CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711PP35 550 South Wadsworth Boulevard Task Order 313150010 Suite 500 SDG No. IOD2049 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Date: June 6, 2005 Reviewer H. Chang Reviewer's Signature Analysis/Method Pesticides/608 Then Ch **ACTION ITEMS*** 1. Case Narrative **Deficiencies** 2. Out of Scope Analyses **Analyses Not Conducted** Missing Hardcopy Deliverables Incorrect Hardcopy **Deliverables Deviations from Analysis** Protocol, e.g., **Holding Times** GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field OC Internal Standard Performance Compound Identification and Quantitation System Performance COMMENTS^b Acceptable as reviewed.

^a Subcontracted analytical laboratory is not meeting contract and/or method requirements.

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



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: PESTICIDES

SAMPLE DELIVERY GROUP: IOD2049

Prepared by

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

Analysis:

NPDES IOD2049 Pest/PCB

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOD2049 B. McIlvaine

Project Manager:

Water

Matrix: Analysis:

Pesticides/PCBs

QC Level:

Level IV

No. of Samples:

1 0

No. of Reanalyses/Dilutions:

Reviewer:

H. Chang

Date of Review:

June 6, 2005

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

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DATA VALIDATION REPORT SD

Project: NPDES SDG: IOD2049 Analysis: Pest/PCB

Table 1. Sample identification

	<u> </u>				
Client ID	EPA ID	Laboratory ID	Matrix	Method	
Outfall 018	Outfall 018	IOD2049-01	water	608	

Project: SDG: NPDES IOD2049

SDG: [OD2049 Analysis: Pest/PCB

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 sample was received at the laboratory within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. The analysis did not require preservation, and no preservation was noted in the field. The COC noted that the sample was received intact. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 PESTICIDES INSTRUMENT PERFORMANCE

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

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

2.3 CALIBRATION

2.3.1 Analytical Sequence

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

SDG: Analysis:

NPDES IOD2049 Pest/PCB

2.3.2 Initial Calibration

There was one initial calibration dated 04/09/05 associated with the pesticide analysis of the sample, which consisted of six point calibrations on two analytical columns. The %RSDs were within the EPA Method 608 QC limit of ≤10% or the r² values were ≥0.995 on both analytical columns. An ICV was analyzed immediately following each of the initial calibrations. The %Ds for all target compounds were within the QC limits of 15% on both analytical columns. A representative number of %RSDs and ICV %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.3.3 Continuing Calibration

In the continuing calibrations bracketing the pesticide analysis of the sample, all %Ds were ≤15%. No qualifications were required. A representative number of %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.4 BLANKS

2.4.1 Instrument Blanks

An instrument blank was analyzed at the beginning of each analytical sequence. Crosscontamination was not evident in the samples. No qualifications were necessary.

2.4.2 Method Blanks

One water method blank (5E03078-BLK1) was extracted and analyzed with the sample in this SDG. There was no alpha-BHC detected in the method blank. Review of the chromatograms showed no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

A blank spike and blank spike duplicate pair (5E03078-BS1/BSD1) was extracted and analyzed with this SDG. The recoveries for the spiked pesticide target compound were within the laboratory-established QC limits and the RPD was ≤30%. No qualifications were required. The recoveries and RPD were checked from the raw data, and no calculation or transcription errors were

2.6 SURROGATE RECOVERY

The sample and all QC samples were fortified with the surrogate compounds decachlorobiphenyl and tetrachloro-m-xylene. Surrogate recoveries were within the laboratoryestablished QC limits. The recoveries were calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

SDG: Analysis:

NPDES IOD2049 Pest/PCB

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses performed on the sample in this SDG. Method accuracy and precision were assessed based on the blank spike/blank spike duplicate results. qualifications were required.

2.8 SAMPLE CLEANUP PERFORMANCE

According to the laboratory extraction benchsheets, no cleanups were performed on the extracts for pesticides. No qualifications were required.

2.9 FIELD QC SAMPLES

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

2.9.1 Field Blanks and Equipment Rinsates

There were no field QC samples associated with the sample in this SDG. No qualifications were required.

2.9.2 Field Duplicates

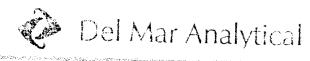
There were no field duplicate samples associated with the sample in this SDG.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for alpha-BHC by EPA Method 608. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for the sample in this SDG. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating a representative number of blank spike and surrogate recoveries. The reporting limit was supported by the low level standards of the initial calibrations and the laboratory MDL studies. The water reporting limit was not adjusted for sample amount on the result summaries; however, the dilution factor listed on the summaries reflected the sample volume extracted. No qualifications were required.



1740 Cherian Ave., Sofie 100, Irvine, CA 8.1 17 (050) 251-1012 (14A 140) 261-175-1634 E. Goory Dr. Julie A. Cebon, CA 9010 (900) 370-1616 (15A) 900 170-1616 (15A) 90

MWH-Pasadena-Boeing

300 North Lake Avenue, Suite 1200

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

Report Number: IOD2049

Sampled: 04/28/05

Received: 04/28/05

DRAFT: ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	Limit	Reporting Limit			n Date Extracted	Date Analyz	e D	ata lifiers
Sample ID: IOD2049-01 (DRAFT: Reporting Units: ug/l alpha-BHC	Outfall 018 - N	Water) - con 5E03078		0.010					Rev Qual	Qual
Surrogate: Decachlorobiphenyl (45-, Surrogate: Tetrachloro-m-xylene (35	(20%)	24203078	0.0010	C.010	ND 77 % 60 %	0.98	05/03/05	05:04/05	u	

AMEC VALIDATED

LEVELTY

DRAFT REPORT
DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711SV57 550 South Wadsworth Boulevard Task Order 313150010 Suite 500 SDG No. IOD2047, IOD2049 Lakewood, CO 80226 No. of Analyses 2 Laboratory Del Mar Date: June 6, 2005 Reviewer H. Chang Reviewer's Signature Analysis/Method Semivolatiles/625 ACTION ITEMS* 1. Case Narrative Deficiencies 2. Out of Scope Analyses

AL	TION ITEMS		er e	
1.	Case Narrative			
	Deficiencies			

2.	Out of Scope			
	Analyses			
	A MARINEMAN SAMELER			
3.	Analyses Not Conducted			
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4.	Missing Hardcopy			
	Deliverables	**************************************		
	Denverance			
5.	Incorrect Hardcopy			
J.	Deliverables			
	Denverables			
6.	Deviations from Analysis		***************************************	
u.				
	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			
	Quantitation			
	System Performance	***************************************		
CON	MMENTS ^b	Acceptable as revie	wed.	

		***************************************	**************************************	
* Sut	ocontracted analytical laboratory is not i	meeting contract and/or met	had 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: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IOD2047, IOD2049

Prepared by

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

Project: SDG: Analysis: NPDES Multiple SVOC

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOD2047, IOD2049

Project Manager:

B. McIlvaine

Matrix:

Water

2

0

Analysis:

Semivolatiles

QC Level:

Level IV

No. of Samples: No. of Reanalyses/Dilutions:

Reviewer:

H. Chang

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

DATA VALIDATION REPORT

Project: SDG: Analysis:

NPDES Multiple SVOC

Table 1. Sample identification

-					
	Client ID	EPA ID	Lab No.	Matrix	Method
	Outfall 012	Outfall 012	IOD2047-01	water	625
	Outfall 018	Outfall 018	IOD2049-01	water	625
			·····		

SDG: Analysis

NPDFS Multiple SVOC

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The samples in these SDGs were received at the laboratory within the temperature limits of 4°C ±2°C. The analyses did not require preservation, and no preservation was noted in the field. The COCs noted that the samples were received intact. No qualifications were required.

2.1.2 Chain of Custody

The COCs were signed and dated by both field and laboratory personnel. 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 water samples were extracted within seven days of collection and analyzed within 40 days of extractopm. No qualifications were required.

2.2 GC/MS TUNING

The DFTPP tunes met the criteria specified in Method 625, and the samples were analyzed within 12 hours of the DFTPP injection time. No qualifications were required.

2.3 CALIBRATION

The initial calibrations associated with these SDGs were dated 05/02/05 and 05/03/05. The average RRFs were ≥0.05 and the %RSDs were ≤35% for the target compounds listed on the sample summary forms. A representative number of average RRFs and %RSDs were checked from the raw data, and no calculation or transcription errors were noted.

The continuing calibration associated with the sample analyses were analyzed on 05/03/05 and 05/04/05. The RRFs for the applicable target compounds were ≥0.05, and the %Ds were ≤20%. A representative number of RRFs, r2 values, and %Ds were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

Two method blanks (5E01020-BLK1 and 5E01024-BLK1) was extracted and analyzed with these SDGs. No target compounds were reported in the method blanks. Review of the raw data indicated no reportable false negatives. No qualifications were required.

Analysis:

NPDES

Multiple

SVOC

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two blank spike/blank spike duplicate pairs (5E01020-BS1/BSD1 and 5E01024-BS1/BSD1) were extracted and analyzed with these SDGs. All percent recoveries and RPDs were within the laboratory QC limits. A representative number of recoveries and RPDs were calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample surrogate recoveries were within the laboratory QC limits with the exception of terphenyl-d14 above the QC limit in sample Outfall 012. No qualifications were required for single surrogate above the QC limits. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy and precision was based on blank spike/blank spike duplicate results. No qualifications were required.

2.8 FIELD QC SAMPLES

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

2.8.1 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG. No qualifications were required.

2.9 INTERNAL STANDARDS PERFORMANCE

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

Analysis:

NPDES Multiple SVOC

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for naphthalene and n-nitrosodimethylamine in sample Outfall 012 and bis(2-ethylhexyl)phthalate, 2,4-dinitrotoluene, n-nitrosodimethylamine, pentachlorophenol, and 2,4,6-trichlorophenol in sample Outfall 018 by EPA Method 625. Review of the sample chromatogram, retention times, and spectra indicated no problems with target compound identification. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low level of the initial calibration and the method detection limit study. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs were not reported by the laboratory for these SDGs. No qualifications were required.

2.13 SYSTEM PERFORMANCE

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

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MWH-Pasadena Bueing

300 North Lake Avenue, Suite 1200

Pasaderia, CA 91161 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Sampled: 04/28.05 Received: 04/28/05

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

Report Number: 10D2047

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Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		n Date Extracted	Date Analyz	D ed Qua	ata lifiers
Sample ID: 10D2047-01 (DRAFT: C Reporting Units: ug/l Naphthalene	Outfall 012 - EPA 625	Water) 5E01019	4.5	16					Flev Qual	Qual
N-Nitrosodimethylamine Surrogute: 2-Fluorophenol (30-120%) Surrogute: Phenol-dő (33-120%) Surrogute: 2,4,6-Tribromophenol (45- Surrogute: Nitrobenzene-d5 (45-120%) Surrogute: 2-Fluorobiphenyl (45-120%) Surrogute: Terphenyl-d14 (45-120%)	EPA 525 120%)	5E01019	3.7	10 20	24 ND 53 % 68 % 69 % 85 % 74 % 132 %	0.99 0.99	05/01/05 05/01/05		u	X

AMEC VALIDATED

LEVEL IV

DRAFT REPORT IRAFT KEPORT DATA SCRUBETT TO CHANGE



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MWH-Pasadena/Boeing

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		ı Date Extracted	Date Analyz	ed Qu)ata alifiers
Sample ID: IOD2049-01 (DRAFT: Reporting Units: ug/l		Water)							Rev	Qual
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	51301024	0.23	9.0	ND	0.962	05/01/05		-	
N-Nitrosodimethylamine	EPA 625	5E01024	0.22	8.0	ND	0.962				
Pentachlorophenol	EPA 625	5E01024	0.78	8.0	ND	0.962			1	
2,4,6-Trichlorophenol	EPA 625	5E01024	0.10	6.0	ND	0.962	05/01/05		1	
Surrogate: 2-Fluorophenol (30-120%))				65 %	0.702	00/01/0/	0.7/04/03	V	j
Surrogate: Phenol-à6 (35-120%)					66 %					•
Surrogate: 2,4,6-Tribromophenol (45-	-120%)				84 %					
Surrogate: Nitrobenzene-d5 (45-120%	6)				68 %					
Surrogate: 2-Fluorobiphenyl (45-120)										
Surrogate: Terphenyl-d14 (45-120%)	7,				73 %					
2 19 4 1 (10 1 20)					77 %					

AMEC VALIDATED

LEVEL IV

DRAFT REPORTDRAFT REPORT
DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental		Package ID	
550 South Wadsworth Bouleva	rd	Task Order	T711VO105 313150010
Suite 500		SDG No.	
		3DG NO.	IOD2043, 2045, 2047, 2049
Lakewood, CO 80226		No. of Analyses	8
Laboratory Del Mar		Date: June 13	
Reviewer M. Poko	omy	Reviewer's Si	oneture -
Analysis/Method Volatiles	3	$ M\lambda$.	Thank
	V 	<u> </u>	
ACTION ITEMS*			
1. Case Narrative	· · · · · · · · · · · · · · · · · · ·		
Deficiencies			
2. Out of Scope		······································	
Analyses			
• **			
3. Analyses Not Conducted			
•	***************************************	N	
4. Missing Hardcopy			
Deliverables			
5. Incorrect Hardcopy			
Deliverables			
	**************************************	· · · · · · · · · · · · · · · · · · ·	
6. Deviations from Analysis	Qualifications were required	for calibration auti-	
Protocol, e.g.,	2	tor canoration outlier	S.
Holding Times			
GC/MS Tune/Inst. Perform		<u> </u>	
Calibrations			
Blanks			
Surrogates			
Matrix Spike/Dup LCS			
Field QC	<u> </u>		
Internal Standard Performance			
Compound Identification and			
Quantitation			
System Performance			
OMMENTS ^b			
			
Subcontracted analytical laboratory is not me	reting contract and/or method manitor	Bents	
Differences in protocol have been adopted by	the laboratory but no action against	the laboratory is required.	variety programme



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

Analysis:

NPDES Multiple VOC

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:

0

No. of Reanalyses/Dilutions:

M. Pokorny

Reviewer: 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

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

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°C ±2°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 The %RSDs were ≤35% for all applicable target compounds. Five continuing summaries. calibrations were associated with the sample analyses in these SDGs. The %D for trichlorofluoromethane exceeded 20% in the continuing calibration associated with samples Outfall 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 required.

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 samples:

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.

NPDFS Multiple Analysis: 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 ± 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.



174/11 Derian Ave., Subir. 190, Indine, CA 93/114, 1949, 261; PULL FAN 1949, 166/13/19 1914 E. Cooley, Lin, Suito A. Colton, CA 92324, 1999; 370-4967, FAX, 949, 370-1941, 9484 Chesapeske Dr., Subir. 806, San Uliogo, CA 92123, 16580, 365-8590, FAX, 8569, 305-497, 9530 South Statistic, Subir. 5-120, Process, AZ 85044, 1948, 785-4823, FAX, 488, 785-4821 2520 E. Simset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 TAX (702) 798-3621

MWI4-Pasadena/Boeing

Project ID: Routine Outfall 001

300 North Lake Avenue, Suite 1200

Sampled: 04 28 05 Pasadena, CA 91101 Report Number: 10D2043 Received: 04/28/05

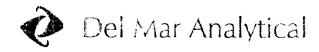
Attention: Bronwyn Kelly

DRAFT: PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit			n Date rExtracted	Date Analyza)ata alifiers
Sample ID: IOD2043-01 (DR Reporting Units: ug/l	AFT: Outfall 001 -	Water)						4	it die Gester	199
Benzene	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/05/05	U	
Carbon tetrachloride	EPA 624	5E04019	0.28	5.0	ND	1		05/05/05	ī	
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1		05/05/05		
1.1-Dichloroethane	EPA 624	5 E04 019	0.27	2.0	ND	1		05/05/05		WWW.Ashinate
1,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	I	05/04/05			A section of the sect
1,1-Dichloroethene	EPA 624	5E04019	0.32	3.0	ND	1	05/04/05		A STATE OF THE STA	-
Ethylbenzene	EPA 624	5E04019	0.25	2.0	ND	1	05/04/05		1	
Tetrachloroethene	EPA 624	51204019	0.32	2.0	ND	1	05/04/05		l	
Toluene	EPA 624	5E04019	0.36	2.0	ND	1	05/04/05		1	
1.1,1-Trichloroethane	EPA 624	5104019	0.30	2.0	ND	•	05/04/05		}	
1,1,2-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05			1
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		5	ے ٰ
Vinyl chloriáe	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05		Ū	
Xylenes, Total	EPA 624	5E04019	0.52	4.0	ND	1	05/04/05		U	1
Surrogate: Dibromofluorometh	ane (80-120%)				107 %	•		000 000 000	_	
Surrogate: Toluene-d8 (80-120)					109.9%					-
Surrogate: 4-Bromofluorobenze	ene (80-120%)				99 %					The state of the s
Sample ID: 1OD2043-02 (DRA Reporting Units: ug/l	AFT: Trip Blank - V	Vater)								many of the control
Benzene	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/04/05	U	or other states
Carbon tetrachlor:de	EPA 624	5E04019	0.28	5.0	ND	1	05/04/05		<u> </u>	
Chloroform	EPA 624	5E04019	0.33	2.0	ND	j	05/04/05			
1,1-Dichloroethane	EPA 624	51504019	0.27	2.0	ND	ì	05/04/05		- 1	
1,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	T.	05/04/05			
1,1-Dichloroethene	EPA 624	5E04019	0.32	3.0	ND	I	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		ŀ	
Toluene	EPA 624	5E04019	0.36	2.0	ND	1	05/04/05			
1.1.1-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			
Trichioroethene	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05			
Trichlorofluoromethane	EPA 624	5E04019	0.34	5.0	ND	¥	05/04/05			
Vinyl chloride	EPA 624	5E04019	0.26	5.0	ND	à e	05/04/05			
Xylenes, Total	EPA 624	5E04019	0.52	4.0	ND	1	05/04/05			
Surrogate: Dibromofiuorometha		W3245 T 67 X J	0.02	7.0	101.95	á.	U2/U+/U2	CU)+U)CU	4	
Surrogate: Toluene-d8 (80-120%					101 : 3					
Surrogate: 4-Bromofluorobenzer					98 %					
12	- with a marry				FO 26					

AMEC VALIDATED

DRAFT REPORT DRAFT REPORT DATA SUBJECT TO CHANGE



17461 Derian Ave., Suite 100, ItVine, CA 92614 (949) Det 41022 FAX (949) 260, (29 10) 4 E. Cooley Ott, Suite A. Colton, CA 92324 (969) 370, 4667 FAX (949) 476, 1046 (948) Cresapeake Dr. Suite 805, San Diego, CA 92123 (858, 505-6596 FAX (858) 500, 0669 9830 South 5381 St., Suite 8-120, Phoenix, AZ 85044 (480) 785-6043 FAX (460) 785-685 (250) 665

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Routine Outfall 002

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: 10D2044

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

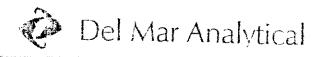
DRAFT: PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	-		n Date Extracted	Date Analyze		Data alifiers
Sample ID: IOD2044-01 (DRAFT:	: Outfall 002 - '	Water)							20	10,7
Reporting Units: ug/l									Kurk.	4
Benzene	EPA 624	5E04019	0.28	2.0	ND	1		05/05/05	U	60 m 44 A A
Carbon tetrachloride	EPA 624	5E04019	0.28	5.0	ND	1		05/05/05	1	
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	l	
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	1	05/04/05	05/05/05	1	
Ethylbenzene	EPA 624	5E04019	0.25	2.0	ND	1	05/04/05	05/05/05	Ī	
Tetrachloroethene	EPA 624	5E04019	0.32	2.0	ND	1	05/04/05	05/05/05		1
Toluene	EPA 624	5E04019	0.36	2.0	ND	1	05/04/05	05/05/05		THE PARTY AND ADDRESS OF THE PARTY AND ADDRESS
1,1,1-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/05/05		o de la company
1,1,2-Trichloroethane	EPA 624	5EC4019	0.30	2.0	ND	1	05/04/05	05/05/05	*	C F C C C C C C C C C C C C C C C C C C
Trichloroethene	EPA 624	5E04019	0.26	5.0	0.27	. 1	05/04/05	05/05/05	J	1 00
Trichlorofluoromethane	EPA 624	5E04019	0.34	5.0	ND	1	05/04/05	05/05/05	U J	C
Vinyl chloride	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05	05/05/05	U	
Xylenes, Total	EPA 624	5E04019	0.52	4.0	ND	1	05/04/05	05/05/05	\cup	
Surrogate: Dibromofluoromethane ((80-120%)				106 %					-
Surrogate: Toluene-d8 (80-120%)					106 %					
Surrogate: 4-Bromofluorobenzene (8	80-120%)				100 %					of a string community
Sample ID: IOD2044-02 (DRAFT: Reporting Units: ug/l	Trip Blank - V	Vater)								the American is worsen province
Benzene	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/05/05	U	}
Carbon tetrachloride	EPA 624	5E04019	0.28	5.0	ND	1	05/04/05		1	
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1	05/04/05		1	A CONTRACTOR OF THE CONTRACTOR
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	1	05/04/05		-	-
1,1-Dichloroethene	EPA 624	5E04019	6.32	3.0	ND	•	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			
1,1,1-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	*	05/04/05			
Trichlorofluoromethane	EPA 624	5E04019	(1,34	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	*		05/05/05	V	
Surrogate: Dibromofluoromethane (J207013	0.22	Ŧ.Ų	101 %	-	CUITUICU	AD:AD:AD	4	
Surrogate: Toluene-48 (80-120%)	JU 140/01				101 %					
Surrogate: 4-Bromofluorobenzene (8	20_120924				95 %					
	10-120/0f				73 70					

AMEG VALIDATED

DRAFT REPORT
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LEVEL IV



174011)erian Ava., Suite 100, Irvino, CA 92614 (919) 261-3122 FAX (949) 261-319 1 01.4 E. Coslev Dr., Suite A, Colton, CA 92324 (909) 370-4667 FSX (6-9) 370-1046 9484 Chesapeake Dr., Saite 805, San Diego, CA 92123 -858; 505-8596 FAX (858: 505-9669 9830 South 51st St., Stille 8-120, Property, AZ 85044 (480) 785-0043 FAN 4887 785-0041 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Pasadena, CA 91101

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Report Number: IOD2047

Sampled: 04/28/05

Attention: Bromvyn Kelly

Received: 04/28/05

DRAFT: PURGEABLES BY GC/MS (EPA 624)

							* /			
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		n Date Extracted	Date Analyz	e Da zed Quali	
Sample ID: IOD2047-01 (DRAFT: Reporting Units: ug/l	Outfall 012 -	Water)						·	REV QUAL	CODE
1,2-Dibromoethane (EDB) Methyl-tert-butyl Ether (MTBE) 1,2,3-Trichloropropane Di-isopropyl Ether (DIPE) tert-Butanol (TBA) Surrogate: Dibromofluoromethane (8 Surrogate: Toluene-d8 (80-120%) Surrogate: 4-Bromofluorobenzene (8t Sample ID: IOD2047-02 (DRAFT: 7 Reporting Units: ug/l	7-120%)	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 % 110 %	1 1 1 1	05/05/05 05/05/05	05/05/05 05/05/05		
1,2-Dibromoethane (EDB) Methyl-tert-butyl Ether (MTBE) 1,2,3-Trichloropropane Di-isopropyl Ether (DIPE) tert-Butanol (TBA) Surrogate: Dibromofluoromethane (80 Surrogate: Toluene-a'8 (80-120%) Surrogate: 4-Bromofluorobenzene (80)		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 1 1 1 1	05/05/05 05/05/05	05/05/05 05/05/05 05/05/05 05/05/05 05/05/05		

AMEG VALIDATED

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DRAFT REPORT DRAFT REPORT DATA SUBJECT TO CHANGE

T3401Desic a Ave., Suite 100, in the CA 92614 19490 267-11-22 FAV 4449 2600 2600 1940 1947-1 52 FAV 4449 2600 2600 1940 1947-1 52 FAV 4449 2600 2600 1948-1 548-4 19490 1948-1 548-4 1948-1 548-4 1948-1 548-4 1948-1 548-4 1948-1 548-4 1948-1 548-4 1948-1 548-4 1948-1 548-4 1948-1

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

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

Repor, Number: IOD2049

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

DRAFT: PURGEABLES BY GC/MS (EPA 624)

		10112	A.J. X.	J DI CICI	urro (£.	I //\ (1441			
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		tion Date torExtracted	Date Analys	2 Da zed Quali	
Sample ID: 1OD2049-01 (DRAF Reporting Units: ug/l	T: Outfall 018	- Water)						********	RN	QUAL
Benzene	EPA 624	5E10003	0.28	3.0	2. 1100				QUAL	COD
Trichlorotrifluoroethane (Freon 113)	EPA 624	5E10003		2.0	ND	1		05/10/05		
Carbon tetrachloride	EPA 624	5E10003		5.0	ND	1		05/10/05		
Chloroform	EPA 624	5E10003		5.0	ND	1		05/10/05		
I,I-Dichloroethane	EPA 624	5F10003		2.0	ND	1		05/10/05	1	
1,2-Dichloroethane	EPA 624	5E10003		2.0	ND	1		05/10/05	-	
1,1-Dichloroethene	EPA 624			2.0	ND	1		05/10/05		
Ethylbenzene	EPA 624	5E10003		3.0	ND	1		05/10/05		
Tetrachloroethene	EPA 624	5E10003	-	2.0	ND	1	05/10/05	05/10/05	ĺ	
Toluene	EPA 624	5E10003	0.32	2.0	ND	1	05/10/05	05/10/05		
1,1,1-Trichloroethane	EPA 624	51510003	0.36	2.0	ND	1	05/10/05	05/10/05		
1,1,2-Trichloroethane		5E10003	0.30	2.0	ND	I	05/10/05			
Trichloroethene	EPA 624	5E10003	0.30	2.0	ND	1	05/10/05		.	
Trichlorofluoromethane	EPA 624	5E10003	0.26	5.0	1.0	1		05/10/05	_3 1	13876
Vinyl chloride	EPA 624	5E10003	0.34	5.0	ND	1	05/10/05	05/10/05		1,110,00
Xylenes, Total	EPA 624	5E16003	0.26	5.0	ND	1	05/10/05		(
	EPA 624	5E10003	0.52	4.0	ND	Į	05/10/05		(
Surrogate: Dibromofluoromethane (Surrogate: Toluene-d8 (80-120%)	(80-130%)				108 %			00/10/00	V'	
Surrogate: 4-Bromofluorobenzene (e	80-120%)				104 %					
Sample ID: IOD2049-02 (DRAFT:		Notar)			104 %					
Reporting Units: ug/l	TOP EMILE	raicij								
Benzene	EPA 624	5E100 03	0.28	2.0	N 1995				ĺ	
Trichlorotrifluoroethane (Freon 113)	EPA 624	5E10003	1.2	2.0	ND	1	05/10/05		()	
Carbon tetrachloride	EPA 624	5E10003		5.0	ND	1	05/10/05			
Chloroform	EPA 624	5E10003	0.28	5.0	ND	1	05/10/05			
1,1-Dichloroethane	EPA 624	5E10003	0.33	2.0	ND	1	05/10/05 (
1,2-Dichloroethane	EPA 624	5E10003	0.27	2.0	ND]	05/10/05 (1
1,1-Dichloroethene	EPA 624		0.28	2.0	ND	1	05/10/05 (-
Ethylbenzene	EPA 624	5E10003	0.42	3.0	ND	1	05/10/05 (h.
Tetrachloroethene	EPA 624	5E10003	0.25	2.0	ND	1	05/10/05 (5/10/05	1 1	
Toluene	EPA 624	5310003	0.32	2.0	ND	1	05/10/05 0	5/10/05		
1,1,1-Trichloroethane	EPA 624	5E10003	0.36	2.0	ND	1	05/10/05 0			8
1,1,2-Trichloroethane	EPA 624	5E10003	0.30	2.0	ND	1	05/10/05 0			a a
Trichloroethene			0.30	2.0	ND	I	05/10/05 0			, and a
Trichlorofluoromethane	EPA 624		0.26	5.0	ND	1	05/10/05 0			
Vinyl chloride	EPA 624		0.34	5.0	ND	1	05/10/05 0			
Xylenes, Total	EPA 624		0.26	5.0	ND	1	05/10/05 0		1	
	EPA 624	5E10003	0.52	4.0	ND	1	05/10/05 0	5/10/05		
Surrogate: Dibromofluoromethane (80 Surrogate: Toluene-d8 (80-120%)	J-120%)				105 %		W		•	ilia di di
Surrogate: 4-Bromofluorobenzene (80	-120%)				102%					
DRAFT DEPORT					103 %					L BU MARLA

DRAFT REPORT
DATA SUBJECT TO CHANGE

AMEC VALIDATED

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AM.	EC Earth & Environment	al	Package ID	T711WC151			
550 South Wadsworth Boulevard			Task Order	313150010			
Suite 500			SDG No.	IOD2043, IOD2044,			
				IOD2047, IOD2049			
Lake	ewood, CO 80226		No. of Analyses	4			
	Laboratory Del Ma	ar Analytical	Date: 06/03/0				
	Reviewer L. Jaru		Reviewer's S				

	Analysis/Method Genera	1 Milicrais	— LAJU	usewu			
ACT	ION 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	Qualifications were applied	ed for:				
	Analysis Protocol, e.g.,	1) Detects below the repo	orting limit				
	Holding Times						
	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						
	· ,						
				······································			
COM	MENTS ⁹						
~ (Ji7)	LINE FARE	<u> </u>					

	* Subcontracted analytical laboratory is not meeting contract and/or method requirements.						
Unit	Differences in protocol have been adopted by the laboratory but no action against the laboratory 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.
U) -	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	Organics	Inorganics
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used 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 contro limits.
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 not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M _	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination from trip blank.	Not applicable.
+	False positive – reported compound was not present. Not applicable.	•
-	False negative – compound was present but not reported.	Not applicable.
I.	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.
D	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.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	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

Project: SDG No.: NPDES

Analysis:

Multiple General Minerals

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

DATA VALIDATION REPORT

IOD2043, IOD2044, IOD2047, IOD2049

Project Manager:

B. McIlvaine

Matrix:

Water

Analysis:

General Minerals

QC Level:

Level IV

4

No. of Samples:

Reviewer:

L. Jarusewic

Date of Review:

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: SDG No.:

NPDES Multiple

Analysis:

General Minerals

Table 1. Sample identification

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

DATA VALIDATION REPORT

SDG No.:

NPDFS Multiple

Analysis:

General Minerals

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

DATA VALIDATION REPORT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The 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 ≥ 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.: NPDES Multiple

Analysis:

General Minerals

DATA VALIDATION REPORT

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

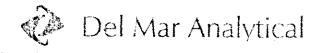
Field QC samples are evaluated, and if necessary, qualified based only on laboratory blanks. Any remaining detects are used to evaluate the associated samples. The following are findings associated with field QC samples:

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.



Sample ID: IOD2043-01 (DRAFT: Outfall 001 - Water)

174n3 Portan Avn., Spite 100, fryinc CA 92634 (649) 241 (10, 2.14 v. 040) 262 (10, 1014.5, Cooley Or., Suite A. Colton, CA 92324 (966, 370-4667 FAX (949, 378-4866 9484 Chesapeuro Dr., Suite 868, San Diego CA 9272, 1628 (501-8596 FAX (95) Goldege 9830 South 51st St., State 8-120, Phoenix, AZ 85044 (460) 765-6043 (AX (460) 285-66) 2520 ft. Sunset Rd. #3, Las Vegas, NV 86120 (702, 788-8290 FAX (702) 768-8224

MWH-Pasadena/Boeing

Project iD: Routine Outfail 001

DRAFT: INORGANICS

300 North Lake Avenue, Suite 1200

Reporting Units: umhos/cm

Specific Conductance

Sampled: 04/28/05

04/29/05 04/29/05

Pasadena, CA 91101
Attention: Bronwyn Kelly

Report Number: IOD2043

5D29130

Received: 04/28/05

Analyte	Method	Batch	MDL Limit	Reporting Limit						ifier
Sample ID: 1OD2043-01 (DRAF Reporting Units: mg/l Ammonia-N (Distilled)	T: Outfall 001 - V EPA 350.2	Vater) - con 5E02067	t. 0.30	0.50	0.84	1	05/03/05	05/02/05	DUAL	82
Sample ID: IOD2043-01 (DRAF Reporting Units: NTU			0.50	0.20	0.04	ade	03/02/03	00702700		
Turbidity	EPA 180.1	5D29110	0.040	1.0	7.6	1	04/29/05	04/29/05		

620

AMEC VALIDATED

EPA 120.1



DRAFT REPORT
DATA SUBJECT TO CHANGE



17461/Derkin Ave., Suite 100, Irvine, CA 92614 (949) 261-3027 EAX (949) 266 (296) 196-1014 E. Coniey Dr., Suite A, Colton, CA 92624 (909) 370-4667 EAX (949-370-1046) 9464 Chesapenke Dr., Suite 895, San Diego, CA 92123 (858) 505-8596 EAX (858) 505-9669 9830 South 51st St., Suite 8-120, Phoenix, AZ 85044 (480) 780-6943 EAX (480) 785-0151 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 EAX (702) 798-3621

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 Analyze	Data d Qualifiers
	Sample ID: IOD2044-01 (DRAFT: Reporting Units: mg/l	Outfall 002 - \	Water)						•	SWAL CO
	Ammonia-N (Distilled)	EPA 350.2	5E02067	0.30	0.50	0.84	1	05/02/05	05/02/05	***************************************
	Sample ID: IOD2044-01 (DRAFT: Reporting Units: NTU	Outfall 002 - V	Water)							
	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 - \	Water)							
	Specific Conductance	EPA 120.1	5D29130	1.0	1.0	590	1	04/29/05	04/29/05	

AMEC VALIDATED



DRAFT REPORTDATA SUBJECT TO CHANGE

17461 Derian Avo., Soite 100, twinn, CA 97, 11, [949, 263-1022] FAX (state 250-101), 1014 E. Cuoley (Dr., State A, Culton, CA 92324, [969-175-4-67] FAX (949-370-944), 9484 Chesapeake Or., State 305, San Diego, CA 92123, [856, 505-5566] FAX (950-505-944) of 9830 Soith 31st St., Shite B-120, Phoenix, AZ 83044, [449, 783-3,93] FAX (460-785-907), 2520 E. Sunset Rd. #3, Las Vegas, NV 89120, [702) 798-3620, FAX (702) 798-3621

MWH-Pasadena Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

1 reject is. And Outlan 912 - Duning 188

Report Number: IOD2047

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

DRAFT: INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyz	ed Qualifiers
Sample ID: IOD2047-01 (DRAF Reporting Units: mg/l	T: Outfall 012 - V	Water) - con	t.					(QUAL CO
Ammonia-N (Distilled)	EPA 350.2	5E02067	0.30	0.50	ND	1	05/02/05	05/02/05	u
Biochemical Oxygen Demand	EPA 405.1	5D29091	0.59	2.0	3.2	1		05/04/05	
Oil & Grease	EPA 413.1	5E04036	0.94	5.0	ND	1		05/04/05	
Total Dissolved Solids	SM2540C	5D29129	10	10	250	1		03/04/03	u
Total Suspended Solids	EPA 160.2	5E04071	10	10	21	1		05/04/05	
Sample ID: IOD2047-01 (DRAF Reporting Units: mi/l/hr	T: Outfall 012 - V	Vater)							
Total Settleable Solids	EPA 160.5	5D29094	0.10	C.10	0.10	1	04/29/05	04/29/05	rit - t t the control of the control
Sample ID: IOD2047-01 (DRAF) Reporting Units: NTU	Γ: Outfall 012 - V	Vater)						-	William Control of the Control of th
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	T: Outfall 012 - W	vater)							Trummer and the commercial states are considered and the commercial states and the commercial states are considered and the commercial states and the commercial states are considered and the
Perchlorate	EPA 314.0	5D29065	0.80	4.0	ND	1	04/29/05	04/30/05	*

AMEC VALIDATED

LEVEL IV

*Analysis Not Velice

DRAFT REPORT
DATA SUBJECT TO CHANGE



17463 Curion Ave., Smite, 100, Joine, CA 9267 5, 1949, 264-1677, EAN 3949 (363-15) 3014 L. Cooley Del. Suite A, Colton, CA 923114 (2001, 370-4667); 4N 1-19-370-30 vo 9400 Chessukoke Dc, Scale 805, San Diego, CA 92110 1858; 505-8396, FAX ,856; 505-9600 96.0 South S1st St., Suite 6-120, Plumin. AZ 83044 (480) 783-4643 FAX (480) 781-6558 2520 E. Sunset Rd. #3, Las Vogas, NV 20120 (702) 798-3620 FAX (702) 798-3624

MWH-Pasadena/Boeing

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Attention: Bronwyn Kelly

Report Number: IOD2047

5D30026 0.31

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

04/30/05 04/30/05

DRAFT: TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

MDL Reporting Sample Dilution Date Analyte Method Limit Result Factor Extracted Analyzed_Qualifier: Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water) Reporting Units: mg/l Total Recoverable Hydrocarbons

1.0

AMEC VALIDATED

EPA 418.1

LEVEL IV

DRAFT REPORT DRAFT REPORT DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

	AEC Earth & Environmental	Package ID T711SV62
	5 South Teller Street	Task Order <u>313150010</u>
	ite 300	SDG No. <u>IOF1253</u>
Lak	kewood, CO 80226	No. of Analyses 1
	Laboratory Del Mar	Date: July 20, 2005
	Reviewer M. Pokor	
	Analysis/Method Semivola	
	-	- AM
AC'	TION ITEMS ^a	
1.	Case Narrative	<u>一个一个种,但是这个人的,这个种种的人,这个种种的</u> 是是一种的人,就是这种的人,也是这种的人,也是是这种种的,也是是这种种的人,就是这种种的人,就是一个种的人,
	Deficiencies	
2.	Out of Scope	
	Analyses	
	I sanday www	
3.	Analyses Not Conducted	
-		
4.	Missing Hardcopy	
	Deliverables	
5.	Incorrect Hardcopy	
	Deliverables	
6.	Deviations from Analysis	
	Protocol, e.g.,	
	Holding Times	
	GC/MS Tune/Inst. Perform	
	Calibrations	
	Blanks	
	Surrogates	
	Matrix Spike/Dup LCS	
	Field QC	
	Internal Standard Performance	
	Compound Identification and	
	Quantitation	
	System Performance	
CON	MMENTS ^b	Acceptable as reviewed.
		neeting contract and/or method requirements.
^b Di	ifferences in protocol have been adopted	by the laboratory but no action against the laboratory is required.



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IOF1253

Prepared by

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

Analysis:

NPDES

IOF1253

SVOC

1. INTRODUCTION

Task Order Title: **NPDES Monitoring**

Contract Task Order #: 313150010

> SDG#: IOF1253

Project Manager: P. Costa

Matrix: Water

Analysis: Semivolatiles

QC Level: Level IV

No. of Samples: 1

No. of Reanalyses/Dilutions: 0

> Reviewer: M. Pokorny

Date of Review: July 20, 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 Semivolatile Organics (DVP-3, Rev. 2), EPA Method 625, and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: SDG: Analysis: **NPDES** IOF1253 SVOC

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
Outfall 012	Outfall 012	IOF1253-01	water	625

NPDES IOF1253 SVOC

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The sample in this SDG was received at the laboratory within the temperature limits of 4° C $\pm 2^{\circ}$ C. The analysis did not require preservation, and no preservation was noted in the field. The COC noted that the sample was received intact. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 GC/MS TUNING

The DFTPP tunes met the criteria specified in Method 625, and the sample was analyzed within 12 hours of the DFTPP injection time. No qualifications were required.

2.3 CALIBRATION

The initial calibration associated with this SDG was dated 06/07/05. The average RRFs were ≥ 0.05 and the %RSDs were $\leq 35\%$ for both target compounds listed on the sample summary form. A representative number of average RRFs and %RSDs were checked from the raw data, and no calculation or transcription errors were noted. The continuing calibration associated with the sample analysis was analyzed 06/21/05. The RRFs for both target compounds were ≥ 0.05 , and the %Ds were $\leq 20\%$. A representative number of RRFs, r^2 values, and %Ds were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.4 BLANKS

One method blank (5F19018-BLK1) was extracted and analyzed with this SDG. No target compounds were reported in the method blank. Review of the raw data indicated no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One blank spike (5F19018-BS1) was extracted and analyzed with this SDG. All percent recoveries were within the laboratory QC limits. A representative number of recoveries were

NPDES IOF1253 Analysis: SVOC

calculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample surrogate recoveries were within the laboratory QC limits. A representative number of recoveries were calculated from the raw data, and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy and precision was based on blank spike/blank spike duplicate results. No qualifications were required.

2.8 FIELD QC SAMPLES

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

2.8.1 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

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

2.10 COMPOUND IDENTIFICATION

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

NPDES IOF1253 SVOC

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification is verified at a Level IV data validation. No calculation or transcription errors were found. The reporting limits were supported by the low level of the initial and the method detection limit study. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

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

2.13 SYSTEM PERFORMANCE

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



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Project ID: Alfa Outfall 012 - During Test

Report Number: IOF1253

Sampled: 06/16/05 Received: 06/16/05

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

						- (0,			
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor I	Date Extracted		Da ed Quali	fiers
Sample ID: IOF1253-01 (DRAF Reporting Units: ug/l	T: Outfall 012 - V	Vater)							RUXL QUXL	CODE
Naphthalene N-Nitrosodimethylamine Surrogate: 2-Fluorophenol (30-12 Surrogate: Phenol-d6 (35-120%) Surrogate: 2,4,6-Tribromophenol Surrogate: Nitrobenzene-d5 (45-12 Surrogate: 2-Fluorobiphenyl (45-2 Surrogate: Terphenyl-d14 (45-120)	(45-120%) 20%) 120%)	5F19018 5F19018	4.5 3.7	10 20	13 ND 58 % 68 % 79 % 87 % 76 % 113 %	0.98	06/19/05 06/19/05	06/22/05 06/22/05	U	

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA AMEC Earth & Environmental Package ID T711WC163 355 South Teller Street Task Order 313150010 Suite 300 SDG No. IOF1253 Lakewood, CO 80226 No. of Analyses 1 Laboratory Del Mar Analytical Date: 97/14/05 Reviewer L. Jarusewic Reviewer's Signature Analysis/Method General Minerals **ACTION ITEMS**^a Case Narrative **Deficiencies** Out of Scope **Analyses** 3. **Analyses Not** Conducted Missing Hardcopy **Deliverables** 5. **Incorrect Hardcopy Deliverables Deviations from** 6. 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	
l	Performance	
	Compound Identification	
	and Quantitation	
l	System Performance	
l		
l		
l		
	COMMENTS ^b	
L		
L		
		not meeting contract and/or method requirements.
L	b Differences in protocol have been adop	oted by the laboratory but no action against the laboratory 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.
И	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	Organics	Inorganics
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used 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 contro limits.
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 not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable,	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
Γ	Presumed contamination from trip blank.	Not applicable.
+	False positive – reported compound was not present. Not applicable.	11
	False negative – compound was present but not reported.	Not applicable.
4	Presumed contamination from FB, or ER.	Presumed contamination from FB or ER.
6	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.
NQ	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: IOF1253

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

Project: SDG No.:

NPDES IOF1253

Analysis:

General Minerals

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

DATA VALIDATION REPORT

IOF1253

Project Manager:

P. Costa

Matrix:

Water

Analysis:

General Minerals

QC Level:

Level IV

No. of Samples:

Reviewer: L. Jarusewic

1

Date of Review:

July 14, 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 418.1, 350.2, 405.1, 413.1, 160.2, 160.5, and 180.1, 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:

SDG No.:

NPDES IOF1253

Analysis:

General Minerals

Table 1. Sample identification

Client ID	EPA ID	Laboratory ID	Matrix	COC Method
Outfall 012	Outfall 012	IOF1253-01	Water	General Minerals

DATA VALIDATION REPORT

Project: SDG No.:

NPDES IOF1253

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 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 total recoverable petroleum hydrocarbons, ammonia, and oil and grease, the seven day holding time for total suspended solids and total dissolved solids, and the 48-hour holding time for BOD, total settleable solids, and 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. For BOD, no information regarding the calibration of the oxygen meter was provided; however, as the LCS recovery was within the CCV control limits, no qualifications were required. Calibration is not applicable to the total dissolved solid, oil and grease, total suspended solids, and total settleable solids analyses. No qualifications were required.

2.3 BLANKS

Turbidity was detected in method blank 5F17094-BLK1 and total dissolved solids were reported in method blank 5F21081-BLK1 at 0.05 NTU and -28 mg/L, respectively; however, the turbidity and total dissolved solids method blank results were insufficient to qualify Outfall 012. 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.

Project: SDG No.:

NPDES IOF1253

DATA VALIDATION REPORT

Analysis:

General Minerals

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

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

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 laboratory duplicate analyses performed for Outfall 012; therefore, no assessment was made with respect to this criterion.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses performed for Outfall 012; 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 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 Is were verified against the raw data. No transcription errors or calculation errors were noted. BOD and oil and grease detected below the reporting limit were qualified as estimated, "J." No further qualifications were required.

SDG No.:

Analysis:

IOF1253

NPDES

General Minerals

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.

2.11.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A. Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9686 9630 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue. Suite 1200

Pasadena, CA 91101

91101

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOF1253

Sampled: 06/16/05 Received: 06/16/05

DRAFT: TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte Sample ID: IOF1253-01 (DRAFT: Reporting Units: mg/l	Method Outfall 012 - W	Batch	MDL Limit	Reporting Limit	Sample Result				ata ifiers Gua Code
Total Recoverable Hydrocarbons	EPA 418.1	5F22081	0.31	1.0	3.2	1	06/22/05	06/22/05	

AMEC VALIDATED

EVEL

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

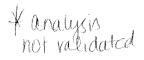
Pasadena, CA 91101 Attention: Bronwyn Kelly Project ID: Alfa Outfall 012 - During Test

Report Number: IOF1253

Sampled: 06/16/05 Received: 06/16/05

DRAFT: INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyz	Dat: ed Qualif	
Sample ID: IOF1253-01 (DRAFT Reporting Units: mg/l	: Outfall 012 - V	Vater) - con	t.						Qual o	21 Cc
Ammonia-N (Distilled) Biochemical Oxygen Demand	EPA 350.2 EPA 405.1	5F23075 5F17083	0.30 0.59	0.50 2.0	0.56 1.7		06/23/05 06/17/05	06/23/05 06/22/05	.	M
Oil & Grease Total Dissolved Solids Total Suspended Solids	EPA 413.1 SM2540C EPA 160.2	5F20071 5F21081 5F22109	0.94 10 10	5.0 10	1.5 280	1	06/20/05 06/22/05	06/20/05 06/22/05)	, L1 ↑
Sample ID: FOF1253-01 (DRAFT Reporting Units: ml/l/hr			10	10	13	ł	06/22/05	06/22/05		
Total Settleable Solids Sample ID: IOF1253-01 (DRAFT)	EPA 160.5 : Outfall 012 - W	5F18038 Vater)	0.10	0.10	ND	1	06/18/05	06/18/05	U	
Reporting Units: NTU Turbidity	EPA 180.1	5F17094	0.040	1.0	25] (06/17/05	06/17/05		
Sample ID: IOF1253-01 (DRAFT: Reporting Units: ug/l Perchlorate	: Outfall 012 - W EPA 314.0	/ ater) 5F16067	0.80	4.0) FF					
	AM IL DITT,U	DE 10007	0.80	4.0	ND	1 (06/16/05	06/16/05	*	



AMEC VALIDATED



DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

Package ID __T711VO118

	5 South Teller Street		Task Order <u>313150010</u>		
	ite 300		SDG No.	IOF1253	
Lakewood, CO 80226			No. of Analyses 1		
	Laboratory Del Mar		Date: July 20		
	Reviewer M. Poko		Reviewer's \$	ignature	
	Analysis/Method_Volatiles	s (1,4-dioxanes)	— I M. Y		
,				()	
AC	CTION ITEMS ^a				
1.	Case Narrative				
	Deficiencies				
2.	Out of Scope				
	Analyses				
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3.	Analyses Not Conducted				

4.	Missing Hardcopy				
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5.	Incorrect Hardcopy			And the second of the second o	
	Deliverables				
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6.	Deviations from Analysis	Qualification required	I for blank contamination.		
	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				
	Quantitation				
-70	System Performance	Т			
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a C.	1	7/	-		
	ubcontracted analytical laboratory is not differences in protocol have been adopted			ad	
		ing the adolatery out no delier	ir against the laceratory is require	ott.	

AMEC Earth & Environmental



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IOF1253

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

SDG No.:

NPDES IOF1253

VOC

DATA VALIDATION REPORT

Analysis:

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOE0230

Project Manager:

P. Costa

Matrix:

Water

Analysis:

Volatiles (1,4-dioxane)

QC Level:

Level IV

No. of Samples:

0

No. of Reanalyses/Dilutions:

Reviewer:

M. Pokorny

Date of Review:

July 20, 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 SW-846 8260B and the National Functional Guidelines For Organic Data Review (2/94). Any deviations from these procedures and guidelines are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project:

SDG No.:

NPDES

Analysis:

IOF1253 VOC

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
		Del Mar, CA		
Outfall 012	Outfall 012	IOF1253-01	water	8260B

DATA VALIDATION REPORT

DATA VALIDATION REPORT

Project: SDG No.: NPDES IOF1253

Analysis:

F1253 VOC

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 GC/MS TUNING

The ion abundance windows were consistent with those specified in EPA Method 8260B. All ion abundances were within the established windows, and the sample was analyzed within 12 hours of the BFB injection time. No qualifications were required.

2.3 CALIBRATION

One initial calibration, dated 06/06/05, was associated with this SDG. The average RRF for 1,4-dioxane was ≥ 0.05 and the %RSD was $\leq 15\%$. In the continuing calibration, dated 06/21/05, the RRF for 1,4-dioxane was ≥ 0.05 ; and, the %D was $\leq 20\%$. The %RSD and average RRF for 1,4-dioxane in the initial calibration, and the %D and RRF for 1,4-dioxane in the continuing calibration were recalculated from the raw data, and no calculation or transcription errors were found. No qualifications were required.

2.4 BLANKS

One water method blank (5F21009-BLK1) was associated with this SDG. Target compound 1,4-dioxane was detected in the method blank at 0.59 ug/L. The 1,4-dioxane detect for the sample was qualified as a nondetect, "U," and raised to the reporting limit. No further qualifications were required.

Project:

NPDES

DATA VALIDATION REPORT

SDG No.: Analysis: IOF1253 VOC

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory analyzed a blank spike (5F21009-BS1) with this SDG. The recovery for 1,4-dioxane was within the QC limits of 70-130%. The recovery was recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample and QC were fortified with dibromofluoromethane. The surrogate was recovered within the laboratory QC limits of 80-125%. The surrogate recovery for the sample was recalculated from the raw data and no calculation or transcription errors were found. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

No MS/MSD analyses were associated with this SDG. Evaluation of method accuracy was based on blank spike results. No qualifications were required.

2.8 FIELD QC SAMPLES

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

2.8.1 Trip Blanks

The sample in this SDG had no associated trip blank. No qualifications were required.

2.8.1.1 Field Blanks and Equipment Rinsates

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

2.8.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

Internal standard area counts and retention times for the sample were within the control limits established by the continuing calibration standard: +100%/-50% for internal standard areas and ±0.50 minutes for retention times. 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

Project:

NPDES

IOF1253 VOC

Revision 0

SDG No.: Analysis:

Target compound identification was verified at a Level IV data validation. The laboratory analyzed for 1,4-dioxane by Method 8260B/SIM. Chromatograms, retention times, and spectra for the sample 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 limit was supported by the lowest concentration of the initial calibration standards and by the undated MDL supplied by the laboratory. Compound quantitation was verified by recalculating blank spike and surrogate recoveries from the raw data. No calculation or transcription errors were noted. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

TICs are not typically reported for SIM methods.

2.13 SYSTEM PERFORMANCE

DATA VALIDATION REPORT

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



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

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

Report Number: 10F1253

Sampled: 06/16/05 Received: 06/16/05

DRAFT: VOLATILE ORGANICS by GCMS SIM

MDL Reporting Sample Dilution Date Analyte Method Batch Limit Result Factor Extracted Limit Analyzed Qualifiers Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water) REV Reporting Units: ug/l QUAL CODE 1.4-Dioxane EPA 8260B 5F21009 0.33 2.0 0.7006/21/05 06/21/05 U B.J Surrogate: Dibromofluoromethane (80-120%) 108 %

AMEC VALIDATED

LEVEL TV

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmer	ntal	Package ID	T711VO117			
355 South Teller Street		Task Order	313150010			
Suite 300		SDG No.				
Lakewood, CO 80226		No. of Analyses 2				
Laboratory Del M		Date: July 20				
Reviewer M. P	okorny	Reviewer's 8				
Analysis/Method Vola		- MY X	1			
			7			
ACTION ITEMS ^a						
1. Case Narrative						
Deficiencies						

2. Out of Scope		**				
Analyses			The state of the s			
3. Analyses Not Conducted						
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4. Missing Hardcopy						
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5. Incorrect Hardcopy						
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6. Deviations from Analysis	3					
Protocol, e.g.,						
Holding Times						
GC/MS Tune/Inst. Perform						
Calibrations						
Blanks						
Surrogates						
Matrix Spike/Dup LCS						
Field QC						
Internal Standard Performanc	e					
Compound Identification and	1					
Quantitation						
System Performance						
COMMENTS ^b Acceptable as reviewed.						
	s not meeting contract and/or method re opted by the laboratory but no action a		.1			
Differences in protocol have been add	opica by the laboratory but no action a	gainst the laboratory is require	ro i			

AMEC Earth & Environmental



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: VOLATILES

SAMPLE DELIVERY GROUP: IOF1253

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

Analysis:

NPDES

VOC

IOF1253

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOF1253

Project Manager:

P. costa

Matrix:

Water

Analysis:

Volatiles

OC Level:

Level IV

No. of Samples:

0

No. of Reanalyses/Dilutions:

Reviewer:

M. Pokorny

Date of Review:

July 20, 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 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.

Project: SDG: Analysis: NPDES IOF1253 VOC

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
Outfall 012	Outfall 012	IOF1253-01	water	624
Trip Blank	Trip Blank	IOF1253-02	water	624

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 this SDG were received at the laboratory within the temperature limits of 4°C ±2°C. The samples were properly preserved. The COC 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 COC was signed and dated by both field and laboratory personnel. The COC accounted for the analyses presented in this SDG. 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

One initial calibration dated 06/04/05 was associated with this SDG. 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. One continuing calibration dated 06/19/05 was associated with the sample analyses in this SDG. The %Ds for all target compounds were ≤20% in the continuing calibration. 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 calibrations, and %Ds and RRFs from the continuing calibrations were recalculated from the raw data, and no calculation or transcription errors were found. No qualifications were required.

2.4 BLANKS

One water method blank (5F19005-BLK1) was 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

One water blank spike (5F19005-BS1) was 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 012 was the MS/MSD analyzed with this SDG. All percent recoveries and RPDs were within the QC limits except of the recovery of EDB below the QC limits in the MS only. No qualifications were required.

2.8 FIELD QC SAMPLES

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

2.8.1 Trip Blanks

Sample Trip Blank was the trip blank associated with this SDG. There were no target compounds detected above the MDLs in the trip blank. No qualifications were required.

2.8.2 Field Blanks and Equipment Rinsates

There were no field QC samples associated with this SDG. No qualifications were required.

2.8.3 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.9 INTERNAL STANDARDS PERFORMANCE

Internal standard area counts and retention times for the samples in this SDG were within the control limits established by the continuing calibration standards: +100%/-50% for internal standard areas and ± 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 five 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. As there were no sample detects in this SDG, compound quantitation was verified by recalculating a representative number of blank spike and surrogate recoveries from the raw data. Results were reported in $\mu g/L$ (ppb). No calculation or transcription errors were noted. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

The laboratory did not provide TICs for this SDG. 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 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 [9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

MWH-Pasadena/Boeing

300 North Lake Avenue, Suite 1200

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

Report Number: IOF1253

Sampled: 06/16/05 Received: 06/16/05

DRAFT: PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit			n Date Extracted	Date Analyz	Data ed Qualifie	rs
Sample ID: #OF1253-01 (DRAFT: Reporting Units: ug/l	Outfall 012 - V	Water) - con	t.						QUAL	CODE
1,2-Dibromoethane (EDB)	EPA 624	5F19005	0.32	2.0	ND	1	06/19/05	06/19/05	U M2	
Methyl-tert-butyl Ether (MTBE)	EPA 624	5F19005	0.32	5.0	ND.	1	06/19/05		O M2	ŝ
1,2,3-Trichloropropane	EPA 624	5F19005	0.85	10	ND	1	06/19/05			F
Di-isopropyl Ether (DIPE)	EPA 624	5F19005	0.25	5.0	ND	1	06/19/05	06/19/05		
tert-Butanol (TBA) Surrogate: Dibromofluoromethane (Surrogate: Toluene-d8 (80-120%)	,	5F19005	3.1	25	ND 108 % 99 %	1			V	es
Surrogate: 4-Bromofluorobenzene (c Sample ID: 10F1253-02 (DRAFT: Reporting Units: ug/l		Vater)			92 %					
1,2-Dibromoethane (EDB)	EPA 624	5F19005	0.32	2.0	ND	1	06/19/05	06/10/06	()	
Methyl-tert-butyl Ether (MTBE)	EPA 624	5F19005	0.32	5.0	ND	1		06/19/05 06/19/05		
1,2,3-Trichloropropane	EPA 624	5F19005	0.85	10	ND	1		06/19/05		
Di-isopropyl Ether (DIPE)	EPA 624	5F19005	0.25	5.0	ND	1		06/19/05		
tert-Butanol (TBA) Surrogate: Dibromofluoromethane (& Surrogate: Toluene-d8 (80-120%) Surrogate: 4-Bromofluorobenzene (&	•	5F19005	3.1	25	ND 104 % 98 % 91 %	1		06/19/05	1	98- 8-2

AMEC VALIDATED

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

LEVEL IV

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental

355 South Teller Street

Suite 300

Lakewood, CO 80226

Laboratory Del Mar Analytical

Reviewer L. Calvin

Analysis/Method Purgeable TFH by Method 8015M

Package ID T711TF79

Task Order 313150010

SDG No. IOF1253

No. of Analyses 2

Date: July 18, 2005

Reviewer's figurature

AC	TION ITEMS ^a	
	Case Narrative	
	Deficiencies	
2.	Out of Scope	
۷.		
	Analyses	
3.	Analyses Not Conducted	
4.	Missing Hardcopy	
	Deliverables	
5.	Incorrect Hardcopy	
	Deliverables	
6.	Deviations from Analysis	Qualification assigned for a continuing calibration %D >15%.
	Protocol, e.g.,	
	Holding Times	
	GC/MS Tune/Inst. Performance	
	Calibration	
	Method blanks	
	Surrogates	
	Matrix Spike/Dup LCS	
	Field QC	
	Internal Standard Performance	
	Compound Identification	
	Quantitation	
CON	System Performance MMENTS ^b	
CON	MMENTS	
a C.	L	
b Di	ocontracted analytical laboratory is not r	neeting contract and/or method requirements.



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Purgeable

SAMPLE DELIVERY GROUP: IOF1253

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

NPDES

IOF1253

TPH

Analysis:

1. INTRODUCTION

Task Order Title: **NPDES Monitoring**

Contract Task Order #: 313150010

SDG#: IOF1253

Project Manager: P Costa

> Matrix: Water

Analysis: TPH-Purgeable

OC Level: Level IV

No. of Samples: 2

No. of Reanalyses/Dilutions: 0

> Reviewer: L. Calvin

Date of Review: July 18, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2), USEPA SW-846 Method 8015M, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project: SDG: Analysis: NPDES IOF1253 TPH

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
Outfall 012	Outfall 012	IOF1253-01	water	8015M/GRO
Trip Blank	Trip Blank	IOF1253-02	water	8015M/GRO

Project: SDG: Analysis: NPDES IOF1253 TPH

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 this SDG were received at Del Mar Analytical on ice within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$, at 6°C . The Del Mar Analytical case narrative noted that the samples were received intact, and the COC indicated the samples were properly preserved. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel. The EFH analysis (rather than the GRO analysis) was requested in error on the COC for the Trip Blank sample. The sample was analyzed correctly. As the samples were couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

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

2.2 CALIBRATION

One gasoline standard initial calibration dated 08/26/04 was associated with the sample analyses. The %RSD for GRO (C4-C12) was within the QC limit of \leq 20%. An initial calibration verification (ICV) was not provided in the data package. The %Ds for all CCVs bracketing the sample analyses were within the Method QC limit of \leq 15%, with the exception of CCV analyzed following the site sample. The GRO result in sample Outfall 012 was qualified as an estimated detect, "J." The %RSD and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No further qualifications were required

2.4 METHOD BLANKS

Two water method blanks (5F17038-BLK1 and 5F20039-BLK1) were associated with the sample analyses. GRO (C4-C12) was not detected above the MDL in either method blank. Review of the raw data indicated no false negative results. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

Two water method blank spikes (5F17038-BS1 and 5F20039-BS1) were associated with the sample analyses. GRO (C4-C12) was recovered within the laboratory-established QC limits of 70-

140% in both blank spikes. The recoveries were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.6 SURROGATE RECOVERY

The samples were fortified with the surrogate compound 4-bromofluorobenzene (BFB). Surrogate recoveries were within the laboratory-established QC limits of 65-140%. Recoveries were calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

FIELD QC SAMPLES

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

2.9.1 Trip Blanks, Field Blanks, and Equipment Rinsates

Sample Trip Blank was the trip blank associated with site sample Outfall 012. GRO (C4-C12) was not detected above the MDL in the trip blank. Review of the raw data indicated no false negative result. There were no field blank or equipment rinsate samples associated with this SDG. No qualifications were required.

2.9.2 Field Duplicates

There were no field duplicate samples in this SDG.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for GRO (C4-C12) by Method 8015M. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for the samples in this SDG. No qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detects, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. The results were reported in mg/L (ppm). No qualifications were required.



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MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

300 North Lake Avenue. Suite 1200

Pasadena, CA 91101

Project ID: Alfa Outfall 012 - During Test

Report Number: IOF1253

Sampled: 06/16/05 Received: 06/16/05

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

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AMEC VALIDATED

LEVEL IV

DRAFT REPORT
DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental

355 South Teller Street

Suite 300

Lakewood, CO 80226

Laboratory Del Mar Analytical

Reviewer L. Calvin

Analysis/Method Extractable TFH by Method 8015B

Package ID T711TF78

313150010

SDG No. IOF1253

No. of Analyses 1

Date: July 18, 2005

Reviewer's Signature

Analysis/Method Extractable TFH by Method 8015B

ACTION ITEMS*	<u> 전형 마음 마음 마음 마음 마련하는 그림이라고 할 만하다고 프로젝트 스타를 하다.</u>
. Case Narrative	
Deficiencies	
2. Out of Scope	
•	
Analyses	
3. Analyses Not Conducted	
5. Analyses Not Conducted	
4. Missing Hardcopy	
Deliverables	
5. Incorrect Hardcopy	
Deliverables	
6. Deviations from Analysis	
Protocol, e.g.,	
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	·
Quantitation	
System Performance COMMENTS ^b	
COMMENTS	Acceptable as reviewed.
3 0 1	
Subcontracted analytical laboratory is not	meeting contract and/or method requirements. by the laboratory but no action against the laboratory is required.



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Extractable

SAMPLE DELIVERY GROUP: IOF1253

Prepared by

AMEC Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

Analysis:

NPDES

IOF1253

TPH

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

SDG#:

IOF1253

Project Manager:

P. Costa

Matrix:

Water

Analysis:

TPH-Extractable

QC Level:

Level IV

1

No. of Samples:

No. of Reanalyses/Dilutions:

L. Calvin

Reviewer:

Date of Review:

July 18, 2005

The samples listed in Table 1 were validated based on the general guidelines outlined in the AMEC Data Validation Procedure for Levels C and D Extractable Total Fuel Hydrocarbons by GC (DVP-8, Rev. 2), USEPA SW-846 Method 8015B, and validation guidelines outlined in the USEPA CLP National Functional Guidelines for Organic Data Review (2/94). Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the Form I as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

Project:

DATA VALIDATION REPORT
SDG:
Analysis:

Table 1. Sample identification

Client ID	EPA ID	Lab No.	Matrix	Method
Outfall 012	Outfall 012	IOF1253-01	water	8015B

NPDES IOF1253 TPH

Project: SDG: Analysis:

NPDES IOF1253 TPH

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 sample in this SDG was received at Del Mar Analytical laboratory on ice within the temperature limits of 4°C ±2°C. The Del Mar Analytical case narrative noted that the sample containers were received intact. No qualifications were required.

2.1.2 Chain of Custody

The COC was signed and dated by both field and laboratory personnel, and accounted for the analysis presented in this SDG. The EFH analysis (rather than the GRO analysis) was requested in error on the COC for the Trip Blank sample. The sample was analyzed correctly. As the site sample was couriered directly to the laboratory, custody seals were not required. No qualifications were required.

2.1.3 Holding Times

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

2.2 CALIBRATION

The initial calibration associated with the sample analysis was analyzed on 05/27/05. The %RSD was within the QC limit of \leq 20%. The %Ds for the initial calibration verification (ICV) and continuing calibrations associated with the sample analysis were \leq 15%. The %RSD and %Ds were recalculated from the raw data and no transcription or calculation errors were noted. No qualifications were required

2.4 METHOD BLANKS

One method blank (5F20048-BLK1) was extracted and analyzed with the sample in this SDG. EFH (C13-C22) was not present above the MDL in the method blank or in the instrument blank analyzed at the beginning of the analytical sequence. Review of the chromatograms showed no false negatives. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

One method blank spike/blank spike duplicate pair (5F20048-BS1/BSD1) was extracted and analyzed with the sample in this SDG. The laboratory reported recoveries of alkane range C13-C28 from spiked diesel. The recoveries were within the laboratory-established QC limits of 40-120%,

NPDES IOF1253 **TPH**

and the RPD was within the QC limit of ≤25%. The recoveries and RPD were checked from the raw data, and no calculation or transcription errors were noted. No qualifications were required.

2.6 SURROGATE RECOVERY

The sample was fortified with the surrogate compound n-octacosane. The sample surrogate recovery was within the laboratory-established QC limits of 40-125%. The recovery was calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

There were no MS/MSD analyses associated with the sample of this SDG. Evaluation of method accuracy was based on the blank spike. No qualifications were required.

2.8 FIELD QC SAMPLES

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

2.9.1 Field Blanks and Equipment Rinsates

There were no field blank or equipment rinsate samples associated with the site sample in this SDG. No qualifications were required.

2.9.2 Field Duplicates

There were no field duplicate samples associated with this SDG.

2.10 COMPOUND IDENTIFICATION

The laboratory analyzed for EFH n-alkane range C13-C22 by EPA SW-846 Method 8015B. Compound identification is verified at a Level IV validation. Review of chromatograms and retention times indicated no problems with compound identification for this SDG. qualifications were required.

2.11 COMPOUND QUANTIFICATION AND REPORTED DETECTION LIMITS

Compound quantification was verified for this SDG by recalculating any sample detect, blank spike recoveries, and a representative number of surrogate recoveries. Reporting limits were supported by the low level standard of the initial calibration and by the laboratory MDL. Results were reported in mg/L (ppm). No qualifications were required.



17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046 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) 785-0831 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: Alfa Outfall 012 - During Test

Report Number: IOF1253

Sampled: 06/16/05 Received: 06/16/05

DRAFT: EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

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

Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water) - cont. Reporting Units: mg/l

EFH (C13 - C22) EPA 8015B 5F20048 0.082 0.50 1.3 06/20/05 06/22/05 Surrogate: n-Octacosane (40-125%)

80%

AWEC VALIUA

LEVEL IV

DRAFT REPORT DRAFT REPORT DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

	Earth & Environmenta	ı l	Package ID	T711WC164
	th Teller Street		Task Order	313150010
Suite 30	0		SDG No.	IOF1253
Lakewo	od, CO 80226		No. of Analyses	1
	Laboratory Del Ma	r Analytical	Date: 07/14/0)5
	Reviewer L. Jarus		Reviewer's S	ignature
An	alysis/Method Perchlo	rate		
				ausurs
ACTION	N ITEMS ^a			
	ase Narrative			
	eficiencies			
	ut of Scope			
	nalyses			
	nalyses Not			
	onducted			
4. M	issing Hardcopy			
	eliverables			
5. In	correct Hardcopy			
De	eliverables			
	eviations from			
Ai	nalysis Protocol, e.g.,			
Ц	olding Times			
	C/MS Tune/Inst.			!
O.	Performance		······································	
Са	librations	**************************************		
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	eld QC			
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COMME	ENTS ^b	Acceptable as reviewed.		· · · · · · · · · · · · · · · · · · ·
			**************************************	· · · · · · · · · · · · · · · · · · ·
^a Subcont	racted analytical laboratory is r	not meeting contract and/or method re	equirements.	er.
		ted by the laboratory but no action a		ed.

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	Organics	Inorganics
Н	Holding times were exceeded.	Holding times were exceeded.
S	Surrogate recovery was outside QC limits.	The sequence or number of standards used 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 control limits.
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 not within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not within control limits.
M	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
T	Presumed contamination from trip blank.	Not applicable.
+	False positive – reported compound was not present. Not applicable.	••
-	False negative – compound was present but not reported.	Not applicable.
F	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.
D	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.
P	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not within control limits.
DNQ	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: PERCHLORATE

SAMPLE DELIVERY GROUP: IOF1253

Prepared by

AMEC—Denver Operations 355 South Teller Street, Suite 300 Lakewood, Colorado 80226

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOF1253 Perchlorate

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

313150010

Sample Delivery Group #:

IOF1253

Project Manager:

Matrix:

P. Costa Water

Perchlorate

Analysis:

Level IV

QC Level: No. of Samples:

1

Reviewer:

L. Jarusewic

Date of Review:

July 14, 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 314.0, 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.

1

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOF1253

Perchlorate

Table 1. Sample identification

Client ID	EPA ID	Laboratory ID	Matrix	COC Method
Outfall 012	Outfall 012	IOF1253-01	Water	Perchlorate

DATA VALIDATION REPORT

Project: SDG No.: Analysis: NPDES IOF1253 Perchlorate

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 $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. The analysis did not require preservation and no preservation was noted in the field. No qualifications were required.

2.1.2 Chain of Custody

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

2.1.3 Holding Times

The holding time was assessed by comparing the date of collection with the date of analysis. The 28-day analytical holding time for perchlorate was met, and no qualifications were required.

2.2 CALIBRATION

The initial calibration correlation coefficient was ≥ 0.995 . The IPC-MA recovery was within the control limits of 80-120%. The ICV, CCV, and IPC recoveries were within the control limits of 90-110%. The ICCS was recovered above the control limits at 122.7%; however, as perchlorate was not detected in Outfall 012, no qualifications were required.

2.3 BLANKS

The method blank and CCB results reported on the summary form and in the raw data for the 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 laboratory control sample associated with this SDG was recovered within the method control limits of 85-115%. No qualifications were required.

2.5 SURROGATES RECOVERY

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

DATA VALIDATION REPORT

SDG No.: Analysis:

NPDES IOF1253 Perchlorate

2.6 LABORATORY DUPLICATES

No MS/MSD or duplicate analyses were 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

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

2.8 FURNACE ATOMIC ABSORPTION QC

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

2.9 ICP SERIAL DILUTION

ICP serial dilution is not applicable to the analysis 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 result reported on the Form I was verified against the raw data. No transcription errors or calculation errors were noted. No 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.

2.11.2 Field Duplicates

There were no field duplicate pairs associated with this SDG.

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949, 260-329) 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 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) 785-0031 2520 E. Sunset Rd. #3. Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621 。 1980年,1980年,1980年,1980年,1980年,1980年,1980年,1980年,1980年,1980年,1980年,1980年,1980年,1980年,1980年,1980年,1980年,1980年,1

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IOF1253

Sampled: 06/16/05

Received: 06/16/05

DRAFT: INORGANICS

Project ID: Alfa Outfall 012 - During Test

		aratista .	E . E. T.	NECESTICAL AND	しら				
Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		Date Extracted	Date Analyzed	Data Qualifie
Sample ID: #OF1253-01 (DRAF Reporting Units: mg/l	T: Outfall 012 - V	Vater) - con	t.					-	Qual C
Ammonia-N (Distilled)	EPA 350.2	5F23075	0.30	0.50	0.56	1	06/00/05	06122102	W
Biochemical Oxygen Demand	EPA 405.1	5F17083	0.59	2.0	1.7		06/23/05	06/23/05	*
Oil & Grease	EPA 413.1	5F20071	0.94	5.0	1.7		06/17/05	06/22/05	J
Total Dissolved Solids	SM2540C	5F21081	10	10	280		06/20/05	06/20/05	J
Total Suspended Solids	EPA 160.2	5F22109	10	10	13		06/22/05	06/22/05	
Sample ID: JOF1253-01 (DRAFT) Reporting Units: ml/l/hr Total Settleable Solids	Γ: Outfall 012 - W EPA 160.5	Vater) 5F18038	0.10	0.10	ND		06/22/05	06/22/05 06/18/05	
Sample ID: IOF1253-01 (DRAFT Reporting Units: NTU	Γ: Outfall 012 - W	/ater)			- 1-2-	•	00/16/05	00/18/03	
Turbidity	EPA 180.1	5F17094	0.040	1.0	25	1 1	06/17/05	06/17/05	
Sample ID: IOF1253-01 (DRAFT Reporting Units: ug/l	: Outfall 012 - W	⁷ ater)				, ,	00/17/03	00/17/03	
Perchlorate	EPA 314.0	5F16067	0.80	4.0	ND	1 (06/16/05	06/16/05	ů

* analysis not validated

AMEC VALIDATED



DRAFT REPORT DRAFT REPORT DATA SUBJECT TO CHANGE

174/3 Derian Avo., Suite 106, Invine, CA 92614, 19401763-1922, FAX (6.29-2)6-2, n. 1314 E. Cooley Lm, Suite A. Colten, CA 92324, (8061371-4047, FAX (6.29-2)6-2, n. 19414 Chesaprake Dr., Suite 805, San Diego, CA 92123, (658) 305-8396, FAX (8.98-350-0)6-6-9830 South 538150, Suite B-126, Phoenix, AZ 83044, (480) 785-0043, FAX (480) 785-007, p. 195-192, 2520 E. Sunyot Rd., #3, Las Negas, NV 89120, (202) 798-3620, FAX (702) 798-3621

MWH-Pasadena/Boeing

Pasadena, CA 91101

Project (D: Quarterly Outfall 018

300 North Lake Avenue, Suite 1200

Report Number: IOD2049

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

Attention: Bronwyn Kelly

DRAFT: INORGANICS

			*** " ** * * * * * * * * * * * * * * *								
				MDL		-			Date		ata
	Analyte	Method	Batch	Limit	Limit	Result	Factor1	Extracted	Analyz	ed Qual	ifiers
	Sample ID: 1OD2049-01 (DRAFT: Reporting Units: mg/l	Outfall 018 - V	Vater) - con	t.						DUAL	800E
	Ammonia-N (Distilled)	EPA 350.2	5E02067	0.30	0.50	ND	ì	05/02/05	05/02/05	U	
	Biochemical Oxygen Demand	EPA 405.1	5D29091	0.59	2.0	9.7	1	04/29/05	05/04/05		
	Chloride	EPA 300.0	5D23116	0.26	0.50	30	I	04/28/05	04/29/05		
	Nitrate/Nitrite-N	EPA 300.0	5D28116	0.075	0.15	0.17	1	04/28/05	04/29/05		
	Oil & Grease	EPA 413.1	5E04036	0.94	5.0	ND	1	05/04/05	05/04/05	U	
	Sulfate	EPA 300.0	5D28116	0.90	2.5	85	5	04/28/05	04/29/05		
	Surfactants (MBAS)	EPA 425.1	5D28122	0.044	0.10	0.059	1	04/28/05	04/28/05	J.	DNQ
	Total Dissolved Solids	EPA 160.1	5D29129	10	10	320	1	04/29/05	04/29/05		
	Total Suspended Solids	EPA 160.2	5E04071	10	10	48	1	05/04/05	05/04/05		
Sample ID: IOD2049-01 (DRAFT: Outfall 018 - Water) Reporting Units: mi/l/hr											
	Total Settleable Solids	EPA 160.5	5D29094	0.10	0.10	ND	1	04/29/05	04/29/05	U	
Sample ID: TOD2049-01 (DRAFT: Outfall 018 - Water) Reporting Units: NTU											
	Turbidity	EPA 180.1	5D29110	0.080	2.0	42	2	04/29/05	04/29/05		
	Sample ID: IOD2049-01 (DRAFT: Reporting Units: ug/l	Outfall 018 - W	(ater)								
	Total Cyanide	EPA 335.2	5D29078	2.2	5.0	ND	1	04/29/05	04/29/05	U.	
	Perchlorate	EPA 314.0	5D29065	0.80	4.0	ND	1	04/29/05	04/30/05	*	
Sample ID: IOD2049-01 (DRAFT: Outfall 018 - Water) Reporting Units: umhos/cm											
	Specific Conductance	EPA 120.1	5D29130	1.0	1.0	450	T	04/29/05	04/29/05		

AMEC VALIDATED



*Analysis Not Validated

DRAFT REPORTDRAFT REPORT
DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environi	mental	Package ID T711WC	
550 South Wadsworth Bo	oulevard	Task Order3131500	10
Suite 500		SDG No. IOD2047	, IOD2049
Lakewood, CO 80226		No. of Analyses 2	<u> </u>
*	el Mar Analytical	Date: 06/03/05	<u> </u>
Reviewer L.		Reviewer's Signature	
Analysis/Method Pe			
Allarysis/iviculod 1 C	temorate	- Lanusian	/
ACTION ITEMS ^a			
1. Case Narrative Deficiencies			
2. Out of Scope Analyses			
3. Analyses Not			
Conducted			
4. Missing Hardcopy			
Deliverables			
5. Incorrect Hardcopy			
Deliverables			
6. Deviations from			· · · · · · · · · · · · · · · · · · ·
Analysis Protocol, e.	·g.,		**************************************
YY - F 4th - Moth			
Holding Times GC/MS Tune/Inst.			
Performance	W-19-19-19-19-19-19-19-19-19-19-19-19-19-		
Calibrations	-		
Blanks			
Surrogates	**************************************		
Matrix Spike/Dup LC	S		
Field QC			
Internal Standard			
Performance	<u></u>		
Compound Identificat			
and Quantitatio	n		
System Performance			
COMMENTS ^b	Acceptable as reviewed.		
			
***************************************	**************************************		
* Subcontracted analytical laborate	ory is not meeting contract and/or method require	ments.	
	n adopted by the laboratory but no action against		

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	Organics	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 n within control limits.
Q	MS/MSD recovery was poor or RPD high.	MS recovery was poor.
E	Not applicable.	Duplicates showed poor agreement.
I	Internal standard performance was unsatisfactory.	ICP ICS results were unsatisfactory.
A	Not applicable.	ICP Serial Dilution %D were not with control limits.
M _	Tuning (BFB or DFTPP) was noncompliant.	Not applicable.
Γ	Presumed contamination from trip blank.	Not applicable.
r	False positive – reported compound was not present. Not applicable.	
	False negative – compound was present but not reported.	Not applicable.
**	Presumed contamination from FB, or ER.	Presumed contamination from FB or ER.
E	Reported result or other information was incorrect.	Reported result or other information was incorrect.
ı	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 use because another more technically soun analysis is available.
•	Instrument performance for pesticides was poor.	Post Digestion Spike recovery was not withit control limits.
NQ	The compound was detected between the MDL and the RL and, by definition, is considered an estimated value.	The compound was detected between th MDL and the RL and, by definition, i considered an estimated value.
<i>‡</i>	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: PERCHLORATE

SAMPLE DELIVERY GROUPS: IOD2047 & IOD2049

Prepared by

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

NPDES IOD2047, IOD2049

SDG No.: Analysis:

Perchlorate

1. INTRODUCTION

Task Order Title:

NPDES Monitoring

Contract Task Order #:

DATA VALIDATION REPORT

313150010

Sample Delivery Group #:

IOD2047, IOD2049

Project Manager:

B. McIlvaine

Matrix:

Water

Analysis:

Perchlorate

QC Level:

Level IV

No. of Samples:

Reviewer:

L. Jarusewic

Date of Review:

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 314.0, 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.

NPDES

SDG No.: IOD2047, IOD2049 Analysis:

Perchlorate

Table 1. Sample identification

Client ID	EPA ID	Laboratory ID	Matrix	COC Method
Outfall 012	Outfall 012	IOD2047-01	Water	Perchlorate
Outfall 018	Outfall 018	IOD2049-01	Water	Perchlorate

DATA VALIDATION REPORT

NPDES

SDG No.: Analysis: IOD2047, IOD2049 Perchlorate

Altai

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

DATA VALIDATION REPORT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in these SDGs were received at the laboratory within the temperature limits of $4^{\circ}C \pm 2^{\circ}C$. The analysis did not require preservation and no preservation was noted in the field. No qualifications were required.

2.1.2 Chain of Custody

The COCs were signed and dated by field and laboratory personnel, and accounted for the samples and analysis presented in these SDGs. No qualifications were required.

2.1.3 Holding Times

The holding time was assessed by comparing the date of collection with the date of analysis. The 28-day analytical holding time for perchlorate was met, and no qualifications were required.

2.2 CALIBRATION

The initial calibration correlation coefficient associated with these SDGs was ≥0.995. The IPC-MA recovery was within the control limits of 80-120%. The ICV and IPC recoveries were within the control limits of 90-110%. The ICCS and a bracketing CCV were recovered above the control limits at 119% and 113.8%, respectively; however, as perchlorate was not detected in either site sample, no qualifications were required.

2.3 BLANKS

The method blank result reported on the summary form and in the raw data for the blank analysis associated with the samples was a nondetect at the reporting limit. No qualifications were required.

2.4 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory control sample associated with these SDGs was recovered within the method control limits of 85-115%. No qualifications were required.

2.5 SURROGATES RECOVERY

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

Project: SDG No.: NPDES IOD2047, IOD2049

Analysis:

Perchlorate

DATA VALIDATION REPORT

2.6 LABORATORY DUPLICATES

No MS/MSD or duplicate analyses were 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

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

2.8 FURNACE ATOMIC ABSORPTION QC

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

2.9 ICP SERIAL DILUTION

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

2.10 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. No 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 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.

174611/zerian Avo., Suite 100, Izzine, CA 92.14 (949) 263-2102 FAV (939-264-264) 1074 £. Cooley Dr., Suite A, Colton, CA 92324 (969-270-4667 FA (1939-370-4667) 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (850) 583-3596 FAA (759-565-9639) 9630 South 5334 St., Suite 8-120, Phoenix, AZ 85044 (460: 785-863) FAA (480) 785-9639 2520 E. Sanset Rd. #3, Las Vegas, NV 89120 (762) 798-1622 FAX (702) 798-1621

MWH-Pasadena/Boeing

Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101

Report Number: IOD2047

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

DRAFT: INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result		n Date Extracted	Date Analyz	ed Qualifiers
Sample ID: IOD2047-01 (DRAF Reporting Units: mg/l	T: Outfall 012 - \	Vater) - con	t.						aun co
Ammonia-N (Distilled)	EPA 350.2	5E02067	0.30	0.50	ND	*	05/02/05	05/02/05	*
Biochemical Oxygen Demand	EPA 405.1	5D29091	0.59	2.0	3.2	1		05/04/05	
Oil & Grease	EPA 413.1	5E04036	0.94	5.0	ND	1		05/04/05	
Total Dissolved Solids	SM2540C	5D29129	10	10	250	1		04/29/05	
Total Suspended Solids	EPA 160.2	5E04071	10	10	21	1		05/04/05	
Sample ID: 10D2047-01 (DRAF Reporting Units: ml/l/hr	T: Outfall 012 - V	Vater)							
Total Settleable Solids	EPA 160.5	5D29094	0.10	C.10	0.10	1	04/29/05	04/29/05	
Sample ID: IOD2047-01 (DRAF) 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 (DRAF) Reporting Units: ug/l	f: Outfall 012 - V	Vater)							\downarrow
Perchlorate	EPA 314.0	5D29065	0.80	4.0	ND	1	04/29/05	04/30/05	u

AMEC VALIDATED

LEVEL IV

*Analysis Not Validated

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

27493 Parian Ave., Suite 100, invine, CA 92613, 9949, 263-1922, FAX 9349, 235-19 1834 E. Cookev Eri, Suite A. Colton, CA 92024, (908) 375-4667, "AN 9349, 575-1545, 044, 4 Chesapriake Eri, Suite 805, San Diego, CA 92125, (858) 395-8596, FAN 9386, 575-656, 0800, South 535 St., Suite 805, San Diego, CA 92125, (858) 395-8596, FAN 9386, 575-656, (856) 385-8596, FAN 9366, (856) 385-8596, FAN 9366, (856) 385-8596, FAN 9367, FAN 9

MWH-Pasadena/Boeing

Project ID: Quarterly Jutfall 018

300 North Lake Avenue, Suite 1200

Pasadena, CA 91101 Report Number: IOD2049

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

Attention: Bronwyn Kelly

DRAFT: INORGANICS

Analyte	Method	Bacch	MDL Limit	Reporting Limit	Sample Result		n Date rExtracted	Date Analyze Pi	Dati d Qualifi EV (
Sample ID: 1OD2049-01 (DRAF Reporting Units: mg/l	t.					Z		COO		
Ammonia-N (Distilled)	EPA 350.2	5E02067	0.30	0.50	ND	1	05/02/05	05/02/05	*	
Biochemical Oxygen Demand	EPA 405.1	5D29091	0.59	2.0	9.7	1	04/29/05	05/04/05	1	
Chloride	EPA 300.0	5D28116	0.26	0.50	30	į	04/28/05	04/29/05		
Nitrate/Nitrite-N	EPA 300.0	5D28116	0.075	0.15	0.17	1	04/28/05	04/29/05		
Oil & Grease	EPA 413.1	5E04036	0.94	5.0	ND	1	05/04/05	05/04/05		
Sulfate	EPA 300.0	5D28116	0.90	2.5	85	5	04/28/05	04/29/05		
Surfactants (MBAS)	EPA 425.1	5D28122	0.044	0.10	0.059	1	04/28/05	04/28/05		
Total Dissolved Solids	EPA 160.1	5D29129	10	10	320	1	04/29/05	04/29/05		
Total Suspended Solids	EPA 160.2	5E04071	10	10	48	1	05/04/05	05/04/05		
Sample ID: IOD2049-01 (DRAF Reporting Units: mi/l/hr	T: Outfall 018 - V	Vater)								
Total Settleable Solids	EPA 160.5	5D29094	0.10	0.10	ND	1	04/29/05	04/29/05		
Sample ID: IOD2049-01 (DRAF Reporting Units: NTU	T: Outfall 018 - V	Vater)							77	
Turbidity	EPA 180.1	51)29110	0.080	2.0	42	2	04/29/05	04/29/05		
Sample ID: IOD2049-01 (DRAF Reporting Units: ug/l	ľ: Outfall 018 - W	vater)								
Total Cyanide	EPA 335.2	5D29078	2.2	5.0	ND	1	04/29/05	04/29/05	\checkmark	
Perchlorate	EPA 314.0	5D29065	0.80	4.0	ND	1	04/29/05	04/30/05	u	
Sample ID: IOD2049-01 (DRAF Reporting Units: umhos/cm	Γ: Outfall 018 - W	vater)							,	
Specific Conductance	EPA 120.1	5D29130	1.0	1.0	450	**************************************	04/29/05	04/29/05	*	

AMEC VALIDATED



*Analysis Not Validated

DRAFT REPORT
DATA SUBJECT TO CHANGE