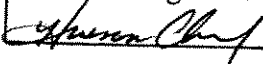


CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
 550 South Wadsworth Boulevard
 Suite 500
 Lakewood, CO 80226

Package ID T711PP35
 Task Order 313150010
 SDG No. IOD2049

Laboratory Del Mar

No. of Analyses 1
 Date: June 6, 2005
 Reviewer's Signature


Reviewer H. Chang

Analysis/Method Pesticides/608

ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g., Holding Times GC/MS Tune/Inst. Perform Calibrations Blanks Surrogates Matrix Spike/Dup LCS Field QC 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

1. INTRODUCTION

Task Order Title: NPDES Monitoring
Contract Task Order #: 313150010
SDG#: IOD2049
Project Manager: B. McIlvaine
Matrix: Water
Analysis: Pesticides/PCBs
QC Level: Level IV
No. of Samples: 1
No. of Reanalyses/Dilutions: 0
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.

Table 1. Sample identification

Client ID	EPA ID	Laboratory ID	Matrix	Method
Outfall 018	Outfall 018	IOD2049-01	water	608

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.

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 $\leq 10\%$ or the r^2 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 $\leq 15\%$. 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. Cross-contamination 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 $\leq 30\%$. No qualifications were required. The recoveries and RPD were checked from the raw data, and no calculation or transcription errors were noted.

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 laboratory-established QC limits. The recoveries were calculated from the raw data and no transcription or calculation errors were noted. No qualifications were required.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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. No 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.



Del Mar Analytical

17441 Berlin Ave., Suite 100, Irvine, CA 92614 (949) 261-0002 FAX (949) 261-0101
 1614 E. Coony Dr., Suite A, Colton, CA 92311 (909) 370-0067 FAX (909) 370-1068
 9414 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 500-0100 FAX (619) 500-0000
 11800 S. 135th St., Suite B-120, Phoenix, AZ 85042 (480) 755-8011 FAX (480) 755-0011
 2520 E. Sunset Rd., #3, Las Vegas, NV 89120 (702) 798-0020 FAX (702) 798-0022

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	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2049-01 (DRAFT: Outfall 018 - Water) - cont.									
Reporting Units: ug/l									
alpha-BHC	EPA 608	5E03078	0.0010	0.010	ND	0.98	05/03/05	05/04/05	u
Surrogate: Decachlorobiphenyl (45-120%)					77 %				
Surrogate: Tetrachloro-m-xylene (35-115%)					60 %				

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE


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

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
 550 South Wadsworth Boulevard
 Suite 500
 Lakewood, CO 80226

Package ID T711SV57
 Task Order 313150010
 SDG No. IOD2047, IOD2049
 No. of Analyses 2

Laboratory Del Mar
 Reviewer H. Chang
 Analysis/Method Semivolatiles/625

Date: June 6, 2005
 Reviewer's Signature


ACTION ITEMS^a	
1. Case Narrative Deficiencies	_____
2. Out of Scope Analyses	_____
3. Analyses Not Conducted	_____
4. Missing Hardcopy Deliverables	_____
5. Incorrect Hardcopy Deliverables	_____
6. Deviations from Analysis Protocol, e.g.,	_____
Holding Times	_____
GC/MS Tune/Inst. Perform	_____
Calibrations	_____
Blanks	_____
Surrogates	_____
Matrix Spike/Dup LCS	_____
Field QC	_____
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: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IOD2047, IOD2049

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Monitoring
Contract Task Order #: 313150010
SDG#: IOD2047, IOD2049
Project Manager: B. McIlvaine
Matrix: Water
Analysis: Semivolatiles
QC Level: Level IV
No. of Samples: 2
No. of Reanalyses/Dilutions: 0
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.

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

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The samples in these SDGs were received at the laboratory within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. The 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. 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 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 $\leq 35\%$ 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 $\leq 20\%$. 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

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.

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.

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.



Del Mar Analytical

17901 Derbin Ave., Suite 100, Irvine, CA 92614 949-261-0112 FAX: 949-261-0111
 101 - E. Chaparral, Suite A, Corona, CA 92624 951-270-4601 FAX: 951-270-4602
 9184 Chesapeake Dr., Suite 803, San Diego, CA 92123 619-505-9396 FAX: 619-505-9397
 9500 South 51st St., Suite B-120, Phoenix, AZ 85044 480-718-9843 FAX: 480-794-0011
 2500 E. Sunset Rd., #3, Las Vegas, NV 89120 702-718-9843 FAX: 702-796-0112

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

Project ID: Alfa Outfall 012 - During Test

Report Number: IOD2047

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	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water)									
Reporting Units: ug/l									
Naphthalene	EPA 625	5E01019	4.5	10	24	0.99	05/01/05	05/04/05	
N-Nitrosodimethylamine	EPA 625	5E01019	3.7	20	ND	0.99	05/01/05	05/04/05	
Surrogate: 2-Fluorophenol (30-120%)					53 %				
Surrogate: Phenol-d6 (35-120%)					68 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					69 %				
Surrogate: Nitrobenzene-d5 (45-120%)					83 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					74 %				
Surrogate: Terphenyl-d14 (45-120%)					132 %				

Rev	Qual Code
u	

ZX

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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



Del Mar Analytical

17401 Dorian Ave., Suite 100, Irvine, CA 92614 (949) 261-1122 FAX: (949) 261-1123
 1714 E. Copley Dr., Suite A, Lodi, CA 93224 (909) 271-0007 FAX: (909) 271-0008
 6104 Chesapeake Dr., Suite 605, San Diego, CA 92121 (619) 514-6100 FAX: (619) 514-6101
 1830 South 31st St., Suite 3110, Phoenix, AZ 85034 (480) 200-4043 FAX: (480) 200-4044
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-6120 FAX: (702) 798-6121

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2049-01 (DRAFT: Outfall 018 - Water)									
Reporting Units: ug/l									
Bis(2-ethylhexyl)phthalate	EPA 625	5E01024	1.1	5.0	ND	0.962	05/01/05	05/04/05	u
2,4-Dinitrotoluene	EPA 625	5E01024	0.23	9.0	ND	0.962	05/01/05	05/04/05	↓
N-Nitrosodimethylamine	EPA 625	5E01024	0.22	8.0	ND	0.962	05/01/05	05/04/05	↓
Pentachlorophenol	EPA 625	5E01024	0.78	8.0	ND	0.962	05/01/05	05/04/05	↓
2,4,6-Trichlorophenol	EPA 625	5E01024	0.10	6.0	ND	0.962	05/01/05	05/04/05	↓
Surrogate: 2-Fluorophenol (30-120%)					65 %				
Surrogate: Phenol-d6 (35-120%)					66 %				
Surrogate: 2,4,6-Tribromophenol (45-120%)					84 %				
Surrogate: Nitrobenzene-d5 (45-120%)					68 %				
Surrogate: 2-Fluorobiphenyl (45-120%)					73 %				
Surrogate: Terphenyl-d14 (45-120%)					77 %				

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
 550 South Wadsworth Boulevard
 Suite 500

Package ID T711VO105
 Task Order 313150010
 SDG No. IOD2043, 2045, 2047,
2049

Lakewood, CO 80226

No. of Analyses 8

Laboratory Del Mar

Date: June 13, 2005

Reviewer M. Pokorny

Reviewer's Signature


Analysis/Method Volatiles

ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	Qualifications were required for calibration outliers.
Holding Times	
GC/MS Tune/Inst. Perform	
Calibrations	
Blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification and Quantitation	
System Performance	

COMMENTS^b

^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: VOLATILES

SAMPLE DELIVERY GROUPs: IOD2043, IOD2044,
IOD2047, IOD2049

Prepared by

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

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: 8
No. of Reanalyses/Dilutions: 0
Reviewer: M. Pokorny
Date of Review: June 13, 2005

The samples listed in Table 1 were validated based on the guidelines outlined in the *AMEC Data Validation Procedure for Levels C and D Volatile Organics (DVP-2, Rev. 2)*, *EPA Method 624, SW846 Method 8260B*, and the *National Functional Guidelines For Organic Data Review (2/94)*. Any deviations from these procedures are documented herein. Qualifiers were applied in cases where the data did not meet the required QC criteria or where special consideration by the data user is required. Data qualifiers were placed on Form Is with the associated qualification codes. Analytes that were rejected for any reason are denoted on the summary forms as having only the "R" data qualifier and associated qualification code(s) denoting the reason for rejection. Any additional problems with the data that may have resulted in an estimated value were not denoted by a qualification code since the data had already been rejected.

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

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

The following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 GC/MS TUNING

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

2.3 CALIBRATION

Four initial calibrations dated 03/31/05, 04/20/05, 04/29/05, and 04/30/05 were associated with these SDGs. The average RRFs were ≥ 0.05 for the target compounds listed on the sample result summaries. The %RSDs were $\leq 35\%$ for all applicable target compounds. Five continuing 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 $\leq 20\%$. 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.

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.

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 $\mu\text{g/L}$ (ppb). No calculation or transcription errors were noted. No qualifications were required.

2.12 TENTATIVELY IDENTIFIED COMPOUNDS

The laboratory did not provide TICs for 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.



Del Mar Analytical

17401 Denan Ave., Suite 100, Irvine, CA 92614 (949) 261-0011 FAX (949) 260-1277
 1014 E. Coskey Dr., Suite A, Colton, CA 92324 (909) 570-4667 FAX (949) 370-1194
 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 595-8596 FAX (619) 595-9429
 9500 South 51st St., Suite 5-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 787-0021
 2520 E. Sunset Rd., #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 790-3621

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

Project ID: Routine Outfall 001
 Report Number: IOD2043

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

DRAFT: PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2043-01 (DRAFT: Outfall 001 - Water)									
Reporting Units: ug/l									
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	05/05/05	U
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1	05/04/05	05/05/05	U
1,1-Dichloroethane	EPA 624	5E04019	0.27	2.0	ND	1	05/04/05	05/05/05	U
1,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/05/05	U
1,1-Dichloroethene	EPA 624	5E04019	0.32	3.0	ND	1	05/04/05	05/05/05	U
Ethylbenzene	EPA 624	5E04019	0.25	2.0	ND	1	05/04/05	05/05/05	U
Tetrachloroethene	EPA 624	5E04019	0.32	2.0	ND	1	05/04/05	05/05/05	U
Toluene	EPA 624	5E04019	0.36	2.0	ND	1	05/04/05	05/05/05	U
1,1,1-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/05/05	U
1,1,2-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/05/05	U
Trichloroethene	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05	05/05/05	U
Trichlorofluoromethane	EPA 624	5E04019	0.34	5.0	ND	1	05/04/05	05/05/05	U
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	U
Surrogate: Dibromofluoromethane (80-120%)					107 %				
Surrogate: Toluene-d8 (80-120%)					109 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					99 %				

Sample ID: IOD2043-02 (DRAFT: Trip Blank - Water)
 Reporting Units: ug/l

Benzene	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/04/05	U
Carbon tetrachloride	EPA 624	5E04019	0.28	5.0	ND	1	05/04/05	05/04/05	U
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1	05/04/05	05/04/05	U
1,1-Dichloroethane	EPA 624	5E04019	0.27	2.0	ND	1	05/04/05	05/04/05	U
1,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/04/05	U
1,1-Dichloroethene	EPA 624	5E04019	0.32	3.0	ND	1	05/04/05	05/04/05	U
Ethylbenzene	EPA 624	5E04019	0.25	2.0	ND	1	05/04/05	05/04/05	U
Tetrachloroethene	EPA 624	5E04019	0.32	2.0	ND	1	05/04/05	05/04/05	U
Toluene	EPA 624	5E04019	0.36	2.0	ND	1	05/04/05	05/04/05	U
1,1,1-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/04/05	U
1,1,2-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/04/05	U
Trichloroethene	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05	05/04/05	U
Trichlorofluoromethane	EPA 624	5E04019	0.34	5.0	ND	1	05/04/05	05/04/05	U
Vinyl chloride	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05	05/04/05	U
Xylenes, Total	EPA 624	5E04019	0.52	4.0	ND	1	05/04/05	05/04/05	U
Surrogate: Dibromofluoromethane (80-120%)					101 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					98 %				

AMEC VALIDATED

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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

LEVEL IV



Del Mar Analytical

17461 Doran Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-1291
 1034 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4067 FAX (909) 370-1034
 9484 Chasapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-8396 FAX (619) 505-0600
 9830 South 53rd St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0857
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-6620 FAX (702) 798-6620

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

Project ID: Routine Outfall 002

Report Number: IOD2044

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

DRAFT: PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2044-01 (DRAFT: Outfall 002 - Water)									
Reporting Units: ug/l									
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	05/05/05	U
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1	05/04/05	05/05/05	U
1,1-Dichloroethane	EPA 624	5E04019	0.27	2.0	ND	1	05/04/05	05/05/05	U
1,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/05/05	U
1,1-Dichloroethene	EPA 624	5E04019	0.32	3.0	ND	1	05/04/05	05/05/05	U
Ethylbenzene	EPA 624	5E04019	0.25	2.0	ND	1	05/04/05	05/05/05	U
Tetrachloroethene	EPA 624	5E04019	0.32	2.0	ND	1	05/04/05	05/05/05	U
Toluene	EPA 624	5E04019	0.36	2.0	ND	1	05/04/05	05/05/05	U
1,1,1-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/05/05	U
1,1,2-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/05/05	U
Trichloroethene	EPA 624	5E04019	0.26	5.0	0.27	1	05/04/05	05/05/05	J, DN, C
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, C
Xylenes, Total	EPA 624	5E04019	0.52	4.0	ND	1	05/04/05	05/05/05	U
Surrogate: Dibromofluoromethane (80-120%)					106 %				
Surrogate: Toluene-d8 (80-120%)					106 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					100 %				

Sample ID: IOD2044-02 (DRAFT: Trip Blank - Water)
 Reporting Units: ug/l

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	05/05/05	U
Chloroform	EPA 624	5E04019	0.33	2.0	ND	1	05/04/05	05/05/05	U
1,1-Dichloroethane	EPA 624	5E04019	0.27	2.0	ND	1	05/04/05	05/05/05	U
1,2-Dichloroethane	EPA 624	5E04019	0.28	2.0	ND	1	05/04/05	05/05/05	U
1,1-Dichloroethene	EPA 624	5E04019	0.32	3.0	ND	1	05/04/05	05/05/05	U
Ethylbenzene	EPA 624	5E04019	0.25	2.0	ND	1	05/04/05	05/05/05	U
Tetrachloroethene	EPA 624	5E04019	0.32	2.0	ND	1	05/04/05	05/05/05	U
Toluene	EPA 624	5E04019	0.36	2.0	ND	1	05/04/05	05/05/05	U
1,1,1-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/05/05	U
1,1,2-Trichloroethane	EPA 624	5E04019	0.30	2.0	ND	1	05/04/05	05/05/05	U
Trichloroethene	EPA 624	5E04019	0.26	5.0	ND	1	05/04/05	05/05/05	U
Trichlorofluoromethane	EPA 624	5E04019	0.34	5.0	ND	1	05/04/05	05/05/05	U
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	U
Surrogate: Dibromofluoromethane (80-120%)					101 %				
Surrogate: Toluene-d8 (80-120%)					108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					95 %				

AMEC VALIDATED

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

LEVEL IV

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



Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1122 FAX (949) 261-1207
 1014 E. Copley Dr., Suite A, Colton, CA 92324 (909) 370-4867 FAX (909) 370-1046
 5484 Chesapeake Dr., Suite 305, San Diego, CA 92123 (619) 595-8506 FAX (619) 595-9609
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 795-0943 FAX (480) 795-0944
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Alfa Outfall 012 - During Test

Report Number: IOD2047

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

DRAFT: PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	REV QUAL	QUAL CODE
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water)											
Reporting Units: ug/l											
1,2-Dibromoethane (EDB)	EPA 624	5E05024	0.32	2.0	ND	1	05/05/05	05/05/05		U	
Methyl-tert-butyl Ether (MTBE)	EPA 624	5E05024	0.32	5.0	ND	1	05/05/05	05/05/05			
1,2,3-Trichloropropane	EPA 624	5E05024	0.85	10	ND	1	05/05/05	05/05/05			
Di-isopropyl Ether (DIPE)	EPA 624	5E05024	0.25	5.0	ND	1	05/05/05	05/05/05			
tert-Butanol (TBA)	EPA 624	5E05024	3.1	25	ND	1	05/05/05	05/05/05			
Surrogate: Dibromofluoromethane (80-120%)					114 %						
Surrogate: Toluene-d8 (80-120%)					112 %						
Surrogate: 4-Bromofluorobenzene (80-120%)					110 %						
Sample ID: IOD2047-02 (DRAFT: Trip Blank - Water)											
Reporting Units: ug/l											
1,2-Dibromoethane (EDB)	EPA 624	5E05024	0.32	2.0	ND	1	05/05/05	05/05/05		U	
Methyl-tert-butyl Ether (MTBE)	EPA 624	5E05024	0.32	5.0	ND	1	05/05/05	05/05/05			
1,2,3-Trichloropropane	EPA 624	5E05024	0.85	10	ND	1	05/05/05	05/05/05			
Di-isopropyl Ether (DIPE)	EPA 624	5E05024	0.25	5.0	ND	1	05/05/05	05/05/05			
tert-Butanol (TBA)	EPA 624	5E05024	3.1	25	ND	1	05/05/05	05/05/05			
Surrogate: Dibromofluoromethane (80-120%)					111 %						
Surrogate: Toluene-d8 (80-120%)					112 %						
Surrogate: 4-Bromofluorobenzene (80-120%)					107 %						

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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



Del Mar Analytical

1740 Devon Ave., Suite 100, Irvine, CA 92614 (949) 261-1122 FAX (949) 261-1200
 1014 E. Colby Dr., Suite A, Colton, CA 92324 (909) 570-0007 FAX (909) 570-0008
 9454 Chesapeake Ln., Suite 305, San Diego, CA 92123 (619) 705-5900 FAX (619) 505-4000
 9830 South 57th St., Suite B-120, Phoenix, AZ 85044 (480) 771-8000 FAX (480) 771-8000
 2120 E. Sunset Rd., #3, Las Vegas, NV 89120 (702) 798-0600 FAX (702) 798-0600

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)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2049-01 (DRAFT: Outfall 018 - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	5E10003	0.28	2.0	ND	1	05/10/05	05/10/05	U
Trichlorotrifluoroethane (Freon 113)	EPA 624	5E10003	1.2	5.0	ND	1	05/10/05	05/10/05	U
Carbon tetrachloride	EPA 624	5E10003	0.28	5.0	ND	1	05/10/05	05/10/05	U
Chloroform	EPA 624	5E10003	0.33	2.0	ND	1	05/10/05	05/10/05	U
1,1-Dichloroethane	EPA 624	5E10003	0.27	2.0	ND	1	05/10/05	05/10/05	U
1,2-Dichloroethane	EPA 624	5E10003	0.28	2.0	ND	1	05/10/05	05/10/05	U
1,1-Dichloroethene	EPA 624	5E10003	0.42	3.0	ND	1	05/10/05	05/10/05	U
Ethylbenzene	EPA 624	5E10003	0.25	2.0	ND	1	05/10/05	05/10/05	U
Tetrachloroethene	EPA 624	5E10003	0.32	2.0	ND	1	05/10/05	05/10/05	U
Toluene	EPA 624	5E10003	0.36	2.0	ND	1	05/10/05	05/10/05	U
1,1,1-Trichloroethane	EPA 624	5E10003	0.30	2.0	ND	1	05/10/05	05/10/05	U
1,1,2-Trichloroethane	EPA 624	5E10003	0.30	2.0	ND	1	05/10/05	05/10/05	U
Trichloroethene	EPA 624	5E10003	0.26	5.0	1.0	1	05/10/05	05/10/05	U
Trichlorofluoromethane	EPA 624	5E10003	0.34	5.0	ND	1	05/10/05	05/10/05	U
Vinyl chloride	EPA 624	5E10003	0.26	5.0	ND	1	05/10/05	05/10/05	U
Xylenes, Total	EPA 624	5E10003	0.52	4.0	ND	1	05/10/05	05/10/05	U
Surrogate: Dibromofluoromethane (80-120%)					108 %				
Surrogate: Toluene-d8 (80-120%)					104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					104 %				
Sample ID: IOD2049-02 (DRAFT: Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 624	5E10003	0.28	2.0	ND	1	05/10/05	05/10/05	U
Trichlorotrifluoroethane (Freon 113)	EPA 624	5E10003	1.2	5.0	ND	1	05/10/05	05/10/05	U
Carbon tetrachloride	EPA 624	5E10003	0.28	5.0	ND	1	05/10/05	05/10/05	U
Chloroform	EPA 624	5E10003	0.33	2.0	ND	1	05/10/05	05/10/05	U
1,1-Dichloroethane	EPA 624	5E10003	0.27	2.0	ND	1	05/10/05	05/10/05	U
1,2-Dichloroethane	EPA 624	5E10003	0.28	2.0	ND	1	05/10/05	05/10/05	U
1,1-Dichloroethene	EPA 624	5E10003	0.42	3.0	ND	1	05/10/05	05/10/05	U
Ethylbenzene	EPA 624	5E10003	0.25	2.0	ND	1	05/10/05	05/10/05	U
Tetrachloroethene	EPA 624	5E10003	0.32	2.0	ND	1	05/10/05	05/10/05	U
Toluene	EPA 624	5E10003	0.36	2.0	ND	1	05/10/05	05/10/05	U
1,1,1-Trichloroethane	EPA 624	5E10003	0.30	2.0	ND	1	05/10/05	05/10/05	U
1,1,2-Trichloroethane	EPA 624	5E10003	0.30	2.0	ND	1	05/10/05	05/10/05	U
Trichloroethene	EPA 624	5E10003	0.26	5.0	ND	1	05/10/05	05/10/05	U
Trichlorofluoromethane	EPA 624	5E10003	0.34	5.0	ND	1	05/10/05	05/10/05	U
Vinyl chloride	EPA 624	5E10003	0.26	5.0	ND	1	05/10/05	05/10/05	U
Xylenes, Total	EPA 624	5E10003	0.52	4.0	ND	1	05/10/05	05/10/05	U
Surrogate: Dibromofluoromethane (80-120%)					105 %				
Surrogate: Toluene-d8 (80-120%)					102 %				
Surrogate: 4-Bromofluorobenzene (80-120%)					103 %				

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

AMEC VALIDATED

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

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
 550 South Wadsworth Boulevard
 Suite 500

Package ID T711WC151
 Task Order 313150010
 SDG No. IOD2043, IOD2044,
IOD2047, IOD2049

Lakewood, CO 80226

No. of Analyses 4

Laboratory Del Mar Analytical
 Reviewer L. Jarusewic
 Analysis/Method General Minerals

Date: 06/03/05
 Reviewer's Signature
L. Jarusewic

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

Data 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 detected 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
H	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
C	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.
B	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: GENERAL MINERALS

SAMPLE DELIVERY GROUPS: IOD2043, IOD2044, IOD2047,
IOD2049

Prepared by

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

I. INTRODUCTION

Task Order Title: NPDES Monitoring
Contract Task Order #: 313150010
Sample Delivery Group #: IOD2043, IOD2044, IOD2047, IOD2049
Project Manager: B. McIlvaine
Matrix: Water
Analysis: General Minerals
QC Level: Level IV
No. of Samples: 4
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.

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

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

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

2.1.3 Holding Times

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

2.2 CALIBRATION

For the applicable analyses, the initial calibration correlation coefficients were ≥ 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.

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.

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.



Del Mar Analytical

17403 Perlan Ave., Suite 100, Irvine, CA 92614 (949) 261-3022 FAX (949) 261-3023
 1014 F. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4607 FAX (909) 370-1026
 9404 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 502-8596 FAX (619) 502-9400
 8830 South West St., Suite B-120, Phoenix, AZ 85044 (480) 725-0043 FAX (480) 785-0271
 2520 E. Sunset Rd., #3, Las Vegas, NV 89120 (702) 798-3020 FAX (702) 798-3124

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

Project ID: Routine Outfall 001

Report Number: IOD2043

Sampled: 04-28-05
 Received: 04-28-05

DRAFT: INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2043-01 (DRAFT: Outfall 001 - Water) - cont.									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	5E02067	0.30	0.50	0.84	1	05/02/05	05/02/05	REV QUAL CODE
Sample ID: IOD2043-01 (DRAFT: Outfall 001 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	5D29110	0.040	1.0	7.6	1	04/29/05	04/29/05	
Sample ID: IOD2043-01 (DRAFT: Outfall 001 - Water)									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	5D29130	1.0	1.0	620	1	04/29/05	04/29/05	

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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



Del Mar Analytical

17461 Dorian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 266-1107
 1014 S. Cowley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (949) 370-1046
 9484 Chesapeake Dr., Suite 895, San Diego, CA 92123 (619) 595-8596 FAX (619) 595-9600
 9800 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 787-0043 FAX (480) 787-0051
 2720 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-8020 FAX (702) 798-3621

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

Project ID: Routine Outfall 002

Report Number: IOD2044

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

DRAFT: INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2044-01 (DRAFT: Outfall 002 - Water)									
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	5E02067	0.30	0.50	0.84	1	05/02/05	05/02/05	REV QUAL CODE
Sample ID: IOD2044-01 (DRAFT: Outfall 002 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	5D29110	0.080	2.0	79	2	04/29/05	04/29/05	
Sample ID: IOD2044-01 (DRAFT: Outfall 002 - Water)									
Reporting Units: umhos/cm									
Specific Conductance	EPA 120.1	5D29130	1.0	1.0	590	1	04/29/05	04/29/05	

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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



Del Mar Analytical

17467 Denan Ave., Suite 100, Irvine, CA 92614 (949) 261-7222 FAX (949) 261-3121
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 770-4667 FAX (909) 370-0146
 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-8556 FAX (619) 505-9011
 9830 South 51st St., Suite B-126, Phoenix, AZ 85044 (480) 763-0343 FAX (480) 763-0271
 2520 E. Sunset Rd., #3, Las Vegas, NV 89120 (702) 798-0020 FAX (702) 798-3021

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

Project ID: Alfa Outfall 012 - During Test

Report Number: IOD2047

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

DRAFT: INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water) - cont.									
Reporting Units: mg/l									
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	04/29/05	05/04/05	
Oil & Grease	EPA 413.1	5E04036	0.94	5.0	ND	1	05/04/05	05/04/05	u
Total Dissolved Solids	SM2540C	5D29129	10	10	250	1	04/29/05	04/29/05	
Total Suspended Solids	EPA 160.2	5E04071	10	10	21	1	05/04/05	05/04/05	
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water)									
Reporting Units: ml/hr									
Total Settleable Solids	EPA 160.5	5D29094	0.10	0.10	0.10	1	04/29/05	04/29/05	
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water)									
Reporting Units: NTU									
Turbidity	EPA 180.1	5D29110	0.040	1.0	23	1	04/29/05	04/29/05	
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water)									
Reporting Units: ug/l									
Perchlorate	EPA 314.0	5D29065	0.80	4.0	ND	1	04/29/05	04/30/05	*

REV
QUAL
CODE

AMEC VALIDATED

LEVEL IV

*Analysis Not Valid

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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



Del Mar Analytical

17461 Cedar Ave., Suite 100, Irvine, CA 92614 (949) 261-7122 FAX (949) 262-0217
 10741 L. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-3126
 9404 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 595-8296 FAX (619) 595-9009
 9640 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 787-0043 FAX (480) 787-0853
 2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3121

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

Project ID: Alfa Outfall 012 - During Test

Report Number: IOD2047

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

DRAFT: TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water)									
Reporting Units: mg/l									
Total Recoverable Hydrocarbons	EPA 418.1	SD30026	0.31	1.0	5.6	1	04/30/05	04/30/05	REV QUAL QUAL CODE

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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

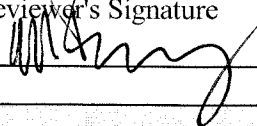
CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
355 South Teller Street
Suite 300
Lakewood, CO 80226

Package ID T711SV62
Task Order 313150010
SDG No. IOF1253

No. of Analyses 1

Laboratory Del Mar
Reviewer M. Pokorny
Analysis/Method Semivolatiles

Date: July 20, 2005
Reviewer's Signature


ACTION ITEMS^a	
1. Case Narrative	
Deficiencies	
2. Out of Scope	
Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy	
Deliverables	
5. Incorrect Hardcopy	
Deliverables	
6. Deviations from Analysis	
Protocol, e.g.,	
Holding Times	
GC/MS Tune/Inst. Perform	
Calibrations	
Blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
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: SEMIVOLATILES

SAMPLE DELIVERY GROUP: IOF1253

Prepared by

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

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.

Table 1. Sample identification

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

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

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

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.

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.



Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
 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: ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									REN QUAL	QUAL CODE
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water)										
Reporting Units: ug/l										
Naphthalene	EPA 625	SF19018	4.5	10	13	0.98	06/19/05	06/22/05		
N-Nitrosodimethylamine	EPA 625	SF19018	3.7	20	ND	0.98	06/19/05	06/22/05	U	
Surrogate: 2-Fluorophenol (30-120%)					58 %					
Surrogate: Phenol-d6 (35-120%)					68 %					
Surrogate: 2,4,6-Tribromophenol (45-120%)					79 %					
Surrogate: Nitrobenzene-d5 (45-120%)					87 %					
Surrogate: 2-Fluorobiphenyl (45-120%)					76 %					
Surrogate: Terphenyl-d14 (45-120%)					113 %					

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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

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
H	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
C	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.
B	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: GENERAL MINERALS

SAMPLE DELIVERY GROUP: IOF1253

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Monitoring
Contract Task Order #: 313150010
Sample Delivery Group #: IOF1253
Project Manager: P. Costa
Matrix: Water
Analysis: General Minerals
QC Level: Level IV
No. of Samples: 1
Reviewer: L. Jarusewic
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.

Table 1. Sample identification

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

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

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

2.1.2 Chain of Custody

The COC was signed and dated by field and laboratory personnel. 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.

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.

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.



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: TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Qualifiers	Data
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water)										
Reporting Units: mg/l										
Total Recoverable Hydrocarbons	EPA 418.1	5F22081	0.31	1.0	3.2	1	06/22/05	06/22/05	RU Qual	Qual Code

AMEC VALIDATED

LEVEL I

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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



Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3197
 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) 505-9589
 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	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	Data Code
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water) - cont. Reporting Units: mg/l										
Ammonia-N (Distilled)	EPA 350.2	5F23075	0.30	0.50	0.56	1	06/23/05	06/23/05		
Biochemical Oxygen Demand	EPA 405.1	5F17083	0.59	2.0	1.7	1	06/17/05	06/22/05	J	DNQ
Oil & Grease	EPA 413.1	5F20071	0.94	5.0	1.5	1	06/20/05	06/20/05	J	DNQ
Total Dissolved Solids	SM2540C	5F21081	10	10	280	1	06/22/05	06/22/05		
Total Suspended Solids	EPA 160.2	5F22109	10	10	13	1	06/22/05	06/22/05		
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water) Reporting Units: ml/hr										
Total Settleable Solids	EPA 160.5	5F18038	0.10	0.10	ND	1	06/18/05	06/18/05	U	
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water) Reporting Units: NTU										
Turbidity	EPA 180.1	5F17094	0.040	1.0	25	1	06/17/05	06/17/05		
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water) Reporting Units: ug/l										
Perrchlorate	EPA 314.0	5F16067	0.80	4.0	ND	1	06/16/05	06/16/05	*	

* analysis not validated

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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

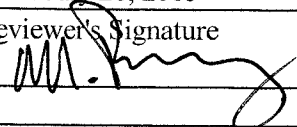
CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
 355 South Teller Street
 Suite 300
 Lakewood, CO 80226

Package ID T711VO118
 Task Order 313150010
 SDG No. IOF1253

No. of Analyses 1

Laboratory Del Mar
 Reviewer M. Pokorny
 Analysis/Method Volatiles (1,4-dioxanes)

Date: July 20, 2005
 Reviewer's Signature


ACTION ITEMS^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	Qualification required for blank contamination.
Holding Times	
GC/MS Tune/Inst. Perform	
Calibrations	
Blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification and Quantitation	
System Performance	
COMMENTS^b	
^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: VOLATILES

SAMPLE DELIVERY GROUP: IOF1253

Prepared by

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

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: 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 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.

Table 1. Sample identification

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

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.

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

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

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



Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
 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: VOLATILE ORGANICS by GCMS SIM

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									REV QUAL	QUAL CODE
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water)										
Reporting Units: ug/l										
1,4-Dioxane	EPA 8260B	5F21009	0.33	2.0	0.70	1	06/21/05	06/21/05	U	B, J
Surrogate: Dibromofluoromethane (80-120%)					108 %					B

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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

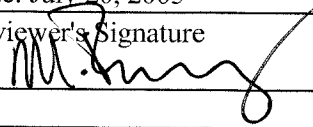
CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
 355 South Teller Street
 Suite 300
 Lakewood, CO 80226

Package ID T711VO117
 Task Order 313150010
 SDG No. IOF1253

No. of Analyses 2

Laboratory Del Mar
 Reviewer M. Pokorny
 Analysis/Method Volatiles

Date: July 20, 2005
 Reviewer's Signature 

ACTION ITEMS ^a	
1. Case Narrative	
Deficiencies	<hr/> <hr/>
2. Out of Scope	
Analyses	<hr/> <hr/>
3. Analyses Not Conducted	<hr/> <hr/>
4. Missing Hardcopy	
Deliverables	<hr/> <hr/>
5. Incorrect Hardcopy	
Deliverables	<hr/> <hr/>
6. Deviations from Analysis	
Protocol, e.g.,	
Holding Times	<hr/>
GC/MS Tune/Inst. Perform	<hr/>
Calibrations	<hr/>
Blanks	<hr/>
Surrogates	<hr/>
Matrix Spike/Dup LCS	<hr/>
Field QC	<hr/>
Internal Standard Performance	<hr/>
Compound Identification and	<hr/>
Quantitation	<hr/>
System Performance	<hr/>
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: VOLATILES

SAMPLE DELIVERY GROUP: IOF1253

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Monitoring
Contract Task Order #: 313150010
SDG#: IOF1253
Project Manager: P. costa
Matrix: Water
Analysis: Volatiles
QC Level: Level IV
No. of Samples: 2
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 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.

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

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 $\mu\text{g/L}$ (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	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									QUAL	CODE
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water) - cont.										
Reporting Units: ug/l										
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	06/19/05	↓	
1,2,3-Trichloropropane	EPA 624	5F19005	0.85	10	ND	1	06/19/05	06/19/05		
Di-isopropyl Ether (DIPE)	EPA 624	5F19005	0.25	5.0	ND	1	06/19/05	06/19/05		
tert-Butanol (TBA)	EPA 624	5F19005	3.1	25	ND	1	06/19/05	06/19/05		
Surrogate: Dibromofluoromethane (80-120%)					108 %					
Surrogate: Toluene-d8 (80-120%)					99 %					
Surrogate: 4-Bromofluorobenzene (80-120%)					92 %					
Sample ID: IOF1253-02 (DRAFT: Trip Blank - Water)										
Reporting Units: ug/l										
1,2-Dibromoethane (EDB)	EPA 624	5F19005	0.32	2.0	ND	1	06/19/05	06/19/05	U	
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	06/19/05		
Di-isopropyl Ether (DIPE)	EPA 624	5F19005	0.25	5.0	ND	1	06/19/05	06/19/05		
tert-Butanol (TBA)	EPA 624	5F19005	3.1	25	ND	1	06/19/05	06/19/05		
Surrogate: Dibromofluoromethane (80-120%)					104 %					
Surrogate: Toluene-d8 (80-120%)					98 %					
Surrogate: 4-Bromofluorobenzene (80-120%)					91 %					

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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


CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
 355 South Teller Street
 Suite 300
 Lakewood, CO 80226

Package ID T711TF79
 Task Order 313150010
 SDG No. IOF1253

No. of Analyses 2

Laboratory Del Mar Analytical
 Reviewer L. Calvin
 Analysis/Method Purgeable TFH by Method 8015M

Date: July 18, 2005
 Reviewer's Signature


ACTION ITEMS ^a	
1. Case Narrative Deficiencies	
2. Out of Scope Analyses	
3. Analyses Not Conducted	
4. Missing Hardcopy Deliverables	
5. Incorrect Hardcopy Deliverables	
6. Deviations from Analysis Protocol, e.g.,	Qualification assigned for a continuing calibration %D >15%.
Holding Times	
GC/MS Tune/Inst. Performance	
Calibration	
Method blanks	
Surrogates	
Matrix Spike/Dup LCS	
Field QC	
Internal Standard Performance	
Compound Identification	
Quantitation	
System Performance	
COMMENTS ^b	
^a Subcontracted analytical laboratory is not meeting contract and/or method requirements. ^b Differences in protocol have been adopted by the laboratory but no action against the laboratory is required.	



DATA VALIDATION REPORT

NPDES Monitoring

ANALYSIS: TPH/Purgeable

SAMPLE DELIVERY GROUP: IOF1253

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Monitoring
Contract Task Order #: 313150010
SDG#: IOF1253
Project Manager: P Costa
Matrix: Water
Analysis: TPH-Purgeable
QC 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.

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

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.

2.7 MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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

2.8 FIELD QC SAMPLES

Field QC samples 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.



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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water) - cont. Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	5F20039	0.050	0.10	0.30	1	06/20/05	06/20/05	J C
Surrogate: 4-BFB (FID) (65-140%)					84 %				
Sample ID: IOF1253-02 (DRAFT: Trip Blank - Water) Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	5F17038	0.050	0.10	ND	1	06/17/05	06/17/05	U
Surrogate: 4-BFB (FID) (65-140%)					80 %				

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE



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

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
No. of Samples: 1
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 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.

Table 1. Sample identification

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

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 ≤20%. The %Ds for the initial calibration verification (ICV) and continuing calibrations associated with the sample analysis were ≤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%,

and the RPD was within the QC limit of $\leq 25\%$. 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.

2.7 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. No 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.



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)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
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	0.98	06/20/05	06/22/05	rel qual qual code
Surrogate: n-Octacosane (40-125%)					80 %				

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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

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
H	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
C	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.
B	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

1. INTRODUCTION

Task Order Title: NPDES Monitoring
Contract Task Order #: 313150010
Sample Delivery Group #: IOF1253
Project Manager: P. Costa
Matrix: Water
Analysis: Perchlorate
QC Level: Level IV
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.

Table 1. Sample identification

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

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.



Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
 1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8598 FAX (858) 505-9689
 9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 783-0051
 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	Dilution Factor	Date Extracted	Date Analyzed	Data	Qualifiers
										Rev Qual
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water) - cont.										
Reporting Units: mg/l										
Ammonia-N (Distilled)	EPA 350.2	5F23075	0.30	0.50	0.56	1	06/23/05	06/23/05	*	
Biochemical Oxygen Demand	EPA 405.1	5F17083	0.59	2.0	1.7	1	06/17/05	06/22/05		J
Oil & Grease	EPA 413.1	5F20071	0.94	5.0	1.5	1	06/20/05	06/20/05		J
Total Dissolved Solids	SM2540C	5F21081	10	10	280	1	06/22/05	06/22/05		
Total Suspended Solids	EPA 160.2	5F22109	10	10	13	1	06/22/05	06/22/05		
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water)										
Reporting Units: ml/hr										
Total Settleable Solids	EPA 160.5	5F18038	0.10	0.10	ND	1	06/18/05	06/18/05		
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water)										
Reporting Units: NTU										
Turbidity	EPA 180.1	5F17094	0.040	1.0	25	1	06/17/05	06/17/05		
Sample ID: IOF1253-01 (DRAFT: Outfall 012 - Water)										
Reporting Units: ug/l										
Perchlorate	EPA 314.0	5F16067	0.80	4.0	ND	1	06/16/05	06/16/05		u

* analysis
 not validated

AMEC VALIDATED

LEVEL II

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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



Del Mar Analytical

17443 Florida Ave., Suite 100, Irvine, CA 92614 (949) 769-1022 FAX (949) 769-1020
 1311 E. Cooley Ln., Suite A, Colton, CA 92324 (909) 377-9017 FAX (909) 370-1049
 9474 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 516-8396 FAX (619) 502-0069
 9820 South 53rd St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0044
 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: Quarterly Outfall 018

Report Number: IOD2049

Sampled: 04/28/05

Received: 04/28/05

DRAFT: INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2049-01 (DRAFT: Outfall 018 - Water) - cont.									
Reporting Units: mg/l									
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	9.7	1	04/29/05	05/04/05	
Chloride	EPA 300.0	5D28116	0.26	0.50	30	1	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
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: ml/hr									
Total Settleable Solids	EPA 160.5	5D29094	0.10	0.10	ND	1	04/29/05	04/29/05	U
Sample ID: IOD2049-01 (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: Outfall 018 - Water)									
Reporting Units: ug/l									
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	1	04/29/05	04/29/05	

REV QUAL
 QUAL CODE

DNQ

AMEC VALIDATED

LEVEL IV

*Analysis Not Validated

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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

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
H	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
C	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.
B	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 GROUPS: IOD2047 & IOD2049

Prepared by

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

1. INTRODUCTION

Task Order Title: NPDES Monitoring
Contract Task Order #: 313150010
Sample Delivery Group #: IOD2047, IOD2049
Project Manager: B. McIlvaine
Matrix: Water
Analysis: Perchlorate
QC Level: Level IV
No. of Samples: 2
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.

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

2. DATA VALIDATION FINDINGS

2.1 SAMPLE MANAGEMENT

Following are findings associated with sample management:

2.1.1 Sample Preservation, Handling, and Transport

The samples in these SDGs were received at the laboratory within the temperature limits of $4^{\circ}\text{C} \pm 2^{\circ}\text{C}$. 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.

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.



Del Mar Analytical

17461 Herian Ave., Suite 100, Irvine, CA 92614 (949) 261-7722 FAX (949) 261-3107
 1074 E. Coolley Dr., Suite A, Colton, CA 92324 (909) 539-4507 FAX (909) 539-4506
 9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-8566 FAX (619) 505-0609
 9650 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 765-0013 FAX (480) 765-1051
 2520 E. Sunset Rd., # 3, Las Vegas, NV 89120 (702) 798-1020 FAX (702) 798-1021

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

Project ID: Aifa Outfall 012 - During Test

Report Number: IOD2047

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

DRAFT: INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	REV QUAL	QUAL CODE
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water) - cont.											
Reporting Units: mg/l											
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	3.2	1	04/29/05	05/04/05			
Oil & Grease	EPA 413.1	5E04036	0.94	5.0	ND	1	05/04/05	05/04/05			
Total Dissolved Solids	SM2540C	5D29129	10	10	250	1	04/29/05	04/29/05			
Total Suspended Solids	EPA 160.2	5E04071	10	10	21	1	05/04/05	05/04/05			
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water)											
Reporting Units: ml/hr											
Total Settleable Solids	EPA 160.5	5D29094	0.10	0.10	0.10	1	04/29/05	04/29/05			
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water)											
Reporting Units: NTU											
Turbidity	EPA 180.1	5D29110	0.040	1.0	23	1	04/29/05	04/29/05			
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water)											
Reporting Units: ug/l											
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

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



Del Mar Analytical

17443 Denali Ave., Suite 100, Irvine, CA 92614 (949) 267-7022 FAX (949) 267-7023
 3014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 371-9467 FAX (909) 371-1044
 9414 Chesapeake Ln., Suite 305, San Diego, CA 92123 (619) 515-8596 FAX (619) 515-8599
 9830 South 51st St., Suite B-120, Phoenix, AZ 85024 (480) 365-0043 FAX (480) 365-0044
 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: Quarterly Outfall 018

Report Number: IOD2049

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

DRAFT: INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers	
									REV QUAL	QUAL CODE
Sample ID: IOD2049-01 (DRAFT: Outfall 018 - Water) - cont.										
Reporting Units: mg/l										
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		
Chloride	EPA 300.0	5D28116	0.26	0.50	30	1	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 (DRAFT: Outfall 018 - Water)										
Reporting Units: ml/hr										
Total Settleable Solids	EPA 160.5	5D29094	0.10	0.10	ND	1	04/29/05	04/29/05		
Sample ID: IOD2049-01 (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: Outfall 018 - Water)										
Reporting Units: ug/l										
Total Cyanide	EPA 335.2	5D29078	2.2	5.0	ND	1	04/29/05	04/29/05		✓
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	1	04/29/05	04/29/05	*	

AMEC VALIDATED

LEVEL IV

**Analysis Not Validated*

DRAFT REPORT
 DRAFT REPORT
 DATA SUBJECT TO CHANGE

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