

1747 Dedict Ave., Suite 100, Invine, CA 97674 (949) 134 (001) 34X (949) 260. (p. 100) E. Cooley Pr., Suite A, Cohon, CA 97324 (909) 370-4667 54X (949) 370-466 54X (949) 370-466 54X (949) 370-466 54X (949) 370-466 505-666 505-666 5060 5060 518 51, Suite 8-120, Phoenix, AZ 85044 (449) 185-6041 54X (460) 185-667 2520 E. Smiset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 54X (702) 768-362

MWH-Pasadena/Boeing

哪分的 化性的现在分词 医多种皮肤 "多"的"感觉"这个是自转数的现在分词的原则是一个

300 North Lake Avenue, Suite 1200

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

Report Number: IOD1251

Sampled: 04/16/05

Received: 04/16/05

DRAFT: PURGEABLES BY GC/MS (EPA 624)

		· -			TABLE FILLS		<i>4</i> ~₹}			
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilut Fact	ion Date or Extracted	Date Analyz	e L	Data alifior
Sample ID: JOD1251-01 (DR/	VET: Outfall hat	XX							REV	IQ
Reporting Units: ug/l	xi i. Outian ovi -	watery							QUAL	
Benzene	EPA 624	5D29021	0,28	3.0	3.770					1
Carbon tetrachloride	EPA 624	5D29021		2.0	ND	l		04/30/05		
Chloroform	EPA 624	5D29021		5.0	ND	1		04/30/05		1
1,1-Dicnieroethane	EPA 624	5D29021		2.0	ND	1		04/30/05		
1,2-Dichloroethane	EPA 624	5D29021		2.0	ND	1		04/30/05		
1,1-Dichloroethene	EPA 624	5D29021		2.0	ND	Ī		04/30/05		ĺ
Ethylbenzene	EPA 624	5D29021		3.0	ND .	1		04/30/05	-	
Tetrachloroethene	EPA 624			2.0	ND	1		04/30/05		
Toluena	EPA 624	5D29021		2.0	ND	1		04/30/05		
1,1,1-Trichloroethane		5D29021	0.36	2.0	ND	1		04/30/05		
1.1,2-Trichloroethane	EPA 624	5D29021	0.30	2.0	ND	1	04/29/05			
Trichloroethene	EPA 624	5D29021	0.30	2.0	ND	Į	04/29/05	04/30/05	1	
Trichlorofluoromethane	EPA 624	5D29021	0.26	5.0	ND	1	04/29/05	04/30/05	4	Ì
Vinyl chloride	EPA 624	5D29021	0.34	5.0	ND	1	04/29/05	04/30/05	U5	C
Cylenes, Total	EPA 624	5D29021	0.26	5.0	ND	1	04/29/05		Ū,	
Surrogute: Dibromofluorometha.	EPA 624	5D29021	0.52	4.0	ND	Ţ	04/29/05		し	
Surrogate: Toluene-d8 (80-120%	ne (80-120%)				119%					
Surrogute: A Promodernet	<i>y</i>				106 %					
surrogate: 4-Bromofluorobenzen					110%					
Sample ID: IOD1251-02 (DRA) Reporting Units: ug/l	FT: Trip Blank - V	Vater)								- Annual management of the second
senzene	EPA 624	5D29021	0.28	3.0) P7)					
arbon tetrachloride	EPA 624	5D29021	0.28	2.0	ND	1	04/29/05		\cup	
hloroform	EPA 624	5D29021	0.23	5.0	ND	1	04/29/05		I	
,l-Dichloroethane	EPA 624	5D29021	0.27	2.0	ND	Į	04/29/05			
.2-Dichloroethane	EPA 624	5D29021		2.0	ND	1	04/29/05			
1-Dichloroethene	EPA 624	5D29021	0.28	2.0	ND	i	04/29/05			
thylbenzene	EPA 624		0.32	3.0	ND	1	04/29/05			
etrachloroethene	EPA 624	5D29021	0.25	2.0	ND	1	04/29/05 (
oluene	EPA 624	5D29021	0.32	2.0	ND	1	04/29/05 (
1.1-Trichloroethane	EPA 624	5D29021	0.36	2.0	ND]	04/29/05 (
1,2-Trichloroethane	EPA 624	5D29021	0.30	2.0	ND	1	04/29/05 (04/29/05		
ichloroethene		5D29021	0.30	2.0	ND	1	04/29/05 (04/29/05	and the second	
ichlorofluoromethane	EPA 624	5D29021	0.26	5.0	ND	Ĭ	04/29/05)4/29/05	and an incident	
nyl chloride	EPA 624	5D29021	0.34	5.0	ND	1	04/29/05 0	H 29/05		
vlenes, Total	EPA 624	5D29021	0.26	5.0	ND	Ĭ	04/29/05 0	4/29/05		
rrogute: Dibromofluoromethane	EPA 624	5D29021	0.52	4.0	ND	1	04/29/05 0		¥	
······ พระเคราะเกาะเกาะเกาะเกาะเกาะเกาะเกาะเกาะเกาะเก	' 160-1719%)				112%				i	
Proposto Tolyone de 190 : 2002:	(والاستبداد الا					
rrogute: Toluene-d8 (80-120%) rrogute: 4-Bromofluorobenzene					104%					

AMEC VALIDATED

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

LEVELTY

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711WC149 550 South Wadsworth Boulevard Task Order 313150010 Suite 500 SDG No. IOD1251 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Date: 05/20/05 Reviewer L. Jarusewic Reviewer's Signature Analysis/Method General Minerals **ACTION ITEMS**^a Case Narrative **Deficiencies** 2. Out of Scope Analyses **Analyses Not** Conducted **Missing Hardcopy Deliverables** Incorrect Hardcopy **Deliverables Deviations from** Qualifications were applied for: Analysis Protocol, e.g., 1) Detects below the reporting limit **Holding Times** GC/MS Tune/Inst. Performance Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance

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.

COMMENTS^b

Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
IJ	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. (Note: Analyte may or may not be present).

Qualification Code Reference Table

Qualifier	Organies	Inorganics
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards us for the calibration was incorrect
С	Calibration %RSD or %D were noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within conti
В	Presumed contamination from preparation (method) blank.	Presumed contamination from preparati
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	(method) or calibration blank. Laboratory Control Sample %R was n within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
2	Not applicable.	Duplicates showed poor agreement.
	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
\	Not applicable.	ICP Serial Dilution %D were not with control limits.
1	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
•	Presumed contamination from trip blank,	Not applicable.
	False positive – reported compound was not present. Not applicable.	or oppositely
	False negative – compound was present but not reported.	Not applicable.
	Presumed contamination from FB, or ER.	Presumed contamination from FB or ER.
	Reported result or other information was incorrect.	Reported result or other information was incorrect.
	TIC identity or reported retention time has been changed.	Not applicable.
	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
4Q	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.
	Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).	Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IOD1251

Prepared by

AMEC—Denver Operations 550 South Wadsworth Boulevard, Suite 500 Lakewood, Colorado 80226

SDG No.:

NPDES IOD1251

Analysis: General Minerals

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOD1251

Project Manager:

B. McIlvaine

Matrix:

Water

Analysis:

General Minerals

QC Level:

Reviewer:

Level IV

No. of Samples:

L. Jarusewic

Date of Review:

May 20, 2005

The sample listed in Table 1 was validated based on the guidelines outlined in the AMEC Data Validation Procedures SOP DVP-6, Rev. 2, USEPA Methods for Chemical Analysis of Water and Wastes Method 350.2, 120.1, and 180.1, 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 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.

SDG No.:

NPDES IOD1251

Analysis:

General Minerals

Table 1. Sample identification

Client ID	EPA ID	Laboratory ID	Matrix	COC Method	
Outfall 001	Outfall 001	IOD1251-01	Water	General Minerals	

DATA VALIDATION REPORT

NPDES

SDG No.: Analysis: IOD1251 General Minerals

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 $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. No preservation problems were noted by the laboratory. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analyses. The 28-day analytical holding time for ammonia and conductivity and the 48-hour holding time for turbidity were met. No qualifications were required.

2.2 CALIBRATION

For the applicable analyses, the initial calibration correlation coefficients were ≥ 0.995 . Initial and continuing calibration information was acceptable with recoveries within the control limits of 90-110%. For ammonia, no information regarding the standardization of the titrant was provided; however, as the LCS recovery was within the CCV control limits, no qualifications were required.

2.3 BLANKS

Turbidity was detected in a bracketing CCB at 0.040NTU; however, the turbidity CCB result was insufficient to qualify the Outfall 001 result. The remaining method blank and CCB results reported on the summary forms and in the raw data for blank analyses associated with the sample were nondetects at the reporting limit. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The ammonia laboratory control sample recovery was within the laboratory-established control limits. The LCS is not applicable to turbidity or conductivity. No qualifications were required.

DATA VALIDATION REPORT

SDG No.:

IOD1251

NPDES

Analysis: General Minerals

2.5 SURROGATES RECOVERY

Surrogate recovery is not applicable to the analyses presented in this SDG.

2.6 LABORATORY DUPLICATES

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

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses performed in association with the sample in this SDG; therefore, no assessment was made with respect to this criterion. Ammonia method accuracy was based on LCS results.

2.8 FURNACE ATOMIC ABSORPTION QC

Furnace atomic absorption was not utilized for the analyses of this sample; therefore, furnace atomic absorption QC is not applicable.

2.9 ICP SERIAL DILUTION

ICP serial dilution is not applicable to the analyses presented in this data validation report.

2.10 SAMPLE RESULT VERIFICATION

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

2.11 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:

2.11.1 Field Blanks and Equipment Rinsates

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

NPDES

SDG No.:

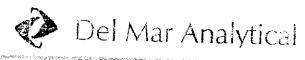
IOD1251

DATA VALIDATION REPORT

Analysis: General Minerals

2.11.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



174ort Derian Ave., Suite 300, Jonne, CA 92614, 4949 265, 2021 3448 2021 2000 3 1014 E. Cordey Dr., Suite A, Conon. CA 92024, 9001 370-4667, FAN, 6749, 370-7 94.11 Chesepoulie Dr., Suite 805, Sen Diego, CA 92123, 458, 507-4596, EAX 958, 507-957, 9630 Soniti SEst St., Sone B-120, Pircenox, AZ 856, 14, 460, 787-96613, FAX, 4494, 787, 77 Z320 E. Sunset Rd. #3, Las Vogas, NV 89120, 702, 708, 3620, FAX, 702, 700, 16,

MWH-Pasadena Boeing

300 North Lake Avenue, Suite 1200

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

Report Number: 10D1251

Sampled: 04/16/05 Received: 04/16/05

DRAFT: INORGANICS

		AZANZKE:	1 . LITE	MOBIL	_ >					
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		n Date Extracted	Date Analyzec	Da ileuO 1	
Sample ID: IOD1251-01 (DRAFT Reporting Units: mg/l	: Outfall 001 - 1	Water)		•				R	EV (QUH
Ammonia-N (Distilled)	EPA 350.2	5D19082	0.30	0.50	ND	1	04/19/05	04/19/05	,	
Sample ID: IOD1251-01 (DRAFT) Reporting Units: NTU	: Outfall 001 - \	Vater)				•	0 11 2 2 1 0 0	0 % 1 2, 00	u	
Turbidity	EPA 180.1	5D16054	0.040	1.0	0.74	i	04/16/05	04/16/05	-	TNIA
Sample ID: IOD1251-01 (DRAFT: Reporting Units: umhos/cm	Outfall 001 - V	Vater)			,	•	0 11 10,00	0"/10.00	J	DNQ
Specific Conductance	EPA 120.1	5D18087	1.0	1.0	660	1	04/18/05	04/18/05		
									1	

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

		·		

LABORATORY REPORT

Prepared For: MWH-Pasadena/Boeing

Project: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Sampled: 04/28/05 Received: 04/28/05

Issued: 06/20/05 16:53

NELAP #01108CA California ELAP#1197 CSDLAC #10117

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

This entire report was reviewed and approved for release.

CASE NARRATIVE

SAMPLE RECEIPT: Samples were received intact, at 3°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar

Analytical Sample Acceptance Policy unless otherwise noted in the report.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

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

COMMENTS: Results that fall between the MDL and RL are 'J' flagged.

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

ADDITIONAL

INFORMATION: The Iron result for IOD2043-01RE1 is a confirmation that was re-prepared and then analyzed. The Iron

result for IOD2043-01RE2 is a confirmation that was re-analyzed from the originally prepared sample.

LABORATORY ID CLIENT ID MATRIX
IOD2043-01 Outfall 001 Water

IOD2043-02 Trip Blank Water

Reviewed By:

Del Mar Analytical, Irvine

Michell Harar

Michele Harper Project Manager



MWH-Pasadena/Boeing

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04/28/05
Report Number: IOD2043

Received: 04/28/05

Attention: Bronwyn Kelly

Pasadena, CA 91101

PURGEABLES BY GC/MS (EPA 624)

				- C. T. T. (E		-		_	**
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution	Date Extracted	Date	Data Qualifiers
•		Datth	1,111111	Limit	Resun	ractor	Extracted	Analyzed	Quanners
Sample ID: IOD2043-01 (Outfall	001 - Water)								
Reporting Units: ug/l									
Benzene	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/05/05	
Carbon tetrachloride	EPA 624	5E04019	0.28	5.0	ND	1	05/04/05	05/05/05	
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1	05/04/05	05/05/05	
1,1-Dichloroethane	EPA 624	5E04019	0.27	2.0	ND	1	05/04/05	05/05/05	
1,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	j	05/04/05	05/05/05	
1,1-Dichloroethene	EPA 624	5E04019	0.32	3.0	ND	1	05/04/05	05/05/05	
Ethylbenzene	EPA 624	5E04019	0.25	2.0	ND	1	05/04/05	05/05/05	
Tetrachloroethene	EPA 624	5E04019	0.32	2.0	ND	1	05/04/05	05/05/05	
Toluene	EPA 624	5E04019	0.36	2.0	ND	1	05/04/05	05/05/05	
1,1,1-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/05/05	
1,1,2-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/05/05	
Trichloroethene	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05	05/05/05	
Trichlorofluoromethane	EPA 624	5E04019	0.34	5.0	ND	1	05/04/05	05/05/05	
Vinyl chloride	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05	05/05/05	
Xylenes, Total	EPA 624	5E04019	0.52	4.0	ND	l	05/04/05	05/05/05	
Surrogate: Dibromofluoromethane					107 %				
Surrogate: Toluene-d8 (80-120%)	,				109 %				
Surrogate: 4-Bromofluorobenzene	(80-120%)				99 %				
•	·								
Sample ID: IOD2043-02 (Trip Black Reporting Units: ug/l	ank - Water)								
Benzene	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/04/05	
Carbon tetrachloride	EPA 624	5E04019	0.28	5.0	ND	1	05/04/05	05/04/05	
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1	05/04/05	05/04/05	
1,1-Dichloroethane	EPA 624	5E04019	0.27	2.0	ND	1	05/04/05	05/04/05	
1,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/04/05	
1,1-Dichloroethene	EPA 624	5E04019	0.32	3.0	ND	ì	05/04/05	05/04/05	
Ethylbenzene	EPA 624	5E04019	0.25	2.0	ND	1	05/04/05	05/04/05	
Tetrachloroethene	EPA 624	5E04019	0.32	2.0	ND	ĺ	05/04/05	05/04/05	
Toluene	EPA 624	5E04019	0.36	2.0	ND	1	05/04/05	05/04/05	
1,1,1-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/04/05	
1,1,2-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/04/05	
Trichloroethene	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05	05/04/05	
Trichlorofluoromethane	EPA 624	5E04019	0.34	5.0	ND	1	05/04/05	05/04/05	
Vinyl chloride	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05	05/04/05	
Xylenes, Total	EPA 624	5E04019	0.52	4.0	ND ND	1	05/04/05	05/04/05	
Surrogate: Dibromofluoromethane		フルヴザジェブ	0.32	+.U	101 %		03/0 4 /03	UJ/U4/UJ	
Surrogate: Toluene-d8 (80-120%)	(00-12070)				101 %				
Surrogate: 4-Bromofluorobenzene (/90 1200/\								
sur ogaie: 4-promojiuoropenzene ((00-12070)				98 %				

Del Mar Analytical, Irvine

Michele Harper Project Manager



MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

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: IOD2043-01 (Outfall 001 - V	Vater)								
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	5E01024	1.1	5.0	ND	0.962	05/01/05	05/04/05	
2,4-Dinitrotoluene	EPA 625	5E01024	0.23	9.0	ND	0.962	05/01/05	05/04/05	
N-Nitrosodimethylamine	EPA 625	5E01024	0.22	8.0	ND	0.962	05/01/05	05/04/05	
Pentachlorophenol	EPA 625	5E01024	0.78	8.0	ND	0.962	05/01/05	05/04/05	
2,4,6-Trichlorophenol	EPA 625	5E01024	0.10	6.0	ND	0.962	05/01/05	05/04/05	
Surrogate: 2-Fluorophenol (30-120%)					64 %			32.01.02	
Surrogate: Phenol-d6 (35-120%)					64 %				
Surrogate: 2,4,6-Tribromophenol (45-120)	%)				79 %				
Surrogate: Nitrobenzene-d5 (45-120%)					65 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					71%				
Surrogate: Terphenyl-d14 (45-120%)					74 %				



MWH-Pasadena/Boeing

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

Attention: Bronwyn Kelly

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2043-01 (Outfall 001 - Water Reporting Units: ug/l alpha-BHC Surrogate: Decachlorobiphenyl (45-120%) Surrogate: Tetrachloro-m-xylene (35-115%)	EPA 608	5E03078	0.0010	0.010	ND 70 % 55 %	0.962	05/03/05	05/04/05	



MWH-Pasadena/Boeing

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

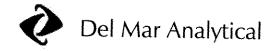
Attention: Bronwyn Kelly

Report Number: IOD2043

Sampled: 04/28/05

Received: 04/28/05

			META	ALS					
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2043-01 (Outfall 001 - Reporting Units: mg/l	Water) - cont.							•	
Iron	EPA 200.7	5D29098	0.0088	0.040	0.36	1	04/29/05	05/02/05	
Sample ID: IOD2043-01RE1 (Outfall (Reporting Units: mg/l	001 - Water)								
Iron	EPA 200.7	5E17078	0.0088	0.040	0.34	1	04/29/05	05/17/05	
Sample ID: IOD2043-01RE2 (Outfall 0	01 - Water)								
Reporting Units: mg/l Iron	EPA 200.7	5D29098	0.0088	0.040	0.36	1	04/29/05	05/17/05	
Sample ID: IOD2043-01 (Outfall 001 -	Water)								
Reporting Units: ug/l									
Соррег	EPA 200.8	5D28117	0.49	2.0	2.0	1	04/28/05	04/29/05	
Lead	EPA 200.8	5D28117	0.13	1.0	0.26	1	04/28/05		T
Mercury	EPA 245.1	5D29061	0.063	0.20	ND	1	04/28/05	04/29/05 04/29/05	j



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

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Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2043-01 (Outfall 001	- Water) - cont.							-	
Reporting Units: mg/l	•								
Ammonia-N (Distilled)	EPA 350.2	5E02067	0.30	0.50	0.84	1	05/02/05	05/00/05	
Biochemical Oxygen Demand	EPA 405.1	5D29091	0.59	2.0	2.2	1	03/02/03	05/02/05	
Chloride	EPA 300.0	5D28116	0.26	0.50	27	ĭ		05/04/05	
Nitrate/Nitrite-N	EPA 300,0	5D28116	0.072	0.26	ND	_	04/28/05	04/28/05	
Oil & Grease	EPA 413.1	5D29041	0.94	5.0	ND ND	1	04/28/05	04/28/05	
Sulfate	EPA 300.0	5D28116	0.90	2.5	ND 110	l e	04/29/05	04/29/05	
Surfactants (MBAS)	SM5540-C	5D28122	0.044	0.10	ND	5	04/28/05	04/28/05	
Total Dissolved Solids	SM2540C	5D29129	10	10		1	04/28/05	04/28/05	
Total Suspended Solids	EPA 160.2	5E04071	10	10	390	1	04/29/05	04/29/05	
		31304071	10	10	ND	l	05/04/05	05/04/05	
Sample ID: IOD2043-01 (Outfall 001	- Water)								
Reporting Units: ml/l/hr Total Settleable Solids	EPA 160.5	5D29094	0.10	0.10	ND	1	04/29/05	04/29/05	
Sample ID: IOD2043-01 (Outfall 001.	- Water)								
Reporting Units: NTU	,								
Turbidity	EPA 180.1	5D29110	0.040	1.0	7.6	1	04/29/05	04/29/05	
Sample ID: IOD2043-01 (Outfall 001 -	· Water)								
Reporting Units: ug/l									
Chromium VI	EPA 218.6	5D28121	0.10	1.0	ND	1	04/28/05	04/39/02	
Total Cyanide	EPA 335.2	5D29078	2.2	5.0	ND	1	04/28/05	04/28/05	
Perchlorate	EPA 314.0	5D29065	0.80	4.0	ND	1	04/29/05	04/29/05	
Sample ID: IOD7043 81 (Outs 11 004	WWY-4.			110	1417	i	04/29/03	04/30/05	
Sample ID: IOD2043-01 (Outfall 001 - Reporting Units: umhos/cm	water)								
Specific Conductance	FD4 100 4								
observe Conductance	EPA 120.1	5D29130	1.0	1.0	620	1	04/29/05	04/29/05	



MWH-Pasadena/Boeing

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04/28/05

Pasadena, CA 91101 Attention: Bronwyn Kelly

Report Number: IOD2043

Received: 04/28/05

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 001 (IOD2043-01) - Water	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	04/28/2005 11:16	04/28/2005 18:15	04/29/2005 13:29	04/29/2005 15:00
EPA 180.1	2	04/28/2005 11:16	04/28/2005 18:15	04/29/2005 15:00	04/29/2005 16:00
EPA 218.6	1	04/28/2005 11:16	04/28/2005 18:15	04/28/2005 21:55	04/28/2005 22:24
EPA 300.0	2	04/28/2005 11:16	04/28/2005 18:15	04/28/2005 21:10	04/28/2005 21:44
EPA 405.1	2	04/28/2005 11:16	04/28/2005 18:15	04/29/2005 13:10	05/04/2005 10:00
SM5540-C	2	04/28/2005 11:16	04/28/2005 18:15	04/28/2005 21:00	04/28/2005 21:40

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300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

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: 5E04019 Extracted: 05/04/05	-								141 0	Dimit	Quanticis
Blank Analyzed: 05/04/2005 (5E04019-Bl	CK1)										
Benzene	ND	2.0	0.28	ug/l							
Trichlorotrifluoroethane (Freon 113)	ND	5.0	1.2	ug/1							
Carbon tetrachloride	ND	5.0	0.28	ug/l							
Chloroform	ND	2.0	0.33	ug/l							
1,1-Dichloroethane	ND	2.0	0.27	ug/l							
1,2-Dichloroethane	ND	2.0	0.28	ug/l							
1,1-Dichloroethene	ND	3.0	0.32	ug/l							
Ethylbenzene	ND	2.0	0.25	ug/l							
Tetrachloroethene	ND	2.0	0.32	ug/l							
Toluene	ND	2.0	0.36	ug/l							
1,1,1-Trichloroethane	ND	2.0	0.30	ug/l							
1,1,2-Trichloroethane	ND	2.0	0.30	ug/l							
Trichloroethene	ND ·	5.0	0.26	ug/l							
Trichlorofluoromethane	ND	5.0	0.34	ug/l							
Vinyl chloride	ND	5.0	0.26	ug/l							
Xylenes, Total	ND	4.0	0.52	ug/l							
Surrogate: Dibromofluoromethane	28.0			ug/l	25.0		112	80-120			
Surrogate: Toluene-d8	27.0			ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	24.4			ug/l	25.0		98	80-120			
LCS Analyzed: 05/04/2005 (5E04019-BS1)											
Benzene	27.2	2.0	0.28	ug/l	25.0		109	70-120			
Carbon tetrachloride	24.4	5.0	0.28	ug/l	25.0		98	70-140			
Chloroform	26.2	2.0	0.33	ug/l	25.0		105	75-130			
1,1-Dichloroethane	28.4	2.0	0.27	ug/i	25.0		114	70-135			
1,2-Dichloroethane	24.1	2.0	0.28	ug/l	25.0		96	60-150			
1,1-Dichloroethene	29.8	3.0	0.32	ug/l	25.0		119	75-135			
Ethylbenzene	26.7	2.0	0.25	ug/l	25.0		107	80-120			
Tetrachloroethene	25.6	2.0	0.32	ug/l	25.0		102	75-125			
Toluene	26.5	2.0	0.36	ug/l	25.0		106	75-120			
1,1,1-Trichloroethane	25.7	2.0	0.30	ug/l	25.0		103	75-140			
1,1,2-Trichloroethane	28.0	2.0	0.30	ид/І	25.0		112	70-125			
Trichloroethene	24.0	5.0	0.26	ug/l	25.0			80-120			
Trichlorofluoromethane	25.2	5.0	0.34	ug/l	25.0			65-145			
	24.5	5.0	0.26	ug/l	25.0			50-130			
Surrogate: Dibromofluoromethane	28.2			ug/l	25.0			80-120			
Del Mar Analytical, Irvine							ا سدد	SU 14V			

Michele Harper Project Manager



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result		%REC	RPD	RPD Limit	Data Qualifiers
Batch: 5E04019 Extracted: 05/04/05	•							***************************************		*HIII.t	Quanners
LCS Analyzed: 05/04/2005 (5E04019-BS1)										
Surrogate: Toluene-d8	27.8			ug/l	25.0		277	00.100			
Surrogate: 4-Bromofluorobenzene	27.1			ug/l ug/l	25.0 25.0		111 108	80-120 80-120			
Matrix Spike Analyzed: 05/05/2005 (5E04	(019-MS1)					was IOD		00-120			
Benzene	27.6	2.0	0.28	ug/i	25.0	rce: IOD2		70.100			
Carbon tetrachloride	23.1	5.0	0.28	ug/l	25.0	ND	110	70-120			
Chloroform	25.1	2.0	0.33	ug/l	25.0	ND	92	70-145			
1,1-Dichloroethane	27.2	2.0	0.27	ug/l	25.0	ND	100	70-135			
1,2-Dichloroethane	21.6	2.0	0.28	ug/l	25.0	ND	109	65-135			
1,1-Dichloroethene	29.5	3.0	0.32	ug/l	25.0	ND	86	60-150			
Ethylbenzene	27.8	2.0	0.25	ug/l	25.0	ND	118	65-140			
Tetrachloroethene	26.5	2.0	0.32	ug/l	25.0	ND	111	70-130			
Toluene	25.1	2.0	0.36	ug/i ug/l	25.0	ND	106	70-130			
1,1,1-Trichloroethane	24.0	2.0	0.30	-		ND	100	70-120			
1,1,2-Trichloroethane	25.8	2.0	0.30	ug/l	25.0	ND	96	75-140			
Trichloroethene	24.8	5.0	0.26	ug/l	25.0	ND	103	60-135			
Trichlorofluoromethane	23.2	5.0	0.34	ug/l	25.0	ND	99	70-125			
Vinyl chloride	23.2	5.0	0.26	ug/l	25.0	ND	93	55-145			
Surrogate: Dibromofluoromethane	25.9	5.0	0.20	ug/l	25.0	ND	93	40-135			
Surrogate: Toluene-d8	26.8			ug/l	25.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	27.0			ug/l ug/l	25.0 25.0		107 108	80-120 80-120			
Matrix Spike Dup Analyzed: 05/05/2005 (5	F04019_MCI	01)		~.s/ •				00~12U			
Benzene	27.9	2.0	0.20			ce: IOD20					
Carbon tetrachloride	23.5	2.0 5.0	0.28	ug/l	25.0	ND	112	70-120	1	20	
Chloroform	24.9	2.0	0.28	ug/l	25.0	ND	94	70-145	2	25	
1,1-Dichloroethane	26.7		0.33	ug/l	25.0	ND	100	70-135	1	20	
1,2-Dichloroethane	20.7	2.0	0.27	ug/l	25.0	ND	107	65-135	2	20	
1,1-Dichloroethene	29.3	2.0	0.28	ug/l	25.0	ND	82	60-150	6	20	
That the	28.0	3.0	0.32	ug/l	25.0	ND	117	65-140	I	20	
The form of the section of	26.6	2.0	0.25	ug/l	25.0	ND	112	70-130	1	20	
Tr. f		2.0	0.32	ug/l	25.0	ND	106	70-130	0	20	
1 1 1 m 1 63	26.6	2.0	0.36	ug/l	25.0	ND	106	70-120	6	20	
5 5 A 77 1 2 2 3	24.1	2.0	0.30	ug/l	25.0	ND	96	75-140	0	20	
TF-1-4.5	24.6	2.0	0.30	ug/l	25.0	ND	98	50-135	5	25	
T'II A	25.0	5.0	0.26	ug/l	25.0	ND	100	70-125	1	20	
Del Man Analysis I I	22.7	5.0	0.34	ug/l	25.0	ND	91	55-145	2	25	

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Michele Harper Project Manager



MWH-Pasadena/Boeing

Pasadena, CA 91101 Attention: Bronwyn Kelly

300 North Lake Avenue, Suite 1200

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

METHOD BLANK/QC DATA

Project ID: Routine Outfall 001

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: 5E04019 Extracted: 05/04/05 Matrix Spike Dup Analyzed: 05/05/2005	-	D1)			Soui	rce: IOD	2043-01				
Vinyl chloride Surrogate: Dibromofluoromethane Surrogate: Toluene-d8 Surrogate: 4-Bromofluorobenzene	23.3 25.0 27.0 25.3	5.0	0.26	ug/l ug/l ug/l ug/l	25.0 25.0 25.0 25.0	ND	93 100 108 101	40-135 80-120 80-120 80-120	0	30	

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300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC	RPD	RPD Limit	Data Qualifiers
Batch: 5E01024 Extracted: 05/01/05	<u>.</u>									*3*****	Quantitis
Blank Analyzed: 05/04/2005 (5E01024-B	LK1)										
Bis(2-ethylhexyl)phthalate	ND	5.0	1.1	ug/l							
2,4-Dinitrotoluene	ND	9.0	0.23	ug/l							
N-Nitrosodimethylamine	ND	8.0	0.22	ug/l							
Pentachlorophenol	ND	8.0	0.78	ug/l							
2,4,6-Trichlorophenol	ND	6.0	0.10	ug/l							
Surrogate: 2-Fluorophenol	12.2		-,,,	ug/l	20.0		61	20.120			
Surrogate: Phenol-d6	12.4			ug/l	20.0		62	30-120 35-120			
Surrogate: 2,4,6-Tribromophenol	14.9			ug/l	20.0		02 74	45-120			
Surrogate: Nitrobenzene-d5	6.02			ug/l	10.0		60	45-120 45-120			
Surrogate: 2-Fluorobiphenyl	6.54			ug/l	10.0		65	45-120 45-120			
Surrogate: Terphenyl-d14	7.54			ug/l	10.0		75	45-120 45-120			
LCS Analyzed: 05/04/2005 (5E01024-BS1)				• 0.0		7.3	43-1217			
Bis(2-ethylhexyl)phthalate	7.94	5.0	1.1	ug/l	10.0		70	50.100			M-NR1
2,4-Dinitrotoluene	6.92	9.0	0.23	ug/l	10.0		79	60-130			
N-Nitrosodimethylamine	6.10	8.0	0.23	ug/i ug/i	10.0		69	60-120			J
Pentachlorophenoi	7.58	8.0	0.78	ug/l	10.0		61	40-120			J
2,4,6-Trichlorophenol	7.66	6.0	0.10	ug/l	10.0		76	50-120			J
Surrogate: 2-Fluorophenol	11.4	0.0	0.10	ug/l	20.0		77	60-120			
Surrogate: Phenol-d6	12.1			ug/l ug/l	20.0		57	30-120			
Surrogate: 2,4,6-Tribromophenol	15.6			ug/i ug/l	20.0		60	35-120			
Surrogate: Nitrobenzene-d5	6.30			ug/l	10.0		78	45-120			
Surrogate: 2-Fluorobiphenyl	7.26			ug/l ug/l	10.0		63 22	45-120			
Surrogate: Terphenyl-d14	7.76			ug/l ug/l	10.0		73	45-120			
LCC B				ug i	10.0		78	45-120			
LCS Dup Analyzed: 05/04/2005 (5E01024-											
Bis(2-ethylhexyl)phthalate	8.48	5.0	1.1	ug/l	10.0		85	60-130	7	20	
2,4-Dinitrotoluene	7.22	9.0	0.23	ug/I	10.0		72	60-120	4	20	j
N-Nitrosodimethylamine	6.54	8.0	0.22	ug/l	10.0		65	40-120	7	20	J
Pentachlorophenol	8.02	8.0	0.78	ug/l	10.0		80	50-120	6	25	J
2,4,6-Trichlorophenol	8.36	6.0	0.10	ug/l	10.0			60-120	9	20	
Surrogate: 2-Fluorophenol	12.9			ug/l	20.0			30-120			
Surrogate: Phenol-d6	13.5			ug/l	20.0			35-120			
Surrogate: 2,4,6-Tribromophenol	16.4			ug/l	20.0			45-120			
Surrogate: Nitrobenzene-d5	6.78			ug/l	10.0			45-120			
Surrogate: 2-Fluorobiphenyl	7.78			ug/l	10.0			15-120			

Del Mar Analytical, Irvine

Michele Harper Project Manager



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

METHOD BLANK/QC DATA

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

Analyte <u>Batch: 5E01024 Extracted: 05/01/05</u>	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup Analyzed: 05/04/2005 (5E0102 Surrogate: Terphenyl-d14	4-BSD1) 8.06			ug/l	10.0		81	45-120			



MWH-Pasadena/Boeing

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

Report Number: IOD2043

Sampled: 04/28/05

Received: 04/28/05

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: 5E03078 Extracted: 05/03/05	•••										
Blank Analyzed: 05/04/2005 (5E03078-B)	LK1)										
alpha-BHC	ND	0.010	0.0010	ug/l							
Surrogate: Decachlorobiphenyl	0.451			ug/l	0.500		90	45-120			
Surrogate: Tetrachloro-m-xylene	0.350			ug/l	0.500		70	35-115			
LCS Analyzed: 05/04/2005 (5E03078-BS1	l)										M-NRI
alpha-BHC	0.336	0.010	0.0010	ug/l	0.500		67	45-115			
Surrogate: Decachlorobiphenyl	0.425			ug/l	0.500		85	45-120			
Surrogate: Tetrachloro-m-xylene	0.322			ug/l	0.500		64	35-115			
LCS Dup Analyzed: 05/04/2005 (5E03078	R-BSD1)										
alpha-BHC	0.364	0.010	0.0010	ug/l	0.500		73	45-115	8	30	
Surrogate: Decachlorobiphenyl	0.415			ug/l	0.500		83	45-120			
Surrogate: Tetrachloro-m-xylene	0.340			ug/l	0.500		68	35-115			



MWH-Pasadena/Boeing

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Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

METHOD BLANK/QC DATA

METALS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D28117 Extracted: 04/28/05	-										
Blank Analyzed: 04/29/2005 (5D28117-B)	LKI)										
Copper	ND	2.0	0.49	ug/l							
Lead	ND	1.0	0.13	ug/l							
LCS Analyzed: 04/29/2005 (5D28117-BS1)										
Copper	79.5	2.0	0.49	ug/l	80.0		99	85-115			
Lead	89.7	1.0	0.13	ug/l	80.0		112	85-115			
Matrix Spike Analyzed: 04/29/2005 (5D28	117-MS1)				Sau	ce: IOD2	844 81				
Copper	85.0	2.0	0.49	ug/l	80.0	4.6	100	70-130			
Lead	91.0	1.0	0.13	ug/l	80.0	2.4	111	70-130			
Matrix Spike Dup Analyzed: 04/29/2005 (5D28117-MS	D 1)			Saum	ce: IOD2		, , , , , ,			
Copper	79.3	2.0	0.49	ug/l	80.0			7 0.400			
Lead	89.6	1.0	0.13	ug/l	80.0	4.6 2.4	93 109	70-130 70-130	7 2	20 20	
Batch: 5D29061 Extracted: 04/29/05						4,4	107	70-130	۷	∠0	
Blank Analyzed: 04/29/2005 (5D29061-BL	K1)										
Mercury	ND	0.20	0.063	ug/l							
LCS Analyzed: 04/29/2005 (5D29061-BS1)									٧		
Mercury	8.06	0.20	0.063	ug/l	8.00		101	85-115			
Matrix Spike Analyzed: 04/29/2005 (5D296)61-MS1)				Source	e: IOD20	133_03				
Mercury	7.76	0.20	0.063	ug/l	8.00	ND		70-130			
Matrix Spike Dup Analyzed: 04/29/2005 (5	D29061_MSI) 1)		<i>Q</i> .				.0-150			
Mercury	7.82	0.20	0.063			e: IOD20					
•	٠. حدد	V.2V	U.UU3	ug/l	8.00	ND	98	70-130	L	20	

Del Mar Analytical, Irvine

Michele Harper Project Manager



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

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

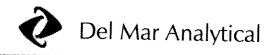
Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

METHOD BLANK/QC DATA

METALS

		Reporting			Spike	Source		%REC		RPD	Data
Analyte	Result	Limit	MDL	Units	Level	Result	%REC	Limits	RPD	Limit	Qualifiers
Batch: 5D29098 Extracted: 04/29/05	<u>i_</u>										
Blank Analyzed: 05/02/2005 (5D29098-B	LK1)										
Iron	ND	0.040	0.0088	mg/l							
LCS Analyzed: 05/02/2005 (5D29098-BS	1)										
Iron	0.498	0.040	0.0088	mg/l	0.500		100	85-115			
Matrix Spike Analyzed: 05/02/2005 (5D2	9098-MS1)				Sour	rce: IOD2	2042-01				
Iron	0.883	0.040	0.0088	mg/l	0.500	0.41	95	70-130			
Matrix Spike Dup Analyzed: 05/02/2005	(5D29098-MS	D1)			Sour	ce: IOD2	042-01				
fron	0.892	0.040	0.0088	mg/l	0.500	0.41	96	70-130	1	20	
Batch: 5E17078 Extracted: 05/17/05	u.										
Blank Analyzed: 05/17/2005 (5E17078-BI	.K1)										
Iron	0.0129	0.040	0.0088	mg/l							J
LCS Analyzed: 05/17/2005 (5E17078-BS1)										
Iron	0.484	0.040	0.0088	mg/l	0.500		97	85-115			
Matrix Spike Analyzed: 05/17/2005 (5E17	(078-MS1)				Sour	ce: IOE0	795-01				
Iron	0.635	0.040	0.0088	mg/l	0.500	0.16	95	70-130			
Matrix Spike Dup Analyzed: 05/17/2005 (5E17078-MSI) 1)			Sourc	e: IOE07	795-01				
Iron	0.631	0.040	0.0088	mg/l	0.500	0.16	94	70-130	1	20	



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

METHOD BLANK/QC DATA

INORGANICS

Analyte Batch: 5D28116 Extracted: 04/28/05	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Blank Analyzed: 04/28/2005 (5D28116-B											
Chloride (SD28116-B											
Nitrate/Nitrite-N	ND	0.50	0.26	mg/l							
Sulfate	ND ND	0.26 0.50	0.072 0.18	mg/l mg/l							
LCS Analyzed: 04/28/2005 (5D28116-BS)		0.50	0.16	mg/i							
Chloride		0.00									
Sulfate	4.82 9.63	0.50	0.26	mg/l	5.00		96	90-110			M-3
		0.50	0.18	mg/l	10.0		96	90-110			M-3
Batch: 5D28121 Extracted: 04/28/05	•										
Blank Analyzed: 04/28/2005 (5D28121-BI	K1)										
Chromium VI	ND	1.0	0.10	4							
F.CC A. J. A. Mariana and A. Mariana		1.0	0.10	ug/l							
LCS Analyzed: 04/28/2005 (5D28121-BS1)										
Chromium VI	48.3	1.0	0.10	ug/l	50.0		97	90-110			
Matrix Spike Analyzed: 04/28/2005 (5D28	121-MS1)				Sour	e: IOD2(142 61				
Chromium VI	53.8	1.0	0.10	ug/l	50.0	ND		90-110			
Matrix Spike Dup Analyzed: 04/28/2005 (EB90141 Men	D. 1.)		-6.				90-110			
Chromium VI		•			Sourc	e: IOD20	143-01				
	54.2	1.0	0.10	ug/l	50.0	ND	108	90-110	1	10	
Batch: 5D28122 Extracted: 04/28/05											
Right Anglored, 04/20/2002 (Species as	***										
Blank Analyzed: 04/28/2005 (5D28122-BL)	•										
Surfactants (MBAS)	ND	0.10	0.044	mg/l							



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

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

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D28122 Extracted: 04/28/05											
LCS Analyzed: 04/28/2005 (5D28122-BS1)										
Surfactants (MBAS)	0.252	0.10	0.044	mg/l	0.250		101	90-110			
Matrix Spike Analyzed: 04/28/2005 (5D28	122-MS1)				Sour	ce: IOD1	996_A1				
Surfactants (MBAS)	0.276	0.10	0.044	mg/l	0.250	ND	110	50-125			
Matrix Spike Dup Analyzed: 04/28/2005 (5D28122-MSI) 1)			Sour	ce: IOD1	99601				
Surfactants (MBAS)	0.277	0.10	0.044	mg/l	0.250	ND	111	50-125	0	20	
Batch: 5D29041 Extracted: 04/29/05											
Blank Analyzed: 04/29/2005 (5D29041-BL	K 1)										
Oil & Grease	ND	5.0	0.94	mg/l							
LCS Analyzed: 04/29/2005 (5D29041-BS1)											
Oil & Grease	18.3	5.0	0.94	mg/l	20.0		92	65-120			M-NRI
LCS Dup Analyzed: 04/29/2005 (5D29041-	BSD1)										147-74107
Oil & Grease	18.9	5.0	0.94	mg/l	20.0		94	65-120	3	20	
Batch: 5D29065 Extracted: 04/29/05											
Blank Analyzed: 04/29/2005 (5D29065-BLI	71)										
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 04/29/2005 (5D29065-BS1)				•							
Perchlorate	51.0	4.0	0.80	ug/l	50.0		102	85-115			



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5D29065 Extracted: 04/29/05	-										
Matrix Spike Analyzed: 04/29/2005 (5D2)	9065-MS1)				Sour	rce: IOD1	955-04				
Perchlorate	53.1	4.0	0.80	ug/l	50.0	ND	106	80-120			
Matrix Spike Dup Analyzed: 04/29/2005 ((5D29065-MS	D1)			Som	rce: IOD1	955.04				
Perchlorate	52.9	4.0	0.80	ug/l	50.0	ND	106	80-120	0	20	
Batch: 5D29078 Extracted: 04/29/05									•	****	
Blank Analyzed: 04/29/2005 (5D29078-BI	.K1)										
Total Cyanide	ND	5.0	2.2	ug/l							
LCS Analyzed: 04/29/2005 (5D29078-BS1)										
Total Cyanide	181	5.0	2.2	ug/l	200		90	90-110			
Matrix Spike Analyzed: 04/29/2005 (5D29	078-MS1)				Sour	ce: IOD18	298-02				
Total Cyanide	162	5.0	2.2	ug/l	200	ND	81	70-115			
Matrix Spike Dup Analyzed: 04/29/2005 (5D29078-MSI) 1)			Sour	ce: IOD18	เลอ กว				
Total Cyanide	156	5.0	2.2	ug/l	200	ND	78	70-115	4	15	
Batch: 5D29091 Extracted: 04/29/05									·	***	
Blank Analyzed: 05/04/2005 (5D29091-BL)	KI)										
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 05/04/2005 (5D29091-BS1)											
Biochemical Oxygen Demand	209	100	30	mg/l	198		106	85-115			



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

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

Report Number: IOD2043

Sampled: 04/28/05

Received: 04/28/05

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
·		Lamit	WEDE	Units	Liever	MOME	/OKEC	Limits	K(D	x3mm.	Quanners
Batch: 5D29091 Extracted: 04/29/05	_										
LCS Dup Analyzed: 05/04/2005 (5D2909)	L-RSD1)										
Biochemical Oxygen Demand	208	100	30	mg/f	198		105	85-115	1	20	
• •			• •	-							
Batch: 5D29110 Extracted: 04/29/05	-										
Blank Analyzed: 04/29/2005 (5D29110-B	LKI										
Turbidity	ND	1.0	0.040	NTU							
TO 12 4 4 4 4 5 04/50/5005 (57)5014	o minima)				6	rce: IOD2	3077 81				
Duplicate Analyzed: 04/29/2005 (5D2911)		5.0	0.20	NTU	Sou		2000-U1		4	20	
Turbidity	135	5.0	0.20	NIU		130			4	20	
Batch: 5D29129 Extracted: 04/29/05											
Blank Analyzed: 04/29/2005 (5D29129-B)	F 12/11\										
Total Dissolved Solids	ND	10	10	ma/l							
1 otal Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 04/29/2005 (5D29129-BS)	l)										
Total Dissolved Solids	930	10	10	mg/l	1000		93	90-110			
Duplicate Analyzed: 04/29/2005 (5D29129	9-DUP1)				Sou	rce: IOD2	2033-01				
Total Dissolved Solids	334	10	10	mg/l		360			7	10	
Batch: 5D29130 Extracted: 04/29/05	_										
Duplicate Analyzed: 04/29/2005 (5D29130	0-DUP1)				Sou	rce: IOD2	2023-01				
Specific Conductance	625	1.0	1.0	umhos/cm		640			2	5	



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

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

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E02067 Extracted: 05/02/05	•										
Blank Analyzed: 05/02/2005 (5E02067-B	LK1)										
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 05/02/2005 (5E02067-BS)	1)										
Ammonia-N (Distilled)	10.4	0.50	0.30	mg/l	10.0		104	80-115			
Matrix Spike Analyzed: 05/02/2005 (5E0)	2067-MS1)		Source: IOD1914-01								
Ammonia-N (Distilled)	10.9	0.50	0.30	mg/l	10.0	1.1	98	70-120			
Matrix Spike Dup Analyzed: 05/02/2005	(5E02067-MS)	D1)	Source: IOD1914-01								
Ammonia-N (Distilled)	11.2	0.50	0.30	mg/l	10.0	1.1	101	70-120	3	15	
Batch: 5E04071 Extracted: 05/04/05											
Blank Analyzed: 05/04/2005 (5E04071-BI	.K1)										
Total Suspended Solids	ND	10	10	mg/l							
LCS Analyzed: 05/04/2005 (5E04071-BS1)										
Total Suspended Solids	1000	10	10	mg/l	1000		100	85-115			
Duplicate Analyzed: 05/04/2005 (5E04071	-DUP1)				Source: IOD2054-01						
Total Suspended Solids	ND	10	10	mg/l		ND				10	

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

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

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

Compliance Check

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

LabNumber	Analysis	Analyte	Units	Result	MRL	Compliance Limit
IOD2043-01	413.1 Oil and Grease	Oil & Grease	mg/l	0	5.0	10.00
IOD2043-01	608-Pest Boeing 001/002 Q (LL)	alpha-BHC	ug/l	0	0.010	0.0100
IOD2043-01	624-Boeing 001/002 Q (Fr113+X)		ug/l	0	3.0	3.20
IOD2043-01	624-Boeing 001/002 Q (Fr113+X)	Trichloroethene	ug/l	0	5.0	5.00
IOD2043-01	625-Boeing 001/002 Q-LL	2,4,6-Trichlorophenol	ug/l	0	6.0	6.50
IOD2043-01	625-Boeing 001/002 Q-LL	2,4-Dinitrotoluene	ug/l	0.17	9.0	9.10
IOD2043-01	625-Boeing 001/002 Q-LL	Bis(2-ethylhexyl)phthalate	ug/l	0,29	5.0	4.00
IOD2043-01	625-Boeing 001/002 Q-LL	N-Nitrosodimethylamine	ug/l	0	8.0	8.10
IOD2043-01	625-Boeing 001/002 Q-LL	Pentachlorophenol	ug/l	Ö	8.0	8.20
IOD2043-01	BOD	Biochemical Oxygen Demand	mg/l	2.20	2.0	20
IOD2043-01	Chloride - 300.0	Chloride	mg/l	27	0.50	150
IOD2043-01	Chromium VI-218.6	Chromium VI	ug/l	0	1.0	8.10
IOD2043-01	Copper-200.8	Copper	ug/l	2.00	2.0	7.10
IOD2043-01	Cyanide-335.2 5ppb	Total Cyanide	ug/l	0	5.0	4.30
IOD2043-01	Iron-200.7	Iron	mg/l	0.36	0.040	0.30
IOD2043-01	Lead-200.8	Lead	ug/l	0.26	1.0	2.60
IOD2043-01	MBAS - SM5540-C	Surfactants (MBAS)	mg/l	0.024	0.10	0.50
IOD2043-01	Mercury - 245.1	Mercury	ug/l	0.019	0.20	0.20
IOD2043-01	Nitrogen, NO3+NO2 -N	Nitrate/Nitrite-N	mg/l	0.064	0.26	8.00
IOD2043-01	Perchlorate 314.0	Perchlorate	ug/l	0.004	4.0	6.00
IOD2043-01	Sulfate-300.0	Sulfate	mg/l	110	2.5	300
IOD2043-01	TDS - SM 2540C	Total Dissolved Solids	mg/l	390	10	950
IOD2043-01RE1	Iron-200.7	Iron	mg/l	0.34	0.040	930 0.30
IOD2043-01RE2	Iron-200.7	Iron	mg/l	0.36	0.040	0.30
IOD2043-02	624-Boeing 001/002 Q (Fr113+X)	1,1-Dichloroethene	ug/l	0.50	3.0	
IOD2043-02		Trichloroethene	ug/l	0	5.0	3.20 5.00
	,		461	v	٠.٧	2,00



MWH-Pasadena/Boeing

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

DATA QUALIFIERS AND DEFINITIONS

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

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

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

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

Duplicate.

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

RPD Relative Percent Difference



MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 120.1	Water	X	X
EPA 160.2	Water	X	X
EPA 160.5	Water	$^{\cdot}\mathbf{X}$	X
EPA 180.1	Water	X	X
EPA 200.7	Water	X	X
EPA 200.8	Water	X	X
EPA 218.6	Water	N/A	X
EPA 245.1	Water	X	X
EPA 300.0	Water	X	X
EPA 314.0	Water	N/A	X
EPA 335.2	Water	X	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 608	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
SM2540C	Water	X	X
SM5540-C	Water	X	X

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

Subcontracted Laboratories

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

1104 Windfield Way - El Dorado Hills, CA 95762

Analysis Performed: 1613-Dioxin-HR

Samples: IOD2043-01

Analysis Performed: EDD + Level 4

Samples: IOD2043-01

Field readings: 🙆 Temp = 62.6Page 1 of 2 24 TAT, *Fe Normal TAT 平7.63 Comments 24 TAT 24 TAT 24 TAT ۲ α 10 Days Sample Integrity. (Check) Intact On Ice: Turn around Time: (check) 24 Hours 5 Days pentachlorophenol (EPA 625) Perchlorate Only 72 Hours, AMON ,etsisrtriq(lyxerliyrite Metals Only 72 Hours_ Dinitrotoluene, Bis(2-P,S, lonehorophenol, 2,4,S Alpha BHC (608) × 72 Hours 48 Hours ANALYSIS REQUIRED M-sinommA × Conductivity × Turbidity,TDS, TSS, Perchlorate × CI-, SO4, NO3+NO2-N, Surfactants (MBAS) × BOD5(20 degrees C) Cyanide (total recoverable) × CHAIN OF CUSTODY FORM Oil & Grease (EPA 413.1) × TCDD (and all congeners) トシぞん VOCs 624 + xylenes × × Date/Time: Date/Time: Settleable Solids × Cu, Pb, Hg, Fe* × × Total Recoverable Metals: 3A, 3B, 3C 14A, 14B, 14C, 13A, 13B 12A, 12B 10A, 10B 4A, 4B 9A, 9B 58 8 ₹ $\overline{\omega}$ N O Bottle i 5A Preservative Received By Received By Received By Boeing-SSFL NPDES Routine Outfall 001 H2SO4 HN03 HN33 NaOH None None None None None None None None 오 Ö 626) 568-6515 (626) 568-6691 Phone Number Fax Number: Sampling Date/Time 3 '. B'. 4 Pate/Time; Del Mar Analytical version 04/13/05 Project 1/8/5 Date/Time: S & Project Manager: Bronwyn Kelly 300 North Lake Avenue, Suite 1200 C/I Container 1L Amber 1L Amber Poly-500 ml Poly-500 1L Amber Poly-500 ml 1L Amber Poly-500 ml Poly-500 Poly-1L Type Poly-1L Poly-1L Poly-1L VOAs VOAs Client Name/Address MWH-Pasadena Sample Matrix Pasadena, CA 91101 Sampler: K ₹ ₹ 3 ₹ 3 3 ₹ ₹ ≥ ≥ ≥ ≥ \geq 3 Relinquished By Relinquesed By Relinquished By Description Outfall 001: Sample Outfall 001 Trip Blank

Page 2 of 2

17461 Derian Ave., Irvine CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

June 20, 2005

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

Attention:

Bronwyn Kelly

Project:

Routine Outfall 001

Sampled: 04/28/05

Del Mar Analytical Number: IOD2043

Dear Ms. Kelly:

Alta Analytical Laboratories performed the EPA Method 1613 for tetra-through-octa chlorinated dioxins and furans for the project referenced above. Please use the following cross-reference table when reviewing your results.

MWH ID	Del Mar ID	Alta ID
Outfall 001	IOD2043-01	26117-001

Attached is the original report from the subcontract laboratory. If you have any questions or require further assistance, please do not hesitate to contact me at (949) 261-1022, extension 215.

Sincerely yours,

DEL MAR ANALYTICAL

Michele Harper Project Manager

Enclosure



May 20, 2005

Alta Project I.D.: 26117

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

Dear Ms. Harper,

Enclosed are the results for the one aqueous sample received at Alta Analytical Laboratory on April 30, 2005 under your Project Name "IOD2043". 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.

An "A" qualifier indicates that the result is greater than the low point in the calibration curve, but lower than the EPA Method 1613 Minimum Level.

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

Marke Moior



The small rate Continues of sittles that the report here a more all the respite names so faint by ALAC in those applicable to methods. For report similar active reproduces a coordinately submit the setucts approved in 117.3.





Section I: Sample Inventory Report
Date Received: 4/30/2005

Alta Lab. ID

Client Sample ID

26117-001

IOD2043-01



SECTION II

Project 26117 Page 3 of 237



Aquecous QC Barch No.: 6789 Lab Sample: 0-MB001 1.000 L Date Extracted: 17-May-05 Date Analyzed DB-5: 19-May-05 Date Analyzed DB-225 1.000 L Date Extracted: 17-May-05 Date Analyzed DB-5: 19-May-05 Date Analyzed DB-225 1.000 L ND 0.00000154 IS 13C-23,7,8-TCDD 69.9 25-164 DD ND 0.00000186 13C-12,3,7,8-TCDD 84.1 25-184 CDD ND 0.00000186 13C-12,3,7,8-TCDD 83.2 17-173 CDD ND 0.00000183 13C-12,3,7,8-TCDD 83.4 17-173 DF ND 0.00000033 13C-12,3,7,8-TCDF 82.4 17-173 DF ND 0.00000032 13C-12,3,7,8-PCDF 82.4 17-178 DF ND 0.00000032 13C-12,3,7,8-PCDF 82.4 17-178 DF ND 0.00000032 13C-12,3,7,8-PCDF 82.4 17-178 DF ND 0.00000032 13C-12,3,7,8-PCDF <th>Method Blank</th> <th></th> <th></th> <th></th> <th>EPA Method 1613</th>	Method Blank				EPA Method 1613
1,000 L Date Extracted: 17-May-05 Date Analyzed DB-5: 19-May-05 Date Analyzed DB-225		QC Batch No.:	6249		
Conc. (ug/L) DL. a EMPC b Qualifiers Labeled Standard %R LCL-UCLd by LCD ND 0.00000124 1S 13C-23.7.8-TCDD 69.9 25 - 164 ND 0.00000186 13C-12.3.7.8-TCDD 69.9 25 - 181 ND 0.00000197 13C-12.3.7.8-HCDD 72.5 32 - 141 ND 0.00000198 13C-12.3.4.7.8-HCDD 58.4 17 - 157 ND 0.000000303 13C-12.3.4.7.8-HCDD 58.4 17 - 157 ND 0.00000024 13C-12.3.4.7-HCDF 81.1 24 - 169 ND 0.00000025 13C-12.3.4.8-HCDF 58.4 17 - 157 ND 0.00000026 13C-12.3.4.8-HCDF 82.4 17 - 157 ND 0.00000073 13C-12.3.4.8-HCDF 75.4 26 - 123 DF ND 0.00000073 13C-12.3.4.8-HCDF 75.4 26 - 123 DF ND 0.00000073 13C-12.3.4.8-HCDF 75.4 26 - 123 DF ND 0.00000073 13C-12.3.4.6.7.8-HCDF 75.4 26 - 123		Date Extracted:	17-May-05		Date Analyzed DB-225: NA
ND 0.00000124 IS 13C-2,3,7,8-PCDD 69.9 ND 0.00000166 13C-1,2,3,7,8-PCDD 72.5 ND 0.00000179 13C-1,2,3,4,7,8-PCDD 75.3 ND 0.00000179 13C-1,2,3,4,7,8-PCDD 58.4 ND 0.00000179 13C-1,2,3,4,7,8-PCDD 58.4 ND 0.00000024 13C-2,3,7,8-PCDF 82.4 ND 0.00000026 13C-2,3,7,8-PCDF 82.4 ND 0.00000026 13C-2,3,7,8-PCDF 82.4 ND 0.000000785 13C-1,2,3,4,7,8-PCDF 82.4 ND 0.000000785 13C-1,2,3,4,7,8-PCDF 68.4 ND 0.000000785 13C-1,2,3,4,7,8-PCDF 68.4 ND 0.000000785 13C-1,2,3,4,7,8-PCDF 68.4 ND 0.00000078 13C-1,2,3,4,5,8-PCDF 68.4 ND 0.00000078 13C-1,2,3,4,5,8-PCDF 68.4 ND 0.00000018 13C-1,2,3,4,5,8-PCDF 68.4 ND 0.00000018 13C-1,2,3,4,5,8-PCDF 68.4 <	Conc.	DI. ^a		Labeled Standard	-
ND 0.00000166 13C-1,2,3,7,8-PeCDD 84.1 DD ND 0.00000179 75.3 DD ND 0.00000179 75.3 DD ND 0.00000179 75.3 DD ND 0.00000033 13C-1,2,3,4,5,7,8-HoCDF 58.4 DD ND 0.00000024 13C-2,3,7,8-HoCDF 70.5 ND 0.00000026 13C-1,2,3,7,8-HoCDF 72.6 ND 0.000000785 13C-1,2,3,4,7,8-HoCDF 72.6 DF ND 0.000000731 13C-1,2,3,4,7,8-HoCDF 72.4 DF ND 0.000000731 13C-1,2,3,4,7,8-HoCDF 68.4 DF ND 0.000000731 13C-1,2,3,4,5,4-HoCDF 68.4 DF ND 0.00000073 13C-1,2,3,4,5,4-HoCDF 68.4 DF ND 0.00000073 13C-1,2,3,4,5,4-HoCDF 68.4 DF ND 0.00000030 13C-1,2,3,4,5,8-HoCDF 68.4 DF ND 0.00000018 13C-1,2,3,4,5,8-HoCDF 68.4		0.00000124			
DD ND 0.00000186 13C-1,2,3,47,8-HxCDD 72.5 DD ND 0.00000179 13C-1,2,3,47,8-HxCDD 55.8 DD ND 0.0000033 13C-1,2,3,47,8-HxCDD 58.4 DD ND 0.00000034 13C-1,2,3,7,8-PcCDF 81.1 ND 0.000000226 13C-1,2,3,7,8-PcCDF 82.4 ND 0.00000032 13C-1,2,3,7,8-PcCDF 82.4 ND 0.000000785 13C-1,2,3,4,8-PcCDF 75.4 DF ND 0.00000785 13C-1,2,3,4,8-PcCDF 75.4 DF ND 0.000000785 13C-1,2,3,4,8-PcCDF 75.4 DF ND 0.00000078 13C-1,2,3,4,8-PcCDF 75.4 DF ND 0.00000078 13C-1,2,3,4,6,7,8-HxCDF 63.5 DF ND 0.00000069 13C-1,2,3,4,6,7,8-HxCDF 63.5 DF ND 0.00000069 13C-1,2,3,4,6,7,8-HxCDF 63.5 DF ND 0.00000069 13C-1,2,3,4,6,7,8-HxCDF 63.5 DF <		0.00000166		13C-1,2,3,7,8-PeCDD	
DD ND 0.00000179 13C-1,23,6,7,8-HxCDD 75.3 DD ND 0.00000186 13C-1,23,46,7,8-HyCDD 65.8 DD ND 0.00000677 13C-1,23,46,7,8-HyCDD 65.8 ND 0.00000677 13C-2,37,8-PcCDF 81.1 ND 0.000000226 13C-2,37,8-PcCDF 82.4 ND 0.000000785 13C-1,2,34,7,8-PcCDF 82.4 DF ND 0.000000785 13C-1,2,34,7,8-PcCDF 82.4 DF ND 0.00000078 13C-1,2,34,7,8-PcCDF 82.4 DF ND 0.00000078 13C-1,2,34,7,8-PcCDF 82.4 DF ND 0.00000072 13C-1,2,34,7,8-PcCDF 82.4 DF ND 0.00000072 13C-1,2,34,7,8-PcCDF 82.9 CDF ND 0.00000095 13C-1,2,34,6,7,8-PcCDF 82.9 CDF ND 0.00000192 CRS 3C-1,2,34,6,7,8-PcCDF 82.9 CDF ND 0.00000192 CRS 3C-1,2,34,6,7,8-PcCDF 82.9	Q	0.00000186		13C-1,2,3,4,7,8-HxCDD	
DD ND 0.00000186 13C-1,23,46,7,8-HpCDD 65.8 CDD ND 0.00000303 13C-0CDD 58.4 ND 0.00000024 13C-2,3,7,8-PcCDF 81.1 ND 0.00000256 13C-2,3,7,8-PcCDF 82.4 ND 0.000000785 13C-2,3,4,7,8-HcCDF 72.6 DF ND 0.000000731 13C-1,2,3,7,8-HcCDF 72.4 DF ND 0.000000731 13C-1,2,3,7,8-HcCDF 82.4 DF ND 0.000000731 13C-1,2,3,7,8-HcCDF 68.4 DF ND 0.00000072 13C-1,2,3,4,6,7,8-HpCDF 63.5 CDF ND 0.00000099 13C-1,2,3,4,6,7,8-HpCDF 63.5 CDF ND 0.00000099 13C-1,2,3,7,8-HpCDF 63.5 ND 0.00000124 a. Sample specific estimated detection limit. A9.2 ND 0.00000124 b. Estimated maximum possible concentration. c. Method detection limit. ND 0.00000029 c. Method detection limit. d. Lower control limit - upper control limit. </td <td></td> <td>0.00000179</td> <td></td> <td>13C-1,2,3,6,7,8-HxCDD</td> <td></td>		0.00000179		13C-1,2,3,6,7,8-HxCDD	
CDD ND 0.00000303 13C-OCDD 58.4 ND 0.00000677 13C-2,3,7,8-TCDF 81.1 ND 0.00000226 13C-2,3,7,8-PeCDF 79.5 ND 0.000000735 13C-1,2,3,47,8-HxCDF 72.6 DF ND 0.000000731 13C-1,2,3,47,8-HxCDF 75.4 DF ND 0.000000731 13C-1,2,3,47,8-HxCDF 68.4 DF ND 0.000000731 13C-1,2,3,47,8-HxCDF 68.4 DF ND 0.000000672 13C-1,2,3,4,6,7,8-HpCDF 68.4 DF ND 0.00000069 13C-1,2,3,4,6,7,8-HpCDF 63.5 CDF ND 0.00000192 CRS 37C-1,2,3,4,8,9-HpCDF 63.5 CDF ND 0.00000192 CRS 37C-1,2,3,4,8,9-HpCDF 63.5 ND 0.00000192 CRS 37C-1,2,3,4,8,9-HpCDF 63.5 ND 0.000000124 a. Sumple specific estimated detection limit. b. Estimated detection limit. ND 0.0000000324 c. Method detection limit. a. Lo		0.00000186		13C-1,2,3,4,6,7,8-HpCDD	
ND 0.00000677 13C-2,3,7,8-TCDF 81.1 ND 0.00000226 13C-1,2,3,7,8-PeCDF 79.5 ND 0.00000226 13C-1,2,3,7,8-PeCDF 72.6 ND 0.00000785 13C-1,2,3,4,7,8-HxCDF 72.6 ND 0.000000731 13C-1,2,3,4,7,8-HxCDF 75.4 ND 0.00000073 13C-1,2,3,4,7,8-HxCDF 92.3 ND 0.00000073 13C-1,2,3,4,7,8-HxCDF 68.4 ND 0.00000058 13C-1,2,3,4,6,7,8-HyCDF 68.4 ND 0.00000969 13C-1,2,3,4,7,8-HyCDF 63.5 CDF ND 0.00000969 13C-1,2,3,4,7,8-HyCDF 63.5 CDF ND 0.00000969 13C-1,2,3,4,7,8-HyCDF 63.5 CDF ND 0.00000192 CRS 37C-1,2,3,4,7,8-HyCDF 63.5 ND 0.00000192 CRS 37C-1,2,3,4,7,8-HyCDF 63.5 ND 0.00000124 a. Sample specific estimated detection limit. 40.2 ND 0.000000124 a. Sample specific estimated detection limit.		0.00000303		13C-OCDD	
ND 0.00000924 13C-1,2,3,7,8-PeCDF 79.5 ND 0.00000226 13C-2,3,4,7,8-PeCDF 82.4 ND 0.00000785 13C-1,2,3,4,7,8-PeCDF 72.6 DF ND 0.000000731 13C-1,2,3,4,7,8-HxCDF 75.4 DF ND 0.00000672 13C-1,2,3,4,6,7,8-HxCDF 92.3 DF ND 0.00000672 13C-1,2,3,4,6,7,8-HxCDF 68.4 DF ND 0.00000969 13C-1,2,3,4,6,7,8-HxCDF 68.4 CDF ND 0.00000969 13C-1,2,3,4,7,8-HxCDF 63.5 CDF ND 0.00000969 13C-1,2,3,4,7,8-HxCDF 63.5 CDF ND 0.00000969 13C-1,2,3,4,7,8-HxCDF 63.5 CDF ND 0.00000124 a. Sample specific estimated detection limit. ND 0.00000124 a. Sample specific estimated detection limit. ND 0.000000209 c. Method detection limit. ND 0.000000209 c. Method detection limit. ND 0.000000209 c. Method detection limit.	•	0.00000677		13C-2,3,7,8-TCDF	24 -
ND 0.00000226 13C-2,3,4,7,8-PeCDF 82.4 ND 0.00000193 13C-1,2,3,4,7,8-PeCDF 72.6 DF ND 0.000000785 13C-1,2,3,4,7,8-HxCDF 75.4 DF ND 0.00000672 13C-1,2,3,4,7,8-HxCDF 68.4 DF ND 0.00000672 13C-1,2,3,4,6,7,8-HxCDF 68.4 DF ND 0.00000158 13C-1,2,3,4,6,7,8-HpCDF 63.5 CDF ND 0.00000192 13C-1,2,3,4,7,8,9-HpCDF 63.5 CDF ND 0.00000192 13C-1,2,3,4,7,8,9-HpCDF 63.5 ND 0.00000192 CRS 37CL-2,3,7,8-TCDD 89.9 ND 0.00000124 a. Sample specific estimated detection limit. ND 0.00000183 c. Method detection limit. b. Estimated maximum possible concentration. ND 0.00000024 c. Method detection limit. c. Method detection limit. ND 0.000000393 d. Lower control limit. upper control limit. ND 0.000000972 c. Method detection limit. ND 0.000		0.000000924		13C-1,2,3,7,8-PeCDF	24 -
ND 0.00000193 13C-1,2,3,4,7,8-HxCDF 72.6 DF ND 0.000000785 13C-1,2,3,6,7,8-HxCDF 75.4 DF ND 0.000000731 13C-1,2,3,6,7,8-HxCDF 68.4 DF ND 0.00000069 13C-1,2,3,7,8,9-HpCDF 63.5 CDF ND 0.00000192 CRS 13C-1,2,3,4,7,8,9-HpCDF 63.5 CDF ND 0.00000192 CRS 13C-0,2,3,4,7,8,9-HpCDF 63.5 CDF ND 0.00000192 CRS 13C-0,2,3,4,7,8,9-HpCDF 63.5 ND 0.00000192 CRS 13C-0,2,3,4,7,8,9-HpCDF 63.5 ND 0.00000192 CRS 37Cl-2,3,7,8-TCDD 89.9 ND 0.00000124 a. Sample specific estimated detection limit. b. Estimated maximum possible concentration. ND 0.00000183 c. Method detection limit. c. Method detection limit. ND 0.000000924 c. Method detection limit. d. Lower control limit. ND 0.000000872 c. Method detection limit. control limit.	OF.	0.00000226		13C-2,3,4,7,8-PeCDF	21 -
DF ND 0.000000785 13C-1,2,3,6,7,8-HxCDF 75.4 DF ND 0.000000731 13C-2,3,4,6,7,8-HxCDF 92.3 DF ND 0.000000672 13C-1,2,3,7,8,9-HxCDF 68.4 DF ND 0.00000158 13C-1,2,3,7,8,9-HxCDF 68.4 DF ND 0.00000969 13C-1,2,3,4,6,7,8-HpCDF 63.5 CDF ND 0.00000969 13C-0,2,3,4,7,8,9-HpCDF 63.5 CDF ND 0.00000476 CRS 37C1-2,3,4,7,8,9-HpCDF 89.9 ND 0.00000124 a. Sample specific estimated detection limit. b. Estimated maximum possible concentration. ND 0.00000133 c. Method detection limit. b. Estimated detection limit. ND 0.00000909 c. Method detection limit. c. Method detection limit. ND 0.000000909 d. Lower control limit. c. Method detection limit. ND 0.0000000909 d. Lower control limit. c. Method detection limit. ND 0.000000000 d. Lower control limit. c. Method detection limit. ND		0.00000193		13C-1,2,3,4,7,8-HxCDF	26 -
ND 0.000000731 13C-2,3,4,6,7,8-HxCDF 92.3 ND 0.000000672 13C-1,2,3,7,8,9-HxCDF 68.4 ND 0.000000158 13C-1,2,3,4,6,7,8-HpCDF 63.5 ND 0.000000969 13C-1,2,3,4,7,8,9-HpCDF 63.5 ND 0.00000476 CRS 37C-1,2,3,4,7,8,9-HpCDF 89.9 ND 0.00000124 a. Sample specific estimated detection limit. 89.9 ND 0.00000183 a. Sample specific estimated detection limit. ND 0.000000303 c. Method detection limit. ND 0.000000209 c. Method detection limit. ND 0.000000209 c. Method detection limit. ND 0.000000209 d. Lower control limit - upper control limit. ND 0.000000209 d. Lower control limit.)F	0.000000785		13C-1,2,3,6,7,8-HxCDF	
ND 0.000000672 13C-1,2,3,7,8,9-HxCDF 68.4 ND 0.00000158 13C-1,2,3,4,6,7,8-HpCDF 63.5 ND 0.00000192 13C-1,2,3,4,7,8,9-HpCDF 52.9 ND 0.00000476 CRS 37C1-2,3,4,7,8,9-HpCDF 52.9 ND 0.00000124 Exotnotes 89.9 ND 0.00000166 a. Sample specific estimated detection limit. ND 0.00000183 d. Lower control limit. ND 0.000000924 d. Lower control limit. ND 0.000000924 d. Lower control limit. ND 0.000000872 d. Lower control limit. ND 0.000000872 d. Lower control limit.		0.000000731		13C-2,3,4,6,7,8-HxCDF	
8,9-HxCDF ND 0.00000158 13C-1,2,3,4,7,8-HpCDF 63.5 6,7,8-HpCDF ND 0.00000969 13C-1,2,3,4,7,8,9-HpCDF 52.9 7,8,9-HpCDF ND 0.00000122 49.2 7,8,9-HpCDF ND 0.00000124 89.9 CDD ND 0.00000124 a. Sample specific estimated detection limit. cCDD ND 0.00000183 c. Method detection limit. hCDD ND 0.000000303 d. Lower control limit. hCDF ND 0.00000209 c. Method detection limit.		0.000000672		13C-1,2,3,7,8,9-HxCDF	
6,7,8-HpCDF ND 0,000000969 13C-1,2,3,4,7,8,9-HpCDF 52.9 7,8,9-HpCDF ND 0,00000192 49.2 7,8,9-HpCDF ND 0,00000476 CRS 37CI-2,3,7,8-TCDD 89.9 CDD ND 0,00000124 a. Sample specific estimated detection limit. b. Estimated maximum possible concentration. CDD ND 0,00000183 c. Method detection limit. pCDD ND 0,000000303 d. Lower control limit. upper control limit. CDF ND 0,000000209 d. Lower control limit. CDF ND 0,000000209 d. Lower control limit. ND 0,000000209 d. Lower control limit. n. Control limit. ND 0,000000209 d. Lower control limit. n. Control limit.		0.00000158		13C-1,2,3,4,6,7,8-HpCDF	
7,8,9-HpCDF ND 0.00000192 13C-OCDF 49.2 ND 0.00000476 CRS 37Cl-2,3,7,8-TCDD 89.9 CDD ND 0.00000124 a. Sample specific estimated detection limit. eCDD ND 0.00000183 b. Estimated maximum possible concentration. xCDD ND 0.00000303 d. Lower control limit. pCDF ND 0.00000209 d. Lower control limit. wCDF ND 0.00000209 d. Lower control limit. ND 0.00000209 d. Lower control limit. n. Lower control limit.)F	0.000000969		13C-1,2,3,4,7,8,9-HpCDF	
CDD ND 0.00000476 Footnotes Footnotes CDD ND 0.00000124 a. Sample specific estimated detection limit. ECDD ND 0.00000166 b. Estimated maximum possible concentration. IXCDB ND 0.00000183 c. Method detection limit. IPCDF ND 0.000000203 d. Lower control limit - upper control limit. CDF ND 0.000000209 d. Lower control limit. IXCDF ND 0.000000872 d. Lower control limit. IXCDF ND 0.000000872 d. Lower control limit.		0.00000192		13C-OCDF	
CDD ND 0.00000124 *CDD ND 0.00000166 IxCDD ND 0.00000183 IpCDD ND 0.00000303 CCDF ND 0.00000024 *CCDF ND 0.000000209 IxCDF ND 0.000000872 IxCDF ND 0.000000872	A SAME TO THE PARTY OF THE PART	0.00000476		- 1	
ND 0.00000124 ND 0.00000166 ND 0.00000183 ND 0.00000303 ND 0.00000024 ND 0.00000209 ND 0.000000872 ND 0.00000132	Totals	-		Footnotes	
ND 0.00000166 ND 0.00000183 ND 0.00000303 ND 0.00000924 ND 0.00000209 ND 0.00000872 ND 0.00000132		0.00000124		a. Sample specific estimated detection limit.	
ND 0.00000183 ND 0.00000303 ND 0.00000024 ND 0.00000209 ND 0.00000872 ND 0.00000132				b. Estimated maximum possible concentration.	
ND 0.00000303 ND 0.0000024 ND 0.00000872 ND 0.00000872 ND 0.00000132				c. Method detection limit.	
8 8 8 8 8 8				d. Lower control limit - upper control limit.	
ON ON ON					
ON ON					
QN					
and the second s	Total HpCDF ND	0.00000132			

Analyst: RAS

Approved By: William J. Luksemburg 20-May-2005 11:09

						EPA	EPA Method 1613
Matrix: Aqueous Sample Size: 1,000 L		QC Batch No.: Date Extracted:	6789 17-May-05	Lab Sample: 0-OPR001 Date Analyzed DB-5: 19-May-05	0-OPR001 19-May-05	Date Analyzed DB-225:	1 DB-225: NA
Analyte	Spike Conc.	Spike Conc. Conc. (ng/mL)	OPR Limits	Labeled Standard		%R	TCIT-ACT
2,3,7,8-TCDD	10.0	10.3	6.7 - 15.8	IS 13C-2,3,7,8-TCDD		66.3	25 - 164
1,2,3,7,8-PeCDD	50.0	51.8	35 - 71	13C-1,2,3,7,8-PeCDD	D	82.1	25 - 181
1,2,3,4,7,8-HxCDD	50.0	50.1	35 - 82	13C-1,2,3,4,7,8-HxCDD	QQ;	69.4	32 - 141
1,2,3,6,7,8-HxCDD	50.0	52.2	38 - 67	13C-1,2,3,6,7,8-HxCDD	OC	74.5	28 - 130
1,2,3,7,8,9-HxCDD	50.0	54.3	32 - 81	13C-1,2,3,4,6,7,8-HpCDD	CDD	64.6	23 - 140
1,2,3,4,6,7,8-HpCDD	50.0	49.7	35 - 70	13C-0CDD		40.2	17 - 157
0000	100	99.1	78 - 144	13C-2,3,7,8-TCDF		71.3	24 - 169
2,3,7,8-TCDF	10.0	10.1	7.5 - 15.8	13C-1,2,3,7,8-PeCDF	بيتا	78.8	24 - 185
1,2,3,7,8-PeCDF	50.0	49.0	40 - 67	13C-2,3,4,7,8-PeCDF	L	85.0	21 - 178
2,3,4,7,8-PeCDF	50.0	49.2	34 - 80	13C-1,2,3,4,7,8-HxCDF	JDF	72.8	26 - 152
1,2,3,4,7,8-HxCDF	50.0	48.2	36 - 67	13C-1,2,3,6,7,8-HxCDF	DF	78.4	26 - 123
1,2,3,6,7,8-HxCDF	20.0	48.8	42 - 65	13C-2,3,4,6,7,8-HxCDF	DF	82.5	28 - 136
2,3,4,6,7,8-HxCDF	20.0	48.4	35 - 78	13C-1,2,3,7,8,9-HxCDF	ÜF	8.69	29 - 147
1,2,3,7,8,9-HxCDF	50.0	49.7	39 - 62	13C-1,2,3,4,6,7,8-HpCDF	pCDF	58.1	28 - 143
1,2,3,4,6,7,8-HpCDF	20.0	49.7	41 - 61	13C-1,2,3,4,7,8,9-HpCDF	pCDF	45.9	26 - 138
1,2,3,4,7,8,9-HpCDF	50.0	50.6	39 - 68	13C-OCDF		36.3	17 - 157
OCDF	100	93.6	63 - 170	CRS 37CI-2,3,7,8-TCDD		85.6	35 - 197

Analyst: RAS

Approved By: William J. Luksemburg 20-May-2005 11:09



Sample ID: IOD2043-01	3-01		A minigares of Milkes was a children was the Milkes			anaministration for mainting the fact that interference and the security of th	EPA Method 1613
Client Data	obyd fressowsky wywadzywania sissystym rate sawa wywynante i dosinia wy yrgana e ddi		Sample Data	and the state of t	Laboratory Data	and the second s	
	Del Mar Analytical, Irvine		Matrix:	Aqueous	Lab Sample: 26117-001	Date Received:	30-Apr-05
	5		Sample Size:	0.957 L	_		
Ime Collected: 1116					Date Analyzed DB-5: 19-May-05		Date Analyzed DB-225: NA
Analyte Conc.	rc. (ug/L)	DI a	EMPCb	Qualifiers	Labeled Standard	%R LCL	LCL-UCL ^d Qualifiers
2,3,7,8-TCDD	N Q	0.00000132	2		IS 13C-2,3,7,8-TCDD	60.8 25	25 - 164
1,2,3,7,8-PeCDD	S	0.00000179	6		13C-1,2,3,7,8-PeCDD	63.1 25	25 - 181
1,2,3,4,7,8-HxCDD	2	0.00000375	5		13C-1,2,3,4,7,8-HxCDD	61.3 32	32 - 141
1,2,3,6,7,8-HxCDD	2	0.00000354	4		13C-1,2,3,6,7,8-HxCDD	60.9 28	28 - 130
1,2,3,7,8,9-HxCDD	Q	0.00000372	2		13C-1,2,3,4,6,7,8-HpCDD	53.8 23	23 - 140
1,2,3,4,6,7,8-HpCDD	0.0000517			- -,	13C-0CDD		17 - 157
OCDD	0.000373				13C-2,3,7,8-TCDF	65.0 24	24 - 169
2,3,7,8-TCDF	S	0.00000133	8		13C-1,2,3,7,8-PeCDF	66.4 24	24 - 185
1,2,3,7,8-PeCDF	Ş	0.00000165			13C-2,3,4,7,8-PeCDF	66.3 21	21 - 178
2,3,4,7,8-PeCDF	S	0.00000139	6		13C-1,2,3,4,7,8-HxCDF	57.6 26-	- 152
1,2,3,4,7,8-HxCDF	S	0,000000862	62		13C-1,2,3,6,7,8-HxCDF	60.4 26	26 - 123
1,2,3,6,7,8-HxCDF	Q.	0.000000782	82		13C-2,3,4,6,7,8-HxCDF	63.2 28	28 - 136
2,3,4,6,7,8-HxCDF	S	0.000000881	81		13C-1,2,3,7,8,9-HxCDF	55.9 29	29 - 147
1,2,3,7,8,9-HxCDF	S S	0.00000157	7		13C-1,2,3,4,6,7,8-HpCDF	44.4 28	28 - 143
1,2,3,4,6,7,8-HpCDF	0.00000903			<	13C-1,2,3,4,7,8,9-HpCDF	43.0 26	26 - 138
1,2,3,4,7,8,9-HpCDF	S	0.00000132	2		13C-OCDF	33.6 17	17-157
OCDF	0.0000390			¥	CRS 37CI-2,3,7,8-TCDD	81.7 35	35 - 197
Totals					Footnotes		Avadaminimus va manujumi pisesi misiku pisesi katika misika manga paga paga paga paga paga paga paga
Total TCDD	2	0.00000132	2		a. Sample specific estimated detection limit.		
Total PeCDD	S	0.00000179	6		b. Estimated maximum possible concentration.	'ti	
Total HxCDD	0.0000114				c. Method detection limit.		
Total HpCDD	0.000124				d. Lower control limit - upper control limit.		
Total TCDF	OZ.	0.00000133	8				
Total PeCDF	S	0.00000151	-				
Total HxCDF	0.00000540						
Total HpCDF	0.0000268						

Analyst: RAS

Approved By:

William J. Luksemburg 20-May-2005 11:09



APPENDIX



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.
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.
P	Homologue totals include any coplanar PCBs detected at concentrations less than the reporting limit.
*	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 correspond 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.

The control limits are "interim limits only" until in-house limits are utilized.

CURRENT CERTIFICATIONS



NELAP - (Primary AA: California, Certificate No. 02102CA)

Department of the Navy

U.S. Army Corps of Engineers

U.S. EPA Region 5

Bureau of Reclamation - Mid-Pacific Region - (MP-470, Res-1.10)

Commonwealth of Kentucky — (Certificate No. 90063)

Commonwealth of Virginia — (Certificate No. 00013)

State of Alaska, Department of Environmental Conservation — (Certificate No. OS-00197)

State of Arizona — (Certificate No. AZ0639)

State of Arkansas, Department of Health — (Approval granted through CA certification)

State of Arkansas, Department of Environmental Quality

State of California — (Certificate No. 1640)

State of Colorado

State of Connecticut — (Certificate No. PH-0182)

State of Florida — (Certificate No. 87456)

State of Louisiana, Department of Health and Hospitals — (Certificate No. LA000014)

State of Louisiana, Department of Environmental Quality

State of Maine

State of Michigan (Certificate No. 81178087)

State of Mississippi — (Approval granted through CA certification)

State of Nevada — (Certificate No. CA413)

State of New Jersey — (Certificate No. CA003)

State of New York, Department of Health — (Certificate No. 11411)

State of North Carolina — (Certification No. 06700)

State of North Dakota, Department of Health - (Certificate No. R-078)

State of New Mexico

State of Oklahoma - (D9919)

State of Oregon – (Certificate No. CA413)

State of Pennsylvania — (Certificate No. 68-490)

State of South Carolina — (Certificate No. 87002001)

State of Tennessee — (Certificate No. 02996)

State of Texas — (Certificate No. TX247-1000A

State of Utah — (Certificate No. E-201)

State of Washington - (Certification No. C091)

State of Wisconsin — (Certificate No. 998036160)

State of Wyoming — (USEPA Region 8 Ref: 8TMS-Q)



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

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

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

SUBCONTRACT ORDER - PROJECT # IOD2043

CENTRES CY I DOD I DODY			
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 Harper	RECEIVING LABORATORY: Alta Analytical 1104 Windfield Way El Dorado Hills, CA 95762 Phone: (916) 933-1640 Fax: (916) 673-0106		
Standard TAT is requested unless specific due date is requested. Analysis Expiration	ed => Due Date: Initials: Comments		
Sample ID: IOD2043-01 Water Sampled: 04/28/05 11:16 1613-Dioxin-HR 05/05/05 11:16 EDD + Level 4 05/26/05 11:16 Containers Supplied: 1 L Amber (IOD2043-01G)	Instant Nofication J flags,17 congeners,no TEQ,sub=Alta, DP to AMEC Excel EDD email to pm,Include Std logs for Lvl IV		

	SAMPLI	INTEGRITY:		
All containers intact:	Sample labels/COC agree: Samples Preserved Properly:		s Received On Ice;; s Received at (temp);	☐ Yes ☐ No
Anna 9	1.29.05 17:00	M Tallent	4/30/05	0915
Released By	Date Time	Received By	Date	Time
Released By	Date Time	Received By	Date	Time

Attachment 10.B.1

SAMPLE LOG-IN CHECKLIST

ALTA Project No.: 26117

1.	Date Samples Arrived: 430 05 Initials: 40 Location Time / Date logged in: 1030 5/8/05 Initials: 40 Location	n: U	(·2	
2.	Time / Date logged in: 1030 5/3/05 Initials: Color Location	n: U)R -	2
3.	Samples Arrived By: (circle) FedEx UPS World Courier Other:			
4.	Shipping Preservation: (circle) lce / Blue lce / Dry lce / None Temp °C 0.0			
		YES	NO	NA
5.	Shipping Container(s) Intact"? If not, describe condition in comment section.	مبس	·	
6.	Shipping Container(s).Custody Seals Present?			
	intact? If not intact, describe condition in comment section.	1		
7.	Shipping Documentation Present? (circle) Shipping Label Airbill Tracking Number 79, 2 6999 9579	/		
8.	Sample Custody Seal(s) Present? No. of Seals or Seal No.			
	Intact? If not intact, describe condition in comment section.			V
9.	Sample Container Intact? If no, Indicate sample condition in comment section.			
10.	Chain of Custody (COC) or other Sample Documentation Present?	V		
11	COC/Documentation Acceptable? If no, complete COC Anomaly Form.	/		
12	. Shipping Container (circle): ALTA Client Retain or Return or Di	sposed		
13	. Container(s) and/or Bottle(s) Requested?		/	
14	Drinking Water Sample? (HRMS Only) If yes, Acceptable Preservation? Y or N Preservation Info From? (circle) COC or Sample Container or None Noted			/

comments: Jampler's initials found on sangele Jaksels

ALTA Analytical Laboratory El Dorado Hills, CA 95762

·			

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711DF48 550 South Wadsworth Boulevard Task Order 313150010 Suite 500 SDG No. Multiple Lakewood, CO 80226 No. of Analyses 6 Laboratory Alta Date: June 1, 2005 Reviewer H. Chang Reviewer's Signature Analysis/Method Dioxin&Furans/1613 **ACTION ITEMS^a** Case Narrative **Deficiencies** 2. Out of Scope Analyses 3. Analyses Not Conducted Missing Hardcopy **Deliverables Incorrect Hardcopy Deliverables** 6. Deviations from Analysis Detects below the calibration range were qualified "J." Protocol, e.g., EMPCs were qualified "UJ." **Holding Times** GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and 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

ANALYSIS: DIOXINS/FURANS

SAMPLE DELIVERY GROUPS: IOD2043, IOD2044, IOD2049, IOD2053, IOD2056 & IOD2058

Prepared by

AMEC—Denver Operations 550 South Wadsworth Boulevard, Suite 500 Lakewood, Colorado 80226

SDG No.: Analysis:

NPDES Multiple D/F

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOD2043, IOD2044, IOD2049, IOD2053, IOD2056 & IOD2058

Project Manager:

B. McIlvaine

Matrix:

Water

Analysis:

Dioxins/Furans

OC Level:

Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

0

6

Reviewer:

H. Chang

Date of Review:

June 1, 2005

1

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Dioxins and Furans (DVP-19, Rev. 1), EPA Method 1613, and the National 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 Multiple D/F

Table 1. Sample Identification

Client ID	Laboratory ID (Del Mar)	Laboratory ID (Alta)	Matrix	COC Method
Outfall 001	IOD2043-01	26117-001	water	1613
Outfall 002	IOD2044-01	26112-001	water	1613
Outfall 018	IOD2049-01	26118-001	water	1613
Outfall 004	IOD2053-01	26120-001	water	1613
Outfall 010	IOD2056-01	26116-001	water	1613
Outfall 009	IOD2058-01	26115-001	water	1613

NPDES Multiple 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 samples in these SDGs were received at Del Mar Analytical within the temperature limits of 4°C ±2°C. The samples were shipped to Alta for dioxin/furan analysis and were received below the temperature limits of 4°C ±2°C at 0°C and 1.1°C; however, as the samples were not noted to have been frozen or damaged, no qualifications were required. According to the laboratory login sheets, the samples were 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 these SDGs. As the samples were couriered directly to Del Mar Analytical, custody seals were not required. The cooler received by Alta had custody seals present and intact; however, custody seals were not present on the sample containers. The EPA IDs were added to the sample result summaries by the reviewer. No qualifications were required.

2.1.3 Holding Times

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

2.2 INSTRUMENT PERFORMANCE

Following are findings associated with instrument performance:

2.2.1 GC Column Performance

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

2.2.2 Mass Spectrometer Performance

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

NPDES Multiple D/F

DATA VALIDATION REPORT

2.3 CALIBRATION

2.3.1 Initial Calibration

The initial calibration was analyzed 05/09/05. The calibration consisted of six concentration level standards (CS0 through CS5) analyzed to verify instrument linearity. The initial calibration was 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 and end 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 (6789-MB001) was extracted and analyzed with the samples in these SDGs. There were no target compound detects reported 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 Ongoing Precision Recovery (OPR) sample (6789-OPR001) was extracted and analyzed with the samples in these SDGs. All recoveries were within the acceptance criteria listed in Table 6 of Method 1613. No qualifications were required.

2.6 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

MS/MSD analyses were not performed in these SDGs. 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 OC:

NPDES Multiple Analysis:

D/F

2.7.1 Field Blanks and Equipment Rinsates

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

2.7.2 Field Duplicates

No field duplicate samples were identified for these SDGs.

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. In five of the six SDGs, the laboratory noted that detects above the low point of the calibration curve but below the EPA Method 1613 minimum level were denoted by an "A" laboratory qualifier. However, all results with "A" qualifier were actually below the low point of the calibration curve and should have been flagged as "J." Also, one of the detects which should have been flagged as "A" was incorrectly flagged as "J" by the laboratory. Any detects below the method minimum level were qualified as estimated, "J." If the concentration of any component of the total was below the lower method calibration level (MCL), the total detect was qualified as estimated, "J." Any reported EMPC was qualified as an estimated nondetect, "UJ." The results and reporting limits were reported in µg/L except for the results in sample Outfall 010 which were reported in ng/L. No further qualifications were required.

Laboratory Data Lab Sample: 26117-001 Date Received: 26.17-001	Date Analyzed DB-5: 19-May-05 Date Extracted: 17-May-05 Labeled Standard	CDD 63.1 CCDD 61.3 CCDD 60.9 HpCDD 53.8 34.9	65.0 66.4 66.3 57.6 60.4	•	t. íon.	AMEC VALIDATED LEVEL IV
Sample Data Matrix: Aqueous Sample Size. 0.957 1	2	Press,		A CR	p. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6. 6.	7 7
2	DL a 0.00000132 0.00000179	7	0.00000133 0.00000165 0.00000139 0.000000782 0.000000782	0.00000157 0.00000132 0.00000132	4	0.00000133 0.00000151 540 68.
IOD2043-01 Outfall C Del Mar Analytical, Irvine IOD2043 28-Apr-05	Cone. (ug	_		CDF 0.00000903 CDF ND 0.0000390	ND ND 0.0000114 0.000124	ND ND 0.00000540 0.0000268
Sample ID: Client Data Narie. Project: Project: Time Collected.	2,3,7,8-TCDD 1,2,3,7,8-PeCDD 1,2,3,4,7,8-HvCDD	1,2,3,6,7,8-HxCDD 1,2,3,7,8,9-HxCDD 1,2,3,4,6,7,8-HpCDD OCDD 2,3,7,8-TCDF	1,2,3,7,8-PeCDF 2,3,4,7,8-PeCDF 1,2,3,4,7,8-HxCDF 1,2,3,6,7,8-HxCDF 2,3,4,6,7,8-HxCDF 1,2,3,7,8,9-HxCDF	DNG 1,2,3,4,6,7,8-HpCDF 1,2,3,4,7,8,9-HpCDF DNQ OCDF Totals	Total TCDD Total PeCDD Total HxCDD Total HpCDD Total TCDF	Total PeCDF DNQ Total HxCDF DNQ Total HpCDF Analyst: RAS
(3 3 3 4	→ b 3		1	3 h 3 0	3 h r 3 8

Approved By:

William J. Luksemburg 20-May-2005 11:09

1	Sample ID:	IOD2044-01	DIAFALL C	700	THE PARTY OF THE P	AND THE RESERVE OF THE PROPERTY OF THE PROPERT		
*	Clear Data	en de la companya de la composição de la companya d		Total Statement of	Carrent, D.	***************************************		EPA Method 1613
	Name	Del Mar Analytical, Irvine	al, irvine		Sample Data		Laboratory Data	
	Date Collected.	10022044 28::Apr-05		, geografie	Sample Size:	Aqueous 0 940 I	Lab Sample: 26112-001	Date Received, 30-Apr-()5
	ine colected	2 AK.	and the second s			1	ed DR.5.	Date Extracted: 17-May-05
383	Analyte	Conc. (ug/L)	~	DL a	quant	0.11	(3.24.43). (3.14ay-0.)	Date Analyzed DB-225; NA
- 4	2,3,7,8-TCDD	The second state of the second	CN			Quanners	Labeled Standard	%R LCL-101 d Onetic
	1,2,3,7,8-PeCDD		3 5	0.00000199	Ž,		<u>IS</u> 13C-2,3,7,8-TCDD	
~~~	1,2,3.4,7.8-HxCDD			0.00000294	4		13C-1.2.3.7.8-PeCDD	
(m	1.2.3.6.7.8-HyCon		מ ב	0.00000400	0		13C-123478-HVCDD	
	12378 0 Hwy		ו ב	0.00000399	σ.		13C-1726-70 H.Chr	
* :	7 2 4 6 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7 5 7		Ω	0.00000409	6		12C 122 4 7 7 1 2 1 2 1 2 2 1 2 2 1 2 2 1 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	65.8 28 - 130
* (	1,4,3,4,0,7,8-HpCDD		0.0000557				13C-1,2,3,4,6,7,8-HpCDD	61.5 23 - 140
	acon acon	.0	0.000706				I3C-OCDD	45.0 17 157
~ <u>`</u>	2,3,7,8-TCDF			O COCOCOCO	24		13C-2,3,7,8-TCDF	
7' 	1,2,3,7,8-PeCDF	S	بعمو	0.0000000			13C-1,2,3,7,8-PeCDF	
4	2,3,4,7,8-PeCDF		. ~	7050000000	<b>\</b> 1 .4		13C-2,3,4,7,8-PeCDF	
, mi	1,2,3,4,7,8-HxCDF		. ~	0.000000111			13C-1,2,3,4,7,8-HxCDF	
	1,2,3,6,7,8-HxCDF			ATTOONON'S		<del></del>	13C-1,2,3,6,7,8-HxCDF	
ζ,	2,3,4,6,7,8-HXCDF			0.00000165			13C-2,3,4,6,7,8-HxCDF	
	1,2,3,7,8,9-HxCDF			0.00000118		***************************************	13C-1,2,3,7,8,9-HxCDF	
- 1	12.3.4.6.78.HbChp			0.00000214		-	13C-1234678-HACDE	
	Attraction to the		0.00000968			4	120 100 4 4 6 0 11	58.0 28 - 143
; ;	4,6,2,4,7,8,7-HPCDF	S S		0.00000252		zi N	12C-1,2,3,4,7,8,9-HpCDF	49.7 26-138
2 3 3 5	CLXI.	0.0	0.0000306					43.8 17-157
=	Totals	-		A VALLEY OF THE PARTY OF THE PA		ξ .	3/CI-2,3,7,8-TCDD	78.7 35-197
To	Total TCDD						Footnotes	
<u>5</u>	Total PeCDD	3 S	-	0.00000199			a. Sample specific estimated detection limit	
<u>-1</u>	Total PtxCDD			0.00000294		TT (Wall of Age,	b. Estimated maximum possible concentration	
<u></u>	Total HnCDD	0.00	0.00000660		0.0000135		c Method detection limit	
È	Total COL	76.5 7	0.000114			Military and American	Commence of the commence of th	
Š .		0.00	0.00000366			······································	c. Lower conrol limit - upper control limit.	
<u> </u>	Total FeCDF	S	)	0.00000322				
<u>ਰ</u> ਦੋ	Lotal HXCDF Total HnCDF	0.00	0.00000666		0.00000980	Mariahan, ay ay	AMEC VALIDATE	
			11000					

Approved By:

William J. Luksemburg 20-May-2005 10:57

	Sample ID: IOD2049	149 OLAFALL OIS	8				PROPORTION AND THE PROPERTY OF	ALTA
	Name: Del Ma	**		Sample Data			EPA M	EPA Method 1613
*	Alected; Alected	1751 Mar Analytical, Irvine 10122049 28-Apr-05 1516	en e	Matrix: Sample Size:	Aqueous 0.9\0 L	Lab Sample: 26118-001  QC Batch No.:	3	30-Apr-05
333	Analyze	and the first of the contraction	į	***************************************		ed DB-5:	Date Extracted.	17-May-05
1	The state of the same of the state of the st	(T/Sn) (T/S)	DL a	EMPC	Ouglifiere		Date Analyzed DB-225; NA	S: NA
	2.5,7,8-1CDD	SS	CAL00000.0	)			%R LCL-UCL ^d C	Onalifican
	1,2,3,7,8-PeCDD	Z	0.00000180	۰ .		LS 13C-2,3,7,8-TCDD	- )	
	1,2,3,4,7,8-HxCDD	ON ON	0.0000000			13C-1,2,3,7,8-PeCDD		
	1,2,3,6,7,8-HxCDD	S	0.00000265			13C-1,2,3,4,7,8-HxCDD		
	1,2,3,7,8,9-HxCDD	S	0.00000			13C-1,2,3,6,7,8-HxCDD		
	1,2,3,4,6,7,8-HpCDD	0.0000445	0.000000.			13C-1.2.3.4.6.7.8.Hr.Cr.n.		
	OCED	Cttoppo-			******	120 751	60.1 23 - 140	
	2378 Ten	0.000477			,		44.7 17-157	
		QN	0.00000164			13C-2,3,7,8-TCDF		
	1,4,5,7,8-reCDF	2	91000000			13C-1,2,3,7,8-PeCDF		
	2,3,4,7,8-PeCDF	S	0.00000218			13C-2,3,4,7,8-PeCDF		***************************************
	1,2,3,4,7,8-HxCDF	S	0.00000193		****	13C-1,2,3,4,7,8-HxCDF		
	1,2,3,6,7,8-HxCDF		0.0000105	٠	***************************************	13C-123678.Hy.Chr		
-	2,3,4,6,7,8-HxCDF		0.0000000992		***************************************	13C.234670.	64.8 26 - 123	
	12.3.7.89-HyChr	2	0.00000107			12C 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	69.4 28 - 136	
	1234670 m.ch	2	0.00000207		and and a	13C-1,2,3,7,8,9-HxCDF	59.2 29 - 147	
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-		0.00000896				<ul> <li>c. csumated maximum possible concentration.</li> </ul>		
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<u>-</u>	Total TCDF	0.00000379				d. Lower control limit - upper control limit.		************
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William J. Luksemburg 20-May-2005 11:10

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	Sample ID;	10D2053-01 Outfall 004	£007	PROPERTY COLUMN TO THE PROPERTY OF THE PROPERT		ALTA	a 🐔
	Client Data	Andre Charles and	The second secon	Sample Data		EPA Method 1613	
	L	28-Apr-05	v	Matrix: Aqueous	Lab Sample: QC Batch No.:	Date Received: 30-Apr-05 Date Extracted: 17 Mov. 0.05	
Qual Code		Cone. (ug/L)	DI, a	EMPC ^b Ouslifiers	Date.	Date Analyzed DB-225: NA	
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	1,2,3,4,7,8-HxCDD		0.00000171			70.3 25 - 164 71.3 25 - 181	
	er ( despriyer)		0.00000164		13C-1,2,3,4,7,8-HxCDD 13C-1,2,3,6,7,8-HxCDD	69.9 32 - 141 75.4 28 - 130	
-	1,4,3,4,6,7,8-HpCDD   OCDD			0.0000163	13C-1,2,3,4,6,7,8-HpCDD		
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S H	Total PeCDD   Total HxCDD	ND 0.0000163	0.00000171		a. Sample specific estimated detection limit, b. Estimated maximum possible concentration		
рз 2	Total HpCDD	0.0000189		0.0000352	2. Method detection limit,		
	Total PeCDF	<b>3 5</b>	0.00000135		control think - upper control limit.		
gya h h	Total HxCDF Total HpCDF	0.00000229	071000000		AMEC V	AMEC VALIDATED	
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		Laborator Data		Date Analyzed DB-5: 19-May, 05		IS 120 33 46 Mg		13C-1,2,3,7,8-PeCDD	13C-1,2,3,6,7,8-HxCDD	13C-1,2,3,4,6,7,8-HpCDD	13C-0CDD	13C-2,3,7,8-TCDF	13C-1,2,3,7,8-PeCDF	13C-2,3,4,7,8-PeCDF	13C-1,2,3,4,7,8-HxCDF	13C-1,2,3,6,7,8-HxCDF	13C-2,3,4,6,7,8-HxCDF	13C-1,2,3,7,8,9-HxCDF	13C-1,2,3,4,6,7,8-HpCDF	13C-OCDE	CRS 37Cl-2,3,7,8-TCDD	Footnotes	a. Sample specific estimated desertion 11;	b. Estimated maximum possible concentration	c. Method detection limit.	d. Lower control limit - upper control limit.	AMEC VALIDATE	F	
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10D2056-01 Outfalk	The second se	Del Mar Analytical, Irvine	IOD2056			9 \$	2 ;	2 2	QN	0.0000129	0.000119	N Q	Q	S	2	Q ;	Q ;	2 ;	9 9	2 5	OVERVIOLE TO THE PROPERTY OF T	W.V.	2		0.0000303		ON Oncooperation		
***	Client Data		Project Date Collected: Time Collected:	Analyte	2.3.7.8-TCDD	1,2,3,7.8-Pecmn	1,2,3,4,7,8-HyChn	1,2,3,6,7,8-IIxCDD	1,2,3,7,8,9-HxCDD	1,2,3,4,6,7,8.HpCDD		4,2,7,9-1CDF	23.47.6"FeCDF	123478-U205	123678 HACDE	2,3,4,6,7,8-HyChe	1,2,3,7,8,9-HyChr	1,2,3,4,6,7 8-HnCT1E	1.2,3,4,7,8,9-HpCDF	OCD!;	Totals	Total TCDD	Total PeCDD	Total HxCDD	Total HpCDD	Total Perme	Total HxCDF	Total HpCDF	Analyse DAG
				Such Class	Z				<u>}</u> ≯Iτ		<b>국</b>										***************************************	₹ [,		i i	Ž	3	Q AC	실	Ą

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Sample ID:	10D2058-01 Outfall	010	of the dates with the contract of the contract			Andrew (1994) (Andrew Springer) (Andrew Springer
Chemt Data		***************************************		The state of the s	2	EPA Method 1613
Name: Project: Date Collected: Time Collected:	Del Mar Analytical, Irvine 10D2058 28-Apr-05 1205	and the second s	Sample Data Mairix: Sample Size:	Aqueous 0.957 L		Date Received: 30-Apr-05 Date Extracted: 17-Mav-05
	Conc. (ng/L)	DL a	EMPC	Onsiffers	Date Analyzed DB-5; 19-May-05	Date Analyzed DB-225: NA
2,3,7,8-TCDD	1V	0.00130		× ammers	Ī	%R LCL-UCL ^d Qualifiers
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1,2,3,6,7,8-HxCDD	CDD ND	0.00283			13C-1,2,3,4,7,8-HxCDD	62.6 32 141
1,2,3,7,8,9-HxCDD	CDD ND	0.00208			13C-1,2,3,6,7,8-HxCDD	
1,2,3,4,6,7,8-HpCDD		0.0000			13C-1,2,3,4,6,7,8-HpCDD	
OCDD		t// 2000		Marco A Comp	13C-0CDD	
2,3,7,8-TCDF	JOS ON			,	13C-2,3,7,8-TCDF	
1,2,3,7,8-PeCDF		0.00166			13C-1,2,3,7,8-PeCDF	53.6 24 105
2,3,4,7,8-PeCDF		0.00202		<del>*************************************</del>	13C-2,3,4,7,8-PeCDF	
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1,2,3,7,8,9-HxCDF		0.000942			13C-1,2,3,7,8,9-HxCDF	
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Total HyChin		0.00165			b. Estimated maximim noseitle	
Total HoCDD		0.00293			c. Method detection limit	<del>na tanàng</del>
Total TCDF		0.0137			d. Lower control limit - upper control limit	
Total PeCDF		0.00166				
Total HxCDF		0.000911			AMEC VALIDATED	
Total Hector		*				

Analyst RAS

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LEVEL IN

# CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental

55/	South Wadsworth Bould			Package ID	_T711MT88
	ite 500	evard		Task Order	313150010
Sui	iic 500			SDG No.	IOD2043, 2049, 2054,
Lal	cewood, CO 80226				2056, 2058
1.Atr		for Analysis -1	No	of Analyses	5/2 reanalyses
	Laboratory <u>Del M</u> Reviewer L. Jan	tai Anaiyucai		Date: 06/06/0	
	Analysis/Method Metal			Reviewer's Si	gnature
	r many sast receiled interal	3		LANGE	Uscurs
AC	TION ITEMS*			<u> </u>	
1.	Case Narrative				
	Deficiencies				
2.	Out of Scope				
	Analyses				
3.	Analyses Not				
	Conducted				
4.	Missing Hardcopy Deliverables				
5,	Incorrect Hardcopy	***************************************			
	Deliverables				
6.	Deviations from	Qualifications were applied	for:		
	Analysis Protocol, e.g.,	CCB negative results			
	Holding Times	2) Change of MDL by revie			
	GC/MS Tune/Inst.	3) Rejected reanalyses in far	vor of ori	ginal analysis	
	Performance	4) Detects below the reporti	ng limit		
	Calibrations Blanks				
	Surrogates				
	Matrix Spike/Dup LCS				
	Field QC				
	Internal Standard				
	Performance Compound Identification				
	and Quantitation		****		
	System Performance -	4			
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OMN	MEN'IS ^b				
			******************************		
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			······		
Subco	ntracted analytical laboratory is no	t meeting contract and/or method requ	iremente		
Differ	ences in protocol have been adopte	ed by the laboratory but no action again	inct the labor	entors is required	***************************************

# Data Qualifier Reference Table

Qualifier	Organics	Inorganics
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.	The material was analyzed for, but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimated quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
UJ -	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. (Note: Analyte may or may not be present).

# **Qualification Code Reference Table**

Qualifier	Organies	Inorganics
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards us for the calibration was incorrect
С	Calibration %RSD or %D were noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within contribution.
В	Presumed contamination from preparation (method) blank.	Presumed contamination from preparation (method) or calibration blank.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was no within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E ·	Not applicable.	Duplicates showed poor agreement.
[	Internal standard performance was unsatis- factory.	ICP ICS results were unsatisfactory.
4	Not applicable.	ICP Serial Dilution %D were not within control limits.
А -	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
	Presumed contamination from trip blank.	Not applicable.
-	False positive – reported compound was not present. Not applicable.	. The approach.
	False negative – compound was present but not reported.	Not applicable.
	Presumed contamination from FB, or ER.	Presumed contourings
	Reported result or other information was incorrect.	Presumed contamination from FB or ER.  Reported result or other information was incorrect.
	TIC identity or reported retention time has been changed.	Not applicable.
	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
ΝQ	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.	The compound was detected between the MDL and the RL and by definition is
	Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).	Considered an estimated value.  Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



# DATA VALIDATION REPORT

# NPDES Monitoring

ANALYSIS: METALS

SAMPLE DELIVERY GROUPS: IOD2043, IOD2049, IOD2054,

IOD2056, IOD2058

Prepared by

AMEC—Denver Operations 550 South Wadsworth Boulevard, Suite 500 Lakewood, Colorado 80226

SDG No.: Analysis:

**NPDES** Multiple **METALS** 

## 1. INTRODUCTION

Task Order Title:

**NPDES Monitoring** 

Contract Task Order #:

313150010

SDG#:

IOD2043, IOD2049, IOD2054, IOD2056, IOD2058

Project Manager:

B. McIlvaine Water

Matrix: Analysis:

Metals

QC Level:

Level IV

No. of Samples:

2

No. of Reanalyses/Dilutions:

Reviewer: L. Jarusewic

Date of Review:

June 6, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels III and IV ICP-MS Metals, (DVP-5-A, Rev.0), AMEC Data Validation Procedure for Levels III and IV ICP Metals (DVP-5, Rev. 0), SW-846 Method 6020B for Inductively Coupled Plasma - Mass Spectrometry, SW-846 Method 7471A for Mercury (Manual Cold-Vapor Technique), 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.

T711MT88

Project:

G No.:

SDG No.: Analysis:

Multiple METALS

**NPDES** 

Table 1. Sample identification

DATA VALIDATION REPORT

Client ID	EPA ID	Laboratory ID	Mari	00000
		Latoratory ID	Matrix	COC Method
Outfall 001	Outfall 001	IOD2043-01	water	ILM04
Outfall 001RE1	Outfall 001RE1	IOD2043-01RE1	water	ILM04
Outfall 001RE2	Outfall 001RE2	IOD2043-01RE2	water	ILM04
Outfall 005	Outfall 005	IOD2054-01	water	ILM04
Outfall 009	Outfall 009	IOD2056-01	water	ILM04
Outfall 010	Outfall 010	IOD2058-01	water	ILM04
Outfall 018	Outfall 018	IOD2049-01	water	ILM04

NPDES Multiple 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 samples in these SDGs were 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 COCs were signed and dated by field and laboratory personnel. The COCs accounted for the samples and analyses presented in these SDGs. The laboratory did not include the "RE1" and "RE2" client ID suffixes for the iron reanalyses on the Form I for sample Outfall 001. The reviewer appended the Form I with the correct suffixes to reflect this information. No sample qualifications were required.

## 2.1.3 Holding Times

The dates of collection recorded on the COCs 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

A precalibration routine must be completed prior to calibrating the instrument, which consists of analyzing a tuning solution to verify resolution, mass calibration, and thermal stability. The solution must be analyzed a minimum of five times and must contain isotopes representing all mass regions of interest. All %RSDs were less than 5%. The mass calibrations were within 0.1 amu of the true mass and the instrument resolutions were less than 0.75 amu at 5 percent peak height for all analytes in the tune solution. No site sample qualifications were required.

### 2.3 CALIBRATION

The ICV and CCV results showed acceptable recoveries, 90-110% for ICP and ICP-MS metals and 80-120% for mercury. The 0.2  $\mu$ g/L ICP-MS reporting limit check standard was not recovered for antimony; however, as the antimony MDL was raised to 0.61  $\mu$ g/L, no qualifications were required (see section 2.4). The remaining reporting limit check standards were recovered within the AMEC control limits of 70-130%. No sample qualifications were required.

Project: DG No

NPDES Multiple METALS

DATA VALIDATION REPORT

SDG No.: Analysis:

### 2.4 BLANKS

Cadmium was reported in a bracketing ICP-MS CCB at -0.028  $\mu$ g/L; therefore, cadmium detected in samples Outfall 009 and Outfall 010 was qualified as estimated, "J." Antimony was detected in a bracketing ICP-MS CCB at 0.61  $\mu$ g/L; however, as antimony was not detected in Outfall 009 or Outfall 010, no qualifications were required. The remaining method blank and CCB results were nondetects at the reporting limit.

There were antimony detects in both the bracketing ICP-MS CCBs at concentrations  $\geq 3 \times MDL$ . The antimony CCB detects indicated the laboratory could not detect antimony at the reported MDL. The reviewer, therefore, raised the MDLs for antimony to the highest level reported in the CCBs, 0.61  $\mu g/L$ . No further qualifications were required due to the method and calibration blank results.

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

ICSA and ICSAB analyses were included in the raw data for the ICP-MS analyses. Results were not provided for spiked interferents sulfur, phosphorus, carbon, and chloride, and titanium. Antimony and lead were not spiked into the ICSAB solution. Potassium exceeded the calibration range of the instrument in both the ICSA/AB solutions associated with the Outfall 005, Outfall 009 and Outfall 010 analyses. Sodium exceeded the calibration range of the instrument in the ICSA solution for all associated analyses, and was recovered within the control limits in the ICSAB solution associated with the Outfall 005 analysis. Copper and cadmium were detected above the reporting limit in the ICSA. The validator reviewed the raw data for the site sample ICP-MS analyses for the level of reported interferents, Al, Ca, Fe, and Mg, and determined that the levels of reported interferents were not high enough to cause matrix affects. No assessment could be made with respect to possible interference from sulfur, phosphorus, carbon, titanium, and chloride.

ICSA and ICSAB analyses were included in the raw data for the ICP analyses and were analyzed the same day the samples. The recoveries were within the control limits of 80-120% and no qualifications were required.

# 2.6 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The ICP LCS sample was identified as 5D29098-BS1 and the ICP-MS LCS sample was identified as 5D29095-BS1. The mercury LCS sample was identified as 5D29061-BS1. The LCS results on the summary forms and in the raw data were within the laboratory-established control limits of 85-115% for the ICP, ICP-MS, and mercury analyses. No qualifications were required.

## 2.7 LABORATORY DUPLICATES

MS/MSD analyses were performed in association with the ICP-MS analyses on sample Outfall 005 for lead. The RPD was within the control limits of  $\leq$ 20% and no qualifications were required.

Project:

**NPDES** Multiple **METALS** 

DATA VALIDATION REPORT

SDG No.: Analysis:

### 2.8 MATRIX SPIKE

MS/MSD analyses were performed in association with the ICP/MS analyses on sample Outfall 005 for lead. The recoveries were within the control limits of 70-130% and no qualifications were required.

# 2.9 FURNACE ATOMIC ABSORPTION QC

Furnace atomic absorption was not utilized for the analyses of these samples; therefore, furnace atomic absorption QC is not applicable.

# 2.10 ICP/MS AND ICP SERIAL DILUTION

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

# 2.11 INTERNAL STANDARDS PERFORMANCE

The ICP-MS internal standard recoveries for the site samples and associated QC sample analyses were within the 60-125% control limits and no qualifications were required

# 2.12 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the samples in these data packages. 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. The laboratory reanalyzed sample Outfall 001 for iron. As the Outfall 001RE1 and Outfall 002RE2 results were similar to the original result, the Outfall 001RE1 and Outfall 002RE2 iron results were rejected, "R," in favor of the original iron analysis. Lead in Outfall 005, cadmium in Outfall 009 and Outfall 010, and mercury in Outfall 010 detected below the reporting limit were qualified as estimated, "J." No further qualifications were required.

## 2.13 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.

# 2.13.1 Field Blanks and Equipment Rinsates

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

## 2.13.2 Field Duplicates

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



17461Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-1261 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (939) 376-4647 FAX (949) 376-1618 9-484 Chesaroake Dr., Suite 805, San Diego, CA 92123 (858, 505-8296) FAX (858) 506-9668 98:30 South 519 St., Suite 8-120, Phoenix, AZ 85044 (480) 785-6443 FAX (480) 785-655 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena Boeing

Attention: Bronwyn Kelly

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOD2043

Sampled: 04/28/05 Received: 04/28/05

### DRAFT: METALS

			** * 1.	THE LATES						
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		n Date Extracted	Date	~~ **	
Sample ID: IOD2043-01 (DRAFT Reporting Units: mg/l	: Outfall 001 - N	Vater)					Taranticu (	ManyZ	ed Quali REV WUAI	10 ut
Iron	EPA 200.7 Outfall	5D29098	0.0088	0.040	0.36	1	04/29/05	05/02/05		
Sample ID: IOD2043-01RE1 (DRA Reporting Units: mg/l	AFT: Outfall (10)	F - Water)					0 11 m 2 1 Q D	03/02/03		
Iron	EPA 200,7 Outfall	5E17078	0.0088	0.040	0.34	I	04/29/05	05/17/05	R	
Sample ID: IOD2043-01RE2 (DRA Reporting Units: mg/l	FT: Outfall 001	- Water)						03/1//03	, ~	٢
Iron	EPA 200.7	5D29098	0.0088	0.040	0.36	1	04/29/05	05/17/05	~	
								40,13,00	K	<u> </u>

J 06/06/05

AWEC VALIDATED

LEVEL IV



17461 Ded on see , Suite 100, Irvins, CA 93616 (949) 261-1722 (945) of ending 30' 3 E. Cooley Or., Suite 4, Colton, CA 9222 + 8890 379-1667 EDX 34 6 1780 2 5 10 12 Ctsory on, Jame 7, Comon, Cri 22123 1858/305-0196 14X 070) Viscous of 14 Chesandake For, Suite 865, San Diego, CA 92123 1858/305-0196 14X 070) Viscous of 14 Chesandake For, Suite 861, San Diego, Phoenix, AZ 8504-0489, 782 0443 14X 070; Phoenix of 14 Chesandake For 15 04X 070; Phoenix of 15 0 2526 £, Sun-of Sci. #3, Las Vegas, NV 89120 -702 798-1620 FAX 702 798-462

MWH-Pasadena/Boeing

roject ID: Quarterly Outfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IOD2049

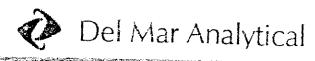
Sampled: 04/28/05 Received: 04/28/05

DRAFT: METALS

Analyte	Method	Barch	Limit	Reporting Limit	Sample Result	Dilution Date Factor Extracted	Date Data Analyzed Qyalifiers
Sample ID: IOD2049-01 (DRAFT: Reporting Units: ug/l	Outfall 018 - V	Vater) - con	t.				REV OUL
Copper Lead Mercury	EPA 200.8 EPA 200.8 EPA 245.1	5D29095 5D29095 5D29061	0.13	2.0 1.0 0.20	3.7 1.9 ND	1 04/29/05 1 04/29/05 1 04/29/05	05/03/05

AMEC VALIDATED





17461Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (940) 260-2207 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4067 FAX (949) 370-4046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (958) 505-8596 FAX 858: 505-9639 9830 South 51st 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

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Routine Outfall 005

Report Number: 10D2054

Sampled: 04/28/05 Received: 04/28/05

DRAFT: METALS

MDL Reporting Sample Dilution Date Analyte Method Batch Limit Limit Result Factor Extracted Analyzed Qualifiers Sample ID: IOD2054-01 (DRAFT: Outfall 005 - Water)

Reporting Units: ng/l Lead

EPA 200.8

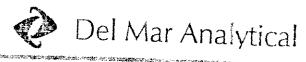
5D29095 0.13

1.0

04/29/05 05/03/05 J

AMEC VALIDATED

LEVEL IV



17461 Cerian Ave., Suite 100, Invine, CA 92614 (940) 251-1022 FAX (549) 363-3007 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (969) 370-4667 FAX (949) 370-1046 9484 Chesapeuke Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9669 9830 South S1st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset RJ. #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 009

Report Number: IOD2056

Sampled: 04/28/05 Received: 04/28/05

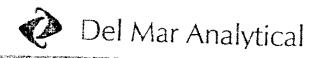
DRAFT: METALS

		DIC	ra, r · L	METALS					
Analyte	Method	Batch	MDL Limit	Reporting Limit	4	Dilution Factor E		Date	Data
Sample ID: 10D2056-01 (DRAF) Reporting Units: ug/l	T: Outfall 009 - V	Vater)	0/1			10001	Att acteg	Analyzed O	L COT
Antimony Cadmium Copper Lead Mercury	EPA 200.8 EPA 200.8 EPA 200.8 EPA 200.8 EPA 245.1	5D29095 5D29095 5D29095 5D29095 5D29061		2.0 1.0 2.0 1.0 0.20	ND 0.024 3.2 1.1 ND	1	04/29/05 04/29/05 04/29/05	05/03/05 UJ 05/03/05 J 05/03/05 05/03/05 04/29/05 U	B, DN

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AMEC VALIDATED

EVEL IV



17461 Derian Ave., Suite 100, Irvina, CA 92014 (949) 261-1022 FAX (949 250-2391 1014 E. Cocley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046 9434 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858-505-9689 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480, 783-0651 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: Routine Outfall 010

Report Number: IOD2058

Sampled: 04/28/05 Received: 04/28/05

### **DRAFT: METALS**

				· ************************************						
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result			Date Analyz	Ded Qua	ata Iifiare
Sample ID: IOD2058-01 (DRAF Reporting Units: ug/l	T: Outfall 010 - V	Vater)	0.61					,	QUAL	10ute
Antimony Cadmium Copper Lead Mercury	EPA 200.8 EPA 200.8 EPA 200.8 EPA 200.8 EPA 245.1	5D29095 5D29095 5D29095 5D29095 5D29061	0.015 0.49	2.0 1.0 2.0 1.0 0.20	ND 0.084 6.0 3.0 0.18	1 ( 1 (	04/29/05 04/29/05 04/29/05	05/03/05 05/03/05 05/03/05 05/03/05 04/29/05	Ĵ	3,5 B, DNG

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AMEC VALIDATED

LEVEL IV

### CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental

FEO. C. A. W. A. Environmenta		Package ID	T711VO105
550 South Wadsworth Boulev	ard	Task Order	313150010
Suite 500		SDG No.	IOD2043, 2045, 2047,
I skawaad GO 88822			2049
Lakewood, CO 80226		No. of Analyses	8
Laboratory Del Ma	I	Date: June 13	,2005
Reviewer M. Pok	lomy	Reviewer's Si	gnature
Analysis/Method Volatile	es	<u> </u>	thing
ACTION ITEMS*			
1. Case Narrative			
Deficiencies	***************************************		
2. Out of Scope			
Analyses	***************************************		
,			
	***************************************		
3. Analyses Not Conducted			
	**************************************		
4. Missing Hardcopy			
Deliverables			
5. Incorrect Hardcopy			
Deliverables			
6. Deviations from Analysis	Qualifications were rea	quired for calibration outliers	
Protocol, e.g.,			
Holding Times			
GC/MS Tune/Inst. Perform			
Calibrations			
Blanks			
Surrogates			
Matrix Spike/Dup LCS			
Field QC			
Internal Standard Performance			
Compound Identification and	<del></del>		
Quantitation	,		
System Performance			
OMMENTS ^b			
Subcontracted analytical laboratory is not me Differences in protocol have been adopted by	eeting contract and/or method n	equirements.	
represented in protocor have been adonted by	Vilhe laboratory but no action a	considerate at 1.1.	1



# DATA VALIDATION REPORT

## NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUPs: IOD2043, IOD2044, IOD2047, IOD2049

Prepared by

AMEC Denver Operations 550 South Wadsworth Boulevard, Suite 500 Lakewood, Colorado 80226

**NPDES** Multiple

<u>VOC</u>

Analysis:

#### 1. INTRODUCTION

Task Order Title:

**NPDES Monitoring** 

Contract Task Order #:

313150010

SDG#:

IOD2043, IOD2044, IOD2047, IOD2049

Project Manager:

B. McIlvaine

Matrix:

Water

Analysis:

Volatiles

QC Level: Level IV

No. of Samples:

No. of Reanalyses/Dilutions:

0

Reviewer:

M. Pokorny

Date of Review:

June 13, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Volatile Organics (DVP-2, Rev. 2), EPA Method 624, SW846 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 summary forms 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 Multiple VOC Analysis:

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
Outfall 001	Outfall 001	IOD2043-01	water	624
Trip Blank	Trip Blank	IOD2043-02	water	624
Outfall 002	Outfall 002	IOD2044-01	water	624
Trip Blank	Trip Blank	IOD2044-02	water	624
Outfall 012	Outfall 012	IOD2047-01	water	624
Trip Blank	Trip Blank	IOD2047-02	water	624
Outfall 018	Outfall 018	IOD2049-01	water	624
Trip Blank	Trip Blank	IOD2049-02	water	624

Analysis:

**NPDES** Multiple VOC

### 2. DATA VALIDATION FINDINGS

### 2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

### 2.1.1 Sample Preservation, Handling, and Transport

The samples in these SDGs were received at the laboratory within the temperature limits of  $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$ . The samples were properly preserved. The COCs noted that the samples were received intact; however, information regarding absence of headspace was not provided. No qualifications were required.

#### 2.1.2 Chain of Custody

The COCs were signed and dated by both field and laboratory personnel. The COCs accounted for the analyses presented in these SDGs. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

#### 2.1.3 Holding Times

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

#### 2.2 GC/MS TUNING

The ion abundance windows shown on the quantitation reports were consistent with those specified in EPA Method 624, and all ion abundances were within the established windows. The samples and associated QC were analyzed within 12 hours of the BFB injection time. The BFB summary report was verified from the raw data and no discrepancies between the summary report and the raw data were noted. No qualifications were required.

#### 2.3 CALIBRATION

Four initial calibrations dated 03/31/05, 04/20/05, 04/29/05, and 04/30/05 were associated with these SDGs. The average RRFs were ≥0.05 for the target compounds listed on the sample result summaries. The %RSDs were ≤35% for all applicable target compounds. Five continuing calibrations were associated with the sample analyses in these SDGs. trichlorofluoromethane exceeded 20% in the continuing calibration associated with samples Outfall The %D for 001 and Outfall 002; therefore, the nondetect results for trichlorofluoromethane were qualified as estimated, "UJ," in samples Outfall 001 and Outfall 002. No qualifications were required for the Trip Blanks. All remaining %Ds were ≤20%. The RRFs were ≥0.05 for the target compounds listed on the sample result summaries. A representative number of %RSDs and average RRFs from the initial calibration, and %Ds and RRFs from the continuing calibration were recalculated from the raw data, and no calculation or transcription errors were found. No further qualifications were

**NPDES** Multiple VOC

#### 2.4 BLANKS

Three water method blanks (5E04019-BLK1, 5E05024-BLK1, and 5E10003-BLK1) were associated with the sample analyses. There were no detects above the MDLs for the target compounds listed on the sample result summaries. The method blank raw data showed no evidence of false negatives. No qualifications were required.

### 2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Three water blank spikes (5E04019-BS1, 5E05024-BS1, and 5E10003-BS1) were associated with the sample analyses. All recoveries were within the laboratory-established QC limits. A representative number of recoveries were recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

### 2.6 SURROGATE RECOVERY

The surrogates were recovered within the QC limits of 80-120% in the samples and associated QC. A representative number of surrogate recoveries were recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

### 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Sample Outfall 001 was the MS/MSD analyses performed with these SDGs. All percent recoveries and RPDs were within the QC limits. No qualifications were required.

### 2.8 FIELD QC SAMPLES

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

#### 2.8.1 Trip Blanks

Samples Trip Blank (IOD2043-02), Trip Blank (IOD2044-02), Trip Blank (IOD2047-02), and Trip Blank (IOD2049-02) were the trip blanks associated with these SDGs. There were no target compounds detected above the MDLs in the trip blanks. No qualifications were required.

### 2.8.2 Field Blanks and Equipment Rinsates

There were no field QC samples associated with these SDGs. No qualifications were required.

### 2.8.3 Field Duplicates

There were no field duplicate samples associated with these SDGs.

SDG: Analysis:

**NPDES** Multiple VOC

### 2.9 INTERNAL STANDARDS PERFORMANCE

Internal standard area counts and retention times for the samples in these SDGs were within the control limits established by the continuing calibration standards: +100%/-50% for internal standard areas and  $\pm 0.50$  minutes for retention times. A representative number of internal standard areas and retention times were verified from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

### 2.10 COMPOUND IDENTIFICATION

Target compound identification was verified at a Level IV data validation. The laboratory analyzed for volatile target compounds by EPA Method 624. Chromatograms, retention times, and spectra for the samples and QC were examined and no target compound identification problems were noted. No qualifications were required.

### 2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. The reporting limits were supported by the lowest concentrations of the initial calibration standard and by the MDL study. Compound quantitation was verified by recalculating a representative number of target compound detects, blank spike, and surrogate recoveries from the raw data. Results were reported in µg/L (ppb). No calculation or transcription errors were noted. No qualifications were required.

### 2.12 TENTATIVELY IDENTIFIED COMPOUNDS

The laboratory did not provide TICs for these SDGs. No qualifications were required.

### 2.13 SYSTEM PERFORMANCE

A review of the chromatograms and other raw data showed no identifiable problems with system performance. No qualifications were required.



17461 Denin Ave., Salle 100, rosine, CA 93614 (949-261-1923) TAX 9319 (160-17) 1014 E. Cooley Ltt., Suite A. Collon, CA 92324 (909) 370-4067 FAX 949 (370-474) 9484 Chesapetike Dr., Suita 805, San Olego, CA 92123 (858) 503-8596 FAX 858: 703-649-9830 South 518 N., Suita 8-120, Photeinx, AZ 85044 (480) 785-0023 FAX 480 T87-0023 2520 E. Simsot 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: IOD2043

Sampled: 04/28/05 Received: 04/28/05

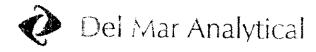
### DRAFT: PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilut. Fact	ion Date or Extracted	Date Analyz		Data alifiers
Sample ID: IOD2043-01 (D	RAFT: Outfall 001.	Water).						. 1041,2	ea Qu	anners
Reporting Units: ug/l		, , , , ,							GLAL.	
Benzene	EPA 624	5E04019	0.28	2.0	xmy	•	0 =			1
Carbon tetrachloride	EPA 624	5E04019	0.28	5.0	ND	1		05/05/05	Ü	
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1	05/04/05			1
1.1-Dichloroethane	EPA 624	5E04019	0.27	2.0	ND	1	05/04/05			Ì
1,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05			
1,1-Dichloroethene	EPA 624	5E04019	0.32		ND	1	05/04/05			Andrew State of the State of th
Ethylbenzene	EPA 624	5E04019	0.32	3.0	ND	4.004	05/04/05		- 1	
Tetrachloroethene	EPA 624	51504019		2.0	ND	1	05/04/05			
Toluene	EPA 624		0.32	2.0	ND	1	05/04/05		1	
1.1.1-Trichloroethane	EPA 624	5E04019	0.36	2.0	ND	1	05/04/05			1
1.1.2-Trichloroethane	EPA 624	5E04019 5E04019	0.30	2.0	ND	1	05/04/05			:
Trichloroethene	EPA 624		0.30	2.0	ND	]	05/04/05		1	
The Salation of the Salation o	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05		₩	-
Vinyl chloride	EPA 624	5E04019	0.34	5.0	ND	1	05/04/05	05/05/05	ப்ர	ے ٔ
Xylenes, Total	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05		U	:
Surrogate: Dibromofluorometi	EFA 024 hama (20-13002)	5E04019	0.52	4.0	ND	1	05/04/05	05/05/05	$\cup$	:
Surrogate: Toluene-48 (80-12)	1071 (00-12070)				107 %				1	1
Surrogate: 4-Bromofluorobenz	170) 1200 (2011-13/10/1				109 %					!
					99%					
Sample ID: 10D2043-02 (DR	AFT: Trip Blank - V	Vater)							0	
reborning Dutte: ng/l		•							İ	ı
Benzene	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05 (	N# 10 x 10 #	, ,	
Carbon tetrachloride	EPA 624	5lE04019	0.28	5.0	ND	1			N	
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1	05/04/05 (			
,1-Dichloroethane	EPA 624	5E04019	0.27	2.0	ND		05/04/05 (		1	
,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05 (			
,1-Dichloroethene	EPA 624	5E04019	0.32	3.0		1	05/04/05 (			
Ethylbenzene	EPA 624	5E04019	0.25	2.0	ND	1	05/04/05 0			
etrachloroeth <b>e</b> ne	EPA 624	5E04019	0.32	2.0	ND	1	05/04/05 0		-	
Cluene	EPA 624		0.36	2.0	ND	1	05/04/05 0			
1.1-Trichloroethane	EPA 624		0.30		ND	1	05/04/05 0			
,1,2-Trichloroethane	EPA 624		0.30	2.0	ND	1	05/04/05 0			
richloroethene	EPA 624			2.0	ND	1	05/04/05 0		and the state of t	
richlorofluoromethane	EPA 624		0.26	5.0	ND	1	05/04/05 0			
inyl chloride	EPA 624		0.34	5.0	ND	1	05/04/05 0			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	awar Co. Williams		0.26	5.0	ND	1	05/04/05 0	5/04/05		
		<b>まだりょうきき</b>								
ylenes, Total	EPA 624	5E04019	0.52	4.0	ND	Ĭ	05/04/05 0:	5/04/05	4	
ylenes, Total urrogate: Dibromofluocometha	EPA 624 me (80-120%)	5E04019	0.52		101 %	promj.	05/04/05 0:	5/04/05		
ylenes, Total	EPA 624 me (80-120%) 6)	5E04019	0.52			g-read	05/04/05 0:	5/04/05	1	

# AMEC VALIDATED

DRAFT REPORT DRAFT REPORT

DATA SUBJECT TO CHANGE



17461 Derian Ave., Soite 100, Irvine, CA 92614 (9498 De1-1022 FAX 90.0-200...20, 1014 E. Cooley Dr., Suite A. Coiton, CA 92324 (909: 370-4667 FAX (949) 370-1010 (9484 C tesapeake Dr. Suite 805, San Diego, CA 92123 (858, 505-8596 FAX)(858; 505-960) 9830 South 538 St., Suite B-120, Phoenix, AZ 85044 (900: 785-0043 FAX)(400: 785-085) 2520 E. Sunset Rif. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702, 798-362)

. Эн традуга у кайлыги батын үүнү түрүүлүй жүүн байдагын түрүү түүнү түү

MWH-Pasadena/Boeing

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Attention: Bronwyti Kelly

Report Number: IOD2044

Sampled: 04/28/05 Received: 04/28/05

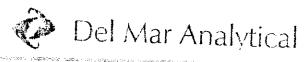
DRAFT: PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit			n Date rExtracted	Date Analyze		Data alifiers
Sample ID: IOD2044-01 (DRAFT: Reporting Units: ug/l	Outfall 002 -	-Water)							44	16.121
Benzene	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/05/05	11	1-1-
Carbon tetrachloride	EPA 624	5E04019	0.28	5.0	ND	1		05/05/05		
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1		05/05/05		
1,1-Dichloroethane	EPA 624	5E04019	0.27	2.0	ND	1		05/05/05		
1,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	1		05/05/05		
1,1-Dichloroethene	EPA 624	5E04019	0.32	3.0	ND	î		05/05/05		
Ethylbenzene	EPA 624	5E04019	0.25	2.0	ND	1		05/05/05		Í
Tetrachloroethene	EPA 624	5E04019	0.32	2.0	ND	ì		05/05/05		-
Toluene	EPA 624	5E04019	0.36	2.0	ND	1		05/05/05		
1,1,1-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1		05/05/05		A STATE OF THE STA
1,1,2-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	ì		05/05/05	1	Public de la company de la com
Trichloroethene	EPA 624	5E04019	0.26	5.0	0.27	1		05/05/05	J	1 DN
Trichlorofluoromethane	EPA 624	5E04019	0.34	5.0	ND	1		05/05/05	UT	
Vinyl chloride	EPA 624	5E04019	0.26	5.0	ND	ì			Ü	
Xylenes, Total	EPA 624	5E04019	0.52	4.0	ND	1	05/04/05		$\ddot{\mathcal{O}}$	İ
Surrogate: Dibromofluoromethane (80	0-120%)			7.0	106 %	*	05/04/05	05/05/05		***************************************
Surrogate: Toluene-d8 (80-120%)	,				106 %					-
Surrogate: 4-Bromofluorobenzene (80	1-120%)				100 %					
Sample ID: 10D2044-02 (DRAFT: T Reporting Units: ug/l	rip Blank -	Water)								Married Probability
Benzene	EPA 624	5E04019	0.28	2.0	ND	Toward.	05/04/05	05/05/05	U	
Carbon tetrachloride	EPA 624	5E04019	0.28	5.0	ND	ì	05/04/05		υ	
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1	05/04/05			
1,1-Dichloroethane	EPA 624	5E04019	0.27	2.0	ND	1	05/04/05			
1,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	ì	05/04/05			
1,1-Dichloroethene	EPA 624	5E04019	0.32	3.0	ND	1	05/04/05			:
Ethylbenzene	EPA 624	5E04019	0.25	2.0	ND	1	05/04/05			
Tetrachloroethene	EPA 624	5E04019	0.32	2.0	ND	1	05/04/05			
Toluene	EPA 624	5E04019	0.36	2.0	ND	1	05/04/05			
I,I,I-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05			
1,1,2-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05			
Trichloroethene	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05			
Trichlorofluoromethane	EPA 624	5E04019	0.34	5.0	ND	1	05/04/05			
Vinyl chloride	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05			
Xylenes, Total	EPA 624	5E04019	0.52	4.0	ND	¥ Pro-	05/04/05			* * * * * * * * * * * * * * * * * * *
Surrogate: Dibromofluoromethane (80					101 %	^	CONTROL	<i>uu:\uu:\uu:\u</i>	1	Š
Surrogate: Toluene-d8 (80-120%)	,				108 %					waisin,
Surrogate: 4-Bromofluorobenzene (80-	120%)				95 %					sinonaaa

AMEC VALIDATED

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

LEVEL IV



T34CTOelan Ace, Suite 100, Indine, CA 92614 (949) 261-1702 FAX (949) 366-1702 FAX (949) 366-1702 FAX (949) 370-1606 1014 E. Cordev Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1606 9484 Chesapxake Dr., Suite 305, San Diego, CA 92723 (856) 505-8566 FAX (858) 505-9669 9830 Sooth 51st St., Suite B-120, Procenix, AZ 85044 (480) 765-0843 FAX (480) 765-0863 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3624

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Froject ID: Alfa Outfall 012 - During Test

Report Number: IOD2047

Sampled: 04/28/05

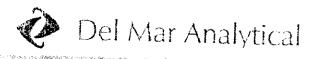
Received: 04/28.05

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

					**** f ****	CAN UMMIJ			
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Date Factor Extracte		te Da zed Qual	ita
Sample ID: IOD2047-01 (DRAFT: Reporting Units: ug/l 1.2-Dibromoethane (EDB) Methyl-tert-butyl Ether (MTBE) 1.2,3-Trichloropropane Di-isopropyl Ether (DIPE) tert-Butanol (TBA) Surrogate: Dibromofluoromethane (& Surrogate: Toluene-d& (&0-120%) Surrogate: 4-Bromofluorobenzene (& Sample ID: IOD2047-02 (DRAFT:	EPA 624 EPA 624 EPA 624 EPA 624 EPA 624 80-120%)	5E05024 5E05024 5E05024 5E05024 5E05024	0.32 0.32 0.85 0.25 3.1	2.0 5.0 10 5.0 25	ND ND ND ND ND 114 % 112 %	1 05/05/0 1 05/05/0 1 05/05/0 1 05/05/0	05/05/05 05/05/05 5 05/05/05	REV QUAL U	Ca
Reporting Units: ug/l 1,2-Dibromoethane (EDB) Methyl-tert-butyl Ether (MTBE) 1,2,3-Trichloropropane Di-isopropyl Ether (DIPE) ert-Butanol (TBA) Surrogate: Dibromofluoromethane (80 furrogate: Toluene-a'8 (80-120%) furrogate: 4-Bromofluorobenzene (80	EPA 624 EPA 624 EPA 624 EPA 624 EPA 624 0-120%)	5E05024 5E05024 5E05024 5E05024 5E05024	0.32 0.32 0.85 0.25 3.1	2.0 5.0 10 5.0 25	ND ND ND ND ND 111 % 112 %	1 05/05/05 1 05/05/05 1 05/05/05	05/05/05	<u> </u>	

# AMEC VALIDATED

LEVEL IV



174-179-00 a Ave., Suite 100, in inc. CA 92614 (939) 264-1-22. FAX out-1266-129 1913 E. C., Jey Dr., Shae A., Cohon, CA 90724, 1991, 17934 (c), 263, 2948, 179, 119 945.4 Chesapsake (h., Saite 805, Sao Diego, CA 92123, 1855) 705-8 (h.) FAX 1858; 305, Ref. 1830 - 44th 514 St., Side B-120, Piberik, AZ 57044 (486, 703-4 - 3 FAX (486, 703-6 27 (30 S. Siabet Rif. #3, Las Vegas, NV 89120 (782) 798-16/70 FAX (782) 798-16/7

MWH-Pasadena/Boeing

300 North Lake Avenue. Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Project ID: Quarterly Outfall 018 Repor. Number: 10D2049

Sampled: 04/28/05

Received: 04/28/05

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

Analyte	Method	Batch		Reporting Limit	Sample	Dilu		Date Analyz	Da	
Sample ID: IOD2049-01 (DRAF	T: Outfall 018	- Water)						•	RN	QUA
Reporting Units: ug/l Benzene									QUAL	Car
	EPA 624	5E10003	0.28	2.0	ND	1	05/10/05	05/10/05		100
Trichlorotrifluoroethane (Freon 113)	EPA 624	5E10003	1.2	5.0	ND	1		05/10/05	U	
Carbon tetrachloride Chloroform	EPA 624	5E10003	0.28	5.0	ND	ĺ		05/10/05	- 1	
	EPA 624	5E10003	0.33	2.0	ND		05/10/05	05/10/05	L. A. C.	
1.1-Dichloroethane	EPA 624	5F10003	0.27	2.0	ND	1			1	
1,2-Dichloroethane	EPA 624	5E10003		2.0	ND	1			1	
1,1-Dichloroethene	EPA 624	5E10003		3.0	ND				<b>1</b>	
Ethylbenzene	EPA 624	5E10003	0.25	2.0		1	05/10/05		1	
Tetrachloroethene	EPA 624	5E10003	0.32	2.0	ND	1				
Toluene	EPA 624	5E10003	0.36	2.0	ND	1	05/10/05			
1,1,1-Trichloroethane	EPA 624	SE10003	0.30		ND	I	05/10/05			
1,1,2-Trichloroethane	EPA 624	5E10003	0.30	2.0	ND	1	05/10/05	05/10/05		
Trichloroethene	EPA 624	51E10003	0.26	2.0	ND	ĺ	05/10/05		1	
Trichlorofluoromethane	EPA 624	5E10003		5.0	1.0	1	05/10/05	05/10/05	<u> </u>	1000
Vinyl chloride	EPA 624	5E10003	0.34	5.0	ND	Ţ	05/10/05	05/10/05		
Xylenes, Total	EPA 624	5E10003	0.26	5.0	ND	1	05/10/05	05/10/05	- Le	
Surrogate: Dibromofluoromethane (	(80.120%)	3610003	0.52	4.()	ND	į	05/10/05	05/10/05		
Surrogate: Toluene-d8 (80-120%)	00 (2019)				108 %					
Surrogate: 4-Bromofluorobenzene (e	80-120%)				104 %					
Sample ID: IOD2049-02 (DRAFT: Reporting Units: ug/l		Water)			104 %					
Benzene	EPA 624	21377 1 C (A A A								
Trichlorotrifluoroethane (Freon 113)	EPA 624	5E10003	0.28	2.0	ND	1	05/10/05 (	)5/10/05	6	
Carbon tetrachloride		5E10003	1.2	5.0	ND	1	05/10/05 (	)5/10/05	C	
Chloroform	EPA 624	5E10003	0.28	5.0	ND	1	05/10/05 (		1 1	
1,1-Dichloroethane	EPA 624	5E10003	0.33	2.0	ND	ì	05/10/05 0			
1,2-Dichloroethane	EPA 624	5E10003	0.27	2.0	ND	1	05/10/05 0			
1,1-Dichloroethene	EPA 624	5E10003	0.28	2.0	ND	1	05/10/05 0			
Ethylbenzene	EPA 624	5E10003	0.42	3.0	ND	1	05/10/05 0			
Tetrachloroethene	EPA 624	5E10003	0.25	2.0	ND	1	05/10/05 0			
Toluene	EPA 624	5E10003	0.32	2.0	ND	1	05/10/05 0			
I, I, I-Trichloroethane	EPA 624		0.36	2.0	ND	1	05/10/05 0	5/10/05		
1,1,2-Trichkoroethane	EPA 624	5E10003	0.30	2.0	ND	i	05/10/05 0:			
Trichloroethene	EPA 624	5E10003	0.30	2.0	ND	1	05/10/05 0:		j	
	EPA 624	5.E10003	0.26	5.0	ND	1	05/10/05 0:	5/10/05		
Trichlorofluoromethane	EPA 624		0.34	5.0	ND	4	05/10/05 05			
Vinyl chloride	EPA 624	and the second	0.26	5.0	ND	1	05/10/05 05	710/05	1	
Xylenes, Total	EPA 624		0.52	4.0	ND	1	05/10/05 05	10.05		
Surrogate: Dibromofluoromethane (80	0-120%)				105 %	£	05/10/05 05	/10/05 ¥	1	Perculiale
Surrogate: Toluene-d8 (80-120%)										30,00
Surrogate: 4-Bromofluorobenzene (80	-120%)				102 % 103 %					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
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DRAFT REPORT DRAFT REPORT DATA SUBJECT TO CHANGE

AMEC VALIDATED

#### CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711WC151 550 South Wadsworth Boulevard Task Order 313150010 Suite 500 SDG No. IOD2043, IOD2044, IOD2047, IOD2049 Lakewood, CO 80226 No. of Analyses 4 Laboratory Del Mar Analytical Date: 06/03/05 Reviewer L. Jarusewic Reviewer's Signature . Analysis/Method General Minerals ausewe **ACTION ITEMS*** Case Narrative **Deficiencies** Out of Scope Analyses **Analyses Not** 3. Conducted Missing Hardcopy **Deliverables** 5. Incorrect Hardcopy **Deliverables** 6. Deviations from Qualifications were applied for: Analysis Protocol, e.g., 1) Detects below the reporting limit **Holding Times** GC/MS Tune/Inst. Performance Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC Internal Standard Performance Compound Identification and Quantitation System Performance

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.

COMMENTS^b

### Data Qualifier Reference Table

Qualifier	Organies	Inorganies
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.	The material was analyzed for, but wanted not detected above the level of the associated value. The associated value either the sample quantitation limit or the sample detection limit.
J	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.	The associated value is an estimate quantity.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."	Not applicable.
N)	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	Not applicable.
ת ב	The analyte was not deemed above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.	The material was analyzed for, but was not detected. The associated value is an estimate and may be inaccurate or imprecise.
	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and to meet quality control criteria. The presence or absence of the analyte cannot be verified.	The data are unusable. (Note: Analyte may or may not be present).

### Qualification Code Reference Table

Qualifier	Organies	Inorganies
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards use for the calibration was incorrect
C	Calibration %RSD or %D were noncompliant.	Correlation coefficient is <0.995.
R	Calibration RRF was <0.05.	%R for calibration is not within contribution.
В	Presumed contamination from preparation (method) blank.	Presumed contamination from preparatio (method) or calibration blank.
L	Laboratory Blank Spike/Blank Spike Duplicate %R was not within control limits.	Laboratory Control Sample %R was no within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
Ξ	Not applicable.	Duplicates showed poor agreement.
	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
N.	Not applicable.	ICP Serial Dilution %D were not within control limits.
1 _	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
•	Presumed contamination from trip blank.	Not applicable.
	False positive – reported compound was not present. Not applicable.	-гримос.
	False negative – compound was present but not reported.	Not applicable.
	Presumed contamination from FB, or ER.	Presumed contamination from FB or ER.
	Reported result or other information was incorrect.	Reported result or other information was incorrect.
	TIC identity or reported retention time has been changed.	Not applicable.
	The analysis with this flag should not be used because another more technically sound analysis is available.	The analysis with this flag should not be used because another more technically sound analysis is available.
	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
IQ	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.
	Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).	Unusual problems found with the data that have been described in Section 2.#, "Data Validation Findings." The number following the asterisk (*) will indicate the subsection where a description of the problem can be found (eg. *1 would indicate a sample was not within temperature limits).



## DATA VALIDATION REPORT

### NPDES Monitoring

ANALYSIS: GENERAL MINERALS

SAMPLE DELIVERY GROUPS: IOD2043, IOD2044, IOD2047,

IOD2049

Prepared by

AMEC—Denver Operations 550 South Wadsworth Boulevard, Suite 500 Lakewood, Colorado 80226

SDG No.:

Analysis:

Multiple General Minerals

**NPDES** 

### 1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOD2043, IOD2044, IOD2047, IOD2049

Project Manager:

B. McIlvaine

Matrix:

Water

Analysis:

General Minerals

QC Level:

Level IV

No. of Samples:

Reviewer:

Date of Review:

L. Jarusewic June 3, 2005

The samples listed in Table 1 was validated based on the guidelines outlined in the AMEC Data Validation Procedures SOP DVP-6, Rev. 2, USEPA Methods for Chemical Analysis of Water and Wastes Method 350.2, 180.1, 120.1, 405.1, 413.1, 160.2, 160.5, 418.1, 300.0, 425.1, 160.1, and 335.2, Standard Methods for the Examination of Water and Wastewater Method SM2540C, 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 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** 

DATA VALIDATION REPORT

SDG No.: Analysis:

Multiple General Minerals

Table 1. Sample identification

j				
Client ID	EPA ID	Laboratory ID	Matrix	COC Method
Outfall 001	Outfall 001	IOD2043-01	Water	General Minerals
Outfall 002	Outfall 002	IOD2044-01	Water	General Minerals
Outfall 012	Outfall 012	IOD2047-01	Water	General Minerals
Outfall 018	Outfall 018	IOD2049-01	Water	General Minerals

Project: SDG No.: NPDES Multiple

Analysis:

General Minerals

### 2. DATA VALIDATION FINDINGS

#### 2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

### 2.1.1 Sample Preservation, Handling, and Transport

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

#### 2.1.2 Chain of Custody

The COCs were signed and dated by field and laboratory personnel. The COCs accounted for all samples and analyses presented in these SDGs. No sample qualifications were required.

#### 2.1.3 Holding Times

The holding times were assessed by comparing the date of collection with the dates of analyses. The 28-day analytical holding time for ammonia, chloride, sulfate, conductivity, total recoverable hydrocarbons, and oil and grease, the 14-day analytical holding time for cyanide, the seven-day holding time for total suspended solids and total dissolved solids, the 48-hour holding time for surfactants, turbidity, nitrate/nitrite, biological oxygen demand, and total settleable solids were met. No qualifications were required.

#### 2.2 CALIBRATION

For the applicable analyses, the initial calibration correlation coefficients were  $\geq 0.995$ . Initial and continuing calibration information was acceptable with recoveries within the control limits of 90-110%. For ammonia, no information regarding the standardization of the titrant was provided; however, the LCS recovery was within the CCV control limits. For BOD, no information regarding the calibration of the oxygen meter was provided; however, the LCS recovery was within the CCV control limits. The total cyanide reporting limit check standard was recovered within the control limits of 70-130%. Calibration is not applicable to total suspended solids, total dissolved solids, and total settleable solids. No qualifications were required.

#### 2.3 BLANKS

Turbidity was detected in a bracketing CCB at 0.040 NTU; however, the turbidity CCB results were insufficient to qualify the site sample turbidity results. The remaining method blank and CCB results reported on the summary forms and in the raw data for blank analyses associated with the samples were nondetects at the reporting limit. No qualifications were required.

Project:

SDG No.:

DATA VALIDATION REPORT

Multiple Analysis: General Minerals

**NPDES** 

### 2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample and laboratory control sample duplicate (total recoverable hydrocarbons, oil and grease, and BOD) recoveries and RPDs were within the laboratory-established control limits. The LCS is not applicable to turbidity, total settleable solids, or conductivity. No qualifications were required.

### 2.5 SURROGATES RECOVERY

Surrogate recovery is not applicable to the analyses presented in these SDGs.

### 2.6 LABORATORY DUPLICATES

MS/MSD analyses were not performed in association with the samples in these SDGs; therefore, no assessment was made with respect to this criterion.

### 2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

### 2.8 FURNACE ATOMIC ABSORPTION QC

Furnace atomic absorption was not utilized for the analyses of these samples; therefore, furnace atomic absorption QC is not applicable.

### 2.9 ICP SERIAL DILUTION

ICP serial dilution is not applicable to the analyses presented in this data validation report.

### 2.10 SAMPLE RESULT VERIFICATION

A Level IV review was performed for the samples in this data package. Calculations were verified, and the sample results reported on the Form Is were verified against the raw data. No transcription errors or calculation errors were noted. Surfactant detected below the reporting limit was qualified as estimated, "J," in sample Outfall 018. No further qualifications were required.

Project:

SDG No.:

**NPDES** Multiple

Analysis:

General Minerals

#### 2.11 FIELD QC SAMPLES

DATA VALIDATION REPORT

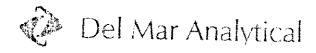
Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples. The following are findings associated with field QC samples:

### 2.11.1 Field Blanks and Equipment Rinsates

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

#### 2.11.2 Field Duplicates

There were no field duplicate pairs associated with these SDGs.



17461Perket Arch, State 100, Itvinc, CA 925614, Fully 261, 3CC2, CAN, 0449, 260000, 1014 F. Cooley Dr., Suite A., Colori, CA 92324, 1909, 370-4667, CAN, 0409, 370-4669, GAN, 0409, GAN, 04

MWH-Pasadena/Boeing

Project ID: Routine Outfall 601

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Attention: Bronwyn Kelly

Report Number: IOD2043

Sampled: 04/28/05

Received: 04/28/05

### **DRAFT: INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed (	Data Qualifier
Sample ID: IOD2043-01 (DRAFT Reporting Units: mg/l	: Outfall 001 - 1	Water) - con	t.					OL OL	AL 8
Ammonia-N (Distilled)	EPA 350,2	5E02067	0.30	0.50	0.84	1	05/02/05	05/02/05	
Sample ID: IOD2043-01 (DRAFT Reporting Units: NTU	: Outfall 001 - \	Water)							
Turbidity	EPA 180.1	5D29110	0.040	1.0	7.6	Property	04/29/05	04/29/05	
Sample ID: 1OD2043-01 (DRAFT Reporting Units: umhos/cm	: Outfall 001 - V	Vater)							
Specific Conductance	EPA 120.1	5D29130	1.0	1.0	620	1	04/29/05	04/29/05	

AMEC VALIDATED

LEVEL IV



17461/Derian Ave., Suite 100, Irvine, CA 92634 (949) 260-1022 FAX (949-200-104-1044 E. Coviley Dr., Suite A, Colton, CA 92324 (969) 370-4667 FAX (949-370-104) 9464 Chesapeake Dr., Suite 805, San Diego, CA 92323 (838) 505-8596 FAX (836) 505-9666 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (460) 783-0043 FAX (480) 785-0053 2020 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 748-3620 FAX (702) 708-3621

MWH-Pasadena/Boeing

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200 Pasadena, CA 91101

Report Number: IOD2044

Sampled: 04/28/05 Received: 04/28/05

Attention: Bronwyn Kelly

#### **DRAFT: INORGANICS**

Analyte	Method	Batch	MDL Limit	Reporting Limit	•	Dilution Factor E		Date Analyzed	Data Qualifier
Sample ID: IOD2044-01 (DRAFT Reporting Units: mg/l	: Outfall 002 - V	Vater)						<u> </u>	aut C
Ammonia-N (Distilled)	EPA 350.2	5E02067	0.30	0.50	0.84	I	05/02/05	05/02/05	
Sample ID: IOD2044-01 (DRAFT Reporting Units: NTU	: Outfall 002 - V	Vater)							
Turbidity	EPA 180.1	5D29110	0.080	2.0	79	2	04/29/05	04/29/05	
Sample ID: IOD2044-01 (DRAFT Reporting Units: umhos/cm	: Outfall 002 - V	Vater)							And 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 th
Specific Conductance	EPA 120.1	5D29130	1.0	1.0	590	1	04/29/05	04/29/05	
						-			1

### **AMEC VALIDATED**

# LEVEL IV

DRAFT REPORT
DATA SUBJECT TO CHANGE

17461 Derian Avc., Suite 100, Isaine, CA 90, 11, 1949, 261-1002, FAV, 5400, 264), 590-10014 E. Cooley Dr., Suite A, Colion, CA 92324, (909), 173-4-607, EA (1929), 370-4-4-6.
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123, (850), 505-95/6, FAX 9750), 205-94, 6-9830, South 51st St., Suite 8-12d, Phoenix, AZ 88044, (400), 785-4-343, FAX (406), 785-6-003, 2520, E. Sunsot Rd., #3, Las Vegas, NV 8-9120, (702), 798-3629, FAX 702-798-3624.

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: 10D2047

Sampled: 04/28/05 Received: 04/28/05

### **DRAFT: INORGANICS**

			n. 2 N.5 ( C	7 X X C3 C X E 3 E 3	C C					
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyz	Da ed Qual	
Sample ID: IOD2047-01 (DRAF Reporting Units: mg/l	T: Outfall 012 - 1	Water) - con	t.					Ì	<u> Rukl</u>	Coc
Ammonia-N (Distilled)	EPA 350.2	5E02067	0.30	0,50	ND	•	Ocionia -	6.510.416.4		
Biochemical Oxygen Demand	EPA 405.1	5D29091	0.59	2.0	3.2			05/02/05	L	1
Oil & Grease	EPA 413.1	5E04036	0.94	5.0				05/04/05		
Total Dissolved Solids	SM2540C	5D29129	10	10	ND			05/04/05	u	
Total Suspended Solids	EPA 160.2	5E04071	10	10	250			04/29/05		
Sample ID: IOD2047-01 (DRAF Reporting Units: mi/l/hr			10	10	21	I	05/04/05	05/04/05		
Total Settleable Solids	EPA 160.5	5D29094	0.10	C.10	0.10	1	04/29/05	04/29/05		
Sample ID: IOD2047-01 (DRAFT Reporting Units: NTU	Γ: Outfall 012 - V	Vater)								
Turbidity	EPA 180.1	5D29110	0.040	1.0	23	1 (	04/29/05	04/29/05		
Sample ID: IOD2047-01 (DRAFT Reporting Units: ug/l	Γ: Outfall 012 - W	'ater)								
Perchiorate	EPA 314.0	5D29065	0.80	4.0	ND	1 (	04/29/05	04/30/05	*	
~										

# AMEC VALIDATED

# LEVEL IV

*Analysic Not Valida

DRAFT REPORT
DATA SUBJECT TO CHANGE