2.4 BLANKS

One water method blank (P5E0214-BLK1) was associated with this SDG. Target compound 1,4-dioxane was not detected above the MDL in the method blank. The method blank raw data showed no evidence of a false negative. No qualifications were required.

2.5 BLANK SPIKES AND LABORATORY CONTROL SAMPLES

The laboratory analyzed a blank spike/blank spike duplicate pair (P5E0214-BS1/BS1D) with this SDG; however, P5E0214-BS1 was reported as the CCV (see section 2.3); therefore, P5E0214-BS1D was evaluated as a single blank spike. 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 (949) 370-1258
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
3830 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: IOD2047

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

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water) - cont.									
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B	P5E0214	0.49	1.0	ND	1	05/02/05	05/02/05	U
Surrogate: Dibromofluoromethane (80-125%)					97 %				

KEY: QUAL = QUAL CODE

AMEC VALIDATED

LEVEL IV

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

AMEC Earth & Environmental
550 South Wadsworth Boulevard
Suite 500

Lakewood, CO 80226

Package ID T711WC151
Task Order 313150010
SDG No. IOD2043, IOD2044, IOD2047, IOD2049
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[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 applied for:
Holding Times	1) Detects below the reporting limit
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 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 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
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°C ± 2°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

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
4619 North 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2420 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Routine Outfall 001

Report Number: IOD2043

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

DRAFT: INORGANICS

Analyte	Method	Batch	MDL	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	
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	

REV QUAL | QUAL CODE

AMEC VALIDATED

LEVEL IV

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Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0
2220 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3

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	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	
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	

REV QUAL | QUAL CODE

AMEC VALIDATED

LEVEL IV

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DATA SUBJECT TO CHANGE

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
4619 North 53rd 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: IOD2047

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

DRAFT: INORGANICS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	REV QUAL	Data Qualifiers 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	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/l/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	*	

AMEC VALIDATED

LEVEL IV

*Analyte Not Valid

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
30 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
960 South 52nd 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: IOD2047

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

DRAFT: TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOD2047-01 (DRAFT: Outfall 012 - Water)									REV QUAL / QUAL CODE
Reporting Units: mg/l									
Total Recoverable Hydrocarbons	EPA 418.1	5D30026	0.31	1.0	**5.6**	1	04/30/05	04/30/05	

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LEVEL IV

DRAFT REPORT
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Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 261-1228
5731 E. Cholla Ln., 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) 505-8689
1845 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: Quarterly Outfall 018

Report Number: IOD2049

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

DRAFT: INORGANICS

Analyte	Method	Batch	MDL	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	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	DNQ
Total Dissolved Solids	EPA 160.1	5D29129	10	10	**320**	1	04/29/05	04/29/05		
Total Suspended Solids	EPA 160.2	5E04071	10	10	**48**	1	05/04/05	05/04/05		
Sample ID: IOD2049-01 (DRAFT: Outfall 018 - Water)										
Reporting Units: ml/l/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		

AMEC VALIDATED

LEVEL IV

*Analysis Not Validated

DRAFT REPORT
DRAFT REPORT
DATA SUBJECT TO CHANGE

CONTRACT COMPLIANCE SCREENING FORM FOR HARDCOPY DATA

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

Laboratory Del Mar Analytical
Reviewer L. Jarusewic
Analysis/Method Perchlorate

Package ID T711WC153
Task Order 313150010
SDG No. IOD2047, IOD2049
No. of Analyses 2

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

ACTION ITEMS[a]	
1. **Case Narrative Deficiencies**	
2. **Out of Scope Analyses**	
3. **Analyses Not Conducted**	
4. **Missing Hardcopy Deliverables**	
5. **Incorrect Hardcopy Deliverables**	
6. **Deviations from Analysis Protocol, e.g.,**	
Holding Times	
GC/MS Tune/Inst. Performance	
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 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.
S	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°C ± 2°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 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 261-1228
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
4619 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: IOD2047

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

DRAFT: INORGANICS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers REV QUAL	Data Qualifiers 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/l/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

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2465 Dupont Ave., Suite 100, Irvine, CA 92612 (949) 261-1022 FAX (949) 261-1228
5464 E. Cowles Dr., Suite A, Clifton, CA 92324 (909) 307-4067 FAX (909) 307-0160
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
4850 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: Quarterly Outfall 018

Report Number: IOD2049

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

DRAFT: INORGANICS

Analyte	Method	Batch	MDL	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers REV QUAL	Data Qualifiers 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/l/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		U
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

APPENDIX G - VOLUME 4 (Part 3 of 3)

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Section No.

APPENDIX G

Section 9 Continued

Outfall 012

Del Mar Analytical Laboratory Reports

AMEC Data Validation Reports

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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

LABORATORY REPORT

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

Project: Alfa Outfall 012 - During Test

Sampled: 05/03/05
Received: 05/04/05
Issued: 06/27/05 16:57

NELAP #01108CA California ELAP#1197 CSDLAC #10117

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

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

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

LABORATORY ID	CLIENT ID	MATRIX
IOE0230-01	Outfall 012	Water
IOE0230-02	Trip Blank	Water

Reviewed By:

Michele Harper

Del Mar Analytical, Irvine
Michele Harper
Project Manager

Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

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

Project ID: Alfa Outfall 012 - During Test

Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

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: IOE0230-01 (Outfall 012 - Water)					**Sampled: 05/03/05**				
Reporting Units: mg/l									
Total Recoverable Hydrocarbons	EPA 418.1	5E12040	0.34	1.1	**5.2**	1	05/12/05	05/12/05	

Del Mar Analytical, Irvine
Michele Harper
Project Manager

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

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

Project ID: Alfa Outfall 012 - During Test

Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

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: IOE0230-01 (Outfall 012 - Water) - cont.					**Sampled: 05/03/05**				
Reporting Units: mg/l									
EFH (C13 - C22)	EPA 8015B	5E06055	0.082	0.50	**0.71**	0.971	05/06/05	05/06/05	
Surrogate: n-Octacosane (40-125%)					*73 %*				

Del Mar Analytical, Irvine
Michele Harper
Project Manager

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

Project ID: Alfa Outfall 012 - During Test

Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

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: IOE0230-01 (Outfall 012 - Water) - cont.					**Sampled: 05/03/05**				
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	5E12047	0.50	1.0	**1.7**	10	05/12/05	05/12/05	
Surrogate: 4-BFB (FID) (65-140%)					*114 %*				
Sample ID: IOE0230-02 (Trip Blank - Water)					**Sampled: 05/03/05**				
Reporting Units: mg/l									
GRO (C4 - C12)	EPA 8015 Mod.	5E11043	0.050	0.10	ND	1	05/11/05	05/11/05	
Surrogate: 4-BFB (FID) (65-140%)					*102 %*				

Del Mar Analytical, Irvine
Michele Harper
Project Manager

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

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

Project ID: Alfa Outfall 012 - During Test

Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

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: IOE0230-01 (Outfall 012 - Water)					**Sampled: 05/03/05**				
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	5E09023	0.32	2.0	ND	1	05/09/05	05/10/05	
Methyl-tert-butyl Ether (MTBE)	EPA 624	5E09023	0.32	5.0	ND	1	05/09/05	05/10/05	
1,2,3-Trichloropropane	EPA 624	5E09023	0.85	10	ND	1	05/09/05	05/10/05	
Di-isopropyl Ether (DIPE)	EPA 624	5E09023	0.25	5.0	ND	1	05/09/05	05/10/05	
tert-Butanol (TBA)	EPA 624	5E09023	3.1	25	ND	1	05/09/05	05/10/05	
Surrogate: Dibromofluoromethane (80-120%)					*112 %*				
Surrogate: Toluene-d8 (80-120%)					*107 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*105 %*				
Sample ID: IOE0230-02 (Trip Blank - Water)					**Sampled: 05/03/05**				
Reporting Units: ug/l									
1,2-Dibromoethane (EDB)	EPA 624	5E12005	0.32	2.0	ND	1	05/12/05	05/12/05	
Methyl-tert-butyl Ether (MTBE)	EPA 624	5E12005	0.32	5.0	ND	1	05/12/05	05/12/05	
1,2,3-Trichloropropane	EPA 624	5E12005	0.19	10	ND	1	05/12/05	05/12/05	
Di-isopropyl Ether (DIPE)	EPA 624	5E12005	0.25	5.0	ND	1	05/12/05	05/12/05	
tert-Butanol (TBA)	EPA 624	5E12005	3.1	25	ND	1	05/12/05	05/12/05	
Surrogate: Dibromofluoromethane (80-120%)					*97 %*				
Surrogate: Toluene-d8 (80-120%)					*98 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)					*90 %*				

Del Mar Analytical, Irvine
Michele Harper
Project Manager

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: IOE0230

Sampled: 05/03/05
Received: 05/04/05

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOE0230-01 (Outfall 012 - Water)					**Sampled: 05/03/05**				
Reporting Units: ug/l									
Naphthalene	EPA 625	5E05051	4.5	10	**23**	0.962	05/05/05	05/10/05	
N-Nitrosodimethylamine	EPA 625	5E05051	3.7	20	ND	0.962	05/05/05	05/10/05	
Surrogate: 2-Fluorophenol (30-120%)					*58 %*				
Surrogate: Phenol-d6 (35-120%)					*66 %*				
Surrogate: 2,4,6-Tribromophenol (45-120%)					*83 %*				
Surrogate: Nitrobenzene-d5 (45-120%)					*77 %*				
Surrogate: 2-Fluorobiphenyl (45-120%)					*77 %*				
Surrogate: Terphenyl-d14 (45-120%)					*76 %*				

Del Mar Analytical, Irvine
Michele Harper
Project Manager

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: IOE0230

Sampled: 05/03/05
Received: 05/04/05

INORGANICS

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOE0230-01 (Outfall 012 - Water) - cont.					**Sampled: 05/03/05**				
Reporting Units: mg/l									
Ammonia-N (Distilled)	EPA 350.2	5E05091	0.30	0.50	ND	1	05/05/05	05/05/05	
Biochemical Oxygen Demand	EPA 405.1	5E04069	0.59	2.0	**1.5**	1	05/04/05	05/09/05	J
Oil & Grease	EPA 413.1	5E06041	0.94	5.0	ND	1	05/06/05	05/18/05	
Total Dissolved Solids	SM2540C	5E04104	10	10	**250**	1	05/04/05	05/04/05	
Total Suspended Solids	EPA 160.2	5E08025	10	10	**11**	1	05/08/05	05/08/05	
Sample ID: IOE0230-01 (Outfall 012 - Water)					**Sampled: 05/03/05**				
Reporting Units: ml/l/hr									
Total Settleable Solids	EPA 160.5	5E05078	0.10	0.10	**0.10**	1	05/05/05	05/05/05	
Sample ID: IOE0230-01 (Outfall 012 - Water)					**Sampled: 05/03/05**				
Reporting Units: NTU									
Turbidity	EPA 180.1	5E05095	0.040	1.0	**30**	1	05/05/05	05/05/05	
Sample ID: IOE0230-01 (Outfall 012 - Water)					**Sampled: 05/03/05**				
Reporting Units: ug/l									
Perchlorate	EPA 314.0	5E10060	0.80	4.0	ND	1	05/10/05	05/10/05	C

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Michele Harper
Project Manager

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
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Sampled: 05/03/05
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1,4-DIOXANE BY GC/MS (EPA 5030B/8260B)

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IOE0230-01 (Outfall 012 - Water) - cont.					**Sampled: 05/03/05**				**RL-1**
Reporting Units: ug/l									
1,4-Dioxane	EPA 8260B	P5E1128	4.9	10	ND	10	05/11/05	05/11/05	
Surrogate: Dibromofluoromethane (80-125%)					*101 %*				

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Michele Harper
Project Manager

Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

SHORT HOLD TIME DETAIL REPORT

Sample ID: Outfall 012 (IOE0230-01) - Water	Hold Time (in days)	Date/Time Sampled	Date/Time Received	Date/Time Extracted	Date/Time Analyzed
EPA 160.5	2	05/03/2005 16:16	05/04/2005 15:15	05/05/2005 09:01	05/05/2005 11:00
EPA 180.1	2	05/03/2005 16:16	05/04/2005 15:15	05/05/2005 13:00	05/05/2005 14:00
EPA 405.1	2	05/03/2005 16:16	05/04/2005 15:15	05/04/2005 20:00	05/09/2005 18:00

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Michele Harper
Project Manager

Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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Pasadena, CA 91101
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Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E12040 Extracted: 05/12/05											
Blank Analyzed: 05/12/2005 (5E12040-BLK1)											
Total Recoverable Hydrocarbons	ND	1.0	0.31	mg/l							
LCS Analyzed: 05/12/2005 (5E12040-BS1)											
Total Recoverable Hydrocarbons	5.21	1.0	0.31	mg/l	5.00		104	65-120			M-NR1
LCS Dup Analyzed: 05/12/2005 (5E12040-BSD1)											
Total Recoverable Hydrocarbons	4.96	1.0	0.31	mg/l	5.00		99	65-120	5	20	

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Michele Harper
Project Manager

Del Mar Analytical

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METHOD BLANK/QC DATA

EXTRACTABLE FUEL HYDROCARBONS (CADHS/8015 Modified)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E06055 Extracted: 05/06/05											
Blank Analyzed: 05/06/2005 (5E06055-BLK1)											
EFH (C13 - C22)	ND	0.50	0.082	mg/l							
EFH (C13 - C40)	ND	0.50	0.082	mg/l							
Surrogate: n-Octacosane	*0.138*			*mg/l*	*0.200*		*69*	*40-125*			
LCS Analyzed: 05/06/2005 (5E06055-BS1)											**M-NR1**
EFH (C13 - C40)	0.438	0.50	0.082	mg/l	0.775		57	40-120			*J*
Surrogate: n-Octacosane	*0.138*			*mg/l*	*0.200*		*69*	*40-125*			
LCS Dup Analyzed: 05/06/2005 (5E06055-BSD1)											
EFH (C13 - C40)	0.434	0.50	0.082	mg/l	0.775		56	40-120	1	25	*J*
Surrogate: n-Octacosane	*0.142*			*mg/l*	*0.200*		*71*	*40-125*			

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Michele Harper
Project Manager

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

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

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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E11043 Extracted: 05/11/05											
Blank Analyzed: 05/11/2005 (5E11043-BLK1)											
GRO (C4 - C12)	ND	0.10	0.050	mg/l							
Surrogate: 4-BFB (FID)	*0.0119*			*mg/l*	*0.0100*		*119*	*65-140*			
LCS Analyzed: 05/11/2005 (5E11043-BS1)											
GRO (C4 - C12)	0.875	0.10	0.050	mg/l	0.800		109	70-140			
Surrogate: 4-BFB (FID)	*0.0387*			*mg/l*	*0.0300*		*129*	*65-140*			
Matrix Spike Analyzed: 05/11/2005 (5E11043-MS1)						**Source: IOE0220-32**					
GRO (C4 - C12)	0.252	0.10	0.050	mg/l	0.220	ND	115	60-140			
Surrogate: 4-BFB (FID)	*0.0119*			*mg/l*	*0.0100*		*119*	*65-140*			
Matrix Spike Dup Analyzed: 05/11/2005 (5E11043-MSD1)						**Source: IOE0220-32**					
GRO (C4 - C12)	0.250	0.10	0.050	mg/l	0.220	ND	114	60-140	1	20	
Surrogate: 4-BFB (FID)	*0.0117*			*mg/l*	*0.0100*		*117*	*65-140*			
Batch: 5E12047 Extracted: 05/12/05											
Blank Analyzed: 05/12/2005 (5E12047-BLK1)											
GRO (C4 - C12)	ND	0.10	0.050	mg/l							
Surrogate: 4-BFB (FID)	*0.0123*			*mg/l*	*0.0100*		*123*	*65-140*			
LCS Analyzed: 05/12/2005 (5E12047-BS1)											
GRO (C4 - C12)	0.621	0.10	0.050	mg/l	0.800		78	70-140			
Surrogate: 4-BFB (FID)	*0.0384*			*mg/l*	*0.0300*		*128*	*65-140*			
Matrix Spike Analyzed: 05/12/2005 (5E12047-MS1)						**Source: IOE0293-02**					
GRO (C4 - C12)	0.223	0.10	0.050	mg/l	0.220	ND	101	60-140			
Surrogate: 4-BFB (FID)	*0.00997*			*mg/l*	*0.0100*		*100*	*65-140*			

Del Mar Analytical, Irvine
Michele Harper
Project Manager

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

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300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
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METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E12047 Extracted: 05/12/05											
Matrix Spike Dup Analyzed: 05/12/2005 (5E12047-MSD1)						**Source: IOE0293-02**					
GRO (C4 - C12)	0.263	0.10	0.050	mg/l	0.220	ND	120	60-140	16	20	
Surrogate: 4-BFB (FID)	*0.0124*			*mg/l*	*0.0100*		*124*	*65-140*			

Del Mar Analytical, Irvine
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Project Manager

Del Mar Analytical

17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E09023 Extracted: 05/09/05											
Blank Analyzed: 05/09/2005 (5E09023-BLK1)											
1,2-Dibromoethane (EDB)	ND	2.0	0.32	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	0.32	ug/l							
1,2,3-Trichloropropane	ND	10	0.85	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	0.25	ug/l							
tert-Butanol (TBA)	ND	25	3.1	ug/l							
Surrogate: Dibromofluoromethane	*26.6*			*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: Toluene-d8	*27.0*			*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.2*			*ug/l*	*25.0*		*101*	*80-120*			
LCS Analyzed: 05/09/2005 (5E09023-BS1)											
1,2-Dibromoethane (EDB)	26.2	2.0	0.32	ug/l	25.0		105	70-125			
Methyl-tert-butyl Ether (MTBE)	23.4	5.0	0.32	ug/l	25.0		94	55-140			
1,2,3-Trichloropropane	23.1	10	0.85	ug/l	25.0		92	55-130			
Di-isopropyl Ether (DIPE)	25.9	5.0	0.25	ug/l	25.0		104	60-135			
tert-Butanol (TBA)	127	25	3.1	ug/l	125		102	65-135			
Surrogate: Dibromofluoromethane	*26.9*			*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: Toluene-d8	*27.5*			*ug/l*	*25.0*		*110*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.7*			*ug/l*	*25.0*		*107*	*80-120*			
Matrix Spike Analyzed: 05/09/2005 (5E09023-MS1)						**Source: IOE0441-01**					
1,2-Dibromoethane (EDB)	31.6	2.0	0.32	ug/l	25.0	ND	126	65-130			
Methyl-tert-butyl Ether (MTBE)	29.7	5.0	0.32	ug/l	25.0	ND	119	50-150			
1,2,3-Trichloropropane	28.8	10	0.85	ug/l	25.0	ND	115	50-135			
Di-isopropyl Ether (DIPE)	29.9	5.0	0.25	ug/l	25.0	ND	120	60-140			
tert-Butanol (TBA)	129	25	3.1	ug/l	125	ND	103	60-145			
Surrogate: Dibromofluoromethane	*27.8*			*ug/l*	*25.0*		*111*	*80-120*			
Surrogate: Toluene-d8	*27.0*			*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.9*			*ug/l*	*25.0*		*108*	*80-120*			

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Project Manager

Del Mar Analytical

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E09023 Extracted: 05/09/05											
Matrix Spike Dup Analyzed: 05/09/2005 (5E09023-MSD1)						Source: IOE0441-01					
1,2-Dibromoethane (EDB)	29.5	2.0	0.32	ug/l	25.0	ND	118	65-130	7	25	
Methyl-tert-butyl Ether (MTBE)	27.9	5.0	0.32	ug/l	25.0	ND	112	50-150	6	25	
1,2,3-Trichloropropane	26.8	10	0.85	ug/l	25.0	ND	107	50-135	7	30	
Di-isopropyl Ether (DIPE)	29.4	5.0	0.25	ug/l	25.0	ND	118	60-140	2	25	
tert-Butanol (TBA)	156	25	3.1	ug/l	125	ND	125	60-145	19	25	
Surrogate: Dibromofluoromethane	*27.4*			*ug/l*	*25.0*		*110*	*80-120*			
Surrogate: Toluene-d8	*27.1*			*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.5*			*ug/l*	*25.0*		*106*	*80-120*			
Batch: 5E12005 Extracted: 05/12/05											
Blank Analyzed: 05/12/2005 (5E12005-BLK1)											
1,2-Dibromoethane (EDB)	ND	2.0	0.32	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	5.0	0.32	ug/l							
1,2,3-Trichloropropane	ND	10	0.19	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	0.25	ug/l							
tert-Butanol (TBA)	ND	25	3.1	ug/l							
Surrogate: Dibromofluoromethane	*24.9*			*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: Toluene-d8	*25.0*			*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.8*			*ug/l*	*25.0*		*91*	*80-120*			
LCS Analyzed: 05/12/2005 (5E12005-BS1)											
1,2-Dibromoethane (EDB)	25.6	2.0	0.32	ug/l	25.0		102	70-125			
Methyl-tert-butyl Ether (MTBE)	24.5	5.0	0.32	ug/l	25.0		98	55-140			
1,2,3-Trichloropropane	23.1	10	0.19	ug/l	25.0		92	55-130			
Di-isopropyl Ether (DIPE)	26.5	5.0	0.25	ug/l	25.0		106	60-135			
tert-Butanol (TBA)	136	25	3.1	ug/l	125		109	65-135			
Surrogate: Dibromofluoromethane	*25.3*			*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: Toluene-d8	*25.4*			*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.5*			*ug/l*	*25.0*		*102*	*80-120*			

Del Mar Analytical, Irvine
Michele Harper
Project Manager

Del Mar Analytical

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

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E12005 Extracted: 05/12/05											
Matrix Spike Analyzed: 05/12/2005 (5E12005-MS1)						**Source: IOE0469-06**					
1,2-Dibromoethane (EDB)	24.2	2.0	0.32	ug/l	25.0	ND	97	65-130			
Methyl-tert-butyl Ether (MTBE)	23.0	5.0	0.32	ug/l	25.0	ND	92	50-150			
1,2,3-Trichloropropane	20.6	10	0.19	ug/l	25.0	ND	82	50-135			
Di-isopropyl Ether (DIPE)	24.9	5.0	0.25	ug/l	25.0	ND	100	60-140			
tert-Butanol (TBA)	132	25	3.1	ug/l	125	ND	106	60-145			
Surrogate: Dibromofluoromethane	*25.5*			*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: Toluene-d8	*24.8*			*ug/l*	*25.0*		*99*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.7*			*ug/l*	*25.0*		*103*	*80-120*			
Matrix Spike Dup Analyzed: 05/12/2005 (5E12005-MSD1)						**Source: IOE0469-06**					
1,2-Dibromoethane (EDB)	25.6	2.0	0.32	ug/l	25.0	ND	102	65-130	6	25	
Methyl-tert-butyl Ether (MTBE)	25.5	5.0	0.32	ug/l	25.0	ND	102	50-150	10	25	
1,2,3-Trichloropropane	23.2	10	0.19	ug/l	25.0	ND	93	50-135	12	30	
Di-isopropyl Ether (DIPE)	26.3	5.0	0.25	ug/l	25.0	ND	105	60-140	5	25	
tert-Butanol (TBA)	132	25	3.1	ug/l	125	ND	106	60-145	0	25	
Surrogate: Dibromofluoromethane	*26.1*			*ug/l*	*25.0*		*104*	*80-120*			
Surrogate: Toluene-d8	*25.1*			*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.3*			*ug/l*	*25.0*		*101*	*80-120*			

Del Mar Analytical, Irvine
Michele Harper
Project Manager

Del Mar Analytical

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

Project ID: Alfa Outfall 012 - During Test

Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E05051 Extracted: 05/05/05											
Blank Analyzed: 05/09/2005 (5E05051-BLK1)											
Naphthalene	ND	10	4.5	ug/l							
N-Nitrosodimethylamine	ND	20	3.7	ug/l							
Surrogate: 2-Fluorophenol	*110*			*ug/l*	*200*		*55*	*30-120*			
Surrogate: Phenol-d6	*125*			*ug/l*	*200*		*62*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*146*			*ug/l*	*200*		*73*	*45-120*			
Surrogate: Nitrobenzene-d5	*67.4*			*ug/l*	*100*		*67*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*71.6*			*ug/l*	*100*		*72*	*45-120*			
Surrogate: Terphenyl-d14	*76.3*			*ug/l*	*100*		*76*	*45-120*			
LCS Analyzed: 05/09/2005 (5E05051-BS1)											
Naphthalene	67.9	10	4.5	ug/l	100		68	50-120			M-NR1
N-Nitrosodimethylamine	54.6	20	3.7	ug/l	100		55	40-120			
Surrogate: 2-Fluorophenol	*105*			*ug/l*	*200*		*52*	*30-120*			
Surrogate: Phenol-d6	*121*			*ug/l*	*200*		*60*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*150*			*ug/l*	*200*		*75*	*45-120*			
Surrogate: Nitrobenzene-d5	*62.9*			*ug/l*	*100*		*63*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*67.3*			*ug/l*	*100*		*67*	*45-120*			
Surrogate: Terphenyl-d14	*65.6*			*ug/l*	*100*		*66*	*45-120*			
LCS Dup Analyzed: 05/09/2005 (5E05051-BSD1)											
Naphthalene	70.5	10	4.5	ug/l	100		70	50-120	4	20	
N-Nitrosodimethylamine	55.0	20	3.7	ug/l	100		55	40-120	1	20	
Surrogate: 2-Fluorophenol	*106*			*ug/l*	*200*		*53*	*30-120*			
Surrogate: Phenol-d6	*125*			*ug/l*	*200*		*62*	*35-120*			
Surrogate: 2,4,6-Tribromophenol	*153*			*ug/l*	*200*		*76*	*45-120*			
Surrogate: Nitrobenzene-d5	*63.9*			*ug/l*	*100*		*64*	*45-120*			
Surrogate: 2-Fluorobiphenyl	*70.1*			*ug/l*	*100*		*70*	*45-120*			
Surrogate: Terphenyl-d14	*66.0*			*ug/l*	*100*		*66*	*45-120*			

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Michele Harper
Project Manager

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1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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MWH-Pasadena/Boeing
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E04069 Extracted: 05/04/05											
Blank Analyzed: 05/09/2005 (5E04069-BLK1)											
Biochemical Oxygen Demand	ND	2.0	0.59	mg/l							
LCS Analyzed: 05/09/2005 (5E04069-BS1)											
Biochemical Oxygen Demand	224	100	30	mg/l	198		113	85-115			
LCS Dup Analyzed: 05/09/2005 (5E04069-BSD1)											
Biochemical Oxygen Demand	222	100	30	mg/l	198		112	85-115	1	20	
Batch: 5E04104 Extracted: 05/04/05											
Blank Analyzed: 05/04/2005 (5E04104-BLK1)											
Total Dissolved Solids	ND	10	10	mg/l							
LCS Analyzed: 05/04/2005 (5E04104-BS1)											
Total Dissolved Solids	926	10	10	mg/l	1000		93	90-110			
Duplicate Analyzed: 05/04/2005 (5E04104-DUP1)						**Source: IOE0149-01**					
Total Dissolved Solids	911	10	10	mg/l		910			0	10	
Batch: 5E05091 Extracted: 05/05/05											
Blank Analyzed: 05/05/2005 (5E05091-BLK1)											
Ammonia-N (Distilled)	ND	0.50	0.30	mg/l							
LCS Analyzed: 05/05/2005 (5E05091-BS1)											
Ammonia-N (Distilled)	10.1	0.50	0.30	mg/l	10.0		101	80-115			

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Project ID: Alfa Outfall 012 - During Test

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Sampled: 05/03/05
Received: 05/04/05

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E05091 Extracted: 05/05/05											
Matrix Spike Analyzed: 05/05/2005 (5E05091-MS1)						**Source: IOE0226-01**					
Ammonia-N (Distilled)	9.52	0.50	0.30	mg/l	10.0	ND	95	70-120			
Matrix Spike Dup Analyzed: 05/05/2005 (5E05091-MSD1)						**Source: IOE0226-01**					
Ammonia-N (Distilled)	9.52	0.50	0.30	mg/l	10.0	ND	95	70-120	0	15	
Batch: 5E05095 Extracted: 05/05/05											
Blank Analyzed: 05/05/2005 (5E05095-BLK1)											
Turbidity	0.0400	1.0	0.040	NTU							J
Duplicate Analyzed: 05/05/2005 (5E05095-DUP1)						**Source: IOE0230-01**					
Turbidity	30.9	1.0	0.040	NTU		30			3	20	
Batch: 5E06041 Extracted: 05/06/05											
Blank Analyzed: 05/06/2005 (5E06041-BLK1)											
Oil & Grease	1.10	5.0	0.94	mg/l							J
LCS Analyzed: 05/06/2005 (5E06041-BS1)											M-NR1
Oil & Grease	22.0	5.0	0.94	mg/l	20.0		110	65-120			
LCS Dup Analyzed: 05/06/2005 (5E06041-BSD1)											
Oil & Grease	18.3	5.0	0.94	mg/l	20.0		92	65-120	18	20	
Batch: 5E08025 Extracted: 05/08/05											
Blank Analyzed: 05/08/2005 (5E08025-BLK1)											
Total Suspended Solids	ND	10	10	mg/l							

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Michele Harper
Project Manager

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1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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MWH-Pasadena/Boeing
300 North Lake Avenue, Suite 1200
Pasadena, CA 91101
Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 5E08025 Extracted: 05/08/05											
LCS Analyzed: 05/08/2005 (5E08025-BS1)											
Total Suspended Solids	984	10	10	mg/l	1000		98	85-115			
Duplicate Analyzed: 05/08/2005 (5E08025-DUP1)						**Source: IOE0224-06**					
Total Suspended Solids	ND	10	10	mg/l		ND				10	
Batch: 5E10060 Extracted: 05/10/05											
Blank Analyzed: 05/10/2005 (5E10060-BLK1)											
Perchlorate	ND	4.0	0.80	ug/l							
LCS Analyzed: 05/10/2005 (5E10060-BS1)											
Perchlorate	48.9	4.0	0.80	ug/l	50.0		98	85-115			
Matrix Spike Analyzed: 05/10/2005 (5E10060-MS1)						**Source: IOE0554-03**					
Perchlorate	52.9	4.0	0.80	ug/l	50.0	ND	106	80-120			
Matrix Spike Dup Analyzed: 05/10/2005 (5E10060-MSD1)						**Source: IOE0554-03**					
Perchlorate	51.3	4.0	0.80	ug/l	50.0	ND	103	80-120	3	20	

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Michele Harper
Project Manager

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17461 Derian Ave., Suite 100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297
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Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P5E1128 Extracted: 05/11/05											
Blank Analyzed: 05/11/2005 (P5E1128-BLK1)											
1,4-Dioxane	ND	1.0	0.49	ug/l							
Surrogate: Dibromofluoromethane	*0.970*			*ug/l*	*1.00*		*97*	*80-125*			
LCS Analyzed: 05/11/2005 (P5E1128-BS1)											
1,4-Dioxane	10.7	1.0	0.49	ug/l	10.0		107	70-130			
Surrogate: Dibromofluoromethane	*0.970*			*ug/l*	*1.00*		*97*	*80-125*			
LCS Dup Analyzed: 05/11/2005 (P5E1128-BSD1)											
1,4-Dioxane	9.63	1.0	0.49	ug/l	10.0		96	70-130	11	20	
Surrogate: Dibromofluoromethane	*0.960*			*ug/l*	*1.00*		*96*	*80-125*			
Matrix Spike Analyzed: 05/11/2005 (P5E1128-MS1)						**Source: POE0059-02**					
1,4-Dioxane	10.4	1.0	0.49	ug/l	10.0	0.85	95	70-150			
Surrogate: Dibromofluoromethane	*0.980*			*ug/l*	*1.00*		*98*	*80-125*			
Matrix Spike Dup Analyzed: 05/11/2005 (P5E1128-MSD1)						**Source: POE0059-02**					
1,4-Dioxane	10.0	1.0	0.49	ug/l	10.0	0.85	92	70-150	4	25	
Surrogate: Dibromofluoromethane	*1.02*			*ug/l*	*1.00*		*102*	*80-125*			

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Michele Harper
Project Manager

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

Project ID: Alfa Outfall 012 - During Test

Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

DATA QUALIFIERS AND DEFINITIONS

C	Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
J	Estimated value. Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). The user of this data should be aware that this data is of limited reliability.
M-NR1	There was no MS/MSD analyzed with this batch due to insufficient sample volume. See Blank Spike/Blank Spike Duplicate.
RL-1	Reporting limit raised due to sample matrix effects.
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD	Relative Percent Difference

ADDITIONAL COMMENTS

For GRO (C4-C12):

GRO (C4-C12) is quantitated against a gasoline standard. Quantitation begins immediately following the methanol peak.

For Extractable Fuel Hydrocarbons (EFH, DRO, ORO) :

Unless otherwise noted, Extractable Fuel Hydrocarbons (EFH, DRO, ORO) are quantitated against a Diesel Fuel Standard.

Del Mar Analytical, Irvine
Michele Harper
Project Manager

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MWH-Pasadena/Boeing
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Attention: Bronwyn Kelly

Project ID: Alfa Outfall 012 - During Test

Report Number: IOE0230

Sampled: 05/03/05
Received: 05/04/05

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	Nelac	California
EPA 160.2	Water	X	X
EPA 160.5	Water	X	X
EPA 180.1	Water	X	X
EPA 314.0	Water	N/A	X
EPA 350.2	Water		X
EPA 405.1	Water	X	X
EPA 413.1	Water	X	X
EPA 418.1	Water	X	X
EPA 624	Water	X	X
EPA 625	Water	X	X
EPA 8015 Mod.	Water	X	X
EPA 8015B	Water	X	X
SM2540C	Water	X	X

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

Subcontracted Laboratories

Del Mar Analytical - Phoenix *NELAC Cert #01109CA, California Cert #2446, Arizona Cert #AZ0426, Nevada Cert #AZ-907*
9830 S. 51st Street, Suite B-120 - Phoenix, AZ 85044

Method Performed: EPA 8260B
Samples: IOE0230-01

)el Mar Analytical, Irvine
Aichele Harper
roject Manager

Del Mar Analytical

17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851
2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IOE0230

SENDING LABORATORY:

Del Mar Analytical, Irvine
17461 Derian Avenue. Suite 100
Irvine, CA 92614
Phone: (949) 261-1022
Fax: (949) 261-1228
Project Manager: Michele Harper

RECEIVING LABORATORY:

Del Mar Analytical - Phoenix
9830 S. 51st Street, Suite B-120
Phoenix, AZ 85044
Phone :(480) 785-0043
Fax: (480) 785-0851

Analysis	Expiration	Due	Comments
Sample ID: IOE0230-01 Water	**Sampled: 05/03/05 16:16**		
Dioxane-8260B-out	05/17/05 16:16	05/13/05 12:00	Boeing-permit,sub DMAP, J flags,ID=DMA+Outfall 012
Level 4 Data Package - Out	05/31/05 16:16	05/13/05 12:00	Boeing

Containers Supplied:
40 ml VOA w/HCL (IOE0230-01H)
40 ml VOA w/HCL (IOE0230-01I)
40 ml VOA w/HCL (IOE0230-01J)

POE0151-01

SAMPLE INTEGRITY:

All containers intact: ☑ Yes ☐ No
Custody Seals Present: ☑ Yes ☐ No
Sample labels/COC agree: ☑ Yes ☐ No
Samples Preserved Properly: ☑ Yes ☐ No
Samples Received On Ice:: ☑ Yes ☐ No
Samples Received at (temp): 2.4°C

Released By	Date	Time	Received By	Date	Time
	5.5.05	17:00			
Released By	Date	Time	Received By	Date	Time
				5/6/05	9:45

491 IOE0230

Del Mar Analytical Version 02/17/05 — CHAIN OF CUSTODY FORM

Client Name/Address:	Project:
MWH-Pasadena 300 North Lake Avenue, Suite 1200 Pasadena, CA 91101	Boeing-SSFL NPDES **During Test -- Outfall 012** Alfa Test Stand
Project Manager: Bronwyn Kelly Sampler: Rick Banagan, Pat Pollock	Phone Number: (626) 568-6691 Fax Number: (626) 568-6515

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservative	Bottle #	Oil & Grease (EPA 413.1)	8015-gas	8015-diesel/jet fuel	1,4-Dioxane-8260B	TRPH,=Total Rec. Petroleum Hydrocarbons (EPA 418.1)	624 (EDB, 1,2,3-TCP, MTBE, DPE, TBA)	BOD5(20 degrees C)	625 Naphthalene +NDMA analysis	Ammonia-N, Titr. (350.2) w/ dist	Perchlorate	Turbidity,TDS, TSS	Settleable Solids	Comments
Outfall 012	W	1L Amber	1	5/3-5/6	HCl	1A	X												
Outfall 012 duplicate	W	1L Amber	1		HCl	1B	X												
Outfall 012	W	VOAs	1		HCl	2A		X											
Outfall 012 duplicate	W	VOAs	2		HCl	2B, 2C		X											
Outfall 012	W	1L Amber	1		None	3A			X										
Outfall 012 duplicate	W	1L Amber	1		None	3B			X										
Outfall 012	W	VOAs	1		HCl	4A				X									
Outfall 012 duplicate	W	VOAs	2		HCl	4B, 4C				X									
Outfall 012	W	1L Amber	1		HCl	5A					X								
Outfall 012 duplicate	W	1L Amber	1		HCl	5B					X								
Outfall 012	W	VOAs	1		HCl	6A						X							
Outfall 012 duplicate	W	VOAs	2		HCl	6B, 6C						X							
Outfall 012	W	1L Poly	1		None	7A							X						
Outfall 012	W	1L Amber	1		None	8A								X					
Outfall 012 duplicate	W	1L Amber	1		None	8B								X					
Outfall 012	W	500ml Poly	1		H2S04	9A									X				
Outfall 012	W	1L Poly	1		None	10A										X	X		
Outfall 012	W	1L Poly	1	5/3-5/6	None	11A												X	
Trip Blank	W	VOAs	6		HCl	12A, 12B, 12C, 12D, 12E, 12F			X			X							

ANALYSIS REQUIRED

Field readings:
Temp = 69.3
pH = 7.0

Relinquished By	Date/Time:	Received By	Date/Time:
Kevin Berg	5-4-05 10:00	L DeLacy	5/4/05 10:50
L DeLacy	5/4/05 1575		5/4/05 1515
Relinquished By	Date/Time:	Received By	Date/Time:

Turn around Time: (check)
24 Hours _____ 5 Days _____
48 Hours _____ 10 Days _____
72 Hours _____ Normal ✓
Perchlorate Only 72 Hours _____
Metals Only 72 Hours _____
Sample Integrity: (Check)
Intact X On ice: 4°C

QA/QC DATA PACKAGE: LEVEL IV

Del Mar Analytical

QA/QC DATA PACKAGE LEVEL IV

TABLE SUMMARY

Del Mar Analytical

17461Derian 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 (949) 370-1046
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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

LABORATORY REPORT

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

Project: IOE0230

Sampled: 05/03/05
Received: 05/06/05
Issued: 05/16/05 15:12

NELAP #01109CA California ELAP#2446

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

CASE NARRATIVE

LABORATORY ID	CLIENT ID	MATRIX
POE0151-01	IOE0230-01	Water

SAMPLE RECEIPT: Samples were received intact, at 2°C, on ice and with chain of custody documentation.

HOLDING TIMES: All samples were analyzed within prescribed holding times and/or in accordance with the Del Mar Analytical Sample Acceptance Policy unless otherwise noted in the report.

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

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

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

SUBCONTRACTED: No analyses were subcontracted to an outside laboratory.

Reviewed By:

Karen Maxwell

Del Mar Analytical - Phoenix
Karen Maxwell
Project Manager

Del Mar Analytical

QA/QC DATA PACKAGE: LEVEL IV

CHAIN OF CUSTODY FORMS

Del Mar Analytical

17461 Derian Ave. Suite 100, Irvine, CA 92614 Ph (949) 261-1022 Fax (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851
2520 E. Sunset Rd., Suite #3, Las Vegas, NV 89120 Ph (702) 798-3620 Fax (702) 798-3621

SUBCONTRACT ORDER - PROJECT # IOE0230

SENDING LABORATORY:

Del Mar Analytical, Irvine
17461 Derian Avenue. Suite 100
Irvine, CA 92614
Phone: (949) 261-1022
Fax: (949) 261-1228
Project Manager: Michele Harper

RECEIVING LABORATORY:

Del Mar Analytical - Phoenix
9830 S. 51st Street, Suite B-120
Phoenix, AZ 85044
Phone :(480) 785-0043
Fax: (480) 785-0851

Analysis	Expiration	Due	Comments
Sample ID: IOE0230-01 Water	**Sampled: 05/03/05 16:16**		
Dioxane-8260B-out	05/17/05 16:16	05/13/05 12:00	Boeing-permit,sub DMAP, J flags,ID=DMA+Outfall 012
Level 4 Data Package - Out	05/31/05 16:16	05/13/05 12:00	Boeing

Containers Supplied:
40 ml VOA w/HCL (IOE0230-01H)
40 ml VOA w/HCL (IOE0230-01I)
40 ml VOA w/HCL (IOE0230-01J)

POE0151-01

SAMPLE INTEGRITY:

All containers intact: ☑ Yes ☐ No | Sample labels/COC agree: ☑ Yes ☐ No | Samples Received On Ice:: ☑ Yes ☐ No
Custody Seals Present: ☑ Yes ☐ No | Samples Preserved Properly: ☑ Yes ☐ No | Samples Received at (temp): 2.1°C

Released By	Date	Time	Received By	Date	Time
	5.5.05	17:00			
Released By	Date	Time	Received By	Date	Time
				5/6/05	9:45

Del Mar Analytical

QC DATA PACKAGE: LEVEL IV

ANALYTICAL REPORTS

Del Mar Analytical

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

Project ID: IOE0230

Report Number: POE0151

Sampled: 05/03/05
Received: 05/06/05

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

Analyte	Method	Batch	MDL Limit	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: POE0151-01 (IOE0230-01 - Water)									
Reporting Units: ug/l									**RL-1**
1,4-Dioxane	EPA 8260B	P5E1128	4.9	10	ND	10	05/11/05	05/11/05	
Surrogate: Dibromofluoromethane (80-125%)					*101 %*				

Del Mar Analytical - Phoenix
Karen Maxwell
Project Manager

QC DATA PACKAGE: LEVEL IV

ANALYTICAL REPORTS

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

Project ID: IOE0230

Report Number: POE0151

Sampled: 05/03/05
Received: 05/06/05

METHOD BLANK/QC DATA

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

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P5E1128 Extracted: 05/11/05											
Blank Analyzed: 05/11/2005 (P5E1128-BLK1)											
1,4-Dioxane	ND	1.0	0.49	ug/l							
Surrogate: Dibromofluoromethane	*0.970*			*ug/l*	*1.00*		*97*	*80-125*			
LCS Analyzed: 05/11/2005 (P5E1128-BS1)											
1,4-Dioxane	10.7	1.0	0.49	ug/l	10.0		107	70-130			
Surrogate: Dibromofluoromethane	*0.970*			*ug/l*	*1.00*		*97*	*80-125*			
LCS Dup Analyzed: 05/11/2005 (P5E1128-BSD1)											
1,4-Dioxane	9.63	1.0	0.49	ug/l	10.0		96	70-130	11	20	
Surrogate: Dibromofluoromethane	*0.960*			*ug/l*	*1.00*		*96*	*80-125*			
Matrix Spike Analyzed: 05/11/2005 (P5E1128-MS1)						**Source: POE0059-02**					
1,4-Dioxane	10.4	1.0	0.49	ug/l	10.0	0.85	95	70-150			
Surrogate: Dibromofluoromethane	*0.980*			*ug/l*	*1.00*		*98*	*80-125*			
Matrix Spike Dup Analyzed: 05/11/2005 (P5E1128-MSD1)						**Source: POE0059-02**					
1,4-Dioxane	10.0	1.0	0.49	ug/l	10.0	0.85	92	70-150	4	25	
Surrogate: Dibromofluoromethane	*1.02*			*ug/l*	*1.00*		*102*	*80-125*			

Del Mar Analytical - Phoenix
Karen Maxwell
Project Manager

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Del Mar Analytical - Irvine
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Attention: Michele Harper

Project ID: IOE0230

Report Number: POE0151

Sampled: 05/03/05
Received: 05/06/05

DATA QUALIFIERS AND DEFINITIONS

RL-1 Reporting limit raised due to sample matrix effects.

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

RPD Relative Percent Difference

Del Mar Analytical - Phoenix
Karen Maxwell
Project Manager

Del Mar Analytical

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Del Mar Analytical - Irvine
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Irvine, CA 92614
Attention: Michele Harper

Project ID: IOE0230

Report Number: POE0151

Sampled: 05/03/05
Received: 05/06/05

Certification Summary

Del Mar Analytical - Phoenix

Method	Matrix	Nelac	California
EPA 8260B	Water	X	X

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

Del Mar Analytical - Phoenix
Karen Maxwell
Project Manager

QA/QC DATA PACKAGE: LEVEL IV

EPA METHOD 8260B LABORATORY RAW DATA

GCMS TUNING
INITIAL/DAILY CALIBRATION
RUNLOG
CONTINUTING CALBRATION
QUANTITATION REPORTS
CHROMATOGRAMS
EXTRACTION LOG
STANDARD LOG

CMS #: 1 Date Analyzed: 3/19/05

ANALYST REVIEW	METHOD CRITERIA	PEER REVIEW
✓	1. Sequence File is printed and in the file folder? Standard IDs and analyst's initials are present?	✓
✓	2. Initial Calibration met criteria?	
✓	a. Print calibration as Average Response Factor (624: RSD ≤ 35%) (8260B: ≤ 30% for CCCs, ≤ 15% for all other compounds, SPCCs met Criteria) (524.2: RSD ≤ 20%)	✓
✓	b. If non CCC RSD > 15%, print out the curve as Linear Regression $r \geq 0.995$ or $r^2 \geq 0.99$ (do not force through zero for 8260B)	✓
✓	c. If non CCC RSD > 15%, print out the curve as Quadratic $r \geq 0.995$ or $r^2 \geq 0.99$ (do not force through zero for 8260B)	NA
✓	d. Choose option (b or c) with the least negative intercept	✓
✓	e. Requant the low (RL) standard against the curve must be ± 30%, file with the calibration for reference	✓
✓	f. If samples contain negative values then: compare the area counts with the low standard on file if <, then report as N.D. with no flag if >, then report from RSD curve and flag that curve is out or report at an elevated RL as compared to a curve standard	✓
✓	3. Initial Midpoint / LCS / BFB Tune (624: use Table 5) (524.2: ±30%) (8260B: see control chart) SPCCs met criteria? CCCs met criteria (±20%)?	✓
✓	4. Checked integration of all peaks in Midpoint?	✓
✓	5. Method Blank < Report Limit, if not is data flagged? (624: every 20 samples) (524.2: every 12 hours) (8260B: every 12 hours)	✓
NA	6. MS/MSD (every 20 samples) (624: use Table 5) (524.2: N/A) (8260B: see Control Chart)	NA
✓	7. All samples met holding time? (Soil 72hr ext, 7/14days water)	
✓	8. All water samples checked to be pH < 2? (Note this on the sequence file)	
✓	9. LCS every 20 samples (624: See Table 5) (524.2: ±30%) (8260B: See Control Chart)	
✓	10. Cont. Midpoint / LCS / BFB Tune done every 12 hours (624: use Table 5) (524.2: ±30%) (8260B: see control chart) SPCCs met criteria? CCCs met criteria (±20%)?	✓
✓	11. Surrogates within acceptance limits (624 / 524.2 / 8260B: See Control Chart)	✓
✓	12. Internal Standards within acceptance limits (624 / 524.2 / 8260B: response must be -50 to +100%).	✓
	13. Manual re-integration(s) performed? yes:_____ no: ✓	
	14. Corrective Action Report required? yes:_____ (Attached) no: ✓	
	15. Reports impacted by the Corrective Action Report	

Analyst: JGalassi 3/21/05 Reviewer / Date: [illegible] 3/22/05

DMAP GC/MS 1 DAILY LOG SUMMARY

CAL CURVE

DATE: 3/19/05 **QC BATCH # (s):** ~~P5C1902~~ J63/21/05

ANALYST: JLY/MS **SEQUENCE FILE:** C:\GCMS1\DATA\

CALIBRATION METHOD(S): DX021605.M / W072903.M

POS #	FILENAME	SAMPLE ID.CLIENT	SAMPLE VOL.	pH	EPA METHOD	MATRIX	COMMENTS
/	P0319001	TUNE	1uL	NA	8260	H2O	
1	2	CCV	1X10mL				
2	3	LCSDUP					-DNU IS Low
3	4	LCSDUP					-DNU IS Low -> Replace + rerun
/	5	TUNE					
1	6	CCV					-DNU, IS's still low will re-calibrate
2	7	CCV					
3	8	Blank					
4	9	1.0 ppb Cal					DNU Grubbs test outlier Re-run
5	10	2.0					
6	11	5.0					
7	12	10.0					
8	13	20.0					
9	14	50.0					
10	15	100.0					
11	16	Clean Blank/Tune					
12	17	~~MSCCV~~/Blank					
13	18	5/19 1.0 ppb Cal					
14	19	55/CCV					

MS 7/14 to 5

STANDARD ID NUMBERS

CCV / H_2O LCS / H20 SPIKE: 5030018 **Internal Std:** 353. 5030259 3/21/05

CALIBRATION STD: 5030348/5030349 **IS / Surrogate / BFB:** 5030321

REVIEWER / DATE: 3/22/05 tune / 5030090

Injection Log

Directory: D:\HPCHEM\1\DATA\031905

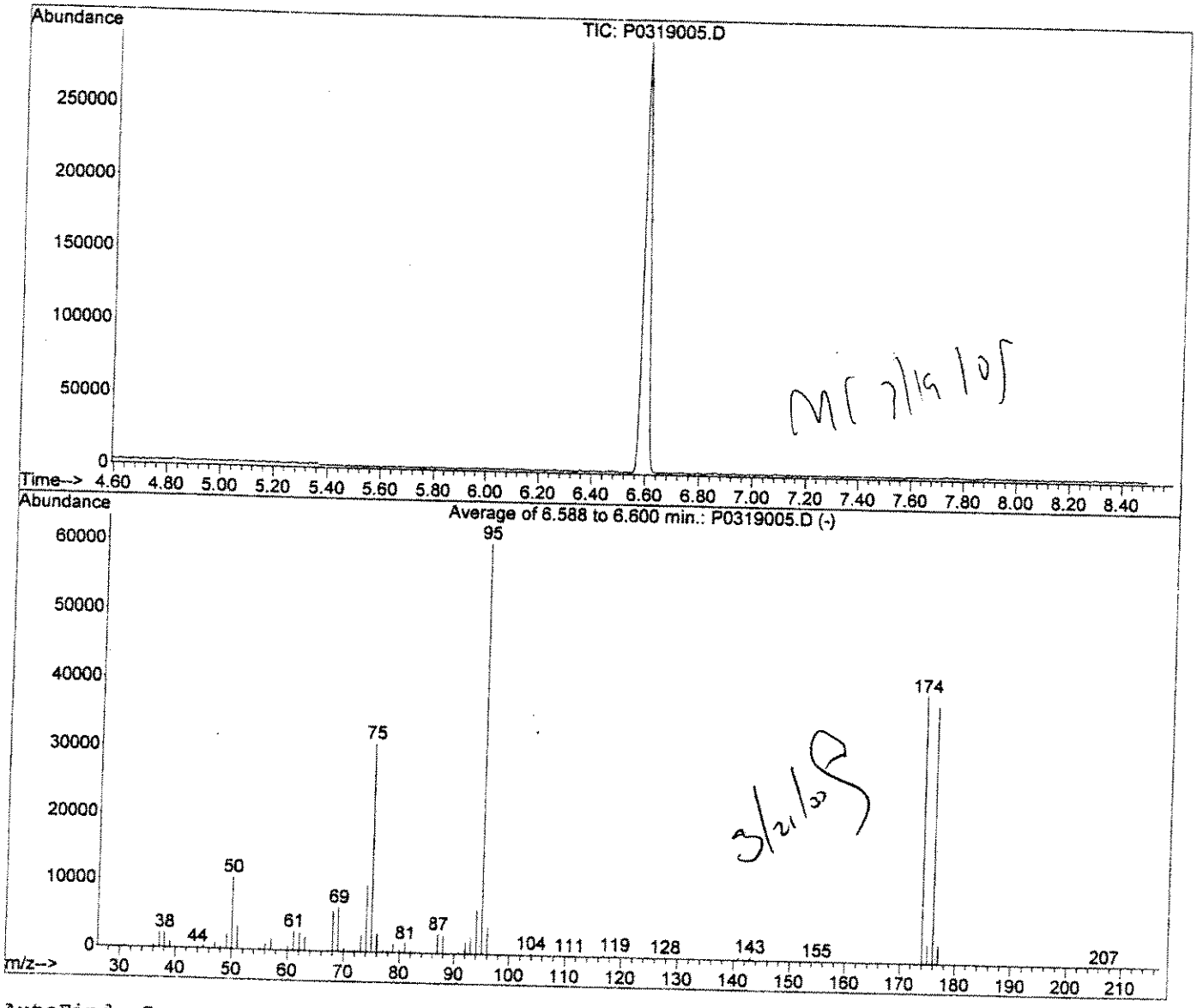
Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	P0319001.D	1.	~~TUNE/BLANK~~	1X 10ML	19 Mar 2005 06:19
2	2	P0319002.D	1.	CCV	1X 10ML	19 Mar 2005 06:32
3	3	P0319003.D	1.	LCS DUP	1X 10ML	19 Mar 2005 07:08
4	4	P0319004.D	1.	~~LCS DUP~~ DNU	1X 10ML	19 Mar 2005 07:44
5	5	P0319005.D	1.	TUNE	1X 10ML	19 Mar 2005 08:39
6	6	P0319006.D	1.	~~CCV~~	1X 10ML	19 Mar 2005 09:07
7	7	P0319007.D	1.	~~CCV~~ DNU	1X 10ML	19 Mar 2005 09:39
8	8	P0319008.D	1.	BLANK	1X 10ML	19 Mar 2005 10:12
9	9	P0319009.D	1.	~~1.0 PPB CAL~~ DNU	1X 10ML	19 Mar 2005 10:54
10	10	P0319010.D	1.	2.0 PPB CAL	1X 10ML	19 Mar 2005 11:26
11	11	P0319011.D	1.	5.0 PPB CAL	1X 10ML	19 Mar 2005 11:59
12	12	P0319012.D	1.	10.0 PPB CAL	1X 10ML	19 Mar 2005 12:32
13	13	P0319013.D	1.	20.0 PPB CAL	1X 10ML	19 Mar 2005 13:05
14	14	P0319014.D	1.	50.0 PPB CAL	1X 10ML	19 Mar 2005 13:38
15	15	P0319015.D	1.	100.0 PPB CAL	1X 10ML	19 Mar 2005 14:11
16	16	P0319016.D	1.	~~CLEAN OUT BLANK/TUNE~~ DNU	1X 10ML	19 Mar 2005 14:44
17	17	P0319017.D	1.	BLANK	1X 10ML	19 Mar 2005 15:21
18	18	P0319018.D	1.	1.0 PPB CAL	1X 10ML	19 Mar 2005 15:54
19	19	P0319019.D	1.	SS/CCV	1X 10ML	19 Mar 2005 16:27

3/21/05

BFB

Data File : D:\HPCHEM\1\DATA\031905\P0319005.D
Acq On : 19 Mar 2005 8:39 am
Sample : TUNE
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)

Vial: 5
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00



AutoFind: Scans 411, 412, 413; Background Corrected with Scan 395

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.5	10615	PASS
75	95	30	60	51.3	31037	PASS
95	95	100	100	100.0	60549	PASS
96	95	5	9	6.6	3996	PASS
173	174	0.00	2	0.6	226	PASS
174	95	50	100	65.5	39648	PASS
175	174	5	9	6.9	2752	PASS
176	174	95	101	96.0	38059	PASS
177	176	5	9	6.9	2638	PASS

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319008.D
Acq On : 19 Mar 2005 10:12 am
Sample : BLANK
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 10:34 2005

Vial: 8
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

MT 3/19/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	46878	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6171	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 NT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	37890	1.05	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 105.00%			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.45	88	278	0.23	ug/L ND	92

3/21/05

(#) = qualifier out of range (m) = manual integration

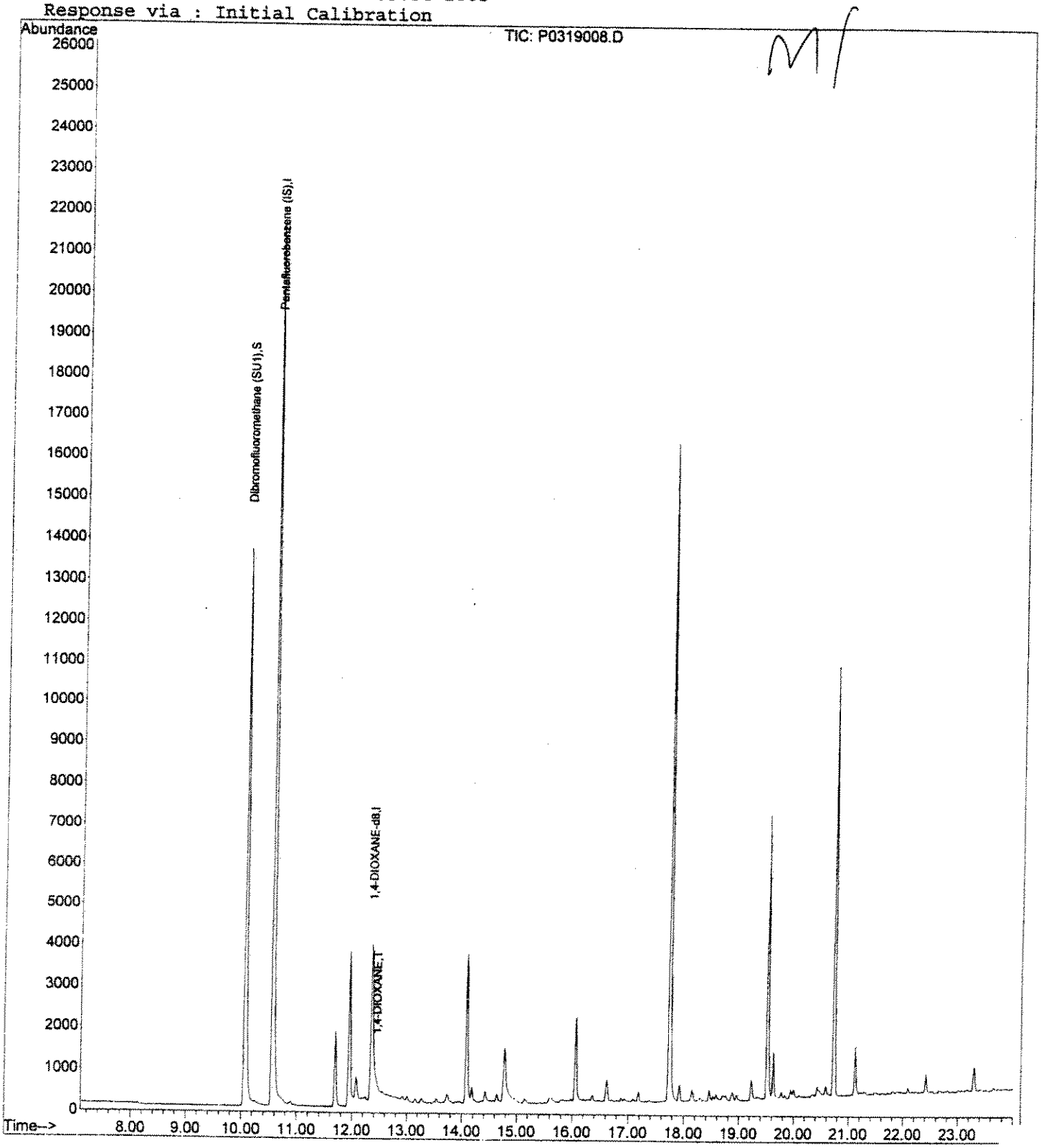
Quantitation Report

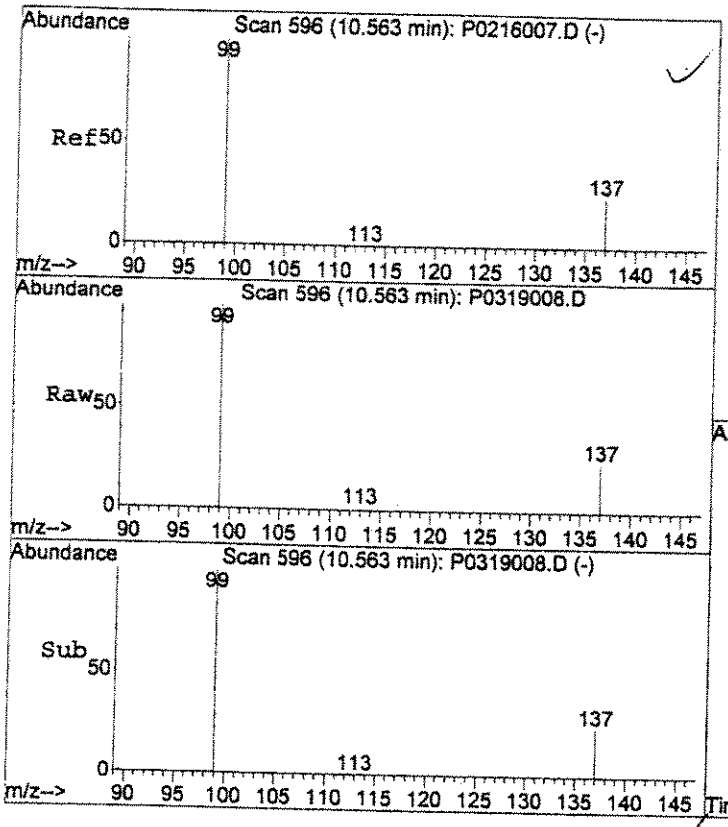
Data File : D:\HPCHEM\1\DATA\031905\P0319008.D
Acq On : 19 Mar 2005 10:12 am
Sample : BLANK
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 10:34 2005

Vial: 8
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration

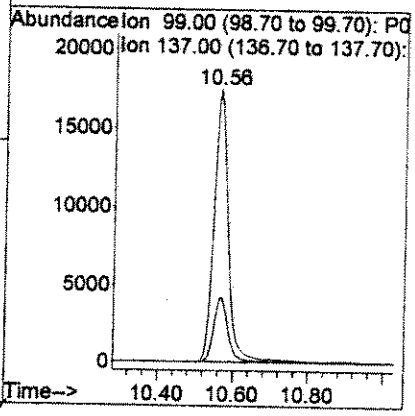


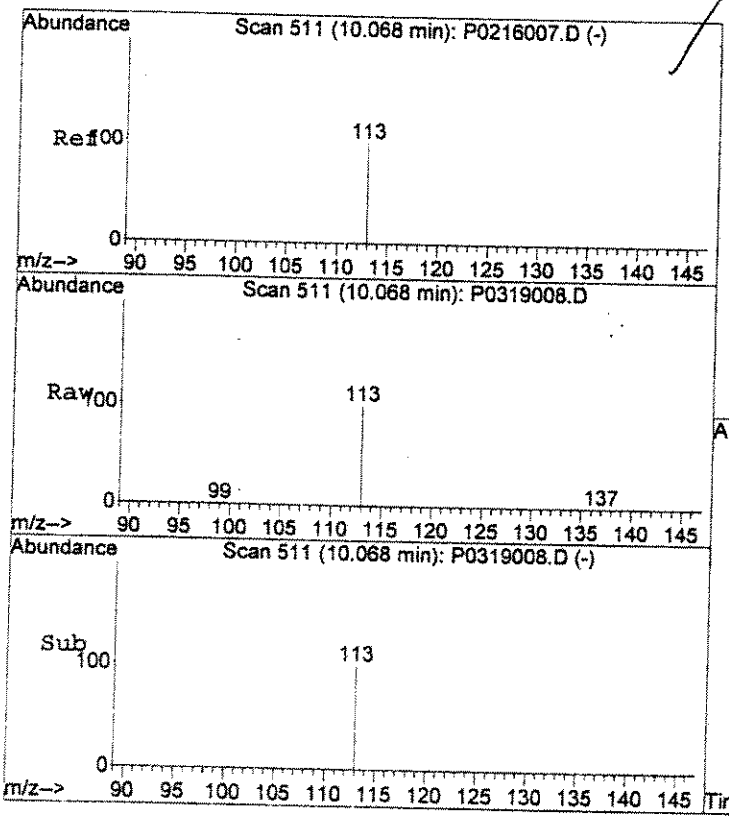


#1
Pentafluorobenzene (IS)
Concen: 1.00 ug/L
RT: 10.56 min Scan# 596
Delta R.T. 0.00 min
Lab File: P0319008.D
Acq: 19 Mar 2005 10:12 am

Tgt Ion: 99 Resp: 46878

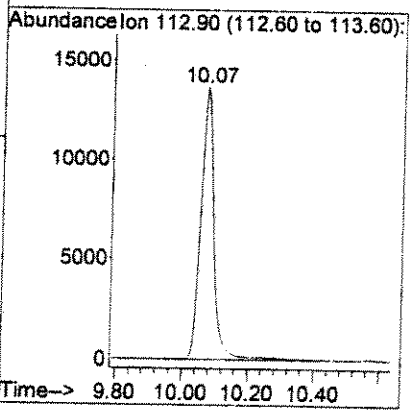
Ion	Ratio	Lower	Upper
99	100		
137	23.9	3.7	43.7

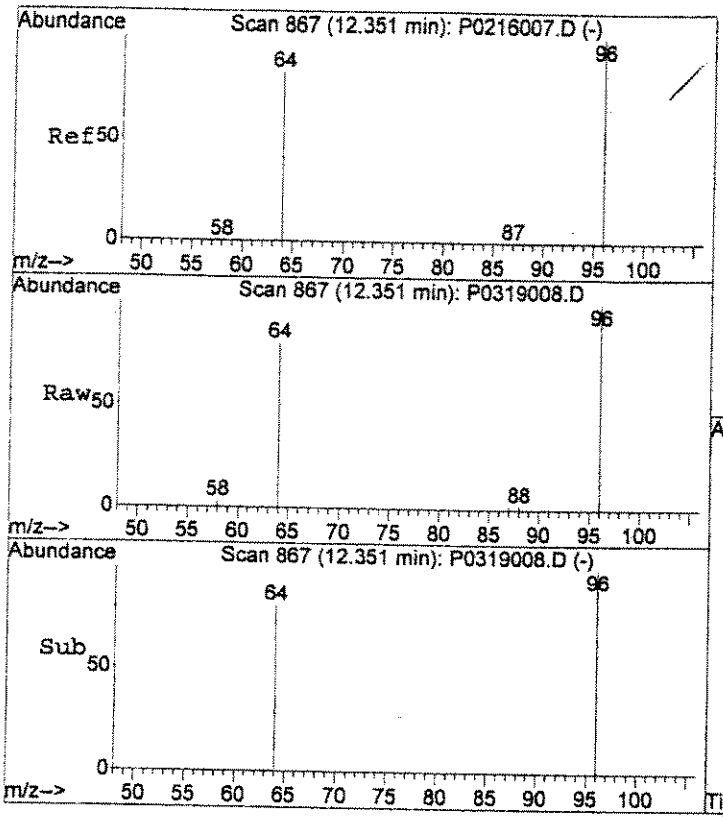




#2
Dibromofluoromethane (SU1)
Concen: 1.00 ug/L
RT: 10.07 min Scan# 511
Delta R.T. 0.00 min
Lab File: P0319008.D
Acq: 19 Mar 2005 10:12 am

Tgt Ion:113 Resp: 37890

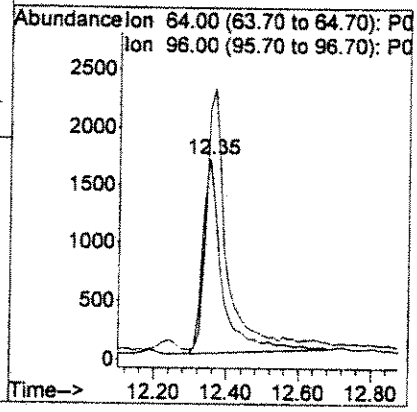


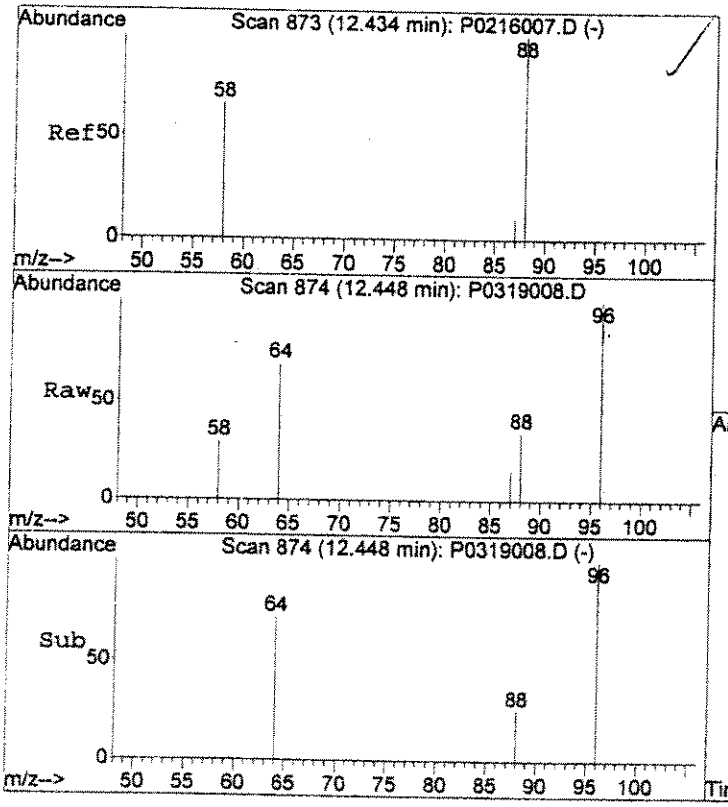


#3
1,4-DIOXANE-d8
Concen: 25.00 ug/L
RT: 12.35 min Scan# 867
Delta R.T. -0.00 min
Lab File: P0319008.D
Acq: 19 Mar 2005 10:12 am

Tgt Ion: 64 Resp: 6171

Ion	Ratio	Lower	Upper
64	100		
96	123.7	70.1	170.1

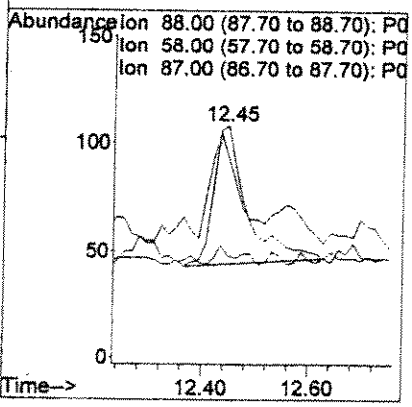


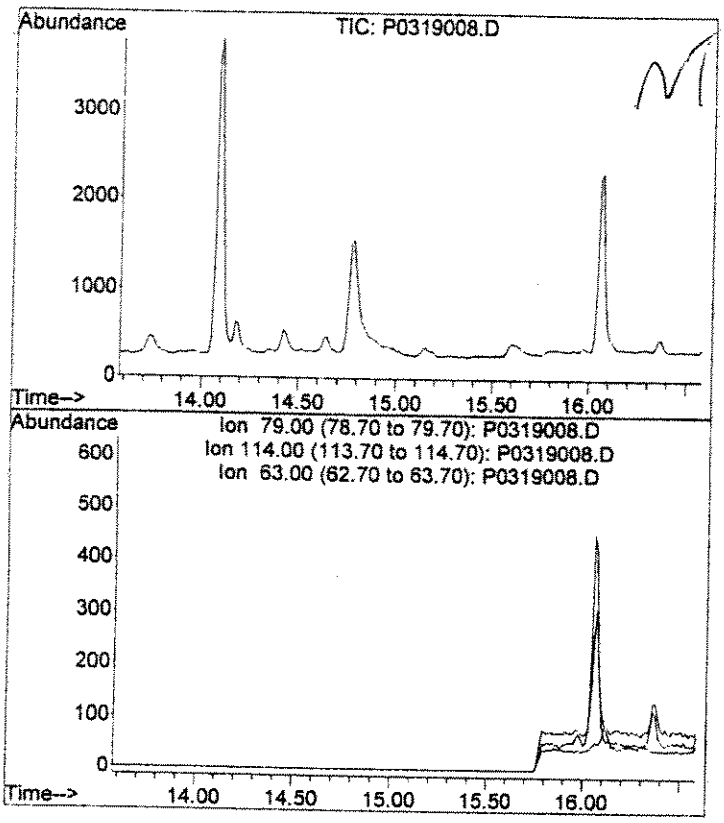


#4
1,4-DIOXANE
Concen: 0.23 ug/L
RT: 12.45 min Scan# 874
Delta R.T. 0.01 min
Lab File: P0319008.D
Acq: 19 Mar 2005 10:12 am

Tgt Ion: 88 Resp: 278

Ion	Ratio	Lower	Upper
88	100		
58	61.5	16.3	116.3
87	3.1	0.0	59.9





#5
1,2,3-Trichloropropane-d5
Concen: 0.00 ug/L
Expected RT: 15.08 min

Lab File: P0319008.D
Acq: 19 Mar 2005 10:12 am

Tgt Ion: 79

Sig	Exp Ratio
79	100
114	0.0
63	98.0

Grubbs Test for curve

	1.0ppb	2.0ppb	5.0ppb	10ppb	20ppb	50ppb	100ppb	MEAN	STDEV
Response factors	3.099	2.478	2.101	1.905	1.995	1.822	1.905	2.186429	0.456975
Grubbs value	1.99698	0.63805	0.186944	0.615851	0.418904	0.797481	0.615851		

5pts Grubbs values <	1.672
6pts Grubbs values <	1.822
7pts Grubbs values <	1.938
8pts Grubbs values <	2.032
9pts Grubbs values <	2.11
10pts Grubbs values <	2.176

Outlier

MS 3/19/07

83/4/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319009.D
Acq On : 19 Mar 2005 10:54 am
Sample : 1.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:42 2005

Vial: 9
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

MS 3/19/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	42761	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	4961	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 NT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	3531	0.11	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 11.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	615	1.50	ug/L	97

Lee Grubbs Test
JG 3/21/05

DNU

(#) = qualifier out of range (m) = manual integration

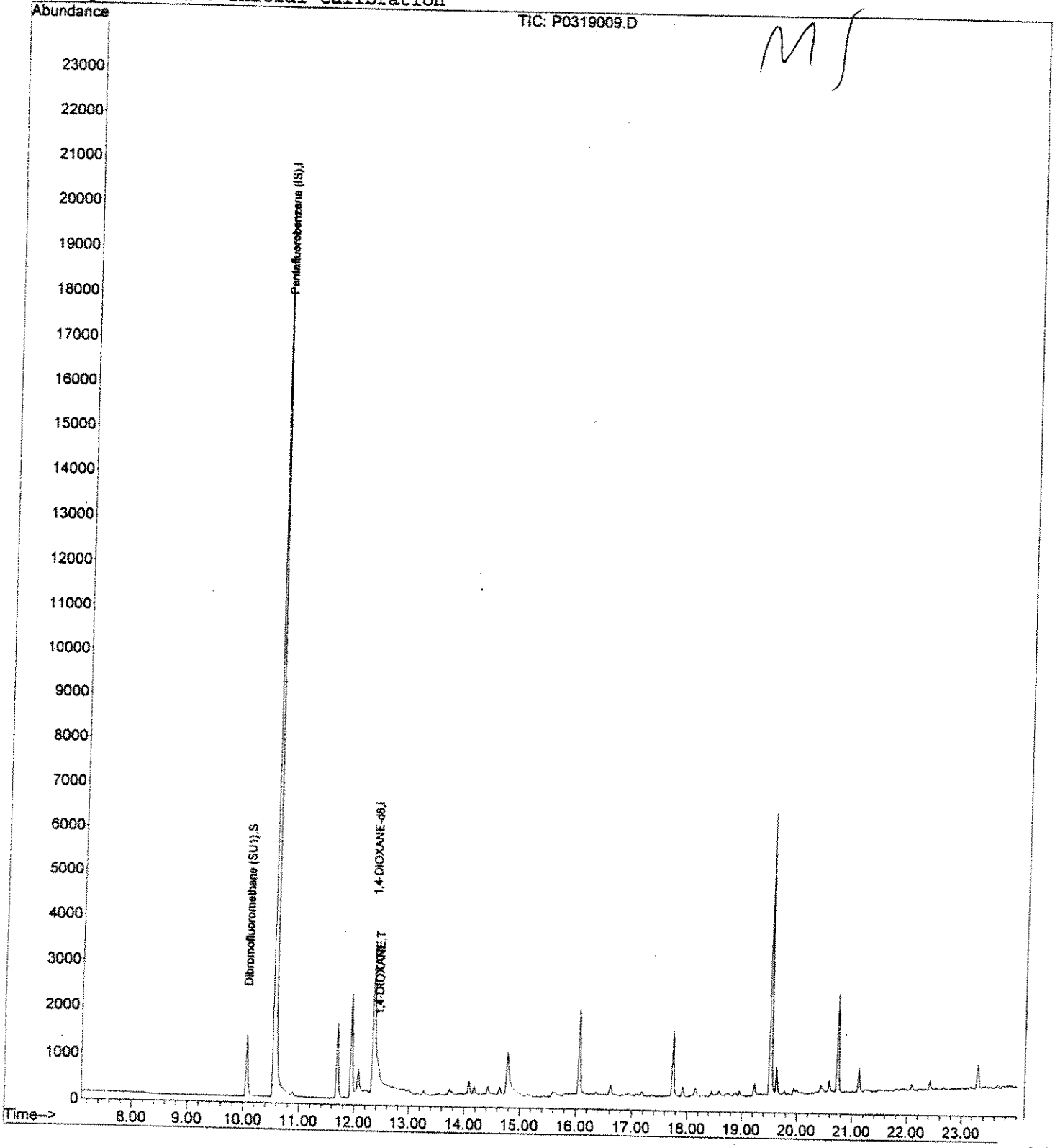
Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319009.D
Acq On : 19 Mar 2005 10:54 am
Sample : 1.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:42 2005

Vial: 9
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



MT

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319010.D
Acq On : 19 Mar 2005 11:26 am
Sample : 2.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:43 2005

Vial: 10
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

MS 3/14/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.57	99	45768	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	5185	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 NT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	7585	0.21	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 21.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	1028	2.69	ug/L	94

8/21/05

(#) = qualifier out of range (m) = manual integration
P0319010.D DX021605.M Sat Mar 19 13:43:20 2005 GCMS1

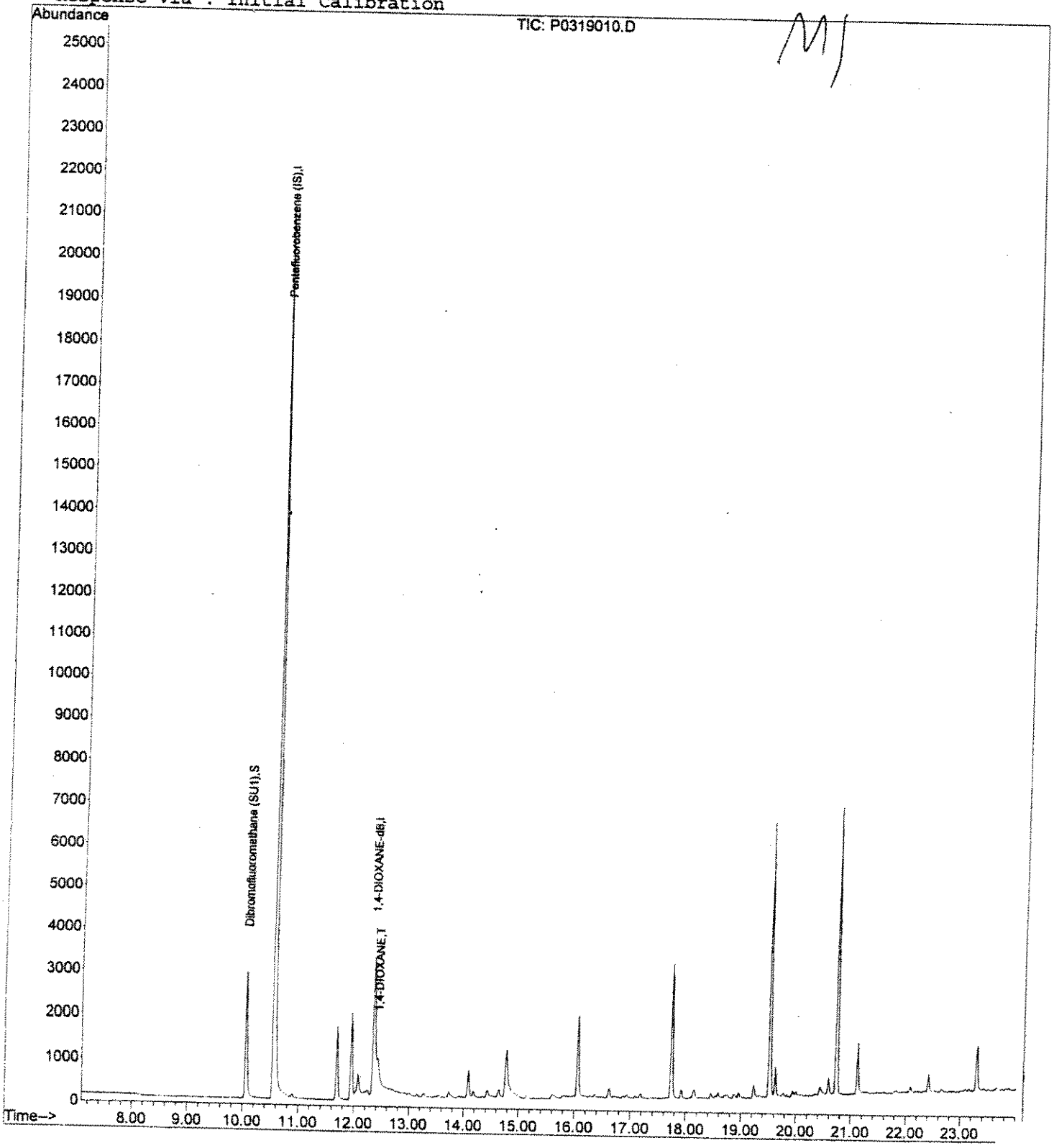
Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319010.D
Acq On : 19 Mar 2005 11:26 am
Sample : 2.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:43 2005

Vial: 10
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319011.D
Acq On : 19 Mar 2005 11:59 am
Sample : 5.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:43 2005

Vial: 11
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

MC 3/19/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	47558	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	5263	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 NT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.06	113	19072	0.52	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 52.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	2211	6.25	ug/L	99

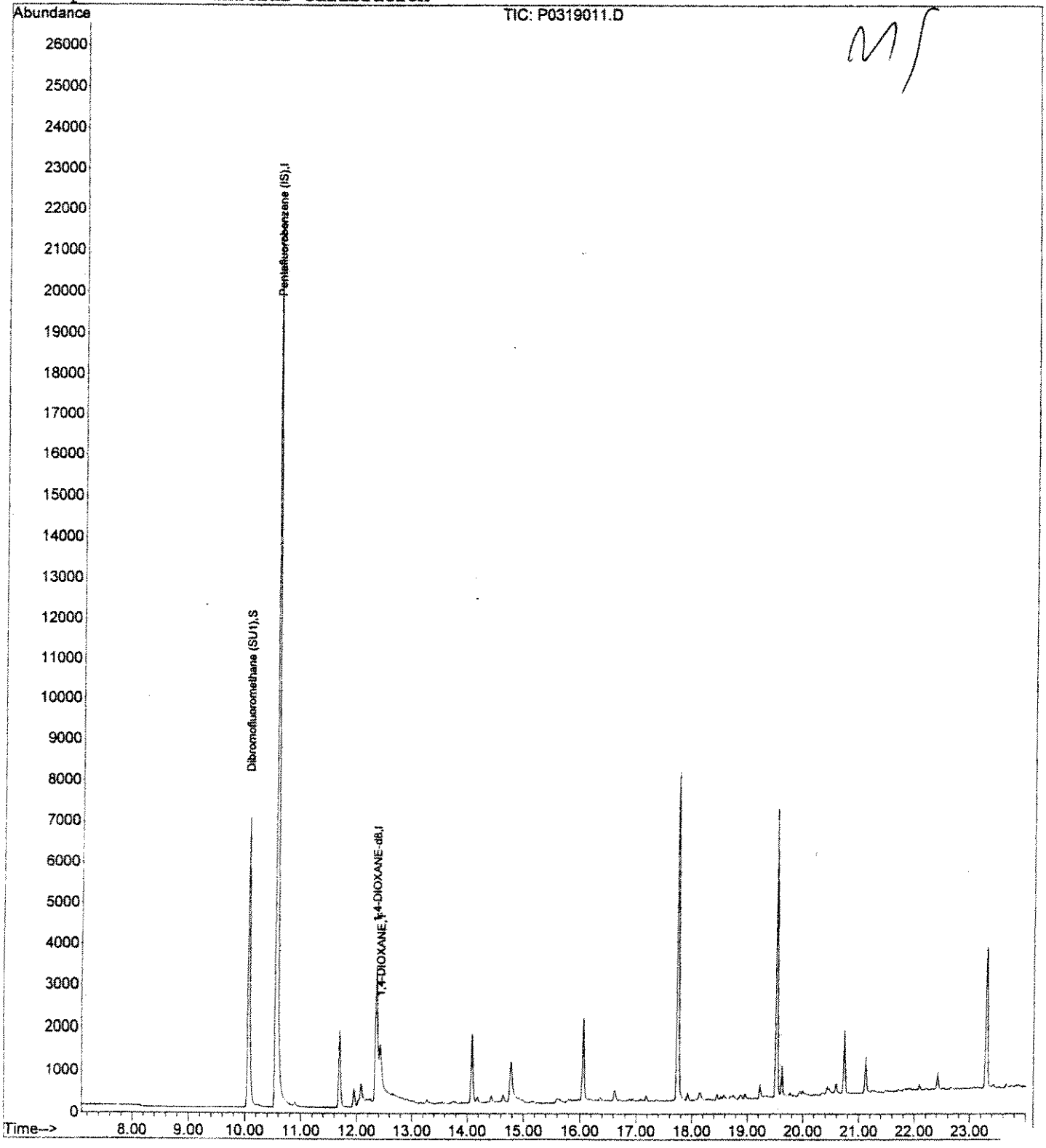
3/21/05

(#) = qualifier out of range (m) = manual integration
P0319011.D DX021605.M Sat Mar 19 13:43:33 2005 GCMS1

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319011.D Vial: 11
Acq On : 19 Mar 2005 11:59 am Operator: JG/MS/CLS
Sample : 5.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:43 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



MS

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319012.D
Acq On : 19 Mar 2005 12:32 pm
Sample : 10.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:37 2005

Vial: 12
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

M 3/19/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.57	99	47071	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	5034	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 NT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	34373	0.95	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 95.00%			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	3835	11.74	ug/L	99

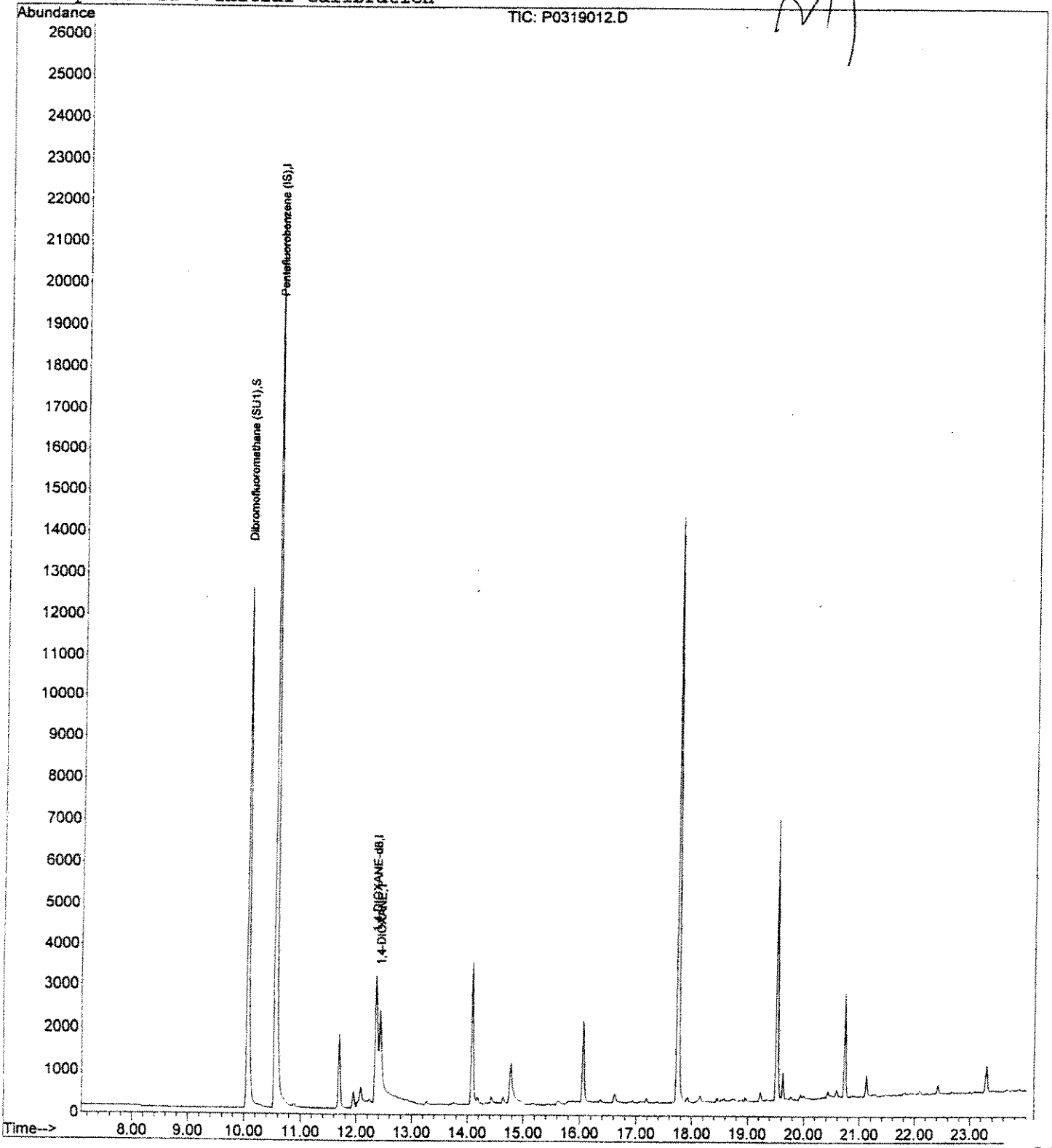
3/21/05

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319012.D Vial: 12
Acq On : 19 Mar 2005 12:32 pm Operator: JG/MS/CLS
Sample : 10.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:37 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319013.D
Acq On : 19 Mar 2005 1:05 pm
Sample : 20.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:37 2005

Vial: 13
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

MC 3/19/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	47635	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	4790	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 MT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	68573	1.86	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 186.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	7646	25.14	ug/L	97

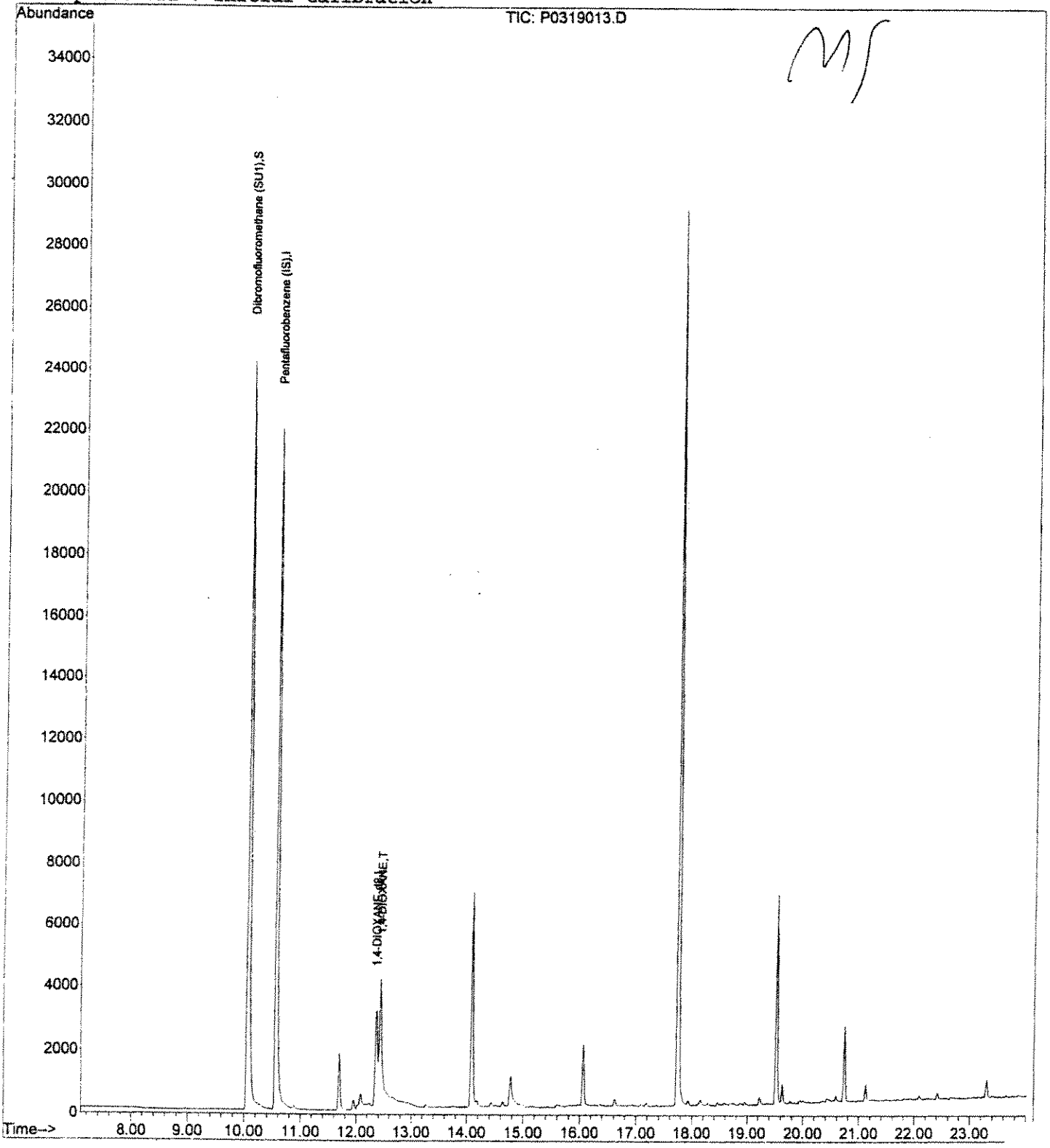
3/21/05

(#) = qualifier out of range (m) = manual integration
P0319013.D DX021605.M Sat Mar 19 13:43:43 2005 GCMS1

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319013.D Vial: 13
Acq On : 19 Mar 2005 1:05 pm Operator: JG/MS/CLS
Sample : 20.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 13:37 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



MS

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319014.D
Acq On : 19 Mar 2005 1:38 pm
Sample : 50.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 14:18 2005

Vial: 14
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

MS 3/19/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	47704	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	5034	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0 NT	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	164450	4.46	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 446.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	18344	58.04	ug/L	99

(#) = qualifier out of range (m) = manual integration
P0319014.D DX021605.M Sat Mar 19 14:18:18 2005

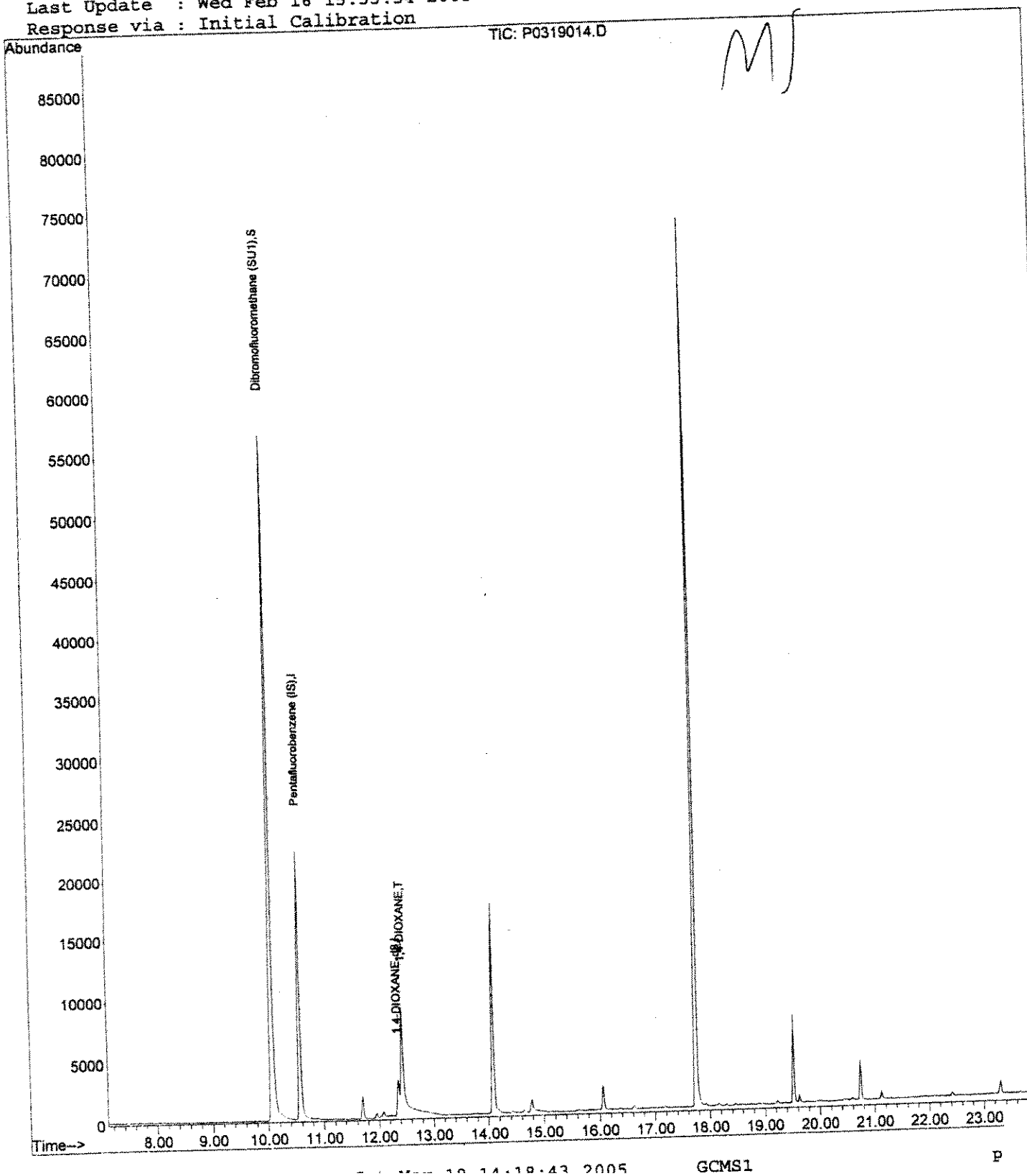
Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319014.D
Acq On : 19 Mar 2005 1:38 pm
Sample : 50.0 PPB CAL
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 14:18 2005

Vial: 14
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



MJ

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319015.D Vial: 15
Acq On : 19 Mar 2005 2:11 pm Operator: JG/MS/CLS
Sample : 100.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 14:54 2005 Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

3/31/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	48150	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	5834	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	307967	8.28	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 828.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	44445	121.87	ug/L	98

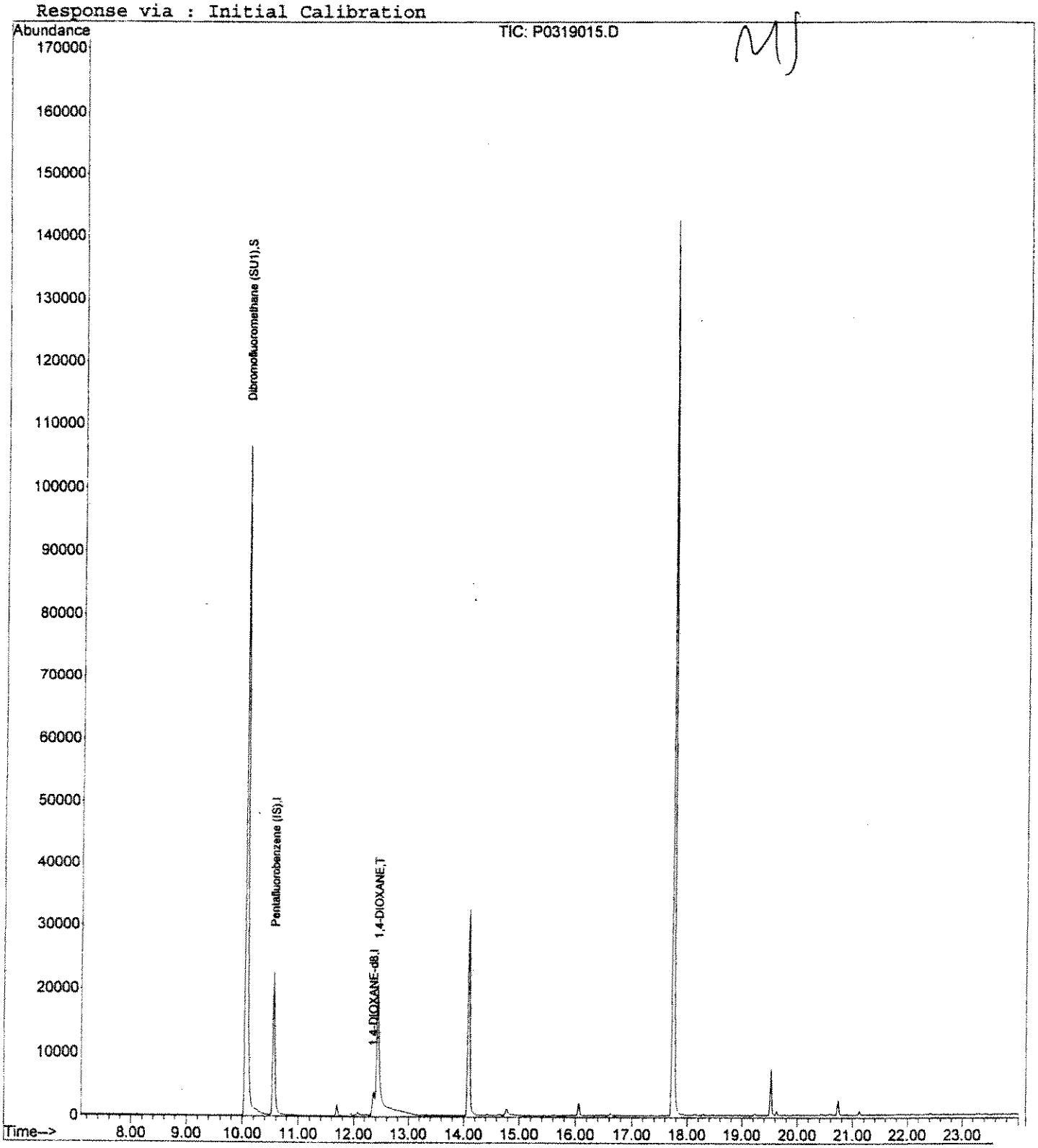
3/31/05

(#) = qualifier out of range (m) = manual integration
P0319015.D DX021605.M Sat Mar 19 14:54:44 2005 GCMS1

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319015.D Vial: 15
Acq On : 19 Mar 2005 2:11 pm Operator: JG/MS/CLS
Sample : 100.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 19 14:54 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319016.D
Acq On : 19 Mar 2005 2:44 pm
Sample : CLEAN OUT BLANK/TUNE
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005

Vial: 16
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : W072903

3/21/05 JG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	168438	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.36	64	64	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	15.15	79	57	500.00	ug/L	0.07
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.06	113	129670	1.00	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 100.00%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration

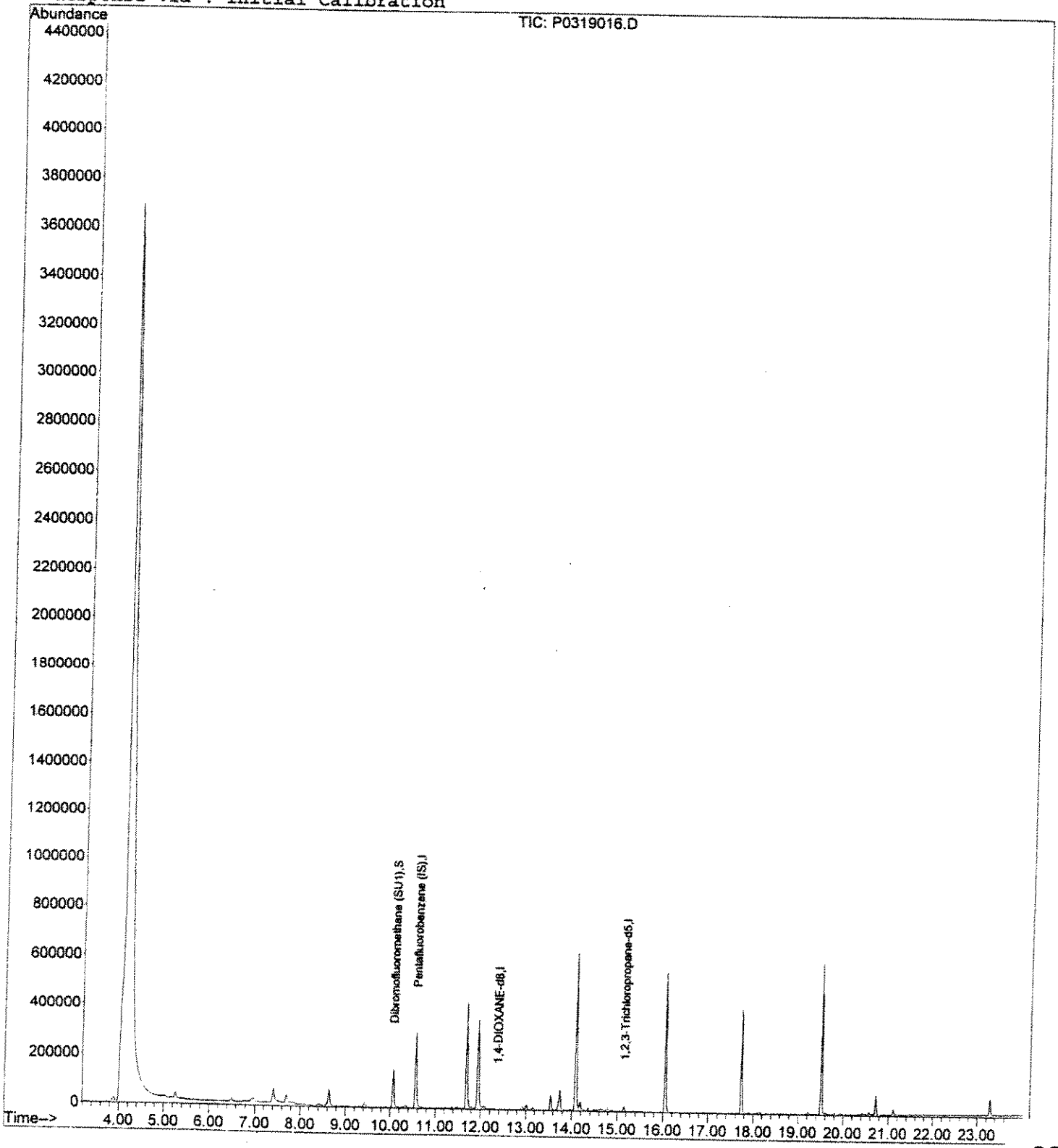
Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319016.D
Acq On : 19 Mar 2005 2:44 pm
Sample : CLEAN OUT BLANK/TUNE
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005

Vial: 16
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319017.D Vial: 17
Acq On : 19 Mar 2005 3:21 pm Operator: JG/MS/CLS
Sample : BLANK Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005 Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

3/21/05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	41664	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6641	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	34219	1.06	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 106.00%			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	233	N.D.		
6) 1,2,3-Trichloropropane	0.00	75	0	N.D.		

3/21/05

(#) = qualifier out of range (m) = manual integration
P0319017.D DX031905.M Mon Mar 21 09:07:35 2005 GCMS1

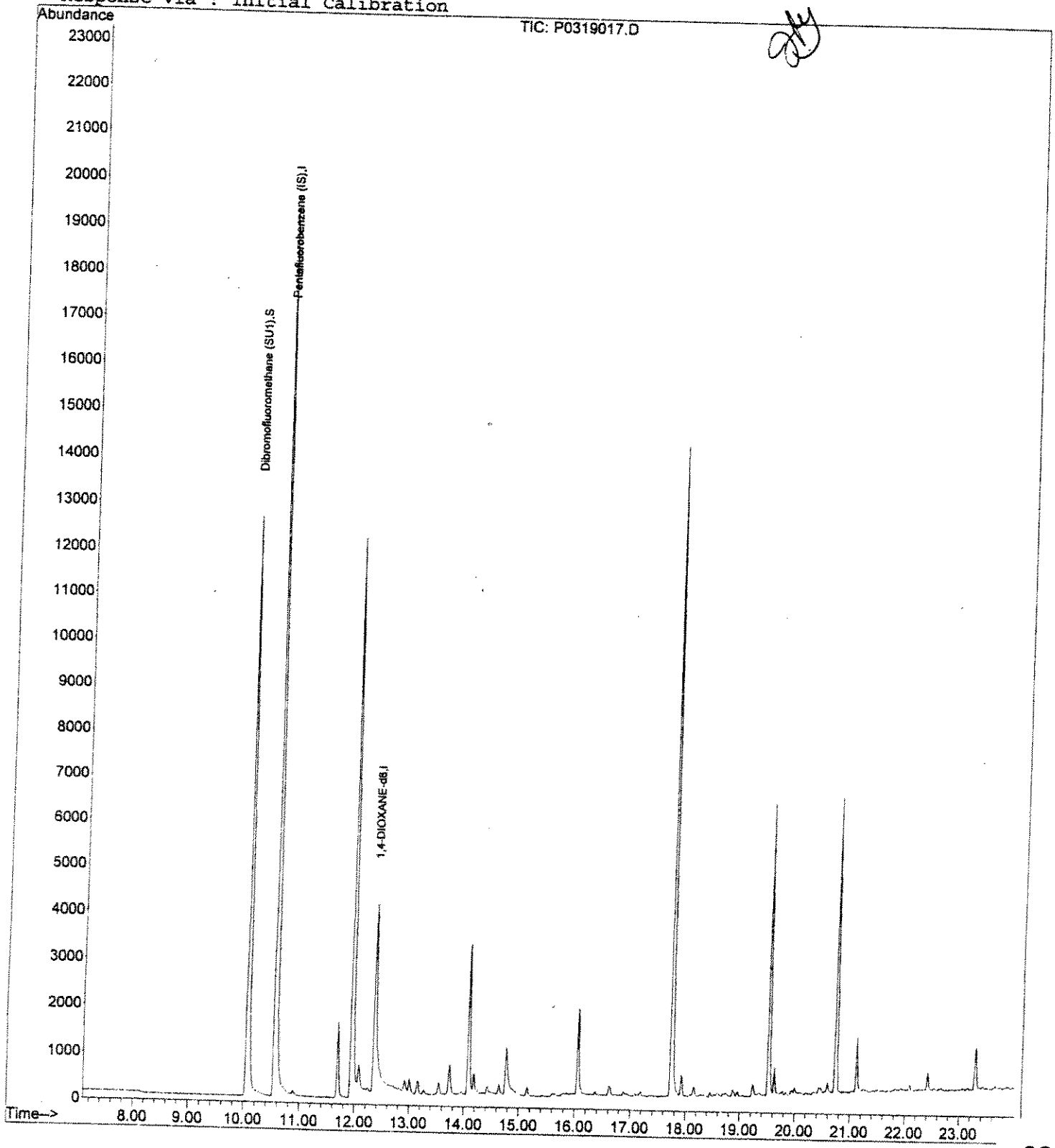
Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319017.D
Acq On : 19 Mar 2005 3:21 pm
Sample : BLANK
Misc : 1X 10ML
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005

Vial: 17
Operator: JG/MS/CLS
Inst : GCMS1
Multiplr: 1.00

Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 07:49:30 2005
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\031905\P0319018.D Vial: 18
Acq On : 19 Mar 2005 3:54 pm Operator: JG/MS/CLS
Sample : 1.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005 Quant Results File: DX021605.RES

Quant Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration
DataAcq Meth : DX021605

3/21/05 JG

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene (IS)	10.56	99	42387	1.00	ug/L	0.00
3) 1,4-DIOXANE-d8	12.35	64	6173	25.00	ug/L	0.00
5) 1,2,3-Trichloropropane-d5	0.00	79	0	0.00	ug/L	-15.08
System Monitoring Compounds						
2) Dibromofluoromethane (SU1)	10.07	113	3733	0.11	ug/L	0.00
Spiked Amount 1.000	Range 80 - 120		Recovery = 11.00%#			
Target Compounds						Qvalue
4) 1,4-DIOXANE	12.43	88	668	1.24	ug/L	97
6) 1,2,3-Trichloropropane	0.00	75	0	N.D.		

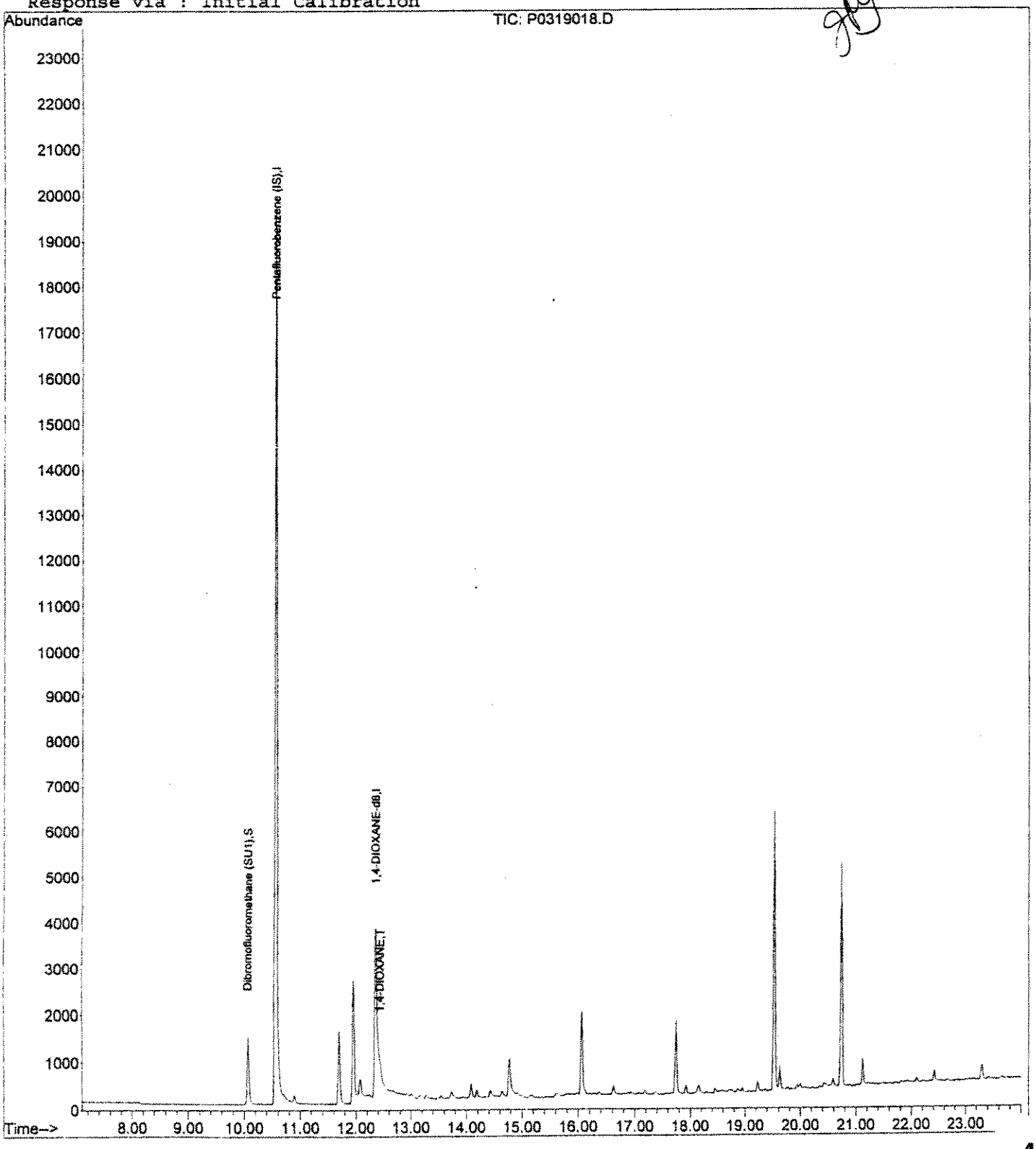
3/21/05

(#) = qualifier out of range (m) = manual integration
P0319018.D DX021605.M Mon Mar 21 07:48:51 2005 GCMS1

Quantitation Report

Data File : D:\HPCHEM\1\DATA\031905\P0319018.D Vial: 18
Acq On : 19 Mar 2005 3:54 pm Operator: JG/MS/CLS
Sample : 1.0 PPB CAL Inst : GCMS1
Misc : 1X 10ML Multiplr: 1.00
MS Integration Params: DIOXANE.P
Quant Time: Mar 21 7:48 2005 Quant Results File: DX021605.RES

Method : D:\HPCHEM\1\METHODS\DX021605.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Wed Feb 16 15:53:54 2005
Response via : Initial Calibration



Calibration Status Report GCMS1

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 12:54:07 2005
Response via : Initial Calibration

3/21/05 JY

#	ID	Conc	ISTD Conc	Path\File
1	1	0	1	D:\HPCHEM\1\DATA\031905\P0319018.D
2	2	0	1	D:\HPCHEM\1\DATA\031905\P0319010.D
3	5	1	1	D:\HPCHEM\1\DATA\031905\P0319011.D
4	10	1	1	D:\HPCHEM\1\DATA\031905\P0319012.D
5	20	2	1	D:\HPCHEM\1\DATA\031905\P0319013.D
6	50	5	1	D:\HPCHEM\1\DATA\031905\P0319014.D
7	100	10	1	D:\HPCHEM\1\DATA\031905\P0319015.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Mar 21 07:49 2005	Mar 21 07:48 19105	19 Mar 2005 3:54 pm
2	2	Mar 19 14:55 2005	Mar 19 13:43 19105	19 Mar 2005 11:26 am
3	5	Mar 19 14:55 2005	Mar 19 13:43 19105	19 Mar 2005 11:59 am
4	10	Mar 19 14:55 2005	Mar 19 13:37 19105	19 Mar 2005 12:32 pm
5	20	Mar 19 14:55 2005	Mar 19 13:37 19105	19 Mar 2005 1:05 pm
6	50	Mar 19 14:55 2005	Mar 19 14:18 19105	19 Mar 2005 1:38 pm
7	100	Mar 19 14:55 2005	Mar 19 14:54 19105	19 Mar 2005 2:11 pm

DX031905.M Mon Mar 21 12:55:30 2005 GCMS1

3/22/05

Compound List Report GCMS1

Method : D:\HPCHEM\1\METHODS\DX031905.M (RTE Integrator)
Title : 8260 1,4-Dioxane Ini. Cal. (05/02/02)
Last Update : Mon Mar 21 12:54:07 2005
Response via : Initial Calibration
Total Cpnds : 6

3/21/05 JHY

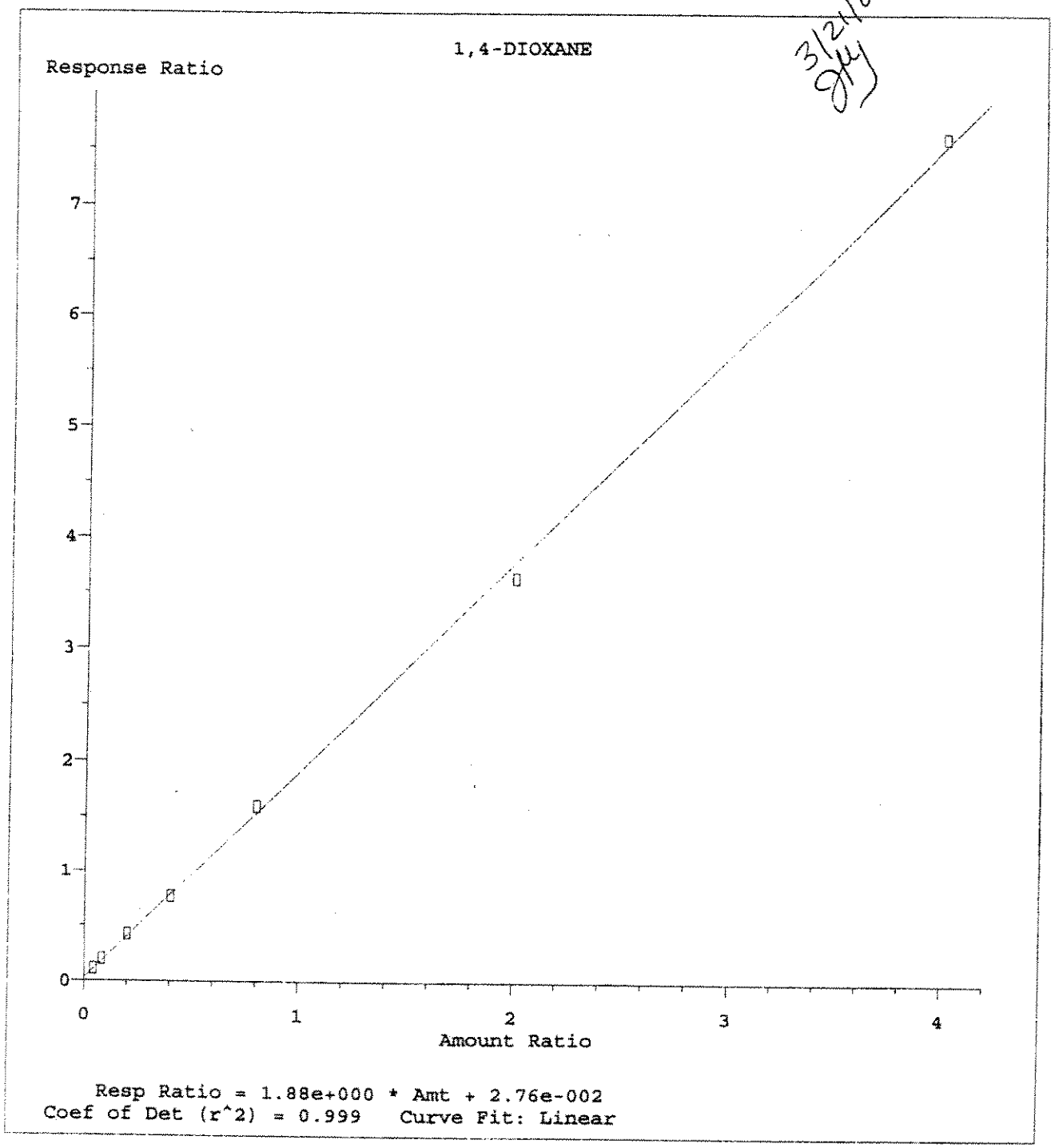
PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (IS)	99	10.57	1.000	A	1	A	B
2	S	Dibromofluoromethane (SU1)	113	10.07	0.953	A	0	A	B
3	I	1,4-DIOXANE-d8	64	12.35	1.000	A	1	A	B
4	T	1,4-DIOXANE	88	12.43	1.007	L	2	A	B
5	I	1,2,3-Trichloropropane-d5	79	15.08	1.000	A	2	A	B
6	T	1,2,3-Trichloropropane	75	15.08	1.000	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

DX031905.M Mon Mar 21 12:55:24 2005 GCMS1

3/21/05

3/24/05 GY



Method Name: D:\HPCHEM\1\METHODS\DX031905.M
Calibration Table Last Updated: Mon Mar 21 12:54:07 2005

3/22/05