> 8660-005	<u>Nuclide</u> GrossAlpha Gross Beta	Results ± 2σ 92.9 ± 7.9 79.8 ± 3.9	MDA 1.88 1.99	<u>Sample ID</u> 8660-001	Results ± 2 2.64 ± 1.7 7.69 ± 1.6	1.9		*Recv 118 103

Certified by 05/2-2006
Report Date 03/12/06
Page 2



SENDING LABORATORY:

40 ml Amber Voa Vial (IPB2643-01AI)

1014 E. Cooley Dr., Suite A. Colton, CA 92324 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 9830 South 51st Street, Suite 8-120, Phoenix, AZ 85044

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

RECEIVING LABORATORY:

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

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

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

Fax (480) 785-0851 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IPB2643

Del Mar Analytical, Irvi	ine	Eberline Services	
17461 Derian Avenue.	Suite 100	2030 Wright Avenue	
Irvine, CA 92614		Richmond, CA 94804	
Phone: (949) 261-1022		Phone :(510) 235-2633	
Fax: (949) 261-1228		Fax: (510) 235-0438	
Project Manager: Miche	le Chamberlin		
Standard TAT is requ	ested unless specific due date is reques	ted => Due Date:	Initials:
Analysis	Expiration	Comments	
Sample ID: IPB2643-01	Water Sampled: 02/28/06 10:00	Instant Nofication	
EDD + Level 4	03/28/06 10:00	Excel EDD cmail to pm, Include Std	l logs for Lvl IV
Gross Alpha-O	02/28/07 10:00	900.0, IF RESULT>15 pCi/L, run F	
Gross Beta-O	02/28/07 10:00	900.0, IF RESULT>50 pCi/L, run F	Radium 226 & 228
Radium, Combined-O	02/28/07 10:00	HOLD for Gross Alpha/Beta result;	EPA 903.1 & 904.0
Strontium 90-O	02/28/07 10:00	905.0	
Tritium-O	02/28/07 10:00	906	
Containers Supplied:			
2.5 gal Poly (IPB2643-0	1AF)		
40 ml Amber Voa Vial (IPB2643-01AG)		
40 ml Amber Voa Vial (IPB2643-01AH)		

			(al-y-a-(SAMPLI	E INTEGRI	TY:			
All containers intact: Custody Seals Present:	☑ Yes □ Yes		,	labels/COC agree; Preserved Properly	グ Yes □ Yes	□ No □ No	•	Received On Ice:: Received at (temp):	☐ Yes ☑ No
<u>Ul</u>	U	<u></u>	3-1-06	1700)		My	63/02/0	6 9:30
Released By			Date	Time	Received B	ÿ	est of the state o	Date	Time
Released By	····	····	Date	Time	Received B	V		Date	Time



RICHMOND, CA LABORATORY

SAMPLE RECEIPT CHECKLIST

ent: <u>)7</u> 5	L MA	<u>r</u>	City	1M(NE 2643	State	- W	
te/Time receive	07 02	6 1 coc	No. <u>IP.B</u>	2643			
erimic issues	IT CHES	Request	ed TAT (Days)	WSH P.O. Receive	ed Yes [] No[]	
ntainer I.D. No.			INSPEC				
		ping container			es [4]	No[] N/A	()
Custody s	seals on simp	ping containe	r dated & signe	d? Y	'es [X]	No [] N/A	[]
		plie containers		··· Y	'es []	No [] N/A	(
Custody !	seals on san	ple containers	s dated & signe	nd? Y	'es []	No[] N/A	$\langle 1 \rangle \rangle$
				•	Net[]	Dry [大]	
Packing i	material is:	s chinning can	tainer:	Sample Matrix <u>W</u>	<u> </u>		
Number	of containers	ner samole:	4	(Or see CoC)		
	are in correc			Yes [] No [1		
		in comples?		Yes [-y] No [1		r
	Tor	etell lar	rd labels []	Rad labels [] Appro	opriate san	rple labels [`	×1
		noilibren been	TLI Leakii	ng [] Broken Com	(ainer[]	Missin A	1
i, Samples	are Prese	rved No	t preserved [>	() pH Preserv	ative		
	any anoma						
3. Describe	any and						
a. Describe	arry arration						
Jeschille	arry carry						
			es? Ye	s[] / No[]	Date	(10)	
4. Was P.I	M. notified o	f any anomalie	es? Ye	03/02/06/me:_	Date 0	ි. භ	
4. Was P.I		f any anomalie	es? Ye	No[] O3 02 04 ime: Customer Sample	<u> </u>		wine
4. Was P.I	M. notified o	f any anomalie	es? Ye Date:	03/02/04 ime: _	Date 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	∵(∩) mR/hr	wipe
4. Was P.I 5. Inspects	M. notified o	f any anomalie	Date:	03 02 04 ime: _	<u> </u>		wipe
4. Was P.I 5. Inspects	M. notified o	f any anomalie	Date:	03 02 04 ime: _	<u> </u>		wipe
4. Was P.I 5. Inspects	M. notified o	f any anomalie	Date:	03 02 04 ime: _	<u> </u>		wipe
4. Was P.I 5. Inspects	M. notified o	f any anomalie	Date:	03 02 04 ime: _	<u> </u>		wipe
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4. Was P.I 5. Inspects	M. notified o	f any anomalie	Date:	03 02 04 ime: _	<u> </u>		wipe
4. Was P.I 5. Inspects	M. notified o	f any anomalie	Date:	03 02 04 ime: _	<u> </u>		wipe
4. Was P.I 5. Inspects	M. notified o	f any anomalie	Date:	03 02 04 ime: _	<u> </u>		wipe
4. Was P.I 5. Inspects	M. notified o	f any anomalie	Date:	03 02 04 ime: _	<u> </u>		wipe
4. Was P.I 5. Inspects	M. notified o	f any anomalie	Date:	03 02 04 ime: _	<u> </u>		wipe
4. Was P.I 5. Inspects	M. notified o	f any anomalie	Date:	03 02 04 ime: _	<u> </u>		wipe
4. Was P.I 5. Inspects	M. notified o	f any anomalie	Date:	03 02 04 ime: _	<u> </u>		wipe
4. Was P.I 5. Inspecte Customer Sample No.	M. notified o	f any anomalie MV mR/hr	Wipe	Customer Sample No. Calibration date	срт	mR/hr	
4. Was P.I 5. Inspects	cpm cpm	f any anomalie	Wipe	Customer Sample	cpm	mR/hr	



Established 1931

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

Del Mar Analytical

Laboratory Number: 952265

Project Name: IPB2643



Prepared for:

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

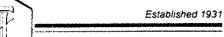
Prepared by:

Truesdail Laboratories, Inc. Tustin, CA 92780

March 20, 2006

FRUESUAR LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



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:

IPB2643

Date Received:

03/01/06

Truesdail Project:

952265

Samples Cross-reference

1 11/1/11/11/12

Chent H

Matrix

Date Sampled

Time Sampled

Analysis Requested

952265-1

IPB2643-01

Water

02/28/06

1000

Hydrazines by EPA 8315M

Respectfully Submitted, TRUESDAIL LABORATORIES, INC.

K. R. P. gya

K.R.P. Iver

Quality Control/Quality Assurance Officer

Muan Huong Dang Project Manager

NPDES - 3254

FOUR SIDEREL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

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

March 20, 2006

Client: Del Mar Analytical

17461 Derian Avenue, Suite 100

Irvine, CA 92614

Attention: Michele Chamberlin

Project Name:

IPB2643

Date Received:

03/01/06

Truesdail Project:

952265

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.

inalysis 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 D D Iver

Quality Control/Quality Assurance Officer

Xuan Huong Dang Project Manager

NPDES - 3255

Established 1931

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

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

Michele Chamberlin Liquid / 1 Sample IPB2643 Client Contact: Sample: Sample ID:

8315 (Modified) IPB2643 Method Number: P.O. Number: Run Batch No.:

Extraction: 3434; Analysis: 455 **Hydrazines in Liquid** Investigation:

REPORT

952265 QC Lab. No.: Project Lab. No.:

952267

Spiked Sample ID:

February 28, 2006 March 20, 2006 March 1, 2006 Report Date: Sampling Date:

March 1, 2006 March 3, 2006 Receiving Date: Extraction Date: Analysis Date:

19/L Reported By: Units

Quality Control/Quality Assurance Calibration Report

•	
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É.	١
7	

Parameter	Theoretical	Measured	*	Control	Flag
	Value	Value	Rec.		
Monomethyl Hydrazine	20.0	46.1	92.2	85-115	PASS
u-Dimethyl Hydrazine	20,0	49.8	99.5	85-115	PASS
Hydrazine	10.0	9.86	98.6	85-115	PASS

Parameter	Theoretical	Measured	%	Control	Flag
	Value	Value	Rec.	Limits	
Monomethyl Hydrazine			93.6	85-115	PASS
u-Dimethyl Hydrazine		:	5	85-115 PASS	PASS
Hydrazine	10.0	10.2	102	85-115	PASS

Quality Control/Quality Assurance Spikes Report

Activistic de la constante de	LCS/LCSD	OSC									MS/MS	۵				
	Spiked		Recovered	-	Percent	ent	rcs/		ပိ	Control	Spiked	1	Recovered	70	Percent	ent
	Conc.	Ŝ	Concentration	50	Recove	iry (%)	CSD	Flag	_	mits	Conc		centrati	uo	Recove	(%)
Parameter		Š	CSD	KB.	CCS	CSD	å,		2%	% Rec.			MSD	Sample	SE	QS₩.
Monomethyl Hydrazine 50.0	e 50.0	48.6	50.0		97.2	100	2.81%	PASS	7.9	76-118		29.1	36.0	0.0	58.2	71.9
u-Dimethyl Hydrazine	50.0	50.3	48.7	0.0	101 97.5	97.5	3.13%	PASS	4.8	81-110		47.5	49.0	0.0	94.9	98.1
Hydrazine	10.0		10.7		99.7	107	6.76%	PASS	18	6.76% PASS 18 82-118	10.0	8.81	9.30	81 9.30 0.0 88.	88.1 93.0	93.0
										AAABLES CO. B. S. S. S. S. S.						

ICV: Initial Calibration Verification

QCS: Quality Control Standard LCS: Lationatory Control Spike

%D: Percent Difference MS; Matrix Spike

Flag: "Pass" if within Control Limits, otherwise "Fail"

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

uan Dang, Project Manager **Environmental Services**

37-128 42-109

Control Limits % Rec. 11-134

Flag

MSD 0%

ŝ

23.4 10.5 32.9

PASS PASS 5.40% PASS

21.2%

3.28%

2

Accuracy

This report applies only to the samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from these laboratories.

Established 1931

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

Client: Del Mar Analytical

17461 Derian Ave., Suite 100 Irvine, CA 92614

Michele Chamberlin

Liquid / 1 Sample

Attention: Sample: P.O. Number: Method Number: Investigation:

Project Name:

PB2643

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

Page 1 of 1

Dage

Analytical Results

Hydrazines in Liquid

8315 (Modified)

		Monomethyl	Unsymmetrical Dimethyl	Hydrazine
Sample ID	Sample Description	Hydrazine	Hydrazine	
~	Blank		Q	QX
	IPB2643-01	Q	NO STATEMENT OF THE PROPERTY O	ND
MD		#	0.27	0.39
		5.0	9'4	TO I I I I I I I I I I I I I I I I I I I

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.



This report applies only to the 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 952.265

1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046 9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 506-9689 9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 796-3620

T ORDER - PROJECT # IPB2643

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 Chamberlit

RECEIVING LABORATORY:

Truesdail Laboratories-SUB 14201 Franklin Avenue

Tustin, CA 92680

Phone :(714) 730-6239

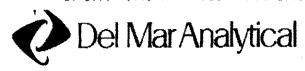
Rec'd 03/01/06

s6b 952265 Fax: (714) 730-6462

<u> </u>			
Standard TAT is requ	ested unless specific due date is request	ed => Due Date:	Initials:
Analysis	Expiration	Comments	
Sample ID: IPB2643-01 Hydrazine-OUT	Water Sampled: 02/28/06 10:00 03/03/06 10:00	Instant Nofication Sub Truesdail for Monomethylhydrazine, J flags	
Containers Supplied: 1 L Amber (IPB2643-01 1 L Amber (IPB2643-01	*		

For Sample Conditions See Form Attached

			SAN	APLE INT	EGRIT	Y:		
All containers misci: Custody Seals Present:	☐ Yes	□ No □ No	Sample tabels/COC ap Samples Preserved Pre	-	Yes Yes	□ No	Samples Received On Ice:: Samples Received at (temp):	O Yes O No
SL	<u>U_</u>	C	106 0650	6	mi	سىد	Rem mo.	1 03/1/00 065
Released By	lau	Duns	03Date Time	Rycci H. /	ved By	y per	Date 7/1 3/1	104 7:28
Released By			Date Time	7/ Recei	ved By		Date	Time Page 1 of 1



1014 E. Cooley Dr., Solie A. Cohon, CA 92224 Ph (909) 370-4667 Fax (909) 570-1048
9484 Chempeake Drive. Suite 805, Son Diegra, CA 92123 Ph (616) 805-9596 Pax (619) 505-6839
9530 South S1et Street. Suite B-120, Phoenix. AZ 85041 Ph (480) 765-0049 Pmc (460) 765-0651
2020 E. Sunest Pal, Suite Sti, Lina Vogae, InV 89120 Ph (702) 796-3220 Fex (702) 796-3221

SUBCONTRACT ORDER - PROJECT # IPB2643 RECEIVING LABORATORY: SENDING LABORATORY: Truesdail Laboratories-SUB Del Mar Analytical, Irvine 17461 Derian Avenue. Suite 100 14201 Franklin Avenue Tustin, CA 92680 Irvine, CA 92614 Phone: (714) 730-6239 Phone: (949) 261-1022 Fax: (714) 730-6462 Fax: (949) 261-1228 Project Manager: Michele Chamberlin Standard TAT is requested unless specific due date is requested -> Due Date: Initials: Analysis Expiration Comments Sample ID: IPB2643-01 Water Sampled: 02/28/06 10:00 Instant Nofication Hydrazino OUT 03/03/ Level III Cala Package Containers Supplied: 03/03/06 10:00 Sub Truesdail for Monomethylhydrazine, J flags 1 L Amber (IPB2643-01AS) 1 L Amber (IPB2643-01AT) * revised 3/20/04 MC

Taraba de la constante de la c						SA	MPLE	ITA	EGRI	ΓY:					 	
	All continues foract: Custody Seals Present			J No J No		Sample Isba's/COC : Samples Preserved P	•		Yes Yes			Samples Receiv		П Уж	□ N ₀	
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1	Released By		*	(en his	Date	Time	# X	ecei	A. W.	*/_/_/	/		Date		ime Page 1 of 1	_ .

Sample Integrity & Analysis Discrepancy Form

Clien	t: Del Mar Analytical	Lab # <u>95</u>	2265
Date	Delivered: 3/01/06 Time: 77 By: □Mail □Field	l 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)? \(\subseteq \cdot \)	☐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	DKIA
12.	Were samples pH checked? pH =	□Yes □No	W 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	ON/A
15.	Sample Matrix:	er 🗅 Waste	Water
	□Sludge □Soil □Wipe □Paint □Solid ��Oth	er water	
16.	Comments		and the second s
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	1 Brown	\wedge

APPENDIX G

Section 70

Outfall 018, February 28, 2006 AMEC Data Validation Reports

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MECX	
12269 East Vassar Drive	Package ID B4DF55
Aurora, CO 80014	Task Order 1261.001D.01
	SDG No. IPB2643
Laboratory Alta	No. of Analyses 1
Reviewer K. Shadov	Date: April 10, 2006
Analysis/Method Dioxin/Fur	Reviewer's Signature
- Walter College Colle	all by Method 1613 1 Shudn M
ACTION ITEMS ^a	
. Case Narrative	
Deficiencies	
2. Out of Scope Analyses	
rest and the second sec	
3. Analyses Not Conducted	
4. Missing Hardcopy	
Deliverables	
5. Incorrect Hardcopy	
Deliverables	
6. Deviations from Analysis	Detects below the laboratory lower calibration level were qualified
Protocol, e.g.,	as estimated.
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance COMMENTS®	
COMMENIA	
2 Calmontenated and the state of the state o	
Subcontracted analytical laboratory is not me Differences in protocol have been advanted in	eting contract and/or method requirements.
OPPOSES (PROCESS PROCESS OF THE PROC	the laboratory but no action against the laboratory is required.



DATA VALIDATION REPORT

NPDES Monitoring Program Annual Outfall 018

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IPB2643

Prepared by

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

DATA VALIDATION REPORT

SDG-Analysis:

NPDES IPB2643 D/F

1. INTRODUCTION

Task Order Title:

NPDES

Contract Task Order:

1261,001D,01

Sample Delivery Group:

IPB2643

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Dioxins/Furans

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

Reviewer:

Date of Review:

K. Shadowlight April 10, 2006

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

Project: SDG: Analysis:

NPDES IP82643 D/F

Table 1. Sample Identification

	· · · · · · · · · · · · · · · · · · ·				
Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method	The state of the Park of the P
Outfall 018	IPB2643-01	27353-001	Water	1613	

Analysis:

NPDES IP82643 D/F

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

Project: SDG: Analysis: NPDES IPB2643 D/F

DATA VALIDATION REPORT

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.

B4DF55

4

Revision 0

Project: SDG: I Analysis:

NPDES IPB2643 D/F

DATA VALIDATION REPORT

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 sample was required.

2.7.2 Field Duplicates

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

2.8 INTERNAL STANDARDS

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

2.9 COMPOUND IDENTIFICATION

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

2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

	Sample ID:	IPB2643	182643-01 OLA FOLL O	0				To the second se	elections do not support the state of the st	74 743	
	Chent Data	der and description of the property of the pro	Define or a company of the party and a second of the secon	Mental in the second se	Samula Date			***		EKA INI	LEA METHOG 101.5
	Name:	Del Mar A	Del Mar Analytical Tryina		Sample Data		Laboratory Data			Manager (Assessment)	Trom (Majorgamental management and an algorithms)
	Project.	IPB2643	Access to the Filly		Matrix:	Aqueous	Lab Sample:	27353-001	Date Received:	ved:	7 3 Km. 0
(Date Collected: Time Collected:	28-Feb-06 1000			Sample Size:	1.01 L	QC Batch No.:	7807	Date Extracted:	cfed:	5-Mar-06
<u> </u>	Analyte	Conc.	. (ug/L)	DI, a	пмирс		Court Libra.	8-Mar-06	E I	Date Analyzed DB-225;	NA
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·	1,4,2,4,7,8-HXCDD		0.00000180				13C-1,2,3,4,7,8-HxCDD	HXCDD		32 - 141	
	1 2 3 7 8 0 EVCDD	3 2	0.00000441	si Si	्र स्ट्रे	-	13C-1,2,3,6,7,8-HxCDD	-HxCDD		28 - 130	
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	Total HpCDD		0.000215				c. Method detection limit.				
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	Total HxCDF		0.0000146								
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Analyst: JMH Level TI

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Martha M. Maier 08-Mar-2006 13:49 Approved By:

Analyst:
Project 27353

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID: B4HZ1

Task Order: 1261.001D.01

ΑL	irora, CO 80014		SDG No.:	Multiple
			No. of Analyses:	4
	Laboratory: Truesda		Date: April 10), 2006
	Reviewer: P. Meel		Reviewer's Si	gnature
	Analysis/Method: Hydrazi	nes	- 18.MS	•
AC	TION ITEMS ^a			
	Case Narrative			
	Deficiencies	***************************************		
2.	Out of Scope Analyses			
3.	Analyses Not Conducted			
4.	Missing Hardcopy			
	Deliverables			
5.	Income at Handan			**************************************
3 .	Incorrect Hardcopy Deliverables			***************************************
	Deliverables		······································	
6.	Deviations from Analysis			
0.				
	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	***************************************		
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CON	AMEN 15	Acceptable as reviewed		na fading open
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	Markon announce and the state of the state o			
* Su	bcontracted analytical laboratory is not i	neeting contract and/or method	requirements	
b Dif	ferences in protocol have been adopted	by the laboratory but no action	against the laboratory is requ	ired.

MECX

12269 East Vassar Drive



DATA VALIDATION REPORT

NPDES Monitoring Program Outfalls 001, 002, 011, 018

ANALYSIS: HYDRAZINES

SAMPLE DELIVERY GROUP: IPB2637, IPB2639, IPB2641, IPB2643

Prepared by

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

NPDES

SDG No.:

Multiple

Analysis:

Hydrazines

1. INTRODUCTION

Task Order Title:

NPDES

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

DATA VALIDATION REPORT

IPB2637, IPB2639, IPB2641, IPB2643

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Hvdrazines

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

P. Meeks

Reviewer: 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.

NPDES

SDG No.:

Multiple

Analysis:

Hydrazines

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

DATA VALIDATION REPORT

NPDES

SDG No.: Analysis: Multiple Hydrazines

DATA VALIDATION REPORT

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in these SDGs were received at Del Mar Analytical and the subcontract laboratory, Truesdail Laboratories, within the temperature limits of 4°C ± 2°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.

NPDES

SDG No.: Analysis: Multiple Hydrazines

DATA VALIDATION REPORT

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.

B4HZ1 4 Revision 0

NPDES

SDG No.: Analysis:

Multiple Hydrazines

DATA VALIDATION REPORT

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.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

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

Client: Del Mar Analytical

17461 Derian Ave., Suite 100 Irvine, CA 92614

Michele Chamberlin

Liquid / 1 Sample

Sample:

Attention:

REPORT

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

Hydrazines in Liquid

Investigation:

Method Number:

8315 (Modified)

PB2637 PB2637

P.O. Number:

Project Name:

Page 1 of 1

Analytical Results

I		GN CN	9	0.39	
Unsymmetrical Dimethyl	Hydrazine	2	2	0.27	5.0
Monomethyl	Hydrazine Mydrazine	Collection and the collection of the collection) ON -S	1.2	5.0
	Sample Description	Method Blank	PB2637-01 シナートー	rand (Appele seasoffered in the 1911 to the seasoff and an appele seasoff appele seasoff and the seasoff and t	
	Sample ID	/05657-MB Method Blar	902206 MADI	MINTER	

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.

Kuan Dang, Project Manager Environmental Services

* Analysis not validated

Lower English V Come Com

This report applies only to the 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.

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Del Mar Analytical Client:

17461 Derian Ave., Suite 100 Irvine, CA 92614

Michele Chamberlin

Attention: Sample: Project Name:

Liquid / 1 Sample

IPB2639 PB2639

REPORT

March 20, 2006 952267 Report Date: Laboratory No:

February 28, 2006 March 1, 2006 Sampling Date: Receiving Date:

March 1, 2006 March 3, 2006 Extraction Date:

HQ/L Analysis Date: SES:

Š Dilution Factor: Reported By:

Mydrazines in Liquid

8315 (Modified)

Method Number: P.O. Number:

Investigation:

Page 1 of 1

Analytical Results

		*			disensi antitoli di con comunica dalla
Hydrazine 0	43	2	ND.	0.39	0.1
~		end from the second sec			woman of the management of the
ു Unsymmetrical Dimethyl	Hydrazine	2	2	0.27	5.0
Van Unsy	2 - -	The second secon			
Monomethyl	lydrazine	2	2	1.2	5.0
	- L		Cat-4.11 002		
	Sample Description	705657-WB Method Blank	IPB2639-01	To the control of the	
		The foreign terror production of the control of the		neworkeyle, romanne et et et et en	
	Sample ID	705657-MB	952267	2	PQ

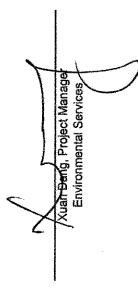
MDL: Method Detection Limit, ug/L.

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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TACE OF THE STATE
INDEPENDENT TESTING. FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

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Client: Del Mar Analytical

17461 Derlan Ave., Suite 100 Irvine, CA 92614

Michele Chamberlin

Attention:

Sample:

Jourd / 1 Sample

PB2641

P.O. Number: Method Number:

Project Name:

Laboratory No: 952268
Report Date: March 2

REPORT

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

Mysis Date: Marci Units: µg/L

Dilution Factor: 1
Reported By: JS

Page 1 of 1

Analytical Results

Hydrazines in Liquid

Investigation:

8315 (Modified)

		Monomethyl	5	fonomethy! On the Unsymmetrical Dimethy!	Hydrazine Rev Coll
Sample ID	Sample Description	Hydrazine			
705657-MB	Method Blank	2		A CALLERY OF THE PROPERTY OF T	Same seminate and produced control and the appropriate produced control and the appropriate produced control and appropriate produce
952268	952268 IPB2641-01 OUT (OI NO	.	ON	2
MOL		4.2		0.27	0.39
PQ	PQL	5.0		5.0	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 Mapager Environmental Services

Laborate not velidated

N Paney

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.

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Established 1931

Client: Del Mar Analytical

17461 Derian Ave., Sulte 100 Irvine, CA 92614

Michele Chamberlin

Attention: Sample:

Jquid / 1 Sample

PB2643 PB2643

Project Name:

P.O. Number:

REPORT

Laboratory No: 952265 Report Date: March 20, 2006

Sampling Date: February 28, 2006
Receiving Date: March 1, 2006
Extraction Date: March 1, 2006

Extraction Date: March 1, 2006
Analysis Date: March 3, 2006

Units: Hg/L

Dilution Factor: 1
Reported By: JS

Page 1 of 1

Analytical Results

Hydrazines in Liquid

8315 (Modified)

Method Number:

investigation;

Sample ID Sample Description Hydrazine	Hydrazine C		W. I. AMING. V. M. MARKET. AND MARKET.
	TA CANADA CONTRACTOR C	d? Hydrazine wiss I Color	
705657-MB Method Blank ND		* an	
952265 이라우리 이 (IPB2643-01 ND		.⊃	2
MDL 1.2	1.2	0.27	0.39
	5.0	. 0'6	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.

X/dan Dang, Project Manager Environmental Services

* Analysis Not valigated

This report applies only to the 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^		Package ID:	B4MT53
12269 East Vassar Drive			1261.001D.01
Aurora, CO 80014		SDG No.:	IPB2643
		No. of Analyses:	1
Laboratory: Del Ma		Date: April 7,	2006
Reviewer: P. Med		Revjewer's Si	gnature
Analysis/Method: Metals		Y. Max	
		3	
ACTION ITEMS ²			
. Case Narrative			······································
Deficiencies			
			
2. Out of Scope Analyses			
3. Analyses Not Conducted			
4. Missing Hardcopy Deliverables			
Deliverables			
5. Incorrect Hardcopy			
Deliverables			***************************************
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			***************************************
6. Deviations from Analysis	Qualifications anni	ied for blank detects and de	tacta halauritha
Protocol, e.g.,	reporting limit.	ica for blank detects and de	rects below file
Holding Times	roporting arms		
GC/MS Tune/Inst. Performance	***************************************	······································	
Calibration	***************************************		
Method blanks	<del>*************************************</del>		
Surrogates			
Matrix Spike/Dup LCS			
Field QC	40-ran/10/0-1		
Internal Standard Performance			······································
Compound Identification	**************************************	······································	
Quantitation			
System Performance		·	
COMMENTS ^b			
Subcontracted analytical laboratory is no	t meeting contract and/or me	ethod requirements.	
Differences in protocol have been adopte	d by the laboratory but no a	iction against the laboratory is requ	ired.

 $MEC^{X}$ 



### DATA VALIDATION REPORT

NPDES Sampling Annual Outfall 018

ANALYSIS: METALS

**SAMPLE DELIVERY GROUP IPB2643** 

Prepared by

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

SDG: Analysis:

IPB2643 Metais

### 1. INTRODUCTION

Task Order Title:

NPDES Sampling

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

IPB2643

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Metals

Level IV

QC Level:

No. of Reanalyses/Dilutions:

Reviewer:

P. Meeks

Date of Review:

No. of Samples:

April 10, 2006 - 8

The samples listed in Table 1 were validated based on the guidelines outlined in the MECX Data Validation Procedure for ICP and ICP-MS Metals (DVP-5, Rev. 0), EPA Methods 200.7, 200.8, and 245.1, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: SDG:

Analysis:

NPDES IPB2643 Metals

DATA VALIDATION REPORT

Table 1. Sample Identification

- 3			<del>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</del>			
	Client ID	Laboratory ID	Matrix	COC Method		
	Outfall 018	IPB2643-01	Water	200.7, 200.8, 245.1		

Project: NPDES SDG: IPB2643 Analysis: Metals

DATA VALIDATION REPORT

## 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

# 2.1.1 Sample Preservation, Handling, and Transport

The sample in this SDG was received at the laboratory within the temperature limits of  $4^{\circ}$ C  $\pm 2^{\circ}$ C. No sample preservation, handling, or transport problems were noted, and no qualifications were necessary.

## 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

#### 2.2 ICP-MS TUNING

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

#### 2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP and ICP-MS metals and 85-115% for mercury. The laboratory analyzed reporting limit check standards in association with the sample in this SDG and the recoveries were considered to be acceptable.

The initial calibration measured mean intensities for selenium indicated that the instrument response for selenium was approximately the same in the 1  $\mu$ g/L standard as in the blank. The 10  $\mu$ g/L standard exhibited a reasonable response. Due to the poor response of the 1  $\mu$ g/L standard, the reviewer raised the selenium MDL to 1  $\mu$ g/L. No qualifications were required.

84MT53

Project:

NPDES

SDG: Analysis:

IPB2643 Metals

DATA VALIDATION REPORT

#### 2.4 BLANKS

Selenium, antimony, thallium, and silver were detected in a bracketing CCB at 1.2, 0.45, 0.27, and 0.10  $\mu$ g/L, respectively; therefore, antimony, selenium, thallium, and silver detected in Outfall 018 were qualified as estimated nondetects, "UJ." Boron was reported in method blank 6C03084-BLK1 at -13.2  $\mu$ g/L; therefore, boron detected in Outfall 018 was qualified as estimated, "J." No further qualifications were required.

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

ICSA and ICSAB analyses were performed in association with the sample in this SDG for the ICP metals. 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 011 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.

**B4MT53** 

Project: NPDES SDG: IPB2643 Analysis: Metals

#### DATA VALIDATION REPORT

# 2.10 INTERNAL STANDARDS PERFORMANCE

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

## 2.11 SAMPLE RESULT VERIFICATION

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

#### 2.12 FIELD QC SAMPLES

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

# 2.12.1 Field Blanks and Equipment Rinsates

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

#### 2.12.2 Field Duplicates

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



17461 Derian Ave., Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A. Collon, 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. Surset Rd. #3, Lab 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 018

Report Number: IPB2643

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

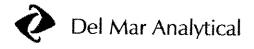
#### **METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifier	s
Sample ID: IPB2643-01 (Outfall 018 - W	ater) - cont.								RW	Wash
Reporting Units: ug/l								where	Qual	Code
Antimony	EPA 200.8	6C02098	0.18	2.0	0.45	1	03/02/06	03/02/06	UJJ	B
Arsenic	EPA 200.7	6C03084	3.8	5.0	ND	1	03/03/06	03/04/06	Ü	-6-00
Beryllium	EPA 200.7	6C03084	0.62	2.0	ND	1	03/03/06	03/04/06	Ĵ	And proceedings
Cadmium	EPA 200.8	6C02098	0.015	1.0	0.20	1	03/02/06	03/02/06	J	DNQ
Chromium	EPA 200.7	6C03084	0.68	5.0	6.5	1	03/03/06	03/04/06	В	2000
Cobalt	EPA 200.7	6C03084	2.0	10	ND	i	03/03/06	03/04/06	U	
Copper	EPA 200.8	6C02098	0.49	2.0	5.9	1	03/02/06	03/02/06	-	
Lead	EPA 200.8	6C02098	0.13	1.0	3.6	1	03/02/06	03/02/06		
Manganese	EPA 200.7	6C03084	3.2	20	110	1	03/03/06	03/04/06		
Mercury	EPA 245.1	6C02097	0.063	0.20	ND	1	03/02/06	03/02/06	Ú	
Nickel	EPA 200.7	6C03084	2.0	10	4.3	1	03/03/06	03/04/06	J 1	DNQ
Selenium	EPA 200.8	6C02098	49.36 L	> 2.0	0.47	1	03/02/06	03/02/06	JT B. J	Bis
Silver	EPA 200.8	6C02098	0.089	1.0	0.11	1	03/02/06		UJ I	8
Thallium	EPA 200.8	6C02098	0.075	1.0	0.089	1	03/02/06	03/02/06	J. 1	J
Vanadium	EPA 200.7	6C03084	3.0	10	9.9	1	03/03/06	03/04/06	J J	DNG
Zinc	EPA 200.7	6C03084	3.7	20	270	1	03/03/06	03/04/06	J	

MA 4/10/06

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

Level IV



17461 Derian Avc., 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 31st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0831 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2643

Sampled: 02/28/06

Received: 02/28/06

#### **METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifie	rs
Sample ID: IPB2643-01 (Outfall 01 Reporting Units: mg/l	8 - Water) - cont.								Rev	10001 1001
Barium Boron Iron	EPA 200.7 EPA 200.7 EPA 200.7	6C03084 6C03084 6C03084	0.0028 0.0080 0.0088	0.010 0.050 0.040	0.041 0.046 4.0	1	03/03/06 03/03/06 03/03/06	03/04/06 03/07/06 03/04/06	and the second	B,DKQ

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

Levec IV

# CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA MECX, LLC Package ID <u>B4PP17</u> 12260 East Vassar Drive Task Order <u>1261.001D.01</u> Suite 500 SDG No. <u>IPB2643</u> Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar - Irvine Date: April 7, 2006 Reviewer E. Wessling Reviewer's Signature Analysis/Method Pesticide/PCBs ACTION ITEMS* Case Narrative Deficiencies 2. Out of Scope Analyses Analyses Not Conducted Missing Hardcopy Deliverables 5. Incorrect Hardeopy MDL for alpha-BHC incorrect on Form I Deliverables **Deviations from Analysis** Qualifications were assigned for the following: Protocol, e.g., - continuing calibration outliers Holding Times GCMS Tune/Inst, Performance Calibration Method blanks Surrogates. Matrix Spike/Dup LCS Field OC Internal Standard Performance Compound Identification Quantitation System Performance COMMENTS* Subcostracted analytical laboratory is not meeting contract anal/or method requirements.

Differences in protocol have been adopted by the laboratory but, no action assinst the laboratory is required.



# DATA VALIDATION REPORT

# NPDES Monitoring Program Quarterly Outfall 018

ANALYSIS: PESTICIDES / PCBs

SAMPLE DELIVERY GROUP: IPB2643

Prepared by

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

IP82643 Analysis: Pest/PCBs

#### 1. INTRODUCTION

Task Order Title:

**NPDES** 

MEC^X Project Number:

1261.001.01

Sample Delivery Group:

IPB2643

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Pesticides

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

Reviewer:

E. Wessling

Date of Review:

April 6, 2006

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

Project:

NPDES

SDG: Analysis: IP82643 Pest/PCBs

Table 1. Sample Identification

The state of the s				and the
Client ID	Laboratory ID	Matrix	COC Method	PARTICO MARCOLOGICS
Outfall 018		Water	608	
	., 52.5.0 0 ;		000	

DATA VALIDATION REPORT

Project: SDG: NPDES

DATA VALIDATION REPORT

SDG: IPB2643 Analysis: Pest/PCBs

#### 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. However the resolution of the individual standard mixture was deemed acceptable by the reviewer. 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  $\pm 0.10$  minutes for both surrogates and target compound calibration standards. A review of the raw data indicated that the laboratory retention time criteria were met for the surrogates and pesticide calibration standards. No qualifications were required.

## 2.3 CALIBRATION

#### 2.3.1 Analytical Sequence

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

84PP17

Project: NPDES SDG: IPB2643 Analysis: Pest/PCBs

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% or had an  $r^2$  greater than 0.995 and the %RSDs for all pesticide target compounds were  $\leq$ 10% or had an  $r^2$  greater than 0.995. No qualifications were required.

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 ≤15% on both columns. No further qualifications were required.

#### 2.3.3 Continuing Calibration

The pesticide and Aroclor analyses of sample Outfall 012 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 ≤15% for all calibrations with the exception of beta-BHC, delta-BHC, DDD, DDE, DDT, dieldrin, endosulfan I, endosulfan II, endosulfan sulfate, endrin, endrin aldehyde, endrin ketone, heptachlor epoxide, and methoxychlor in one of the ending pesticide CCVs. The aforementioned target compounds were qualified as estimated nondetects, "UJ," in sample Outfall 018. 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

Two blank spike/blank spike duplicate pairs (6C05031-BS1/BSD1 for pesticides and 6C05031-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 within the QC limit of ≤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.

84PP17

Project.

NPDES

SDG: Analysis: IPB2643 Pest/PCBs

DATA VALIDATION REPORT

#### 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 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.

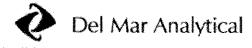
Project: NPDES SDG: IP82643

DATA VALIDATION REPORT

SDG: IP82643 Analysis: Pest/PCBs

# 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. The MDL for alpha-BHC was incorrectly listed on the sample Form I. The MDL was corrected by the reviewer. No qualifications were required.



17461 Denise Ave., Suite 100, Index. CA 92614 (949) 261-1022 (AX (949) 260-)247 1874 E. Cookey Or., Solite A. Colton, CA 92324 (909) 170-4667 FAX (909) 178-1646 9830 South STRESL, Some 8-120, Phoenic, AZ 05044 (480) 785-0943 (AX 0400) 785-0671 25.20 E. Sasset Rd. #3, Las Vegas, NV 891.20 (702) 798-3620 FAX (702) 718-3621

MWrl-Pasadena/Boeing

Attention: Bronwyn Kelly

Project iD: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPB2643

Sampled: 02/28/06

Received: 02/28/06

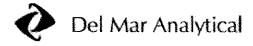
## ORGANOCHLORINE PESTICIDES (EPA 608)

			MDL	Reporting	Sample	Dilution	Date	Date	Data	
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifier	<b>3</b>
Sample ID: IPB2643-01 (Outfall 018 - Wate	er'i overet								Zai _ ;	*avî
Reporting Units: ug/l	or, conte								and 1	CALL
Aktrin	EPA 608	6C05031	0.029	0.095	ND	0.952	03/05/06	03/07/06		ere a
alpha-BHC	EPA 608	6C05031	0.00047	0.0095	ND	0.952	03/05/06	03/07/06	\	11
beta-BHC	EPA 608	6C05031	0.014	0.095	ND	0.952	03/05/06	03/07/06	in the	<b>S</b>
delta-BHC	EPA 608	6C05031	0.019	0.19	ND	0.952	03/05/06	03/07/06	, A )	C
gamma-BHC (Lindane)	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	J.	4.0
Chlordane	EPA 608	6C05031	0.19	0.95	ND	0.952	03/05/06	03/07/06	i.	September 1
4,4-DDD	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	ú.)	10
4,4'-DDE	EPA 608	6C05031	0.024	0.095	ND	0.952	03/05/06	03/07/06	Wà	Com
4,4°-DDT	EPA 608	6C05031	0.033	0.095	ND	0.952	03/05/06	03/07/06	LA 3	C
Dieldrin	EPA 608	6C05031	0.014	0.095	ND	0.952	03/05/06	03/07/06	(A-3	C
Endosulfan I	<b>BPA 608</b>	6C05031	0.014	0.095	ND	0.952	03/05/06	03/07/06	د است	Č.
Endosulfan (I	EPA 608	6C05031	0.038	0.095	ND	0.952	03/05/06	03/07/06	ه این	
Endosulfan sulfate	EPA 608	6C05031	0.019	0.19	ND	0.952	03/05/06	03/07/06	W. 3	, Same
Endrin	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	W.S	C.
Endrin aldehyde	EPA 608	6C05031	0.043	0.095	ND	0.952	03/05/06	03/07/06	U. D	. 6.
Endrin ketone	EPA 608	6C05031	0.019	0.095	ND	0.952	03/05/06	03/07/06	43	· John
Heptachlor	EPA 608	6C05031	0.029	0.095	ND	0.952	03/05/06	03/07/06		
Heptachlor epoxide	EPA 608	6C05031	0.029	0.095	ND	0.952	03/05/06	03/07/06	خد کھی	Ç.
Methoxychior	EPA 608	6C05031	0.033	0.095	ND	0.952	03/05/06	03/07/06	us	Cam
Toxaphene	EPA 608	6C05031	1.4	4.8	ND	0.952	03/05/06	03/07/06	Ā	
Surrogate: Decachlorobiphenyl (45-120%)					67%		. , .		-	
Surrogate: Tetrachloro-m-xylene (35-120%)					66 %					

Del Mar Analytical - Irvine Michele Chamberlin Project Manager







17461 Doning Ave., Suite 1865, Irvine, CA 92614 (949) 261-1622 FAX (949) 260-1212 1014 E. Chodey De., Suite A. Colton, CA 92374 (600) 170-4667 FAX (600) 170-1046 9830 South 314 St., Salte 8-120, Phoenix, AZ 85514 (480) 783-0743 FAX (480) 783-1851. 2320 E. Summer Ref. #3, Lies Vergas; NW 899200 (202) 798-3629 FAX (702) 798-3621

MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Report Number: 1PB2643

Sampled: 02/28/06

Pasadena, CA 91101 Attention: Bronwyn Kelly Received: 02/28/06

## **TOTAL PCBS (EPA 608)**

			MDL	Reporting	Sample	Dilution	Date	Date	Data	
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	<b>Qualifiers</b>	0
Sample ID: IPB2643-01 (Outfall 018 - Wat	er) - cont.								2 3 2	
Reporting Units: ug/l								C		V Miles
Aroclor 1016	EPA 608	6C05031	0.19	0.95	ND	0.952	03/05/06	03/06/06		
Aroclor 1221	EPA 608	6C05031	0.095	0.95	ND	0.952	03/05/06	03/06/06	Mann cycles	
Aroclor 1232	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	VATABLE AND A STATE OF THE STAT	
Aroclor 1242	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	(va)	
Aroclor 1248	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	Acceptable of the Control of the Con	
Arocior 1254	EPA 608	6C05031	0.24	0.95	ND	0.952	03/05/06	03/06/06	Substitute and the substitute an	
Arocior 1260	EPA 608	6C05031	0.38	0.95	ND	0.952	03/05/06	03/06/06	V I	
Surrogate: Decachlorobiphenyl (45-120%)					107.%				Savysättälive	





# CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MECX		Package ID:	B4RA3
12269 East Vassar Drive		707	1261,001D.05
Aurora, CO 80014		SDG No.:	Multiple
	No.	of Analyses:	8
Laboratory: Ebeline		Date: April 1	2006
Reviewer. P. Meeks		Reviewer's Si	gnature
Analysis/Method: Radionuc	lides	T. MO	
ACTION ITEMS ²			
. Case Narrative			
Deficiencies		nectoral to the production of the techniques of the state	okasiin kun muhakain minkain makain masaya maka muun muu muu minkain kiri maka jopugu sa ka muu ka ja ja ja ja
2. Out of Scope Analyses		to intermediate and a state of the state of	
	art het het koordinate koordinate ka	·	<del></del>
3. Analyses Not Conducted			
4. Missing Hardcopy			with the whole the contract of the contract
Deliverables		**************************************	<del>de la companya da /del>
,	The state of the s		
5. Incorrect Hardcopy	etti <del>kiloninin kutulin kiloti</del> miradika kilogopa manusususopa <del>lan neessa palantii, eessa siida kiloti</del> mat	······	er Grand den Marian den Maria (de Maria de Servicio de Maria de Maria de Maria de Maria de Maria de Maria de M Caracterista de Maria de Maria (de Maria de Mari
Deliverables	er i i i i i i i i i i i i i i i i i i i	CONTRACTOR OF THE CONTRACTOR O	
			<del>alamatek ingani daga ya salama kana kana salama salama kana salama kana salama kana salama kana kana kana banda</del>
6. Deviations from Analysis			
Protocol, e.g.,	Qualifications were applied for	r exceeded hold	ing times and low
Holding Times	detector efficiencies.		
GC/MS Tune/Inst. Performance			
Calibration			
Method blanks			
Surrogates		t tigat ambay tid kaligat alah seber 2002 menjadi seberanjan kaliga menjadi seberanjan kaliga menjadi seberanj	
Matrix Spike/Dup LCS		i dan Sand (nameri risinanjan pupu nya marana napiona jeografi nya m	
Field QC	. Transcent to the financial control of the fi	anieministra en en el control de la cinitate de la cinitate de la cinitate de maria de la cinitate del cinitate de la cinitate del cinitate de la cinitate del cinitate del cinitate de la cinitate del cinitate del cinitate de la cinitate de la cinitate del cinitate de la cinitate del cinitate d	Taman najna naj
Internal Standard Performance			inimmeriammeniaiseisen Canadayus productus partis in anno animaliseisen maiseisen maiseisen maiseisen maiseise
Compound Identification  Quantitation	T. der Wert für der State		
System Performance			etimineistäminet ottaaniksi oli olimitti on manna alajan ja puota yhteesi oli oli oli oli oli oli oli oli oli o
COMMENTS			and and a community of the complete of the com
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	and the second s	t de la companya del la companya de  la companya de	keminin dan dan dan dan dan dan dan dan dan da
* Subcontracted analytical laboratory is not:	Treeting contract and/or method require	nampatai kustustus annoippiai patai kastus kuni annoi kupu apaa apaa apaa aliinta kuni. Kan ta	<del>viinos mitirial in interior i</del>
Differences in protocol have been adopted	by the laboratory but no action agains	d the laboratory is re	csired.



# DATA VALIDATION REPORT

# NPDES Sampling Multiple Outfalls

ANALYSIS: RADIONUCLIDES

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

Prepared by

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

**NPDES** 

Multiple

Rads

Analysis:

#### 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.

Water

Matnx: Analysis:

Radionulcides

P. Costa

QC Level: Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

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.

NPOES Multiple Rads Project SDG: Analysis:

Table 1. Sample identification

477				
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  $4\pm2^{\circ}$ C. No temperature information was provided by Eberline, the subcontract laboratory; however, as it is not necessary to chill radiological samples, no qualifications were required. The 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.

B4RA3 4 Revision 0

# 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.

#### ANALYSIS RESULTS

- 1			ringi ke mininda da talassati da talah merilangan panyar yang persahan se basilan da da tidas berjah									
2000	ŝog	<u>\$459</u>	Client	<u> 282-288-2825</u>								
-	Work Order		CANEZAGE									
	Received Date	03/02/06		<b>2.</b>								
9												

Citent Sample ID Outfall 00)	Section 12	Collected Analyzed		Results : 10	9214 <b>2</b>	The second of the second	Rev   Out
1782637-01	6960+001	02/28/06 03/06/06 03/06/06	GrossAlpha Gross Bata	7.69 ± 2.6	pci/L	1.98 2.06	7 2.4

Level V

Certified by A CA

Page 1

## ANALYSIS RESULTS

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ordened ive	edg	8661	Client	DEC. MAR ANAL
ai a da d	Work Order	R603017-01	Contract	
inal Grandelia (c	Received Date	03/02/06	<b>X</b> atrix	To the second se

Client Sample ID Outfall 002	Lab Sample ID	Collected	Analyzed	March 1 de 18 de 1	Sesults _ 22	Unit 2	in a size wheel work or having	Red Col
IPB2639-01	8661-901	02/26/06	03/06/06	GrossAlpha	2.50 ± 1.6	pCi/L	1.93	TRIM
			03/05/05	Gross Beta	4.50 ± 1.4	pCi/L	1.8%	
								Eus. Nopolonia

LEVEL IV

Certified by FF Report Date 03/12/06

# ANALYSIS RESULTS

- 3		Carlot and the control of the contro						
			Client					
	Work Ordes		Contract	222323222				
	Received Date	03/02/05	Matrix	WAS EX				
8								

Client	Lab							
SAME IN	<u> </u>	Collected	ADALYECG	<u> Muclide</u>	Results i IC	<u>Dnlt</u>	MOA.	200   Quel
Outfall on								QUELICOSA
1982641-01	8662-001	02/28/06	03/06/06	GrossAlpha	5.24 ± 2.0	pCI/L	186	T R.A
			99/96/66	Gross Beta	7.50 ± 1.7	pCi/L	2.18	
								**

Certified by No Committee 
## ANALYSIS RESULTS

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erita de la compania del la compania de  la compania de  la compania de la compania de la compania del compania del compania d	SDG	8653	Client	DEL MAR ANAL					
0.000	Work Order	8603019-01	Contract	PROJECTE 1992643	-				
abelit/Myter	Received Date	93/92/95	Matrix						
į									

Client Sample ID OUT-FAIL	ÖVƏ	Lab Sample ID	Collected	<u> Postasa</u>	Nuclide	Roswits : Mo	Unita	M. Carlotte Contains	Rev	
IP\$2643-01		8663-001	02/28/06	03/06/06	GrossAlpha Gross Seta	1.50 g 1.1 5.59 ± 1.4	pCi/L pCi/L	1.40	-	P. W.

LEVEL IV

Certified by W.E. C. Raport Date 03/11/06

#### ANALYSIS RESULTS

SDG 8664 Client DEL MAR ANAL
Work Order R603020-01 Contract FROJECTS 1P87645
Received Date 03/02/06 Matrix WATER

| Client | Lab | Sample ID | Sample ID | Collected Analyzed Ruclids | Results : 30 Units | Real | Code | Co

Level IV

Certified by 75 - C.

Report Date 03/12/06

Page 1

#### ANALYSIS RESULTS

ı								
combinostos	See	8665	Client	DEL LAKE ANAL.				
ngoweji)	Work Order	200001-01	Contract	<u> </u>				
yekîdiği (A	Received Date	53/03/96	制造な変量を	MAN SE - A CO				
ì,								

Client Semis in ONFALL 007	Sample ID	Collected	Analyzed	<u>Moclide</u>	<u> </u>	Duits	XCA	Rev   Qual
IFB2647-01	3665-001	02/28/6%	03/06/06	Gross Bets	2.56 ± 1.2	pCi/L pCi/L	1.09	J. R. d.

Certified by APLICS
Report Date 53/12/06
Page 1

# ANALYSIS RESULTS

SDG 8666	Client DEL MAR ANAL	
Work Order 2603022-02	Contract PROJECTS	IPB2668
Received Date 03/02/06	Matrix MATER	

Client	del							***
Out-fall co	Sample ID	Collected	Analyzed	<u>Auclide</u>	Results i 20		MOA	Key IQU
I983648-0I	8665-001	02/28/06		Grosskipha	1.01 ± 1.6	pci/L	2.02	<u> </u>
			03/06/06	Gross Beta	23.7 * 2.2	pCi/L	1.92	7

Level IV

Certified by 25 CC Report Date 01/11/05
Page 1

## ANALYSIS RESULTS

Client  Semple ID  Out fall ato	Lab Sample 10	Collected	<u>Andly sod</u>	<u> </u>		<u> </u>	<u> </u>	Kw Qui	
1982656-01	8687-001	02/28/06	03/06/06	GrossAlpha Gross Beta	6.532 ± 8.90	pCi/L pCi/L	1.55	03	

Level W

Certified by The Conference Date 02/12/06
Report Date 02/12/06

# CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA MECX_LLC Package ID B4SV32 12260 East Vassar Drive Task Order _1261.001D.01 Suite 500 SDG No. <u>IPB2643</u> Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar - Irvine Date: April 10, 2006 Reviewer E. Wessling Reviewer's Signature Analysis/Method Semivolatiles ACTION ITEMS* Case Narrative Deficiencies 2. Out of Scope Analyses 3. Analyses Not Conducted 4. Missing Hardcopy Deliverables 5. Incorrect Hardcopy Deliverables 6. Deviations from Analysis Qualifications were assigned for the following: Protocol, e.g., - calibration outlier Holding Times - detects between the RL and MDL qualified as estimated, DNO GCMS Tune/last, Performance -benzoic acid and benzidine rejected for 0% BS/BSD recovery -Dimethyl phthalate estimated for low BS/BSD recovery Calibration Method blanks Surrogates Matrix Spike/Dup LCS Field (C Internal Standard Performance Compound Identification Ouantitation System Performance COMMENTS* Subcontracted analytical laboratory is not meeting contract and/or method requirements.

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



# DATA VALIDATION REPORT

# NPDES Monitoring Program Annual Outfall 018

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP IPB2643

Prepared by

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

Project: NPOES SDG: PB2643 Analysis: SVOC

#### DATA VALIDATION REPORT

#### 1. INTRODUCTION

Task Order Title:

**NPDES** 

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

IPB2643

Project Manager:

P. Costa Water

Matrix.

Semivolatiles

Analysis: QC Level:

No. of Samples:

Level IV

1 Ö

No. of Reanalyses/Dilutions.

Reviewer.

E. Wessling

Date of Review:

April 10, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the MECX Data Validation Procedure for Semivolatile Organics (DVP-3, Rev. 0), EPA Method 625, and the National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form 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.

949V32

Project: NPDES SDG: IPB2643 Analysis: SVOC

#### DATA VALIDATION REPORT

Table 1. Sample Identification

police and the control of the contro	Seekinterbalanta (maringan)			
	1	A STATE OF THE PERSON AND PROPERTY OF THE PERSON AS A STATE OF THE PERS		
				-
Client ID	Laboratory ID	Matrix	COC Method	- makelanian
Outfall 018	IPB2643-01	Water	625	

Project: NPDES SDG: IPB2643 Analysis: SVOC

DATA VALIDATION REPORT

#### 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

The sample in this SDG was received at the laboratory within the temperature limits of 4°C ±2°C at 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 r² values ≥0.995 in the respective initial calibrations. All manual integrations were reviewed by the validator and considered acceptable. The continuing calibration associated with the sample analysis was analyzed 03/09/06. The %Ds for all target compounds were ≤20% in the respective continuing calibrations. No qualifications were required.

84\$VQ 3 Revision ()

Project:	NPDES
SDG:	IPB2643
Anahesis	SVOC

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 ≥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 018. 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 Bianks and Equipment Rinsates

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

845VX2 4 Finding

Project: NPDES SDG: IPB2643 Analysis: SVOC

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 limit was supported by the low point of the initial calibration and the laboratory MDLs. Results were reported in µg/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.

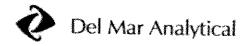
#### 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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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\$7466 Continue Anno, Sindio 2006, Bridon, CA 12062 (1949) INS-1922 FAX (1949) INS-1927 1874 E. Condry Din, Sindio A. Codino, CA 12222 (1949) \$724-4667 FAX (1949) \$727 (1946) 18830 Sonath \$74.50, Sindio B. T. No. Francisco, AZ 155644 (1948) 725-72645 FAX (1949) FAX (1956) 25288 E. Sindio M. A.L. End Vingue, 189 (1972) (1946-1652) FAX (1952-746-1652)

MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2643

Sampled: 02/28/06

Attention: Bronwyn Kelly

Received: 02/28/06

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

Analyte	Methed	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor		Date Analyzed	Data Qaalifiers
Sample ID: IPB2643-01 (Outfall 018	- Water)							,	Barrer .
Reporting Units: ugft								ř	to person
Acceaphthene	EPA 625	6C06060	0.096	0.48	ND	0.962	03/06/06	store street see 2000	
Acenaphthylene	EPA 625	6C06060	0.096	0.48	ND	0.962	03/06/06	03/09/06	G. a
Aniline	EPA 625	6C06060	2.8	9.6	ND	0.962	03/06/06	03/09/06	:
Anthracene	EPA 625	6C06060	0.080	0.48	ND	0.962	03/06/06	03/09/06	1
Benzidine	EPA 625	6006060	3.1	4.8	ND	0.962	03/06/06	03/09/06	
Benzoic scid	EPA 625	6C06060	3.6	19	ND	0.962	03/06/06	03/10/06	<u> </u>
Benzo(a)anthracene	EPA 625	6006060	0.037	4.8	ND	0.962	03/06/06		W. 12
Везго(а)ругене	EPA 625	6C06060	0.13	1.9	ND	0.962		03/09/06	, a
Benzo(b)fluoranthene	EPA 625	6C06060	0.048	1.9	ND	0.962	03/06/06	03/09/06	
Benzo(g,h,i)perylene	EPA 625	6006060	0.057	4.8	ND	0.962	03/06/06 03/06/06	03/09/06	
Benzo(k)fluoranthene	EPA 625	6C06060	0.051	0.48	ND	0.962		03/09/06	
Benzyl alcohol	EPA 625	6006060	0.20	4.8	ND	0.962	03/06/06	93/09/06	
Bis(2-chloroethoxy)methane	EPA 625	6C06060	0.069	0.48	ND	0.962	03/06/06	03/09/06	
Bis(2-chloroethyl)ether	EPA 625	6C06060	0.081	0.48	ND	0.962	03/06/06	03/09/06	
Bis(2-chloroisopropyl)ether	EPA 625	6C05060	0.11	0.48	ND	0.962	03/06/06	03/09/06	*
Bis(2-ethylhexyl)phthalate	EPA 625	6006060	1.1	4.8	ND	0.962	03/06/06	03/09/06	
4-Bromophenyl phenyl ether	EPA 625	6C06060	0.12	0.96	ND	0.962	03/06/06	03/09/06	
Butyl benzyl phthalate	EPA 625	6006060	0.33	4.8	1.4	0.962	03/06/06	03/09/06	§*
4-Chioroaniline	EPA 625	600000	0.19	1.9	ND	0.962	03/06/06	03/09/06	1 3000
2-Chioronaphthulene	EPA 625	6CG6060	0.057	0.48	ND	0.962	03/06/06	03/09/06	s.d
4-Chloro-3-methylphenol	EPA 625	6C06060	0.33	1.9	ND	_	03/06/06	03/09/06	
4-Chiorophenyi phenyi ether	EPA 625	6006060	0.054	0.48	ND	0.962	03/06/06	03/09/06	•
2-Chlorophenol	EPA 625	6006060	0.12	0.96	ND	0.962	03/06/06	03/09/06	:
Chrysene	EPA 625	6C06060	0.069	0.48	ND .	0.962	03/06/06	0.5/09/06	ţ
Dibenz(a,h)anthracene	EPA 625	6006060	0.080	0.48	ND	0.962	03/06/06	03/09/06	i.
Diberzofuran	EPA 625	6C06060	0.072	0.48	ND ND	0.962	03/06/06	03/09/06	
Di-n-butyl phthalate	EPA 625	6C06060	0.25	1.9	ND ND	0.962	03/06/06	03/09/06	
1,2-Dichiorobenzene	EPA 625	6006060	0.11	0.48		0.962	03/06/06	03/09/06	
1.3-Dichlorobenzene	EPA 625	6C06060	0.12	0.48	ND	0.962	03/06/06	0.3/09/06	
1,4-Dichlorobeazese	EPA 625	5C06060	0.048	0.48	ND	0.962	03/06/06	05/04/06	*
3.3-Dichlorobenzidine	EPA 625	6006060	0.89	4.8	ND ND	0.962	03/06/06	03/09/06	4
2,4-Dichlorophenol	EPA 625	6C16060	0.20	1.9		0.962	03/06/06	03/09/06	
Diethyl phthalate	EPA 625	6006060	0.12	0.96	ND.	0.962	03/06/06	03/09/96	
2.4-Dimothylphenol	EPA 625	6C06060	0.30	1.9	ND	0.962	03/06/06	03/09/06	\$
Disnethyl phthalate	EPA 625	9006060	0.078	0.48	ND	0.962	03/06/06	03/09/66	
4.6-Director-2-methylphonal	EPA 625	(C06060	0.37	4.8	ND	0.962	03/06/06	03/09/06	J. 13 4
2.4-Dinitrophenol	EPA 625	(C)(6)(6)	2.6		N(I)	0.962	03/06/06	03/09/06	\$ \$
2.4-Destrois locac	E#A 625	6C06A60	0.22	4.8 4.8	NI)	0.962	03/06/06	03/09/06	
2,6-Dinitrotolisese	EPA 625	6C06060	0.23		NI)	0.962		03/09/06	
Di-a-cayl phinalate	EPA 625	9C06060	0.16	4.8	ND			03/09/06	
1.2-Diphenythydrazine/Azobenzene	EPA 623	6C06060	0.084	4.8	ND			03/99/06	:
Del Mar Analysical India	wine of the things.		POULU	0.96	ND	0.962	03/06/06	03/09/06	•

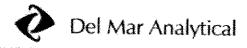
Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager

You results perhasically in the complex located in the laboratory. This report little that the reproductions except in fall, without written permission from that star Analysical.

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17461 Cention Arm., Solite 100, Indian, CA 92614, 1949 261-1002, Year (949 260-1) 1991 4 E. Cooley Dr., Salte A. Colline, Ca 93324 (2009) 170-4667 (AX (200)) 170-4667 9830 South Stag St., Some # 126, Phonomic, AZ https://doi.org/10.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14.100/14 2530 E. Summer Md. #1, East Virgon, MM 89120 (701) 798-1920 (14) (701) 798-1921

MWH-Pasakssa/Bucspg

Attention: Bronwyn Kelly

Project iD: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 9[10]

Report Number: IPB2643

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: IPB2643-01 (Outfall 018 - Wat	er) - cont.								See N
Reporting Units: ug/l	,								
Fluoranthese	EPA 625	600000	0.086	0.48	ND	0.962	03/06/06	* ********	10 B
Fluorene	EPA 625	6C06060	0.072	0.48	ND	0.962	03/06/06	03/09/06 03/09/06	\$4,5 g
Hexachlorobenzene	EPA 625	6C06060	0.12	0.96	ND	0.962	03/06/06	03/09/06	1
Hexachlorobutadiene	EPA 625	6C06060	0.37	1.9	ND	0.962	03/06/06	03/09/06	
Hexachlorocyclopentadiene	EPA 625	6C06060	1.7	4.8	ND	0.962	03/06/06		
Hexachloroethase	EPA 625	6C06060	0.49	2.9	ND	0.962	03/06/06	03/09/06 03/09/06	
Indeno(1,2,3-cd)pyrene	EPA 625	6C06060	0.18	1.9	ND	0.962	03/06/06		
Isophorone	EPA 625	6C06060	0.057	0:96	ND	0.962	03/06/06	03/09/06	
2-Methylnaphthalene	EPA 625	6C06060	0.12	0.96	ND	0.962	03/06/06	03/09/06	photos and a
2-Methylphenol	EPA 625	6C06060	0.27	1.9	ND	0.962	03/06/06	03/09/06	77
4-Methylphenol	EPA 625	6C06060	0.19	4.8	ND	0.962	03/06/06	03/09/06 03/09/06	474.6
Naphthalene	EPA 625	6C06060	0.12	0.96	ND	0.962	03/06/06		Amon nig
2-Nitroaniline	EPA 625	6C06060	0.17	4.8	ND	0.962	03/06/06	03/09/06	***
3-Nitroaniline	EPA 625	6C06060	0.34	4.8	ND	0.962	03/06/06		X.
4-Nitroaniline	EPA 625	6C06060	0.47	4.8	ND	0.962	03/06/06	03/09/06	
Nitrobenzene	EPA 625	6C06060	0.096	0.96	ND	0.962	03/06/06	03/09/06	
2-Nitrophenol	EPA 625	6C06060	0.22	1.9	ND	0.962	03/06/06	03/09/06	Inches de
4-Nürophenol	EPA 625	6C06060	0.70	4.8	ND	0.962	03/06/06	03/09/06	STAND OF THE STAND
N-Nitrosodimethylamine	EPA 625	6C06060	0.21	1.9	ND	0.962	03/06/06	03/09/06	Mary con-
N-Nitroso-di-n-propylamine	EPA 625	6C06060	0.17	1.9	ND	0.962	03/06/06		district.
N-Nitrosodiphenylamine	EPA 625	6C06060	0.074	0.96	ND	0.962	03/06/06	03/09/06	
Pentachlorophenol	EPA 625	6C06060	0.75	1.9	ND	0.962	03/06/06	03/09/06	
Phenanthrene	EPA 625	6C06060	0.068	0.48	ND	0.962	03/06/06	03/09/06	
Phenol	EPA 625	6C06060	0.13	0.96	ND	0.962	03/06/06	03/09/06	
Pyreac	EPA 625	6C06060	0.057	0.48	ND	0.962		03/09/06	
1,2,4-Trichlorobenzene	EPA 625	6C06060	0.096	0.96	ND	0.962	03/06/06	03/09/06	
2,4,5-Trichiorophenol	EPA 625	6C06060	0.072	1.9	ND	0.962	03/06/06	03/09/06	
2,4,6-Trichlorophenol	EPA 625	6C06060	0.096	0.96	ND	9.962 9.962	03/06/06	03/09/06	
Surrogate: 2-Fluorophenol (35-120%)		4-4-4-6-6	6.079	Q.7 <b>Q</b>	54 %	9.702.	03/06/06	03/09/06	3
Surrogate: Phenol-d5 (45-120%)					64 %				
Surrogate: 2,4,6-Tribromophenol (50-125%)					66 %				
Surrogate: Narobenzene-d5 (45-120%)					75 %				
Surrogate: 2-Fluoroisiphenyi (45-120%)					62 %				1.
Surrogate: Terphenyl-di 4 (45-135%)					72 %				
					8 to 19				



## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MECX		Package ID:	B4TF7
12269 East Vassar Drive		Task Order:	
Aurora, CO 80014		SDG No.:	IPB2643
	No	of Analyses:	1
Laboratory: Del Mar Analyti	cal	Date: April 7,	2006
Reviewer: P. Meeks		Reviewer's Si	gnature
Analysis/Method: EFH/GRO		I P. MOS	<b>&gt;</b>
ACTION ITEMS*			
. Case Narrative	·		
Deficiencies			
2. Out of Scope Analyses			
		·	
3. Analyses Not Conducted	is distribute and single state of the state		takan kepuncahan termakan kepungan kantan pertambahan kebantan terbahan kepuncah kebantan bahan di sebagai keb
	Make with the first to be minused 4.4 or in motivation that the classic work to relate the first which the security of the contributions of the contribution of the co		
4. Missing Hardcopy			
Deliverables			e majorka Liberta kata mje općina je kojani mirovjetinje na svejanike je meta i najvijanje pokreja njegovje njegovje s
			·
5. Incorrect Hardcopy			is sometimes of the contract
Deliverables			
6. Deviations from Analysis			
		**************************************	**************************************
Protocol, e.g., Holding Times	94, plant 197, 1979 bet 1988 i Strantis I Fridancia de Sentis de Sentis de la Sentis Departie de la mentra de Sentis	r yayan da kakisina er medi ekisanan erek anariy r yeyina erekimen ere	annan en
GC/MS Tune/Inst. Performance	<del>ՠ</del> ՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟՟		
Calibration	Printerior en entre de sensible en la constantación de la constant		
Method blanks	ensistent valuation en en particular de la constant		**************************************
Surrogates			Stance) proposition and processor processor places of the section
Matrix Spike/Oup LCS		***************************************	
Field OC		······································	
Internal Standard Performance		<del>lyptimises (to the control of the c</del>	
Compound Identification	والمراجعة		<del></del>
Quantitation	edinimėje, dažinima marmitinimas, jaida iš įminima marminis (palijas pagamaram minis jardy jūnas paš įmam.	بسيبين والموافسة معمورة والتوافه الموافعة المعاسمة معاملة معالية الموافعة المعاسمة	i <del>na na dalam kalaga da kaja ili na tina</del> kasa tanan <del>na na tini n</del> in-andan panda <del>amaning pangangan ana na n</del> a
System Performance	ike jiin eer remaanda ka	e succes so miserim implembali priminen menensul kansana communication	alanda karin k Karin karin ka
	ptable as reviewed.	enementes en de financia de la comunicación de la constitución de la constitución de la constitución de la cons	<del>ika ina dani dani dani dani dani dani dani</del>
	n gen vermen ett til men i mattente er men till 1900 til til til til til till till til til t	o de salvado de de de la composição de salvado esta esta de la composição de la composição de la composição de Composição de la composição	anisanda masinda anisanda da sanada alika kata da sanada anisanda anisanda anisanda anisanda anisanda anisanda Anisanda anisanda anisanda da sanada anisanda anisanda anisanda anisanda anisanda anisanda anisanda anisanda a
ere terber tertet er bester det er det er de	kantan laingal pemerimen mempelah dalam milay mengengan kertah laingan anta amah mendepingan yang seperan berbumpan	ak fullman osa eminimise eti esisteminasi suktioniseksi enimenaksi esitteeti enimeteleeti enimeteleeti enimete A	eersekselvelvelvelvelvelvelseriserse saansinal intimiserise laten var sersen seesen eerse var eerse bedoorween teelsevoors
		and the state of t	ar for an all an all all fails and an area and an area and an area and an area and an all and area and an area
Subcontracted analytical laboratory is not meeting			
Differences in protocol have been adopted by the I	aboratory but no action agains	at the laboratory is re	quired.



# DATA VALIDATION REPORT

# NPDES Monitoring Program Annual Outfall 018

ANALYSIS: TOTAL FUEL HYDROCARBONS
SAMPLE DELIVERY GROUP IPB2643

Prepared by

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

Project: NPDES SDG IPB2643 Analysis: TFH

DATA VALIDATION REPORT

## 1. INTRODUCTION

Task Order Title:

**NPDES** 

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

IP82643

Project Manager:

P. Costa

Matrix

Water.

Analysis:

TFH/EFH

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions: Reviewer:

P. Meeks

Date of Review:

April 8, 2006

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

Project:

NPDES

SDG: Analysis: IPB2543 TFH

DATA VALIDATION REPORT

Table 1. Sample Identification

	ga kirindin mente ama daka ilik kiringgi di semiyin dayan dayan kanasa daka di sebagai sebagai sebagai sebagai		
Client ID	Laboratory ID	Matrix	COC Method
Outfall 018	IPB2643-01	Water	8015B & 8015M

Project: NPDES SDG: (PB2643 Analysis: TFH

DATA VALIDATION REPORT

#### 2. DATA VALIDATION FINDINGS

## 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

## 2.1.1 Sample Preservation, Handling, and Transport

The 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  $\leq$ 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 both GRO and EFH analyses. No 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.

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Project:	NPDES
SDG:	IP62643
Amakonia	7

#### DATA VALIDATION REPORT

## 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 ≤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 018. As GRO (C4-C12) was not detected above the MDL in Outfall 018, trip blank review was not necessary. No qualifications were required.

## 2.7.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

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<b>⇔</b> (**)	a	Characteristics of the

Project: NPDES SDG: IPB2643 Analysis: TFH

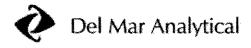
DATA VALIDATION REPORT

## 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 calibrations and the laboratory MDLs. Results were reported in mg/L (ppm). No qualifications were required.



17481 Design Ave., Suite 1911, Irvêne, CA 92614 (949) 361-1922 (AS 6949) 360-1927 1914 E. Cooley Ch., Suite A., Collein, CA 92324 (969) 378-4667 (AN 9899) 376 (1946) 9830 Soudi Nin St., Suite 8-126, Phoenix, AZ 85644 (486) 785-1945 (AX 648) 785-665 2520 E. Suiser Rd. #3, Lie Veges, NV 89433 (702) 795-3669 (AX 1702) 795-1669

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Sampled: 02/28/06

Pasadena, CA 91101

Report Number: IPB2643

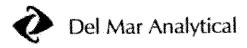
Received: 02/28/06

## EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

			MDL	Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers
Sample ID: IPB2643-01RE1 (Outfall 018	- Water) - cont.								And Cont
Reporting Units: mg/l EFH (C13 - C22)	EPA 8015B	6007098	0.043	0.48	ND	0.952	03/07/06	03/08/06	Appendix of part of the Environment of the Environm
Surrogate: n-Octacosane (40-125%)	24 13 90 576	<b>V</b> UNTATO	0.945	W. 749	84 %	V24 P eP #iii	200 0 C W	10-20 V/A 2009	***************************************

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

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17465 Derbus Avid, Sidde 100, Brând, CA 92654 (1949) 261-1022 (FAX (1949) 260 1277) 1894 E. Cooley Dr., Suite A. Colton, CA 92324 (1989) 170-4667 (FAX (1979) 470-7070) 1858 South Stat St., Suite 8-120, Phoneir, AZ 85044 (4895 785-6944) (FAX (1985 785-695) 2520 E. South Rd. #3, Lin Vegas, NV 89438 (1935) 796-18628 (FAX (1985) 796-1862

MWII-Pasadena Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Sampled: 02/28/06

Pasadena, CA 91101

Report Number: IPB2643

Received: 02/28/06

Attention: Browwyn Keily

## 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: IPB2643-01 (Outfall 018 - V Reporting Units: mg/l GRO (C4 - C12) Surrogate: 4-BFB (FID) (65-140%)	Vater) - cont. EPA 8015 Mod.	6C06046	0.050	0.10	ND 88 %	ı	03/06/06	03/06/06	Code Code

Dei Mar Analytical - Irvine Michele Chamberlin Project Manager

Level IV

## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA Package ID <u>B4VO41</u> MECX, LLC 12260 East Vassar Drive Task Order <u>1261.001D.01</u> SDG No. <u>IPB2643</u> Suite 500 Lakewood, CO 80226 No. of Analyses 2 Date: April 10, 2006 Laboratory Del Mar - Irvine Reviewer's Signature Reviewer E. Wessling Analysis/Method Volatiles ACTION ITEMS^a Case Narrative Deliciencies 2. Out of Scope Analyses Analyses Not Conducted Missing Hardcopy Deliverables 5. Incorrect Hardcopy Deliverables Qualifications were assigned for the following: Deviations from Analysis - calibration outlier Protocol, e.g., - TICs qualified as estimated nondetects Holding Times GC/MS Tune/Inst. Performance Calibration Method blanks Surrogates Matrix Spike/Dep LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance COMMENTS*

* 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 018

**ANALYSIS: VOLATILES** 

SAMPLE DELIVERY GROUP: IPB2643

Prepared by

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

Project:

MODES

SDG:

IPB2643 **Analysis VOCs** 

## 1. INTRODUCTION

Task Order Title:

**NPDES** 

MEC^X Project Number:

DATA VALIDATION REPORT

1261.001D.01

Sample Delivery Group:

IPB2643

Project Manager:

P. Costa Water

Matrix:

Volatiles

Analysis: QC Level:

Level IV

No. of Samples:

2

No. of Reanalyses/Dilutions:

0

Reviewer:

E. Wessling

Date of Review:

April 10, 2006.

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

Project: SDG:

NPOES IPB2643

DATA VALIDATION REPORT

SDG: IPB2543 Analysis: VOCs

Table 1. Sample Identification

Client ID	Laboratory (D	Matrix	COC Method
Outfall 018	IPB2643-01	Water	624
Trip Blank	IPB2643-02	Water	624

Project: NPDES SDG: IPB2643 Analysis: VOOs

DATA VALIDATION REPORT

#### 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

The samples in this SDG were received at the laboratory within the temperature limits of 4°C ±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 five 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 further 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 r² 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 018. Sample Trip Blank was a field QC sample and required no qualification. The %RSDs were ≤35% or r² 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

B4VO41 3 Revision 0

Project	NPDES
SDG:	iPB2643
Analysis	WWw

DATA VALIDATION REPORT

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

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#### 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 018. No target compounds were detected in the trip blank. No qualifications were required.

B4VO41 4 Revision 0

Project: NPDES SDG: IPB2643 Analysis: VOCs

#### 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  $\pm30$  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  $\mu g/L$  (ppb). No 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: IPB2643

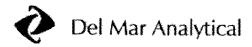
Analysis:

VOCs

## 2.13 SYSTEM PERFORMANCE

DATA VALIDATION REPORT

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



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9839 South 51st St., Swite B-120, Piscentic, AZ 85044 (460) 785-4844 1 (AX (480) 785-486)
3538 E. Suisce Rd. #3, Eas Vegas, NW 89120 (762) 796-1620 EAX (240) 798-1621

MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: 1PB2643

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: IPB2643-01 (Outfall 018 - Wate	in and in the second								
Reporting Units: ug/l	a) - com.								1 1 1 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3
Benzene	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	4
Bromodichloromethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/03/06	J. 18
Bromoform	EPA 624	6C02019	0.32	5.0	ND	1	03/02/06	03/03/06	t T
Bromomethane	EPA 624	6C02019	0.42	5.0	ND	i	03/02/06	03/03/06	254111
Trichiorotriffuoroethase (Freon 113)	EPA 624	6C02019	1.2	5.0	ND	1. 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	į.
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	į.	03/02/06	03/03/06	
Chloromethane	EPA 624	6C02019	0.30	5.0	ND	. 1	03/02/06	03/03/06	
Dibromochloromethane	EPA 624	6C02019	0.28	2.0	ND	1	03/02/06	03/03/06	
1.2-Dichlorobenzene	EPA 624	6C02019	0.32	2.0	ND	* *	03/02/06	03/03/06	
1,3-Dichlorobenzene	EPA 624	6C02019	0.35	2.0	ND	1	03/02/06	03/03/06	Personal
1,4-Dichlorobeazene	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	*	03/02/06	03/03/06	· ·
1,2-Dichloroethane	EPA 624	6C02019	0.28	2.0	ND	ĭ	03/02/06	03/03/06	
1,1-Dichloroethene	EPA 624	6C02019	0.32	3.0	ND		03/02/06	03/03/06	Wagar I
trans-1,2-Dichloroethene	EPA 624	6C02019	0.27	2.0	ND	*	03/02/06	03/03/06	a e e e e e e e e e e e e e e e e e e e
L2-Dichloropropane	EPA 624	6C02019	0.35	2.0	ND	į.	03/02/06	03/03/06	
cis-1,3-Dichloropropene	EPA 624	6C02019	0.22	2.0	ND	*	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	Secretary and
Ethylbenzene	EPA 624	6002019	0.25	2.0	ND	, i	03/02/06	03/03/06	Angelon,
Methylene chloride	EPA 624	6C02019	0.70	5.0	ND	1	03/02/06	03/03/06	1970
1,1,2,2-Tetrachloroethane	EPA 624	6C02019	0.24	2.0	ND	1	03/02/06	03/03/06	l i
Tetrachloroethene	EPA 624	6C02019	0.32	2.0	ND	i.	03/02/06	03/03/06	*
Toluene	EPA 624	6C02019	0.36	2.6	ND		03/02/06	03/03/06	
I, I, I-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	1	03/02/06	03/03/06	
1,1,2-Trichlomethase	EPA 624	6C02019	0.30	2.0	ND	ŀ	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	i.
Xylenes, Total	EPA 624	6C02019	0.52	4.0	ND	*	03/02/06	03/03/06	f j
Surrogate: Dibromofuorometiume (80-120%)	,	•		***.	110%	-	- ma chimos na its	anner the said the first.	5
Surrogate: Totuene-38 (80-120%)					109 %				3
Surrogate: 4-Bromofluorobenzene (80-120%)					90 %				# # # # #







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MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2643

Sampled: 02/28/06

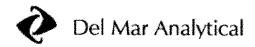
Received: 02/28/06

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

Analyte	Method	Baich	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2643-02 (Trip Blank - Wate	er)								pH *
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	5.5
Bromoform	EPA 624	6C02019	0.32	5.0	ND	1	03/02/06	03/02/06	1
Bromomethane	EPA 624	6C02019	0.42	5.0	ND	1	03/02/06	03/02/06	
Trichiorotrifluoroethane (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	1
Chloroethane	EPA 624	6C02019	0.40	5.0	ND	1	03/02/06	03/02/06	
Chioroform	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	6002019	0.28	2.0	ND	1	03/02/06	03/02/06	
1,2-Dichlorobenzene	EPA 624	6C02019	0.32	2.0	ND	jamme.	03/02/06	03/02/06	1
1,3-Dichknobenzene	EPA 624	6C02019	0.35	2.0	ND	ŧ	03/02/06	03/02/06	3.
1,4-Dichlorobenzene	EPA 624	6C02019	0.37	2.0	ND	1	03/02/06	03/02/06	į
1,1-Dichloroethane	EPA 624	6C02019	0.27	2.0	ND	<b>1</b>	03/02/06	03/02/06	
1,2-Dichloroethane	EPA 624	6C02019	0.28	2.0	ND	*	03/02/06	03/02/06	No.
1,1-Dichloroethene	EPA 624	6C02019	0.32	3.0	ND	į.	03/02/06	03/02/06	adjust trans
trans-1,2-Dichloroethene	EPA 624	6C02019	0.27	2.0	ND	į	03/02/06	03/02/06	2
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	*	03/02/06	03/02/06	-
Methylene chloride	EPA 624	6C02019	0.70	5.0	ND	İ	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	Ĭ	03/02/06	03/02/06	
Toluene	EPA 624	6C02019	0.36	2.0	ND	Ĭ	03/02/06	03/02/06	Ĭ
1,1,1-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	¥	03/02/06	03/02/06	
1,1,2-Trichloroethane	EPA 624	6C02019	0.30	2.0	ND	ľ	03/02/06	03/02/06	1
Trichloroethene	EPA 624	6C02019	0.26	5.0	NĐ	Ł	03/02/06	03/02/06	3
Trichlorofluoromethane	EPA 624	6C02019	0.34	5.0	ND	1	03/02/06	03/02/06	į
Vinyl chloride	EPA 624	6C02019	0.26	5.0	ND	Mare	03/02/06	03/02/06	9
Xylenes, Total	EPA 624	6C02019	0.52	4.0	ND		03/02/06	03/02/06	4
Surrogate: Dibromojhuoromethane (80-120%)	}				110%				
Surrogute: Tolwene-its (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					97 %				







17461 Derign And, Sodie 100, indien, CA 32614 (1949) 261 1022 kar plan 221 (1947) 1844 E. Codiny De, Sodie A, Codine, CA 32324 (1909) 315-4657 kar paper 115 sella 9830 Soudh 514 SL, Sodie 8-120, Phodode, AZ 85844 (1484) 785 (2014) kar (1482) 785 (2014) 2838 E. Soudh Ad. #3, Lad Vegjar, PAV 194120 (1912) 798-1620 KAR (142) 798-1621

MWH-Pasadena/Boeing

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPB2643

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: IPB2643-01 (Outfall 018 - Wate	ar)							85	i Language and the second
Reporting Units: ug/i									
Acrolein	EPA 624	6C02019	4.6	50	ND	1	03/02/06	03/03/06	. ^
Acrylonitrile	EPA 624	6C02019	0.70	50	ND	1	03/02/06	03/03/06	5.00
2-Chloroethyl vinyl ether	EPA 624	6C02019	1.8	5.0	ND	I.	03/02/06	03/03/06	A. 5
Surrogate: Dibromofluoromethane (80-120%	j				110%				
Surrogate: Toluene-d8 (80-120%)					109 %				
Surrogate: 4-Bromofluorobenzene (80-120%)	)				90 %				
Sample ID: IPB2643-02 (Trip Blank - Wate	r):								pH
Reporting Units: ag/l									
Acrolein	EPA 624	6C02019	4.6	50	ND	1	03/02/06	03/02/06	Ç. N
Acrylonitrile	EPA 624	6C02019	0.70	50	ND	1	03/02/06	03/02/06	4,
2-Chloroethyl vinyl ether	EPA 624	6C02019	1.8	5.0	ND	1	03/02/06	03/02/06	
Surrogate: Dibromofluoromethane (80-120%	j				110%				
Surrogate: Toluene-d8 (80-120%)					108 %				•
Surrogate: 4-Bromafluorobenzene (80-120%	)				97 %				





17461 Design Asse, Suite 190, Inview, CA 92614 (1949) 247-1192 (AX 9149) 249-1295 (277-1614 E. Cooley On., Suite A. Colton, CA 92224 (1989) 178-4667 (AX 989) 176-1644. 1850 Sough 53st St., Suite B-128, Process, AZ 85044 (1889) 787-4943 (AX 989) 787-4817 2520 E. Semer Rd. #3, Las Veges, NV 89128 17623 798-16221 (AX 1702) 788-1623

MWH-Pasadena/Boeing

Pasadena, CA 91101

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200

Report Number: 1PB2643

Sampled: 02/28/06

Received: 02/28/06

Attention: Bronwyn Kelly

## PURGEABLES BY GC/MS, TENTATIVELY IDENTIFIED COMPOUNDS

			MDL	Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method	Batch	Limit	Limit	Result	Factor.	Extracted	Analyzed	Qualifiers
Sample ID: IPB2643-01 (Outfall 018 - Reporting Units: og/l	· Water)							- American	
1.2-Dichloro-1,1,2-trifluoroethane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/03/06	(A)   (A)
Cyclohexane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/03/06	~ \$
Sample 1D: 1PB2643-02 (Trip Blank - Reporting Units: ug/l	- Water)								2) - 2:
1,2-Dichloro-1,1,2-trifluoroethane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	ì	03/02/06	03/02/06	
Cyclobexane	EPA 624 (MOD.)	6C02019	N/A	2.5	ND	1	03/02/06	03/02/06	





## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC ^X	Package ID B4VO45
12269 East Vassar Drive	Task Order 1261,001D.01
Aurora, CO 80014	SDG No. IPB2643
	No. of Analyses 1
Laboratory Del Mar Ar	
Reviewer K. Shadow	
Analysis/Method 1,4-Dioxar	
Analysis in curou 1,7-Dioxai	e by welling dead
ACTION ITEMS	
. Case Narrative	
Deficiencies	
2. Out of Scope Analyses	
No. of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of	
3. Analyses Not Conducted	
4. Missing Hardcopy	
Deliverables	
Deliverables	
5. Incorrect Hardcopy	
Deliverables	
100° 100° 13 13 14 140° 15 15 15 15 15 15 15 15 15 15 15 15 15	
6. Deviations from Analysis	The detect between the MDL and the reporting limit was qualified
Protocol, e.g.,	as estimated.
Holding Times	63 53HH (GLOV).
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS Field QC	
Internal Standard Performance	
Compound Identification  Quantitation	
System Performance COMMENTS®	
VOIMER 13	
Ciphopodernian and some fine and in a	neeting contract and/or method requirements.
	neeting contract and/or method requirements,  by the laboratory but no action against the laboratory is required.



# DATA VALIDATION REPORT

# NPDES Monitoring Program Annual Outfall 018

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPB2643

Prepared by

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

Project: SDG: Analysis: NPDES IPB2643 VOCs

DATA VALIDATION REPORT

#### 1. INTRODUCTION

Task Order Title: NPDES

MEC^X Project Number: 1261.001D.01

Sample Delivery Group: IPB2643

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 9, 2006

The samples listed in Table 1 were validated based on the guidelines outlined in the  $MEC^{\times}$  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.

Project: SDG: If

Analysis.

NPDES IPB2643 VOCs

DATA VALIDATION REPORT

## Table 1. Sample Identification

Client ID	Laboratory ID (Irvine)	Laboratory ID (Phoenix)	Matrix	COC Method
Outfall 018	IPB2643-01	PPC0066-01	Water	8260B

SDG: Analysis:

VOCs

#### 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

The sample in this SDG was received within the temperature limits of 4°C ±2°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  $\geq$ 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  $\geq$ 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.

Project: NPDES SDG: IPB2643 Analysis: VOCs

DATA VALIDATION REPORT

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#### 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.

84VO45 4 Revision 0

Project: NPDES SDG: IPB2643 Analysis: VOCs

## 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

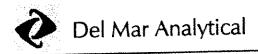
Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limit was supported by the low point of the initial calibration and the laboratory MDL. 1,4-Dioxane detected between the MDL and the reporting limit was qualified as estimated,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



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

Del Mar Analytical - Irvine

17461 Derian Ave. Suite 100

Irvine, CA 92614 Attention: Michele Chamberlin Project ID: IPB2643

Report Number: PPC0066

Sampled: 02/28/06

Received: 03/02/06

1.4-DIOXANE BY GC/MS (EPA 5030B/8260B)

	1,4-1/10/2/2	TAN DY	MDL	Reporting	Sample	Dilution	Date	Date	Data
Analyte	Method  Over 12	Batch	Limit	Limit	Result	Factor	Extracted	Analyzed	Qualifiers Qual
Sample ID: PPC0066-01 (IPB2643-01 -	Water)	V 15.2							*
Reporting Units: ug/l 1,4-Dioxane Surrogate: Dibromofluoromethane (70-1	EPA 8260B	P6C0311	0.49	1.0	0.60 112 %	1	03/03/06	03/04/06	J DAQ

Level II

# CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID: B4WCP5

Task Order: 1261.001D.01

Aurora, CO 80014		rask Olde	***************************************
		SDG No	
Laboratory: Del M	lme Amaludia at	No. of Analyses	
Reviewer: P. Me	iar Analytical	Date: April	
		Reviewer's	
Analysis/Method: Gene	rai Minerais	P. My	<u> </u>
ACTION ITEMS ^a	··········		<u> </u>
. Case Narrative Deficiencies			
Deliciencies			
2. Out of Scope Analyses		***************************************	
2. Out of Scope Analyses	***************************************		
3. Analyses Not Conducted			
J. Analyses NOt Collaucted	<del></del>		
	·····		
4. Missing Hardcopy			
Deliverables			
Don't Clauses			
5. Incorrect Hardcopy	<del></del>		
Deliverables			
	•		
6. Deviations from Analysis	Oualifications ar	oplied for detects below the r	
Protocol, e.g.,			eborauâ iimit?
Holding Times	ana cov 1	ecovery outlier	
GC/MS Tune/Inst. Performance	•		
Calibration			
Method blanks			
Surrogates			
Matrix Spike/Dup LCS			
Field QC			
Internal Standard Performance	***************************************		
Compound Identification		**************************************	
Quantitation			
System Performance	**************************************		
COMMENTS	***************************************		
	<u> </u>	and the second section of the second section is the second section of the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section is the second section in the second section is the second section in the second section in the second section is the second section in the second section in the second section is the second section in the second section in the section is the second section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the section in the section is the se	
^a Subcontracted analytical laboratory is no	t meeting contract and/or	method requirements.	
² Differences in protocol have been adopte	ed by the laboratory but no	action against the laboratory is re-	quired.
			· ····

MECX

12269 East Vassar Drive



# DATA VALIDATION REPORT

# NPDES Sampling Outfall 018

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IPB2643

Prepared by

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

Project:

NPDES

SDG:

IPB2643

Analysis:

sis: Gen. Min.

## 1. INTRODUCTION

Task Order Title:

**NPDES Sampling** 

MEC^X Project Number:

DATA VALIDATION REPORT

1261.001D.01

Sample Delivery Group:

IPB2643

Project Manager:

P. Costa

Matrix:

Water

Analysis:

General Minerals

QC Level:

Level IV

No. of Samples:

4

No. of Reanalyses/Dilutions:

0

Reviewer:

P. Meeks

Date of Review:

April 10, 2006

The sample listed in Table 1 was validated based on the guidelines outlined in the MEC^X Data Validation Procedure for General Minerals (DVP-6, Rev. 0), USEPA Methods for Chemical Analysis of Water and Wastes Methods 120.1, 160.1, 160.2, 160.5, 180.1, 300.0, 314.0, 330.5, 335.2, 350.2, 405.1, 413.1, 415.1, and 418.1 and Standard Methods for the Examination of Water and Wastewater Method SM2540-C, and validation guidelines outlined in the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form Is as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

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Project:

**NPDES** 

SDG: Analysis: IPB2643 Gen. Min.

DATA VALIDATION REPORT

# Table 1. Sample Identification

- 1										
	Client ID	Laboratory ID	Matrix	COC Method						
***************************************	Outfall 018	IPB2643-01	Water	General Minerals						

Project:

**NPDES** 

SDG:

IPB2643

Analysis:

ysis: Gen. Min.

# 2. DATA VALIDATION FINDINGS

# 2.1 SAMPLE MANAGEMENT

DATA VALIDATION REPORT

Following are findings associated with sample management:

# 2.1.1 Sample Preservation, Handling, and Transport

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

# 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

#### 2.2 CALIBRATION

For all applicable analyses, the initial calibration correlation coefficients were ≥0.995 and the ICV and CCV recoveries were within the control limits of 90-110%. For those methods requiring weight determinations, balance calibration logs were reviewed and found to be acceptable. For ammonia, no information regarding the standardization of the titrant was provided; therefore, as the LCS recovery was above the calibration control limit, at 115%, ammonia detected in Outfall 018 was qualified as estimated, "J." No further 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.

**84WCP5** 

3

Project:

NPDES

DATA VALIDATION REPORT

SDG: Analysis:

IPB2643 Gen. Min.

# 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

# 2.5 LABORATORY DUPLICATES

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

#### 2.6 MATRIX SPIKES

No MS/MSD analyses were performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Evaluation of method accuracy and precision (for BOD and oil and grease) was 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. Results reported by the laboratory between the MDL and reporting limit were qualified as estimated, "J," and annotated with the qualification code of "DNQ" to comply with the reporting requirements of the NPDES permit. 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

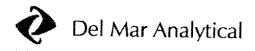
The sample in this SDG had no associated field QC samples. No qualifications were required.

#### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.

B4WCP5

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17461 Derian Ave., Sulie 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Sulie A. Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Sulie 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0651 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 018

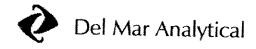
Report Number: IPB2643

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 Qualific	
Sample ID: IPB2643-01 (Outfall 018	- Water) - cont.								Reul	1 Qual
Reporting Units: mg/l									Qual	Cole
Ammonia-N (Distilled)	EPA 350.2	6C05021	0.30	0.50	0.56	1	03/05/06	03/05/06		R
Biochemical Oxygen Demand	EPA 405.1	6C01115	0.59	2.0	2.9	1	03/01/06	03/06/06	~	in the second
Chloride	EPA 300.0	6C01049	0.26	0.50	14	i	03/01/06	03/01/06		
Fluoride	EPA 300.0	6C01049	0.10	0.50	0.20	i	03/01/06	03/01/06	T I	0.30
Nitrate/Nitrite-N	EPA 300.0	6C01049	0.072	0.26	1.3	1	03/01/06	03/01/06	w J	DNG
Oil & Grease	EPA 413.1	6C08046	0.91	4.9	ND	1	03/08/06	03/01/06	V	O delica
Residual Chlorine	EPA 330.5	6B28145	0.10	0.10	ND	1	02/28/06	02/28/06	Ŭ	Account of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the control of the contro
Sulfate	EPA 300.0	6C01049	0.18	0.50	32	1	03/01/06	03/01/06		
Surfactants (MBAS)	SM5540-C	6C01108	0.044	0.10	ND	1	03/01/06	03/01/06		
Total Dissolved Solids	SM2540C	6C03069	10	10	180	1	03/03/06	03/03/06		
Total Organic Carbon	EPA 415.1	6C02064	0.25	1.0	9.8	1	03/03/06		of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of th	
Total Suspended Solids	EPA 160.2	6C05025	10	10	39	1	03/05/06	03/01/06 03/05/06	erminate en compatible de la compatible de la compatible de la compatible de la compatible de la compatible de	

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



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MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Annual Outfall 018

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPB2643

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: IPB2643-01 (Outfall 018 - Reporting Units: mg/l	Water)								Rey and
Total Recoverable Hydrocarbons	EPA 418.1	6C06047	0.30	0.96	ND	0.962	03/06/06	03/06/06	V

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

Project ID: Annual Outfall 018

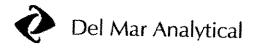
Report Number: IPB2643

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

## **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor		Date Analyzed	Data Qualifiers
Sample ID: IPB2643-01 (Outfall 018 - Reporting Units: ml//hr Total Settleable Solids	Water) - cont. EPA 160.5	6B28095	0.10	0.10	ND	1	02/28/06	02/28/06	Bural Code

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MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Annual Outfall 018

Report Number: IPB2643

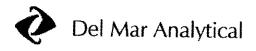
Sampled: 02/28/06

Received: 02/28/06

#### **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	_	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPB2643-01 (Outfall 018 - Reporting Units: NTU	Water) - cont.							·	EL 182
Turbidity	EPA 180.1	6C01122	0.080	2.0	62	2	03/01/06	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 018

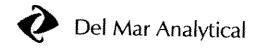
Report Number: IPB2643

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: IPB2643-01 (Outfall 01 Reporting Units: ug/l	8 - Water) - cont.								Rev Jan Qual Qual Qual Code
Total Cyanide Perchlorate	EPA 335.2 EPA 314.0	6C02125 6C02068	2.2 0.80	5.0 4.0	ND ND	1	03/02/06 03/02/06	03/02/06 03/03/06	U U

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MWH-Pasadena/Boeing

300 North Lake Avenue. Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Annual Outfall 018

Report Number: IPB2643

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: IPB2643-01 (Outfall 018 - Reporting Units: umhos/cm	Water) - coni.								Rev Code
Specific Conductance	EPA 120.1	6C03067	1.0	1.0	230	I	03/03/06	03/03/06	

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

LEVEL I

IPB2643 <Page 20 of 58>

# **APPENDIX G**

# **Section 71**

Outfall 001, March 29, 2006

Del Mar Analytical Laboratory Report



## LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing

Project: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Sampled: 03/29/06

Received: 03/29/06

Issued: 04/07/06 10:47

#### NELAP #01108CA California ELAP#1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

#### SAMPLE CROSS REFERENCE

SUBCONTRACTED:

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

 LABORATORY ID
 CLIENT ID
 MATRIX

 IPC2961-01
 Outfall 001
 Water

 IPC2961-02
 Trip Blank
 Water

Reviewed By:

**Del Mar Analytical - Irvine** Michele Chamberlin

Michile Chamberdin

Project Manager



Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPC2961

Sampled: 03/29/06 Received: 03/29/06

Attention: Bronwyn Kelly

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2961-01 (Outfall 001 - Wat	er)								
Reporting Units: ug/l	,								
Benzene	EPA 624	6C30004	0.28	2.0	ND	1	03/30/06	03/30/06	
Carbon tetrachloride	EPA 624	6C30004	0.28	5.0	ND	1	03/30/06	03/30/06	
Chloroform	EPA 624	6C30004	0.33	2.0	ND	1	03/30/06	03/30/06	
1,1-Dichloroethane	EPA 624	6C30004	0.27	2.0	ND	1	03/30/06	03/30/06	C
1,2-Dichloroethane	EPA 624	6C30004	0.28	2.0	ND	1	03/30/06	03/30/06	
1,1-Dichloroethene	EPA 624	6C30004	0.42	3.0	ND	1	03/30/06	03/30/06	
Ethylbenzene	EPA 624	6C30004	0.25	2.0	ND	1	03/30/06	03/30/06	
Tetrachloroethene	EPA 624	6C30004	0.32	2.0	ND	1	03/30/06	03/30/06	
Toluene	EPA 624	6C30004	0.36	2.0	ND	1	03/30/06	03/30/06	
1,1,1-Trichloroethane	EPA 624	6C30004	0.30	2.0	ND	1	03/30/06	03/30/06	
1,1,2-Trichloroethane	EPA 624	6C30004	0.30	2.0	ND	1	03/30/06	03/30/06	
Trichloroethene	EPA 624	6C30004	0.26	5.0	ND	1	03/30/06	03/30/06	
Trichlorofluoromethane	EPA 624	6C30004	0.34	5.0	ND	1	03/30/06	03/30/06	
Vinyl chloride	EPA 624	6C30004	0.26	5.0	ND	1	03/30/06	03/30/06	
Xylenes, Total	EPA 624	6C30004	0.90	4.0	ND	1	03/30/06	03/30/06	
Surrogate: Dibromofluoromethane (80-120%	;) ·				114%				
Surrogate: Toluene-d8 (80-120%)					107 %				
Surrogate: 4-Bromofluorobenzene (80-120%)	) -				100 %				
					,		4		
Sample ID: IPC2961-02 (Trip Blank - Water Reporting Units: ug/l	:r)							•	•
Benzene	EPA 624	6C30004	0.28	2.0	ND	1	03/30/06	03/30/06	
Carbon tetrachloride	EPA 624	6C30004	0.28	5.0	ND	1	03/30/06	03/30/06	
Chloroform	EPA 624	6C30004	0.33	2.0	ND	ì	03/30/06	03/30/06	
1,1-Dichloroethane	EPA 624	6C30004	0.27	2.0	ND	1	03/30/06	03/30/06	С
1,2-Dichloroethane	EPA 624	6C30004	0.28	2.0	ND	1	03/30/06	03/30/06	~
1,1-Dichloroethene	EPA 624	6C30004	0.42	3.0	ND	1	03/30/06	03/30/06	
Ethylbenzene	EPA 624	6C30004	0.25	2.0	ND	1	03/30/06	03/30/06	
Tetrachloroethene	EPA 624	6C30004	0.32	2.0	ND	1	03/30/06	03/30/06	
Toluene	EPA 624	6C30004	0.36	2.0	ND	l	03/30/06	03/30/06	
1,1,1-Trichloroethane	EPA 624	6C30004	0.30	2.0	ND	1	03/30/06	03/30/06	
1,1,2-Trichloroethane	EPA 624	6C30004	0.30	2.0	ND	1	03/30/06	03/30/06	
Trichloroethene	EPA 624	6C30004	0.26	5.0	ND	1	03/30/06	03/30/06	
Trichlorofluoromethane	EPA 624	6C30004	0.34	5.0	ND	1	03/30/06	03/30/06	
Vinyl chloride	EPA 624	6C30004	0.26	5.0	ND	1	03/30/06	03/30/06	
Xylenes, Total	EPA 624	6C30004	0.90	4.0	ND	1	03/30/06	03/30/06	
Surrogate: Dibromofluoromethane (80-120%)		000007	0.70	1,0	104 %	•	35.55.00		
Surrogate: Toluene-d8 (80-120%)	•				106 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					100 %				
Santoguie. T-Divingiaoroventene (00-12079)					100 70				

**Del Mar Analytical - Irvine** Michele Chamberlin

Project Manager



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MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

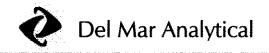
Report Number: IPC2961

Sampled: 03/29/06

Received: 03/29/06

## 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: IPC2961-01 (Outfall 001 - Water	er)								
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6C31065	1.6	4.7	ND	0.943	03/31/06	04/04/06	
2,4-Dinitrotoluene	EPA 625	6C31065	0.19	8.5	ND	0.943	03/31/06	04/04/06	
N-Nitrosodimethylamine	EPA 625	6C31065	0.094	7.5	ND	0.943	03/31/06	04/04/06	
Pentachlorophenol	EPA 625	6C31065	0.094	7.5	ND	0.943	03/31/06	04/04/06	
2,4,6-Trichlorophenol	EPA 625	6C31065	0.094	5.7	ND	0.943	03/31/06	04/04/06	
Surrogate: 2-Fluorophenol (30-120%)					60 %				
Surrogate: Phenol-d6 (35-120%)					67%				
Surrogate: 2,4,6-Tribromophenol (45-120%)					<i>78 %</i>				
Surrogate: Nitrobenzene-d5 (45-120%)					71%				
Surrogate: 2-Fluorobiphenyl (45-120%)					69 %				
Surrogate: Terphenyl-d14 (45-120%)					72 %				



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MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPC2961

Sampled: 03/29/06

Received: 03/29/06

## **ORGANOCHLORINE PESTICIDES (EPA 608)**

Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
er) - cont.								
EPA 608	6C30097	0.00094	0.0094	ND	0.943	03/30/06	03/31/06	
				61 %				
				61 %				
	ter) - cont.	ter) - cont.  EPA 608 6C30097	Method         Batch         Limit           ter) - cont.         EPA 608         6C30097         0.00094	Method         Batch         Limit         Limit           ter) - cont.         EPA 608         6C30097 0.00094 0.0094         0.0094	Method         Batch         Limit         Limit         Result           ter) - cont.         EPA 608         6C30097         0.00094         0.0094         ND         61 %	Method         Batch         Limit         Limit         Result         Factor           ter) - cont.           EPA 608         6C30097         0.00094         0.0094         ND         0.943           61 %	Method         Batch         Limit         Limit         Result         Factor         Extracted           ter) - cont.           EPA 608         6C30097         0.00094         0.0094         ND         0.943         03/30/06           61 %         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.0	Method         Batch         Limit         Limit         Result         Factor         Extracted         Analyzed           ter) - cont.           EPA 608         6C30097         0.00094         0.0094         ND 0.943         03/30/06         03/31/06           61 %         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094         0.00094





Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPC2961

Sampled: 03/29/06 Received: 03/29/06

Attention: Bronwyn Kelly

METALS											
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers		
Sample ID: IPC2961-01 (Outfall 001 - Was	ter) - cont.										
Reporting Units: mg/l Iron	EPA 200.7	6C30081	0.015	0.040	0.87	1	03/30/06	03/30/06			
Sample ID: IPC2961-01RE1 (Outfall 001 -	Water)										
Reporting Units: mg/l											
Iron	EPA 200.7	6D03078	0.015	0.040	0.85	1	03/30/06	04/03/06			
Sample ID: IPC2961-01 (Outfall 001 - Wat	ter)										
Reporting Units: ug/l											
Copper	EPA 200.8	6C29141	0.49	2.0	3.0	1	03/29/06	03/30/06			
Lead	EPA 200.8	6C29141	0.13	1.0	0.91	1	03/29/06	03/30/06	J		
Mercury	EPA 245.1	6C30065	0.050	0.20	ND	1	03/30/06	03/30/06			





Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101
Attention: Bronwyn Kelly

Report Number: IPC2961

Sampled: 03/29/06

Received: 03/29/06

## **INORGANICS**

Sample ID: IPC2961-01 (Outfall 001 - Water) - cont.   Reporting Units: mg/l   Ammonia-N (Distilled)   EPA 350.2   6C31112   0.30   0.50   0.56   1   03/31/06   03/31/06   Biochemical Oxygen Demand   EPA 405.1   6C29138   0.59   2.0   1.3   1   03/29/06   04/03/06   J   Chloride   EPA 300.0   6C29052   0.26   0.50   28   1   03/29/06   03/29/06   Oil & Grease   EPA 413.1   6C30048   0.89   4.7   ND   1   03/30/06   03/29/06   Oil & Grease   EPA 413.1   6C30048   0.89   4.7   ND   1   03/30/06   03/29/06   Oil & Grease   EPA 413.1   6C30048   0.89   4.7   ND   1   03/30/06   03/29/06   Oil & Grease   EPA 413.1   6C30048   0.89   4.7   ND   1   03/30/06   03/29/06   Oil & Grease   EPA 300.0   6C29052   0.36   1.0   78   2   03/29/06   03/29/06   Oil & Grease   EPA 300.0   6C29052   0.36   1.0   78   2   03/29/06   03/29/06   Oil & Grease   EPA 410.0   6C29052   0.36   1.0   78   2   03/29/06   03/29/06   Oil & Grease   EPA 410.0   6C30063   10   10   0.057   1   03/30/06   03/29/06   Oil & Grease   Greate   Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
Ammonia-N (Distilled)	Sample ID: IPC2961-01 (Outfall 001 - Wa	ter) - cont.								
Blochemical Oxygen Demand	Reporting Units: mg/l									
Chloride	Ammonia-N (Distilled)	EPA 350.2	6C31112	0.30	0.50	0.56	1	03/31/06	03/31/06	
Nitrate/Nitrite-N	Biochemical Oxygen Demand	EPA 405.1	6C29138	0.59	2.0	1.3	1	03/29/06	04/03/06	J
Oil & Grease	Chloride	EPA 300.0	6C29052	0.26	0.50	28	1	03/29/06	03/29/06	
Sulfate         EPA 300.0         6C29052         0.36         1.0         78         2         03/29/06         03/29/06         O3/29/06         Surfactants (MBAS)         SM5540-C         6C29127         0.044         0.10         0.057         1         03/29/06         03/29/06         J           Total Dissolved Solids         SM2540C         6C30063         10         10         300         1         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/30/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06         03/29/06	Nitrate/Nitrite-N	EPA 300.0	6C29052	0.072	0.26	3.1	1	03/29/06	03/29/06	
Surfactants (MBAS)   SM5540-C   6C29127   0.044   0.10   0.057   1   03/29/06   03/29/06   J	Oil & Grease	EPA 413.1	6C30048	0.89	4.7	ND	1	03/30/06	03/30/06	
Total Dissolved Solids SM2540C 6C30063 10 10 300 1 03/30/06 03/30/06 Total Suspended Solids EPA 160.2 6C30086 10 10 ND 1 03/30/06 03/30/06  Sample ID: IPC2961-01 (Outfall 001 - Water) Reporting Units: mi//hr  Total Settleable Solids EPA 160.5 6C29122 0.10 0.10 ND 1 03/29/06 03/29/06  Sample ID: IPC2961-01 (Outfall 001 - Water) Reporting Units: NTU  Turbidity EPA 180.1 6C30113 0.040 1.0 18 1 03/30/06 03/30/06  Sample ID: IPC2961-01 (Outfall 001 - Water) Reporting Units: ug/  Total Cyanide EPA 335.2 6C30093 2.2 5.0 ND 1 03/30/06 03/30/06  Perchlorate EPA 314.0 6C30069 0.80 4.0 ND 1 03/30/06 03/30/06  Sample ID: IPC2961-01 (Outfall 001 - Water) Reporting Units: um/os/one	Sulfate	EPA 300.0	6C29052	0.36	1.0	78	2	03/29/06	03/29/06	
Total Suspended Solids EPA 160.2 6C30086 10 10 ND 1 03/30/06 03/30/06  Sample ID: IPC2961-01 (Outfall 001 - Water) Reporting Units: ml//hr  Total Settleable Solids EPA 160.5 6C29122 0.10 0.10 ND 1 03/29/06 03/29/06  Sample ID: IPC2961-01 (Outfall 001 - Water) Reporting Units: NTU  Turbidity EPA 180.1 6C30113 0.040 1.0 18 1 03/30/06 03/30/06  Sample ID: IPC2961-01 (Outfall 001 - Water) Reporting Units: ug/l  Total Cyanide EPA 335.2 6C30093 2.2 5.0 ND 1 03/30/06 03/30/06  Perchlorate EPA 314.0 6C30069 0.80 4.0 ND 1 03/30/06 03/30/06  Sample ID: IPC2961-01 (Outfall 001 - Water) Reporting Units: umhos/cm	Surfactants (MBAS)	SM5540-C	6C29127	0.044	0.10	0.057	1	03/29/06	03/29/06	J
Sample ID: IPC2961-01 (Outfall 001 - Water)   Reporting Units: mi//hr	Total Dissolved Solids	SM2540C	6C30063	10	10	300	1	03/30/06	03/30/06	
Reporting Units: ml//hr   Total Settleable Solids   EPA 160.5   6C29122   0.10   0.10   ND   1   03/29/06   03/29/06	Total Suspended Solids	EPA 160.2	6C30086	10	10	ND	1	03/30/06	03/30/06	
Sample ID: IPC2961-01 (Outfall 001 - Water)   Reporting Units: NTU	• •	ter)								
Reporting Units: NTU Turbidity EPA 180.1 6C30113 0.040 1.0 18 1 03/30/06 03/30/06  Sample ID: IPC2961-01 (Outfall 001 - Water)  Reporting Units: ug/I  Total Cyanide EPA 335.2 6C30093 2.2 5.0 ND 1 03/30/06 03/30/06  Perchlorate EPA 314.0 6C30069 0.80 4.0 ND 1 03/30/06 03/30/06  Sample ID: IPC2961-01 (Outfall 001 - Water)  Reporting Units: umhos/cm	Total Settleable Solids	EPA 160.5	6C29122	0.10	0.10	ND	1	03/29/06	03/29/06	
Sample ID: IPC2961-01 (Outfall 001 - Water)  Reporting Units: ug/I  Total Cyanide EPA 335.2 6C30093 2.2 5.0 ND 1 03/30/06 03/30/06  Perchlorate EPA 314.0 6C30069 0.80 4.0 ND 1 03/30/06 03/30/06  Sample ID: IPC2961-01 (Outfall 001 - Water)  Reporting Units: umhos/cm		ter)								
Reporting Units: ug/l   Total Cyanide   EPA 335.2   6C30093   2.2   5.0   ND   1   03/30/06   03/30/06	Turbidity	EPA 180.1	6C30113	0.040	1.0	18	1	03/30/06	03/30/06	
Total Cyanide EPA 335.2 6C30093 2.2 5.0 ND 1 03/30/06 03/30/06  Perchlorate EPA 314.0 6C30069 0.80 4.0 ND 1 03/30/06 03/30/06  Sample ID: IPC2961-01 (Outfall 001 - Water)  Reporting Units: umhos/cm	Sample ID: IPC2961-01 (Outfall 001 - Wa	ter)								
Perchlorate EPA 314.0 6C30069 0.80 4.0 ND 1 03/30/06 03/30/06  Sample ID: IPC2961-01 (Outfall 001 - Water)  Reporting Units: umhos/cm	Reporting Units: ug/l	i Statistica de la composición		Bary .	e de grande				1.0	.5
Sample ID: IPC2961-01 (Outfall 001 - Water) Reporting Units: umhos/cm	Total Cyanide	EPA 335.2	6C30093	2.2	5.0	ND	1	03/30/06	03/30/06	
Reporting Units: umhos/cm	Perchlorate	EPA 314.0	6C30069	0.80	4.0	ND	1	03/30/06	03/30/06	
Caralife Conductores 170 1 (C700C7 10 10 200 1 02/20/0C 02/20/0C	•	ter)								
Specific Conductance EPA 120.1 0C30002 1.0 1.0 500 1 03/30/06 03/30/06	Specific Conductance	EPA 120.1	6C30062	1.0	1.0	500	1	03/30/06	03/30/06	





Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPC2961

Sampled: 03/29/06

Received: 03/29/06

#### SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 001 (IPC2961-01) - Wate	Hold Time (in days) r	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	03/29/2006 13:33	03/29/2006 18:45	03/29/2006 19:30	03/29/2006 20:30
EPA 180.1	2	03/29/2006 13:33	03/29/2006 18:45	03/30/2006 15:59	03/30/2006 16:00
EPA 300.0	2	03/29/2006 13:33	03/29/2006 18:45	03/29/2006 20:30	03/29/2006 20:46
EPA 405.1	2	03/29/2006 13:33	03/29/2006 18:45	03/29/2006 22:45	04/03/2006 22:45
SM5540-C	2	03/29/2006 13:33	03/29/2006 18:45	03/29/2006 18:11	03/29/2006 22:12



Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPC2961

Sampled: 03/29/06

Received: 03/29/06

# METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C30004 Extracted	1: 03/30/06										
Blank Analyzed: 03/30/2006 (	(6C30004-BLK1)										
Benzene	0.340	2.0	0.28	ug/l							j
Carbon tetrachloride	ND	5.0	0.28	ug/l							
Chloroform	ND	2.0	0.33	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	2.0	0.28	ug/l							
1,1-Dichloroethene	ND	3.0	0.42	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND	5.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l		ģ				. ,	
Vinyl chloride	ND	5.0	0.26	ug/I						×8	
Xylenes, Total	ND	4.0	0.90	ug/l							
Surrogate: Dibromofluoromethane	22.6			ug/l	25.0		90	80-120			
Surrogate: Toluene-d8	25.6			ug/l	25.0		102	80-120			
Surrogate: 4-Bromofluorobenzene	24.8			ug/l	25.0		99	80-120			
LCS Analyzed: 03/30/2006 (60	C30004-BS1)										
Benzene	24.2	2.0	0.28	ug/l	25.0		97	65-120			
Carbon tetrachloride	29.2	5.0	0.28	ug/l	25.0		117.	65-140			•
Chloroform	25.8	2.0	0.33	ug/l	25.0		103	65-130			
1,1-Dichloroethane	31.9	2.0	0.27	ug/l	25.0		128	65-130			
1,2-Dichloroethane	24.7	2.0	0.28	ug/l	25.0		99	60-140			
1,1-Dichloroethene	26.8	3.0	0.42	ug/l	25.0		107	70-130			
Ethylbenzene	24.5	2.0	0.25	ug/l	25,0		98	70-125			
Tetrachloroethene	23,2	2.0	0.32	ug/l	25.0		93	65-125			
Toluene	24.0	2.0	0.36	ug/l	25.0		96	70-125			
1,1,1-Trichloroethane	25.9	2.0	0.30	ug/l	25.0		104	65-135			
1,1,2-Trichloroethane	24.3	2.0	0.30	ug/l	25.0		97	65-125			
Trichloroethene	24.4	5.0	0.26	ug/l	25.0		98	70-125			
Trichlorofluoromethane	26.0	5.0	0.34	ug/l	25.0		104	60-140			
Vinyl chloride	23.2	5.0	0.26	ug/l	25.0		93	50-130			
Surrogate: Dibromofluoromethane	25.4			ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	26.0			ug/l	25.0		104	80-120			

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Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

Report Number: IPC2961

Sampled: 03/29/06

Received: 03/29/06

# 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: 6C30004 Extracted: 03/30/06	<u>.</u>										
LCS Analyzed: 03/30/2006 (6C30004-BS				_							
Surrogate: 4-Bromofluorobenzene	25.7			ug/l	25.0		103	80-120			
Matrix Spike Analyzed: 03/30/2006 (6C3	0004-MS1)				Sou	rce: IPC2	561-11				
Benzene	30.6	2.0	0.28	ug/l	25.0	ND	122	60-125			
Carbon tetrachloride	34.0	5.0	0.28	ug/l	25.0	ND	136	65-140			
Chloroform	35.2	2.0	0.33	ug/i	25.0	ND	141	65-135			M1
1,1-Dichloroethane	41.4	2.0	0.27	ug/l	25.0	ND	166	60-130			M7
1,2-Dichloroethane	31.2	2.0	0.28	ug/l	25.0	ND	125	60-140			
1,1-Dichloroethene	36.1	3.0	0.42	ug/l	25.0	ND	144	60-135			MI
Ethylbenzene	30.0	2.0	0.25	ug/l	25.0	ND	120	65-130			
Tetrachloroethene	27.3	2.0	0.32	ug/l	25.0	ND	109	60-130			
Toluene	30.3	2.0	0.36	ug/l	25.0	ND	121	65-125			
1,1,1-Trichloroethane	33.6	2.0	0.30	ug/l	25.0	ND	134	65-140		4	*.
1,1,2-Trichloroethane	33.2	2.0	0.30	ug/l	25.0	ND	133	60-130			MI.
Trichloroethene	28.6	5.0	0.26	ug/l	25.0	ND	114	60-125			
Trichlorofluoromethane	35.8	5.0	0.34	ug/l	25.0	ND	143	55-145			
Vinyl chloride	31.8	5.0	0.26	ug/l	25.0	ND	127	40-135			
Surrogate: Dibromofluoromethane	29.1			ug/l	25.0		116	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	26.7			ug/l	25.0		107	80-120			
Matrix Spike Dup Analyzed: 03/30/2006	(6C30004-MS	D1)			Sour	rce: IPC2	561-11				
Benzene	30.1	2.0	0.28	ug/i	25.0	ND	120	60-125	2	20	
Carbon tetrachloride	34.3	5.0	0.28	ug/l	25.0	ND	137	65-140	1	25	
Chloroform	34.6	2.0	0.33	ug/l	25.0	ND	138	65-135	2	20	MI
1,1-Dichloroethane	36.8	2.0	0.27	ug/l	25.0	ND	147	60-130	12	20	M7
1,2-Dichloroethane	31.6	2.0	0.28	ug/l	25.0	ND	126	60-140	1	20	
1,1-Dichloroethene	34.6	3.0	0.42	ug/l	25.0	ND	138	60-135	4	20	MI
Ethylbenzene	29.0	2.0	0.25	ug/I	25.0	ND	116	65-130	3	20	
Tetrachloroethene	26.3	2.0	0.32	ug/l	25.0	ND	105	60-130	4	20	
Toluene	29.6	2.0	0.36	ug/i	25.0	ND	118	65-125	2	20	
1,1,1-Trichloroethane	33.1	2.0	0.30	ug/l	25.0	ND	132	65-140	1	20	
1,1,2-Trichloroethane	32.9	2.0	0.30	ug/l	25.0	ND	132	60-130	1	25	MI
Trichloroethene	27.6	5.0	0.26	ug/l	25.0	ND	110	60-125	4	20	
Trichlorofluoromethane	33.8	5.0	0.34	ug/l	25.0	ND	135	55-145	6	25	
Vinyl chloride	29.7	5.0	0.26	ug/l	25.0	ND	119	40-135	7	30	

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager



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

MWH-Pasadena/Boeing

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPC2961

Sampled: 03/29/06

Received: 03/29/06

# METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C30004 Extracted: 03/30/	<u>/06</u>	•				÷					
Matrix Spike Dup Analyzed: 03/30/20	06 (6C30004-M	ISD1)			Sou	rce: IPC2	2561-11				
Surrogate: Dibromofluoromethane	29.5			ug/l	25.0		118	80-120			
Surrogate: Toluene-d8	26.9			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	27.3			ug/l	25.0		109	80-120			



300 North Lake Avenue, Suite 1200

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

Report Number: IPC2961

Sampled: 03/29/06 Received: 03/29/06

# METHOD BLANK/QC DATA

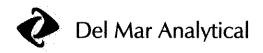
# **ACID & BASE/NEUTRALS BY GC/MS (EPA 625)**

Analyte Result Limit MDL Units Level Result %REC Limits RPD Limit Qualifiers  Batch: 6C31065 Extracted: 03/31/06  Blank Analyzed: 04/04/2006 (6C31065-BLK1)  Bis(2-ethylhexyl)phthalate ND 5.0 1.7 ug/l  2,4-Dinitrotoluene ND 9.0 0.20 ug/l	Analyte
Blank Analyzed: 04/04/2006 (6C31065-BLK1) Bis(2-ethylhexyl)phthalate ND 5.0 1.7 ug/l	
Bis(2-ethylhexyl)phthalate ND 5.0 1.7 ug/l	Batch: 6C31065 Extracted: 03/3
Bis(2-ethylhexyl)phthalate ND 5.0 1.7 ug/l	
	•
2,4-Dinitrotoluene ND 9.0 0.20 ug/l	
N-Nitrosodimethylamine ND 8.0 0.10 ug/l	*
Pentachlorophenol ND 8.0 0.10 ug/l	•
2,4,6-Trichlorophenol ND 6.0 0.10 ug/l	2,4,6-Trichlorophenol
Surrogate: 2-Fluorophenol 13.3 ug/l 20.0 66 30-120	Surrogate: 2-Fluorophenol
Surrogate: Phenol-d6 13.5 ug/l 20.0 68 35-120	Surrogate: Phenol-d6
Surrogate: 2,4,6-Tribromophenol 15.6 ug/l 20.0 78 45-120	Surrogate: 2,4,6-Tribromophenol
Surrogate: Nitrobenzene-d5 5.98 ug/l 10.0 60 45-120	Surrogate: Nitrobenzene-d5
Surrogate: 2-Fluorobiphenyl 6.24 ug/l 10.0 62 45-120	Surrogate: 2-Fluorobiphenyl
Surrogate: Terphenyl-d14 7.92 ug/l 10.0 79 45-120	Surrogate: Terphenyl-d14
LCS Analyzed: 04/04/2006 (6C31065-BS1) M-NR1	LCS Analyzed: 04/04/2006 (6C3106
Bis(2-ethylhexyl)phthalate 10.6 5.0 1.7 ug/l 10.0 106 60-130	Bis(2-ethylhexyl)phthalate
2,4-Dinitrotoluene 11.1 9.0 0.20 ug/l 10.0 111 60-120	2,4-Dinitrotoluene
N-Nitrosodimethylamine 9.24 8.0 0.10 ug/l 10.0 92 40-120	N-Nitrosodimethylamine
Pentachlorophenol 10.9 8.0 0.10 ug/l 10.0 109 50-120	Pentachlorophenol
2,4,6-Trichlorophenol 10.0 6.0 0.10 ug/l 10.0 100 60-120	2,4,6-Trichlorophenol
Surrogate: 2-Fluorophenol 12.5 ug/l 20.0 62 30-120	Surrogate: 2-Fluorophenol
Surrogate: Phenol-d6 14.2 ug/l 20.0 71 35-120	Surrogate: Phenol-d6
Surrogate: 2,4,6-Tribromophenol 16.2 ug/l 20.0 81 45-120	Surrogate: 2,4,6-Tribromophenol
Surrogate: Nitrobenzene-d5 7.82 ug/l 10.0 78 45-120	Surrogate: Nitrobenzene-d5
Surrogate: 2-Fluorobiphenyl 7.24 ug/l 10.0 72 45-120	Surrogate: 2-Fluorobiphenyl
Surrogate: Terphenyl-d14 7.24 ug/l 10.0 72 45-120	Surrogate: Terphenyl-d14
LCS Dup Analyzed: 04/04/2006 (6C31065-BSD1)	LCS Dup Analyzed: 04/04/2006 (6C:
Bis(2-ethylhexyl)phthalate 11.3 5.0 1.7 ug/l 10.0 113 60-130 6 20	Bis(2-ethylhexyl)phthalate
2,4-Dinitrotoluene 11.7 9.0 0.20 ug/l 10.0 117 60-120 5 20	2,4-Dinitrotoluene
N-Nitrosodimethylamine 10.0 8.0 0.10 ug/l 10.0 100 40-120 8 20	N-Nitrosodimethylamine
Pentachlorophenol 11.7 8.0 0.10 ug/l 10.0 117 50-120 7 25	Pentachlorophenol
2,4,6-Trichlorophenol 10.3 6.0 0.10 ug/l 10.0 103 60-120 3 20	2,4,6-Trichlorophenol
Surrogate: 2-Fluorophenol 13.6 ug/l 20.0 68 30-120	Surrogate: 2-Fluorophenol
Surrogate: Phenol-d6 15.7 ug/l 20.0 78 35-120	Surrogate: Phenol-d6
Surrogate: 2,4,6-Tribromophenol 16.8 ug/l 20.0 84 45-120	Surrogate: 2,4,6-Tribromophenol
Surrogate: Nitrobenzene-d5 8.28 ug/l 10.0 83 45-120	Surrogate: Nitrobenzene-d5
Surrogate: 2-Fluorobiphenyl 7.32 ug/l 10.0 73 45-120	Surrogate: 2-Fluorobiphenyl

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager



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 S1st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IPC2961

Sampled: 03/29/06

Received: 03/29/06

# METHOD BLANK/QC DATA

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

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

Batch: 6C31065 Extracted: 03/31/06

LCS Dup Analyzed: 04/04/2006 (6C31065-BSD1)

Surrogate: Terphenyl-d14

7.82

ug/l

10.0

78 45-120



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# METHOD BLANK/QC DATA

## **ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Batch: 6C30097 Extracted: 03/30/06							,				<b>C</b>
Blank Analyzed: 03/31/2006 (6C30097-Bl	LK1)										
alpha-BHC	ND	0.010	0.0010	ug/l							
Surrogate: Decachlorobiphenyl	0.472	1		ug/l	0.500		94	45-120			
Surrogate: Tetrachloro-m-xylene	0.407			ug/l	0.500		81	35-115			
LCS Analyzed: 03/31/2006 (6C30097-BS1	)										M-NR1
alpha-BHC	0.434	0.010	0.0010	ug/l	0.500		87	45-120			
Surrogate: Decachlorobiphenyl	0.441			ug/l	0.500		88	45-120			
Surrogate: Tetrachloro-m-xylene	0.377			ug/l	0.500		75	35-115			
LCS Dup Analyzed: 03/31/2006 (6C30097	-BSD1)										
alpha-BHC	0.452	0.010	0.0010	ug/l	0.500		90	45-120	4	30	
Surrogate: Decachlorobiphenyl	0.452			ug/l	0.500		90	45-120			
Surrogate: Tetrachloro-m-xylene	0.398			ug/l	0.500		80	35-115			

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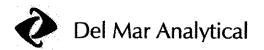
Sampled: 03/29/06

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# METHOD BLANK/QC DATA

#### **METALS**

Amaluria	Result	Reporting Limit	MDL	WY-mid-n	Spike	Source	e/ DEC	%REC	DDD	RPD	Data
Analyte		Limit	WIDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C29141 Extracted: 03/29/06	-										
Blank Analyzed: 03/30/2006 (6C29141-B)	LK1)										
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1,0	0.040	ug/l							
LCS Analyzed: 03/30/2006 (6C29141-BS)	)										
Copper	75.5	2.0	0.25	ug/l	80.0		94	85-115			
Lead	78.2	1.0	0.040	ug/l	80.0		98	85-115			
Matrix Spike Analyzed: 03/30/2006 (6C29	9141-MS1)				Sour	rce: IPC2	844-01				
Copper	384	2.0	0.25	ug/l	80.0	320	80	70-130			
Lead	76.3	1.0	0.040	ug/l	80.0	1.1	94	70-130			
Matrix Spike Analyzed: 03/30/2006 (6C29	)141-MS2)				Sour	ce: IPC2	911-01				
Copper	87.2	2.0	0.25	ug/l	80.0	8.8	98	70-130			
Lead	83.4	. , . ,1,0	0.040	ug/l	0.08	0.35	104	70-130			
Matrix Spike Dup Analyzed: 03/30/2006 (	6C29141-MS	D1)			Sour	ce: IPC2	844-01				•
Copper	403	2.0	0.25	ug/l	80.0	320	104	70-130	5	20	
Lead	82.3	1.0	0.040	ug/l	80.0	1.1	102	70-130	8	20	
Batch: 6C30065 Extracted: 03/30/06	ı										
Blank Analyzed: 03/30/2006 (6C30065-BI	K1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 03/30/2006 (6C30065-BS1	)										
Mercury	7.87	0.20	0.050	ug/l	8.00		98	85-115			



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MWH-Pasadena/Boeing

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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: 6C30065 Extracted: 03/30/06	•										
Matrix Spike Analyzed: 03/30/2006 (6C3	0065-MS1)				Sou	rce: IPC2	857-01				
Mercury	8.16	0.20	0.050	ug/l	8.00	ND	102	70-130			
Matrix Spike Dup Analyzed: 03/30/2006	(6C30065-MS)	D1)			Sou	rce: IPC2	857-01				
Mercury	8.19	0.20	0.050	ug/l	8.00	ND	102	70-130	0	20	
Batch: 6C30081 Extracted: 03/30/06											
Blank Analyzed: 03/30/2006 (6C30081-Bl	LK1)										
Iron	ND	0.040	0.0088	mg/l							
LCS Analyzed: 03/30/2006 (6C30081-BS1	)										
Iron	0.509	0.040	0.0088	mg/l	0.500		102	85-115			
Matrix Spike Analyzed: 03/30/2006 (6C30	081-MS1)				Sour	ce: IPC26	85-03				
Iron	0.664	0.040	0.0088	mg/l	0.500	0.17	99	70-130	*		
Matrix Spike Dup Analyzed: 03/30/2006 (	6C30081-MSI	<b>D1</b> )			Sour	ce: IPC26	85-03				
Iron	0.672	0.040	0.0088	mg/l	0.500	0.17	100	70-130	1	20	
Batch: 6D03078 Extracted: 04/03/06											
Blank Analyzed: 04/03/2006 (6D03078-BL	.K1)										
Iron	ND	0.040	0.015	mg/l							
LCS Analyzed: 04/03/2006 (6D03078-BS1)	)										
Iron	0.511	0.040	0.015	mg/l	0.500		102	85-115			



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METHOD BLANK/QC DATA

#### **METALS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6D03078 Extracted: 04/03/00	<u>6</u>										
Matrix Spike Analyzed: 04/03/2006 (6D)	03078-MS1)				Sou	rce: IPC:	3017-01				
Iron	5.81	0.040	0.015	mg/l	0.500	5.2	122	70-130			
Matrix Spike Dup Analyzed: 04/03/2006	(6D03078-MS	D1)			Sou	rce: IPC3	017-01				
Iron	5.78	0.040	0.015	mg/l	0.500	5.2	116	70-130	1	20	



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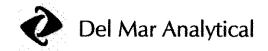
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# METHOD BLANK/QC DATA

## **INORGANICS**

		Reporting	•		Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C29052 Extracted: 03/29/06	<u>5</u>										
Blank Analyzed: 03/29/2006 (6C29052-B	LK1)										
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: 03/29/2006 (6C29052-BS	1)										
Chloride	4.80	0.50	0.26	mg/l	5.00		96	90-110			
Sulfate	10.0	0.50	0.18	mg/l	10.0		100	90-110			M-3
Matrix Spike Analyzed: 03/29/2006 (6C2	9052-MS1)				Sou	rce: IPC2	876-02				
Chloride	20.0	0.50	0.26	mg/l	5.00	16	80	80-120			
Matrix Spike Dup Analyzed: 03/29/2006	(6C29052-MS	SD1)			Sou	rce: IPC2	876-02				
Chloride	20.4	0.50	0.26	mg/l	5.00	16	88	80-120	2	20	
Batch: 6C29127 Extracted: 03/29/06	<u>.</u>					•					
Blank Analyzed: 03/29/2006 (6C29127-B	LK1)										
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 03/29/2006 (6C29127-BS	1)										
Surfactants (MBAS)	0.269	0.10	0.044	mg/l	0.250		108	90-110			
Matrix Spike Analyzed: 03/29/2006 (6C2	9127-MS1)				Sou	rce: IPC2	820-01				
Surfactants (MBAS)	0.345	0.10	0.044	mg/l	0.250	0.090	102	50-125			
Matrix Spike Dup Analyzed: 03/29/2006	(6C29127-MS	SD1)			Sou	rce: IPC2	820-01				
Surfactants (MBAS)	0.347	0.10	0.044	mg/l	0.250	0.090	103	50-125	I	20	



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METHOD BLANK/QC DATA

#### **INORGANICS**

	w	Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C29138 Extracted: 03/29/06											
Blank Analyzed: 04/03/2006 (6C29138-B)	LKI)										
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 04/03/2006 (6C29138-BS)	1)										
Biochemical Oxygen Demand	186	100	30	mg/l	198		94	85-115			
LCS Dup Analyzed: 04/03/2006 (6C29138	3-BSD1)										
Biochemical Oxygen Demand	185	100	30	mg/l	198		93	85-115	1	20	
Batch: 6C30048 Extracted: 03/30/06											
Blank Analyzed: 03/30/2006 (6C30048-B)	LKI										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 03/30/2006 (6C30048-BS1	)										
Oil & Grease	17.8	5.0	0.94	mg/l	20.0		89	65-120		<i>t</i> .	M-NR1
LCS Dup Analyzed: 03/30/2006 (6C30048	-BSD1)										
Oil & Grease	19.4	5.0	0.94	mg/l	20.0		97	65-120	9	20	
Batch: 6C30062 Extracted: 03/30/06			٠								
Duplicate Analyzed: 03/30/2006 (6C30062	-DUP1)				Sou	rce: IPC2	961-01				
Specific Conductance	492	1.0	1.0	umhos/cm		500			2	5	
Batch: 6C30063 Extracted: 03/30/06	·										
Blank Analyzed: 03/30/2006 (6C30063-BI	.K1)										
Total Dissolved Solids	ND	10	10	mg/l							



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# METHOD BLANK/QC DATA

## **INORGANICS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C30063 Extracted: 03/30/06	_										
LCS Analyzed: 03/30/2006 (6C30063-BS)	1)										
Total Dissolved Solids	990	10	10	mg/l	1000		99	90-110			
Duplicate Analyzed: 03/30/2006 (6C3006)	3-DUP1)				Sou	rce: IPC2	961-01				
Total Dissolved Solids	295	10	10	mg/l		300			2	10	
Batch: 6C30069 Extracted: 03/30/06	_										
Blank Analyzed: 03/30/2006 (6C30069-Bl	LK1)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 03/30/2006 (6C30069-BS1	1)										
Perchlorate	50.4	4.0	0.80	ug/l	50.0		101	85-115			M-3
Batch: 6C30086 Extracted: 03/30/06	•										
Blank Analyzed: 03/30/2006 (6C30086-Bl	L <b>K1</b> )						•			:	
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 03/30/2006 (6C30086-BS1	)										
Total Suspended Solids	987	10	10	mg/l	1000		99	85-115			
Duplicate Analyzed: 03/30/2006 (6C30086	i-DUP1)				Sour	ce: IPC2	670-01				
Total Suspended Solids	216	10	10	mg/l		230			6	10	
Batch: 6C30093 Extracted: 03/30/06	•										
Blank Analyzed: 03/30/2006 (6C30093-BI	.K1)										
Total Cyanide	ND	5.0	2.2	ug/l							



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#### **INORGANICS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C30093 Extracted: 03/30/06	-										
LCS Analyzed: 03/30/2006 (6C30093-BS)	n										
Total Cyanide	190	5.0	2.2	ug/l	200		95	90-110			
Matrix Spike Analyzed: 03/30/2006 (6C3)	M93-MS1)			•	Son	rce: IPC2	Q67_A1				
Total Cyanide	187	5.0	2.2	ug/l	200	ND	94	70-115			
Matrix Spike Dup Analyzed: 03/30/2006	(6C30093-MS	SD1)			Sou	rce: IPC2	962-01				
Total Cyanide	178	5.0	2.2	ug/l	200	ND	89	70-115	5	15	
Batch: 6C30113 Extracted: 03/30/06	_										
Blank Analyzed: 03/30/2006 (6C30113-Bl	EK1)										
Turbidity	0.0400	1.0	0.040	NTU							J
Duplicate Analyzed: 03/30/2006 (6C30113	3-DUP1)				Sou	rce: IPC2	950-01				
Turbidity	3.02	1:0	0.040	NTU		3.0		w it	1	20	.,
Duplicate Analyzed: 03/30/2006 (6C30113	-DUP2)				Sour	rce: IPC2	948-06				
Turbidity	ND	1.0	0.040	NTU		ND				20	
Batch: 6C31112 Extracted: 03/31/06	•										
Blank Analyzed: 03/31/2006 (6C31112-BI	.K1)										
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 03/31/2006 (6C31112-BS1	)					,					
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0		112	80-115			



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#### **INORGANICS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C31112 Extracted: 03/31/06	Ĺ										
Matrix Spike Analyzed: 03/31/2006 (6C3	1112-MS1)				Sou	rce: IPC2	824-01				
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	ND	115	70-120			
Matrix Spike Dup Analyzed: 03/31/2006	(6C31112-MS	D1)			Sou	rce: IPC2	824-01				
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0	ND	115	70-120	0	15	



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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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	Limit
IPC2961-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.094	4.7	10.00
IPC2961-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.0094	0.0100
IPC2961-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPC2961-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00
IPC2961-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.7	6.50
IPC2961-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0.15	8.5	9.10
IPC2961-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.25	4.7	4.00
IPC2961-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.5	8.10
IPC2961-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.5	8.20
IPC2961-01	BOD	Biochemical Oxygen Demand	mg/l	1.30	2.0	20
IPC2961-01	Chloride - 300.0	Chloride	mg/l	28	0.50	150
IPC2961-01	Copper-200.8	Copper	ug/l	3.00	2.0	7.10
IPC2961-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	0.39	5.0	5.00
IPC2961-01	Iron-200.7	Iron	mg/l	0.87	0.040	0.30
IPC2961-01	Lead-200.8	Lead	ug/l	0.91	1.0	2.60
IPC2961-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.057	0.10	0.50
IPC2961-01	Mercury - 245.1	Mercury	ug/I	0.0069	0.20	0.20
IPC2961-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	3.10	0.26	8.00
IPC2961-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPC2961-01	Sulfate-300.0	Sulfate	mg/l	78	1.0	300
IPC2961-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	300	10	950
IPC2961-01RE1	Iron-200.7	Iron	mg/l	0.85	0.040	0.30
IPC2961-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPC2961-02	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00



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Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Report Number: IPC2961

Sampled: 03/29/06 Received: 03/29/06

Attention: Bronwyn Kelly

## **DATA QUALIFIERS AND DEFINITIONS**

Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.

Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the

Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.

M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

M-3 Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was

accepted based on acceptable recovery in the Blank Spike (LCS).

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

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

RPD Relative Percent Difference



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

MWH-Pasadena/Boeing

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

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## **Certification Summary**

#### Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
SM2540C	Water	$\mathbf{X}^{c}$	X
SM5540-C	Water	X	X

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

#### **Subcontracted Laboratories**

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

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed:

1613-Dioxin-HR-Alta

Samples: IPC2961-01

EDD + Level 4 Analysis Performed:

Samples: IPC2961-01

Oil & Grease (EPA 413.1)   Noil & Grease (EPA 413.1)   N	Oil & Gresse (EPA 413.1)	1	1	Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone   Mone	Page 1 of 1	UIKED	S. NDMA,	Mannia-N B BHC (608) Trichlorophe rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis rotoluene, Bis ro	nmA inqiA 3,4,S diniQ fiynte stneq	24 TAT, "Fe	24 TAT			24 TAT	24 TAT					×	×	×	1 Mis	,	Turn around Time: (check) 24 Hours 5 Days	48 Hours 10 Days	18 Only 72 Ho	**************************************
Oil & Grease (EPA 413.1)     X     Oil & Grease (EPA 413.1)     X	Nil & Gresse (EPA 413.1)	##	## 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	##	T Significant	ANAL YOU'S KEG	'N-20	actants (MBA: 504, NO3+NO hiorate idity,TDS, TS	Surfa CI-, 9 Perc							×	×	×	×						30%			
	20	TAIN OF CO   CO   CO   CO   CO   CO   CO   C	Project:   Boeing-SSFL NPDES   Routine Outfall 001	Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:   Project:	도 2.		igeners) ( 413.1) overable)	D (and all cor Grease (EPA nide (total rec	TCD S IIO Cyar			×	×	×	×								×				hate/Time:	



1,2006

oject I.D.: 27513

chele Chamberlin r Analytical, Irvine Derian Avenue, Suite 100 CA 92614

#### s. Chamberlin,

Ed are the results for the one aqueous sample received at Alta Analytical Laboratory on March 6 under your Project Name "IPC2961". This sample was extracted and analyzed using EPA 1 1613 for tetra-through-octa chlorinated dioxins and furans. A rush turnaround time was at for this work.

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

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

بواد

ı M. Maier

or of HRMS Services



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



Section I: Sample Inventory Report
Date Received: 3/31/2006

Alta Lab. ID

Client Sample ID

27513-001

IPC2961-01

## **SECTION II**

Method Blank						EPA Method 1613
Matrix: Aqueous	sno	QC Batch No.:	7889	Lab Sample: 0-MB001		
Sample Size: 1.0	1.00 L	Date Extracted:	1-Apr-06	Date Analyzed DB-5: 3-Apr-06	Date Anal	Date Analyzed DB-225: NA
Analyte	Conc. (ug/L)	DL a EM	EMPC b Qualifiers	Labeled Standard	%R	LCL-UCL ^d Oualifiers
2,3,7,8-TCDD	QN	0.00000128		IS 13C-2,3,7,8-TCDD	5'69	25-164
1,2,3,7,8-PeCDD	£	0.00000135			75.3	25 - 181
1,2,3,4,7,8-HxCDD	N	0.00000138		13C-1,2,3,4,7,8-HxCDD	74.1	32-141
1,2,3,6,7,8-HxCDD	2	0.00000142		13C-1,2,3,6,7,8-HxCDD	76.8	28 - 130
1,2,3,7,8,9-HxCDD	ON.	0.00000135		13C-1,2,3,4,6,7,8-HpCDD	692	23-140
1,2,3,4,6,7,8-HpCDD	2	0.000000972		13C-OCDD	37.5	17 - 157
OCDE	QN	0.00000275		13C-2,3,7,8-TCDF	70.7	24 - 169
2,3,7,8-TCDF	g	0.00000102		13C-1,2,3,7,8-PeCDF	75.7	24 - 185
1,2,3,7,8-PeCDF	9	0.00000106		13C-2,3,4,7,8-PeCDF	78.6	21-178
2,3,4,7,8-PeCDF	2	0.00000103		13C-1,2,3,4,7,8-HxCDF	74.4	26 - 152
1,2,3,4,7,8-HxCDF	Ø	0.000000440		13C-1,2,3,6,7,8-HxCDF	1.91	26-123
1,2,3,6,7,8-HxCDF	S	0.000000410		13C-2,3,4,6,7,8-HxCDF	76.4	28 - 136
2,3,4,6,7,8-HxCDF	æ	0.0000000469		13C-1,2,3,7,8,9-HxCDF	76.1	29-147
1,2,3,7,8,9-HxCDF	2	0.000000599		13C-1,2,3,4,6,7,8-HpCDF	65.9	28 - 143
1,2,3,4,6,7,8-HpCDF	ON.	0.000000722		13C-1,2,3,4,7,8,9-HpCDF	16.7	26-138
1,2,3,4,7,8,9-HpCDF	Q	0.000000661		13C-OCDF	47.0	17 - 157
OCDE	QN	0.00000405		CRS 37CI-2,3,7,8-TCDD	83.8	35-197
Totals				Footnotes		
Total TCDD	QN.	0.00000128		a. Sample specific estimated detection limit.		
Total PeCDD	QN	0.00000135		b. Estimated maximum possible concentration.		
Total HxCDD	8	0.00000138		c. Method detection limit.		
Total HpCDD	<b>S</b>	0.000000072		d. Lower control limit - upper control limit.		
Total TCDF	2	0.00000102		William i reference de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya del companya de la companya del companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya del la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya de la companya		
Total PeCIDF	P	0.00000104				
Total HxCDF	2	0.000000474				
Total HpCDF	2	0.000000692				
Analyst: DMS				Approved By: Martha M. 1	Martha M. Maier 04-Apr-2006 14:45	r-2006 14:45

OFR Results					EPA	EPA Method 1613
Matrix: Aqueous		QC Batch No.:	7889	Lab Sample: 0-OPR001		
Sample Size: 1.00 L		Date Extracted:	1-Apr-06	Date Analyzed DB-5: 3-Apr-06	Date Analyzed DB-225:	d DB-225: NA
Analyte	Spike Conc.	Spike Conc. Conc. (ng/mL)	OPR Limits	Labeled Standard	%R	TCT-NCT
2,3,7,8-TCDD	10,0	10.4	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	62.4	25 - 164
1,2,3,7,8-PeCDD	50.0	50.4	35-71		65.4	25 - 181
1.2,3,4,7,8-HxCDD	50.0	50.5	35-82	13C-1,2,3,4,7,8-HxCDD	0.09	32+141
1,2,3,6,7,8-HxCDD	50.0	51.0	38 - 67	13C-1,2,3,6,7,8-HxCDD	60.8	28 - 130
1,2,3,7,8,9-HxCDD	90.05	52.0	3281	13C-1,2,3,4,6,7,8-HpCDD	57.0	23 - 140
1,2,3,4,6,7,8-HpCDD	\$0.0	53.4	35 - 70	13C-OCDD	30.1	17 - 157
0000	001	102	78-144	13C-2,3,7,8-TCDF	219	24 - 169
2,3,7,8-TCDF	10.0	10.3	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	65.3	24 - 185
1,2,3,7,8-PeCDF	900	49.9	40-67	13C-2,3,4,7,8-PeCDF	0.89	21 - 178
2,3,4,7,8-PeCDF	20.0	50.1	34 - 80	13C-1,2,3,4,7,8-HxCDF	56.2	26 - 152
1,2,3,4,7,8-HxCDF	20.0	51.9	36-67	13C-1,2,3,6,7,8-HxCDF	58.4	26-123
1,2,3,6,7,8-HxCDF	20.0	53.9	42 - 65	13C-2,3,4,6,7,8-HxCDF	60.7	28 - 136
2,3,4,6,7,8-HxCDF	20.0	9715	35-78	13C-1,2,3,7,8,9-HxCDF	58.6	29 - 147
1,2,3,7,8,9-HxCDF	50.0	52.0	39 - 65	13C-1,2,3,4,6,7,8-HpCDF	51.0	28 - 143
1.2.3.4.6.7.8-HpCDF	50.0	6.64	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	60.3	26-138
1,2,3,4,7,8,9-HpCDF	50.0	50.7	39 - 69	13C-OCDF	37.3	17-157
OCDF	100	98.2	63 - 170	CRS 37Cl-2,3,7,8-TCDD	75.6	35-197

Analyst: DMS

Martha M. Maier 04-Apr-2006 14:45 Approved By:

CHEMI LANGE		***	Sample Data		Laboratory Data				
	Del Mar Analytical Imina				ACRES CONTRACTOR OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON OF THE PERSON				
2.2	PC2961		Matrix:	Aqueous	Lab Sample:	27513-001	Date Received:	eived:	31-Mar-06
llected:	29-Mar-06		Sample Size:	1.04 L	QC Batch No.:	7889	Date Extracted:	acted:	1-Apr-06
Time Collected:	1333				Date Analyzed DB-5:	3-Apr-06	Date Ana	Date Analyzed DB-225:	NA
Analyte	Conc. (ug/L)	DL a	EMPC	Qualifiers	Labeled Standard	ırd	%R	rcr-ncr _q	Oualifiers
2,3,7,8-TCDD	QN	0.00000103			IS 13C-2,3,7,8-TCDD	Q	7.49	25 - 164	
1,2,3,7,8-PeCDD	S	0.00000121			13C-1,2,3,7,8-PeCDD	CDD	67.5	25 - 181	
1.2.3,4.7,8-HxCDD	. ON	0.00000134	100		13C-1.2.3 4.7.8-HxCDD	HXCDD	64.1	32-141	
1,2,3,6,7,8-HxCDD	ON N	0.00000128	~~		13C-1,2,3,6,7,8-HxCDD	TxCDD	66.7	28 - 130	
1,2,3,7,8,9-HxCDD	<b>QU</b>	0.00000127			13C-1,2,3,4,6,7,8-HpCDD	HPCDD	69.4	23 - 140	
1,2,3,4,6,7,8-HpCD	D 0.0000107			r	13C-OCDD	Water M. C. Took V. Angel Confeet Angel State (大変なないないないないないないないないないないないないないないないないないないな	40.0	17 - 157	
agoo	0.0000883				13C-2,3,7,8-TCDF	¥	6 19	24-169	
2,3,7,8-TCDF	Z	0.000000951			13C-1,2,3,7,8-PeCDF	CDF	62.8	24 - 185	
1.2.3,7.8-PeCDF	<b>Q</b>	0.00000135			13C-2,3,4,7,8-PeCDF	CDF	64.7	21-178	
2,3,4,7,8-PeCDF	R	0.00000127			13C-1,2,3,4,7,8-HxCDF	<b>F</b>	68.1	26 - 152	
1,2,3,4,7,8-HxCDF	<b>QN</b>	0.000000339	9		13C-1,2,3,6,7,8-HxCDF	<b>I</b> ACDF	0.89	26-123	
1,2,3,6,7,8-HxCDF	Q	0.000000326	9		13C-2,3,4,6,7,8-HxCDF	HXCDF	68.7	28 - 136	
2,3,4,6,7,8 HxCDF	<b>W</b>	0.000000362	r M		13C-1,2,3,7,8,9-HxCDF	<b>I</b> xCDF	70.0	29 - 147	
1,2,3,7,8,9-HxCDF	<b>A</b>	0.000000470	0,		13C-1,2,3,4,6,7,8-HpCDF	-HpCDF	63.7	28 - 143	
1,2,3,4,6,7,8-HpCDF	0,00000164			Α,	13C-1,2,3,4,7,8,9-HpCDF	-HpCDF	72.6	26- 138	
1,2,3,4,7,8,9-HpCDF	<b>Q</b>	0.000000519	6		13C-OCDF		48.6	17-157	
acbr	0.00000415			1	CRS 37Cl-2,3,7,8-TCDD	<b>G</b> 0	9:98	35 - 197	
Totals			i * •		Footnotes				
Total TCDD	R	0.00000103			a. Sample specific estimated detection limit	l detection limit.			
Total PeCDD	QN	0,00000121			b. Estimated maximum possible concentration.	ible concentration.	160 280 280		
Total HxCDD	0.00000133		0.00000297	297	c. Method detection limit.				
Total HpCDD	0.0000228				d. Lower control limit - upper control limit	er control limit			
Total TCDF	2	0.000000951	_						
Total PeCDF	QN	0.00000131							
Total HxCDF	R	0.000000370	9		MACALISATIVA (1) DE VICTORIO (1) ANTONOMO DO COMO A COMO CONTRATORIO (1) ANTONOMO CONTRATORIO (1	VALUE ON STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONTRACTOR OF STANDARD CONT	os identificados de seguentes		
Total HpCDF	0.00000466								

### **APPENDIX**

NPDES 23396

#### **DATA QUALIFIERS & ABBREVIATIONS**

В This compound was also detected in the method blank. D The amount reported is the maximum possible concentration due to possible chlorinated diphenylether interference. 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. **Estimated Maximum Possible Concentration EMPC** 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	gangangangang galipilis dalama <u>n mananda manada dara manada dara manada da dara manada da dara mini famili minada d</u>
State of Utah	9169330940
Commonwealth of Virginia	00013
State of Washington	C1285
State of Wisconsin	998036160
State of Wyoming	8TMS-Q



17461 Derisn Ave. Suits 100, irvine, CA 92814 1014 E. Cooley Dr., Suite A. Colton, CA 92324

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

Ph (480) 785-0043

Fax (480) 785-0851

## **SUBCONTRACT ORDER - PROJECT # IPC2961**

Del Mar Analytical - Irvine 17461 Derian Avenue. Sui Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michele	te 100	Alta Analytical - SUB 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106
Standard TAT is request	ed unless specific due date is re Expiration	quested => Due Date: 46/06 Initials:
Sample ID: IPC2961-01 W 1613-Dioxin-HR-Alta EDD + Level 4	7ater Sampled: 03/29/06 13: 04/05/06 13:33 04/26/06 13:33	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 (IPC2961-01G) 1 L Amber (IPC2961-01H)		

	ŠA	MPLE INTEGRITY:		,
All contrainers intact: Yes D	io Sample labels/COC	agree:    Yes    No	Samples Received On Ice::	Yes 🗆 No
Custoff Seals Present:  Yes  A	lo Samples Preserved l	Properly: Yes No	Samples Received at (temp):	
Attual	3/3/06	Bettina de	Binedict 3/31/CL	, 0905
Je saily	/ Date Time	Received By	Date	Time
Released Rv	Date Time	Received By	Date	Time

Project 27513

P. Nepres 25399

## SAMPLE LOG-IN CHECKLIST

Alta Project #: 27513

Samples Arrival:	Date/Time	0905	Initials	8	Location:	- >
Logged In:	Date/Time 3/31/06	1157	Initials	: ! !	Location:	
Delivered By:	FedEx	UPS	Cal	DHL	Hand Delivered	Other
Preservation:	Ice	Blu	ie Ice	Dry	Ice	None
Temp °C  -3		Time:	10	(0)	Thermometer	ID: DT-20

					YES	NO	NA
Adequate Sample Volume Received?	)	•			V/		
Holding Time Acceptable?					V		
Shipping Container(s) Intact?					ريا		
Shipping Custody Seals Intact?							
Shipping Documentation Present?							
Airbill Trk# 791	90	717-90	<u> 39                                    </u>		1		·
Sample Container Intact?			,		V		
Sample Custody Seals Intact?							
Chain of Custody / Sample Documer	ntation P	resent?			V	1./	<u> </u>
COC Anomaly/Sample Acceptance F	orm cor	mpleted?				V	
If Chlorinated or Drinking Water Sam	iples, Ad	cceptable P	reservation?				TI
Na₂S₂O₃ Preservation Documented?			COC		nple ainer	(No	ne
Shipping Container	Alta	Client	Retain	<b>/</b> *(e)	ium)	Disp	ose

Comments:

## APPENDIX G

## **Section 72**

Outfall 001, March 29, 2006

AMEC Data Validation Reports

## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA MECX, LLC Package ID B4DF72 Task Order <u>1261.001D.01</u> 12260 East Vassar Drive Suite 500 SDG No. IPC2961 Lakewood, CO 80226 No. of Analyses 1 Laboratory Alta Analytical Date: April 14, 2006 Reviewer's Signature Reviewer E. Wessling 26bsHA/A Analysis/Method Dioxins/Furans by 1613 **ACTION ITEMS*** Case Narrative Deficiencies 2. Out of Scope **Analyses** 3. Analyses Not Conducted 4. Missing Hardcopy Deliverables 5. Incorrect Hardcopy Deliverables 6. Deviations from Analysis Qualifications were assigned for the following: - results between the RL and the MDL were estimated Protocol, e.g., 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 Subcontracted analytical laboratory is not meeting contract and/or method requirements.

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



# **DATA VALIDATION REPORT**

# NPDES Monitoring Program Outfall 001

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IPC2961

Prepared by

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

Project.

**NPDES** IPC2961

DATA VALIDATION REPORT

SDG: Analysis

#### 1. INTRODUCTION

Task Order Title:

**NPDES** 

Contract Task Order:

1261.001D.01

Sample Delivery Group:

IPC2961

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Dioxins/Furans

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

Reviewer:

E. Wessling

Date of Review:

April 14, 2006

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

Project: SDG:

NPDES

SUG: Analysis: IPC2961 D/F

**Table 1. Sample Identification** 

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 001	IPC2961-01	27513-001	Water	1613

DATA VALIDATION REPORT

SDG: Analysis: IPC2961. D/F

#### 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

The sample in this SDG was received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The sample was shipped to Alta for dioxin/furan analysis and was received below the temperature limits at 1.3°C. As the sample was not noted to be damaged or frozen, no qualifications were required. According to the case narrative and laboratory login sheet, the sample was received intact and in good condition at both laboratories. No qualifications were required.

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

#### 2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

#### 2.2.1 GC Column Performance

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

Project: NPDES SDG: IPC2961 Analysis: D/F

#### DATA VALIDATION REPORT

#### 2.2.2 Mass Spectrometer Performance

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

#### 2.3 CALIBRATION

#### 2.3.1 Initial Calibration

The initial calibration was analyzed 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 ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤35% for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

#### 2.3.2 Continuing Calibration

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

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

#### 2.4 BLANKS

One method blank (0-7889-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 (0-7889-OPR001) was extracted and analyzed with the sample in this SDG. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. A review of the raw data and chromatograms indicated no transcription or calculation errors. No qualifications were required.

Project: SDG

NODES IPC2961 D/F

DATA VALIDATION REPORT

Analysis:

#### MATRIX SPIKE/MATRIX SPIKE DUPLICATE 2.6

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

#### FIELD QC SAMPLES 2.7

Following are findings associated with field QC:

#### 2.7.1 Field Blanks and Equipment Rinsates

The sample in this SDG had no field blank or equipment rinsate identified. No qualification of the site sample was required.

#### 2.7.2 Field Duplicates

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

#### 2.8 INTERNAL STANDARDS

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

#### COMPOUND IDENTIFICATION 2.9

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.

#### **COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS** 2.10

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

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7	Clisat Data Name Project	Del Mar Au IPC2961	Dei Mar Analytical, Irvine IPC2961			Aqueous	Laboratory Data Lab Sample	27513-001	Date Raceive		31-Mar-06
<b>*</b>	Time Collected	20 View 36				7	Date Analyzed DB-5:	3-Apr-06	Dute Analyzed I	Dute Analyzed DB-225:	NA NA
À	Analyte	ë		, Ja	EMPC	Qualifiers	Labeled Standard	12	%R L	וכד-מכודק	Ouglifiers
	2,3,7,8-TCDD		9	0.00000103	33		IS 13C-2,3,7,8-TCDD	0		25.164	
	1,2,3,7,8-PeCDD	~	2	0.00000121	~		13C-1,2,3,7,8-PeCDD	9	67.5	25 - 181	
	1,2,3,4,7,8-ffxCDD	8	ĝ	0.00000134	*		13C-1,23,4,7,8-HxCDD	Icoo	2	32 - 141	
<del></del>	12,3,6,7,8-HxCDD	8	9	0.00000128	**		13C-1,2,3,6,7,8-HxCDD	<u> </u>	66.7	28 - 130	
	12,3,7,8,9-HxCDD	a	2	0.00000127	<b>.</b>		13C-1,2,3,4,6,7,8-HpCDD	HISCOD	4.69	23-140	
7	1,2,3,4,6,7,8-HpCDD	COD	0.0000107			<b>3-16</b>	130,000		40.0	17-157	
	OCDO		0.0000883				13C.2.3.7.8-TCDF	<b>1.</b>	6.19	24-169	· .
	2,3,7,8-TCDF	:	2	0.000000095	2		13C-1,2,3,7,8-PeCDF	Dr	8.79	24 - 185	
	1,2,3,7,8.PeCDF		足	0.00000135			13C-2,3,47,8-PeCDF	Ä	3	21 178	
	2,3,4,7,8-PeCDF		ð	0.00000127			13C-1,2,3,4,7,8-HxCDF	IXCDF	88	26 - 152	
	1,2,3,4,7,8-HxCDF	ħ	Ð	0.000000339	200		13C-1,2,3,6,7,8-HxCDF	¥QX	0.89	26 - 123	
	1,2,3,6,7,8-HxCDF	*	9	0.000000326	8		13C-2,3,4,6,7,8-HxCDF	XCOF	68.7	28 - 136	
	2,3,4,6,7,8-HxCDF	*	9	0.000000362	2		13C-123,7,8,9-HxCDF	dO.	20,07	29 - 147	
	12.3,7.8,9.HxCDF	*	2	0.0000043	2		30.12.4.7.8.150F		63.7	28 - 143	
了 人	1,2,3,4,6,7,8-HpCDF	à	0.00000164	and the second			13C-1,2,3,4,7,8,9-HpCDF	HPCDF	2.6	26 - 138	
	1,2,3,4,7,8,9-HpCDF	JQ.	9	0,000000519	611	-	13COCUF		48.6	17-157	
ン ろ ろ	#a Bo		0,0000015				CRS 37Cl-2,2,7,8-TCDD	Q	86.6	35 - 197	
	Totals						Footmotes	A Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Company of the Comp	and the second second		
	Total TCDD		Ą	0.00000103	•		a. Sample specific actimated detaction limit.	detection limit.			
	Total Pecific		2	0.00000121	-	<del>i kina ya</del>	b. Estimated maximum possible concentration,	ble concentration,		•	
2	Total HxCDD		0.00000133	:	0.00000297	<b>.</b>	c. Method detection limit.				
	Total HpCDD		0.0000228		i.	*************	d. Lower control limit - upper control limit.	r control firmit.			
	Total TCDF		Q	0.000000051	2	***************************************					
	Total PeCDF		Ş	0.00000131							
· ·	Total HxCDF		Ş	0.0000000370	22						
	Total MpCDF	And the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t	0.00000466								



#### CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID: B4MT55

12	269 East Vassar Drive		Task Order	1261.001D.01
Au	rora, CO 80014		SDG No.:	
		N	o. of Analyses:	
	Laboratory: Del Mar		Date: April 1	the first control of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first of the first
	Reviewer: P. Meek	\$	Reviewers &	
	Analysis/Method: Metals		I P. MC	
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AC	TION ITEMS*			
•	Case Narrative			
	Deficiencies			
2.	Out of Scope Analyses			
-				
3.	Analyses Not Conducted		· · · · · · · · · · · · · · · · · · ·	
				<del></del>
4.	Missing Hardcopy			
₩.	Deliverables			
5.	Incorrect Hardcopy		······································	· · · · · · · · · · · · · · · · · · ·
-	Deliverables			
6.	Deviations from Analysis		undersitieten is begriffin – mynteen oo stroppellisiini yer	
	Protocol, e.g.,	Reanalysis rejected in favor	of original result	
	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			<del></del>
COI	System Performance MMENTS ⁹			
CO	<del>(1970-1984) (September 1984) (September</del>			
cei	<del>(1970-1984) (September 1984) (September</del>			
COI	<del>(1970-1984) (September 1984) (September</del>			

MECX



# DATA VALIDATION REPORT

# NPDES Sampling Outfall 001

ANALYSIS: METALS

**SAMPLE DELIVERY GROUP IPC2961** 

Prepared by

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

**NPDES** 

SDG:

IPC2961 Analysis:

Metals

#### 1. INTRODUCTION

Task Order Title:

NPDES Sampling

MEC^x Project Number:

DATA VALIDATION REPORT

1261.001D.01

Sample Delivery Group:

IPC2961

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Metals

QC Level:

Level IV

No. of Samples:

Date of Review:

No. of Reanalyses/Dilutions:

P. Meeks

1

Reviewer:

April 13, 2006

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

**NPDES** 

SDG: Analysis: IPC2961 Metals

Table 1. Sample Identification

DATA VALIDATION REPORT

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPC2961-01	Water	200.7
Outfall 001 RE1	IPC2961-01 RE1	Water	200.7

**NPDES** 

SDG: Analysis:

IPC2961 Metals

DATA VALIDATION REPORT

#### 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

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

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

The date of collection recorded on the COC and the dates of analyses recorded in the raw data documented that the sample analyses were performed within the specified holding times of six months for the ICP 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

Iron was not detected in the method blanks and CCBs associated with the ICP metals analyses. No qualifications were required.

B4MT55 3 Revision 0

NPDES

Metals

SDG: Analysis:

: IPC2961

DATA VALIDATION REPORT

#### 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 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

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

B4MT55 4 Revision 0

**NPDES** 

SDG: Analysis: IPC2961 Metals

DATA VALIDATION REPORT

#### 2.12 FIELD QC SAMPLES

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

#### 2.12.1 Field Blanks and Equipment Rinsates

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

#### 2.12.2 Field Duplicates

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



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A. Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Susset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Project ID: Routine Outfall 001

Sampled: 03/29/06

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPC2961

Attention: Bronwyn Kelly

Received: 03/29/06

#### **METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed		. 1
Sample ID: IPC2961-01 (Outfall 00)	- Water) - cont.								Rey	Code
Reporting Units: mg/l										
Iron	EPA 200.7	6C30081	0.015	0.040	0.87	1	03/30/06	03/30/06		ŀ
Sample ID: IPC2961-01RE1 (Outfa	li 001 - Water)									
Reporting Units: mg/l									~	
Iron	EPA 200.7	6D03078	0.015	0.040	0.85	1	03/30/06	04/03/06	R	a
Sample ID: IPC2961-01 (Outfall 00)	- Water)									
Reporting Units: ug/l										
Copper	EPA 200.8	6C29141	0.49	2.0	3.0	ŀ	03/29/06	03/30/06	¥	
Lead	EPA 200.8	6C29141	0.13	1.0	0.91	1	03/29/06	03/30/06	[ ]	
Mercury	EPA 245.1	6C30065	0.050	0.20	ND	1	03/30/06	03/30/06	4	
				* An	alysis	not .	ialidati	»d		

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

LEVEL IV

#### CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

MEC		Package ID: <u>B4VO51</u>
1226	9 East Vassar Drive	Task Order: <u>1261.001D.01</u>
Auro	ra, CO 80014	SDG No.: IPC2961
	•	No. of Analyses: 2
	Laboratory: Del Mar	
	Reviewer: L. Calvin	
	Analysis/Method: Volatiles	
ACTIO	ON ITEMS ^a	
. (	Case Narrative	
1	Deficiencies	
2. (	Out of Scope Analyses	
3. /	Analyses Not Conducted	
4.	Wissing Hardcopy	
	Deliverables	
	ncorrect Hardcopy	
E	Deliverables	
		**************************************
6. I	Deviations from Analysis	Qualifications were assigned for the following:
	Protocol, e.g.,	-continuing calibration %Ds >20%
. 1	Holding Times	
G	GC/MS Tune/Inst. Performance	
C	Calibration	
	Method blanks	
	Surrogates	
	Matrix Spike/Dup LCS	
	ield QC	
	nternal Standard Performance	
	Compound Identification	
	Quantitation	
	system Performance	
COMN	MENTS ^b	
^a Subo	ontracted analytical laboratory is not ma	eeting contract and/or method requirements.
		range arrives as the principle control of the contr

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



# DATA VALIDATION REPORT

# NPDES Monitoring Program Routine Outfall 001

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IPC2961

Prepared by

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

**NPDES** 

SDG: Analysis: IPC2961 **VOCs** 

#### 1. INTRODUCTION

Task Order Title:

**NPDES** 

MECX Project Number:

DATA VALIDATION REPORT

1261,001D,01

Sample Delivery Group:

IPC2961

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Volatiles

QC Level:

Level IV

L. Calvin

No. of Samples:

2

No. of Reanalyses/Dilutions:

Reviewer: Date of Review:

April 11, 2006

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

NPDES

SDG: Analysis: IPC2961 VOCs

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 001	IPC2961-01	Water	624
Trip Blank	IPC2961-02	Water	624

DATA VALIDATION REPORT

Project: SDG: **NPDES** 

Analysis:

IPC2961 VOCs

#### DATA VALIDATION REPORT

#### 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

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

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

The preserved water samples were analyzed for all target compounds within 14 days of collection. No qualifications were required.

#### 2.2 GC/MS TUNING

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

#### 2.3 CALIBRATION

One initial calibration was associated with the sample analyses, dated 03/23/06. The average RRFs were ≥0.05, and the %RSDs were ≤35% or r² values ≥0.995 for all target compounds listed on the sample result summary forms. The continuing calibration associated with the sample analyses was dated 03/30/06. The %Ds exceeded the QC limit of ≤20% for 1,1-dichloroethane and carbon tetrachloride. Nondetect results for both compounds were qualified as estimated, "UJ," in sample Outfall 001. Sample Trip Blank was a field QC sample and required no qualification for the %D outliers. No further qualifications were required.

#### 2.4 BLANKS

One method blank (6C30004-BLK1) was analyzed with this SDG. Benzene was detected between the MDL and the reporting limit at a concentration of 0.34  $\mu$ g/L; however, benzene was not detected in either sample of this SDG. No other target compounds were detected above the

NPDES

DATA VALIDATION REPORT

SDG: Analysis:

VOCs

MDLs in the method blank. Review of the method blank raw data indicated no false positives or negatives. No qualifications were required.

#### 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (6C30004-BS1) was analyzed with this SDG. All recoveries were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

#### 2.6 SURROGATE RECOVERY

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

#### 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

#### 2.8 FIELD QC SAMPLES

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

#### 2.8.1 Trip Blanks

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

#### 2.8.2 Field Blanks and Equipment Rinsates

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

#### 2.8.3 Field Duplicates

There were no field duplicate samples identified for this SDG.

Project: NPDES SDG: IPC2961 Analysis: VOCs

DATA VALIDATION REPORT

#### 2.9 INTERNAL STANDARDS PERFORMANCE

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

#### 2.10 COMPOUND IDENTIFICATION

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

#### 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

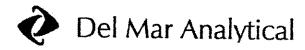
Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low point of the initial calibration and the laboratory MDLs. No qualifications were required.

#### 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

#### 2.13 SYSTEM PERFORMANCE

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



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0857 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

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

Report Number: IPC2961

Sampled: 03/29/06 Received: 03/29/06

## PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed		)ata alifien
Sample ID: IPC2961-01 (Outfall ( Reporting Units: ug/l	001 - Water)								JOHN MAN	4
Benzene	EPA 624	6C30004	0.28	2.0	ND	1	020000		<u> </u>	
Carbon tetrachloride	EPA 624	6C30004	0.28	5.0	ND	1 1	03/30/06	03/30/06		
· Chloroform	EPA 624	6C30004	0.33	2.0	ND	1	03/30/06	03/30/06		C
1,1-Dichloroethane	EPA 624	6C30004	0.27	2.0	ND	1	03/30/06	03/30/06		
1,2-Dichloroethane	EPA 624	6C30004	0.28	2.0	ND	1	03/30/06	03/30/06		CU
1,1-Dichloroethene	EPA 624	6C30004	0.42	3.0	ND	1	03/30/06	03/30/06	u.	
Ethylbenzene	EPA 624	6C30004	0.25	2.0	ND	-	03/30/06	03/30/05		
Tetrachloroethene	EPA 624	6C30004	0.32	2.0	ND	1	03/30/06	03/30/06	l	
Toluene	EPA 624	6C30004	0.36	2.0	ND	1	03/30/06	03/30/06		
1,1,1-Trichloroethane	EPA 624	6C30004	0.30	2.0	ND	1	03/30/06	03/30/06		
1,1,2-Trichloroethane	EPA 624	6C30004	0.30	2.0	ND	1			İ	
Trichloroethene	EPA 624	6C30004	0.26	5.0	ND ND	1	03/30/06			
Trichlorofluoromethane	EPA 624	6C30004	0.24	5.0	ND	1	03/30/06	03/30/06	Ì	
Vinyl chloride	EPA 624	6C30004	0.26	- 5.0	ND	1		03/30/06		
Xylenes, Total	EPA 624	6C30004	0.20	4.0	ND	1		03/30/06		
Surrogate: Dibromofluoromethane (	(80-120%)	000004	0.50	4.0	114 %	1	03/30/06	03/30/06	¥	
Surrogate: Toluene-d8 (80-120%)					107%	^				
Surrogate: 4-Bromofluorobenzene (8	80-120%)				100 %					
Sample ID: IPC2961-02 (Trip Blan Reporting Units: ug/l	•				100 %					· .
Benzene	EPA 624	6C30004	0.28	2.0	<b>&gt;175</b>		000000			
Carbon tetrachloride	EPA 624	6C30004	0.28		ND	1		03/30/06	U.	
Chloroform	EPA 624	6C30004	0.28	5.0	ND	1		03/30/06		
1,1-Dichloroethane	EPA 624	6C30004	0.33	2.0	ND	1	03/30/06			
1,2-Dichloroethane	EPA 624	6C30004	0.27	2.0	ND	1		03/30/06		~
1,1-Dichloroethene	EPA 624	6C30004	0.42	2.0	ND	1		03/30/06	9	
Ethylbenzene	EPA 624	6C30004	0.42	3.0	ND	1		03/30/06	Distriction of the second	
Tetrachloroethene	EPA 624	6C30004		2.0	ND	1		03/30/06		
Toluene	EPA 624	6C30004	0.32	2.0	ND	1		03/30/06		
1,1,1-Trichloroethane	EPA 624	6C30004	0.36	2.0	ND	1		03/30/06	The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s	
1,1,2-Trichloroethane	EPA 624	6C30004	0.30	2.0	ND	1		03/30/06	Contraction	
Trichloroethene	EPA 624		0.30	2.0	ND	. 1	and the second second	03/30/06	en de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania del compania del compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania de la compania del compania del compania de la compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del compania del com	
Trichlorofluoromethane	EPA 624	6C30004	0.26	5.0	ND			03/30/06	and in the last	
Vinyl chloride	EPA 624	6C30004	0.34	5.0	ND		03/30/06			
Xylenes, Total	EPA 624 EPA 624	6C30004	0.26	5.0	ND			03/30/06		
Surrogate: Dibromofluoromethane (8	EE M 044 20. 12002)	6C30004	0.90	4.0	ND	1	03/30/06	03/30/06	V [	
Surrogate: Toluene-d8 (80-120%)	00-12070j				104%				Í	
Surrogate: 4-Bromofluorobenzene (8)	0 120021				106 %					
On Ogac. To one just overzene (6)	U-12U70J				100 %					

Del Mar Analytical - Irvine Michele Chamberlin

Project Manager

Level I

## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

12569 East Vassar Drive Aurora, CO 80014  Aurora, CO 80014  Laboratory: Del Mar Analytical Reviewer: P. Meeks Analytical/Reviewer: P. Meeks Analytical/Revie	ML				Package IU. BAVVC00
Laboratory: Del Mar Analytical Reviewer: P. Meeks Analysis/Method: General Minerals  ACTION ITEMS*  Case Narrative Deficiencies  2. Out of Scope Analyses  3. Analyses Not Conducted  4. Missing Hardcopy Deliverables  5. Incorrect Hardcopy Deliverables  6. Devistions from Analysis Protocol, e.g., Holding Times GCINS Ture/Inst. Performance Calibration Method blanks Surrogates Matrix SpikerDup LCS Field QC Internal Standard Performance Compound Identification Quantitation System Performance COMMENTS*  * Subcontracted analytical laboratory is not meeting contract and/or method requirements.	122	69 East Vassar Drive			
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# DATA VALIDATION REPORT

# NPDES Sampling Outfall 001

**ANALYSIS: GENERAL MINERALS** 

SAMPLE DELIVERY GROUP: IPC2961

Prepared by

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

Project:

**NPDES** 

DATA VALIDATION REPORT

SDG: IPC2961 Analysis: Gen. Min.

### 1. INTRODUCTION

Task Order Title:

**NPDES Sampling** 

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

1201.0010.01

Project Manager:

IPC2961 P. Costa

roject manager. Matrix:

Water

Analysis:

**General Minerals** 

QC Level:

Level IV

No. of Samples:

revei i

No. of Reanalyses/Dilutions:

1.

Reviewer

ver: P. Meeks

Date of Review:

April 13, 2006

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

Project.

NPOES

SDG: Analysis: IPC2961 Gen. Min.

DATA VALIDATION REPORT

Table 1. Sample Identification

Outfall 001	IPC2961-01	Water	General Minerals
Client ID	Laboratory ID	Matrix	COC Method

**NPDES** Project: SDG:

PC2961 Analysis: Gen. Min.

#### DATA VALIDATION REPORT

#### 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

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

### 2.1.2 Chain of Custody

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

### 2.1.3 Holding Times

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

#### 2.2 **CALIBRATION**

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

#### 2.3 BLANKS

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

#### 2.4 **BLANK SPIKES AND LABORATORY CONTROL SAMPLES**

The reported ammonia LCS recovery was within the laboratory-established control limits. LCS samples are not applicable to the turbidity and specific conductivity analyses. No qualifications were required.

**B4WC55** 

Revision 0

Project:

NPDES

DATA VALIDATION REPORT

SDG: Analysis: IPC2961 Gen. Min.

#### 2.5 LABORATORY DUPLICATES

Laboratory duplicate analyses were performed for conductivity only. The RPD was within the laboratory-established control limit of ≤5%. No qualifications were required.

#### 2.6 MATRIX SPIKES

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

#### 2.7 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No qualifications were required.

#### 2.8 FIELD QC SAMPLES

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

#### 2.8.1 Field Blanks and Equipment Rinsates

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

### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



17461 Denim Ave., Suite 100, Invine, CA 92614 (949) 261-1022 FAX (949) 260-5297 1014 E. Cooley Dr., Suite A., Culton, CA 92324 (909) 370-4667 FAX (969) 370-1046 9636 South Stat St., Suite 8-120, Phoenin, AZ 65044 (460) 765-6043 FAX (460) 765-6831 2520 E. Sonori Rd. #3, Lac Vegan, NV 89120 (702) 796-3620 FAX (702) 796-3621

MWH-Pasadena/Boeing

Project ID: Routine Outfail 001

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPC2961

Sampled: 03/29/06

Attention: Bronwyn Kelly

Received: 03/29/06

### **INORGANICS**

Analyte	Method	Batck	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC2961-01 (Outfall 00) Reporting Units: mg/l	I - Water) - cont.								RN (Q)
Ammonia-N (Distilled)	EPA 350.2	6C31112	0.30	0.50	0.56	1	03/31/06	03/31/06	T R
Biochemical Oxygen Demand	EPA 405.1	6C29138	0.59	2.0	1.3	i	03/29/06	04/03/06	* 1
Chloride	EPA 300.0	6C29052	0.26	0.50	28	ì	03/29/06	03/29/06	
Nitrate/Nitrite-N	EPA 300.0	6C29052	0.072	0.26	3.1	i	03/29/06	03/29/06	
Oil & Grease	EPA 413.1	6C30048	0.89	4.7	ND	1	03/30/06	03/30/06	
Sulfate	EPA 300.0	6C29052	0.36	1.0	78	2	03/29/06	03/29/06	
Surfactants (MBAS)	SM5540-C	6C29127	0.044	0.10	0.057	ī	03/29/06	03/29/06	
Total Disselved Solids	SM2540C	6C30063	10	10	300	i	03/30/06	03/30/06	
Total Suspended Solids	EPA 160.2	6C30086	10	10	ND	ī	03/30/06	03/30/06	
Sample ID: IPC2961-01 (Outfall 00) Reporting Units: mi//hr	I - Water)								
Total Settleable Solids	EPA 160.5	6C29122	0.10	0.10	ND	I	03/29/06	03/29/06	<b>↓</b>
Sample ID: IPC2961-01 (Outfall 00) Reporting Units: NTU	1 - Water)								
Turbidity	EPA 180.1	6C30113	0.040	1.0	18	1	03/30/06	03/30/06	Wilderson
Sample ID: IPC2961-01 (Outfall 60 Reporting Units: ug/l	I - Water)						.5.4		
Total Cyanide	EPA 335.2	6C30093	2.2	5.0	ND	1	03/30/06	03/30/06	X
Perchiorate	EPA 314.0	6C30069	0.80	4.0	ND	1	03/30/06	03/30/06	*
Sample ID: IPC2961-01 (Outfail 00 Reporting Units: umbos/cm	I - Water)								

* Analysis not validated

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

LEVEL IN

# **APPENDIX G**

# **Section 73**

Outfall 002, March 07, 2006 Del Mar Analytical Laboratory Report



### LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Sampled: 03/07/06

Received: 03/07/06

Issued: 03/24/06 10:35

#### NELAP #01108CA California ELAP#1197 CSDLAC #10117

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

This entire report was reviewed and approved for release.

#### SAMPLE CROSS REFERENCE

SUBCONTRACTED:

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

LABORATORY ID **CLIENT ID** IPC0795-01 Outfall 002

**MATRIX** Water

Water

IPC0795-02

Trip Blank

Reviewed By:

Del Mar Analytical - Irvine Michele Chamberlin Project Manager

Michele Chamberdin

IPC0795 <Page 1 of 23> NPDES - 3434



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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

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPC0795

Sampled: 03/07/06 Received: 03/07/06

Attention: Bronwyn Kelly

#### CORRECTIVE ACTION REPORT

Department: Extractions

Date: 03/21/2006

Method: EPA 625

Matrix: Water

QC Batch: 6C12001

#### Identification and Definition of Problem:

The percent recovery for several compounds and all surrogates in the LCS were below laboratory 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 these compounds in the LCS are potentially biased low and can be considered estimates only.

Quality Assurance Approval:

Dave Dawes

Date: 03/23/2006 05:34 PM



Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPC0795

Sampled: 03/07/06 Received: 03/07/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0795-01 (Outfall 002 - Wat	er)				Somale	:d: 03/07/0	) <del>(</del>	٠	
Reporting Units: ug/i	,				омирк	Q. 05(07)	7.0		
Benzene	EPA 624	6C09004	0.28	2.0	ND	1	03/09/06	03/09/06	
Carbon tetrachloride	EPA 624	6C09004	0.28	5.0	ND	1	03/09/06	03/09/06	
Chloroform	EPA 624	6C09004	0.33	2.0	ND	1	03/09/06	03/09/06	
1,1-Dichloroethane	EPA 624	6C09004	0.27	2.0	ND	1	03/09/06	03/09/06	
1,2-Dichloroethane	EPA 624	6C09004	0.28	2.0	ND	1	03/09/06	03/09/06	
1,1-Dichloroethene	EPA 624	6C09004	0.42	3.0	ND	1	03/09/06	03/09/06	
Ethylbenzene	EPA 624	6C09004	0.25	2.0	ND	1	03/09/06	03/09/06	
Tetrachloroethene	EPA 624	6C09004	0.32	2.0	ND	1	03/09/06	03/09/06	
Toluene	EPA 624	6C09004	0.36	2.0	ND	1	03/09/06	03/09/06	
1,1,1-Trichloroethane	EPA 624	6C09004	0.30	2.0	ND	1	03/09/06	03/09/06	
1,1,2-Trichloroethane	EPA 624	6C09004	0.30	2.0	ND	1	03/09/06	03/09/06	
Trichloroethene	EPA 624	6C09004	0.26	5.0	ND	1	03/09/06	03/09/06	
Trichlorofluoromethane	EPA 624	6C09004	0.34	5.0	ND	1	03/09/06	03/09/06	
Vinyl chloride	EPA 624	6C09004	0.26	5.0	ND	1	03/09/06	03/09/06	
Xylenes, Total	EPA 624	6C09004	0.90	4.0	ND	1	03/09/06	03/09/06	
Surrogate: Dibromofluoromethane (80-120%					115 %				
Surrogate: Toluene-d8 (80-120%)	*				107 %				
Surrogate: 4-Bromofluorobenzene (80-120%)	<b>)</b>				109 %				
								. :	
Sample ID: IPC0795-02 (Trip Blank - Water	er)				Sample	d: 03/07/0	6		
Reporting Units: ug/l Benzene	ED 4 404	6C09004	0.20	2.0	ND	1	03/09/06	03/09/06	
Carbon tetrachloride	EPA 624 EPA 624		0.28	5.0		1	03/09/06	03/09/06	
		6C09004 6C09004	0.28 0.33	2.0	ND ND	1 1	03/09/06	03/09/06	
Chloroform	EPA 624			2.0					
1,1-Dichloroethane	EPA 624	6C09004	0.27		ND	1	03/09/06	03/09/06	
1,2-Dichloroethane	EPA 624	6C09004	0.28	2.0	ND	1	03/09/06	03/09/06	
1,1-Dichloroethene	EPA 624	6C09004	0.42	3.0	ND	1	03/09/06	03/09/06	
Ethylbenzene	EPA 624	6C09004	0.25	2.0	ND	1	03/09/06	03/09/06	
Tetrachloroethene	EPA 624	6C09004	0.32	2.0	ND	1	03/09/06	03/09/06	
Toluene	EPA 624	6C09004	0.36	2.0	ND	1	03/09/06	03/09/06	
1,1,1-Trichloroethane	EPA 624	6C09004	0.30	2.0	ND	1	03/09/06	03/09/06	
1,1,2-Trichloroethane	EPA 624	6C09004	0.30	2.0	ND	1	03/09/06	03/09/06	
Trichloroethene	EPA 624	6C09004	0.26	5.0	ND	1	03/09/06	03/09/06	
Trichlorofluoromethane	EPA 624	6C09004	0.34	5.0	ND	1	03/09/06	03/09/06	
Vinyl chloride	EPA 624	6C09004	0.26	5.0	ND	1	03/09/06	03/09/06	
Xylenes, Total	EPA 624	6C09004	0.90	4.0	ND	I	03/09/06	03/09/06	
Surrogate: Dibromofluoromethane (80-120%	)				117%				
Surrogate: Toluene-d8 (80-120%)					110%				
Surrogate: 4-Bromofluorobenzene (80-120%,	•				110%				

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager





Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IPC0795

Sampled: 03/07/06

Received: 03/07/06

### 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: IPC0795-01 (Outfall 002 - Wat	er)				Sample	ed: 03/07/0	)6		
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	6C12001	1.0	4.7	ND	0.943	03/12/06	03/16/06	
2,4-Dinitrotoluene	EPA 625	6C12001	0.22	8.5	ND	0.943	03/12/06	03/16/06	
N-Nitrosodimethylamine	EPA 625	6C12001	0.21	7.5	ND	0.943	03/12/06	03/16/06	
Pentachlorophenol	EPA 625	6C12001	0.74	7.5	ND	0.943	03/12/06	03/16/06	L2
2,4,6-Trichlorophenol	EPA 625	6C12001	0.094	5.7	ND	0.943	03/12/06	03/16/06	L2
Surrogate: 2-Fluorophenol (30-120%)					71%				
Surrogate: Phenol-d6 (35-120%)					71%				
Surrogate: 2,4,6-Tribromophenol (45-120%)					70 %				
Surrogate: Nitrobenzene-d5 (45-120%)					75 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					64 %				
Surrogate: Terphenyl-d14 (45-120%)					72 %				



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MWH-Pasadena/Boeing

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPC0795

Sampled: 03/07/06

Received: 03/07/06

Attention: Bronwyn Kelly

### **ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0795-01 (Outfall 002 - Water Reporting Units: ug/l	er) - cont.				Sample	d: 03/07/(	)6		
alpha-BHC	EPA 608	6C09044	0.00095	0.0095	ND	0.952	03/09/06	03/09/06	
Surrogate: Decachlorobiphenyl (45-120%) Surrogate: Tetrachloro-m-xylene (35-115%)					80 % 77 %				



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MWH-Pasadena/Boeing

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPC0795

Sampled: 03/07/06

Attention: Bronwyn Kelly

Received: 03/07/06

#### **METALS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0795-01 (Outfall 002 Reporting Units: ug/l	- Water) - cont.				Sample	d: 03/07/0	)6		
Copper	EPA 200.8	6C07144	0.25	2.0	1.8	1	03/07/06	03/08/06	J
Lead	EPA 200.8	6C07144	0.040	1.0	0.091	1	03/07/06	03/08/06	J
Mercury	EPA 245.1	6C08072	0.050	0.20	0.074	1	03/08/06	03/08/06	J





Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPC0795

Sampled: 03/07/06

Received: 03/07/06

### **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IPC0795-01 (Outfall 002 - V	Vater) - cont.				Sample	d: 03/07/0	06		
Reporting Units: mg/i									
Ammonia-N (Distilled)	EPA 350.2	6C13117	0.30	0.50	1.1	1	03/13/06	03/13/06	
Biochemical Oxygen Demand	EPA 405.1	6C08128	0.59	2.0	ND	1	03/08/06	03/13/06	
Chloride	EPA 300.0	6C07127	1.5	5.0	38	10	03/07/06	03/08/06	
Nitrate/Nitrite-N	EPA 300.0	6C07127	0.080	0.15	ND	1	03/07/06	03/08/06	
Oil & Grease	EPA 413.1	6C08046	0.89	4.7	ND	1	03/08/06	03/08/06	
Sulfate	EPA 300.0	6C07127	4.5	5.0	160	10	03/07/06	03/08/06	
Surfactants (MBAS)	SM5540-C	6C07129	0.044	0.10	0.090	1	03/07/06	03/07/06	J
Total Dissolved Solids	SM2540C	6C11037	10	10	490	1	03/11/06	03/11/06	
Total Suspended Solids	EPA 160.2	6C09147	10	10	ND	1	03/09/06	03/09/06	
Sample ID: IPC0795-01 (Outfall 002 - V	Vater)				Sample	d: 03/07/0	)6		
Reporting Units: ml/l/hr Total Settleable Solids	EPA 160.5	6C07110	0.10	0.10	ND	1	03/07/06	03/07/06	
Sample ID: IPC0795-01 (Outfall 002 - V	Vater)				Sample	d: 03/07/0	)6		
Reporting Units: NTU Turbidity	EPA 180.1	6C09070	0.040	1.0	0.75	1	03/09/06	03/09/06	J
Sample ID: IPC0795-01 (Outfall 002 - V	Vater)				Sample	d: 03/07/0	16		
Reporting Units: ug/l	100			•			4 1	4.3	
Total Cyanide	EPA 335.2	6C07146	2.2	5.0	2.6	1	03/07/06	03/08/06	J, B
Perchlorate	EPA 314.0	6C10128	0.80	4.0	ND	1	03/10/06	03/11/06	
Sample ID: IPC0795-01 (Outfall 002 - V Reporting Units: umhos/cm	Vater)				Sample	d: 03/07/0	16		
Specific Conductance	EPA 120.1	6C11036	1.0	1.0	830	1	03/11/06	03/11/06	



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MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

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

Report Number: IPC0795

Sampled: 03/07/06

Received: 03/07/06

### SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 002 (IPC0795-01) - Wat	Hold Time (in days) er	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	03/07/2006 11:35	03/07/2006 18:25	03/07/2006 19:30	03/07/2006 20:30
EPA 180.1	2	03/07/2006 11:35	03/07/2006 18:25	03/09/2006 07:00	03/09/2006 07:30
EPA 300.0	2	03/07/2006 11:35	03/07/2006 18:25	03/07/2006 20:15	03/08/2006 02:41
EPA 405.1	2	03/07/2006 11:35	03/07/2006 18:25	03/08/2006 18:00	03/13/2006 22:30
SM5540-C	2	03/07/2006 11:35	03/07/2006 18:25	03/07/2006 21:30	03/07/2006 22:12



Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPC0795

Sampled: 03/07/06

Received: 03/07/06

### METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C09004 Extracted: 03/09/	<u>06</u>										
Blank Analyzed: 03/09/2006 (6C09004	-BLK1)										
Benzene	ND	2.0	0.28	ug/l							
Carbon tetrachloride	ND	5.0	0.28	ug/I							
Chloroform	ND	2.0	0.33	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	2.0	0.28	ug/l							
1,1-Dichloroethene	ND	3.0	0.42	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND	5.0	0.26	ug/l							
Trichlorofluoromethane	NĐ	5.0	0.34	ug/l						•	+
Vinyl chloride	ND	5.0	0.26	ug/I		•		•			
Xylenes, Total	ND	4.0	0.90	ug/l							
Surrogate: Dibromofluoromethane	29.0			ug/l	25.0		116	80-120			
Surrogate: Toluene-d8	27.1			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l	25.0		108	80-120			
LCS Analyzed: 03/09/2006 (6C09004-B	S1)										
Benzene	25.0	2.0	0.28	ug/l	25.0		100	65-120			
Carbon tetrachloride	26.2	5.0	0.28	ug/l	25.0		105	65-140			
Chloroform	26.1	2.0	0.33	ug/l	25.0		104	65-130			
1,1-Dichloroethane	26.1	2.0	0.27	ug/l	25.0		104	65-130			
1,2-Dichloroethane	26.8	2.0	0.28	ug/l	25.0		107	60-140			
1,1-Dichloroethene	26.5	3.0	0.42	ug/l	25.0		106	70-130			
Ethylbenzene	25.5	2.0	0.25	ug/l	25.0		102	70-125			
Tetrachloroethene	26.6	2.0	0.32	ug/l	25.0		106	65-125			
Toluene	25.4	2.0	0.36	ug/l	25.0		102	70-125			
1,1,1-Trichloroethane	26.3	2.0	0.30	ug/l	25.0		105	65-135			
1,1,2-Trichloroethane	26.0	2.0	0.30	ug/l	25.0		104	65-125			
Trichloroethene	25.3	5.0	0.26	ug/l	25.0		101	70-125			
Trichlorofluoromethane	25.4	5.0	0.34	ug/l	25.0		102	60-140			
Vinyl chloride	24.3	5.0	0.26	ug/l	25.0		97	50-130			
Surrogate: Dibromofluoromethane	28.3			ug/l	25.0		113	80-120			
Surrogate: Toluene-d8	27.5			ug/l	25.0		110	80-120			

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager



Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly Report Number: IPC0795

Sampled: 03/07/06

Received: 03/07/06

## METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C09004 Extracted: 03/09/06	į										
LCS Analyzed: 03/09/2006 (6C09004-BS	1)										
Surrogate: 4-Bromofluorobenzene	27.6			ug/l	25.0		110	80-120			
Matrix Spike Analyzed: 03/09/2006 (6C0	9004-MS1)				Sou	rce: IPC0	267-10				
Benzene	37.4	2.0	0.28	ug/l	25.0	16	86	60-125			
Carbon tetrachloride	28.7	5.0	0.28	ug/l	25.0	ND	115	65-140			
Chloroform	27.6	2.0	0.33	ug/l	25.0	ND	110	65-135			
1,1-Dichloroethane	27.9	2.0	0.27	ug/l	25.0	ND	112	60-130			
1,2-Dichloroethane	22.0	2.0	0.28	ug/l	25.0	ND	88	60-140			
1,1-Dichloroethene	26.7	3.0	0.42	ug/l	25.0	ND	107	60-135			
Ethylbenzene	30.8	2.0	0.25	ug/l	25.0	1.4	118	65-130			
Tetrachloroethene	31.2	2.0	0.32	ug/l	25.0	ND	125	60-130			
Toluene	29.6	2.0	0.36	ug/l	25.0	2.5	108	65-125			
1,1,1-Trichloroethane	29.8	2.0	0.30	ug/l	25.0	ND	119	65-140			
1,1,2-Trichloroethane	20.7	2.0	0.30	ug/l	25.0	ND	83	60-130			
Trichloroethene	27.1	5.0	0.26	ug/l	25.0	ND	108	60-125			
Trichlorofluoromethane	28.2	5.0	0.34	ug/l	25.0	ND	113	55-145			
Vinyl chloride	28.4	5.0	0.26	ug/l	25.0	ND	114	40-135			
Surrogate: Dibromofluoromethane	25.8			ug/l	25.0		103	80-120			
Surrogate: Toluene-d8	27.2			ug/l	25.0		109	80-120			
Surrogate: 4-Bromofluorobenzene	25.7			ug/l	25.0		103	80-120			
Matrix Spike Dup Analyzed: 03/09/2006	(6C09004-MSI	<b>)</b> 1)			Sour	rce: IPC0	267-10				
Benzene	38.7	2.0	0.28	ug/I	25.0	16	91	60-125	3	20	
Carbon tetrachloride	27.7	5.0	0.28	ug/l	25.0	ND	111	65-140	4	25	
Chloroform	29.6	2.0	0.33	ug/l	25.0	ND	118	65-135	7	20	
1,1-Dichloroethane	29.9	2.0	0.27	ug/l	25.0	ND	120	60-130	7	20	
1,2-Dichloroethane	29.5	2.0	0.28	ug/l	25.0	ND	118	60-140	29	20	R
1,1-Dichloroethene	28.7	3.0	0.42	ug/l	25.0	ND	115	60-135	7	20	
Ethylbenzene	29.7	2.0	0.25	ug/I	25.0	1.4	113	65-130	4	20	
Tetrachloroethene	29.3	2.0	0.32	ug/l	25.0	ND	117	60-130	6	20	
Toluene	30.6	2.0	0.36	ug/l	25.0	2.5	112	65-125	3	20	
1,1,1-Trichloroethane	29.7	2.0	0.30	ug/l	25.0	ND	119	65-140	0	20	
1,1,2-Trichloroethane	31.3	2.0	0.30	ug/l	25.0	ND	125	60-130	41	25	R
Trichloroethene	27.4	5.0	0.26	ug/l	25.0	ND	110	60-125	1	20	
Trichlorofluoromethane	27.9	5.0	0.34	ug/l	25.0	ND	112	55-145	1	25	
Vinyl chloride	29.6	5.0	0.26	ug/l	25.0	ND	118	40-135	4	30	
•				-							

Del Mar Analytical - Irvine

Michele Chamberlin

Project Manager



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MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IPC0795

Sampled: 03/07/06

Received: 03/07/06

METHOD BLANK/QC DATA

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

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

#### Batch: 6C09004 Extracted: 03/09/06

Matrix Spike Dup Analyzed: 03/09/200	03/09/2006 (6C09004-MSD1) Source: 1PC0267-				
Surrogate: Dibromofluoromethane	28.6	ug/l	25.0	114	80-120
Surrogate: Toluene-d8	27.2	ug/l	25.0	109	80-120
Surrogate: 4-Bromofluorobenzene	27.6	ug/l	25.0	110	80-120



Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPC0795

Sampled: 03/07/06 Received: 03/07/06

Attention: Bronwyn Kelly

## METHOD BLANK/QC DATA

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

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C12001 Extracted: 03/12	<u>/06</u>										
Blank Analyzed: 03/16/2006 (6C1200	1-BLK1)										
Bis(2-ethylhexyl)phthalate	ND	5.0	1.7	ug/I							
2,4-Dinitrotoluene	ND	9.0	0.20	ug/l							
N-Nitrosodimethylamine	ND	8.0	0.10	ug/l							
Pentachlorophenol	ND	8.0	0.10	ug/l							
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l							
Surrogate: 2-Fluorophenol	12.6			ug/l	20.0		63	30-120			
Surrogate: Phenol-d6	12.8			ug/l	20.0		64	35-120			
Surrogate: 2,4,6-Tribromophenol	13.1			ug/l	20.0		66	45-120			
Surrogate: Nitrobenzene-d5	7.32			ug/l	10.0		73	45-120			
Surrogate: 2-Fluorobiphenyl	6.30			ug/l	10.0		63	45-120			
Surrogate: Terphenyl-d14	7.32			ug/l	10.0		73	45-120			
LCS Analyzed: 03/16/2006 (6C12001-	BS1)										
Bis(2-ethylhexyl)phthalate	10:1	5.0	1.7	ug/l	10.0		101	60-130			
2,4-Dinitrotoluene	8.38	9.0	0.20	ug/l	10.0		84	60-120			J
N-Nitrosodimethylamine	6.48	8.0	0.10	ug/l	10.0		65	40-120			J
Pentachlorophenol	0.100	8.0	0.10	ug/l	10.0		1	50-120			L2, J
2,4,6-Trichlorophenol	0.200	6.0	0.10	ug/l	10.0		2	60-120			L2, J
Surrogate: 2-Fluorophenol	1.54			ug/l	20.0		8	30-120			<b>Z6</b>
Surrogate: Phenol-d6	5.82			ug/l	20.0		29	35-120			<b>Z6</b>
Surrogate: 2,4,6-Tribromophenol	1.16			ug/l	20.0		6	45-120			<i>Z6</i>
Surrogate: Nitrobenzene-d5	7.26			ug/l	10.0		73	45-120			
Surrogate: 2-Fluorobiphenyl	6.56	•		ug/l	10.0		66	45-120			
Surrogate: Terphenyl-d14	7.20			ug/l	10.0		72	45-120			
Matrix Spike Analyzed: 03/16/2006 (6	C12001-MS1)				Sou	rce: IPC0	588-06				
Bis(2-ethylhexyl)phthalate	10.4	4.8	1.0	ug/I	9.52	ND	109	60-130			
2,4-Dinitrotoluene	7.96	8.6	0.22	ug/l	9.52	ND	84	60-120			J
N-Nitrosodimethylamine	5.87	7.6	0.21	ug/I	9.52	ND	62	40-120			J
Pentachlorophenol	8.13	7.6	0.74	ug/I	9.52	ND	85	45-130			
2,4,6-Trichlorophenol	8.23	5.7	0.095	ug/l	9.52	ND	86	60-120			
Surrogate: 2-Fluorophenol	13.4			ug/l	19.0		71	30-120			
Surrogate: Phenol-d6	13.7			ug/l	19.0		72	35-120			
Surrogate: 2,4,6-Tribromophenol	13.1			ug/l	19.0		69	45-120			
Surrogate: Nitrobenzene-d5	6.99			ug/l	9.52		73	45-120			
Surrogate: 2-Fluorobiphenyl	6.27			ug/l	9.52		66	45-120			

Del Mar Analytical - Irvine

Michele Chamberlin Project Manager

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Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

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### METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C12001 Extracted: 03/12/00	Ĺ										
Matrix Spike Analyzed: 03/16/2006 (6C1	2001-MS1)				Sou	rce: IPC0	588-06				
Surrogate: Terphenyl-d14	6.80			ug/l	9.52		71	45-120			
Matrix Spike Dup Analyzed: 03/16/2006	(6C12001-M	SD1)			Sou	rce: IPC0	588-06				
Bis(2-ethylhexyl)phthalate	10.0	4.9	1.1	ug/l	9.71	ND	103	60-130	4	20	
2,4-Dinitrotoluene	7.73	8.7	0.22	ug/l	9.71	ND	80	60-120	3	25	J
N-Nitrosodimethylamine	5.86	7.8	0.21	ug/l	9.71	ND	60	40-120	0	20	J
Pentachlorophenol	ND	7.8	0.76	ug/l	9.71	ND		45-130		25	M8
2,4,6-Trichlorophenol	0.369	5.8	0.097	ug/l	9.71	ND	4	60-120	183	20	M8, R-2, J
Surrogate: 2-Fluorophenol	2.97			ug/l	19.4		15	30-120			<b>Z6</b>
Surrogate: Phenol-d6	8.00			ug/l	19.4		41	35-120			
Surrogate: 2,4,6-Tribromophenol	2.66			ug/l	19.4		14	45-120			<b>Z6</b>
Surrogate: Nitrobenzene-d5	6.43			ug/l	9.71		66	45-120			
Surrogate: 2-Fluorobiphenyl	5.73			ug/l	9.71		59	45-120			
Surrogate: Terphenyl-d14	6.58			ug/l	9.71		68	45-120			



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### METHOD BLANK/QC DATA

### **ORGANOCHLORINE PESTICIDES (EPA 608)**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 6C09044 Extracted: 03/09/06	<u>.</u>										
Blank Analyzed: 03/09/2006 (6C09044-B	LK1)										
alpha-BHC	ND	0.010	0.0010	ug/l							
Surrogate: Decachlorobiphenyl	0.386			ug/l	0.500		77	45-120			
Surrogate: Tetrachloro-m-xylene	0.358			ug/l	0.500		72	35-115			
LCS Analyzed: 03/09/2006 (6C09044-BS	1)										M-NR1
alpha-BHC	0.468	0.010	0.0010	ug/l	0.500		94	45-120			
Surrogate: Decachlorobiphenyl	0.435			ug/l	0.500		87	45-120			
Surrogate: Tetrachloro-m-xylene	0.367			ug/l	0.500		73	35-115			
LCS Dup Analyzed: 03/09/2006 (6C0904	4-BSD1)										
alpha-BHC	0.453	0.010	0.0010	ug/l	0.500		91	45-120	3	30	
Surrogate: Decachlorobiphenyl	0.409			ug/l	0.500		82	45-120			
Surrogate: Tetrachloro-m-xylene	0.366			ug/l	0.500		73	35-115			



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### METHOD BLANK/QC DATA

### **METALS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C07144 Extracted: 03/07/06	_										
Blank Analyzed: 03/08/2006 (6C07144-B	LK1)										
Copper	ND	2.0	0.25	ug/l							
Lead	ND	1.0	0.040	ug/l							
LCS Analyzed: 03/08/2006 (6C07144-BS	1)										
Copper	84.9	2.0	0.25	ug/l	80.0		106	85-115			
Lead	85.0	1.0	0.040	ug/l	80.0		106	85-115			
Matrix Spike Analyzed: 03/08/2006 (6C0	7144-MS1)				Sou	rce: IPC0	795-01				
Copper	80.8	2.0	0.25	ug/l	80.0	1.8	99	70-130			
Lead	87.0	1.0	0.040	ug/l	80.0	0.091	109	70-130			
Matrix Spike Dup Analyzed: 03/08/2006	(6C07144-MS	<b>D</b> 1)			Sou	rce: IPC0	795-01				
Copper	82.4	2.0	0.25	ug/l	80.0	1.8	101	70-130	2	20	
Lead	85.3	1.0	0.040	ug/l	80.0	0.091	107	70-130	2	20 .	
Batch: 6C08072 Extracted: 03/08/06	•										
Blank Analyzed: 03/08/2006 (6C08072-B)	LK1)										
Mercury	ND	0.20	0.050	ug/l							
LCS Analyzed: 03/08/2006 (6C08072-BS1	1)										
Mercury	8.08	0.20	0.050	ug/l	8.00		101	85-115			
Matrix Spike Analyzed: 03/08/2006 (6C0)	8072-MS1)				Sour	rce: IPC0	532-01				
Mercury	8.40	0.20	0.050	ug/l	8.00	0.074	104	70-130			
Matrix Spike Dup Analyzed: 03/08/2006	(6C08072-MSI	<b>D1</b> )			Sou	rce: IPC0	532-01				
Mercury	8.41	0.20	0.050	ug/l	8.00	0.074	104	70-130	0	20	



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# METHOD BLANK/QC DATA

#### **INORGANICS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C07127 Extracted: 03/07/06	<u>.</u>										
Blank Analyzed: 03/07/2006 (6C07127-B	LK1)										
Chloride	0.162	0.50	0.15	mg/l							J
Nitrate/Nitrite-N	ND	0.15	0.080	mg/l							
Sulfate	ND	0.50	0.45	mg/l							
LCS Analyzed: 03/07/2006 (6C07127-BS	1)										
Chloride	4.68	0.50	0.15	mg/l	5.00		94	90-110			
Sulfate	9.43	0.50	0.45	mg/l	10,0		94	90-110			
Matrix Spike Analyzed: 03/07/2006 (6C0	7127-MS1)				Sou	rce: IPC(	764-01				
Chloride	30.0	1.0	0.30	mg/l	5.00	25	100	80-120			
Sulfate	32.9	1.0	0.90	mg/l	10.0	23	99	80-120			
Matrix Spike Dup Analyzed: 03/07/2006	(6C07127-MS	SD1)			Sou	rce: IPC6	764-01				
Chloride	29.9	1.0	0.30	mg/l	5.00	25	98	80-120	0	20	
Sulfate	32.9	1.0	0.90	mg/l	10.0	23	99	80-120	0	20	
Batch: 6C07129 Extracted: 03/07/06	_										
Blank Analyzed: 03/07/2006 (6C07129-B	LK1)										
Surfactants (MBAS)	ND	0.10	0.044	mg/l							
LCS Analyzed: 03/07/2006 (6C07129-BS	1)										
Surfactants (MBAS)	0.246	0.10	0.044	mg/l	0.250		98	90-110			
Matrix Spike Analyzed: 03/07/2006 (6C0	7129-MS1)				Sou	rce: IPC0	748-01				
Surfactants (MBAS)	0.324	0.10	0.044	mg/l	0.250	ND	130	50-125			MI



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### METHOD BLANK/QC DATA

#### **INORGANICS**

Amalesta	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Oualifiers
Analyte		LARIEL	17117117	Onto	LCVC	***************************************	, tree	***************************************	142		<b>*</b>
Batch: 6C07129 Extracted: 03/07/06	-										
Matrix Spike Dup Analyzed: 03/07/2006	(6C07129-MSI	<b>D1</b> )			Sou	rce: IPC0	748-01				
Surfactants (MBAS)	0.290	0.10	0.044	mg/l	0.250	ND	116	50-125	11	20	
Batch: 6C07146 Extracted: 03/07/06	-										
Blank Analyzed: 03/08/2006 (6C07146-B	LK1)										
Total Cyanide	2.38	5.0	2.2	ug/l							J
LCS Analyzed: 03/08/2006 (6C07146-BS	i)										
Total Cyanide	203	5.0	2.2	ug/l	200		102	90-110			
Matrix Spike Analyzed: 03/08/2006 (6C0	7146-MS1)				Sou	rce: IPC0	543-02				
Total Cyanide	206	5.0	2.2	ug/l	200	3.3	101	70-115			
Matrix Spike Dup Analyzed: 03/08/2006	(6C07146-MSI	<b>)</b> 1)			Sou	rce: IPC0	543-02				
Total Cyanide	203	5.0	2.2	ug/l	200	3.3	100	70-115	1	15	
Batch: 6C08046 Extracted: 03/08/06	-					• •					
Blank Analyzed: 03/08/2006 (6C08046-B	LK1)										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 03/08/2006 (6C08046-BS)	<b>(</b> )										M-NR1
Oil & Grease	15.7	5.0	0.94	mg/l	20.0		78	65-120			
LCS Dup Analyzed: 03/08/2006 (6C08046	6-BSD1)										
Oil & Grease	16.2	5.0	0.94	mg/l	20.0		81	65-120	3	20	



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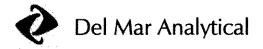
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### METHOD BLANK/QC DATA

### **INORGANICS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C08128 Extracted: 03/08	/06										
Blank Analyzed: 03/13/2006 (6C0812	8-BLK1)										
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 03/13/2006 (6C08128-	BS1)										
Biochemical Oxygen Demand	177	100	30	mg/l	198		89	85-115			
LCS Dup Analyzed: 03/13/2006 (6C0	8128-BSD1)										
Biochemical Oxygen Demand	170	100	30	mg/l	198		86	85-115	4	20	
Batch: 6C09070 Extracted: 03/09	/06										
Blank Analyzed: 03/09/2006 (6C0907	0-BLK1)										
Turbidity	ND	1.0	0.040	NTU							
Duplicate Analyzed: 03/09/2006 (6C0	9070-DUP1)				Sou	rce: IPC0	785-03				
Turbidity	ND	1.0	0.040	NTU		ND	*			20	
Duplicate Analyzed: 03/09/2006 (6C0	9070-DUP2)	•			Sou	rce: IPC1	005-01				
Turbidity	ND	1.0	0.040	NTU		ND				20	
Batch: 6C09147 Extracted: 03/09	/06										
Biank Analyzed: 03/09/2006 (6C0914	7-BLK1)										
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 03/09/2006 (6C09147-	BS1)										
Total Suspended Solids	<del>96</del> 7	10	10	mg/l	1000		97	85-115			



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## METHOD BLANK/QC DATA

#### **INORGANICS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C09147 Extracted: 03/09/06	-	·									
- W	-				•	YDO					
Duplicate Analyzed: 03/09/2006 (6C0914		10		т.	Sou	rce: IPC(	10-040-01		**		
Total Suspended Solids	60.0	10	10	mg/l		66			10	10	
Batch: 6C10128 Extracted: 03/10/06	-										
Blank Analyzed: 03/11/2006 (6C10128-Bl	LKI)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 03/11/2006 (6C10128-BS)	l)										
Perchlorate	52.1	4.0	0.80	ug/l	50.0		104	85-115			
Matrix Spike Analyzed: 03/11/2006 (6C1)	0128-MS1)				Sou	rce: IPC(	1825-02				
Perchlorate	50.2	4.0	0.80	ug/l	50.0	1.7	97	80-120			
Matrix Spike Dup Analyzed: 03/11/2006	(6C10128-M	SD1)			Sou	rce: IPC0	825-02				
Perchlorate	50.9	4.0	0.80	ug/l	50.0	1.7	98	80-120	1	20	
Batch: 6C11036 Extracted: 03/11/06											
Duplicate Analyzed: 03/11/2006 (6C11030	5-DUP1)				Sou	rce: IPC0	292-01				
Specific Conductance	275	1.0	1.0	umhos/cm		280			2	5	
Batch: 6C11037 Extracted: 03/11/06	•										
Blank Analyzed: 03/11/2006 (6C11037-Bl	LKI)										
Total Dissolved Solids	ND	10	10	mg/l							



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### METHOD BLANK/QC DATA

### **INORGANICS**

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 6C11037 Extracted: 03/11/06	Ĺ										
LCS Analyzed: 03/11/2006 (6C11037-BS	1)										
Total Dissolved Solids	984	10	10	mg/l	1000		98	90-110			
Duplicate Analyzed: 03/11/2006 (6C1103	7-DUP1)				Sou	rce: IPC0	651-01				
Total Dissolved Solids	1860	10	10	mg/l		1800			3	10	
Batch: 6C13117 Extracted: 03/13/06	Ĺ										
Blank Analyzed: 03/13/2006 (6C13117-B	LK1)										
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 03/13/2006 (6C13117-BS	1)										
Ammonia-N (Distilled)	11.5	0.50	0.30	mg/l	10.0		115	80-115			
Matrix Spike Analyzed: 03/13/2006 (6C1	3117-MS1)				Soui	rce: IPC1	159-01				
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0	ND	109	70-120			
Matrix Spike Dup Analyzed: 03/13/2006	(6C13117-M	ISD1)			Sour	rce: IPC1	159-01				
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0	ND	112	70-120	3	15	



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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.

						Compliance
LabNumber	Analysis	Analyte	Units	Result	MRL	Limit
IPC0795-01	413.1 Oil and Grease	Oil & Grease	mg/l	0.19	4.7	10.00
IPC0795-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0.00076	0.0095	0.0100
IPC0795-01	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPC0795-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00
IPC0795-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	5.7	6.50
IPC0795-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0	8.5	9.10
IPC0795-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0.62	4.7	4.00
IPC0795-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	7.5	8.10
IPC0795-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	0	7.5	8.20
IPC0795-01	BOD	Biochemical Oxygen Demand	mg/l	0.57	2.0	20
IPC0795-01	Chloride - 300.0	Chloride	mg/l	38	5.0	150
IPC0795-01	Copper-200.8	Copper	ug/l	1.80	2.0	7.10
IPC0795-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	2.60	5.0	4.30
IPC0795-01	Lead-200.8	Lead	ug/l	0.091	1.0	2.60
IPC0795-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.090	0.10	0.50
IPC0795-01	Mercury - 245.1	Mercury	ug/l	0.074	0.20	0.20
IPC0795-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.041	0.15	8.00
IPC0795-01	Perchlorate 314.0	Perchlorate	ug/l	0	4.0	6.00
IPC0795-01	Sulfate-300.0	Sulfate	mg/l	160	5.0	300
IPC0795-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	490	10	950
IPC0795-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0	3.0	3.20
IPC0795-02	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00





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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.

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).

M8 The MS and/or MSD were below 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.

R-2 The RPD exceeded the method control limit.

Z6 Surrogate recovery was below acceptance limits.

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

RPD Relative Percent Difference



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### **Certification Summary**

#### Del Mar Analytical - Irvine

Method	Matrix	Nelac	California
1613A/1613B	Water		
EDD + Level 4	Water		
EPA 120.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 200.8	Water	X	X
EPA 245.1	Water	$\mathbf{x}$	X
EPA 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
SM2540C	Water	<b>X</b> .	X
SM5540-C	Water	X	X

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

#### **Subcontracted Laboratories**

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

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR-Alta

Samples: IPC0795-01

Analysis Performed: EDD + Level 4

Samples: IPC0795-01

(0(q) Page 1 of 1

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	Field readings: Temp = $6\lambda^{6}$	PH= 7.8	Comments	24 TAT	24 TAT				24 TAT	24 TAT								WAS CALLED	3000	S MKS	30/a/c 2/2/06	ī	9
	(GZ9 V43	schlorophenol (	peup																(cthect)	e Co	10 Days Normal	5	
	(5-	eriqorolhom 8 trotoluene, Bis hexyl)phthalate	Ĭαď														×		Time: (C)			Perchiorate Only 72 Hours	Metals Only 72 Hours
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ANALYSIS REQUIRED	's	oidity,TDS, TS ductivity												×						_	Τ.		
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	Boeing-SSFL NPDES Routine Outfall 002	رم – بر	Preservative	HNO3	HNO3	None	호	None	12	NeOH	None	None	None	None	H2S04	None	None	Ş	Received By		Received By	Received By	
	に	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515	<u> </u>	<b>!</b>	=	-	<u> </u>	_	-	-	-	-	-	-	-	•	- Le -:0	_	╅		+		
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e/Addre	sadeni ake Aven 3A 91101	nager.	Sample	3	3	3	3	3	≥	3	3	3	3	3	3	≩	≩	3	-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	1/3	hed By	184	er en
Client Name/Address: Project:	MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101	Project Manager: Bronwyn Kelly Sampler: Lunga & Sures	Sample	Outfall 002	Outfall 002- Due	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Outfall 002	Trip Blank	Reinquished By.		Kalmark	Relinquished B	



March 15, 2006

Alta Project I.D.: 27385

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 09, 2006 under your Project Name "IPC0795". This sample was extracted and analyzed using EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans. A rush 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.

Micalia

Martha M. Maier

**Director of HRMS Services** 





Section I: Sample Inventory Report
Date Received: 3/9/2006

Alta Lab. ID

Client Sample ID

27385-001

IPC0795-01

### **SECTION II**

Page 3 of 230

Method Blank				EPA Method 1613
Matrix: Aqueous	QC Batch No.:	7826	Lab Sample: 0-MB001	100
Sample Size: 1.00 L	Date Extracted:	12-Mar-06	Date Analyzed DB-5: 14-Mar-06	Ir-06 Date Analyzed DB-225; NA
Analyte Conc. (pg/L)	DL a EMPC	C b Qualifiers	Labeled Standard	%R LCL-UCL ^d Qualifiers
2,3,7,8-TCDD ND	0.821		1S 13C-2,3,7,8-TCDD	88.6 25 - 164
1,2,3,7,8-PeCDD ND	0,736			82.7 25 - 181
1,2,3,4,7,8-HxCDD	1.7		13C-1,2,3,4,7,8-HxCDD	87.0
2.5			13C-1,2,3,6,7,8-HxCDD	82.6
2 5	200 Com		13C-1,2,3,4,6,7,8-HpCDD	76.9 23-140
13	335		13C-23.7.8-TCDF	1
S			13C-1,2,3,7,8-PeCDF	24 - 185
1,2,3,7,8-PeCDF	0.810		13C-2,3,4,7,8-PeCDF	79.7 21 - 178
<b>Q</b>	·••		13C-1,2,3,4,7,8-HxCDF	82.5 26-152
1,2,3,4,7,8-HxCDF	0.432		13C-1,2,3,6,7,8-HxCDF	26-123
: 6	0.408		13C-2,3,4,6,7,8-HxCDF	80.7 28 - 136
	0.449		13C-1,2,3,7,8,9-HxCDF	81.6
2	0.691		13C-1,2,3,4,6,7,8-HpCDF	62.3
2 5	1.631 7.77		13C-1,2,3,4,7,8,9-HpCDF	73.7
OCDF Nov-mpcur			CRS 37CI-2,3,7,8-TCDD	35-197
Totals			Footnotes	
Total TCDD ND Total PecDD	0.821		a Sample specific estimated detection limit.  b Estimated maximum bossible concentration.	init.  Tradion. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Sept. 18 Se
2.2	1.68		c. Method detection limit.	
2	0.714			No. 10 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 August 1 Augus
22	0.483			
Analyst: RAS			Approved By: Marth	Martha M. Majer 15-Mar-2006 11:39

Project 27385

OPR Results						EPA I	EPA Method 1613	3
Matrix Aqueous Sample Size: 1.00 L		QC Batch No.: Date Extracted:	7826 12-Mar-06	Lab Sample: 0-OPR001 Date Analyzed DB-5: 14-Mar-06	0-OPR001 -5: 14-Mar-06	Date Analyzed DB-225:		NA
Analyte	Spike Conc.	Spike Conc. Conc. (ng/mL)	OPR Limits	Labeled Standard	ard	%R	TOPTOT	
2,3,7,8-TCDD	10.0	10.8	6.7 - 15.8	IS 13C-2,3,7,8-TCDD	DD	77.3	25 - 164	-
1,2,3,7,8-PeCDD	50.0	53.3	35-71	13C-1,2,3,7,8-PeCDD	eCDD.	70.9	25 - 181	
1,2,3,4,7,8-HxCDD	20.0	53,3	35 - 82	13C-1,2,3,4,7,8-HxCDD	-HxCDD	70.9	32 - 141	
1,2,3,6,7,8-HxCDD	50.0	54.2	38 67	13C-1,2,3,6,7,8-HxCDD	-HxCDD	69.7	28 - 130	
1,2,3,7,8,9-HxCDD	50.0	52.0	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	,8-HpCDD	9.19	23 - 140	
		56.3	35-70	13C-OCDD		42.3	17 - 157	
OCDO	100	112	78 - 144	13C-2,3,7,8-TCDF	)DF	77.2	24 - 169	
		10.5	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	PeCDF	67.8	24 - 185	
1,2,3,7,8-PeCDF	50.0	53.3	40-67	13C-2,3,4,7,8-PeCDF	*CDF	70.4	21 - 178	
2,3,4,7,8-PeCDF	20.0	53.0	34-80	13C-1,2,3,4,7,8-HxCDF	-HxCDF	68.0	26 - 152	
1,2,3,4,7,8-HxCDF	50.0	54.1	36-67	13C-1,2,3,6,7,8-HxCDF	HACDF	9.89	26 - 123	
1,2,3,6,7,8-HxCDF	20.0	53.8	42-65	13C-2,3,4,6,7,8-HxCDF	-HxCDF	68.9	28 - 136	
2,3,4,6,7,8-HxCDF	50.0	<b>4</b>	35-78	13C-1,2,3,7,8,9-HxCDF	L-HxCDF	. 68.1	29 147	
1,2,3,7,8,9-HxCDF	20.0	54.3	39 - 62	13C-1,2,3,4,6,7,8-HpCDF	,8-HpCDF	50,3	28 - 143	
1,2,3,4,6,7,8-HpCDF	50.0	**	19-19-19-19-19-19-19-19-19-19-19-19-19-1	13C-1,2,3,4,7,8,9-HpCDF	9-HpCDF	29.7	26-138	
1,2,3,4,7,8,9-HpCDF	50.0	56.2	39 - 69	13C-OCDF		47.5	17 - 157	
HQ00	8	110	63-170	CRS 37Cl-2,3,7,8-TCDD	cop	108	35-197	\$1.50

Approved By: Martha M. Maier 15-Mar-2006 11:39

Analyst: RAS

Sample ID: IPC0795-01		EPAMe	EPA Method 1613
Client Data  Name: Del Mar Analytical, Irvine Project: IPC0795  Date Collected: 7-Mar-06 Time Collected: 1135	Sample Data  Matrix. Aqueous Sample Size: 1.02 L	Laboratory Data  Lab Sample. 27385-001 Date Received: QC Batch No.: 7826 Date Extracted: Date Analyzed DB-5: 14-Mar-06 Date Analyzed DB-225:	9-Mar-06 12-Mar-06 NA
Analyte Conc. (pg/L) DL a	EMPC ^b Qualifiers	Labeled Standard %R LCL-UCL ^d Q	Oualifiers
2,3,7,8-TCDD ND 0.756		IS 13C-2,3,7,8-TCDD 80.2 25 - 164	
9	-	13C-1,2,3,7,8-PeCDD 76.1 25 - 181	
1,2,3,4,7,8-HxCDD		13C-1,2,3,4,7,8-HxCDD 78.8 32 - 141	
		13C-1,2,3,6,7,8-HxCDD 79.5 28 - 130	
1,2,3,7,8,9-HxCDD (ND ) 1.06		13C-1,2,3,4,6,7,8-HpCDD 70.5 23 - 140	
8	<b>.</b>	13C-OCDD 52.4 17 - 157	-
OCDD		13C-2,3,7,8-TCDF 79.4 24 - 169	
S		72.6	
1,2,3,7,8-PeCDF 0.699		13C-2,3,4,7,8-PeCDF 73.8 21-178	* * ** **
2		13C-1,2,3,4,7,8-HxCDF 77.2 26 - 152	
N P			
2		13C-2,3,4,6,7,8-HxCDF 73.1 28 - 136	
Q.		13C-1,2,3,7,8,9-HxCDF 73.5 29 - 147	
Q	-	13C-1,2,3,4,6,7,8-HpCDF 62.3 28 - 143	
1,2,3,4,6,7,8-HpCDF ND ND 0.532		13C-1,2,3,4,7,8,9-HpCDF 67.1 26-,138	
ND 0.715		13C-OCDF 57.8 17	
OCDF ND 3.17		CRS 37Cl-2,3,7,8-TCDD 8 108 35,-197	And the second
Totals		Footnotes	
Total TCDD ND 0.756		a. Sample specific estimated detection limit.	J. S.
2			
226		d Lower control limit - upper control limit	783 A
Total TCDF 0.776	A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA		182
Analyst: RAS		Approved By: Martha M. Maier 15-Mar-2006 11:39	

### **APPENDIX**

Page 7 of 230

#### **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.

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

E

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



Project 27385

17461 Derien Ave. Suite 100, Irving, CA 92614 Ph (949) 261-1022 Fex (949) 261-1228 1014 E. Cooley Dr., Suite A. Colton, CA 92324

## SUBCONTRACT ORDER - PROJECT # IPC0795

## RECEIVING LABORATORY: SENDING LABORATORY: Del Mar Analytical, Irvine Alta Analytical - SUB 17461 Derian Avenue. Suite 100 1104 Windfield Way Irvine, CA 92614 El Dorado Hills, CA 95762 Phone: (949) 261-1022 Phone: (916) 933-1640 Fax: (949) 261-1228 Fax: (916) 673-0106 Project Manager: Michele Chamberlin Standard TAT is requested unless specific due date is requested -> Due Date: Initials: Analysis Expiration Comments Sample ID: IPC0795-01 Water Sampled: 03/07/06 11:35 Instant Nofication J flags, 17 congeners, no TEQ, ug/L, sub=Alta 1613-Dioxin-HR-Alta 03/14/06 11:35 EDD + Level 4 04'04/06 11:35 Excel EDD email to pm Include Std logs for Lvl IV Containers Supplied: 1 L Amber (IPC0795-01G) 1 L Amber (IPC0795-01H) SAMPLE INTEGRITY: ☐ Yes ☐ No Sample labels/COC agree: ☐ Yes ☐ № ☐ Yes ☐ No All containers intact: Samples Received On Ice:: Samples Preserved Properly: Yes No Released By Date Time Released By Date Time Page 10106230

Released By

Project 27385

# SUBCONTRACT ORDER - PROJECT # IPC0795

Analysis Expiration Comments TAUSH  Sample ID: IPC0795-01 Water Sampled: 03/67/06 11:35 Instant Noticetion 1613-Dioxin-HR-Aita 03/14/06 11:35 Instant Noticetion 1613-Dioxin-HR-Aita 03/14/06 11:35 Instant Noticetion 1 I Amber (IPC0795-01G)  1 L Amber (IPC0795-01G)  1 L Amber (IPC0795-01H)  SAMPLE INTEGRITY:  All containers intext:   Yes   No Sample Saceboot On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   No Sample Resolved On Sect.   Yes   Yes   No Sample Resolved On Sect.   Yes   Ye	Del Mar Analytical, Irvin 17461 Derian Avenne, S Irvine, CA 92614 Phone: (949) 261-1022 Fax: (949) 261-1228 Project Manager: Michel	uite 100	•	Alta Analytical - SU 1104 Windfield Way El Dorado Hills, CA Phone :(916) 933-16 Fax: (916) 673-0106	, 95762 40 (), () [†]	910 C	1385 14°C
1613-Dioxin-HR-Aita 03/14/06 11:35			due date is requested	A	USH	Initials:	<u> </u>
I L Amber (IPC0795-01G)  1 L Amber (IPC0795-01H)  SAMPLE INTECRITY:  All containes intect:	1613-Dioxin-HR-Alta EDD + Level 4	03/14/06 11:35	• •	I flags, 17 congeners, no Ti	EQ.ng/L,sub=Aira acinde Std logs for Lvl I	v	
SAMPLE INTEGRITY:  All containers intect:  Yes  No Sample labels/COC agroc:  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes	1 L Amber (IPC0795-010	,					
SAMPLE INTEGRITY:  All containers intect:  Yes  No Sample labels/COC agroc:  Yes  Yes  Yes  Yes  Yes  Yes  Yes  Yes							
All containent intact:  Yes  No Sample labels/COC agreer  Yes  No Samples Received On Ice:  Yes  No					. " . "		
All containers intact:  Yes  No Sample labels/COC agreer  Yes  No Samples Received On Ioc.  Yes  No							
All containent intact:  Yes  No Sample labels/COC agreer  Yes  No Samples Received On Ice:  Yes  No							
All containent intact:  Yes  No Sample labels/COC agreer  Yes  No Samples Received On Ice:  Yes  No						•	
All containers intect:  Yes  No Sample labels/COC agreer  Yes  No Samples Received On Ice:  Yes  No	,						
	All containers intect:		Sample labels/COC agreer	☐ Yes ☐ No			□ No

Received By

Received By

Time

Date

Presed 1 of 230

Time

Date

## SAMPLE LOG-IN CHECKLIST

Alta Project #:	27385				-				
Samples Arrival:	Date/Time	ion:	WR-2						
Logged In:	Date/Time	0930	Initials:	B	Locat	ion;	DR-	7	
Delivered By:	FedEx	UPS ·	Cal	DHL	•	Hand elive		Oti	her
Preservation:	(clos)	Blue	Ice	Dry I	ce		No	one	
Temp °C 0.4	T 90	Ime: <i>1910</i>	)		Thern	nom	eter IC	: DT-	20
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							7	140	13/2
Adequate Sample	Volume Receiv	red?	•				V		
Holding Time Acce	eptable?						. ,		
Shipping Containe	er(s) Intact?						V		
Shipping Custody	Seals Intact?		····				V		
Shipping Docume	ntation Present	?					V,		
Airbill	Trk# 70	113 998	6 246	8			1/		
Sample Container					E.		V		
Sample Custody S									V
Chain of Custody		mentation Pr	resent?				V		
COC Anomaly/Sa	the second of the second of the second		and the same of the same					V	
				rocon/ati/	3n?				V
If Chlorinated or D			ceptable F	COC	1 3	Sam		No	ne
Na ₂ S ₂ U ₃ Preserva	ANOU DOCUMENT					onta			oose
Shipping Contain	er	Alta (	Client )	Retair	<u> </u>	Ret	(וווג	nis!	V) 2G

Comments:

## **APPENDIX G**

## **Section 74**

Outfall 002, March 07, 2006

AMEC Data Validation Reports

# CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

ME	C ^X			Doolesson ID	D4DEC4
	: 69 East Vassar Drive			Package ID Task Order	
	ora, CO 80014			SDG No.	
			Nin	of Analyses	
	Laboratory Alta		HU.	Date: April	<del></del>
	Reviewer K. Shadov				
4	nalysis/Method Dioxin/Fur			Reviewer's	
•	Truly Growth Carlot Eloxie / Carlot	an by Method 1013		1534a	din Set
ACT	ION ITEMS ^a				
	Case Narrative		· · · · · · · · · · · · · · · · · · ·		
	Deficiencies				
	worker the the		**********		
2.	Out of Scope Analyses			Mile All Andrews	
	Copo Analysos				
3.	Analyses Not Conducted				
			·/···		
4.	Missing Hardcopy		······································		
	Deliverables	<u> </u>	<del></del>		
				····	
5,	Incorrect Hardcopy				
	Deliverables				
6.	Deviations from Analysis	Detects below the lat	orato	rv lower calibra	ition level were qualified
1	Protocol, e.g.,	as estimated.			The state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the s
	folding Times		***************************************	· · · · · · · · · · · · · · · · · · ·	
(	GC/MS Tune/Inst. Performance				
(	Calibration				
ı	Method blanks		· · · · · · · · · · · · · · · · · · ·		
5	Surrogates	<u> </u>	<del>" / 1</del>	<del></del>	······································
ħ	Matrix Spike/Dup LCS		····		
F	field QC		······································		· · · · · · · · · · · · · · · · · · ·
i	nternal Standard Performance		······································	**************************************	
C	compound Identification	***************************************			
G	Quantitation				
	ystem Performance				
COM	/ENTS ⁵				
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			***************************************		
************				····	
* Subc	ontracted analytical laboratory is not me	eting contract and/or method	requirer	ments.	
^b Differ	ences in protocol have been adopted b	y the laboratory but no action	against	the laboratory is re-	quired.



# DATA VALIDATION REPORT

# NPDES Monitoring Program Routine Outfall 002

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUP: IPC0795

Prepared by

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

Project:

SDG: Analysis:

**NPDES** IPC0795 D/F

DATA VALIDATION REPORT

#### 1. INTRODUCTION

Task Order Title:

**NPDES** 

Contract Task Order:

1261.001D.01

Sample Delivery Group:

Project Manager:

IPC0795 P. Costa

Matrix:

Water

Analysis:

Dioxins/Furans

QC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

0

Reviewer:

K. Shadowlight

Date of Review:

April 10, 2006

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

**NPDES - 3473** 

Project: SDG: Analysis:

NPDES IPC0795 D/F

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 002	IPC0795-01	27385-001	Water	1613

SDG: Analysis:

**NPDES** IPC0795 D/F

#### 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

## 2.1.1 Sample Preservation, Handling, and Transport

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

Project:	NPDES
SDG:	IPC0795
Analysis:	D/F

#### DATA VALIDATION REPORT

#### 2.3 CALIBRATION

#### 2.3.1 Initial Calibration

The initial calibration was analyzed 02/02/2006 on instrument VG-8. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibrations were acceptable with %RSDs ≤20% for the 16 native compounds (calibration by isotope dilution) and ≤35% for the one native and all labeled compounds (calibration by internal standard). The relative retention times and ion abundance ratios were within the QC limits listed in Method 1613 for all standards. A representative number of %RSDs were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

#### 2.3.2 Continuing Calibration

Calibration verification (VER) consisted of a mid-level standard (CS3) analyzed at the beginning of each analytical sequence. The 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 (0-7826-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 (0-7826-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 sample was required.

#### 2.7.2 Field Duplicates

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

#### 2.8 INTERNAL STANDARDS

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

#### 2.9 **COMPOUND IDENTIFICATION**

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

## 2.10 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

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

Del Mar Analytical, Irvine   Nature Del Marita   Aqueous   Lab Sample Star.   1,02 L   Qualifiers   1,03 L   Qualifiers   1,03 L   Qualifiers   1,04 Sumple Star.   1,02 L   Qualifiers   1,04 Conc. (pg/L)   DL a   EMPC ⁰   Qualifiers   Labeled Standard   Due Analyzad DB-5.   14-Mar-06	Cliant Date						
Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress   Progress	ACTIVE TO SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE SERVICE STATE OF THE	Dai Man Amala di an	1	Sample Data	Laboratory Data		
1,135   1,102 L   1,102 L   1,102 L   1,102 L   1,103 L   1,103   1,103   1,103   1,103   1,103   1,103   1,103   1,103   1,103   1,103   1,103   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,104   1,	roject:	PC0795	υ			Date Received:	9-Mar-06
Conc. (pg/L)         DL. ^a EMPC ^b Qualifiers         Labeled Standard           DD         ND         0.3756         13C-2,37/8-T/CDD           DD         ND         0.305         13C-12,37/8-Pc/CDD           CCDD         ND         1.08         17C-12,37/8-Pc/CDD           CCDD         ND         1.06         1           CCDD         ND         1.06         1           CCDD         ND         1.076         1           CCDD         ND         0.639         1           CCDF         ND         0.639         13C-12,34/8-H/CDF           CCDF         ND         0.281         13C-12,34/8-H/CDF           CCDF         ND         0.479         13C-12,34/8-H/CDF           CCDF         ND <th>ate Collected: ime Collected:</th> <th>7-Mar-06 1135</th> <th></th> <th>i fire</th> <th>DB-5:</th> <th>Date Extracted:  Oste Analyzed DB-225:</th> <th>12-Mar-06</th>	ate Collected: ime Collected:	7-Mar-06 1135		i fire	DB-5:	Date Extracted:  Oste Analyzed DB-225:	12-Mar-06
NB	nalyte		DL a		I sheled Standard	p.b.: 101 a%	77.7 2.11.12.12.12.12.12.12.12.12.12.12.12.12
DD         ND         0.800         In 12-2,3/18-PcDD           κCDD         ND         1.19         13C-1,2,3/18-PcDD           κCDD         ND         1.06         1           κCDD         ND         1.06         1           κCDD         ND         1.06         1           κCDD         ND         1.06         1           γ         ND         0.639         1           γ         ND         0.439         13C-12,3/3-8-PcDF           κCDF         ND         0.231         13C-12,3/3-8-PcDF           κCDF         ND         0.479         13C-12,3/4-8-PcDF           κCDF         ND         0.479 </td <td>3.7.8.rcnn</td> <td>- FA</td> <td>72.0</td> <td></td> <td>12</td> <td></td> <td>Cuamifers</td>	3.7.8.rcnn	- FA	72.0		12		Cuamifers
MD   0.800   13C-12.37,8-PeCDD   13C-12.34,7-8-PeCDD   1.19   1.08   1.09   1.09   1.01-12.34,7-8-PeCDD   1.08   1.06   1.0C-12.34,7-8-PeCDD   1.00   1.06   1.0C-12.34,7-8-PeCDD   1.0C-12.34,6-7-8-PeCDD   1.0C-12.34,6-7-8-PeCDD   1.0C-12.34,6-7-8-PeCDP   1.0C-12.34,6-7	77.000.000				7	80.2 25-164	STATES OF STREET OF
March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   March   Marc	2,2,7,6-reCUU	2	0.800		13C-1,2,3,7,8-PeCDD	76.1 25-181	;
Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Color   Colo	2,3,4,7,8-HXC	<b>QQ</b>	611		13C-1,23,4,7,8-HxCDD	78.8 32-141	
HyCDD   1.06   13C.12.3.46.7.9-HyCDD   13C.0CDD   13C.0CDD   13C.0CDD   13C.2.2.7.48.TCDF   13C.2.2.7.48.TCDF   13C.2.2.7.48.TCDF   13C.12.3.7.8-PeCDF   13C.2.3.4.7.8-PeCDF   13C.2.3.4.7.8-PeCDF   13C.2.3.4.7.8-PeCDF   13C.12.3.4.7.8-PeCDF   13C.12.3.4.8-PeCDF   13C.	2,3,6,7,8-HxCI		T.08	10 (10 (10 (10 (10 (10 (10 (10 (10 (10 (	13C-1,2,3,6,7,8-HxCDD	79.5 28-130	AND POPULATION OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY
HyCDID         2.26         J         13C-CODD           HyCDID         13C-2.3.7.8-TCDF         13C-1.2.3.7.8-TCDF           ND         0.699         13C-1.2.3.7.8-PCDF           DF         ND         0.633         13C-1.2.3.7.8-PCDF           ND         0.289         13C-1.2.3.7.8-PCDF           CCDF         ND         0.281         13C-1.2.3.7.8-PCDF           CCDF         ND         0.479         13C-1.2.3.7.8-PCDF           CCDF         ND         0.479         13C-1.2.3.7.8-PCDF           HyCDF         ND         0.715         13C-1.2.3.7.8-PCDF           HyCDF         ND         0.732         13C-1.2.3.7.8-PCDF           HyCDF         ND         0.736         13C-1.2.3.7.8-PCDF           HyCDF         ND         0.756         13C-1.2.3.7.8-PCDF           HyCDF         ND         0.756         1.00           ND         0.756         1.30         2.8mpte specific estimated detection limit.           ND         0.776         2.26         2.26           ND         0.776         2.26         2.26           ND         0.331         2.26         2.26           ND         0.331         2.26	2,3,7,8,9-HxCL		81		13C-123.46.78-HpCDD		
18.0   1.13C-2,3,7,8-PcDF   13C-1,2,3,7,8-PcDF   13C-1,2,3,7,8-PcDF   13C-2,3,4,7,8-PcDF   13C-2,3,4,7,8-PcDF   13C-2,3,4,7,8-PcDF   13C-2,3,4,7,8-PcDF   13C-1,2,3,4,7,8-PcDF   13C-1,2,3,4,7,8-PcDF   13C-1,2,3,4,7,8-PcDF   13C-1,2,3,4,7,8-PcDF   13C-1,2,3,4,6,7,8-PcDF   13C-1,2,3,4,8,PcDF   13C-1,2,3,4,RCDF   13C-1,2,3,4,RCDF   13C-1,2,3,4,RCDF   13C	2,3,4,6,7,8-Hp(	8			13C-0CDD	52.4 17.157	
ND	a a				TOTAL STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE		The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon
DF         ND         0.699-         13C-2,3,47.8-PcDF           DF         ND         0.633         13C-1,2,3,47.8-HxCDF           CDF         ND         0.281         13C-1,2,3,47.8-HxCDF           CDF         ND         0.479         13C-1,2,3,46.7-8-HxCDF           CDF         ND         0.479         13C-1,2,3,46.7-8-HxCDF           HPCDF         ND         0.715         13C-1,2,3,47.8-9-HyCDF           HPCDF         ND         0.715         13C-0,2,3,47.8-9-HyCDF           HPCDF         ND         0.775         13C-0,2,3,47.8-PHyCDF           HPCDF         ND         0.785         2.3mpte specific estimated detection limit           ND         0.786         2.5mpte specific estimated detection limit         0.776           ND         0.776         2.266         2.266         2.266           ND         0.665         3.33         4. Lawer control limit           ND         0.333         0.0665         4. Lawer control limit	3,7,8-TCDF		0.776		130 1 2 2 4 0 D-CDB		
DF         ND         0.633         13C-12.3,47,8-HxCDF           CDR         ND         0.281         13C-12.3,47,8-HxCDF           CDR         ND         0.281         13C-12.3,4,67,8-HxCDF           CDF         ND         0.479         13C-12.3,4,67,8-HxCDF           HPCDF         ND         0.715         13C-12.3,4,67,8-HxCDF           HPCDF         ND         0.715         13C-12.3,4,67,8-HxCDF           HPCDF         ND         0.715         13C-12.3,4,67,8-HxCDF           HPCDF         ND         0.716         13C-02.12,3,7,8-HxCDF           HPCDF         ND         0.736         13C-02.12,3,7,8-HxCDF           ND         0.756         13C-02.12,3,7,8-TxDD         13C-02.12,3,7,8-TxDD           ND         0.860         1.10         1.50         1.50           ND         0.776         1.10         1.60         1.60           ND         0.665         1.50         1.50         1.50           ND         0.331         1.50         1.50         1.50           ND         0.331         1.50         1.50         1.50           ND         0.331         1.50         1.50         1.50	2,3,7,8-PeCDF		669.0			7.0 24-103	
CDF         ND         0.289         13C-1,23,67.8-HxCDF           CDF         ND         0.281         13C-2,3,4,67.8-HxCDF           CDF         ND         0.479         13C-1,23,4,67.8-HxCDF           CDF         ND         0.479         13C-1,23,4,67.8-HxCDF           HPCDF         ND         0.715         13C-1,23,4,67.8-HpCDF           HPCDF         ND         0.715         13C-0CDF           ND         0.756         2. Sample specific estimated detection limit           ND         0.756         2. Sample specific estimated detection limit           ND         0.776         5. Estimated maximum possible contemplicant           ND         0.776         2. Marked detection limit           ND         0.776         2. Marked detection limit           ND         0.665         3.31         4. Lower council limit           ND         0.331         4. Lower council limit         4. Lower council limit	3,4,7,8-PeCDF		0.633		13C-1537-15COB	77.0 27.150	
KCDF         ND         0.281         13C-2,34,6,7,8-HxCDF           KCDF         ND         0.479         13C-1,2,3,4,6,7,8-HpCDF           RDDF         ND         0.6732         13C-1,2,3,4,6,7,8-HpCDF           HpCDF         ND         0.715         13C-0,2,3,4,6,7,8-HpCDF           HpCDF         ND         0.715         CMS 37G-1,2,3,4,7,8-HpCDF           HpCDF         ND         0.756         13C-0,2,3,7,8-TCDD           ND         0.756         1 Sample specific estimated detection limit           ND         0.756         1.10         6. Beimased maximum possible contention limit           ND         0.776         C. Method detection limit           ND         0.0655         C. Method detection limit           ND         0.0665         C. Method detection limit           ND         0.0655         C. Method detection limit           ND         0.0655         C. Method detection limit           ND         0.0655         C. Method detection limit	1,3,4,7,8-HXCL		0.289			701 - 07 - 77 /	
KCDF         ND         0,307         13C-12,3,78,9-HxCDF           CDF         ND         0,479         13C-12,3,78,9-HxCDF           HPCDF         ND         0,715         13C-02,3,47,8,9-HpCDF           HPCDF         ND         0,715         13C-0CDF           HPCDF         ND         0,715         Pootnotes           ND         0,756         a. Sample specific estimated detection limit           ND         0,110         a. Sample specific estimated detection limit           ND         0,776         A. Method detection limit           ND         0,776         A. Carbod detection limit           ND         0,665         A. Carbod detection limit           ND         0,331         A. Carbod detection limit	1,3,6,7,8-HxCL		0.281		13C-034678_UVCDB	<b>X</b>	
Hamilton	(,4,6,7,8-HxCL		0307		13/21/24/18 9-14/00/1		
HPCDF	3,7,8,9-HxCL		0.479		130-1034678	4	
HPCDF   ND   0.715   CRS 37Cl-213,7,8,TCDD     ND   0.756   a. Sample specific estimated detection limit     ND   1.10   c. Method detection limit     ND   0.776   d. Sever control limit     ND   0.776   d. Sever control limit     ND   0.331   ND   0.331   C. Method detection limit     ND   0.331   C. Method detection limit     ND   0.665   C. Method detection limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   0.331   C. Method limit     ND   C.	13,4,6,7,8-HpC		0.532		100 0 8 0 FC C 10 E	C+1 = 07	
ND   3.17   Postnotes   Postnotes   ND   0.756   a. Sample specific estimated detection limit.   ND   1.10   b. Patimated maximum possible concentration.   c. Method detection limit.   ND   1.10   c. Method detection limit.   ND   0.776   d. Lewer control limit.   ND   0.665   ND   0.331    2,3,4,7,8,9-HpC		0.715		13C-OCDR			
ND 0.756  ND 0.800  ND 1.10  ND 0.776  ND 0.6655  ND 0.331	JDF.	, ND	3,17		CRS 37CI.23,78,TCDD		
ND 0.756  ND 1.10  ND 0.776  ND 0.776  ND 0.665	tals			Triping the same and the same and the same and the same and the same and the same and the same and the same and	Footnotes		
MD 0.800 = 1.10  ND 1.10  ND 0.776  ND 0.6655	tal TCDD	R	0.756		a Samole specific estimated detection limit		
ND 0.776 ND 0.776 ND 0.331	mal PeCDD	<b>Q</b>	0.800	# # # # # # # # # # # # # # # # # # #	b. Betimated maximum possible concentrati		
ND 0.776 ND 0.665	fal HxCDD	£	1.10	Section (1.00) and the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of the section of th	c. Method detection limit.		
<b>9 9</b>	ALTHOUGH IN	226			d. Lawar control limit - upper control limit		
20	tal TCDF	9	0.776				
24	Mal PecDF	R	0.665		The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon		
£	fal HxCDF	Q	0.331				
N	Total HpCDF	Q	1.10				P

Analyst: RAS

Approved By: Martha M. Maier 15-Mar-2006 11:39

Project 27385 LEVEL W

## CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA Package ID <u>B4VO44</u> MECX, LLC Task Order 1261.001D.01 12260 East Vassar Drive SDG No. IPC0795 Suite 500 No. of Analyses 22~ Lakewood, CO 80226 Date: April 12, 2006 Laboratory Del Mar - Irvine Reviewer's Signature Reviewer E. Wessling Analysis/Method Volatiles ACTION ITEMS 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 OC Internal Standard Performance Compound Identification Quantitation System Performance COMMENTS^b Acceptable as reviewed Subcontracted analytical laboratory is not meeting contract and/or method requirements.

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



# DATA VALIDATION REPORT

# NPDES Monitoring Program Outfall 002

ANALYSIS: VOLATILES

**SAMPLE DELIVERY GROUP: IPC0795** 

Prepared by

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

Project:

NPDES

SDG:

Analysis:

IPC0795 **VOCs** 

#### 1. INTRODUCTION

Task Order Title:

**NPDES** 

MEC^X Project Number:

DATA VALIDATION REPORT

1261.001D.01

Sample Delivery Group:

IPC0795

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Volatiles

QC Level:

Level IV

No. of Samples:

2

No. of Reanalyses/Dilutions:

Reviewer: Date of Review: E. Wessling April 12, 2006

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

Project:

NPDES

SDG: Analysis: IPC0795 VOCs

DATA VALIDATION REPORT

**Table 1. Sample Identification** 

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPC0795-01	Water	624
Trip Blank	IPC0795-02	Water	624

Project: SDG: NPDES IPC0795

Analysis:

VOCs

#### 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

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

#### 2.1.2 Chain of Custody

DATA VALIDATION REPORT

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

#### 2.1.3 Holding Times

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

#### 2.2 GC/MS TUNING

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

#### 2.3 CALIBRATION

An initial calibration dated 2/28/2006 was associated with the sample analyses. The average RRFs were ≥0.05 and the %RSDs were ≤35% for all target compounds. One continuing calibration was associated with the sample analyses, dated 03/09/06. The RRFs were ≥0.05 and all %Ds were within the QC limit of ≤20%.

A representative number of average RRFs and %RSDs for the initial calibration and RRFs and %Ds for the continuing calibration were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

#### 2.4 BLANKS

One method blank (6C09004-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.

Project: NPDES SDG: IPC0795 Analysis: VOCs

#### DATA VALIDATION REPORT

#### 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (6C09004-BS1) was analyzed with this SDG. All recoveries were within the laboratory-established QC limits. A representative number of recoveries were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

#### 2.6 SURROGATE RECOVERY

The 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

No MS/MSD analyses were performed in association with the site samples in this SDG. Method accuracy was evaluated based upon the surrogate and blank spike recoveries. 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.

Project.

NPDES

SDG: Analysis: IPC0795 VOCs

#### DATA VALIDATION REPORT

#### 2.9 INTERNAL STANDARDS PERFORMANCE

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

#### 2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for a short list of 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.



17467 Donion Ave., Suite 100, Imine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1914 E. Cooley Cr., Suite A. Colton, CA 92324 (949) 370-4667 FAX (949) 370-1046 9830 South S1st SL, Suite B-120, Phoenix, AZ 85044 1450; 785-0043 FAX (410) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89128 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

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

Report Number: IPC0795

Sampled: 03/07/06

Received: 03/07/06

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifie	
Sample ID: IPC0795-01 (Outfall 002 - 1	Water)				Samole	d: 03/07/	16	E	Care C	O'N
Reporting Units: og/t								****	- CW	خفی
Benzene	EPA 624	6C09004	0.28	2.0	ND	i	03/09/06	03/09/06	ų	
Carbon tetrachloride	EPA 624	6C09004	0.28	5.0	ND	1	03/09/06	03/09/06	<b>(4)</b>	
Chloroform	EPA 624	6C09004	0.33	2.0	ND	1	03/09/06	03/09/06		
1,1-Dichloroethane	EPA 624	6C09004	0.27	2.0	ND	1	03/09/06	03/09/06	To the second	
1,2-Dichloroethane	EPA 624	6C09004	0.28	2.0	ND	1	03/09/06	03/09/06		
1,1-Dichloroethene	EPA 624	6C09004	0.42	3.0	ND	1	03/09/06	03/09/06	2	
Ethylbenzene	EPA 624	6C09004	0.25	2.0	ND	1	03/09/06	03/09/06		
Tetrachloroethene	EPA 624	6C09004	0.32	2.0	ND	1	03/09/06	03/09/06		
Toluene	EPA 624	6C09004	0.36	2.0	ND	1	03/09/06	03/09/06	(Academy Control	
1,1,1-Trichloroethane	EPA 624	6C09004	0.30	2.0	ND	1	03/09/06	03/09/06		
1,1,2-Trichloroethane	EPA 624	6C09004	0.30	2.0	ND	1	03/09/06	03/09/06		
Trichloroethene	EPA 624	6C09004	0.26	5.0	ND	1	03/09/06	03/09/06		
Trichlorofluoromethane	EPA 624	6C09004	0.34	5.0	ND	1	03/09/06	03/09/06	200	
Vinyl chloride	EPA 624	6C09004	0.26	5.0	ND	ł	03/09/06	03/09/06		
Xylenes, Total	EPA 624	6C09004	0.90	4.0	ND	1	03/09/06	03/09/06	<i>J</i>	
Surrogate: Dibromoftuoromethane (80-1	20%)				115%	*		W. 20 20 20 20 20 20 20 20 20 20 20 20 20		
Surrogate: Toluene-d8 (80-120%)					107 %				CM (Mggggg	
Surrogate: 4-Bromofluorobenzene (80-1)	20%)				109 %				COLUNCTRALINA	
Sample ID: IPC0795-02 (Trip Blank - V	Vater)				Samuele	d: 03/07/0	4			
Reporting Units: ug/l							· · · · · · · · · · · · · · · · · · ·		M(V) Signature	
Benzene	EPA 624	6C09004	0.28	2.0	ND	1	03/09/06	03/09/06	u l	
Carbon tetrachloride	EPA 624	6C09004	0.28	5.0	ND	1	03/09/06	03/09/06	· 1	
Chloroform	EPA 624	6C09004	0.33	2.0	ND	1	03/09/06	03/09/06		
1,1-Dichloroethane	EPA 624	6C09004	0.27	2.0	ND	1	03/09/06	03/09/06	Same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same and the same	
1,2-Dichloroethane	EPA 624	6C09004	0.28	2.0	ND	1	03/09/06	03/09/06	Tanada da	
1,1-Dichloroethene	EPA 624	6C09004	0.42	3.0	ND	1	03/09/06	03/09/06		
Ethy lbenzene	EPA 624	6C09004	0.25	2.0	ND	1	03/09/06	03/09/06		
Tetrachloroethene	EPA 624	6C09004	0.32	2.0	ND	1	03/09/06	03/09/06	NA STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE ST	
Toluene	EPA 624	6C09004	0.36	2.0	ND	1	03/09/06	03/09/06		
1,1,1-Trichloroethane	EPA 624	6C09004	0.30	2.0	ND	ì	03/09/06	03/09/06	Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartina and Cartin	
1,1,2-Trichloroethane	EPA 624	6C09004	0.30	2.0	ND	1	03/09/06	03/09/06		
Trichloroethene	EPA 624	6C09004	0.26	5.0	ND	1	03/09/06	03/09/06	English State	
Trichlorofluoromethane	EPA 624	6C09004	0.34	5.0	ND	i	03/09/06	03/09/06	Section (1975)	
Vinyl chloride	EPA 624	6C09004	0.26	5.0	ND	1	03/09/06	03/09/06	System System	
Xylenes, Total	EPA 624	6009004	0.90	4.0	ND	1	03/09/06	03/09/06	<b>J</b>	
Surrogate: Dibromoftworomethane (80-12	20%)	TO DOMESTIC	Source.	. a sym	117%	^	an and the first shings	ANIALIA.	*	
Surrogate: Toluene-d8 (80-120%)	•				110%					
Surrogate: 4-Bromofluorobenzene (80-12	0%)				110%					
	. •				*****					

Del Mar Analytical - Irvine Michele Chamberlin

Project Manager



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

IPC0795 <Page 3 of 23>

#### CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID: B4WC49

127	269 East Vassar Drive	Task Order: <u>1261.001D.01</u>
Au	rora, CO 80014	SDG No.: IPC0795
	•	No. of Analyses: 1
	Laboratory: Del Mar	
	Reviewer: P. Meeks	
	Analysis/Method: General	
AC'	TION ITEMS ²	
	Case Narrative	
	Deficiencies	
	· · · · · · · · · · · · · · · · · · ·	
2.	Out of Scope Analyses	
3.	Analyses Not Conducted	
	***************************************	
4.	Missing Hardcopy	
	Deliverables	
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5.	Incorrect Hardcopy	
	Deliverables	
~	Taritian franchis	On the state of the COM author and a detect below
6.	Deviations from Analysis	Qualifications applied for a CCV outlier and a detect below
	Protocol, e.g.,	the reporting limit.
	Holding Times	
	GC/MS Tune/Inst. Performance	
	Calibration	
	Method blanks Surrogates	
	Surrogates Matrix Spike/Dup LCS	
	Field QC	·
	Internal Standard Performance	
	Compound Identification	
	Quantitation	
	System Performance	
വ	MMENTS ^b	
<del></del>		
		<del></del>
		meeting contract and/or method requirements.
b Di	ifferences in protocol have been adopted	t by the laboratory but no action against the laboratory is required.

MECX



# DATA VALIDATION REPORT

# NPDES Sampling Outfall 002

**ANALYSIS: GENERAL MINERALS** 

SAMPLE DELIVERY GROUP: IPC0795

Prepared by

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

Project:

NPDES

SDG: Analysis:

IPC0795 Gen. Min.

#### DATA VALIDATION REPORT

#### 1. INTRODUCTION

Task Order Title:

**NPDES Sampling** 

MEC^X Project Number:

1261.001D.01

Sample Delivery Group:

IPC0795

Project Manager:

P. Costa

roject manager: Matrix:

Water

Analysis:

**General Minerals** 

QC Level:

Level IV

No. of Samples:

1

No. of Reanalyses/Dilutions:

Á

Reviewer:

P. Meeks

Date of Review:

April 10, 2006

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

Project:

**NPDES** 

SDG: Analysis:

IPC0795 Gen. Min.

DATA VALIDATION REPORT

Table 1. Sample Identification

Client ID	Laboratory ID	Matrix	COC Method
Outfall 002	IPC0795-01	Water	General Minerals

**NPDES** 

SDG: Analysis: IPC0795 Gen. Min.

#### DATA VALIDATION REPORT

#### 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

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

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

#### 2.1.2 Chain of Custody

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

#### 2.1.3 Holding Times

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

#### 2.2 CALIBRATION

For turbidity and specific conductivity, the check standard recoveries were found to be acceptable. For ammonia, no information regarding the standardization of the titrant was provided; therefore, as the LCS recovery was compared to the CCV control limits and was found to be above the calibration control limit at 115%. Ammonia detected in Outfall 002 was qualified as estimated, "J." No further qualifications were required

#### 2.3 BLANKS

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

#### 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The reported ammonia LCS recovery was within the laboratory-established control limits. LCS samples are not applicable to the turbidity and specific conductivity analyses. No qualifications were required.

B4WC49 3 Revision 0

Project:

**NPDES** 

SDG: Analysis:

IPC0795 Gen. Min.

DATA VALIDATION REPORT

#### 2.5 LABORATORY DUPLICATES

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

#### 2.6 MATRIX SPIKES

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

#### 2.7 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the sample in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. Turbidity 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.

#### 2.8 FIELD QC SAMPLES

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

#### 2.8.1 Field Blanks and Equipment Rinsates

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

#### 2.8.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.

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9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 765-0043 FAX (480) 785-0851
2520 E. Sunsel Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IPC0795

Sampled: 03/07/06

Received: 03/07/06

#### **INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifie	rs
Sample ID: IPC0795-01 (Outfall 00	2 - Water) - coat.		•		Samula	ed: <b>03/0</b> 7/	nc.		Rev	19
Reporting Units: mg/l					Sampa	ou. <b>6</b> 3/0//	JU		Qual	(c
Ammonia-N (Distilled)	EPA 350.2	6C13117	0.30	0.50	1.1	1	03/13/06	03/13/06	-7	18
Biochemical Oxygen Demand	EPA 405.1	6C08128	0.59	2.0	ND	1	03/08/06	03/13/06	*	Continuedance
Chloride	EPA 300.0	6C07127	1.5	5.0	38	10	03/07/06	03/08/06	Î	-
Nitrate/Nitrite-N	EPA 300.0	6C07127	0.080	0.15	ND	1	03/07/06	03/08/06		tellanda vap
Oil & Grease	EPA 413.1	6C08046	0.89	4.7	ND	ì	03/08/06	03/08/06		
Sulfate	EPA 300.0	6C07127	4.5	5.0	160	10	03/07/06	03/08/06		
Surfactants (MBAS)	SM5540-C	6C07129	0.044	0.10	0.090	1	03/07/06	03/07/06	J	
Total Dissolved Solids	SM2540C	6C11037	10	10	490	1	03/11/06	03/11/06		Value of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last
Total Suspended Solids	EPA 160.2	6C09147	10	10	ND	1	03/09/06	03/09/06		
Sample ID: IPC0795-01 (Outfall 00 Reporting Units: ml/l/hr	2 - Water)				Sample	d: 03/07/0	16			e de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company de la company
Total Settleable Solids	EPA 160.5	6C07110	0.10	0.10	ND	1	03/07/06	03/07/06	<b>V</b>	
ample ID: IPC0795-01 (Outfall 00: Reporting Units: NTU	2 - Water)				Sample	d: 03/07/0	16			and the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of the state of t
Turbidity	EPA 180.1	6C09070	0.040	1.0	0.75	1	03/09/06	03/09/06	JJ	۵
iample ID: IPC0795-01 (Outfail 00:	2 - Water)				Sample	d: 03/07/0	6			
Reporting Units: ug/l	Carlos Baggiores	100			. •					
Fotal Cyanide	EPA 335.2	6C07146	2.2	5.0	2.6	1	03/07/06	03/08/06	¥ J, В	-
Perchlorate	EPA 314.0	6C10128	0.80	4.0	ND	1	03/10/06	03/11/06	X	ĺ
Sample ID: IPC0795-01 (Outfall 00: Reporting Units: umbos/cm	2 - Water)				Sample	d: 03/07/0	6			
	EPA 120.1	6C11036	1.0	1.0	830	1	03/11/06	03/11/06	1	I

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

LEVEL IV

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## **APPENDIX G**

# **Section 75**

Outfall 002, March 18, 2006

Del Mar Analytical Laboratory Report



#### LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing Project: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Sampled: 03/18/06 Received: 03/18/06

Issued: 03/28/06 19:20

#### NELAP #01108CA California ELAP#1197 CSDLAC #10117

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

This entire report was reviewed and approved for release.

#### SAMPLE CROSS REFERENCE

SUBCONTRACTED:

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

LABORATORY ID IPC2012-01

MATRIX

IPC2012-02

**CLIENT ID** Outfall 002 Trip Blank

Water

Water

Reviewed By:

Del Mar Analytical - Irvine Michele Chamberlin

Michile Chembergin

Project Manager