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NCBC DAVISVILLE
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LETTER REPORT FOR 1,4-DIOXANE GROUNDWATER INVESTIGATION AT SITE 16 NCBC DAVISVILLE RI

9/1/2006

TETRA TECH

Letter Report
for
1,4-Dioxane Ground-Water Investigation at IR Program Site 16

Former Naval Construction Battalion Center Davisville
North Kingstown, Rhode Island

Naval Facilities Engineering Command MidAtlantic

Contract Number N62472-03-D-0057

Contract Task Order 049

September 2006

Acronyms

CLEAN	Comprehensive Long-Term Environmental Action Navy
DV	Data validation
EA	EA Engineering, Science, and Technology Inc.
NCBC	Naval Construction Battalion Center
NE	Northeast Laboratory Services
PRG	Preliminary Remediation Goal
QAPP	Quality assurance project plan
RIDEM	Rhode Island Department of Environmental Management
SIM	Selective Ion Monitoring
TtNUS	Tetra Tech NUS, Inc.
USEPA	United States Environmental Protection Agency

References

USEPA, 2004. Region 9 Residential Preliminary Remediation Goals, October.

USEPA, 1986. Test Methods for Evaluating Solid Waste; Physical/Chemical Methods (SW-846), 3rd edition, 1986, Update III, June 1997.

USEPA, New England, 1996. Part II Volatile/Semivolatile Data Validation Functional Guidelines, December.

ATTACHMENT NO. 1

Navy Correspondence Dated March 30, 2004

DEPARTMENT OF THE NAVY
ENGINEERING FIELD ACTIVITY, NORTHEAST
NAVAL FACILITIES ENGINEERING COMMAND
10 INDUSTRIAL HIGHWAY
MAIL STOP, #82
LESTER, PA 19113-2090

IN REPLY REFER TO

5090
EV2/OJM
March 30, 2004

Bryan Olson
Chief, Federal Facility Section
US EPA New England
1 Congress Street, Suite 1100 (HBT)
Boston, Massachusetts 02114-2023

Dear Mr. Olson:

SUBJECT: REQUEST FOR 1,4 DIOXANE SAMPLING AT THE FORMER DAVISVILLE NAVAL CONSTRUCTION BATTALION CENTER (NCBC), RHODE ISLAND AND THE BRUNSWICK NAVAL AIR STATION (NAS), MAINE

I am in receipt of your letter dated 15 March 2004 in which you have outlined the EPA's position that the Navy sample for 1,4 dioxane at the Navy's facilities at Davisville, RI and Brunswick, ME.

The Navy shares the EPA's concerns that any chemical of potential concern be identified, analyzed for and, if necessary, that a remedy be implemented to prevent the COPCs from posing a threat to human health and the environment. There have been a number of emerging chemicals, including 1,4 dioxane, that do not have a promulgated action level, but which the Navy reviews on a case-by-case basis. However, since 1,4 dioxane is a COPC, the Navy agrees that it should be sampled for at selected groundwater locations based on the presence of VOCs.

The RPM for the former NCBC Davisville, RI facility will coordinate with EPA and the state to develop a sampling approach for Site 16.

At Brunswick NAS, the technical group earlier this month discussed the possibility of the Navy including 1,4 dioxane sampling at 5 wells during the next two monitoring events (April and October) in order to determine its presence in the groundwater. As a result of that discussion and the Navy recognizing 1,4 dioxane as a COPC, the Navy will conduct the aforementioned sampling, analysis, and reporting.

EV2/OJM
March 30, 2004

Little scientific data on the long-term effects of 1,4 dioxane is known at this time, although it is present in many household products and food additives in addition to its use as an industrial solvent stabilizer. Until the EPA develops a national drinking water standard for 1,4 dioxane, the Navy shall use the safety level set by the state of Maine (70 ppb) as criteria at Davisville, RI and Brunswick, ME for establishing an action level. The sampling results would then be applied against this safely level in evaluating the protectiveness of the existing remedy at Brunswick, ME for consideration in its five-year review. Pursuant to Section 8 of the Brunswick Naval Air Station FFA and Section 9 of the Davisville Naval Construction Battalion Center FFA, the Navy will support the EPA's efforts to conduct split samples during scheduled sampling rounds, if you choose to do so.

Thank you for your understanding in this matter. If you have any questions or comments, please have your staff contact Fred Evans at (610) 595-0567 extension 159, or Lonnie Monaco at (610) 595-0567, extension 164.

Sincerely,

A. E. HARING, P.E.
Director, Environmental
Restoration Division
By direction of the
Commanding Officer

Copy to:
Anthony Williams - BNAS
Capt. Robert Winneg, CDR BNAS
Alexander Easterday - EA
Darren Gainer - ECC
Andy Stackpole - CNRNE
Fred Evans - EFANE
Lonnie Monaco - EFANE
Debra Felton - EFANE
Franco LaGreca - EFANE
Robert Lewandowski - EFANE

ATTACHMENT NO. 2

Data Validation Memoranda for Fall 2004 Sampling Event

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**L. SINAGOGA**	**DATE:**	**NOVEMBER 10, 2005**
FROM:	**EDWARD SEDLMYER**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / VOC SIM / OVG**
CTO 049, NCBC DAVISVILLE
SDG 41048

SAMPLES: 20 / Aqueous

DUP12	DUP13	DUP14	MW16-02D
MW16-02I	MW16-05D	MW16-05I	MW16-05R
MW16-07D	MW16-34D	MW16-34I	MW16-34S
MW16-42D	MW16-42I	MW16-42S	MW16-43D
MW16-43I	MW16-43S	MW16-55D	TB16-03

OVERVIEW

The sample set for CTO 049; NCBC Davisville, SDG 41048 consists of one (1) trip blank and nineteen (19) aqueous environmental samples, including three (3) field duplicates. All samples were analyzed for volatile organic compounds (VOC) and methane, ethane, and ethane, except for the trip blanks, which were not analyzed for methane, ethane, and ethene. Select VOCs, vinyl chloride, 1,1-dichloroethene, chloroform, 1,2-dichloroethane, benzene, 1,1,2-trichlroethane, and 1,4-dichlorobenzene were analyzed by selective ion monitoring (SIM). Samples MW16-02D and MW16-05D were also analyzed for 1,4-dioxane by SIM. Three field duplicate pairs were included in this SDG: MW16-42S / DUP12, MW16-42D / DUP13, and MW16-02R / DUP14. The results for sample MW16-02R are located in SDG 41064.

The samples were collected by EA Engineering, Science & Technology Inc. on September 28, 29, 30, 2004 and analyzed by CEIMIC Corporation. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using USEPA SW 846 Methods 8260B, 8260B SIM, and RSK175 analytical and reporting protocol. A Tier II data validation was performed on the reviewed samples. The data contained in this SDG were validated with regard to the following parameters:

*	•	Data completeness
*	•	Holding times
*	•	GC/MS Tuning
	•	Initial and continuing calibration
	•	Blank results
*	•	Surrogate spike recoveries
*	•	Internal standard recoveries
*	•	Blank Spike/Blank Spike Duplicate Results
	•	Matrix Spike/Matrix Spike Duplicate Results
*	•	Field Duplicate Results
*	•	Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to

support the findings as discussed in this data validation report.

VOA

The following compounds were detected in the method blanks or trip blanks at the maximum concentrations indicated below:

Compound	Concentration	Action Level
Methylene Chloride[1]	0.296 µg/L	3.0 µg/L
Acetone[2]	1.70 µg/L	17.0 µg/L
Trichloroethene[2]	0.198 µg/L	0.99 µg/L

1- Maximum concentration detected in a method blank.
2- Maximum concentration detected in a trip blank.

Blank Actions

- Value < Reporting Limit (RL); report RL followed by a U.
- Value > RL and < Action level; report value followed by a U.

An action level of 10X the maximum contaminant concentration was established to evaluate laboratory contamination for acetone and methylene chloride; and 5X for trichloroethene. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results for acetone and/or methylene chloride were qualified as blank contaminants in samples DUP13, MW16-05D, MW16-05I, MW16-05R, MW16-34D, MW16-34I, MW16-34S, MW16-42I, MW16-42D, MW16-42S, MW16-43I, MW16-43S, and MW16-55D.

An initial calibration relative response factor (RRF) was less than the 0.05 quality control limit for acetone on instrument MS4, on 9/28/2004. The positive and non-detected results reported for acetone have been estimated (J) and rejected (UR), respectively.

An initial calibration percent relative standard deviation (%RSD) exceeded the 30% quality control limit for methylene chloride on instrument MS4, on 9/28/04. The non-detected results reported for methylene chloride were qualified as estimated (UJ), in all samples.

A calibration verification RRF was less than the 0.05 quality control limit for acetone on instrument MS4, on 9/29/04, at 12:06. The non-detected results reported for acetone have been rejected (UR).

A calibration verification percent difference (%D) exceeded the 25% quality control limit for methylene chloride on instrument MS4, on 9/29/04, at 12:06. The non-detected results reported for methylene chloride were qualified as estimated (UJ), in the affected samples.

A calibration verification RRF was less than the 0.05 quality control limit for acetone on instrument MS4, on 9/30/04, at 13:10. The non-detected results reported for acetone have been rejected (UR).

A calibration verification percent difference (%D) exceeded the 25% quality control limit for methylene chloride on instrument MS4, on 9/30/04, at 13:10. The non-detected results reported for methylene chloride were qualified as estimated (UJ), in the affected samples.

A calibration verification RRF was less than the 0.05 quality control limit for acetone on instrument MS4, on 10/01/04, at 10:04. The non-detected results reported for acetone have been rejected (UR).

A calibration verification percent difference (%D) exceeded the 25% quality control limit for methylene chloride on instrument MS4, on 10/01/04, at 10:04. The non-detected results reported for methylene chloride were qualified as estimated (UJ), in the affected samples.

A calibration verification percent difference (%D) exceeded the 25% quality control limit for methylene chloride on instrument MS4, on 10/03/04, at 19:17. The non-detected results reported for methylene chloride were qualified as estimated (UJ), in the affected samples.

The following samples were analyzed at dilutions due to high concentrations of various VOC compounds: DUP13 (20X), DUP14 (50X), MW16-02D (50X), MW16-02I (2X), MW16-05D (50X), MW16-05I (10X), MW16-05R (20X), MW16-42D (20X), and MW16-43D (20X).

VOA SIM

The following compounds were detected in the method blanks or trip blank at the maximum concentrations indicated below:

Compound	Concentration	Action Level
Chloroform[1]	0.0205 µg/L	0.1025 µg/L
1,2-Dichloroethane	0.0175 µg/L	0.0875 µg/L
1,4-Dichlorobenzene	0.0168 µg/L	0.084 µg/L

1- Maximum concentration detected in a trip blank.

Blank Actions

- Value < Reporting Limit (RL); report RL followed by a U.
- Value > RL and < Action level; report value followed by a U.

An action level of 5X the maximum contaminant concentration was established to evaluate laboratory contamination for chloroform, 1,2-dichloroethane, and 1,4-dichlorobenzene. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results for chloroform, 1,2-dichloroethane, and/or 1,4-dichlorobenzene were qualified as blank contaminants in samples DUP13, DUP14, MW16-02D, MW16-02I, MW16-05D, MW16-05I, MW16-05R, MW16-34D, MW16-34I, MW16-34S, MW16-42D, MW16-43D, and MW16-43I.

An initial calibration percent relative standard deviation (%RSD) exceeded the 15% quality control limit for 1,4-dichlorobenzene on instrument MS12, on 10/01/04. The non-detected results reported for 1,4-dichlorobenzene were qualified as estimated (UJ), in the affected samples.

An initial calibration percent relative standard deviation (%RSD) exceeded the 15% quality control limit for 1,4-dichlorobenzene on instrument MS12, on 10/09/04. The non-detected results reported for 1,4-dichlorobenzene were qualified as estimated (UJ), in the affected samples.

An initial calibration percent relative standard deviation (%RSD) exceeded the 15% quality control limit for 1,4-dichlorobenzene on instrument MS12, on 10/11/04. The non-detected results reported for 1,4-

dichlorobenzene were qualified as estimated (UJ), in the affected samples.

An initial calibration relative response factor (RRF) was less than the 0.05 quality control limit for 1,4-dioxane on instrument MS15, on 10/15/2004. The non-detected 1,4-dioxane results have been rejected (UR), in samples MW16-02D and MW16-05D.

The following samples were analyzed at dilutions due to high concentrations of various VOC compounds: DUP12 (20X), MW16-42I (50X), and MW16-42S (10X).

Methane, Ethane, Ethene

The following compound was detected in the method blanks at the maximum concentrations indicated below:

Compound	Concentration	Action Level
Methane	1.4 µg/L	7.0 µg/L

Blank Actions

- Value < Reporting Limit (RL); report RL followed by a U.
- Value > RL and < Action level; report value followed by a U.

An action level of 5X the maximum contaminant concentration was established to evaluate laboratory contamination for methane. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results for methane were qualified as blank contaminant in samples DUP13, MW16-02D, MW16-02I, DUP14, MW16-02D, MW16-02I, MW16-05D, MW16-05I, MW16-05R, MW16-07D, MW16-34D, MW16-34I, MW16-34S, MW16-42D, MW16-43D, and MW16-55D.

The following samples were analyzed at dilutions due to high concentrations of methane: DUP12 (100X), MW16-05I (100X), MW16-42I (500X), MW16-42S (50X), and MW16-43S (50X).

Additional Comments

Positive results reported below the reporting limit but above the threshold value were qualified as estimated, J.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Qualifications were made for initial and continuing calibration noncompliances of several VOC and VOC SIM compounds that failed to comply with quality control criteria (%Ds and RRFs). Blank contamination for several VOC, VOC SIM, and methane resulted in qualification of the data.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Region I Functional Guidelines for Organic Data Validation (12/96) and the NFESC guidelines "Navy IRCDQM" (Sept 1999). The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC guidelines."

Edward Sedlmyer
Tetra Tech NUS

Edward Sedlmyer
Chemist/Data Validator

Joseph A. Samchuck
TetraTech NUS

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region I Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00234

SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	DUP12
samp_date	9/30/2004
lab_id	041048-17
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	MW16-42S

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.778		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.0493	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	5.7		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	UJ	C
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	DUP12
samp_date	9/30/2004
lab_id	041048-17
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	MW16-42S

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.613	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	10		

nsample	DUP13
samp_date	9/30/2004
lab_id	041048-10
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	MW16-42D

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	20	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	20	U	
1,1-DICHLOROETHENE	0.367		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	20	U	
1,3-DICHLOROBENZENE	20	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	100	U	
2-HEXANONE	100	U	
4-METHYL-2-PENTANONE	100	U	
ACETONE	100	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	20	U	
BROMOFORM	20	U	
BROMOMETHANE	20	U	
CARBON DISULFIDE	20	U	
CARBON TETRACHLORIDE	20	U	
CHLOROBENZENE	20	U	
CHLORODIBROMOMETHANE	20	U	
CHLOROETHANE	20	U	
CHLOROFORM	0.1	U	B
CHLOROMETHANE	20	U	
CIS-1,2-DICHLOROETHENE	4.72	J	P
CIS-1,3-DICHLOROPROPENE	20	U	
ETHYLBENZENE	20	U	
M+P-XYLENES	40	U	
METHYLENE CHLORIDE	20	U	A
O-XYLENE	20	U	
STYRENE	20	U	
TETRACHLOROETHENE	20	U	
TOLUENE	20	U	

PROJ_NO: 00234

SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	DUP13
samp_date	9/30/2004
lab_id	041048-10
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	MW16-42D

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	20	U	
TRANS-1,3-DICHLOROPROPENE	20	U	
TRICHLOROETHENE	720		
VINYL CHLORIDE	0.136		

nsample	DUP14
samp_date	9/30/2004
lab_id	041048-18
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	MW16-02R

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	50	U	
1,1,2-TRICHLOROETHANE	0.0117	J	P
1,1-DICHLOROETHANE	50	U	
1,1-DICHLOROETHENE	1.33		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	50	U	
1,3-DICHLOROBENZENE	50	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	250	U	
2-HEXANONE	250	U	
4-METHYL-2-PENTANONE	250	U	
ACETONE	250	UR	C
BENZENE	0.0341	J	P
BROMODICHLOROMETHANE	50	U	
BROMOFORM	50	U	
BROMOMETHANE	50	U	
CARBON DISULFIDE	50	U	
CARBON TETRACHLORIDE	50	U	
CHLOROBENZENE	50	U	
CHLORODIBROMOMETHANE	50	U	
CHLOROETHANE	50	U	
CHLOROFORM	0.1	U	B
CHLOROMETHANE	50	U	
CIS-1,2-DICHLOROETHENE	20	J	P
CIS-1,3-DICHLOROPROPENE	50	U	
ETHYLBENZENE	50	U	
M+P-XYLENES	100	U	
METHYLENE CHLORIDE	50	UJ	C
O-XYLENE	50	U	
STYRENE	50	U	
TETRACHLOROETHENE	50	U	
TOLUENE	50	U	

nsample	DUP14
samp_date	9/30/2004
lab_id	041048-18
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	MW16-02R

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	50	U	
TRANS-1,3-DICHLOROPROPENE	50	U	
TRICHLOROETHENE	1100		
VINYL CHLORIDE	0.348		

PROJ_NO: 00234

SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-02D	nsample	MW16-02D	nsample	MW16-02I
samp_date	9/30/2004	samp_date	9/30/2004	samp_date	9/30/2004
lab_id	041048-19	lab_id	041048-19	lab_id	041048-20
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	50	U	
1,1,2-TRICHLOROETHANE	0.516		
1,1-DICHLOROETHANE	50	U	
1,1-DICHLOROETHENE	0.598		
1,2-DICHLOROETHANE	0.023	U	A
1,2-DICHLOROPROPANE	50	U	
1,3-DICHLOROBENZENE	50	U	
1,4-DICHLOROBENZENE	0.1	U	A
1,4-DIOXANE	1	UR	C
2-BUTANONE	250	U	
2-HEXANONE	250	U	
4-METHYL-2-PENTANONE	250	U	
ACETONE	250	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	50	U	
BROMOFORM	50	U	
BROMOMETHANE	50	U	
CARBON DISULFIDE	50	U	
CARBON TETRACHLORIDE	50	U	
CHLOROBENZENE	50	U	
CHLORODIBROMOMETHANE	50	U	
CHLOROETHANE	50	U	
CHLOROFORM	0.1	U	B
CHLOROMETHANE	50	U	
CIS-1,2-DICHLOROETHENE	50	U	
CIS-1,3-DICHLOROPROPENE	50	U	
ETHYLBENZENE	50	U	
M+P-XYLENES	100	U	
METHYLENE CHLORIDE	50	UJ	C
O-XYLENE	50	U	
STYRENE	50	U	
TETRACHLOROETHENE	50	U	

Parameter	Result	Val Qual	Qual Code
TOLUENE	50	U	
TRANS-1,2-DICHLOROETHENE	50	U	
TRANS-1,3-DICHLOROPROPENE	50	U	
TRICHLOROETHENE	1200		
VINYL CHLORIDE	0.0397	J	P

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	2	U	
1,1,2-TRICHLOROETHANE	0.0114	J	P
1,1-DICHLOROETHANE	2	U	
1,1-DICHLOROETHENE	0.641		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	2	U	
1,3-DICHLOROBENZENE	2	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	10	U	
2-HEXANONE	10	U	
4-METHYL-2-PENTANONE	10	U	
ACETONE	10	UR	C
BENZENE	0.0106	J	P
BROMODICHLOROMETHANE	2	U	
BROMOFORM	2	U	
BROMOMETHANE	2	U	
CARBON DISULFIDE	2	U	
CARBON TETRACHLORIDE	2	U	
CHLOROBENZENE	2	U	
CHLORODIBROMOMETHANE	2	U	
CHLOROETHANE	2	U	
CHLOROFORM	0.1	U	B
CHLOROMETHANE	2	U	
CIS-1,2-DICHLOROETHENE	0.603	J	P
CIS-1,3-DICHLOROPROPENE	2	U	
ETHYLBENZENE	2	U	
M+P-XYLENES	4	U	
METHYLENE CHLORIDE	2	UJ	C
O-XYLENE	2	U	
STYRENE	2	U	
TETRACHLOROETHENE	2	U	
TOLUENE	2	U	

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SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-02I
samp_date	9/30/2004
lab_id	041048-20
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.515	J	P
TRANS-1,3-DICHLOROPROPENE	2	U	
TRICHLOROETHENE	63		
VINYL CHLORIDE	0.1	U	

nsample	MW16-05D
samp_date	9/29/2004
lab_id	041048-03
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.609		
1,1-DICHLOROETHANE	0.164	J	P
1,1-DICHLOROETHENE	0.948		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	A
1,4-DIOXANE	1	UR	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	B
BENZENE	0.0345	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	B
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	4.83		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	

nsample	MW16-05D
samp_date	9/29/2004
lab_id	041048-03
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TOLUENE	1	U	
TRANS-1,2-DICHLOROETHENE	0.527	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1100		
VINYL CHLORIDE	0.0486	J	P

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SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-05I	nsample	MW16-05I	nsample	MW16-05R
samp_date	9/29/2004	samp_date	9/29/2004	samp_date	9/29/2004
lab_id	041048-04	lab_id	041048-04	lab_id	041048-05
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1.52		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.0169	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	B
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	23		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1.1		
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	470		
VINYL CHLORIDE	0.413		

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.549		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	B
BENZENE	0.0271	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.15	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	B
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	8.08		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

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SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-05R
samp_date	9/29/2004
lab_id	041048-05
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.376	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	860		
VINYL CHLORIDE	0.141		

nsample	MW16-07D
samp_date	9/28/2004
lab_id	041048-01
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	UJ	C
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-07D
samp_date	9/28/2004
lab_id	041048-01
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	2.82		
VINYL CHLORIDE	0.0132	J	P

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SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-34D
samp_date	9/29/2004
lab_id	041048-07
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	7.91		
TOLUENE	1	U	

nsample	MW16-34D
samp_date	9/29/2004
lab_id	041048-07
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1.61		
VINYL CHLORIDE	0.1	U	

nsample	MW16-34I
samp_date	9/29/2004
lab_id	041048-06
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.222	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	B
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	3.9		
TOLUENE	1	U	

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nsample	MW16-34I
samp_date	9/29/2004
lab_id	041048-06
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	B
VINYL CHLORIDE	0.1	U	

nsample	MW16-34S
samp_date	9/29/2004
lab_id	041048-08
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	B
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-34S
samp_date	9/29/2004
lab_id	041048-08
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

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SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-42D	nsample	MW16-42D	nsample	MW16-42I
samp_date	9/30/2004	samp_date	9/30/2004	samp_date	9/30/2004
lab_id	041048-11	lab_id	041048-11	lab_id	041048-15
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	20	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	20	U	
1,1-DICHLOROETHENE	0.381		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	20	U	
1,3-DICHLOROBENZENE	20	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	100	U	
2-HEXANONE	100	U	
4-METHYL-2-PENTANONE	100	U	
ACETONE	100	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	20	U	
BROMOFORM	20	U	
BROMOMETHANE	20	U	
CARBON DISULFIDE	20	U	
CARBON TETRACHLORIDE	20	U	
CHLOROBENZENE	20	U	
CHLORODIBROMOMETHANE	20	U	
CHLOROETHANE	20	U	
CHLOROFORM	0.1	U	B
CHLOROMETHANE	20	U	
CIS-1,2-DICHLOROETHENE	4.92	J	P
CIS-1,3-DICHLOROPROPENE	20	U	
ETHYLBENZENE	20	U	
M+P-XYLENES	40	U	
METHYLENE CHLORIDE	20	U	A
O-XYLENE	20	U	
STYRENE	20	U	
TETRACHLOROETHENE	20	U	
TOLUENE	20	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	20	U	
TRANS-1,3-DICHLOROPROPENE	20	U	
TRICHLOROETHENE	730		
VINYL CHLORIDE	0.134		

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	2.99	J	P
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.0951	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.166	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	38		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	0.302	J	P

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nsample	MW16-42I
samp_date	9/30/2004
lab_id	041048-15
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	3.03		
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	33		

nsample	MW16-42S
samp_date	9/30/2004
lab_id	041048-16
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.713		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.0475	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	4.69		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-42S
samp_date	9/30/2004
lab_id	041048-16
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.537	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	8.56		

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SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-43D
samp_date	9/30/2004
lab_id	041048-13
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.83		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	6.91		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	UJ	C
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-43D
samp_date	9/30/2004
lab_id	041048-13
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.618	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	810		
VINYL CHLORIDE	0.139		

nsample	MW16-43I
samp_date	9/30/2004
lab_id	041048-14
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.187		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.0223	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	0.333	J	P
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-43I
samp_date	9/30/2004
lab_id	041048-14
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.153	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	4.47		
VINYL CHLORIDE	0.1	U	

nsample	MW16-43S
samp_date	9/30/2004
lab_id	041048-12
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.357		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	B
BENZENE	0.0549	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	4.1		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-43S
samp_date	9/30/2004
lab_id	041048-12
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.213	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.901	U	B
VINYL CHLORIDE	0.415		

PROJ_NO: 00234

SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-55D	nsample	MW16-55D	nsample	TB16-03
samp_date	9/29/2004	samp_date	9/29/2004	samp_date	9/30/2004
lab_id	041048-02	lab_id	041048-02	lab_id	041048-09
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	1.7	J	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.0205	J	P
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	0.306	J	P
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41048 MEDIA: WATER DATA FRACTION: OV

nsample	TB16-03
samp_date	9/30/2004
lab_id	041048-09
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.198	J	P
VINYL CHLORIDE	0.1	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **L. SINAGOGA** **DATE: NOVEMBER 14, 2005**

FROM: **BERNARD F SPADA III** **COPIES: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION: VOC/OVG**
CTO 049, NCBC DAVISVILLE
SDG 041080

SAMPLES: 18 / Aqueous / VOC/OVG

DUP02	MW16-01D	MW16-01S
MW16-03D	MW16-03S	MW16-08D
MW16-09D	MW16-10D*	MW16-10R
MW16-13D	MW16-13I	MW16-14D
MW16-25I	MW16-26D	MW16-28D
MW16-29D	MW16-40S	MW16-55R

2 / Aqueous / VOC

TB16-08	TB16-09

Overview

The sample set for CTO 049, NCBC Davisville; SDG 041080 consists of seventeen (17) environmental aqueous samples, two (2) trip blanks, and one (1) field duplicate. All samples were analyzed for volatile organic compounds (VOC). All samples except the trip blanks were also analyzed for methane, ethane, and ethene organic volatile gases (OVG). Select VOCs, namely vinyl chloride, 1,1-dichloroethene, 1,2-dichloroethane, chloroform, benzene, 1,1,2-trichloroethane, and 1,4-dichlorobenzene were analyzed using selective ion monitoring (SIM). Sample MW16-10D was also analyzed for 1,4-dioxane using SIM. The field duplicate pair included in this SDG is DUP02 and MW16-40S.

The samples were collected by EA Engineering, Science, and Technology on October 7-8 and 11, 2004 and were analyzed by Ceimic Corporation. Analyses were conducted using SW-846 Methods 8260B and 8260B SIM and RSK-175. A Tier II validation was performed on the referenced samples.

The data were evaluated based on the following parameters:

- * Data Completeness
- * Holding Times
- * GC/MS Tuning
- Initial and Continuing Calibration
- Laboratory Method and/or Field Quality Control Blanks
- * Surrogate Spike Recoveries
- * Blank Spike Recoveries
- Matrix Spike / Matrix Spike Duplicate Recoveries
- * Internal Standards Performance
- * Field Duplicate Precision
- * Detection Limits

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report.

CALIBRATIONS

The VOC continuing calibrations performed on October 11 at 12:25 and October 12 at 09:14 exceeded the 25% difference quality control criterion for carbon disulfide. Positive and non-detected results for carbon disulfide were qualified as estimated, "J", and "UJ", respectively, in all samples except MW16-25I.

The VOC SIM initial calibration performed on October 11, 2004 exceeded the 30% relative standard deviation (RSD) quality control criterion for 1,4-dichlorobenzene. Positive and non-detected results for 1,4-dichlorobenzene were qualified as estimated, "J", and "UJ", respectively, in all samples except MW16-10D.

The VOC SIM initial calibration performed on October 15, 2004 was below the 0.05 RRF quality control criterion for 1,4-dioxane. The non-detected result for 1,4-dioxane was rejected, "UR", in sample MW16-10D.

Laboratory Method Blanks

The following compounds were detected in the aqueous laboratory method blanks at the following maximum concentrations:

Compound	Maximum Concentration	Action Level
Methylene chloride	1.33 µg/L	13.3 µg/L
Chloroform	0.0314 µg/L	0.157 µg/L
1,2-Dichloroethane	0.0357 µg/L	0.1785 µg/L
Benzene	0.0179 µg/L	0.0895 µg/L
1,1,2-Trichloroethane	0.0174 µg/L	0.0870 µg/L
1,4-Dichlorobenzene	0.0168 µg/L	0.0840 µg/L
Methane	1.1 µg/L	5.5 µg/L

An action level of 10X the maximum concentration for methylene chloride and 5X the maximum concentration for the remaining compounds were used to evaluate samples for blank contamination. Positive results for the aforementioned compounds less than the blank action level were qualified as non-detected, "U". No qualifications were made to field quality control samples.

Surrogate Spike Recoveries / Internal Standard Performance

The surrogate bromofluorobenzene was below the percent recovery quality control criteria in the VOC SIM fraction of sample MW16-13D. The sample was re-analyzed with similar results. The initial analysis was used for validation. Non-detected results for vinyl chloride, 1,1-dichloroethene, chloroform, benzene, 1,2-dichloroethane, 1,1,2-trichloroethene, and 1,4-dichlorobenzene were qualified as estimated, "UJ", in sample MW16-13D.

Matrix Spike/Matrix Spike Duplicate Recoveries

The percent recovery of 1,1-dichloroethene was below the quality control criterion in the MS/MSD of sample MW16-01S. The non-detected result for 1,1-dichloroethene was qualified as estimated, "UJ", in sample MW16-01S.

ADDITIONAL COMMENTS

Positive results reported at concentrations below the CRQL were qualified as estimated (J).

Samples DUP02, MW16-08D, MW16-28D, MW16-29D, and MW16-40S were analyzed at a 2X, 10X, 5X, 100X, and 2X dilutions respectively, because the concentration of trichloroethene and/or cis1,2-dichloroethene exceeded the linear calibration range of the instrument. The results for trichloroethene and/or cis-1,2-dichloroethene from the diluted analyses were used for validation.

Samples MW16-14D and MW16-25I were analyzed at 50X and 5X dilutions respectively, because the concentration of trichloroethene exceeded the linear calibration range of the instrument. The samples were not analyzed un-diluted. This accounts for the elevated reporting limits for all non-detected compounds in the VOC fraction of samples MW16-14D and MW16-25I. No action was taken on this basis.

Samples DUP02 and MW16-40S were re-analyzed at a 50X dilutions because the concentration of 1,1-dichloroethene, vinyl chloride, and cis-1,2-dichloroethene exceeded the linear calibration range of the instrument. The results for 1,1-dichloroethene, vinyl chloride, and cis-1,2-dichloroethene from the diluted analyses were used for validation.

Samples DUP02, MW16-03S, MW16-10R, MW16-13D, MW16-29D, and MW16-40S were re-analyzed at 100X, 10X, 20X, 10X, 100X, and 100X dilutions respectively, because the concentration of methane exceeded the linear calibration range of the instrument. The results for methane from the diluted analyses were used for validation.

EXECUTIVE SUMMARY

Laboratory Performance: Qualifications were made based on calibration non-compliances, method blank contamination, MS/MSD non-compliances, and surrogate recovery non-compliances.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region I EPA "Data Validation Functional Guidelines - Part II" (12/96).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines.

Bernard F Spada III

TetraTech NUS
Bernard F Spada III
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	DUP02	nsample	DUP02	nsample	DUP02DL
samp_date	10/8/2004	samp_date	10/8/2004	samp_date	10/8/2004
lab_id	041080-12	lab_id	041080-12	lab_id	041080-12DL
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:	MW16-40S	DUP_OF:	MW16-40S	DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	A
1,1-DICHLOROETHANE	1	U	
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.92	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TRANS-1,2-DICHLOROETHENE	5.17		
TRANS-1,3-DICHLOROPROPENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	14		

Parameter	Result	Val Qual	Qual Code
1,1-DICHLOROETHENE	6.38		
CIS-1,2-DICHLOROETHENE	83		
VINYL CHLORIDE	52		

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-01D	nsample	MW16-01D	nsample	MW16-01S
samp_date	10/7/2004	samp_date	10/7/2004	samp_date	10/7/2004
lab_id	041080-06	lab_id	041080-06	lab_id	041080-07
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.58	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	6.04		
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	UJ	D
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.72	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-01S
samp_date	10/7/2004
lab_id	041080-07
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1.28		
VINYL CHLORIDE	0.1	U	

nsample	MW16-03D
samp_date	10/8/2004
lab_id	041080-18
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	A
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.021	J	P
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.56	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-03D
samp_date	10/8/2004
lab_id	041080-18
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.142	J	P
VINYL CHLORIDE	0.1	U	

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-03S
samp_date	10/8/2004
lab_id	041080-17
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	A
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.0202	J	P
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.65	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-03S
samp_date	10/8/2004
lab_id	041080-17
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

nsample	MW16-08D
samp_date	10/8/2004
lab_id	041080-14
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.188		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	1.45	J	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	3.76		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.84	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-08D
samp_date	10/8/2004
lab_id	041080-14
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.158	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.386		

nsample	MW16-08DDL
samp_date	10/8/2004
lab_id	041080-14DL
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	320		

nsample	MW16-09D
samp_date	10/8/2004
lab_id	041080-16
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	A
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.0197	J	P
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.98	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

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SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-09D
samp_date	10/8/2004
lab_id	041080-16
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.216	J	P
VINYL CHLORIDE	0.1	U	

nsample	MW16-10D
samp_date	10/7/2004
lab_id	041080-11
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	A
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
1,4-DIOXANE	1	UR	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	

nsample	MW16-10D
samp_date	10/7/2004
lab_id	041080-11
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TOLUENE	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.497	J	P
VINYL CHLORIDE	0.1	U	

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SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-10R
samp_date	10/7/2004
lab_id	041080-10
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	A
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.0274	J	P
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	1.33	J	P
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	7.45		
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	2.23	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-10R
samp_date	10/7/2004
lab_id	041080-10
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.0645	J	P

nsample	MW16-13D
samp_date	10/7/2004
lab_id	041080-04
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	UJ	R
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	UJ	R
1,2-DICHLOROETHANE	0.1	UJ	R
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	CR
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	2.57	J	P
BENZENE	0.1	UJ	R
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	UJ	R
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.46	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

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SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-13D
samp_date	10/7/2004
lab_id	041080-04
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.326	J	P
VINYL CHLORIDE	0.1	UJ	R

nsample	MW16-13I
samp_date	10/7/2004
lab_id	041080-03
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.84	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	0.473	J	P
TOLUENE	1	U	

nsample	MW16-13I
samp_date	10/7/2004
lab_id	041080-03
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	9.15		
VINYL CHLORIDE	0.1	U	

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-14D	nsample	MW16-14D	nsample	MW16-25I
samp_date	10/7/2004	samp_date	10/7/2004	samp_date	10/8/2004
lab_id	041080-01	lab_id	041080-01	lab_id	041080-19
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	50	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	50	U	
1,1-DICHLOROETHENE	0.137		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	50	U	
1,3-DICHLOROBENZENE	50	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	250	U	
2-HEXANONE	250	U	
4-METHYL-2-PENTANONE	250	U	
ACETONE	250	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	50	U	
BROMOFORM	50	U	
BROMOMETHANE	50	U	
CARBON DISULFIDE	50	UJ	C
CARBON TETRACHLORIDE	50	U	
CHLOROBENZENE	50	U	
CHLORODIBROMOMETHANE	50	U	
CHLOROETHANE	50	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	50	U	
CIS-1,2-DICHLOROETHENE	50	U	
CIS-1,3-DICHLOROPROPENE	50	U	
ETHYLBENZENE	50	U	
M+P-XYLENES	100	U	
METHYLENE CHLORIDE	180	U	A
O-XYLENE	50	U	
STYRENE	50	U	
TETRACHLOROETHENE	50	U	
TOLUENE	50	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	50	U	
TRANS-1,3-DICHLOROPROPENE	50	U	
TRICHLOROETHENE	2000		
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	5	U	
1,1,2-TRICHLOROETHANE	0.1	U	A
1,1-DICHLOROETHANE	5	U	
1,1-DICHLOROETHENE	0.0326	J	P
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	5	U	
1,3-DICHLOROBENZENE	5	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	25	U	
2-HEXANONE	25	U	
4-METHYL-2-PENTANONE	25	U	
ACETONE	25	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	5	U	
BROMOFORM	5	U	
BROMOMETHANE	5	U	
CARBON DISULFIDE	5	U	
CARBON TETRACHLORIDE	5	U	
CHLOROBENZENE	5	U	
CHLORODIBROMOMETHANE	5	U	
CHLOROETHANE	5	U	
CHLOROFORM	0.113	U	A
CHLOROMETHANE	5	U	
CIS-1,2-DICHLOROETHENE	5	U	
CIS-1,3-DICHLOROPROPENE	5	U	
ETHYLBENZENE	5	U	
M+P-XYLENES	10	U	
METHYLENE CHLORIDE	9.77	U	A
O-XYLENE	5	U	
STYRENE	5	U	
TETRACHLOROETHENE	5	U	
TOLUENE	5	U	

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-25I
samp_date	10/8/2004
lab_id	041080-19
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	5	U	
TRANS-1,3-DICHLOROPROPENE	5	U	
TRICHLOROETHENE	120		
VINYL CHLORIDE	0.1	U	

nsample	MW16-26D
samp_date	10/7/2004
lab_id	041080-09
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	A
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	2.3	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-26D
samp_date	10/7/2004
lab_id	041080-09
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.0786	J	P

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-28D
samp_date	10/11/2004
lab_id	041080-20
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	A
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.18		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1.15		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.21	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-28D
samp_date	10/11/2004
lab_id	041080-20
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.1	U	

nsample	MW16-28DDL
samp_date	10/11/2004
lab_id	041080-20DL
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	200		

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-29D	nsample	MW16-29D	nsample	MW16-29DDL
samp_date	10/7/2004	samp_date	10/7/2004	samp_date	10/7/2004
lab_id	041080-08	lab_id	041080-08	lab_id	041080-08DL
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	A
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1.17		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	35		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.15	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	2.02		
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.515		

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	2900		

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-40S	nsample	MW16-40S	nsample	MW16-40SDL
samp_date	10/8/2004	samp_date	10/8/2004	samp_date	10/8/2004
lab_id	041080-13	lab_id	041080-13	lab_id	041080-13DL
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	A
1,1-DICHLOROETHANE	1	U	
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.81	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TRANS-1,2-DICHLOROETHENE	5.18		
TRANS-1,3-DICHLOROPROPENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	14		

Parameter	Result	Val Qual	Qual Code
1,1-DICHLOROETHENE	6.98		
CIS-1,2-DICHLOROETHENE	91		
VINYL CHLORIDE	58		

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-55R	nsample	MW16-55R	nsample	TB16-08
samp_date	10/7/2004	samp_date	10/7/2004	samp_date	10/7/2004
lab_id	041080-02	lab_id	041080-02	lab_id	041080-05
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	8.4		
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.254	J	CP
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	2.39	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.0185	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.0202	J	P
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	2.39		
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41080 MEDIA: WATER DATA FRACTION: OV

nsample	TB16-08
samp_date	10/7/2004
lab_id	041080-05
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

nsample	TB16-09
samp_date	10/8/2004
lab_id	041080-15
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.0104	J	P
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.0198	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.0171	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.0163	J	P
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	2.27		
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	TB16-09
samp_date	10/8/2004
lab_id	041080-15
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **LEE ANN SINAGOGA** **DATE: NOVEMBER 16, 2005**

FROM: **KELLY CARPER** **COPIES: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION: VOA/DISSOLVED GASES**
CTO 049, NCBC DAVISVILLE, RHODE ISLAND
SDG 041112

SAMPLES: 13/ Aqueous/VOC/VOC SIM/Dissolved Gases

DUP-01	MW16-15D	MW16-15R	MW16-15R2	MW16-23D
MW16-27I	MW16-28I	MW16-50D	MW16-54D	MW16-56D
MW16-56I	MW16-56R	TB16-13		

3/Aqueous/1,4-Dioxane (subset of VOC SIM)

MW16-15D	MW16-50D	MW16-56I

Overview

The sample set for CTO 049 SDG 041112, NCBC Davisville consists of twelve (12) aqueous environmental samples (including one field duplicate pair DUP-01/MW16-15R) and (1) trip blank. All samples were analyzed for volatile organic compounds (VOCs), VOC Selective Ion Monitoring (SIM) and Dissolved Gases, except the trip blank which was not analyzed for Dissolved Gases.

The samples were collected by EA Engineering, Science & Technology, Inc. on October 13 and 14, 2004 and analyzed by CEIMIC Corporation. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using USEPA SW 846 Methods 8260B, 8260B SIM, and RSK175 analytical and reporting protocol. A Tier 2 data validation was performed on the referenced samples. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
• Initial and Continuing Calibration
• Laboratory Method and/or Field Quality Control Blanks
* • Surrogate Spike Recoveries
* • Blank Spike / Blank Spike Duplicate Recoveries
* • Internal Standards Performance
* • Matrix Spike/Matrix Spike Duplicate Results
• Field Duplicate Results
* • Detection Limits

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report.

CALIBRATIONS

The initial calibration Relative Response Factor (RRF) for 1,4-dioxane was less than the 0.05 quality control criterion. The nondetected results report for this compound in samples MW16-15D, MW16-50D, and MW16-56I were rejected qualified (UR).

The continuing calibration Percent Difference (%D) for methane exceeded the 15% quality control criterion for the calibration run on 10/18/04 at 16:43. Positive methane results not qualified as a result of blank contamination were qualified as estimated (J). All samples in the SDG are affected.

Laboratory Method and Field Quality Control Blanks

The following compounds were detected in the method blanks or trip blanks at the maximum concentrations indicated below:

Compound	Concentration	Action Level
Methylene Chloride	1.11 µg/L	11.1 µg/L
Acetone*	2.81 µg/L	28.1 µg/L
1,1,2-Trichloroethane*	0.0131 µg/L	0.065 µg/L
Chloroform	0.0171 µg/L	0.085 µg/L
1,4-Dichlorobenzene	0.0168 µg/L	0.084 µg/L
Methane	1.0 µg/L	5 µg/L

* Detected in a trip blank.

Blank Actions

- Value < Reporting Limit (RL); Report RL followed by a U.
- Value > RL and < Action level; report value followed by a U.

Action levels of 10X the maximum contaminant concentration (for methylene chloride and acetone) and 5X the maximum contaminant concentration (for all others) were established to evaluate blank contamination. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results for these compounds were qualified as indicated above. No actions were taken for 1,4-dichlorobenzene as no positive results were reported or this compound in any of the affected samples.

FIELD DUPLICATE PRECISION

Positive results for 1,1,2-trichloroethane, 1,1-dichloroethene, trichloroethene, and methane were qualified as estimated (J) in the field duplicate pair DUP-01/MW16-15R due to field duplicate Relative Percent Differences (RPDs) greater than 30%.

ADDITIONAL COMMENTS

Positive results reported at concentrations below the CRQL were qualified as estimated (J).

The following samples were reanalyzed at a dilution due to trichloroethene exceeding the instrument linear calibration range: DUP-01 (20X), MW16-15D (50X), MW16-15R (10X), MW16-15R2 (10X), MW16-23D (50X), MW16-27I (5X), and MW16-56D (2X). Additionally the dissolved gases analysis of DUP-01 and MW16-15R were diluted 50X due to concentrations of methane exceeding the instruments linear range.

OVERALL ASSESSMENT

Laboratory Performance: Qualifications were made based on calibration non-compliances and lab method blank contamination.

Other Factors Affecting Data Quality: Several compounds were detected in the field blanks.

The data for these analyses were reviewed with reference to the Region I EPA "Data Validation Functional Guidelines - Part II" (12/96).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines."

TetraTech NUS
Kelly Carper
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

PROJ_NO: 00234

SDG: 041112 MEDIA: WATER DATA FRACTION: OV

nsample	DUP-01	nsample	DUP-01	nsample	DUP-01DL
samp_date	10/14/2004	samp_date	10/14/2004	samp_date	10/14/2004
lab_id	041112-12	lab_id	041112-12	lab_id	041112-12DL
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:	MW16-15R	DUP_OF:	MW16-15R	DUP_OF:	MW16-15R

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.241	J	G
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1.07	J	G
1,2-DICHLOROETHANE	0.0263	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.0318	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.893	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.53	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TRANS-1,2-DICHLOROETHENE	0.242	J	P

Parameter	Result	Val Qual	Qual Code
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.306		

Parameter	Result	Val Qual	Qual Code
CIS-1,2-DICHLOROETHENE	60		
TRICHLOROETHENE	940	J	G

PROJ_NO: 00234

SDG: 041112 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-15D
samp_date	10/14/2004
lab_id	041112-08
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.25		
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.442		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
1,4-DIOXANE	1	UR	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.0194	J	P
BROMODICHLOROMETHANE	0.294	J	P
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	0.579	J	P
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	2.19		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.39	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	

nsample	MW16-15D
samp_date	10/14/2004
lab_id	041112-08
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TOLUENE	1	U	
TRANS-1,2-DICHLOROETHENE	0.275	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.0193	J	P

nsample	MW16-15DDL
samp_date	10/14/2004
lab_id	041112-08DL
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	1400		

PROJ_NO: 00234

SDG: 041112 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-15R	nsample	MW16-15R	nsample	MW16-15R2
samp_date	10/14/2004	samp_date	10/14/2004	samp_date	10/14/2004
lab_id	041112-09	lab_id	041112-09	lab_id	041112-10
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.131	J	G
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.567	J	G
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.0307	J	P
BROMODICHLOROMETHANE	0.235	J	P
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.759	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	0.322	J	P
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	49		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.09	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.184	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.235		

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1.31		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	B
BENZENE	0.0235	J	P
BROMODICHLOROMETHANE	0.303	J	P
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	0.491	J	P
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	27		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.69	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 041112 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-15R2	nsample	MW16-15R2DL	nsample	MW16-15RDL
samp_date	10/14/2004	samp_date	10/14/2004	samp_date	10/14/2004
lab_id	041112-10	lab_id	041112-10DL	lab_id	041112-09DL
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.306	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.19		

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	210		

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	470	J	G

PROJ_NO: 00234

SDG: 041112 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-23D	nsample	MW16-23D	nsample	MW16-23DDL
samp_date	10/14/2004	samp_date	10/14/2004	samp_date	10/14/2004
lab_id	041112-11	lab_id	041112-11	lab_id	041112-11DL
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.464		
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.844		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	25		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.45	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.48	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.0918	J	P

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	1900		

PROJ_NO: 00234

SDG: 041112 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-27I	nsample	MW16-27I	nsample	MW16-27IDL
samp_date	10/14/2004	samp_date	10/14/2004	samp_date	10/14/2004
lab_id	041112-03	lab_id	041112-03	lab_id	041112-03DL
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.10	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.314		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	12	U	B
BENZENE	0.0267	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	6.93		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.83	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.238	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	120		

PROJ_NO: 00234

SDG: 041112 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-28I
samp_date	10/14/2004
lab_id	041112-07
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.0136	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-28I
samp_date	10/14/2004
lab_id	041112-07
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1.29		
VINYL CHLORIDE	0.1	U	

nsample	MW16-50D
samp_date	10/13/2004
lab_id	041112-02
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
1,4-DIOXANE	1	UR	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.49	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.69	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	

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SDG: 041112 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-50D
samp_date	10/13/2004
lab_id	041112-02
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TOLUENE	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.031	J	p

nsample	MW16-54D
samp_date	10/13/2004
lab_id	041112-01
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.5	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-54D
samp_date	10/13/2004
lab_id	041112-01
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

PROJ_NO: 00234

SDG: 041112 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-56D
samp_date	10/14/2004
lab_id	041112-06
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.111		
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.0809	J	P
1,2-DICHLOROETHANE	0.0746	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	12	U	B
BENZENE	0.0135	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.258	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	0.33	J	P
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.9	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-56D
samp_date	10/14/2004
lab_id	041112-06
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.0301	J	P

nsample	MW16-56DDL
samp_date	10/14/2004
lab_id	041112-06DL
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	50		

PROJ_NO: 00234

SDG: 041112 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-56I
samp_date	10/14/2004
lab_id	041112-04
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B .
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
1,4-DIOXANE	1	UR	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	0.364	J	P
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.92	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	

nsample	MW16-56I
samp_date	10/14/2004
lab_id	041112-04
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TOLUENE	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.851	J	P
VINYL CHLORIDE	0.1	U	

nsample	MW16-56R
samp_date	10/14/2004
lab_id	041112-05
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.279		
1,2-DICHLOROETHANE	0.0124	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	8.63	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1.5		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1.86	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 041112 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-56R
samp_date	10/14/2004
lab_id	041112-05
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	17		
VINYL CHLORIDE	0.0498	J	P

nsample	TB16-13
samp_date	10/14/2004
lab_id	041112-13
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.0131	J	P
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	2.81	J	P
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.0130	J	P
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	2.38		
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	TB16-13
samp_date	10/14/2004
lab_id	041112-13
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO:	**L. SINAGOGA**	**DATE:**	**NOVEMBER 14, 2005**
FROM:	**EDWARD SEDLMYER**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / VOC SIM / OVG**
CTO 049, NCBC DAVISVILLE
SDG 41190

SAMPLES: 20 / Aqueous

MW16-08S	MW16-14R	MW16-20D	MW16-20I
MW16-23S	MW16-25S	MW16-32R	MW16-38I
MW16-51D	MW16-51R	MW16-52D	MW16-60D
MW16-60R	MW16-65D	MW16-65I	MW16-65R
MW16-65S	TB16-16	TB16-17	TB16-18

OVERVIEW

The sample set for CTO 049; NCBC Davisville, SDG 41190 consists of three (3) trip blanks and seventeen (17) aqueous environmental samples. All samples were analyzed for volatile organic compounds (VOC(SIM) and methane, ethane, and ethane, except for the trip blanks, which were not analyzed for methane, ethane, and ethene. Select VOCs, vinyl chloride, 1,1-dichloroethene, chloroform, 1,2-dichloroethane, benzene, 1,1,2-trichlroethane, and 1,4-dichlorobenzene were analyzed by selective ion monitoring (SIM). Samples MW16-38I and MW16-52D were also analyzed for 1,4-dioxane by VOC SIM.

The samples were collected by EA Engineering, Science & Technology, Inc. on October 27, 28, 29, and November 1, 2004 and analyzed by CEIMIC Corporation. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using USEPA SW 846 Methods 8260B, 8260B SIM, and RSK175 analytical and reporting protocol. A Tier II data validation was performed on the reviewed samples. The data contained in this SDG were validated with regard to the following parameters:

* • Data completeness
* • Holding times
* • GC/MS Tuning
• Initial and continuing calibration
• Blank results
* • Surrogate spike recoveries
* • Internal standard recoveries
* • Blank Spike/Blank Spike Duplicate Results
* • Matrix Spike/Matrix Spike Duplicate Results
* • Detection Limits

The symbol (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report.

VOA

The following compounds were detected in the method blanks or trip blanks at the maximum concentrations indicated below:

Compound	Concentration	Action Level
Methylene Chloride[1]	0.894 µg/L	8.9 µg/L
Acetone[1]	3.48 µg/L	34.8 µg/L
Dibromochloromethane[1]	0.499 µg/L	2.5 µg/L

1- Maximum concentration detected in a trip blank.

Blank Actions

- Value < Reporting Limit (RL); value followed by a U.
- Value > RL and < Action level; report value followed by a U.

An action level of 10X the maximum contaminant concentration was established to evaluate laboratory contamination for acetone and methylene chloride; and 5X for dibromochloromethane. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results for acetone and methylene chloride were qualified as blank contaminants in samples MW16-08S, MW16-14R, MW16-20D, MW16-20I, MW16-23S, MW16-25S, MW16-32R, MW16-38I, MW16-51D, MW16-51R, MW16-52D, MW16-60D, MW16-60R, MW16-65D, MW16-65I, MW16-65R, and MW16-65S. No action was taken on the trip blanks.

An initial calibration percent relative standard deviation (%RSD) exceeded the 30% quality control limit for methylene chloride on instrument MS4, on 10/28/04. No action was taken on this basis because all methylene chloride results were qualified due to blank contamination, except for the trip blanks which were qualified as estimated (J).

A calibration verification percent difference (%D) exceeded the 25% quality control limit for methylene chloride on instrument MS4, on 10/29/04, at 10:58. The positive result for methylene chloride was qualified as estimated (J) in the trip blank (TB16-16).

A calibration verification percent difference (%D) exceeded the 25% quality control limit for methylene chloride on instrument MS4, on 11/01/04, at 12:14. The positive result for methylene chloride was qualified as estimated (J) in the trip blank (TB16-17). No action was taken in the environmental samples because methylene chloride was qualified due to blank contamination.

A calibration verification percent difference (%D) exceeded the 25% quality control limit for methylene chloride on instrument MS4, on 11/02/04, at 11:44. The positive result for methylene chloride was qualified as estimated (J) in the trip blank (TB16-18). No action was taken in the environmental samples because methylene chloride was qualified due to blank contamination.

A calibration verification percent difference (%D) exceeded the 25% quality control limit for methylene chloride on instrument MS4, on 11/03/04, at 13:15. No action was taken on this basis because all methylene chloride results were qualified due to blank contamination.

The following samples were analyzed at dilutions due to high concentrations of various VOC compounds: MW16-60D (50X) and MW16-60R (50X).

Samples MW16-32R (5X) and MW16-38I (20X) were not analyzed un-diluted. This accounts for the elevated detection limits for these samples.

VOA SIM

The following compounds were detected in the method blanks and/or trip blank at the maximum concentrations indicated below:

Compound	Concentration	Action Level
Chloroform[1]	0.0191 µg/L	0.096 µg/L
1,1,2-Trichloroethane[2]	0.0198 µg/L	0.099 µg/L

1- Maximum concentration detected in a method blank.
2- Maximum concentration detected in a trip blank.

Blank Actions

- Value < Reporting Limit (RL); value followed by a U.
- Value > RL and < Action level; report value followed by a U.

An action level of 5X the maximum contaminant concentration was established to evaluate laboratory contamination for chloroform and 1,1,2-trichloroethane. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results for chloroform and 1,1,2-trichloroethane, were qualified as blank contaminants in samples MW16-08S, MW16-14R, MW16-20D, MW16-20I, MW16-23S, MW16-25S, MW16-32R, MW16-51D, MW16-51R, MW16-65D, MW16-65I, MW16-65R, and MW16-65S. No action was taken on the trip blanks.

An initial calibration relative response factor (RRF) was less than the 0.05 quality control limit for 1,4-dioxane on instrument MS15, on 11/01/2004. The non-detected 1,4-dioxane results have been rejected (UR), in the affected samples.

An initial calibration relative response factor (RRF) was less than the 0.05 quality control limit for 1,4-dioxane on instrument MS15, on 11/03/2004. No action was taken on this basis because no samples analyzed for 1,4-dioxane were associated with this initial calibration.

A calibration verification RRF was less than the 0.05 quality control limit for 1,4-dioxane on instrument MS15, on 11/02/04, at 10:37. The non-detected results reported for 1,4-dioxane have been rejected (UR).

A calibration verification RRF was less than the 0.05 quality control limit for 1,4-dioxane on instrument MS15, on 11/03/04, at 10:46. No action was taken on this basis because no samples analyzed for 1,4-dioxane were associated with this continuing calibration.

The following sample was analyzed at dilutions due to high concentrations of various VOC compounds: MW16-60R.

Methane, Ethane, Ethene

The following compound was detected in the method blanks at the maximum concentrations indicated below:

Compound	Concentration	Action Level
Methane	1.6 µg/L	8.0 µg/L

Blank Actions

- Value < Reporting Limit (RL); value followed by a U.
- Value > RL and < Action level; report value followed by a U.

An action level of 5X the maximum contaminant concentration was established to evaluate laboratory contamination for methane. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. Positive results for methane were qualified as blank contaminant in samples MW16-08S, MW16-14R, MW16-20D, MW16-20I, MW16-23S, MW16-32R, MW16-38I, MW16-60D, MW16-60R, MW16-65D, MW16-65I, MW16-65R, and MW16-65S.

Additional Comments

Positive results reported below the reporting limit but above the threshold value were qualified as estimated, J.

The 1,4-dioxane data were rejected for the following reasons:

1. The Region I guideline for relative response factor (RRF) is a response of 0.05 or greater. The RRFs by VOA SIM for 1,4-dioxane are around 0.001. This is one order of magnitude below the guideline.

2. 1,4-Dioxane is miscible in water. Because it is very soluble in water, it is difficult to purge effectively. This renders analysis as a volatile organic compound impractical if low levels of detection are required. This purging problem is confirmed by the poor RRF.

3. The area count for the low end of the calibration curve (1.0 ug/L) was indistinguishable from background.

4. All points of the calibration curve 1.0, 2.0, 5.0, 10.0, and 20.0 ug/L were manually integrated due to low area counts and poor chromatography. This means that peaks of 1,4-dioxane in real samples would not likely be chosen by the instrument integrator and therefore could have been missed in the samples.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Qualifications were made on initial and continuing calibration non-compliances for several VOC and VOC SIM compounds that failed to comply with quality control criteria (%Ds and RRFs). Blank contamination for several VOC, VOC SIM, and methane compounds resulted in qualification of the data.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the EPA Functional Guidelines for Organic Data Validation (10/99), EPA Region I (12/96) and the NFESC guidelines "Navy IRCDQM" (Sept 1999). The text of this report has been formulated to address only those problem areas affecting data quality.

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC guidelines."

Edward Sedlmyer
Tetra Tech NUS

Edward Sedlmyer
Chemist/Data Validator

TetraTech NUS

Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C – Region I Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00234

SDG: 41190 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-08S	nsample	MW16-08S	nsample	MW16-14R
samp_date	10/28/2004	samp_date	10/28/2004	samp_date	10/27/2004
lab_id	041190-07	lab_id	041190-07	lab_id	041190-01
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	19	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.184	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	4.19		
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	14	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41190 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-14R
samp_date	10/27/2004
lab_id	041190-01
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.85	J	P
VINYL CHLORIDE	0.1	U	

nsample	MW16-20D
samp_date	10/28/2004
lab_id	041190-10
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.187		
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.0483	J	P
1,2-DICHLOROETHANE	0.0529	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	B
BENZENE	0.013	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-20D
samp_date	10/28/2004
lab_id	041190-10
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	9.96		
VINYL CHLORIDE	0.0592	J	P

PROJ_NO: 00234

SDG: 41190 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-20I	nsample	MW16-20I	nsample	MW16-23S
samp_date	10/28/2004	samp_date	10/28/2004	samp_date	10/28/2004
lab_id	041190-09	lab_id	041190-09	lab_id	041190-08
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	0.158	J	P
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	7.34		
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	14	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.149	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.116		
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	0.61	J	P
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41190 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-23S
samp_date	10/28/2004
lab_id	041190-08
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	31		
VINYL CHLORIDE	0.1	U	

nsample	MW16-25S
samp_date	11/1/2004
lab_id	041190-20
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	17	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.151	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	0.233	J	P
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-25S
samp_date	11/1/2004
lab_id	041190-20
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	2.9		
VINYL CHLORIDE	0.1	U	

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SDG: 41190 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-32R
samp_date	10/29/2004
lab_id	041190-16
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	5	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	5	U	
1,1-DICHLOROETHENE	0.12		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	5	U	
1,3-DICHLOROBENZENE	5	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	25	U	
2-HEXANONE	25	U	
4-METHYL-2-PENTANONE	25	U	
ACETONE	29	U	B
BENZENE	0.0201	J	P
BROMODICHLOROMETHANE	5	U	
BROMOFORM	5	U	
BROMOMETHANE	5	U	
CARBON DISULFIDE	5	U	
CARBON TETRACHLORIDE	5	U	
CHLOROBENZENE	5	U	
CHLORODIBROMOMETHANE	5	U	
CHLOROETHANE	5	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	5	U	
CIS-1,2-DICHLOROETHENE	5	U	
CIS-1,3-DICHLOROPROPENE	5	U	
ETHYLBENZENE	5	U	
M+P-XYLENES	10	U	
METHYLENE CHLORIDE	1.29	U	B
O-XYLENE	5	U	
STYRENE	5	U	
TETRACHLOROETHENE	5	U	
TOLUENE	5	U	

nsample	MW16-32R
samp_date	10/29/2004
lab_id	041190-16
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	5	U	
TRANS-1,3-DICHLOROPROPENE	5	U	
TRICHLOROETHENE	110		
VINYL CHLORIDE	0.1	U	

nsample	MW16-38I
samp_date	10/27/2004
lab_id	041190-03
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	20	U	
1,1,2-TRICHLOROETHANE	0.628		
1,1-DICHLOROETHANE	20	U	
1,1-DICHLOROETHENE	0.299		
1,2-DICHLOROETHANE	0.0479	J	P
1,2-DICHLOROPROPANE	20	U	
1,3-DICHLOROBENZENE	20	U	
1,4-DICHLOROBENZENE	0.1	U	
1,4-DIOXANE	1	UR	C
2-BUTANONE	100	U	
2-HEXANONE	100	U	
4-METHYL-2-PENTANONE	100	U	
ACETONE	100	U	B
BENZENE	0.0259	J	P
BROMODICHLOROMETHANE	20	U	
BROMOFORM	20	U	
BROMOMETHANE	20	U	
CARBON DISULFIDE	20	U	
CARBON TETRACHLORIDE	20	U	
CHLOROBENZENE	20	U	
CHLORODIBROMOMETHANE	20	U	
CHLOROETHANE	20	U	
CHLOROFORM	0.301		
CHLOROMETHANE	20	U	
CIS-1,2-DICHLOROETHENE	20	U	
CIS-1,3-DICHLOROPROPENE	20	U	
ETHYLBENZENE	20	U	
M+P-XYLENES	40	U	
METHYLENE CHLORIDE	25	U	B
O-XYLENE	20	U	
STYRENE	20	U	
TETRACHLOROETHENE	20	U	

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SDG: 41190 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-38I
samp_date	10/27/2004
lab_id	041190-03
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TOLUENE	20	U	
TRANS-1,2-DICHLOROETHENE	20	U	
TRANS-1,3-DICHLOROPROPENE	20	U	
TRICHLOROETHENE	820		
VINYL CHLORIDE	0.1	U	

nsample	MW16-51D
samp_date	10/29/2004
lab_id	041190-17
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.0237	J	P
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.579	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	0.336	J	P
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-51D
samp_date	10/29/2004
lab_id	041190-17
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.504	J	P
VINYL CHLORIDE	0.0198	J	P

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SDG: 41190 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-51R	nsample	MW16-51R	nsample	MW16-52D
samp_date	10/29/2004	samp_date	10/29/2004	samp_date	10/27/2004
lab_id	041190-18	lab_id	041190-18	lab_id	041190-04
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	16	U	B
BENZENE	0.0134	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.262	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	0.186	J	P

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
1,4-DIOXANE	1	UR	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	

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nsample	MW16-52D
samp_date	10/27/2004
lab_id	041190-04
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TOLUENE	1	U	
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.55	J	P
VINYL CHLORIDE	0.0641	J	P

nsample	MW16-60D
samp_date	10/27/2004
lab_id	041190-05
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1.28		
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.527		
1,2-DICHLOROETHANE	0.0229	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	6.8	U	B
BENZENE	0.0323	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.249	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.159		
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1.67		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-60D
samp_date	10/27/2004
lab_id	041190-05
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.255	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1600		
VINYL CHLORIDE	0.0236	J	P

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SDG: 41190 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-60R
samp_date	10/27/2004
lab_id	041190-06
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	1.54		
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	5.05		
1,2-DICHLOROETHANE	0.0652	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	21	U	B
BENZENE	0.0567	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.679	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.104		
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	16		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	0.41	J	P

nsample	MW16-60R
samp_date	10/27/2004
lab_id	041190-06
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.668	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1800		
VINYL CHLORIDE	0.413		

nsample	MW16-65D
samp_date	10/28/2004
lab_id	041190-14
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.136	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

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nsample	MW16-65D
samp_date	10/28/2004
lab_id	041190-14
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

nsample	MW16-65I
samp_date	10/28/2004
lab_id	041190-13
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.114	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-65I
samp_date	10/28/2004
lab_id	041190-13
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	3.19		
VINYL CHLORIDE	0.1	U	

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nsample	MW16-65R
samp_date	10/28/2004
lab_id	041190-15
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	8.17		
2-HEXANONE	11		
4-METHYL-2-PENTANONE	5	U	
ACETONE	64		
BENZENE	0.08	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	0.824	J	P
TOLUENE	0.688	J	P

nsample	MW16-65R
samp_date	10/28/2004
lab_id	041190-15
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.415	J	P
VINYL CHLORIDE	0.1	U	

nsample	MW16-65S
samp_date	10/28/2004
lab_id	041190-12
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	B
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	7.61	U	B
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	B
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

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nsample	MW16-65S
samp_date	10/28/2004
lab_id	041190-12
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1.24		
VINYL CHLORIDE	0.1	U	

nsample	TB16-16
samp_date	10/27/2004
lab_id	041190-02
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.0168	J	P
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	3.48	J	P
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.0177	J	P
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	0.692	J	CP
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	TB16-16
samp_date	10/27/2004
lab_id	041190-02
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

PROJ_NO: 00234

SDG: 41190 MEDIA: WATER DATA FRACTION: OV

nsample	TB16-17	nsample	TB16-17	nsample	TB16-18
samp_date	10/28/2004	samp_date	10/28/2004	samp_date	10/29/2004
lab_id	041190-11	lab_id	041190-11	lab_id	041190-19
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.0198	J	P
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	2.15	J	P
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	0.449	J	P
CHLOROETHANE	1	U	
CHLOROFORM	0.0177	J	P
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	0.582	J	CP
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	U	
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	2.71	J	P
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.0179	J	P
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	0.894	J	CP
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41190 MEDIA: WATER DATA FRACTION: OV

nsample	TB16-18
samp_date	10/29/2004
lab_id	041190-19
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **L. SINAGOGA** **DATE: NOVEMBER 16, 2005**

FROM: **BERNARD F SPADA III** **COPIES: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION: VOC/OVG**
CTO 049, NCBC DAVISVILLE
SDG 41072

SAMPLES: 19 / Aqueous / VOC/OVG

DUP03	DUP04	MW16-02R2
MW16-02S	MW16-06S	MW16-07S
MW16-11D	MW16-11S	MW16-14I
MW16-16D	MW16-16I	MW16-17R
MW16-22D	MW16-22I	MW16-37D
MW16-37I	MW16-39D	MW16-39I
MW16-53S		

1 / Aqueous / VOC

TB16-07

Overview

The sample set for CTO 049, NCBC Davisville; SDG 41072 consists of seventeen (17) environmental aqueous samples, one (1) trip blank, and two (2) field duplicates. All samples were analyzed for volatile organic compounds (VOC). All samples except the trip blanks were also analyzed for methane, ethane, and ethene organic volatile gases (OVG). Select VOCs, namely vinyl chloride, 1,1-dichloroethene, 1,2-dichloroethane, chloroform, benzene, 1,1,2-trichloroethane, and 1,4-dichlorobenzene were analyzed using selective ion monitoring (SIM). Sample MW16-39I was also analyzed for 1,4-dioxane. The field duplicate pairs included in this SDG are (DUP03 / MW16-16D) and (DUP04 / MW16-02R2).

The samples were collected by EA Engineering, Science, and Technology on October 6-8 and 11, 2004 and were analyzed by Ceimic Corporation. Analyses were conducted using SW-846 Methods 8260B and 8260B SIM and RSK-175. A Tier II validation was performed on the referenced samples.

The data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
• Initial and Continuing Calibration
• Laboratory Method and/or Field Quality Control Blanks
* • Surrogate Spike Recoveries
* • Blank Spike Recoveries
• Matrix Spike / Matrix Spike Duplicate Recoveries
* • Internal Standards Performance

* • Field Duplicate Precision
* • Detection Limits

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report.

CALIBRATIONS

The VOC initial calibration performed on September 28, 2004 was below the 0.05 relative response factor (RRF) quality control criterion for acetone. Non-detected results for acetone were rejected, "UR", in samples MW16-02S and MW16-17R. No action was taken for sample MW16-39D on this basis because the result was qualified for method blank contamination.

The VOC initial calibration performed on September 28, 2004 exceeded the 30% relative standard deviation (RSD) quality control criterion for methylene chloride. No action was taken on this basis because all results were qualified for blank contamination.

The VOC continuing calibration performed on October 8, 2004 was below the 0.05 RRF quality control criterion for acetone. Non-detected results for acetone were rejected, "UR", in samples MW16-02S and MW16-17R. No action was taken for sample MW16-39D on this basis because the result was qualified for method blank contamination.

The VOC continuing calibration performed on October 8, 2004 exceeded the 30% relative standard deviation (RSD) quality control criterion for methylene chloride. No action was taken on this basis because all associated results for methylene chloride were qualified for method blank contamination.

The VOC continuing calibration performed on October 10 at 11:52 exceeded the 25% difference quality control criterion for carbon disulfide. Non-detected results for carbon disulfide were qualified as estimated, "UJ", in samples DUP03, MW16-06S, MW16-07S, MW16-11D, MW16-14I, MW16-16D, MW16-16I, MW16-22D, MW16-22I, MW16-37I, MW16-53S, and TB16-07.

The VOC continuing calibration performed on October 11 at 12:25 exceeded the 25% difference quality control criterion for carbon disulfide. The non-detected result for carbon disulfide was qualified as estimated, "UJ", in sample MW16-11S.

The VOC SIM initial calibration performed on October 11, 2004 exceeded the 30% relative standard deviation (RSD) quality control criterion for 1,4-dichlorobenzene. Non-detected results for 1,4-dichlorobenzene were qualified as estimated, "UJ", in all samples except MW16-39I.

The VOC SIM initial calibration performed on October 15, 2004 was below the 0.05 RRF quality control criterion for 1,4-dioxane. The non-detected result for 1,4-dioxane was rejected, "UR", in sample MW16-39I.

Laboratory Method Blanks

The following compounds were detected in the aqueous laboratory method blanks at the following maximum concentrations:

Compound	Maximum Concentration	Action Level
Methylene Chloride	1.25 µg/L	12.5 µg/L
Acetone	1.45 µg/L	14.5 µg/L
2-Hexanone	2.24 µg/L	11.2 µg/L
4-Methyl-2-pentanone	1.66 µg/L	8.3 µg/L
Chloroform	0.0314 µg/L	0.157 µg/L
1,2-Dichloroethane	0.0357 µg/L	0.1785 µg/L
Benzene	0.0179 µg/L	0.0895 µg/L
1,1,2-Trichloroethane	0.0174 µg/L	0.0870 µg/L
1,4-Dichlorobenzene	0.0168 µg/L	0.0840 µg/L

An action level of 10X the maximum concentration for acetone and methylene chloride and 5X the maximum concentration for the remaining compounds were used to evaluate samples for blank contamination. Positive results for the aforementioned compounds less than the blank action level were qualified as non-detected, "U". No qualifications were made to field quality control blanks.

Surrogate Spike Recoveries / Internal Standard Performance

The surrogate bromofluorobenzene exceeded the percent recovery quality control criteria in the VOC SIM fraction of samples MW16-07S and MW16-53S. The samples were re-analyzed with similar results. The initial analyses were used for validation. The positive result for benzene was qualified as estimated, "J", in sample MW16-07S. No further action was taken on this basis because all remaining associated results were either non-detected or qualified for method blank contamination.

The internal standard fluorobenzene exceeded the percent recovery quality control criteria in the VOC SIM fraction of samples MW16-14I and MW16-53S. The samples were re-analyzed with similar results. The initial analysis was used for validation. No action was taken on this basis because all associated results were either non-detected or qualified for method blank contamination.

Matrix Spike/Matrix Spike Duplicate Recoveries

An MS/MSD was not performed with the VOC fraction of this SDG. No action is taken on this basis. This item is noted as a completeness issue.

ADDITIONAL COMMENTS

Positive results reported at concentrations below the CRQL were qualified as estimated (J).

Samples MW16-37I and MW16-39I were analyzed at a 50X and 2X dilutions respectively, because the concentration of trichloroethene exceeded the linear calibration range of the instrument. The samples were not analyzed un-diluted. This accounts for the elevated reporting limits for all non-detected compounds in the VOC fraction of samples MW16-37I and MW16-39I . No action was taken on this basis.

Samples DUP04, MW16-22D, and MW16-22I were re-analyzed at a 10X, 50X, and 5X dilutions respectively, because the concentration of trichloroethene exceeded the linear calibration range of the instrument. The results for trichloroethene from the diluted analyses were used for validation.

Samples MW16-07S and MW16-53S were re-analyzed at 10X and 100X dilutions respectively, because the concentration of methane exceeded the linear calibration range of the instrument. The results for methane from the diluted analyses were used for validation.

EXECUTIVE SUMMARY

Laboratory Performance: Qualifications were made based on calibration non-compliances, method blank contamination, and surrogate recovery non-compliances.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region I EPA "Data Validation Functional Guidelines - Part II" (12/96).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines and the Quality Assurance Project Plan (QAPP)."

Bernard F Spada III

TetraTech NUS
Bernard F Spada III
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00234

SDG: 41072 MEDIA: WATER DATA FRACTION: OV

nsample	DUP03
samp_date	10/6/2004
lab_id	041072-09
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	MW16-16D

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	0.254	J	P
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	DUP03
samp_date	10/6/2004
lab_id	041072-09
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	MW16-16D

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	44		
VINYL CHLORIDE	0.1	U	

nsample	DUP04
samp_date	10/6/2004
lab_id	041072-08
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	MW16-02R2

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	0.184	J	P
1,1-DICHLOROETHENE	0.59		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	5.94		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

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nsample	DUP04
samp_date	10/6/2004
lab_id	041072-08
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	MW16-02R2

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.448	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.347		

nsample	DUP04DL
samp_date	10/6/2004
lab_id	041072-08DL
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	MW16-02R2

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	460		

nsample	MW16-02R2
samp_date	10/6/2004
lab_id	041072-07
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	10	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	10	U	
1,1-DICHLOROETHENE	0.587		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	10	U	
1,3-DICHLOROBENZENE	10	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	50	U	
2-HEXANONE	50	U	
4-METHYL-2-PENTANONE	50	U	
ACETONE	50	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	10	U	
BROMOFORM	10	U	
BROMOMETHANE	10	U	
CARBON DISULFIDE	10	U	
CARBON TETRACHLORIDE	10	U	
CHLOROBENZENE	10	U	
CHLORODIBROMOMETHANE	10	U	
CHLOROETHANE	10	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	10	U	
CIS-1,2-DICHLOROETHENE	5.54	J	P
CIS-1,3-DICHLOROPROPENE	10	U	
ETHYLBENZENE	10	U	
M+P-XYLENES	20	U	
METHYLENE CHLORIDE	10	U	
O-XYLENE	10	U	
STYRENE	10	U	
TETRACHLOROETHENE	10	U	
TOLUENE	10	U	

PROJ_NO: 00234

SDG: 41072 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-02R2
samp_date	10/6/2004
lab_id	041072-07
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	10	U	
TRANS-1,3-DICHLOROPROPENE	10	U	
TRICHLOROETHENE	470		
VINYL CHLORIDE	0.342		

nsample	MW16-02S
samp_date	10/6/2004
lab_id	041072-06
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.0287	J	P
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	0.166	J	P
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-02S
samp_date	10/6/2004
lab_id	041072-06
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1.19		
VINYL CHLORIDE	0.1	U	

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SDG: 41072 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-06S	nsample	MW16-06S	nsample	MW16-07S
samp_date	10/6/2004	samp_date	10/6/2004	samp_date	10/6/2004
lab_id	041072-18	lab_id	041072-18	lab_id	041072-17
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	0.152	J	P
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.25	J	P
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	0.159	J	R
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	0.288	J	P
M+P-XYLENES	0.352	J	P
METHYLENE CHLORIDE	1	U	A
O-XYLENE	0.929	J	P
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	0.143	J	P

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nsample	MW16-07S
samp_date	10/6/2004
lab_id	041072-17
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.546	J	P
VINYL CHLORIDE	0.1	U	

nsample	MW16-11D
samp_date	10/6/2004
lab_id	041072-13
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-11D
samp_date	10/6/2004
lab_id	041072-13
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

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nsample	MW16-11S	nsample	MW16-11S	nsample	MW16-14I
samp_date	10/6/2004	samp_date	10/6/2004	samp_date	10/7/2004
lab_id	041072-15	lab_id	041072-15	lab_id	041072-20
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.266	J	P
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

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nsample	MW16-14I
samp_date	10/7/2004
lab_id	041072-20
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	10		
VINYL CHLORIDE	0.1	U	

nsample	MW16-16D
samp_date	10/6/2004
lab_id	041072-10
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	0.247	J	P
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-16D
samp_date	10/6/2004
lab_id	041072-10
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	44		
VINYL CHLORIDE	0.1	U	

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nsample	MW16-16I
samp_date	10/6/2004
lab_id	041072-11
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.0235	J	P
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	0.219	J	P
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	0.387	J	P
CHLOROETHANE	1	U	
CHLOROFORM	0.12	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	0.441	J	P
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-16I
samp_date	10/6/2004
lab_id	041072-11
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	49		
VINYL CHLORIDE	0.1	U	

nsample	MW16-17R
samp_date	10/5/2004
lab_id	041072-02
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.228	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

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nsample	MW16-17R
samp_date	10/5/2004
lab_id	041072-02
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

nsample	MW16-22D
samp_date	10/6/2004
lab_id	041072-14
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.422		
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.152	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	2.39		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-22D
samp_date	10/6/2004
lab_id	041072-14
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.38	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.0273	J	P

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nsample	MW16-22DDL
samp_date	10/6/2004
lab_id	041072-14DL
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	1500		

nsample	MW16-22I
samp_date	10/6/2004
lab_id	041072-16
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.0168	J	P
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.252		
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	0.681	J	P
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	0.905	J	P
TOLUENE	1	U	

nsample	MW16-22I
samp_date	10/6/2004
lab_id	041072-16
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.1	U	

PROJ_NO: 00234

SDG: 41072 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-22IDL
samp_date	10/6/2004
lab_id	041072-16DL
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	110		

nsample	MW16-37D
samp_date	10/5/2004
lab_id	041072-01
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.188	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLOROD!BROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1.58		
TOLUENE	1	U	

nsample	MW16-37D
samp_date	10/5/2004
lab_id	041072-01
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	13		
VINYL CHLORIDE	0.1	U	

PROJ_NO: 00234

SDG: 41072 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-37I
samp_date	10/5/2004
lab_id	041072-03
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	50	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	50	U	
1,1-DICHLOROETHENE	0.044	J	P
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	50	U	
1,3-DICHLOROBENZENE	50	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	250	U	
2-HEXANONE	250	U	
4-METHYL-2-PENTANONE	250	U	
ACETONE	250	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	50	U	
BROMOFORM	50	U	
BROMOMETHANE	50	U	
CARBON DISULFIDE	50	UJ	C
CARBON TETRACHLORIDE	50	U	
CHLOROBENZENE	50	U	
CHLORODIBROMOMETHANE	50	U	
CHLOROETHANE	50	U	
CHLOROFORM	0.286		
CHLOROMETHANE	50	U	
CIS-1,2-DICHLOROETHENE	50	U	
CIS-1,3-DICHLOROPROPENE	50	U	
ETHYLBENZENE	50	U	
M+P-XYLENES	100	U	
METHYLENE CHLORIDE	50	U	A
O-XYLENE	50	U	
STYRENE	50	U	
TETRACHLOROETHENE	50	U	
TOLUENE	50	U	

nsample	MW16-37I
samp_date	10/5/2004
lab_id	041072-03
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	50	U	
TRANS-1,3-DICHLOROPROPENE	50	U	
TRICHLOROETHENE	1700		
VINYL CHLORIDE	0.1	U	

nsample	MW16-39D
samp_date	10/6/2004
lab_id	041072-04
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

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SDG: 41072 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-39D
samp_date	10/6/2004
lab_id	041072-04
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1.44		
VINYL CHLORIDE	0.0557	J	P

nsample	MW16-39I
samp_date	10/6/2004
lab_id	041072-05
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	2	U	
1,1,2-TRICHLOROETHANE	0.0901	J	P
1,1-DICHLOROETHANE	2	U	
1,1-DICHLOROETHENE	0.0952	J	P
1,2-DICHLOROETHANE	0.1	U	A
1,2-DICHLOROPROPANE	2	U	
1,3-DICHLOROBENZENE	2	U	
1,4-DICHLOROBENZENE	0.1	U	
1,4-DIOXANE	1	UR	C
2-BUTANONE	10	U	
2-HEXANONE	10	U	
4-METHYL-2-PENTANONE	10	U	
ACETONE	10	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	2	U	
BROMOFORM	2	U	
BROMOMETHANE	2	U	
CARBON DISULFIDE	2	U	
CARBON TETRACHLORIDE	2	U	
CHLOROBENZENE	2	U	
CHLORODIBROMOMETHANE	2	U	
CHLOROETHANE	2	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	2	U	
CIS-1,2-DICHLOROETHENE	2	U	
CIS-1,3-DICHLOROPROPENE	2	U	
ETHYLBENZENE	2	U	
M+P-XYLENES	4	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	2	U	
STYRENE	2	U	
TETRACHLOROETHENE	2	U	

nsample	MW16-39I
samp_date	10/6/2004
lab_id	041072-05
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TOLUENE	2	U	
TRANS-1,2-DICHLOROETHENE	2	U	
TRANS-1,3-DICHLOROPROPENE	2	U	
TRICHLOROETHENE	77		
VINYL CHLORIDE	0.1	U	

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SDG: 41072 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-53S	nsample	MW16-53S	nsample	TB16-07
samp_date	10/7/2004	samp_date	10/7/2004	samp_date	10/6/2004
lab_id	041072-19	lab_id	041072-19	lab_id	041072-12
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	A
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	0.747	J	P
METHYLENE CHLORIDE	1	U	A
O-XYLENE	0.332	J	P
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.177	J	P
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.0199	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	UJ	C
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.0226	J	P
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	0.743	J	P
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41072 MEDIA: WATER DATA FRACTION: OV

nsample	TB16-07
samp_date	10/6/2004
lab_id	041072-12
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **L. SINAGOGA** **DATE: NOVEMBER 16, 2005**

FROM: **BERNARD F SPADA III** **COPIES: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION: VOC/OVG**
CTO 049, NCBC DAVISVILLE
SDG 41044

SAMPLES: 18 / Aqueous / VOC/OVG

DUP15	DUP16	MW16-06D
MW16-06R	MW16-35D	MW16-35I
MW16-35S	MW16-44I	MW16-44S
MW16-45D	MW16-45I	MW16-45S
MW16-46D	MW16-46I	MW16-46S
MW16-47D	MW16-47S	MW16-55R2

2 / Aqueous / VOC

TB16-01	TB16-02

Overview

The sample set for CTO 049, NCBC Davisville; SDG 41044 consists of sixteen (16) environmental aqueous samples, two (2) trip blanks, and two (2) field duplicates. All samples were analyzed for volatile organic compounds (VOC). All samples except the trip blanks were also analyzed for methane, ethane, and ethene organic volatile gases (OVG). Select VOCs, namely vinyl chloride, 1,1-dichloroethene, 1,2-dichloroethane, chloroform, benzene, 1,1,2-trichloroethane, and 1,4-dichlorobenzene were analyzed using selective ion monitoring (SIM). Sample MW16-45D was also analyzed for 1,4-dioxane by SIM. The field duplicate pairs included in this SDG are (DUP15 / MW16-45S) and (DUP16 / MW16-44S).

The samples were collected by EA Engineering, Science, and Technology on September 27-29, 2004 and were analyzed by Ceimic Corporation. Analyses were conducted using SW-846 Methods 8260B and 8260B SIM and RSK-175. A Tier II validation was performed on the referenced samples.

The data were evaluated based on the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
• Initial and Continuing Calibration
• Laboratory Method and/or Field Quality Control Blanks
* • Surrogate Spike Recoveries
* • Blank Spike Recoveries
• Matrix Spike / Matrix Spike Duplicate Recoveries
* • Internal Standards Performance
• Field Duplicate Results

- Detection Limits

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report.

CALIBRATIONS

The VOC initial calibration performed on September 28, 2004 and continuing calibration performed on September 29 at 12:06 were below the 0.05 relative response factor (RRF) quality control criterion for acetone. Non-detected results for acetone were rejected (UR) in all samples.

The VOC initial calibration performed on September 28, 2004 exceeded the 30% relative standard deviation (RSD) quality control criterion for methylene chloride. Positive and non-detected results for methylene chloride were qualified as estimated (J) and (UJ) respectively, in all samples.

The VOC SIM initial calibration performed on September 30, 2004 exceeded the 30% RSD quality control criterion for 1,4-dichlorobenzene. Non-detected results for 1,4-dichlorobenzene were qualified as estimated (UJ) in all samples except MW16-45D.

The VOC SIM initial calibration performed on October 15, 2004 was below the 0.05 RRF quality control criterion for 1,4-dioxane. The non-detected result for 1,4-dioxane was rejected (UR) in sample MW16-45D.

Laboratory Method Blanks

The following compounds were detected in the aqueous laboratory method blanks at the following maximum concentrations:

Compound	Maximum Concentration	Action Level
Methylene Chloride	1.71 µg/L	17.1 µg/L
4-Methyl-2-pentanone	1.67 µg/L	7.31 µg/L
Acetone	2.99 µg/L	29.9 µg/L
Methane	1.4 µg/L	7.0 µg/L
Chloroform	0.0182 µg/L	0.091 µg/L
1,4-Dichlorobenzene	0.0168 µg/L	0.084 µg/L

An action level of 10X the maximum concentration for methylene chloride and acetone and 5X the maximum concentration for the remaining compounds were used to evaluate samples for blank contamination. Positive results for the aforementioned compounds less than the blank action level were qualified as non-detected, "U". No qualifications were made to field quality control blanks.

Matrix Spike/Matrix Spike Duplicate Recoveries

The percent recovery of 1,1-dichloroethene exceeded the quality control criterion in the MS/MSD of sample MW16-47S. No action was taken on this basis because 1,1-dichloroethene was non-detected in the un-spiked sample.

FIELD DUPLICATE PRECISION

The field duplicate pair DUP15 and MW45S exceeded the 30% relative percent difference quality control criteria for methane. The results for methane were qualified as estimated (J) in the field duplicate pair.

ADDITIONAL COMMENTS

Positive results reported at concentrations below the CRQL were qualified as estimated (J).

Samples DUP16 and MW16-44S were re-analyzed at 10X dilutions because the concentration of vinyl chloride in DUP16 and vinyl chloride and 1,1-dichloroethene in MW16-44S exceeded the linear calibration range of the instrument. The results from the diluted analyses for the aforementioned analytes were used for validation. No action was taken on this basis.

Samples MW16-45D and MW16-46D were analyzed at 20X and 10X dilutions respectively, because the concentration of trichloroethene exceeded the linear calibration range of the instrument. The aforementioned samples were not analyzed un-diluted. This accounts for the elevated reporting limits for all non-detected compounds in these samples.

Sample MW16-45I was re-analyzed at a 20X dilution because the concentration of trichloroethene exceeded the linear calibration range of the instrument. The result for trichloroethene from the diluted analysis was used for validation.

Samples DUP15, DUP16, MW16-06R, MW16-44S, MW16-45S, MW16-46I, and MW16-46S were re-analyzed at 100X, 100X, 5X, 100X, 50X, 5X, and 100X dilutions respectively, because the concentration of methane exceeded the linear calibration range of the instrument. The results for methane from the diluted analyses were used for validation.

EXECUTIVE SUMMARY

Laboratory Performance: Qualifications were made based on calibration non-compliances, method blank contamination, and field duplicate imprecision.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region I EPA "Data Validation Functional Guidelines - Part II" (12/96).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the NFESC Guidelines."

TetraTech NUS
Bernard F Spada III
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

Data Validation Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (e.g. % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = GFAA PDS - GFAA MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (e.g. base-line drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; e.g. chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = % Difference between columns/detectors >25% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is greater than sample activity

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	DUP15	nsample	DUP15	nsample	DUP16
samp_date	9/28/2004	samp_date	9/28/2004	samp_date	9/27/2004
lab_id	041044-13	lab_id	041044-13	lab_id	041044-01
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:	MW16-45S	DUP_OF:	MW16-45S	DUP_OF:	MW16-44S

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.717		
1,2-DICHLOROETHANE	0.0157	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.21		
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	3.55		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.725	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.176		

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	1.99		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.529		
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	19		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	DUP16	nsample	DUP16DL	nsample	MW16-06D
samp_date	9/27/2004	samp_date	9/27/2004	samp_date	9/28/2004
lab_id	041044-01	lab_id	041044-01DL	lab_id	041044-14
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:	MW16-44S	DUP_OF:	MW16-44S	DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1.75		
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	3.56		

Parameter	Result	Val Qual	Qual Code
VINYL CHLORIDE	11		

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-06D
samp_date	9/28/2004
lab_id	041044-14
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1.33		
VINYL CHLORIDE	0.1	U	

nsample	MW16-06R
samp_date	9/28/2004
lab_id	041044-15
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	0.0152	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.724	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	0.15	J	P

nsample	MW16-06R
samp_date	9/28/2004
lab_id	041044-15
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-35D	nsample	MW16-35D	nsample	MW16-35I
samp_date	9/29/2004	samp_date	9/29/2004	samp_date	9/29/2004
lab_id	041044-19	lab_id	041044-19	lab_id	041044-18
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.0317	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.633	J	P
VINYL CHLORIDE	0.1	U	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.0164	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	UJ	C
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	3.81		
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-35I
samp_date	9/29/2004
lab_id	041044-18
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.555	J	P
VINYL CHLORIDE	0.1	U	

nsample	MW16-35S
samp_date	9/29/2004
lab_id	041044-17
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.0106	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	A
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	UJ	C
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-35S
samp_date	9/29/2004
lab_id	041044-17
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

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SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-44I	nsample	MW16-44I	nsample	MW16-44S
samp_date	9/27/2004	samp_date	9/27/2004	samp_date	9/27/2004
lab_id	041044-02	lab_id	041044-02	lab_id	041044-03
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.386		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	0.0157	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	4.14		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.316	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	3.14		
VINYL CHLORIDE	0.926		

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.521		
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	20		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TRANS-1,2-DICHLOROETHENE	1.77		

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-44S	nsample	MW16-44SDL	nsample	MW16-45D
samp_date	9/27/2004	samp_date	9/27/2004	samp_date	9/28/2004
lab_id	041044-03	lab_id	041044-03DL	lab_id	041044-10
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	3.69		

Parameter	Result	Val Qual	Qual Code
1,1-DICHLOROETHENE	2.47		
VINYL CHLORIDE	13		

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	20	U	
1,1,2-TRICHLOROETHANE	0.0241	J	P
1,1-DICHLOROETHANE	20	U	
1,1-DICHLOROETHENE	0.196		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	20	U	
1,3-DICHLOROBENZENE	20	U	
1,4-DICHLOROBENZENE	0.1	U	A
1,4-DIOXANE	1	UR	C
2-BUTANONE	100	U	
2-HEXANONE	100	U	
4-METHYL-2-PENTANONE	100	U	
ACETONE	100	UR	C
BENZENE	0.0125	J	P
BROMODICHLOROMETHANE	20	U	
BROMOFORM	20	U	
BROMOMETHANE	20	U	
CARBON DISULFIDE	20	U	
CARBON TETRACHLORIDE	20	U	
CHLOROBENZENE	20	U	
CHLORODIBROMOMETHANE	20	U	
CHLOROETHANE	20	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	20	U	
CIS-1,2-DICHLOROETHENE	6.94	J	P
CIS-1,3-DICHLOROPROPENE	20	U	
ETHYLBENZENE	20	U	
M+P-XYLENES	40	U	
METHYLENE CHLORIDE	20	U	A
O-XYLENE	20	U	
STYRENE	20	U	
TETRACHLOROETHENE	20	U	

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-45D	nsample	MW16-45I	nsample	MW16-45I
samp_date	9/28/2004	samp_date	9/28/2004	samp_date	9/28/2004
lab_id	041044-10	lab_id	041044-09	lab_id	041044-09
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TOLUENE	20	U	
TRANS-1,2-DICHLOROETHENE	20	U	
TRANS-1,3-DICHLOROPROPENE	20	U	
TRICHLOROETHENE	680		
VINYL CHLORIDE	0.0212	J	P

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.484		
1,2-DICHLOROETHANE	0.0366	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.0304	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	0.153	J	P
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	6.15		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.552	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
VINYL CHLORIDE	0.117		

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-45IDL
samp_date	9/28/2004
lab_id	041044-09DL
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRICHLOROETHENE	520		

nsample	MW16-45S
samp_date	9/28/2004
lab_id	041044-07
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.804		
1,2-DICHLOROETHANE	0.0188	J	P
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.219		
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	3.26		
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-45S
samp_date	9/28/2004
lab_id	041044-07
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.733	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.185		

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-46D
samp_date	9/28/2004
lab_id	041044-12
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	10	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	10	U	
1,1-DICHLOROETHENE	0.576		
1,2-DICHLOROETHANE	0.0296	J	P
1,2-DICHLOROPROPANE	10	U	
1,3-DICHLOROBENZENE	10	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	50	U	
2-HEXANONE	50	U	
4-METHYL-2-PENTANONE	50	U	
ACETONE	50	UR	C
BENZENE	0.0163	J	P
BROMODICHLOROMETHANE	10	U	
BROMOFORM	10	U	
BROMOMETHANE	10	U	
CARBON DISULFIDE	10	U	
CARBON TETRACHLORIDE	10	U	
CHLOROBENZENE	10	U	
CHLORODIBROMOMETHANE	10	U	
CHLOROETHANE	10	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	10	U	
CIS-1,2-DICHLOROETHENE	5.36	J	P
CIS-1,3-DICHLOROPROPENE	10	U	
ETHYLBENZENE	10	U	
M+P-XYLENES	20	U	
METHYLENE CHLORIDE	10	U	A
O-XYLENE	10	U	
STYRENE	10	U	
TETRACHLOROETHENE	10	U	
TOLUENE	10	U	

nsample	MW16-46D
samp_date	9/28/2004
lab_id	041044-12
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	10	U	
TRANS-1,3-DICHLOROPROPENE	10	U	
TRICHLOROETHENE	380		
VINYL CHLORIDE	0.113		

nsample	MW16-46I
samp_date	9/28/2004
lab_id	041044-11
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.497		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.478		
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	0.349	J	P
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-46I
samp_date	9/28/2004
lab_id	041044-11
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	0.494	J	P
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	0.454	J	P
VINYL CHLORIDE	0.1	U	

nsample	MW16-46S
samp_date	9/28/2004
lab_id	041044-08
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.244		
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	0.731	J	P
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	0.262	J	P
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	
TRANS-1,2-DICHLOROETHENE	0.245	J	P

nsample	MW16-46S
samp_date	9/28/2004
lab_id	041044-08
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	1.86		

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-46SDL
samp_date	9/28/2004
lab_id	041044-08DL
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
BENZENE	1.98		

nsample	MW16-47D
samp_date	9/27/2004
lab_id	041044-05
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	UJ	C
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-47D
samp_date	9/27/2004
lab_id	041044-05
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-47S
samp_date	9/27/2004
lab_id	041044-04
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	U	A
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	MW16-47S
samp_date	9/27/2004
lab_id	041044-04
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

nsample	MW16-55R2
samp_date	9/29/2004
lab_id	041044-20
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	18	U	A
BENZENE	0.0281	J	P
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1.02		
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.1	U	
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	1	U	A
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	MW16-55R2
samp_date	9/29/2004
lab_id	041044-20
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

nsample	TB16-01
samp_date	9/28/2004
lab_id	041044-06
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	2.29	J	CP
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.0174	J	P
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	0.375	J	CP
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

nsample	TB16-01
samp_date	9/28/2004
lab_id	041044-06
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

PROJ_NO: 00234

SDG: 41044 MEDIA: WATER DATA FRACTION: OV

nsample	TB16-02	nsample	TB16-02
samp_date	9/29/2004	samp_date	9/29/2004
lab_id	041044-16	lab_id	041044-16
qc_type	NM	qc_type	NM
units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,1,2,2-TETRACHLOROETHANE	1	U	
1,1,2-TRICHLOROETHANE	0.1	U	
1,1-DICHLOROETHANE	1	U	
1,1-DICHLOROETHENE	0.1	U	
1,2-DICHLOROETHANE	0.1	U	
1,2-DICHLOROPROPANE	1	U	
1,3-DICHLOROBENZENE	1	U	
1,4-DICHLOROBENZENE	0.1	UJ	C
2-BUTANONE	5	U	
2-HEXANONE	5	U	
4-METHYL-2-PENTANONE	5	U	
ACETONE	5	UR	C
BENZENE	0.1	U	
BROMODICHLOROMETHANE	1	U	
BROMOFORM	1	U	
BROMOMETHANE	1	U	
CARBON DISULFIDE	1	U	
CARBON TETRACHLORIDE	1	U	
CHLOROBENZENE	1	U	
CHLORODIBROMOMETHANE	1	U	
CHLOROETHANE	1	U	
CHLOROFORM	0.02	J	P
CHLOROMETHANE	1	U	
CIS-1,2-DICHLOROETHENE	1	U	
CIS-1,3-DICHLOROPROPENE	1	U	
ETHYLBENZENE	1	U	
M+P-XYLENES	2	U	
METHYLENE CHLORIDE	0.338	J	CP
O-XYLENE	1	U	
STYRENE	1	U	
TETRACHLOROETHENE	1	U	
TOLUENE	1	U	

Parameter	Result	Val Qual	Qual Code
TRANS-1,2-DICHLOROETHENE	1	U	
TRANS-1,3-DICHLOROPROPENE	1	U	
TRICHLOROETHENE	1	U	
VINYL CHLORIDE	0.1	U	

ATTACHMENT NO. 3

Correspondence Regarding Fall 2004 1,4-Dioxane Data Validation Issue

DEPARTMENT OF THE NAVY
ENGINEERING FIELD ACTIVITY, NORTHEAST
NAVAL FACILITIES ENGINEERING COMMAND
10 INDUSTRIAL HIGHWAY
MAIL STOP, #82
LESTER, PA 19113-2090

IN REPLY REFER TO

5090
Code EV23/FE
February 21, 2006

Ms. Christine Williams
U.S. Environmental Protection Agency, Region I
1 Congress Street Suite 1100 (HBT)
Boston, MA 02114-2023

Mr. Louis Maccarone
Office of Waste Management
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767

Dear Ms. Williams/Mr. Maccarone:

Subject: FALL 2004 1,4-DIOXANE SAMPLING AT SITE 16, FORMER NCBC DAVISVILLE, NORTH KINGSTOWN, RI

The nondetect results for 1,4-Dioxane analysis performed by Ceimic Corporation have been rejected in accordance EPA Region I protocol with because the RRF response was below the minimum requirement (approximately an order of magnitude low). However, as discussed in Enclosure 1, the Navy recommends to use the nondetected sample data from this round as a screen for 1,4-dioxane but at a more conservative detection limit of approximately equal to 5 ug/L.

To assist EPA and RIDEM in there evaluation the Navy is also including electronic copies of the data validation packages for SDG 041080, SDG 041112, SDG 41044, SDG 41048, SDG 41072, and SDG 41190.

If necessary, the Navy would like to schedule a conference call to discuss this on or before March 1, 2006.

5090
Code EV23/FE
February 21, 2006

If additional information is required, please contact Mr. Fred Evans at 610-595-0567, extension 159.

Sincerely,

FREDERICK J. EVANS
Remedial Project Manager
By direction of the
Commanding Officer

Copy to:
COMSUBGRU TWO (A. Stackpole) w/out encl
CSO Davisville (D. Barney)
ToNK (J. Reiner)
QDC (S. King)
NOAA (K. Finkelstein)
USFW (Mr. A. Major)
CDW Consultants (K. Campbell) (2 copies)
RI Resource Conservation & Development (D. Miller)
TtNUS (S. Vetere)
TtNUS (L. Sinagoga)
BRAC PMO NE (G. Preston)
BRAC PMO NE (D. Drozd)

Background Regarding 1,4-Dioxane Analysis by Ceimic Corporation for NCBC Davisville

1,4-Dioxane analysis was performed by Ceimic Corporation on select aqueous samples via Method 8260B using Selective Ion Monitoring (SIM) mode. Despite being a very difficult compound to purge because 1,4-dioxane is miscible in water, the laboratory performed the analysis using a purge and trap technique (Method 8260B). In accordance with the method, a five point calibration curve for 1,4-dioxane (ranging in concentration from 1 ug/L to 20 ug/L) was performed. A blank spike containing 1,4-dioxane (@ 5 ug/L) was also analyzed with each batch of samples. All quality control measurements were considered acceptable with the exception of the Relative Response Factor (RRF) associated with both the initial and continuing calibrations. The minimum RRF requirement of 0.05 was not met in any associated calibration standards. The typical response determined by Ceimic using Method 8260B SIM was 0.001. Blank spike recoveries were acceptable with recoveries around 80%. However, because the RRF response was below the minimum requirement (approximately an order of magnitude low), the non detect results were rejected in accordance with EPA Region I protocol.

It should also be noted that the laboratory reporting limit for 1,4-dioxane was 1 ug/L. This limit was equivalent to the lowest calibration standard of the five point curve. Non-detect results were reported for all samples that were analyzed for 1,4-dioxane.

Data Validation Results

All data for the 1,4-dioxane analysis were validated using EPA Region I protocol. As previously stated, because the minimum RRF criterion was not met, all nondetect results for 1,4-dioxane were rejected.

As part of the data package deliverable, the laboratory included displays of the key ions, m/z 88 and m/z 58, in the data packages which are representative of 1,4-dioxane. The lab included these displays for both calibration standards and for blank spikes as evidence that the analyte could be detected. The response of m/z 88, which is the molecular weight and the base peak for 1,4-dioxane was barely above the signal to noise ratio of the instrument but a peak for ion m/z 88 was still present in the lowest calibration standard. The signal to noise ratio is defined as the measure of the response relative to the background noise of the instrument for a given m/z. The response improved as the concentrations of the calibration standards increased but the RRF remained constant.

The response which was presented in the raw data displays for the 1 ug/L standards combined with the poor RRFs led the validator to consider nondetected results reported to 1 ug/L to be unreliable and the results were rejected.

Usability

Despite the rejections at the reporting limit of 1 ug/L, the 1,4-dioxane response in standards at concentrations between 5 ug/L and 20 ug/L yielded an improved signal to noise ratio. The response at aforementioned concentrations easily exceeded 2.5 times the signal to noise ratio. A 2.5 signal to noise ratio is commonly used as a measure of whether a given analyte responds adequately when using the SIM mode. Considering the improved response at a 5 or 10 ug/L concentration, the sample analyses may provide some useful information despite the poor RRF responses. Therefore, it is not unreasonable to presume that concentrations of 1,4-dioxane, if present in any samples greater than approximately 5 ug/L, should have been detected.

FALL 2004 1,4-DIOXANE SAMPLING AT SITE 16
NCBC DAVISVILLE
NORTH KINGSTOWN, RI

Summary

Analyses of aqueous samples for 1,4-dioxane yielded only nondetected results at a 1 ug/L reporting limit. The laboratory employed a reasonable scientific approach with adequate quality control measures in an attempt to detect and quantify any 1,4-dioxane present in aqueous samples. Regardless of the approach, nondetected results at 1 ug/L were rejected because the minimum RRF criterion of 0.05 was not met. Furthermore, the reporting limit at 1 ug/L is considered unreliable due to the poor response of the primary ion, m/z 88, at a 1 ug/L concentration. However, at higher concentrations, the response improved such that the ratio of the signal to noise exceeded 2.5. In contrast to the response at a low concentration, a concentration greater than 5 times the reporting limit should have been detected. Therefore, despite limitations at the low end of the calibration range, 1,4-dioxane data collected in the Fall of 2004 are not without value because it is reasonable to assume that at a concentration of approximately 5 ug/L, if present in environmental samples, 1,4-dioxane should have been detected by the laboratory given the improved response as the concentration increased. The final recommendation, despite the rejection of the 1,4-dioxane data at 1 ug/L, would be to use the nondetected sample data from this round as a screen for 1,4-dioxane but at a more conservative detection limit of approximately equal to 5 ug/L.

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PITT-03-6-017

March 8, 2006

Project No. 00234

Ms. Christine Williams
U.S. Environmental Protection Agency, Region I
1 Congress Street Suite 1100 (HBT)
Boston, MA 02114-2023

Mr. Louis Maccarone
Office of Waste Management
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767

Reference: Contract No. N62472-03-D-0057
Contract Task Order (CTO) Number 049

Subject: Summary of March 1, 2006 Teleconference
Data Validation Results for Fall 2004 1,4-Dioxane Analysis

Dear Ms. Williams/Mr. Maccarone:

On behalf of the Navy, this correspondence summarizes the conclusions of the March 1, 2006 teleconference between Region 1 of the U.S. Environmental Protection Agency (EPA), the Rhode Island Department of Environmental Management (RIDEM), the Navy, and Tetra Tech NUS (TtNUS). The teleconference was arranged to discuss the results of the data validation performed by TtNUS for the 1,4 dioxane data collected during the Fall 2004 groundwater sampling event at the Former Naval Construction Battalion Center (NCBC), Davisville, Site 16. The following project managers and technical personnel participated in the teleconference:

- Ms. Christine Williams, U.S. EPA Region I, Project Manager
- Mr. Louis Maccarone, RIDEM, Project Manager
- Mr. Fred Evans, U.S. Navy, Project Manager
- Mr. Steven DiMattie, U.S. EPA Region I, Quality Assurance/Control Chemist
- Mr. Joseph Samchuck, TtNUS, Data Validation Coordinator
- Ms. Lee Ann Sinagoga, TtNUS, Project Manager

The results of the data validation of the Fall 2004 1,4-dioxane data are presented in the attached Navy correspondence dated February 21, 2006 and were discussed in detail during the March 1, 2006 teleconference. Although the 1,4-dioxane data were rejected in accordance with EPA Region I data validation protocol because the relative response factor was below the minimum requirement, the Navy recommended the use of the 1,4-dioxane data (all non-detect results) as a screen for the presence of 1,4-dioxane at Davisville Site 16 on the basis of additional quality control data in the analytical data packages for the groundwater samples. However, the Navy further recommended that the appropriate detection limit for the non-detect results was 5 ug/L (not 1 ug/L as reported by the analytical laboratory) per the available quality control data. EPA Region I also recommended that the field sampling protocol for the Spring 2006

0234-3.1-46

DEPARTMENT OF THE NAVY
ENGINEERING FIELD ACTIVITY, NORTHEAST
NAVAL FACILITIES ENGINEERING COMMAND
10 INDUSTRIAL HIGHWAY
MAIL STOP, #82
LESTER, PA 19113-2090

IN REPLY REFER TO

5090
Code EV23/FE
February 21, 2006

Ms. Christine Williams
U.S. Environmental Protection Agency, Region I
1 Congress Street Suite 1100 (HBT)
Boston, MA 02114-2023

Mr. Louis Maccarone
Office of Waste Management
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767

Dear Ms. Williams/Mr. Maccarone:

Subject: FALL 2004 1,4-DIOXANE SAMPLING AT SITE 16, FORMER NCBC DAVISVILLE, NORTH KINGSTOWN, RI

The nondetect results for 1,4-Dioxane analysis performed by Ceimic Corporation have been rejected in accordance EPA Region I protocol with because the RRF response was below the minimum requirement (approximately an order of magnitude low). However, as discussed in Enclosure 1, the Navy recommends to use the nondetected sample data from this round as a screen for 1,4-dioxane but at a more conservative detection limit of approximately equal to 5 ug/L.

To assist EPA and RIDEM in there evaluation the Navy is also including electronic copies of the data validation packages for SDG 041080, SDG 041112, SDG 41044, SDG 41048, SDG 41072, and SDG 41190.

If necessary, the Navy would like to schedule a conference call to discuss this on or before March 1, 2006.

Background Regarding 1,4-Dioxane Analysis by Ceimic Corporation for NCBC Davisville

1,4-Dioxane analysis was performed by Ceimic Corporation on select aqueous samples via Method 8260B using Selective Ion Monitoring (SIM) mode. Despite being a very difficult compound to purge because 1,4-dioxane is miscible in water, the laboratory performed the analysis using a purge and trap technique (Method 8260B). In accordance with the method, a five point calibration curve for 1,4-dioxane (ranging in concentration from 1 ug/L to 20 ug/L) was performed. A blank spike containing 1,4-dioxane (@ 5 ug/L) was also analyzed with each batch of samples. All quality control measurements were considered acceptable with the exception of the Relative Response Factor (RRF) associated with both the initial and continuing calibrations. The minimum RRF requirement of 0.05 was not met in any associated calibration standards. The typical response determined by Ceimic using Method 8260B SIM was 0.001. Blank spike recoveries were acceptable with recoveries around 80%. However, because the RRF response was below the minimum requirement (approximately an order of magnitude low), the non detect results were rejected in accordance with EPA Region I protocol.

It should also be noted that the laboratory reporting limit for 1,4-dioxane was 1 ug/L. This limit was equivalent to the lowest calibration standard of the five point curve. Non-detect results were reported for all samples that were analyzed for 1,4-dioxane.

Data Validation Results

All data for the 1,4-dioxane analysis were validated using EPA Region I protocol. As previously stated, because the minimum RRF criterion was not met, all nondetect results for 1,4-dioxane were rejected.

As part of the data package deliverable, the laboratory included displays of the key ions, m/z 88 and m/z 58, in the data packages which are representative of 1,4-dioxane. The lab included these displays for both calibration standards and for blank spikes as evidence that the analyte could be detected. The response of m/z 88, which is the molecular weight and the base peak for 1,4-dioxane was barely above the signal to noise ratio of the instrument but a peak for ion m/z 88 was still present in the lowest calibration standard. The signal to noise ratio is defined as the measure of the response relative to the background noise of the instrument for a given m/z. The response improved as the concentrations of the calibration standards increased but the RRF remained constant.

The response which was presented in the raw data displays for the 1 ug/L standards combined with the poor RRFs led the validator to consider nondetected results reported to 1 ug/L to be unreliable and the results were rejected.

Usability

Despite the rejections at the reporting limit of 1 ug/L, the 1,4-dioxane response in standards at concentrations between 5 ug/L and 20 ug/L yielded an improved signal to noise ratio. The response at aforementioned concentrations easily exceeded 2.5 times the signal to noise ratio. A 2.5 signal to noise ratio is commonly used as a measure of whether a given analyte responds adequately when using the SIM mode. Considering the improved response at a 5 or 10 ug/L concentration, the sample analyses may provide some useful information despite the poor RRF responses. Therefore, it is not unreasonable to presume that concentrations of 1,4-dioxane, if present in any samples greater than approximately 5 ug/L, should have been detected.

ATTACHMENT NO. 4

Response to Comments Correspondence and E-Mails for QAPP for Spring 2006 1,4-Dioxane Sampling Event

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L. Sinagoga

PITT-03-6-016

March 7, 2006

Project No. 00234

Ms. Christine Williams
U.S. Environmental Protection Agency, Region I
1 Congress Street Suite 1100 (HBT)
Boston, MA 02114-2023

Mr. Louis Maccarone
Office of Waste Management
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908-5767

Reference: Contract No. N62472-03-D-0057
Contract Task Order (CTO) Number 049

Subject: Responses to Comments for Draft Quality Assurance Project Plan for 1,4-Dioxane Ground-Water Investigation at IR Program Site 16 Former Naval Construction Battalion Center, Davisville

Dear Ms. Williams/Mr. Maccarone:

On behalf of the Navy, enclosed are responses to comments submitted by the U.S. Environmental Protection Agency (EPA), Region I and the State of Rhode Island Department of Environmental Management (RIDEM) in correspondence dated January 25, 2006 and February 16, 2006, respectively. The comments were submitted based on the EPA and RIDEM review of the Draft Quality Assurance Project Plan (QAPP) for the 1,4-dioxane sampling event scheduled for the Spring of 2006 at the Former Naval Construction Battalion Center (NCBC), Davisville, Site 16.

Please note that the Navy has tentatively scheduled the 1,4-dioxane sampling event to occur in April of 2006. Consequently, the Navy is requesting a teleconference with the EPA and the RIDEM in March to discuss the enclosed responses to comments. Please advise Mr. Fred Evans (601-595-0567) of teleconference dates and times that would be convenient to you during March. Thank you in advance for your assistance in this matter.

Please call me at 412-921-8887 if you have any questions regarding the enclosed document.

Sincerely,

Lee Ann Sinagoga

Lee Ann Sinagoga
Contract Task Order (CTO) Manager

Enclosures (1)

RESPONSES TO EPA COMMENTS DATED JANUARY 25, 2006
1,4-DIOXANE GROUND-WATER INVESTIGATION QAPP ADDENDUM AT
IR PROGRAM SITE 16
FORMER NCBC DAVISVILLE, NORTH KINGSTOWN, RI

GENERAL COMMENTS

1. **Comment:** The comments provided in this review are based upon knowledge of hydro-geological information available. Specifically, a complete, all encompassing depiction of groundwater flow patterns following the installation of additional groundwater monitoring wells related to the HRC® injection pilot study was not available. Also previous synoptic groundwater elevation measurements had omitted several key monitoring point locations, primarily several shallow monitoring wells where groundwater was noted to be below the intake of the pump, and was therefore not measured. As such, there is an incomplete picture of groundwater flow patterns at Site 16, especially in the shallower portions of the aquifer.

   Additionally, this review did not have available any recent groundwater quality data relative to chlorinated volatile organic compounds (CVOC) from additional monitoring wells installed. Although the release of 1, 4-Dioxane may be unrelated to releases of CVOC, an updated distribution of CVOC concentrations following installation of the additional monitoring wells would be useful in assessing overall likely contaminant release locations.

   A major concern is the focus of groundwater quality assessment for 1, 4-Dioxane primarily in the deep portions of the aquifer (7 out of 10 locations); with limited monitoring in the intermediate segment of the aquifer (3 out of 10 locations); and no samples being collected from the shallow portions of the Site 16 aquifer. Although 1, 4-Dioxane can be associated with CVOC it has different physical and chemical characteristics. It is also found as a separate component of paint and varnish strippers. The density of 1, 4-Dioxane is reported to be 1.028 gram per cubic centimeter (g/cm^3) or, essentially the same density of water. By way of comparison, the density of trichloroethylene (TCE) is 1.468 g/cm^3. The density of cis 1, 2-dichloroethylene (cis 1, 2- DCE) is 1.274 g/cm^3. Therefore, while the proposed groundwater sampling intervals might be suitable for CVOC constituents, they do not appear to be appropriate for monitoring of 1, 4-Dioxane. Releases of 1, 4-Dioxane that would have migrated to the groundwater table from one or more potential source areas would more likely be expected to be found in the shallow portions of the aquifer rather than the deep and intermediate intervals. This is especially true unless there were strong downward vertical hydraulic gradients. As such, primacy of groundwater monitoring locations should be on shallow and intermediate intervals of the aquifer for the monitoring of 1, 4-Dioxane. However, since there are relatively few available shallow intervals from which to sample, EPA will recommend a mixed group of sampling intervals.

   A second concern relates to the solubility and partitioning coefficient of 1, 4-Dioxane. This chemical is completely soluble in water. The solubility is given as 43,100 milligrams per liter (mg/L). For comparison purposes, the solubility of trichloroethylene (TCE) is 1,100 mg/L and that of cis 1, 2-DCE is 3,500 mg/L. The partitioning coefficient of 1, 4-Dioxane also indicates that it is little retarded in the aquifer. For instance, the organic carbon partitioning coefficient (K_{oc}) is given as 3.5 milliliters per gram (ml/g). For TCE and cis 1, 2-DCE, the partitioning coefficients are given as 126 and 49 ml/g, respectively. These properties indicate that if 1, 4-Dioxane has been released at one or more of the site source areas it is likely to have migrated at a much faster velocity than the CVOC constituents. Therefore, while conducting some

interval. The sample locations MW16-50D and MW16-52D are also acceptable, although samples should be collected from the shallow and intermediate zones of the aquifer.

Of the remaining locations, MW16-10D may be a suitable "up gradient" location although sampling should be conducted from the shallow and intermediate portions of the aquifer. Sampling from the locations of MW16-02D and MW16-38I may be useful, but probably will not provide significant additional information relative to migration of 1, 4-Dioxane and may be eliminated. However, given the potential mobility of 1, 4-Dioxane and the groundwater flow patterns that are understood, to date, two areas are not covered in the monitoring program. The first is to the east of MW16-39I. Because of the solubility and low retardation characteristics of 1, 4-Dioxane, monitoring 500 feet further to the east is warranted. The second area is that of Allen Harbor, itself. The current monitoring is truncated to the north of the landfill/fire training area. A monitoring location should be established west of MW16-52D and north-northeast of MW16-20D along the shoreline of Allen Harbor.

2. EPA understands that this screening level 1,4-Dioxane investigation was to be accomplished using the existing monitoring well network and therefore has revised the list of wells to be sampled keeping the same number of locations. See table below:

Well Number	Justification
MW45I	Fire fighting training area source area with higher hits than shallow well
MW04S	Groundwater discharge area near firefighting training area
MW04I	Groundwater discharge area near firefighting training area – Intermediate level
MW37S	RR spur source area
MW25S	Downgradient of rr spur source area
MW12S	Upgradient shallow well
MW05S	Downgradient plume discharge area
MW05I	Intermediate level plume discharge area
MW23S	Within plume well downgradient of bldg 41 source area
MW59 I	Within plume well to give more geographic coverage than if MW23I were sampled

Response to EPA General Comment Nos. 1 and 2: As discussed between Ms. Christine Williams, USEPA, and Mr. Fred Evans, US Navy, the Navy is willing to discuss possible changes to the monitoring well list presented in the Quality Assurance Project Plan (QAPP) Addendum for the 1,4-Dioxane Groundwater Investigation at IR Program Site 16 (the 1,4-Dioxane QAPP) provided it is not used as a reason for requiring additional rounds of sampling to determine presence/non-presence of 1,4-Dioxane. The monitoring well list presented in the 1,4-Dioxane QAPP was developed in consultation with both U.S EPA Region I and the State of Rhode Island in the fall of 2004. Also, the Navy agreed to sample for 1,4-dioxane in March 2004, based on the assumption that the solvent may have been used as a solvent stabilizer for TCE at Site 16. In fact, two wells (MW16-39I and MW16-50D) were specifically added to the list of wells to be monitored at the request of the EPA. The well list was comprised primarily of monitoring wells screened in the deep overburden because the bulk of the volatile organic contamination at Site 16 is present in deep overburden zone. The wells listed in the 1,4-dioxane QAPP were sampled in the Fall of 2004; analytical results will be presented in the Supplemental Phase II Remedial Investigation Data Package for IR Site 16 currently scheduled to be published March 31, 2006.

The 1,4-Dioxane QAPP was prepared assuming that both EPA Region I and the State of Rhode Island concurred with the Fall 2004 monitoring well list. Altering the well list at this time

The Navy also continues to recommend monitoring of MW16-39I which is located at the eastern boundary of the Site 16 Phase II RI boundary. This well was originally recommended by EPA because of the TCE contamination being detected at the eastern (overall downgradient) boundary of Site 16 (i.e., in MW16-39I and MW16-57I).

SPECIFIC COMMENTS

3. **Comment:** Page 2-6, Section 2.2, Bullet Comment: The objective of this monitoring program is not clear from the number, locations, and aquifer intervals of the wells provided. A summary of the rational for the "pre-selection" of the ten locations should be provided (Table 8-2 is inadequate). As noted in the General Comments above, the physical and chemical characteristics of 1, 4-Dioxane, do not support the development of a groundwater monitoring program focused primarily on the deep aquifer interval. Also, since 1, 4-Dioxane releases, if any, could be different from that of CVOC contaminants, some discussion of their potential origin should be provided to support the monitoring network. Also, this bullet notes that monitoring occurred during the fall of 2004. The results of this first monitoring period should be provided in this document.

   Response: Please see response to General EPA Comment No. 1. Also, the discussion and rationale for the recommended monitoring wells presented above will be incorporated in Table 8-2 after the proposed teleconference with EPA and the State of Rhode Island.

4. **Comment:** Page 2-7, Section 2.3.4: The documents that are referred to in this section do not provide an updated description of the site hydro-geology. The conceptual site model and information contained in these documents have been commented on by USEPA in various ways. In particular, the nature of the contaminant "plume" versus "plumes" and "source" versus "sources" is a key change. Further, those documents also lack groundwater elevation data, primarily for the shallow aquifer, but also for other intervals to the east of the former Building 41. These issues were to be addressed in follow on hydro-geological work pursuant to preparation of the HRC ® pilot study program. That is, a more complete assessment of CVOC distribution and groundwater flow patterns was to be developed incorporating USEPA concerns. This information was to be submitted subsequent to the 2002 and 2003 Phase II Investigation reports. EPA understands that the Supplemental Phase II RI Data Package due date was recently extended under the FFA from January 16, 2005 to March 31, 2006. The EPA proposal for new sampling locations may change based on review of the information contained in the March 2006 submittal.

   Response: As indicated by the reviewer, an updated description of the site hydro-geology and site conceptual model will be presented in Supplemental Phase II RI Data Package currently scheduled to be published March 31, 2006. Page 2.3.4 will be amended accordingly.

5. **Comment:** Page 6-1, Section 6.1: This objective for this investigation is in Section 2.2. Please revise the text accordingly.

   Response: Agreed. The text will be amended per the reviewer's comment.

6. **Comment:** Page 7-1, Section 7.2: Although this review did not focus on sampling protocol, etc. it is noted that this section implies that at least 95% of the planned samples to be collected

shallow and intermediate intervals. There are no shallow groundwater samples in the program and only three intermediate samples.

A further concern is the apparently indiscriminate use of CVOC "plume" and "source" when past investigations have clearly shown multiple likely source areas and more than one plume which may blend into an area of CVOC contamination. Adherence to the single plume and source terminology may inadvertently imply that there is only one source near the former Building 41 footprint and one plume migrating away from that location. This has not been shown to be the case. This problem appears to be related to lack of incorporation of post Phase II (2003) hydro-geological data and conceptual model formulation.

Response: Please see Navy response to EPA General Comments No. 1 and 2 and EPA Specific Comment No. 4. Also, the Supplemental Phase II Data Package (currently in preparation) will state that there is more than one source area at Site 16. The last sentence of Section 8.1 also acknowledges that there are source areas (not just a single source area) at Site 16.

10. **Comment:** Tetra Tech SOP "Groundwater Sample Acquisition and Onsite Water Quality Testing" page 19 of 25 - The criteria for turbidity, specific conductance, ORP, temperature, and pH are different that the criteria in the Region 1 Low Stress (low flow) SOP. Please verify that these criteria have been accepted by EPA and RIDEM. Please clarify in the text, the justification for deviating from the R1 low flow SOP. This QAPP is for 1,4-Dioxane analysis only. If Navy plans on sampling dissolved metals at the NCBC Site at another time, the R1 low flow SOP must be followed with no deviation.

    Response: The reviewer is correct. The limits for turbidity, specific conductance, ORP, temperature, and pH presented in the USEPA Region I SOP for Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells (July 30, 1996; Revision 2) will be followed. The current version of the SOP presented in the Draft QAPP will be corrected.

RESPONSES TO RIDEM COMMENTS DATED FEBRUARY 16, 2006
1,4-DIOXANE GROUND-WATER INVESTIGATION QAPP ADDENDUM AT
IR PROGRAM SITE 16
FORMER NCBC DAVISVILLE, NORTH KINGSTOWN, RI

1. **Comment:** It is felt that the objective of the sampling plan and the rationale for given sampling locations were not properly detailed. Please expound upon the objective in section two and the reasoning in Section 8.

   Response: Please see the Navy's response to USEPA Comment No. 9.

Sinagoga, Lee Ann -- NUS

From: williams.christine@epamail.epa.gov
Sent: Thursday, April 06, 2006 8:20 AM
To: Sinagoga, Leeann; Brandon.Bill@epamail.epa.gov; kcampbell@cdwconsultants.com; Sugatt.Rick@epamail.epa.gov; DiMattei.Steve@epamail.epa.gov
Cc: curtis.frye@navy.mil; louis.maccarone@dem.ri.gov; conifer@tiac.net
Subject: RE: Upcoming Telecons/Meetings for Davisville Site 16

LeeAnn-

I have no issues with the RTC for the 1,4Dioxane, so I have no need for a telecon.

I will have to check with my reviewers as to when would be convenient during the last 2 weeks of May (keeping in mind that the 31st is Memorial Day and that I can't make the 25th) to discuss the data gaps and the potential resolution of the data gaps for Site 16 as presented in the recent report. Bill? Conrad? Rick? Steve?

Christine A.P. Williams
Federal Facility Superfund Section
US EPA New England
Suite 1100 (HBT)
1 Congress Street
Boston, MA 02114-2023

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"Sinagoga, Leeann" <SinagogaL@ttnus.com>
04/05/2006 05:44 PM

To: Christine Williams/R1/USEPA/US@EPA, "Sinagoga, Leeann" <SinagogaL@ttnus.com>, curtis.frye@navy.mil, lmaccaro@dem.state.ri.us
cc:
Subject: RE: Upcoming Telecons/Meetings for Davisville Site 16

Good Afternoon Christine,

Yes. The RTCs for the 1,4-dioxane QAPP were mailed on March 7, 2006. In fact, Mr. Evans received an E-mail from you on 3-13-06 requesting additional copies of these type of letters in the future. I do have a Fed-X tracking number if that would help you.

I will check with Navy regarding available dates for proposed technical meeting. Are there any particular dates in that time frame that would be convenient for the EPA/State?? I

will try to match EPA/State availability with the Navy's availability.

Thanks for your time and support.

Lee Ann
X8887

Lee Ann Sinagoga
Human Health Risk Assessment Specialist
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From: williams.christine@epamail.epa.gov
[mailto:williams.christine@epamail.epa.gov]
Sent: Wednesday, April 05, 2006 5:21 PM
To: Sinagoga, Leeann; curtis.frye@navy.mil; lmaccaro@dem.state.ri.us
Subject: Re: Upcoming Telecons/Meetings for Davisville Site 16

LeeAnn: did you already send me the RTCs for the QAPP?

May 16th is out for a BCT meeting as I will be in Maine the 16th and 17th. Please suggest another date.

Christine A.P. Williams
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Boston, MA 02114-2023

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Sinagoga, Lee Ann -- NUS

From: Louis Maccarone [louis.maccarone@DEM.RI.GOV]
Sent: Thursday, April 20, 2006 11:30 AM
To: Sinagoga, Leeann
Subject: RE: 1,4-dioxane Sampling QAPP

LeeAnn,

I have no commnets on the RTCs.

THanks
Lou

-----Original Message-----
From: Sinagoga, Leeann [mailto:SinagogaL@ttnus.com]
Sent: Friday, April 07, 2006 12:08 PM
To: Louis Maccarone
Subject: RE: 1,4-dioxane Sampling QAPP

Thank you for your response.

Lee Ann

Lee Ann Sinagoga
Human Health Risk Assessment Specialist
TETRA TECH NUS, Inc.
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-----Original Message-----
From: Louis Maccarone [mailto:louis.maccarone@DEM.RI.GOV]
Sent: Friday, April 07, 2006 12:07 PM
To: Sinagoga, Leeann; williams.christine@epamail.epa.gov
Cc: Barney, Dave A (EFANE); Frye, Curtis A (EFANE)(NMCI); Vetere, Stephen
Subject: RE: 1,4-dioxane Sampling QAPP

Leeann,

I'm sorry, but I have not yet reviewed it. I will forward comments by early next week.

Thanks
Lou

-----Original Message-----

From: Sinagoga, Leeann [mailto:SinagogaL@ttnus.com]
Sent: Friday, April 07, 2006 11:57 AM
To: williams.christine@epamail.epa.gov; Louis Maccarone
Cc: Barney, Dave A (EFANE); Frye, Curtis A (EFANE)(NMCI); Vetere, Stephen
Subject: 1,4-dioxane Sampling QAPP

Good Afternoon Christine,

Thanks for your prompt response on the 1,4-Dioxane QAPP.

Mr. Maccarone --- Does the state have any comments on the RTCs??

If not, Navy will move forward and execute that sampling plan with the revised monitoring well list recommended in the responses to comments.

Please advise.

Thank you for your time and support.

Lee Ann

-----Original Message-----
From: williams.christine@epamail.epa.gov
[mailto:williams.christine@epamail.epa.gov]
Sent: Thursday, April 06, 2006 8:20 AM
To: Sinagoga, Leeann; Brandon.Bill@epamail.epa.gov; kcampbell@cdwconsultants.com; Sugatt.Rick@epamail.epa.gov; DiMattei.Steve@epamail.epa.gov
Cc: curtis.frye@navy.mil; louis.maccarone@dem.ri.gov; conifer@tiac.net
Subject: RE: Upcoming Telecons/Meetings for Davisville Site 16

LeeAnn-

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I will have to check with my reviewers as to when would be convenient during the last 2 weeks of May (keeping in mind that the 31st is Memorial Day and that I can't make the 25th) to discuss the data gaps and the potential resolution of the data gaps for Site 16 as presented in the recent report.
Bill? Conrad? Rick? Steve?

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"Sinagoga, Leeann" <SinagogaL@ttnus.com>		To
04/05/2006 05:44 PM	Christine Williams/R1/USEPA/US@EPA, "Sinagoga, Leeann" <SinagogaL@ttnus.com>, curtis.frye@navy.mil, lmaccaro@dem.state.ri.us	
		cc

Subject
RE: Upcoming Telecons/Meetings
for Davisville Site 16

Good Afternoon Christine,

Yes. The RTCs for the 1,4-dioxane QAPP were mailed on March 7, 2006. In fact, Mr. Evans received an E-mail from you on 3-13-06 requesting additional copies of these type of letters in the future. I do have a Fed-X tracking number if that would help you.

I will check with Navy regarding available dates for proposed technical meeting. Are there any particular dates in that time frame that would be convenient for the EPA/State?? I will try to match EPA/State availability with the Navy's availability.

Thanks for your time and support.

Lee Ann
X8887

Lee Ann Sinagoga
Human Health Risk Assessment Specialist
TETRA TECH NUS, Inc.
Foster Plaza No. 7
661 Andersen Drive
Pittsburgh, PA 15220-2745
Telephone: (412)-921-8887
FAX: (412)-921-4040
sinagogal@ttnus.com
http://www.ttnus.com
http://www.tetratech.com
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From: williams.christine@epamail.epa.gov
[mailto:williams.christine@epamail.epa.gov]
Sent: Wednesday, April 05, 2006 5:21 PM
To: Sinagoga, Leeann; curtis.frye@navy.mil; lmaccaro@dem.state.ri.us
Subject: Re: Upcoming Telecons/Meetings for Davisville Site 16

LeeAnn: did you already send me the RTCs for the QAPP?

May 16th is out for a BCT meeting as I will be in Maine the 16th and 17th.
Please suggest another date.

Christine A.P. Williams
Federal Facility Superfund Section
US EPA New England
Suite 1100 (HBT)
1 Congress Street
Boston, MA 02114-2023

phone - (617) 918-1384
fax - (617) 918- 0384
e-mail - williams.christine@epa.gov

ATTACHMENT NO. 5

Analytical Data Package and Data Validation Memorandum for Spring 2006 Sampling Event

Tetra Tech NUS **INTERNAL CORRESPONDENCE**

TO: **LEE ANN SINAGOGA** **DATE: JUNE 13, 2006**

FROM: **KELLY CARPER** **COPIES: DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION: 1,4-DIOXANE**
CTO 049, NCBC DAVISVILLE, RHODE ISLAND
SDG TT051306

SAMPLES: 12 / Aqueous

FD05110601	MW16-04D-NWG	MW16-05D-NWG
MW16-05I-NWG	MW16-10D-NWG	MW16-15D-NWG
MW16-37I-NWG	MW16-37S-NWG	MW16-39I-NWG
MW16-45I-NWG	MW16-59I-NWG	RB05120601

Overview

The sample set for CTO 049 SDG TT051306, NCBC Davisville consists of eleven (11) aqueous environmental samples (including 1 field duplicate) and one (1) rinse blank. All environmental samples were analyzed for 1,4-Dioxane. The blanks were only analyzed for VOCs. The field duplicate pair included in this SDG is FD05110601/ MW16-05D-NWG.

The samples were collected by Tetra Tech NUS, Inc. on May 11 and 12, 2006 and analyzed by Northeast Laboratory Services. All analyses were conducted in accordance with Naval Facilities Engineering Service Center (NFESC) Quality Assurance/Quality Control (QA/QC) criteria using USEPA SW 846 Method 8270C Selective Ion Monitoring (SIM) analytical and reporting protocol. A Tier 3 data validation was performed on the referenced samples. The data contained in this SDG were validated with regard to the following parameters:

* • Data Completeness
* • Holding Times
* • GC/MS Tuning
* • Initial and Continuing Calibration
* • Laboratory Method and/or Field Quality Control Blanks
* • Surrogate Spike Recoveries
* • Blank Spike / Blank Spike Duplicate Recoveries
* • Internal Standards Performance
* • Matrix Spike/Matrix Spike Duplicate Results
* • Field Duplicate Precision
* • Detection Limits
* • Sample Quantitation

The asterisk (*) indicates that all quality control criteria were met for this parameter. Qualified (if applicable) analytical results are summarized in Appendix A. Results as reported by the laboratory are presented in Appendix B. Appendix C contains Region I worksheets, and Appendix D contains the documentation to support the findings as discussed in this data validation report. The attached Table summarizes the validation qualifications which are based on the following information:

1,4-Dioxane was analyzed by SW-846 8270C using Selective Ion Monitoring (SIM). A deuterated analog of 1,4,-dioxane, 1,4-dioxane-d8, was used as the internal standard.

A laboratory control sample (LCS) and duplicate were spiked at 2 ug/L and all recoveries fell within acceptance limits. Recoveries were somewhat low between 35% and 40%.

A matrix spike/matrix spike duplicate was also performed and produced recoveries similar to the LCS.

No data quality issues were noted and data did not require any qualifications.

OVERALL ASSESSMENT

Laboratory Performance: No issues were noted.

Other Factors Affecting Data Quality: No issues were noted.

The data for these analyses were reviewed with reference to the Region I EPA "Data Validation Functional Guidelines - Part II" (12/96) and the DOD Quality Systems Manual (January 2006).

"I attest that the data referenced herein were validated according to the agreed upon validation criteria as specified in the DOD Guidelines."

TetraTech NUS
Kelly Carper
Chemist/Data Validator

TetraTech NUS
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as Reported by the Laboratory
3. Appendix C - Regional Worksheets
4. Appendix D - Support Documentation

APPENDIX A

QUALIFIED LABORATORY RESULTS

PROJ_NO: 00234

SDG: TT051306 MEDIA: WATER DATA FRACTION: OS

nsample	FD05110601	nsample	MW16-04D-NWG	nsample	MW16-05D-NWG
samp_date	5/11/2006	samp_date	5/11/2006	samp_date	5/11/2006
lab_id	AI04623	lab_id	AI04624	lab_id	AI04622
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:	MW16-05D-NWG	DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

PROJ_NO: 00234

SDG: TT051306 MEDIA: WATER DATA FRACTION: OS

nsample	MW16-05I-NWG	nsample	MW16-10D-NWG	nsample	MW16-15D-NWG
samp_date	5/11/2006	samp_date	5/11/2006	samp_date	5/11/2006
lab_id	AI04625	lab_id	AI04619	lab_id	AI04617
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

PROJ_NO: 00234

SDG: TT051306 MEDIA: WATER DATA FRACTION: OS

nsample	MW16-37I-NWG
samp_date	5/11/2006
lab_id	AI04621
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

nsample	MW16-37S-NWG
samp_date	5/11/2006
lab_id	AI04620
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

nsample	MW16-39I-NWG
samp_date	5/12/2006
lab_id	AI04627
qc_type	NM
units	UG/L
Pct_Solids	0.0
DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

PROJ_NO: 00234

SDG: TT051306 MEDIA: WATER DATA FRACTION: OS

nsample	MW16-45I-NWG	nsample	MW16-59I-NWG	nsample	RB05120601
samp_date	5/12/2006	samp_date	5/11/2006	samp_date	5/12/2006
lab_id	AI04626	lab_id	AI04618	lab_id	AI04628
qc_type	NM	qc_type	NM	qc_type	NM
units	UG/L	units	UG/L	units	UG/L
Pct_Solids	0.0	Pct_Solids	0.0	Pct_Solids	0.0
DUP_OF:		DUP_OF:		DUP_OF:	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

Parameter	Result	Val Qual	Qual Code
1,4-DIOXANE	2	U	

Northeast Laboratory SERVICES

P.O. Box 788, Waterville, ME 04903-0788
Ph: 1-800-244-8378 Fax: 207/873-7022

SAMPLE REPORT COVER SHEET

Date:	June 1, 2006
Client:;	Tetra Tech NUS, Inc.
SDG#:	TT051306
NEL Sample #s:	AI04617-28

Number of pages contained in report:	152
Number of addendum pages:	

Report submitted by:	Laurie A. Bouchard, Analytical Reporting Specialist

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NARRATIVE
NORTHEAST LABORATORY SERVICES
TETRA TECH NUS, INC.
NASJRB WILLOW GROVE, PA
SDG# TT051306

Sample Receipt

The following samples were received on May 13, 2006 with a hardcopy due date of June 2, 2006.

NEL Sample Number	Sample Identification	Date Sampled	Parameters
AI04617	MW16-15D-NWG	05/11/06	1,4-Dioxane 8270C-SIM
AI04618	MW16-59I-NWG	05/11/06	1,4-Dioxane 8270C-SIM
AI04619	MW16-10D-NWG	05/11/06	1,4-Dioxane 8270C-SIM
AI04620	MW16-37S-NWG	05/11/06	1,4-Dioxane 8270C-SIM
AI04621	MW16-37I-NWG	05/11/06	1,4-Dioxane 8270C-SIM
AI04622	MW16-05D-NWG	05/11/06	1,4-Dioxane 8270C-SIM
AI04623	FD05110601	05/11/06	1,4-Dioxane 8270C-SIM
AI04624	MW16-04D-NWG	05/11/06	1,4-Dioxane 8270C-SIM
AI04625	MW16-05I-NWG	05/11/06	1,4-Dioxane 8270C-SIM
AI04626	MW16-45I-NWG	05/12/06	1,4-Dioxane 8270C-SIM
AI04627	MW16-39I-NWG	05/12/06	1,4-Dioxane 8270C-SIM
AI04628	RB05120601	05/12/06	1,4-Dioxane 8270C-SIM

The samples were tracked through the Laboratory Information Management System (LIMS) for the analyses specified on the chain of custody form. The samples were assigned unique laboratory identification numbers and each test requested on the chain of custody record for that sample was assigned to the unique number for that sample only. Every record in the lab associated with these reports will contain the client's name, project number and sample#, as well as any other pertinent information for that sample. There were no non-conformances noted during sample receipt. The temperature of the sample coolers were 1.2 ^{o}C, 1.5 ^{o}C and 2.7 ^{o}C . The case narrative is an integral part of the data report and should be used in conjunction with review of the hardcopy data package. If you have any questions regarding the data included in this hardcopy data package, please contact Pam Doughty, Quality Assurance Manager.

1,4-Dioxane by 8270C-SIM Analysis

Twelve aqueous samples were received by the NEL organics laboratory on 05/13/06 and were specified to be analyzed for the analyte 1,4-dioxane in accordance with NEL SOP # 3.3.49 (method 8270C modified to use selected ion monitoring (SIM)).

The samples were extracted by method 3510 on 05/17/06. A laboratory control sample/laboratory control sample duplicate pair, with the analyte 1,4-dioxane spiked at 2.0 ug/l, was extracted in the batch. A matrix spike/matrix spike duplicate pair, again with 1,4-dioxane spiked at 2.0 ug/l, was performed on parent sample AI04617 (MW16-15D-NWG).

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All samples were evaluated to the method detection level for 1,4-dioxane, with positive detects between the MDL and the reporting level of 2.0 ug/l given the "J" qualifier. There were no positive detects in any of the field samples.

The initial calibration curve consisted of six points, with concentrations ranging from a low point of 0.125 ug/ml to a high standard of 3.00 ug/ml. The standard at 1.25 ug/ml was used as the continuing calibration verification standard. The %RSD in the curve for 1,4-dioxane was 22.4%, well within the 30% upper limit. The two calibration check standards had %D values of 17.4% and 7.8%, both within the 20%D upper limit.

No SOP deviations were noted by the NEL preparatory or SVOA chemists.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the laboratory manager or her designee, as verified by the following signature.

Kelly Perkins

Kelly Perkins
Chemistry Technical Manager
05/31/06

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Section II- Semivolatile Organics Quality Control

Section III- Chain of Custody Records

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Section I

Report of Analysis

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ANALYSIS REPORT

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Phone: 800-244-8378
Fax: 207-873-7022

Attention: AMY THOMSON
TETRA TECH NUS INC
FOSTER PLAZA 7
661 ANDERSEN DR
PITTSBURGH PA 15220

Lab ID Number: AI04617
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/11/2006 09:05 AM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: MW16-15D-NWG
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics 1 4 Dioxane-SIM										
1,4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/18/2006	19:34	JJC
2-Methylnaphthalene-d10 (surrogate)	69		%	20	EPA 8270BC	05/17/2006	8:00	05/18/2006	19:34	JJC
* *The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

Comments:

Results are reported on a wet weight basis.

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Results meet the requirements of the NELAC standards unless otherwise noted above.

Reviewed By: Kelly A. Perkins **Review Date:** 05/22/2006

Kelly Perkins, Laboratory Technical Manager

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ANALYSIS REPORT

Attention: AMY THOMSON
TETRA TECH NUS INC
FOSTER PLAZA 7
661 ANDERSEN DR
PITTSBURGH PA 15220

Lab ID Number: AI04618
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/11/2006 10:42 AM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: MW16-59I-NWG
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics 1 4 Dioxane-SIM										
1,4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/18/2006	21:03	JJC
2-Methylnaphthalene-d10 (surrogate)	52		%	20	EPA 8270BC	05/17/2006	8:00	05/18/2006	21:03	JJC
* *The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

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Attention: AMY THOMSON
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PITTSBURGH PA 15220

Lab ID Number: AI04619
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/11/2006 12:50 PM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: MW16-10D-NWG
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics 1 4 Dioxane-SIM										
1,4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/19/2006	16:28	JJC
2-Methylnaphthalene-d10 (surrogate)	76		%	20	EPA 8270BC	05/17/2006	8:00	05/19/2006	16:28	JJC
** The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

Comments:

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Reviewed By: Kelly A. Perkins **Review Date:** 05/22/2006

Kelly Perkins, Laboratory Technical Manager

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ANALYSIS REPORT

Attention: AMY THOMSON
TETRA TECH NUS INC
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PITTSBURGH PA 15220

Lab ID Number: AI04620
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/11/2006 01:30 PM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: MW16-37S-NWG
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics 1 4 Dioxane-SIM										
1,4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/19/2006	15:27	JJC
2-Methylnaphthalene-d10 (surrogate)	64		%	20	EPA 8270BC	05/17/2006	8:00	05/19/2006	15:27	JJC
* *The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

Comments:

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Results meet the requirements of the NELAC standards unless otherwise noted above.

Reviewed By: Kelly A. Perkins **Review Date:** 05/22/2006

Kelly Perkins, Laboratory Technical Manager

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Attention: AMY THOMSON
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Lab ID Number: AI04621
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/11/2006 02:47 PM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: MW16-37I-NWG
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics 1 4 Dioxane-SIM										
1,4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/19/2006	15:58	JJC
2-Methylnaphthalene-d10 (surrogate)	66		%	20	EPA 8270BC	05/17/2006	8:00	05/19/2006	15:58	JJC
* *The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

Comments:

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Results meet the requirements of the NELAC standards unless otherwise noted above.

Reviewed By: Kelly A. Perkins **Review Date:** 05/22/2006

Kelly Perkins, Laboratory Technical Manager

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Fax: 207-873-7022

ANALYSIS REPORT

Attention: AMY THOMSON
TETRA TECH NUS INC
FOSTER PLAZA 7
661 ANDERSEN DR
PITTSBURGH PA 15220

Lab ID Number: AI04622
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/11/2006 04:45 PM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: MW16-05D-NWG
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics 1 4 Dioxane-SIM										
1,4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/19/2006	14:26	JJC
2-Methylnaphthalene-d10 (surrogate)	64		%	20	EPA 8270BC	05/17/2006	8:00	05/19/2006	14:26	JJC
** The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

Comments:

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Attention: AMY THOMSON
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661 ANDERSEN DR
PITTSBURGH PA 15220

Lab ID Number: AI04623
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/11/2006 04:50 PM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: FD05110601
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics 1 4 Dioxane-SIM										
1,4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/19/2006	14:57	JJC
2-Methylnaphthalene-d10 (surrogate)	62		%	20	EPA 8270BC	05/17/2006	8:00	05/19/2006	14:57	JJC
** The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

Comments:

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Attention: AMY THOMSON
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661 ANDERSEN DR
PITTSBURGH PA 15220

Lab ID Number: AI04624
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/11/2006 05:53 PM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: MW16-04D-NWG
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics 1 4 Dioxane-SIM										
1,4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/19/2006	0:05	JJC
2-Methylnaphthalene-d10 (surrogate)	76		%	20	EPA 8270BC	05/17/2006	8:00	05/19/2006	0:05	JJC
** The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

Comments:

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Reviewed By: Kelly A. Perkins **Review Date:** 05/22/2006

Kelly Perkins, Laboratory Technical Manager

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ANALYSIS REPORT

Attention: AMY THOMSON
TETRA TECH NUS INC
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661 ANDERSEN DR
PITTSBURGH PA 15220

Lab ID Number: AI04625
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/11/2006 06:25 PM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: MW16-05I-NWG
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics I 4 Dioxane-SIM										
1,4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/19/2006	0:37	JJC
2-Methylnaphthalene-d10 (surrogate)	68		%	20	EPA 8270BC	05/17/2006	8:00	05/19/2006	0:37	JJC
* *The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

Comments:

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ANALYSIS REPORT

Attention: AMY THOMSON
TETRA TECH NUS INC
FOSTER PLAZA 7
661 ANDERSEN DR
PITTSBURGH PA 15220

Lab ID Number: AI04626
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/12/2006 08:45 AM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: MW16-45I-NWG
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics 1 4 Dioxane-SIM										
1.4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/19/2006	1:07	JJC
2-Methylnaphthalene-d10 (surrogate)	71		%	20	EPA 8270BC	05/17/2006	8:00	05/19/2006	1:07	JJC
* *The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

Comments:

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Lab ID Number: AI04627
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/12/2006 10:00 AM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: MW16-39I-NWG
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics 1 4 Dioxane-SIM										
1,4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/19/2006	1:38	JJC
2-Methylnaphthalene-d10 (surrogate)	59		%	20	EPA 8270BC	05/17/2006	8:00	05/19/2006	1:38	JJC
* *The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

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Attention: AMY THOMSON
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Lab ID Number: AI04628
Project Number: Davisville
P.O. Number: G002340505
Date Collected: 05/12/2006 11:00 AM
DateReceived: 05/13/2006 11:30 AM
Date Reported: 05/22/2006

Sample Matrix: G-WATER
Sample Description: RB05120601
Sample Type: Grab

Parameter	Result	Qualifier	Unit	Detection Limit	Method	Preparation Date/Time		Analysis Date/Time		Analyst
Semi Volatile Organics 1 4 Dioxane-SIM										
1,4 Dioxane	2.0	U	ug/L	2.0	EPA 8270BC	05/17/2006	8:00	05/19/2006	12:54	JJC
2-Methylnaphthalene-d10 (surrogate)	58		%	20	EPA 8270BC	05/17/2006	8:00	05/19/2006	12:54	JJC
** The "U" qualifier indicates the compound was analyzed for but not detected.*										
Separatory Funnel-BNA Waters SIM	Completed		Date		EPA 3510C	05/17/2006	8:00	05/17/2006	10:40	JNM

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Section II

Semivolatile Organics Analysis

NEL COMPLETION CHECKLIST

SEMIVOLATILES –LEVELS III AND IV

SDG: Tetratech

ITEM	INCLUDED?	COMMENTS
SDG Narrative		
Chain of Custody		
Form 2-surrogates	MC 052006	
Form 3- LCS/LCSD	MC	
Form 3-MS/MSD	MC	
Form 4-Method blank Summary	MC	
Method blank concentration summary (quant report)	MC	
Form 5-DFTPP Tuning	MC	
Form 8- ISTD Responses	MC	
Sample reports *	MC	
Form 6- Initial calibration summaries	MC	
Curve raw data *	MC	
Form 7-CCV summaries	MC	
CCV raw data*	MC	
DFTPP Tuning hardcopies*	MC	
Method Blank raw data *	MC	
LCS/LCSD raw data *	MC	
MS/MSD raw data *	MC	
Logbook copies, to include extraction logs, injection logs, and standard preparation info*	MC	

narrative TT 051306

Items marked with an * are pertinent to level IV packages only

Analyst preparing the package: MC Date: 052006

Package reviewed for completeness by: [signature] Date: 0524

[signature] 05214

2C
SIM WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: Northeast Labs_____ Contract: _____

Lab Code: __ Case No.: _____ SAS No.: _____ SDG No.: _____

	EPA SAMPLE NO.	S1 (2MN)	TOT OUT
01	WBLK;051706	60	0
02	WLCS;051706	62	0
03	WLCSD;051706	54	0
04	AI04617	69	0
05	AI04617MS	72	0
06	AI04617MSD	60	0
07	AI04618	52	0
08	AI04619	76	0
09	AI04620	64	0
10	AI04621	66	0
11	AI04622	64	0
12	AI04623	62	0
13	AI04624	76	0
14	AI04625	68	0
15	AI04626	71	0
16	AI04627	59	0
17	AI04628	58	0
18			

S1 (2MN) = 2-Methylnaphthalene-d10

QC LIMITS
(20-150)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D DMC diluted out

Semivolatile SIM
LCS/LCSD Summary

Lab Name: Northeast Labs

Analyst: JJC

File LCS: M6936 File LCSD: M6937

Date Extracted: 05/17/06 Date Analyzed: 05/18/06

Compound	Spike Added (ug/L)	LCS Concentration (ug/L)	LCS % Rec.	LCSD Concentration (ug/L)	LCSD % Rec.	% RPD	QC Limits RPD	QC Limits Rec.
1,4-Dioxane	2.00	0.70	35	0.80	40	13	20	30-150

RPD 0 out of 1 outside limits

Spike Recovery 0 out of 2 outside limits

Semivolatile SIM
MS/MSD Summary

Lab Name: Northeast Labs

Analyst: JJC
Sample: AI04617
File MS:M6953 File MSD:M6954

Date Extracted:05/17/06 Date Analyzed: 05/19/06

Compound	Spike Added (ug/L)	Sample Concentration (ug/L)	LCS Concentration (ug/L)	LCS % Rec.	LCSD Concentration (ug/L)	LCSD % Rec.	% RPD	QC Limits RPD	QC Limits Rec.
1,4-Dioxane	2.00	<0.20	0.75	38	0.64	32	16	20	30-150

RPD	0	out of	1	outside limits
Spike Recovery	0	out of	2	outside limits

4B

SEMIVOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

WBLK;051706

Lab Name: Northeast Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Lab File ID: M6935.D Lab Sample ID: WBLK;051706

Instrument ID: HP5890M Date Extracted: 05/17/06

Matrix: (soil/water) WATER Date Analyzed: 05/18/06

Level: (low/med) LOW Time Analyzed: 18:05

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WLCS;051706	WLCS;051706	M6936.D	05/18/06
02	WLCSD;051706	WLCSD;051706	M6937.D	05/18/06
03	AI04617	AI04617	M6938.D	05/18/06
04	AI04618	AI04618	M6941.D	05/18/06
05	AI04624	AI04624	M6947.D	05/19/06
06	AI04625	AI04625	M6948.D	05/19/06
07	AI04626	AI04626	M6949.D	05/19/06
08	AI04627	AI04627	M6950.D	05/19/06
09	AI04617MS	AI04617MS	M6953.D	05/19/06
10	AI04617MSD	AI04617MSD	M6954.D	05/19/06
11	AI04628	AI04628	M6955.D	05/19/06
12	AI04622	AI04622	M6958.D	05/19/06
13	AI04623	AI04623	M6959.D	05/19/06
14	AI04620	AI04620	M6960.D	05/19/06
15	AI04621	AI04621	M6961.D	05/19/06
16	AI04619	AI04619	M6962.D	05/19/06

COMMENTS:

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Northeast Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Lab File ID: MD563.D DFTPP Injection Date: 05/18/06

Instrument ID: HP5890M DFTPP Injection Time: 14:07

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	46.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	48.5
70	Less than 2.0% of mass 69	0.6 (1.1)1
127	25.0 - 75.0% of mass 198	46.0
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.3
275	10.0 - 30.0% of mass 198	20.3
365	Greater than 0.75% of mass 198	1.5
441	Present, but less than mass 443	5.2
442	40.0 - 110.0% of mass 198	66.3
443	15.0 - 24.0% of mass 442	13.0 (19.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD1.25M18	SSTD1.25M18	M6928.D	05/18/06	14:30
02	SSTD0.125M18	SSTD0.125M18	M6929.D	05/18/06	15:05
03	SSTD0.625M18	SSTD0.625M18	M6930.D	05/18/06	15:35
04	SSTD2.00M18	SSTD2.00M18	M6931.D	05/18/06	16:05
05	SSTD2.50M18	SSTD2.50M18	M6932.D	05/18/06	16:35
06	SSTD3.00M18	SSTD3.00M18	M6933.D	05/18/06	17:05
07	WBLK;051706	WBLK;051706	M6935.D	05/18/06	18:05
08	WLCS;051706	WLCS;051706	M6936.D	05/18/06	18:35
09	WLCSD;051706	WLCSD;051706	M6937.D	05/18/06	19:04
10	AI04617	AI04617	M6938.D	05/18/06	19:34
11	AI04618	AI04618	M6941.D	05/18/06	21:03
12	AI04624	AI04624	M6947.D	05/19/06	00:05
13	AI04625	AI04625	M6948.D	05/19/06	00:37
14	AI04626	AI04626	M6949.D	05/19/06	01:07
15	AI04627	AI04627	M6950.D	05/19/06	01:38

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Northeast Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Lab File ID: MD564.D DFTPP Injection Date: 05/19/06

Instrument ID: HP5890M DFTPP Injection Time: 10:57

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	30.0 - 80.0% of mass 198	45.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 Relative abundance	45.5
70	Less than 2.0% of mass 69	0.0 (0.0)1
127	25.0 - 75.0% of mass 198	44.1
197	Less than 1.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.8
275	10.0 - 30.0% of mass 198	22.9
365	Greater than 0.75% of mass 198	2.0
441	Present, but less than mass 443	0.5
442	40.0 - 110.0% of mass 198	64.6
443	15.0 - 24.0% of mass 442	12.5 (19.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD1.25M19	SSTD1.25M19	M6952.D	05/19/06	11:19
02	AI04617MS	AI04617MS	M6953.D	05/19/06	11:50
03	AI04617MSD	AI04617MSD	M6954.D	05/19/06	12:21
04	AI04628	AI04628	M6955.D	05/19/06	12:54
05	AI04622	AI04622	M6958.D	05/19/06	14:26
06	AI04623	AI04623	M6959.D	05/19/06	14:57
07	AI04620	AI04620	M6960.D	05/19/06	15:27
08	AI04621	AI04621	M6961.D	05/19/06	15:58
09	AI04619	AI04619	M6962.D	05/19/06	16:28

Response Factor Report GC/MS Ins

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

Calibration Files
1.25 =M6928.D .125 =M6929.D .625 =M6930.D
2.0 =M6931.D 2.5 =M6932.D 3.0 =M6933.D

		Compound	1.25	.125	.625	2.0	2.5	3.0	Avg	%RSD
1)	I	1,4-Dioxane-d8	----------ISTD----------							
2)		1,4-Dioxane	0.795	0.687	1.127	0.890	1.006	1.268	0.962	22.38
3)	S	2-Methylnaphthalene	5.955	5.554	6.209	6.680	6.120	7.888	6.401	12.73

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\M6928.D
Acq On : 18 May 06 14:30
Sample : SSTD1.25
Misc :
MS Integration Params: rteint.p

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 21% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dioxane-d8	1.000	1.000	0.0	100	0.00
2		1,4-Dioxane	0.962	0.795	17.4	100	0.00
3	S	2-Methylnaphthalene-d10 (su	6.401	5.955	7.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\M6952.D
Acq On : 19 May 06 11:19
Sample : SSTD1.25
Misc :
MS Integration Params: rteint.p

Vial: 2
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 21% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	1,4-Dioxane-d8	1.000	1.000	0.0	113	-0.03
2		1,4-Dioxane	0.962	0.887	7.8	127	-0.01
3	S	2-Methylnaphthalene-d10 (su	6.401	5.822	9.0	111	-0.03

(#) = Out of Range SPCC's out = 0 CCC's out = 0

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Northeast Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Lab File ID (Standard): M6928.D Date Analyzed: 05/18/06

Instrument ID: HP5890M Time Analyzed: 14:30

		IS1 DXN AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	11213	2.56				
	UPPER LIMIT	22426	2.06				
	LOWER LIMIT	5607	3.06				
	EPA SAMPLE NO.						
01	WBLK;051706	13017	2.56				
02	WLCS;051706	11253	2.56				
03	WLCSD;051706	15074	2.56				
04	AI04617	11784	2.56				
05	AI04618	15374	2.56				
06	AI04624	13952	2.56				
07	AI04625	15513	2.54				
08	AI04626	15466	2.56				
09	AI04627	14588	2.56				

IS1 DXN = 1,4-Dioxane-d8

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Northeast Labs Contract:

Lab Code: Case No.: SAS No.: SDG No.:

Lab File ID (Standard): M6952.D Date Analyzed: 05/19/06

Instrument ID: HP5890M Time Analyzed: 11:19

		IS1 DXN AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	12717	2.53				
	UPPER LIMIT	25434	2.03				
	LOWER LIMIT	6359	3.03				
	EPA SAMPLE NO.						
01	AI04617MS	12329	2.53				
02	AI04617MSD	14955	2.53				
03	AI04628	13629	2.52				
04	AI04622	14869	2.53				
05	AI04623	13971	2.53				
06	AI04620	12416	2.55				
07	AI04621	12516	2.54				
08	AI04619	10626	2.55				

IS1 DXN = 1,4-Dioxane-d8

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column to be used to flag values outside QC limit with an asterisk.
* Values outside of contract required QC limits

User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:22:53

Sample: AI04617
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/18/06 19:34 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surroc		69		20

Comment editing: Sample ID: AI04617 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:22:52

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6938.D
Acq On : 18 May 06 19:34
Sample : AI04617
Misc :
MS Integration Params: rteint.p
Quant Time: May 20 12:07 19106

Vial: 15
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	11784 ✓	0.80 ug/L	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.39	152	129906 ✓	1.38 ug/L	0.00
Spiked Amount 2.000	Range 20 - 150		Recovery = 69.00%		

Target Compounds Qvalue

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

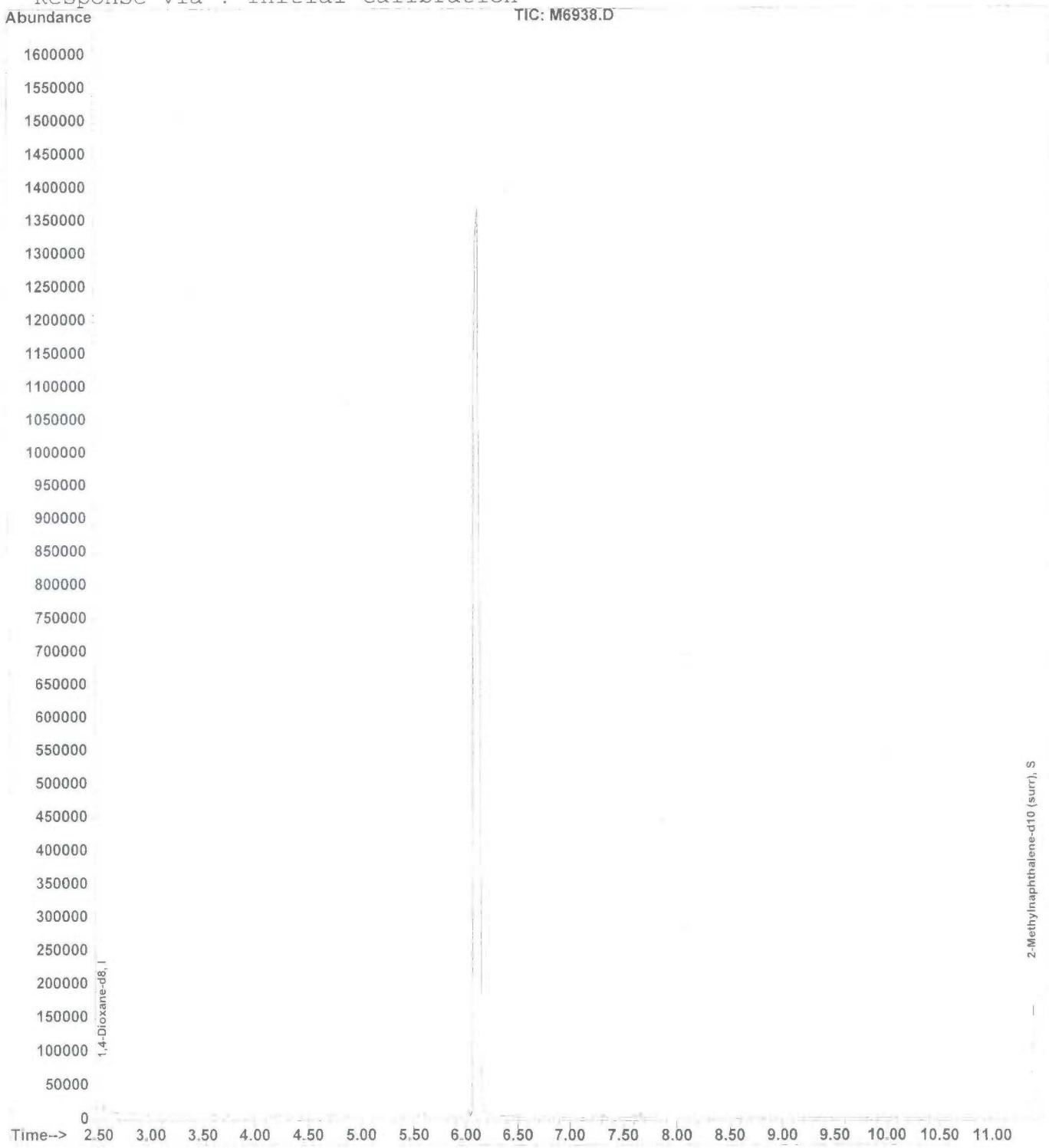
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6938.D
Acq On : 18 May 06 19:34
Sample : AI04617
Misc :
MS Integration Params: rteint.p
Quant Time: May 20 12:07 19106

Vial: 15
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

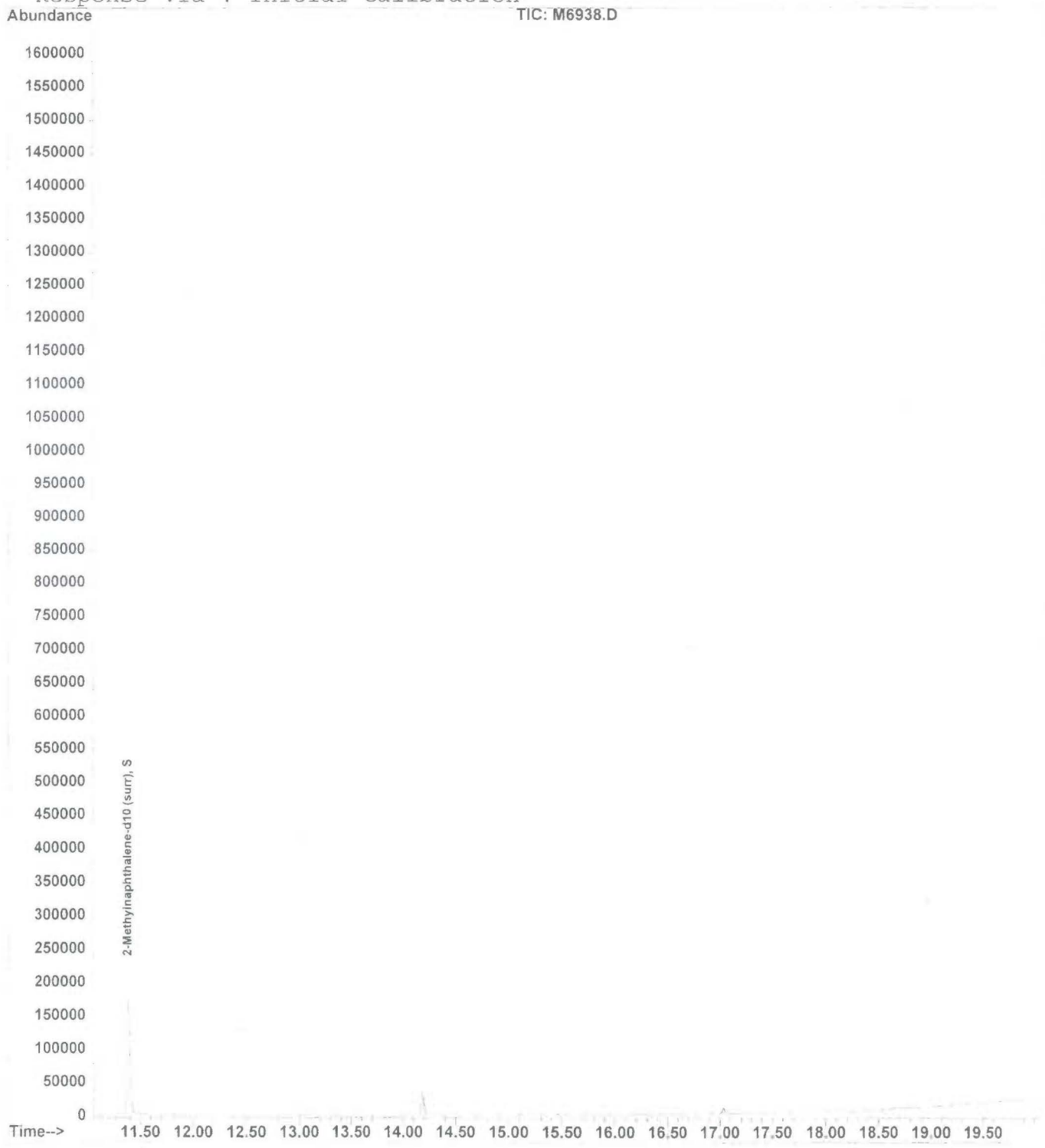


Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6938.D
Acq On : 18 May 06 19:34
Sample : AI04617
Misc :
MS Integration Params: rteint.p
Quant Time: May 20 12:07 19106

Vial: 15
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:23:46

Sample: AI04618
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/18/06 21:03 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surrog		52		20

Comment editing: Sample ID: AI04618 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:23:44

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6941.D
Vial: 18
Acq On : 18 May 06 21:03
Operator: JFG
Sample : AI04618
Inst : GC/MS Ins
Misc :
Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: May 19 8:32 19106
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	15374	0.80 ug/L	0.00

System Monitoring Compounds

3) 2-Methylnaphthalene-d10 (s	11.40	152	129326	1.05 ug/L	0.00

Spiked Amount 2.000 Range 20 - 150 Recovery = 52.50%

Target Compounds Qvalue

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

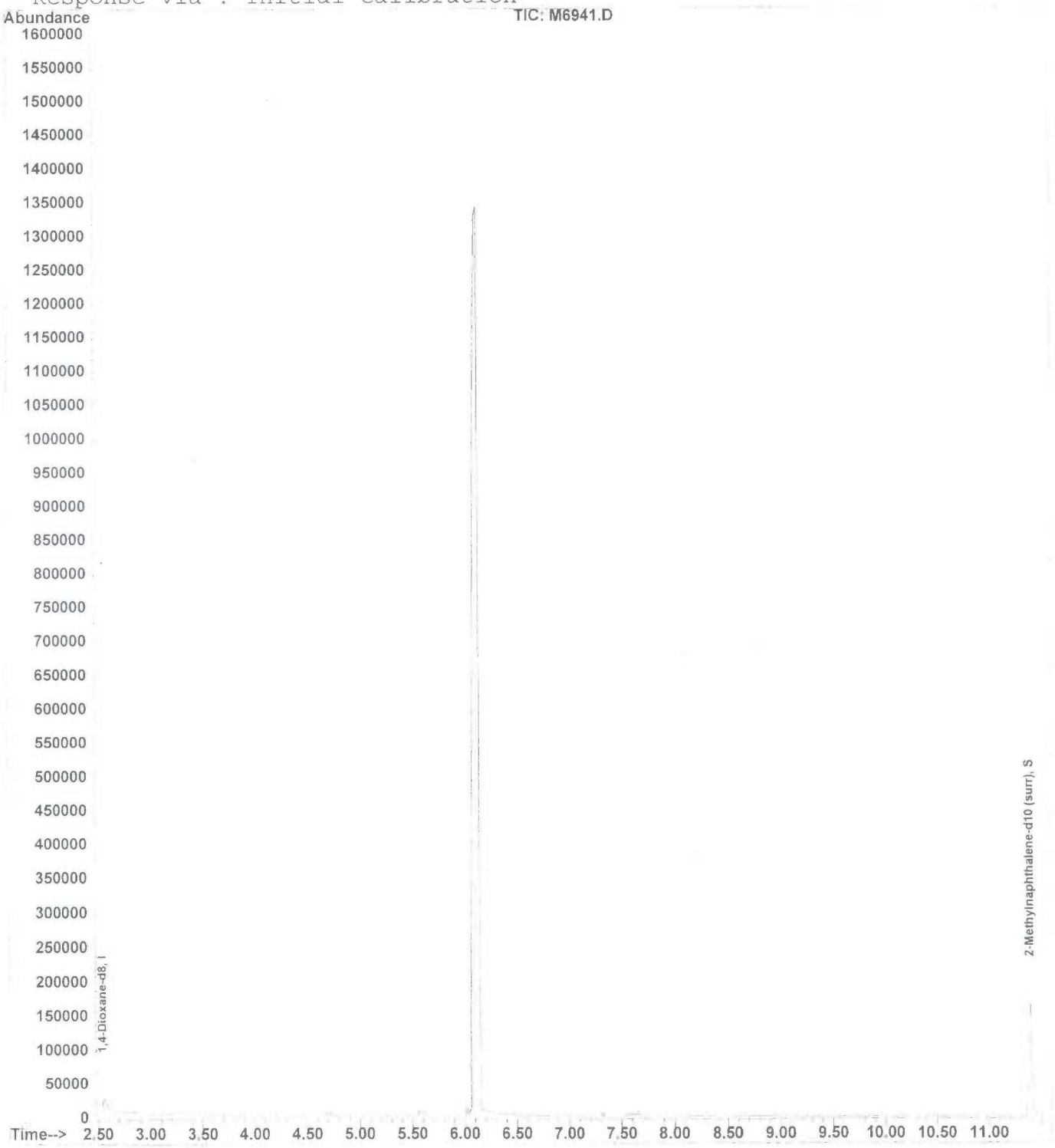
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6941.D
Acq On : 18 May 06 21:03
Sample : AI04618
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:32 19106

Vial: 18
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



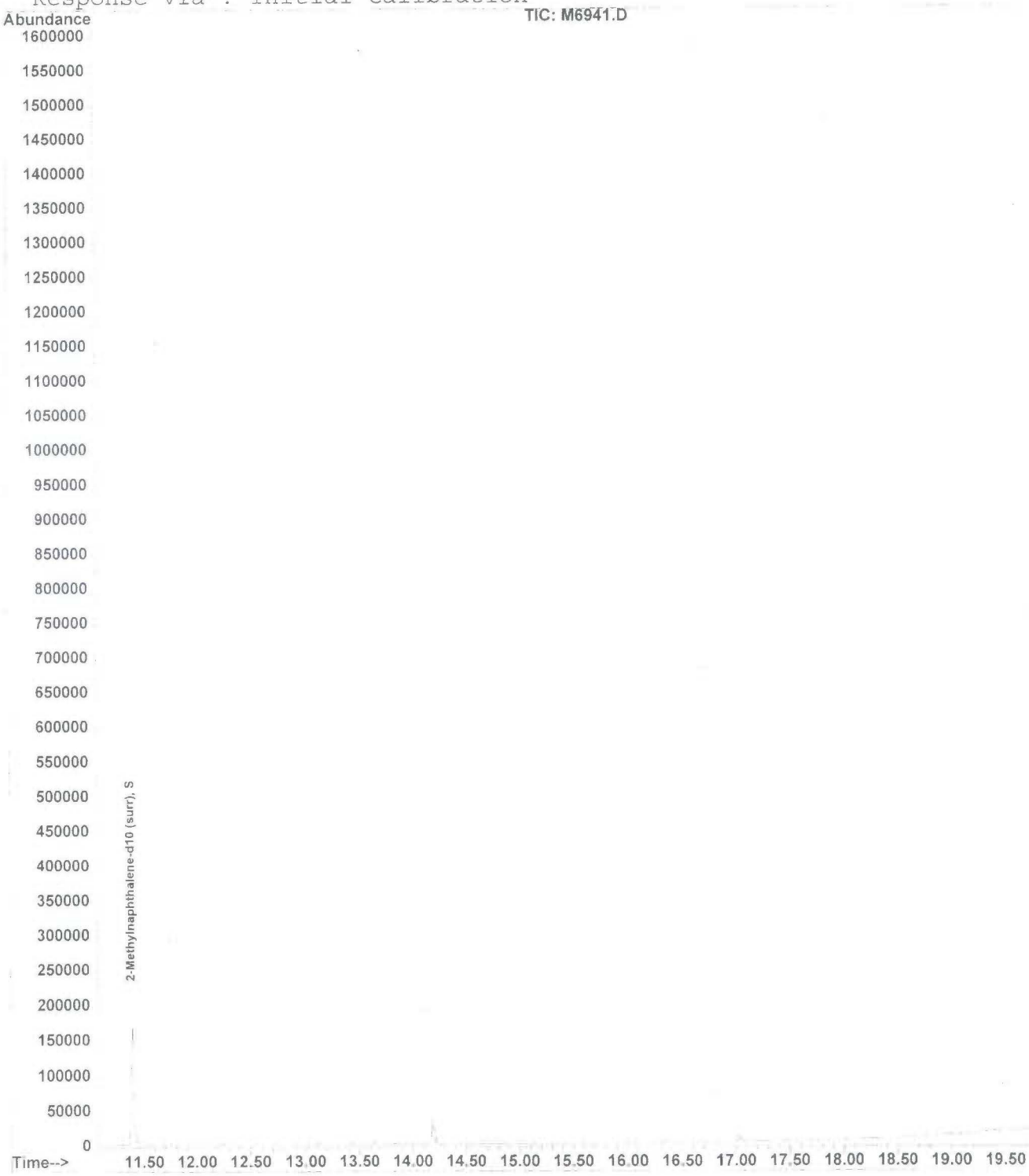
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6941.D
Acq On : 18 May 06 21:03
Sample : AI04618
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:32 19106

Vial: 18
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:24:40

Sample: AI04619
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/19/06 16:28 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surrog		76		20

Comment editing: Sample ID: AI04619 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:24:38

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6962.D
Acq On : 19 May 06 16:28
Sample : AI04619
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 16:48 19106

Vial: 12
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0519.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0519

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.55	96	10626	0.80 ug/L	0.00

System Monitoring Compounds

3) 2-Methylnaphthalene-d10 (s	11.39	152	129969	1.53 ug/L	0.00

Spiked Amount 2.000 Range 20 - 150 Recovery = 76.50%

Target Compounds Qvalue

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

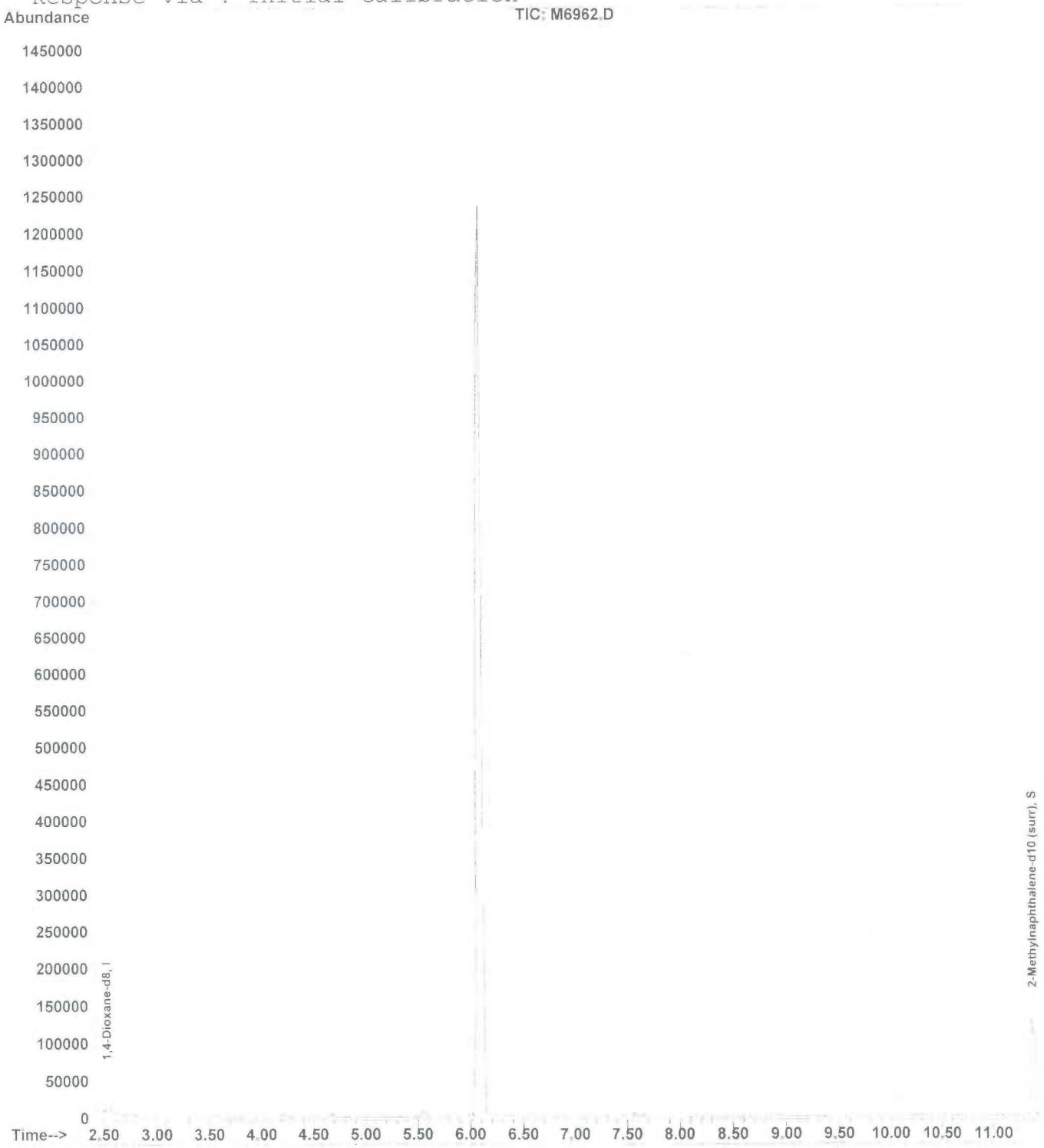
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6962.D
Acq On : 19 May 06 16:28
Sample : AI04619
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 16:48 19106

Vial: 12
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



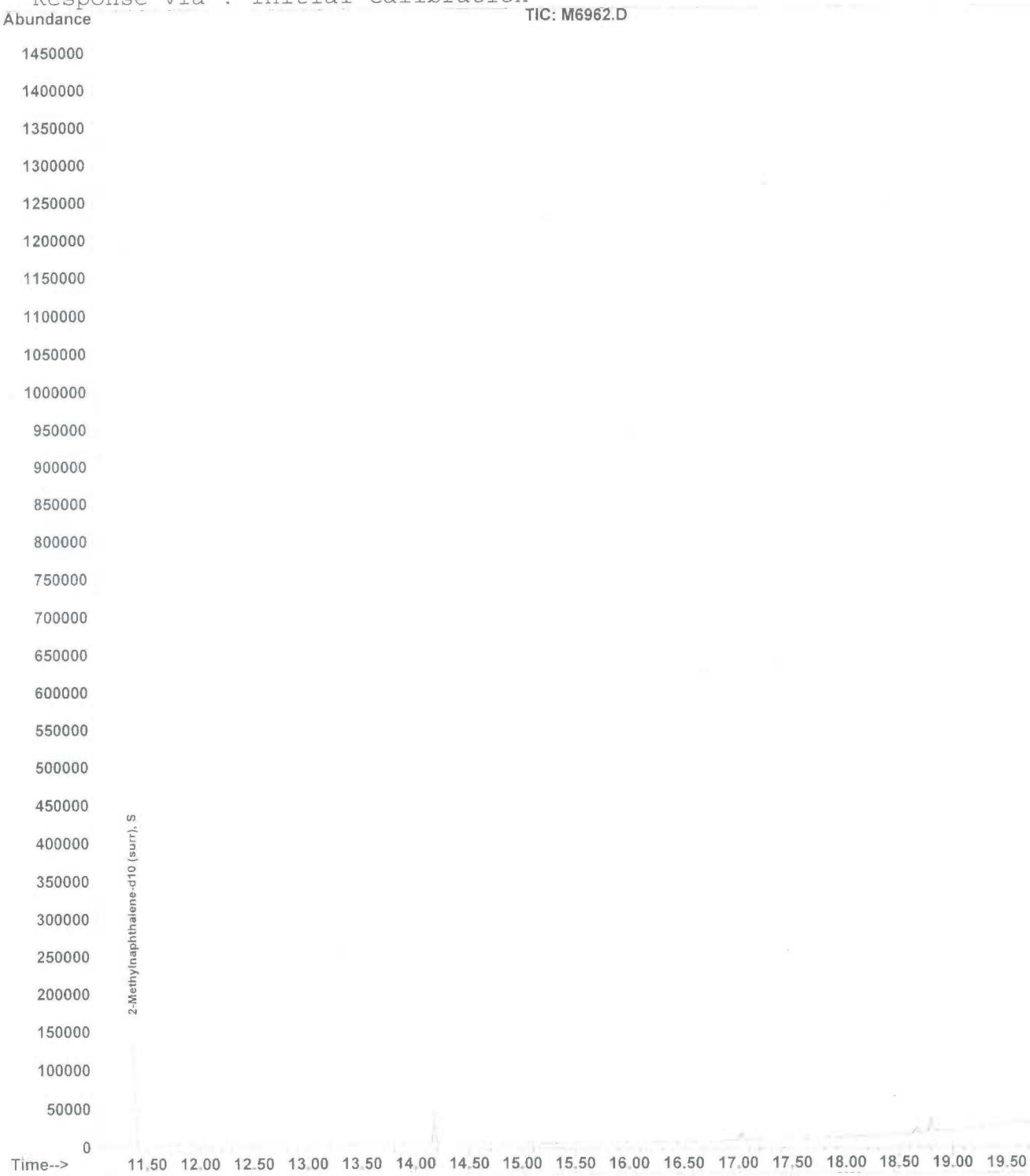
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6962.D
Acq On : 19 May 06 16:28
Sample : AI04619
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 16:48 19106

Vial: 12
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:25:25

Sample: AI04620
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/19/06 15:27 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surroc		64		20

Comment editing: Sample ID: AI04620 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:25:22

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6960.D
Acq On : 19 May 06 15:27
Sample : AI04620
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 15:48 19106

Vial: 10
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0519

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.55	96	12416 ✓	0.80 ug/L	-0.01
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.36	152	125857 ✓	1.27 ug/L	-0.03
Spiked Amount 2.000	Range	20 - 150	Recovery	= 63.50%	

Target Compounds Qvalue

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

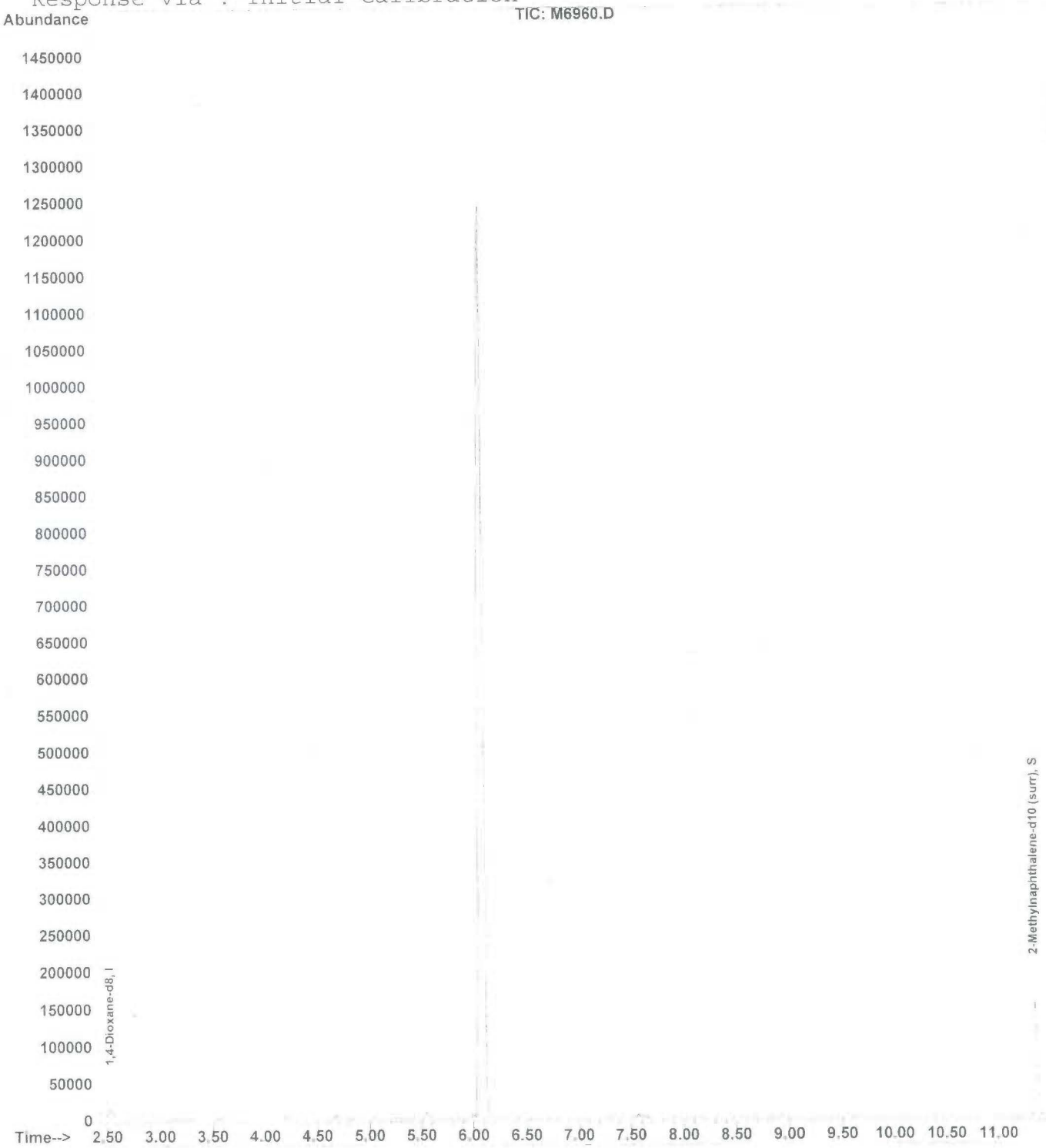
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6960.D
Acq On : 19 May 06 15:27
Sample : AI04620
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 15:48 19106

Vial: 10
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



48

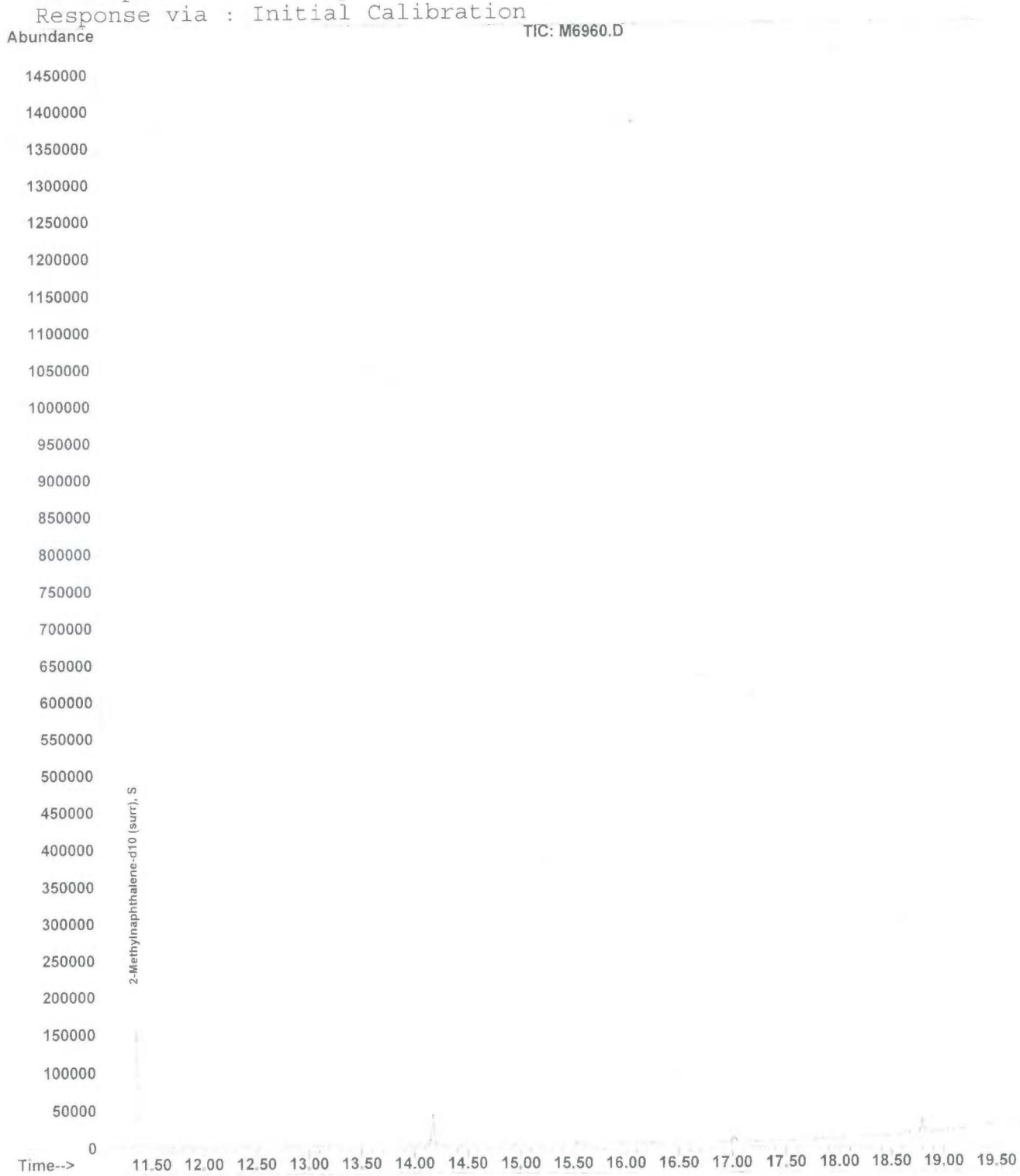
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6960.D
Acq On : 19 May 06 15:27
Sample : AI04620
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 15:48 19106

Vial: 10
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:26:09

Sample: AI04621
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/19/06 15:58 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surrog		66		20

Comment editing: Sample ID: AI04621 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:26:07

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6961.D
Acq On : 19 May 06 15:58
Sample : AI04621
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 16:18 19106

Vial: 11
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0519.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0519

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.54	96	12516 ✓	0.80 ug/L	-0.01
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.38	152	133375 ✓	1.33 ug/L	-0.01
Spiked Amount 2.000	Range 20 - 150		Recovery =	66.50%	

Target Compounds Qvalue

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

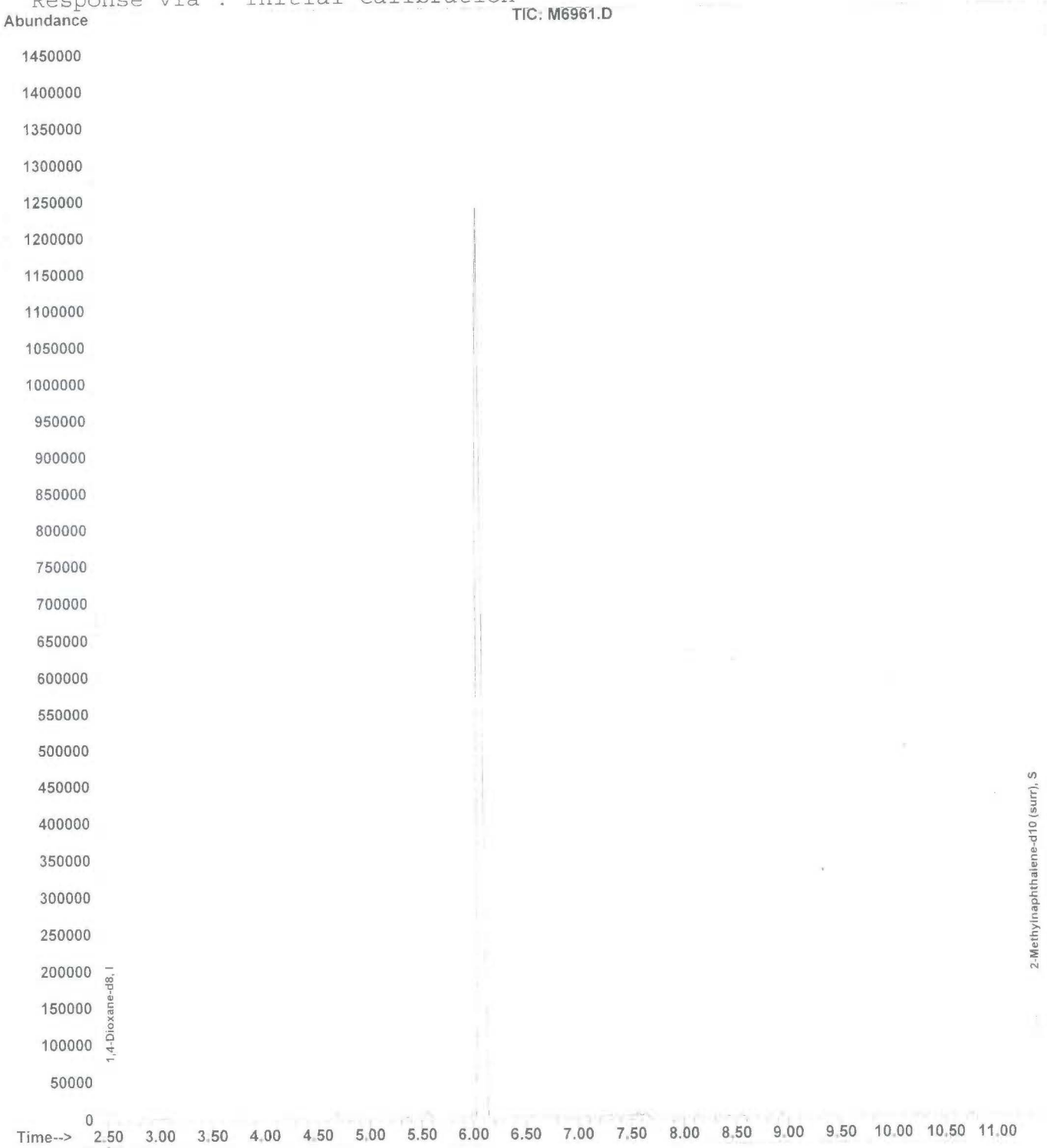
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6961.D
Acq On : 19 May 06 15:58
Sample : AI04621
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 16:18 19106

Vial: 11
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



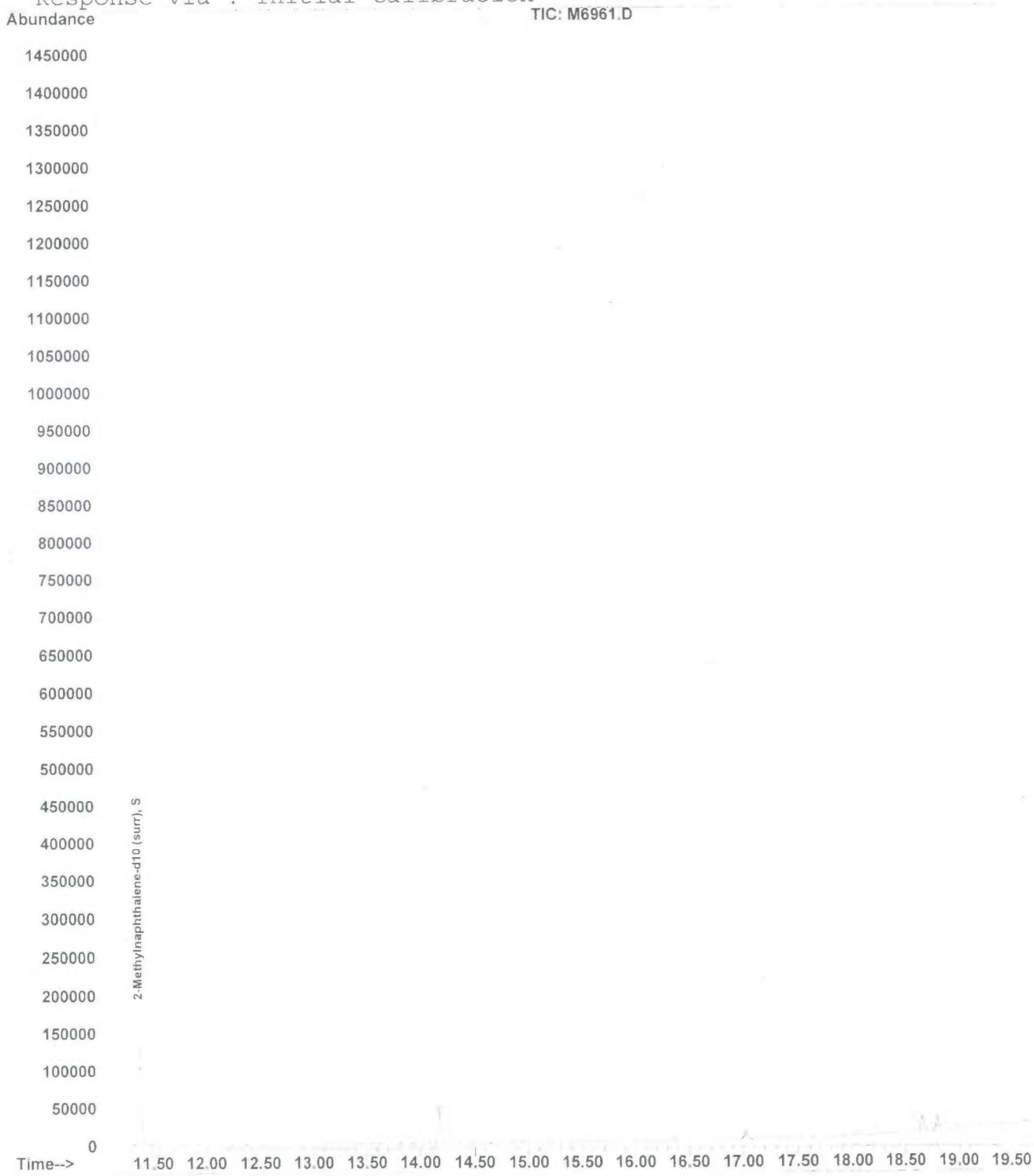
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6961.D
Acq On : 19 May 06 15:58
Sample : AI04621
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 16:18 19106

Vial: 11
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:27:34

Sample: AI04622
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/19/06 14:26 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surrog		64		20

Comment editing: Sample ID: AI04622 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:27:31

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6958.D
Acq On : 19 May 06 14:26
Sample : AI04622
Misc :
MS Integration Params: rteint.p
Quant Time: May 20 11:19 19106

Vial: 8
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0519

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.53	96	14869	0.80	ug/L	-0.03

System Monitoring Compounds

3) 2-Methylnaphthalene-d10 (s	11.37	152	154044	1.29	ug/L	-0.03

Spiked Amount 2.000 Range 20 - 150 Recovery = 64.50%

Target Compounds Qvalue

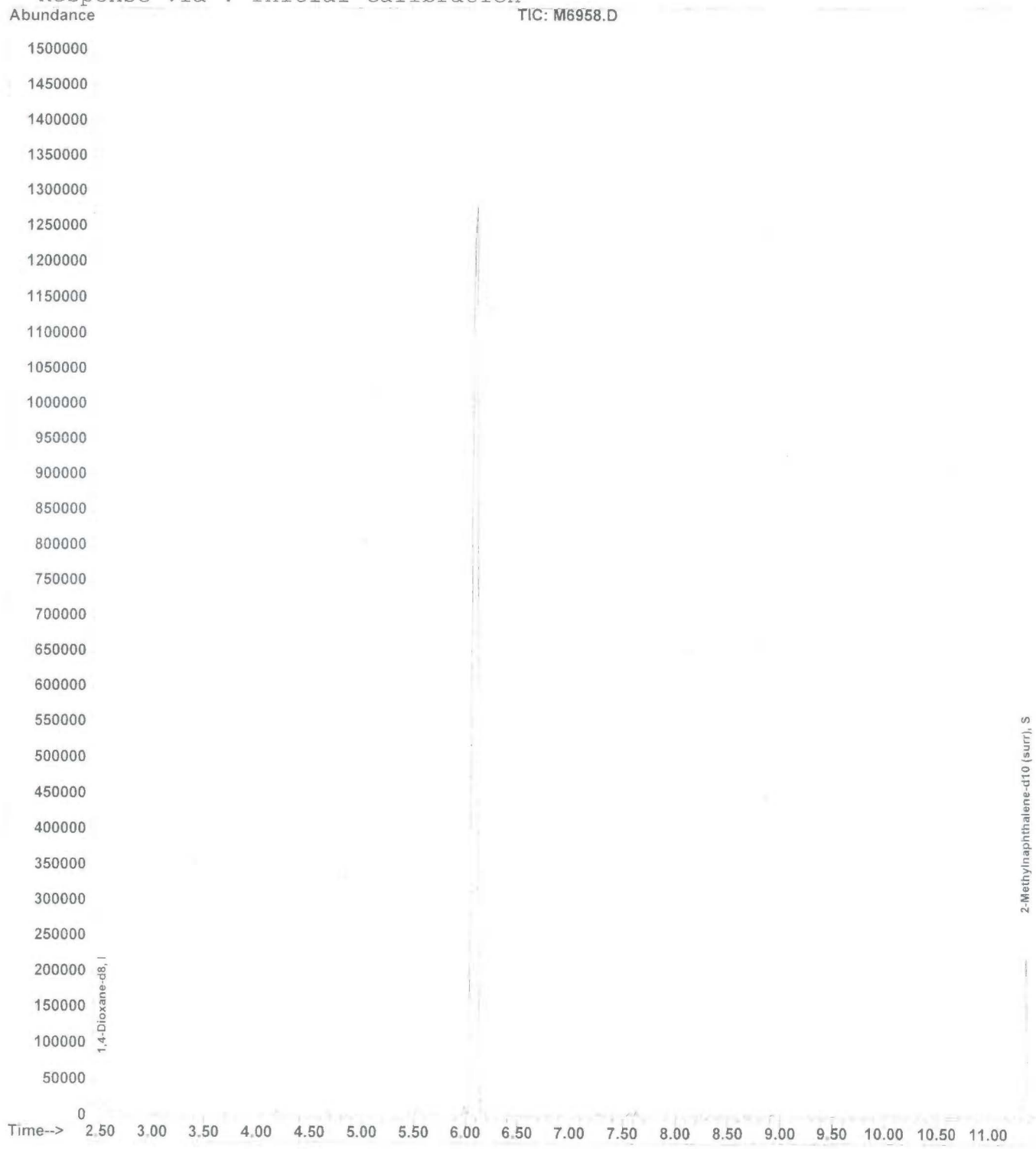
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6958.D
Acq On : 19 May 06 14:26
Sample : AI04622
Misc :
MS Integration Params: rteint.p
Quant Time: May 20 11:19 19106

Vial: 8
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



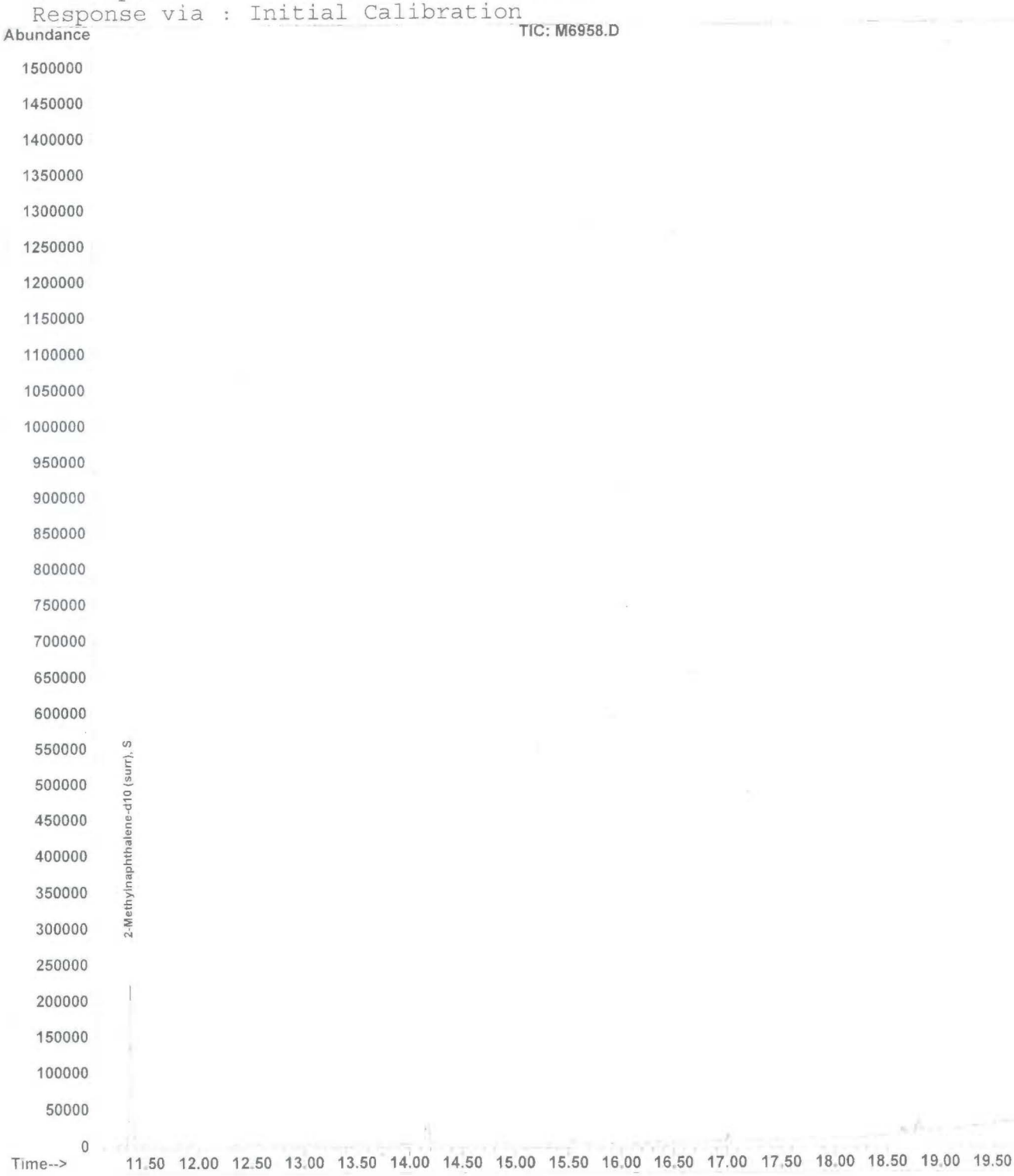
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6958.D
Acq On : 19 May 06 14:26
Sample : AI04622
Misc :
MS Integration Params: rteint.p
Quant Time: May 20 11:19 19106

Vial: 8
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:29:16

Sample: AI04623
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/19/06 14:57 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surrog		62		20

Comment editing: Sample ID: AI04623 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:29:13

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\M6959.D
Acq On : 19 May 06 14:57
Sample : AI04623
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 15:17 19106

Vial: 9
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0519

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.53	96	13971	0.80 ug/L	-0.03

System Monitoring Compounds

3) 2-Methylnaphthalene-d10 (s	11.36	152	137305	1.23 ug/L	-0.03

Spiked Amount 2.000 Range 20 - 150 Recovery = 61.50%

Target Compounds Qvalue

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

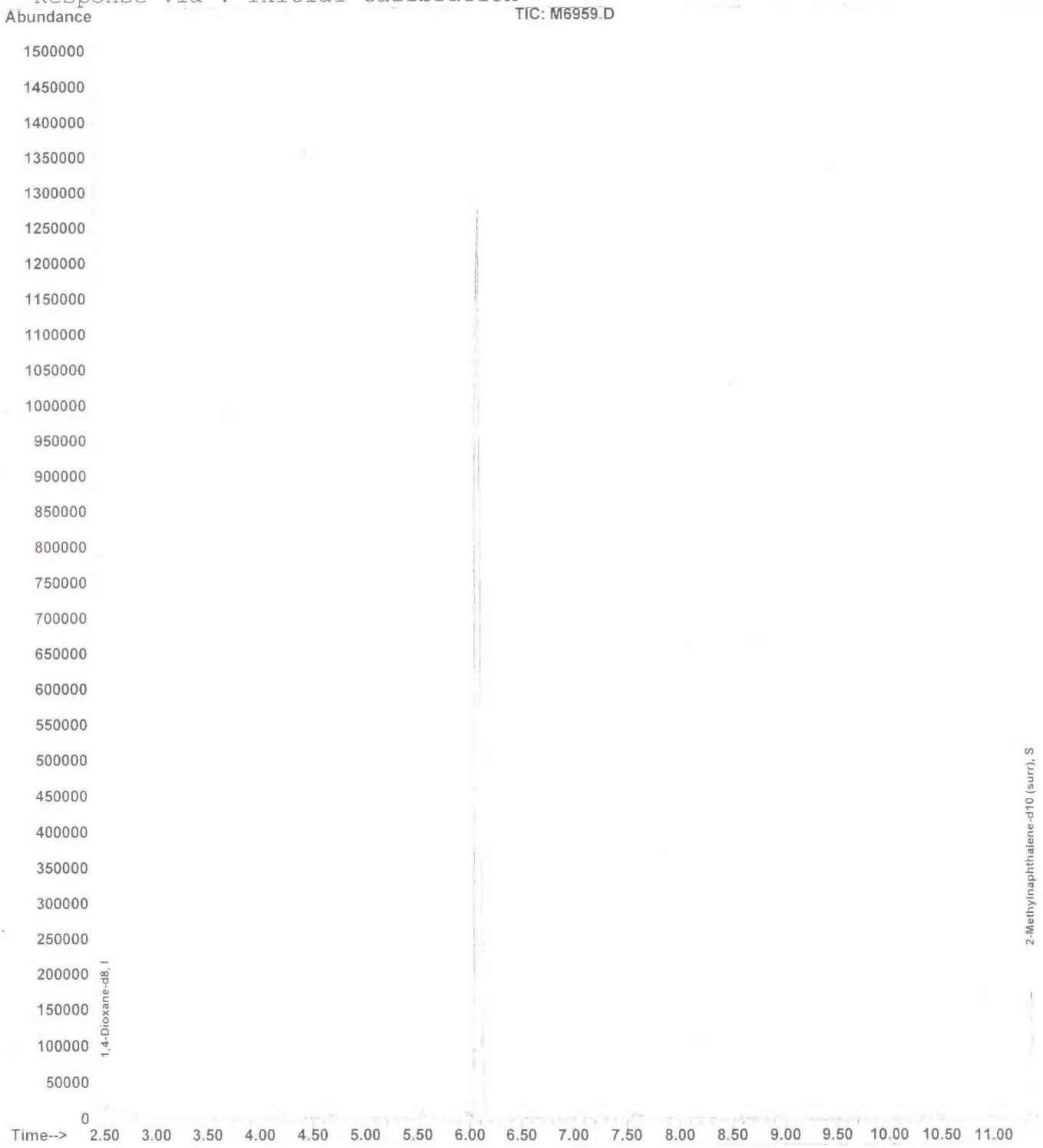
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6959.D
Acq On : 19 May 06 14:57
Sample : AI04623
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 15:17 19106

Vial: 9
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6959.D
Acq On : 19 May 06 14:57
Sample : AI04623
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 15:17 19106

Vial: 9
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:30:27

Sample: AI04624
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/19/06 00:05 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surroc		76		20

Comment editing: Sample ID: AI04624 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:30:25

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6947.D
Acq On : 19 May 06 00:05
Sample : AI04624
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:36 19106

Vial: 24
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	13952 ✓	0.80 ug/L	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.38	152	170929 ✓	1.53 ug/L	-0.02
Spiked Amount 2.000	Range	20 - 150	Recovery	= 76.50%	

Target Compounds Qvalue

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

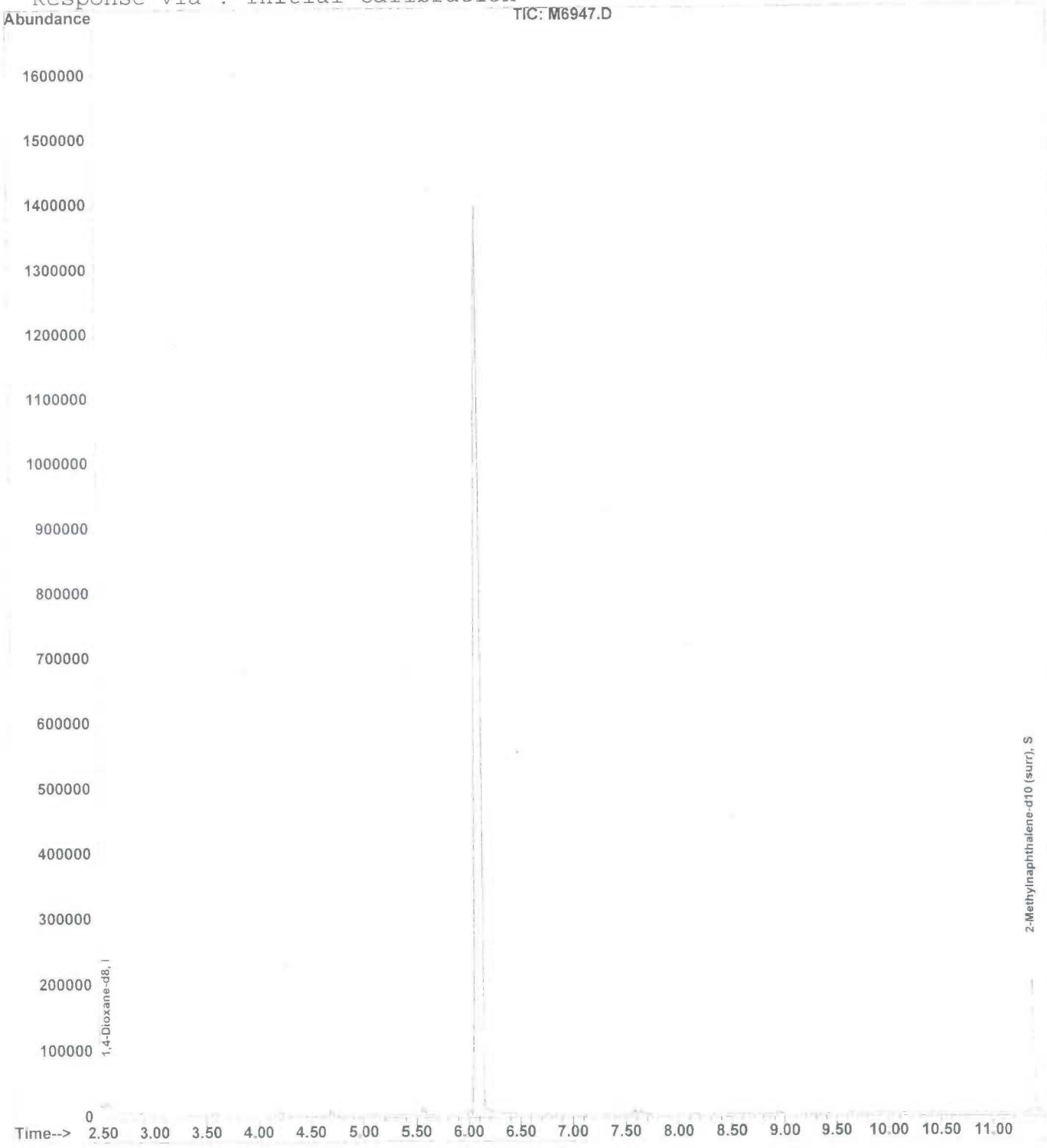
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6947.D
Acq On : 19 May 06 00:05
Sample : AI04624
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:36 19106

Vial: 24
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6947.D
Acq On : 19 May 06 00:05
Sample : AI04624
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:36 19106

Vial: 24
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:31:10

Sample: AI04625
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/19/06 00:37 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surrog		68		20

Comment editing: Sample ID: AI04625 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:31:08

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6948.D
Acq On : 19 May 06 00:37
Sample : AI04625
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 13:35 19106

Vial: 25
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.54	96	15513m JJC 05/2006	0.80	ug/L	-0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10 (s	11.38	152	169887	1.37	ug/L	-0.02
Spiked Amount 2.000	Range	20 - 150	Recovery	=	68.50%	

Target Compounds Qvalue

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

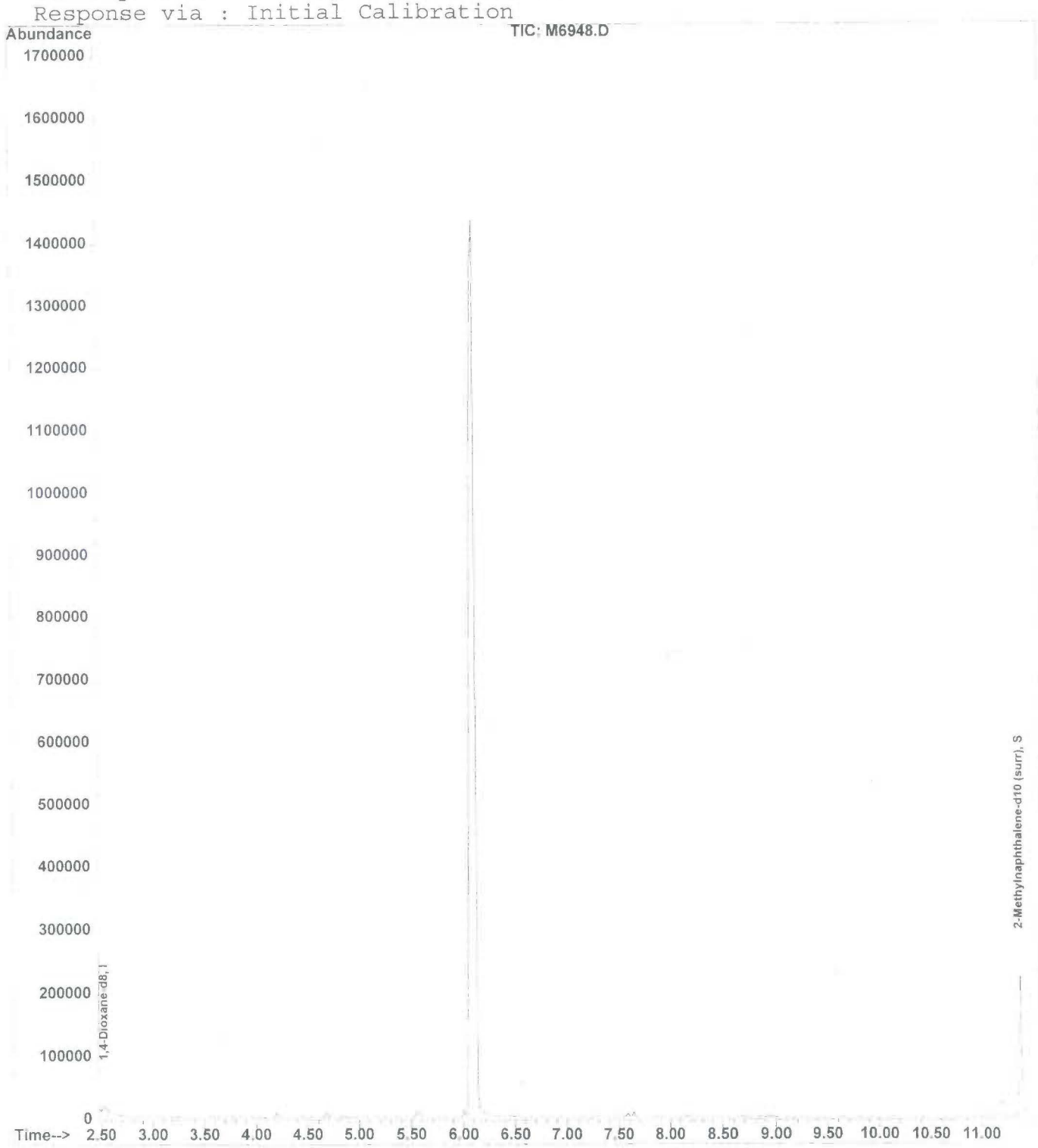
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6948.D
Acq On : 19 May 06 00:37
Sample : AI04625
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 13:35 19106

Vial: 25
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



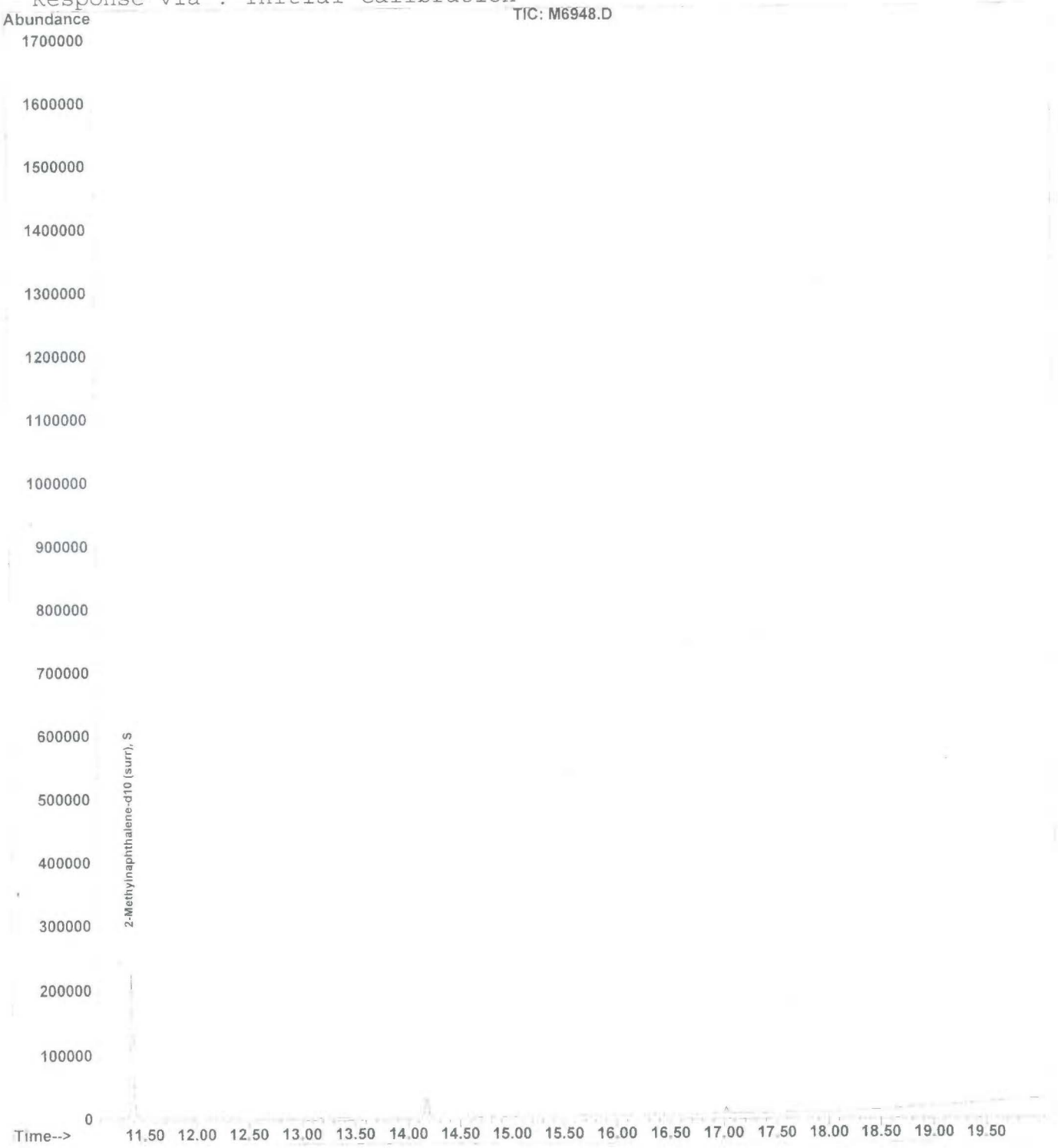
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6948.D
Acq On : 19 May 06 00:37
Sample : AI04625
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 13:35 19106

Vial: 25
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

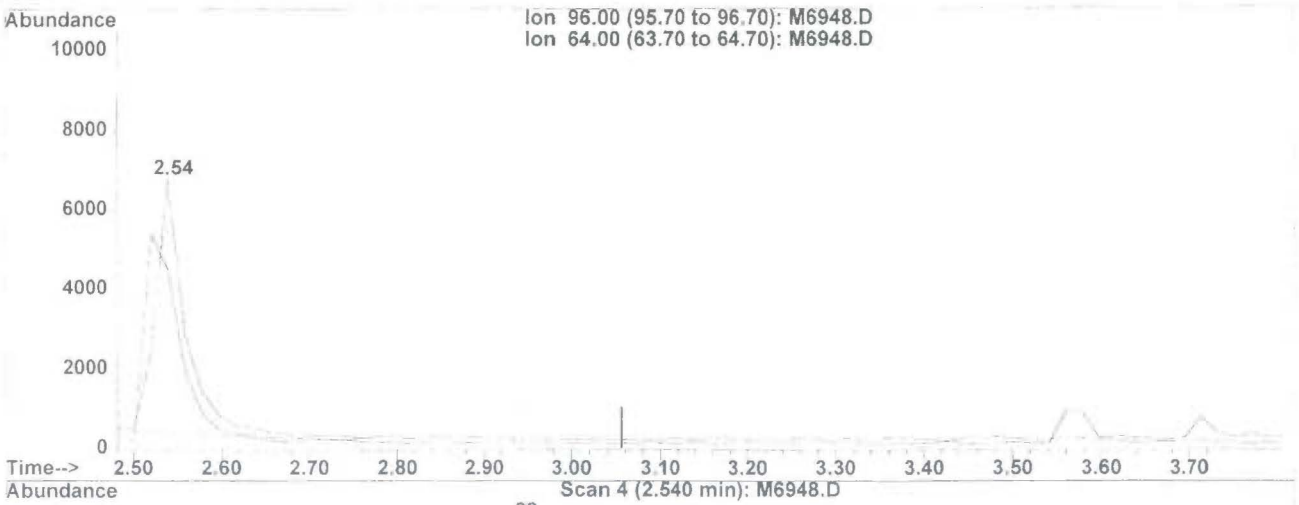


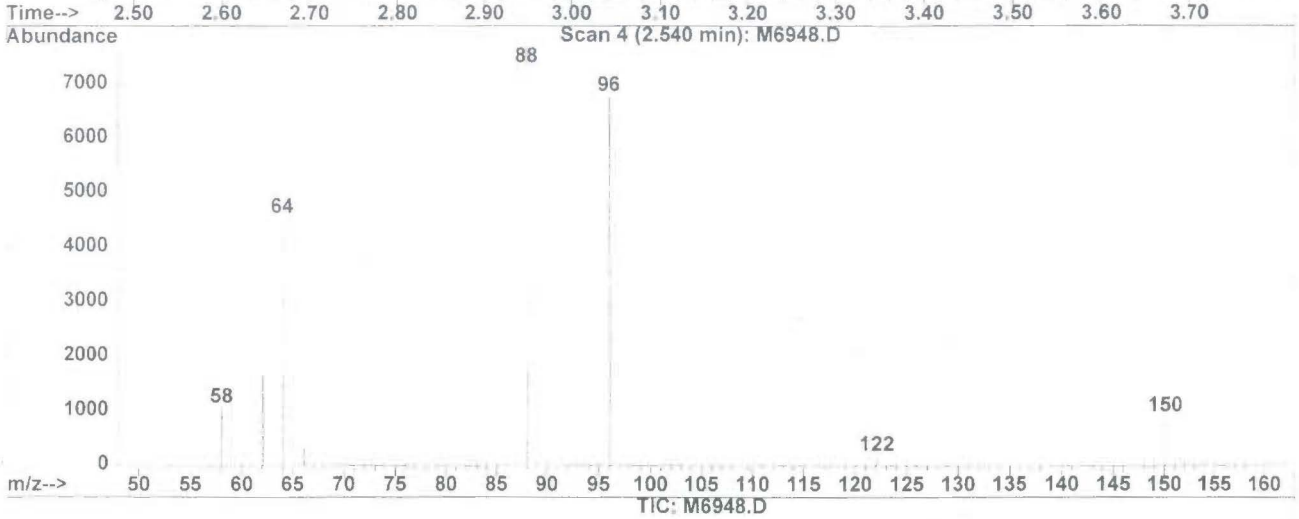
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6948.D
Acq On : 19 May 06 00:37
Sample : AI04625
Misc :
Quant Time: May 19 13:35 19106

Vial: 25
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration





(1) 1,4-Dioxane-d8 (I)

2.54min 0.80ug/L m

response 15513

Ion	Exp%	Act%
96.00	100	100
64.00	90.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

after .99
052006

User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:31:58

Sample: AI04626
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/19/06 01:07 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surrog		71		20

Comment editing: Sample ID: AI04626 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:31:54

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\M6949.D
Acq On : 19 May 06 1:07
Sample : AI04626
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:36 19106

Vial: 1
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	15466	0.80 ug/L	0.00

System Monitoring Compounds

3) 2-Methylnaphthalene-d10 (s	11.38	152	175203	1.42 ug/L	-0.02

Spiked Amount 2.000 Range 20 - 150 Recovery = 71.00%

Target Compounds Qvalue

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

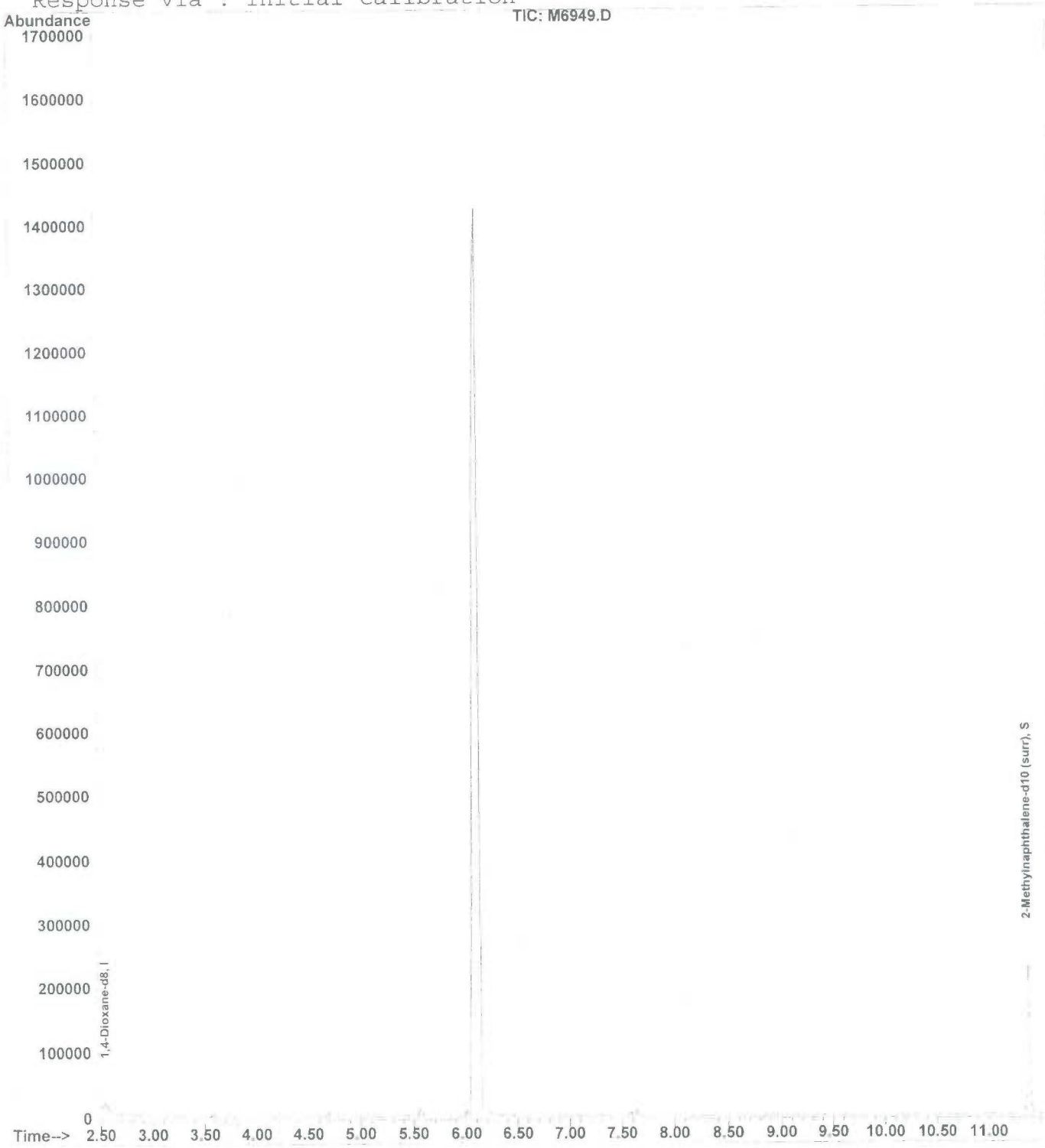
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6949.D
Acq On : 19 May 06 1:07
Sample : AI04626
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:36 19106

Vial: 1
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



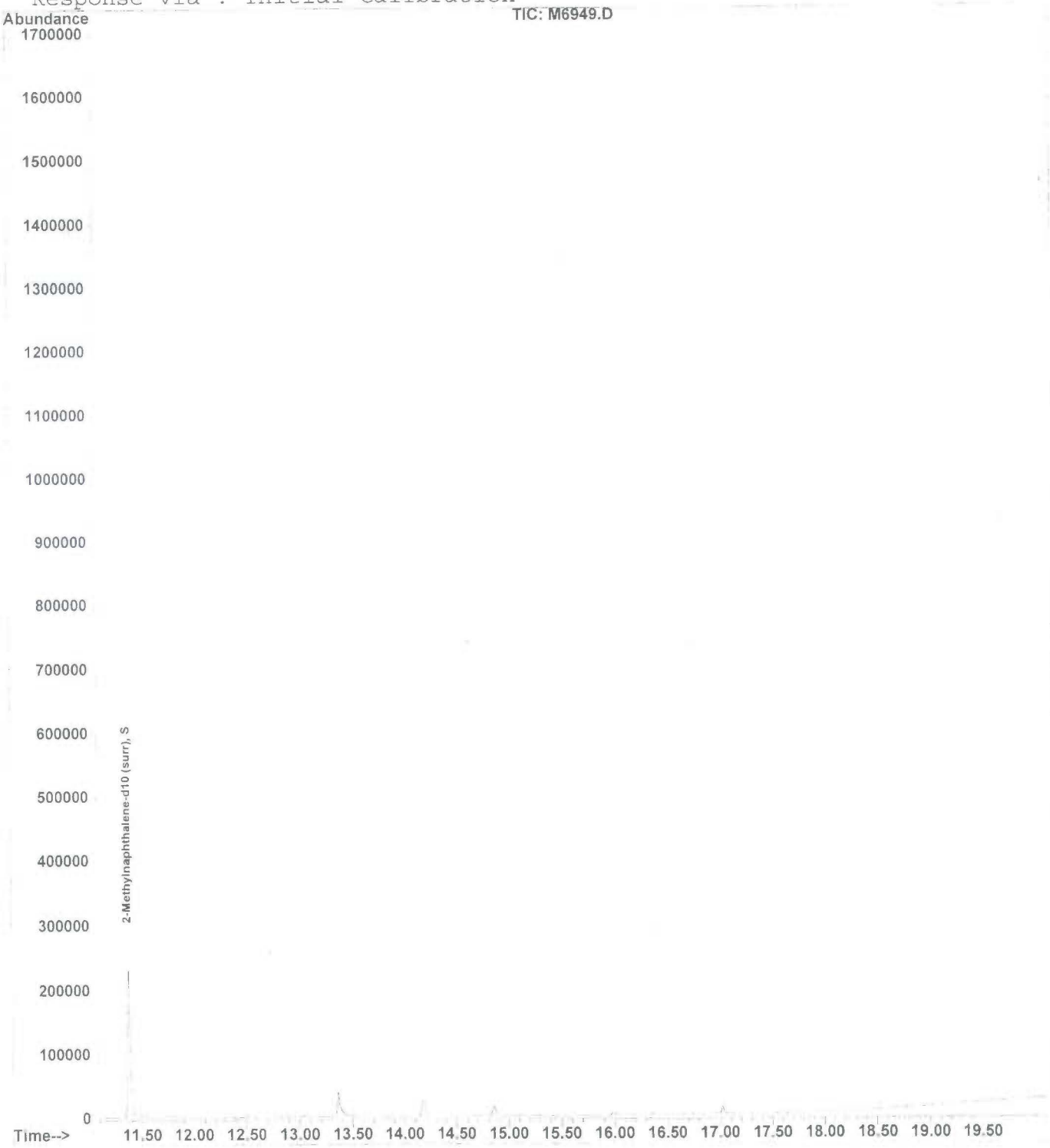
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6949.D
Acq On : 19 May 06 1:07
Sample : AI04626
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:36 19106

Vial: 1
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:32:44

Sample: AI04627
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/19/06 01:38 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surroq		59		20

Comment editing: Sample ID: AI04627 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:32:43

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\M6950.D
Acq On : 19 May 06 1:38
Sample : AI04627
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:37 19106

Vial: 2
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	14588	0.80 ug/L	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.37	152	137443	1.18 ug/L	-0.02
Spiked Amount 2.000	Range 20 - 150		Recovery	= 59.00%	

Target Compounds Qvalue

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

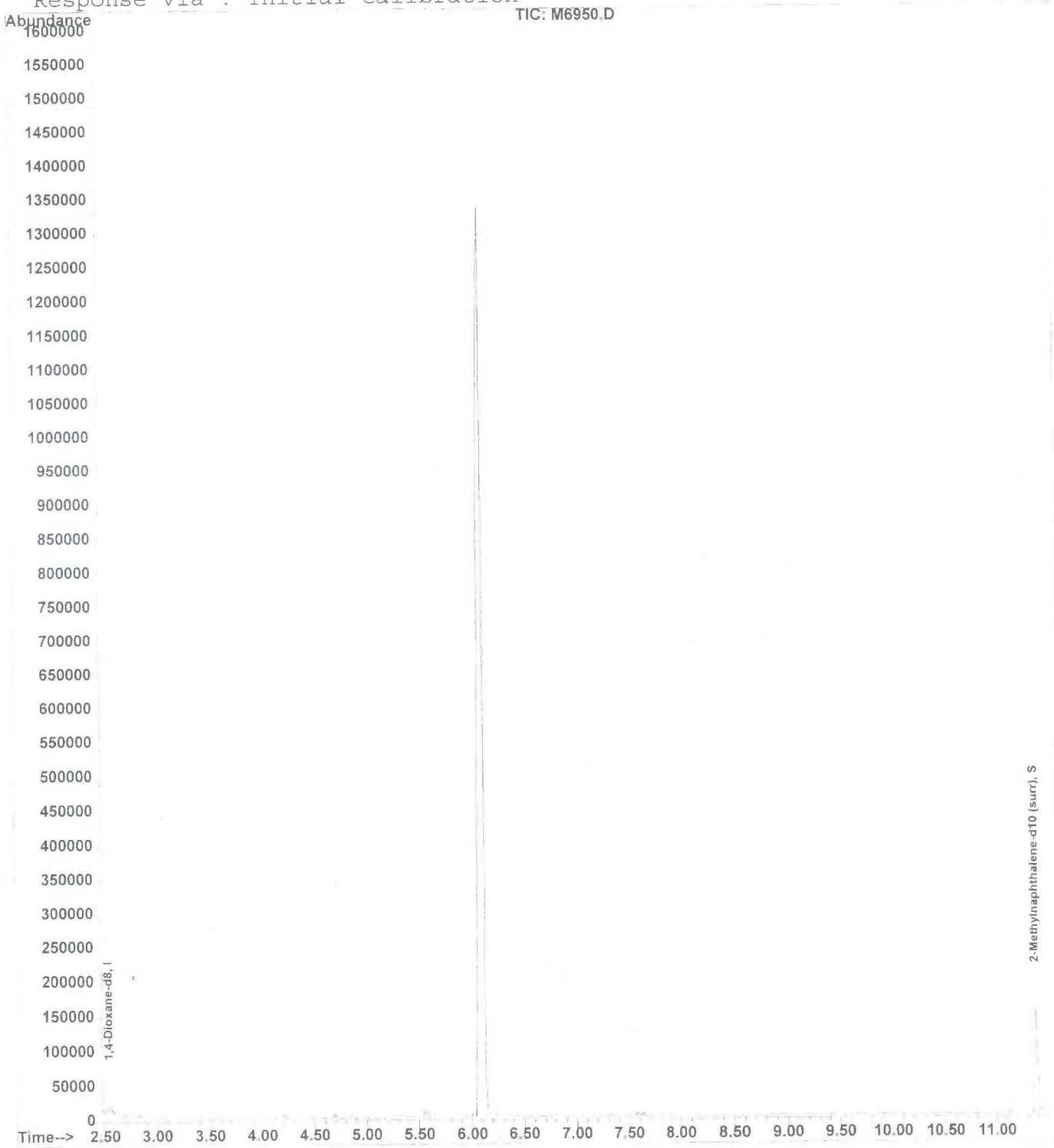
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6950.D
Acq On : 19 May 06 1:38
Sample : AI04627
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:37 19106

Vial: 2
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

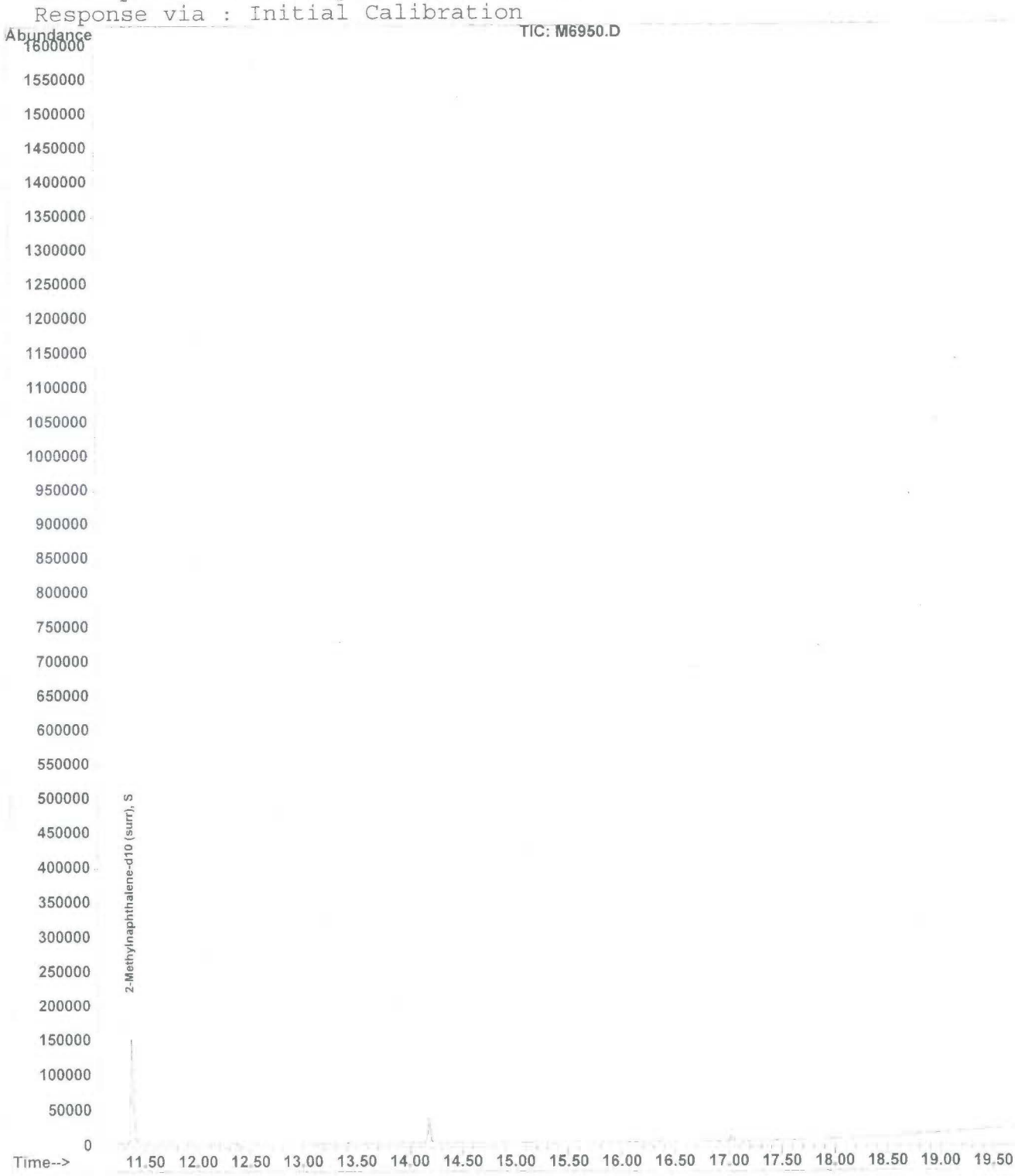


Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6950.D
Acq On : 19 May 06 1:38
Sample : AI04627
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:37 19106

Vial: 2
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



User: Galasyn, James
Northeast Laboratory Services
Date: 05/21/06 Time: 09:33:35

Sample: AI04628
Analysis: $8270DIO Semi Volatile Organics 1 4 Dioxane-SIM
Units: ug
Started: 5/17/06 08:00 Ended: 5/19/06 12:54 Analyst: JJC
Page: 1

	Component Name	Viol	Result	Qualifier	MDL
1	1,4 Dioxane		2.0	U	2.0
2	2-Methylnaphthalene-d10 (surrog		58		20

Comment editing: Sample ID: AI04628 Analysis: $8270DIO

Northeast Laboratory Services
User: Galasyn, James
Date: 05-21-2006 Time: 09:33:33

The "U" qualifier indicates the compound was analyzed for but not detected.

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\M6955.D
Acq On : 19 May 06 12:54
Sample : AI04628
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 13:14 19106

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0519.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0519

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.52	96	13629	0.80 ug/L	-0.03
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.36	152	125861	1.15 ug/L	-0.03
Spiked Amount 2.000	Range 20 - 150		Recovery	= 57.50%	

Target Compounds Qvalue

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

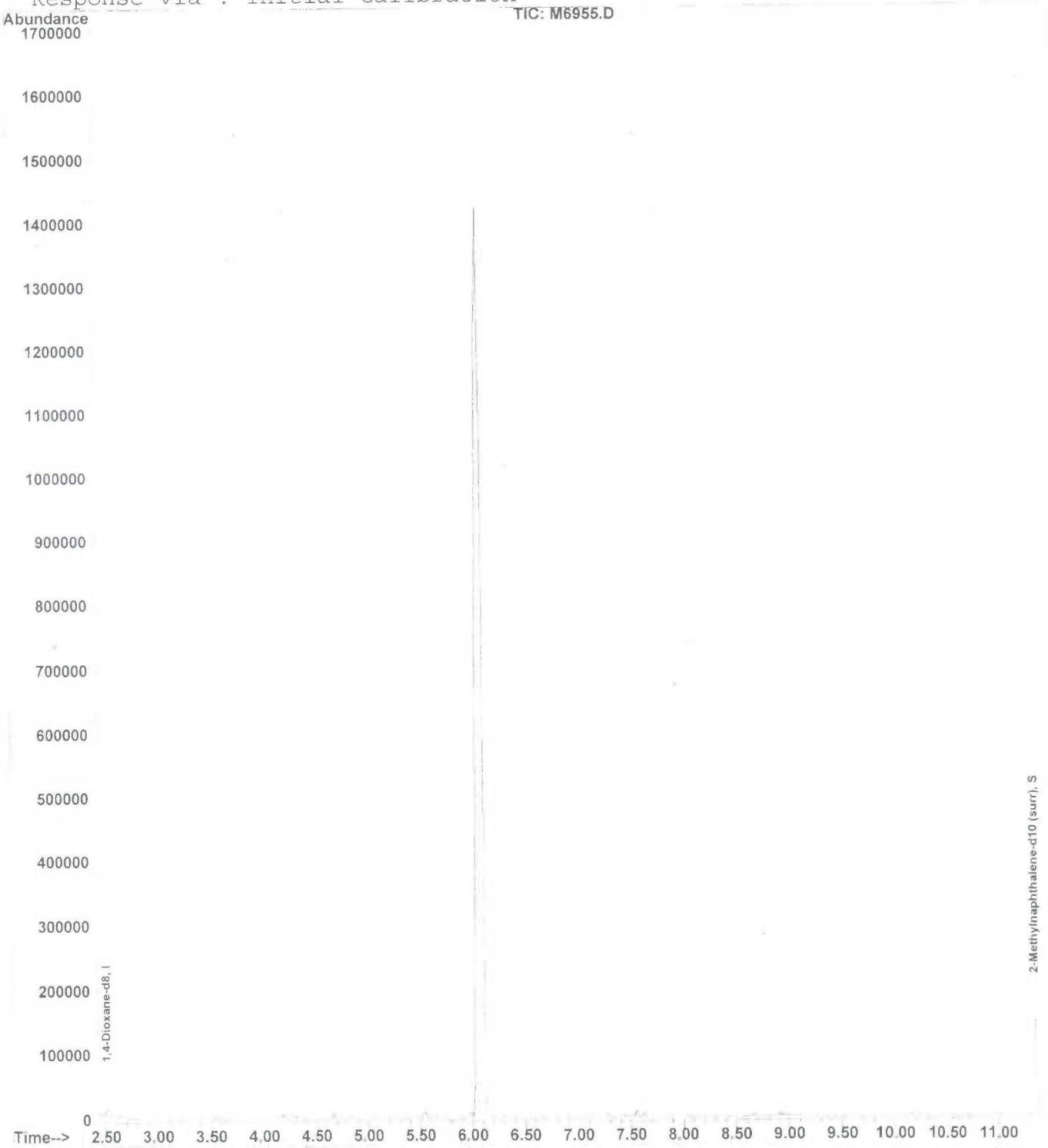
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6955.D
Acq On : 19 May 06 12:54
Sample : AI04628
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 13:14 19106

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



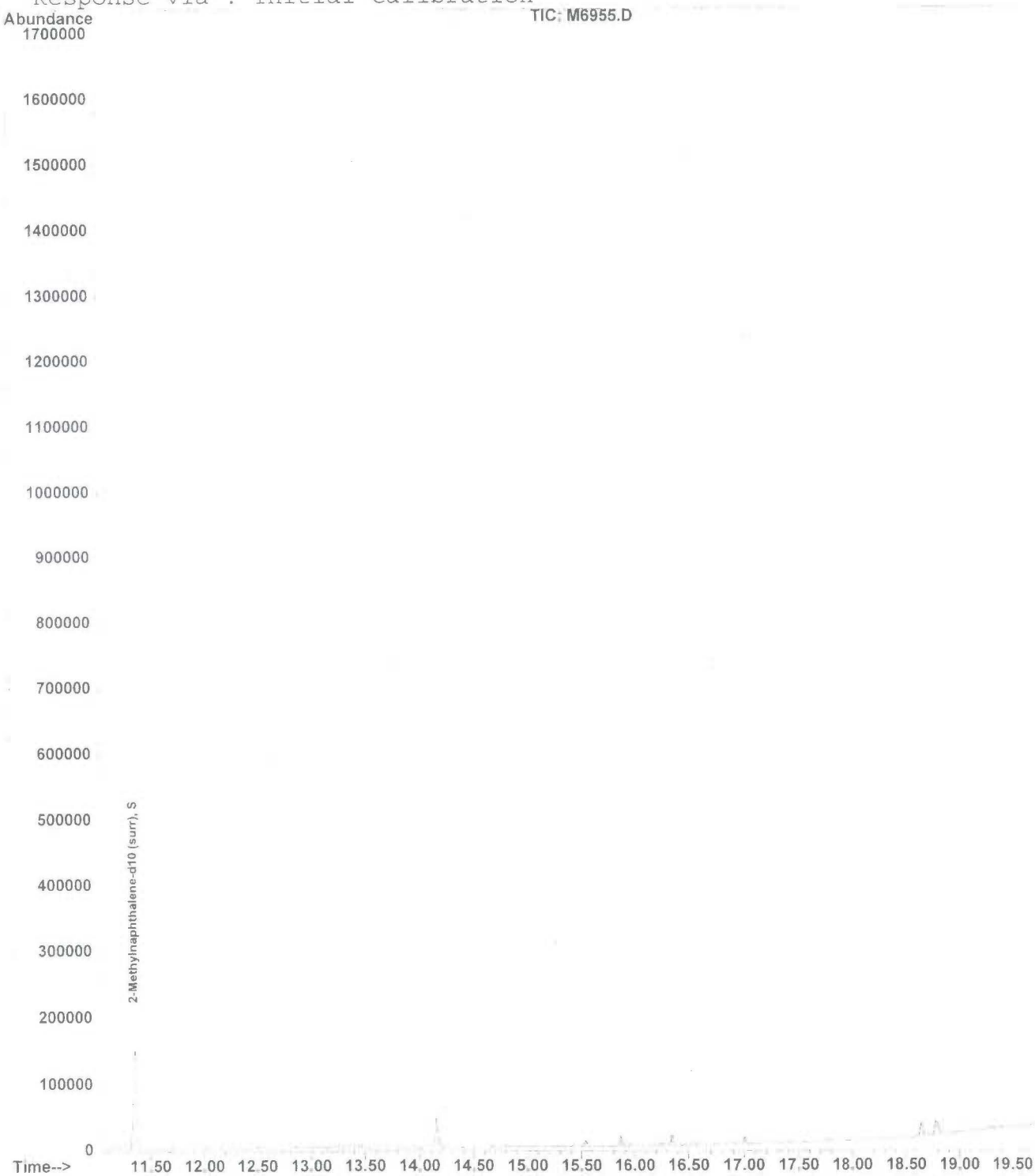
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6955.D
Acq On : 19 May 06 12:54
Sample : AI04628
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 13:14 19106

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6929.D
Acq On : 18 May 06 15:05
Sample : SSTD0.125
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 16:20 19106

Vial: 6
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Fri Jan 06 09:01:47 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	16788	0.80 ug/L	-0.28
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.39	152	14569	0.16 ug/L	-0.28
Spiked Amount 2.000	Range 20 - 150		Recovery =	8.00%#	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.59	88	1802m	0.05 ug/L	0

MC 05 2006

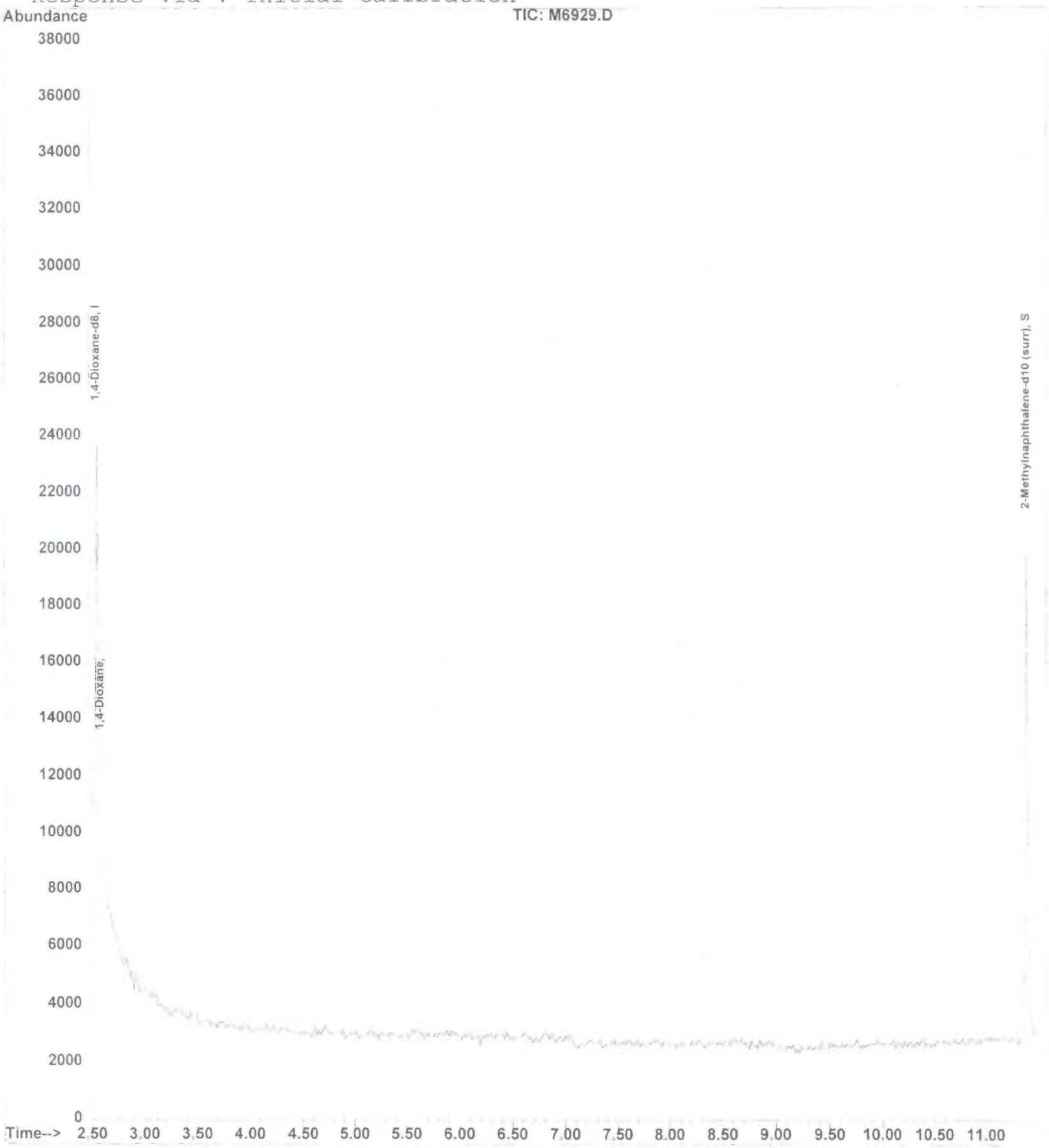
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6929.D
Acq On : 18 May 06 15:05
Sample : SSTD0.125
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 16:20 19106

Vial: 6
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

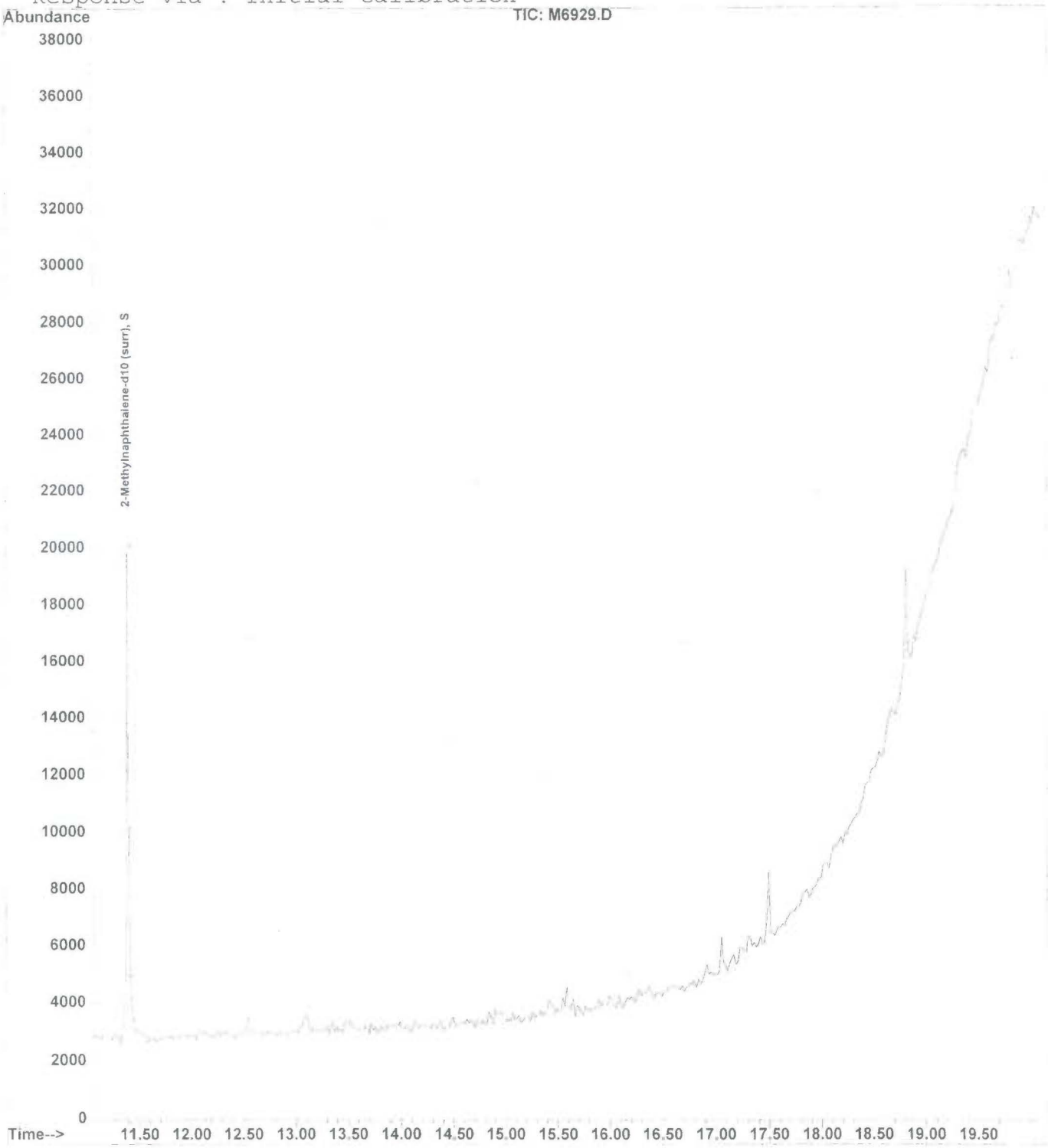


Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6929.D
Acq On : 18 May 06 15:05
Sample : SSTD0.125
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 16:20 19106

Vial: 6
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

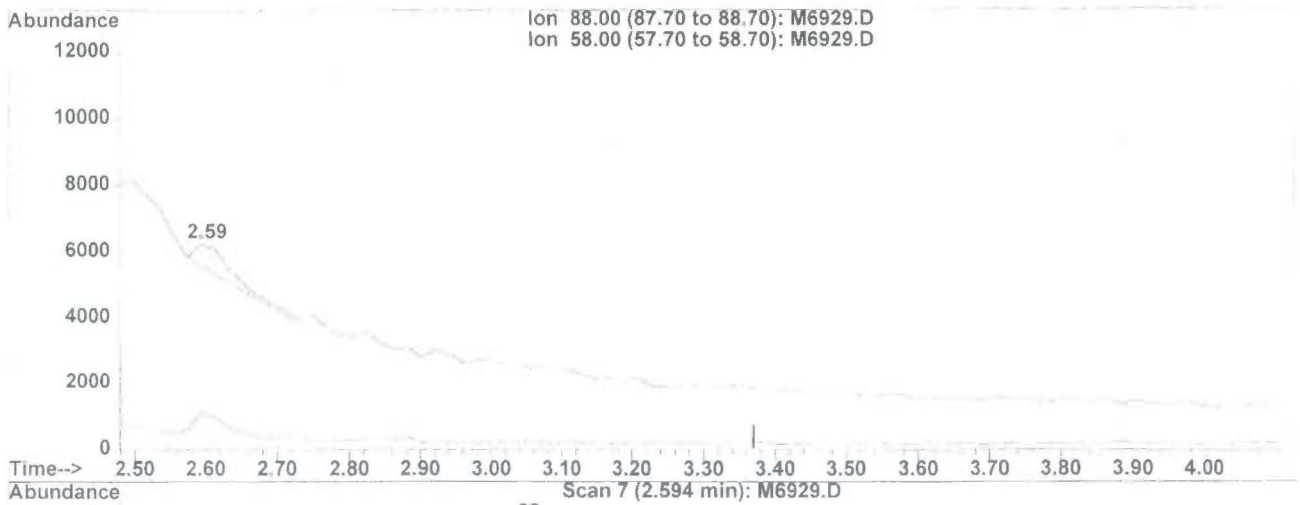


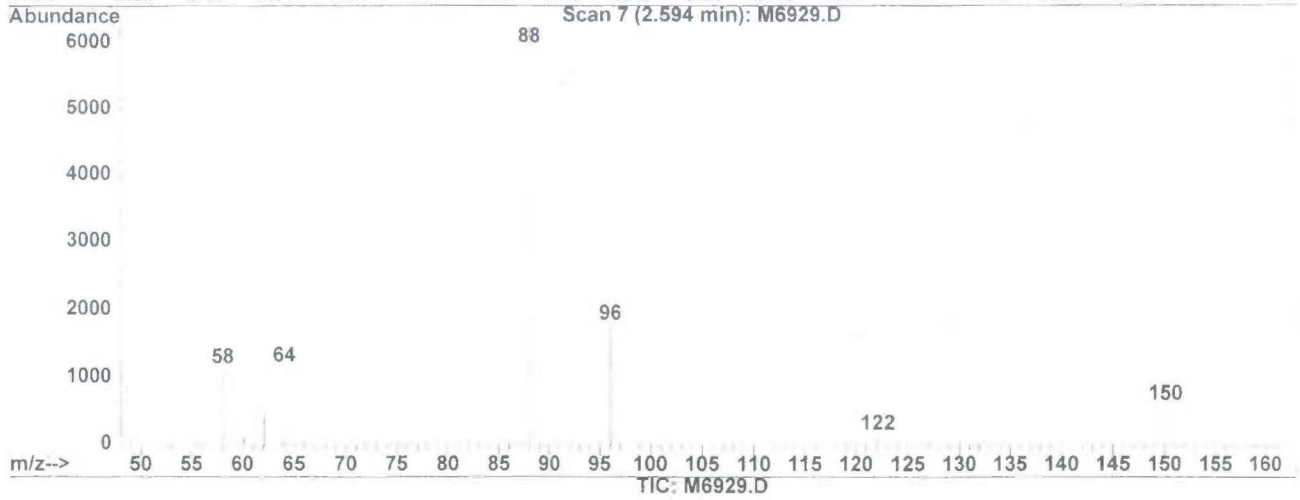
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6929.D
Acq On : 18 May 06 15:05
Sample : SSTD0.125
Misc :
Quant Time: May 18 16:20 19106

Vial: 6
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration





(2) 1,4-Dioxane

2.59min 0.05ug/L m

response 1802

Ion	Exp%	Act%
88.00	100	100
58.00	90.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

after-99C 052006

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6930.D
Acq On : 18 May 06 15:35
Sample : SSTD0.625
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 16:21 19106

Vial: 7
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Fri Jan 06 09:01:47 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	11822	0.80 ug/L	-0.27
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.40	152	57343	0.88 ug/L	-0.27
Spiked Amount 2.000	Range 20 - 150		Recovery = 44.00%		
Target Compounds					Qvalue
2) 1,4-Dioxane	2.60	88	10407m	0.44 ug/L	18

MC 052006

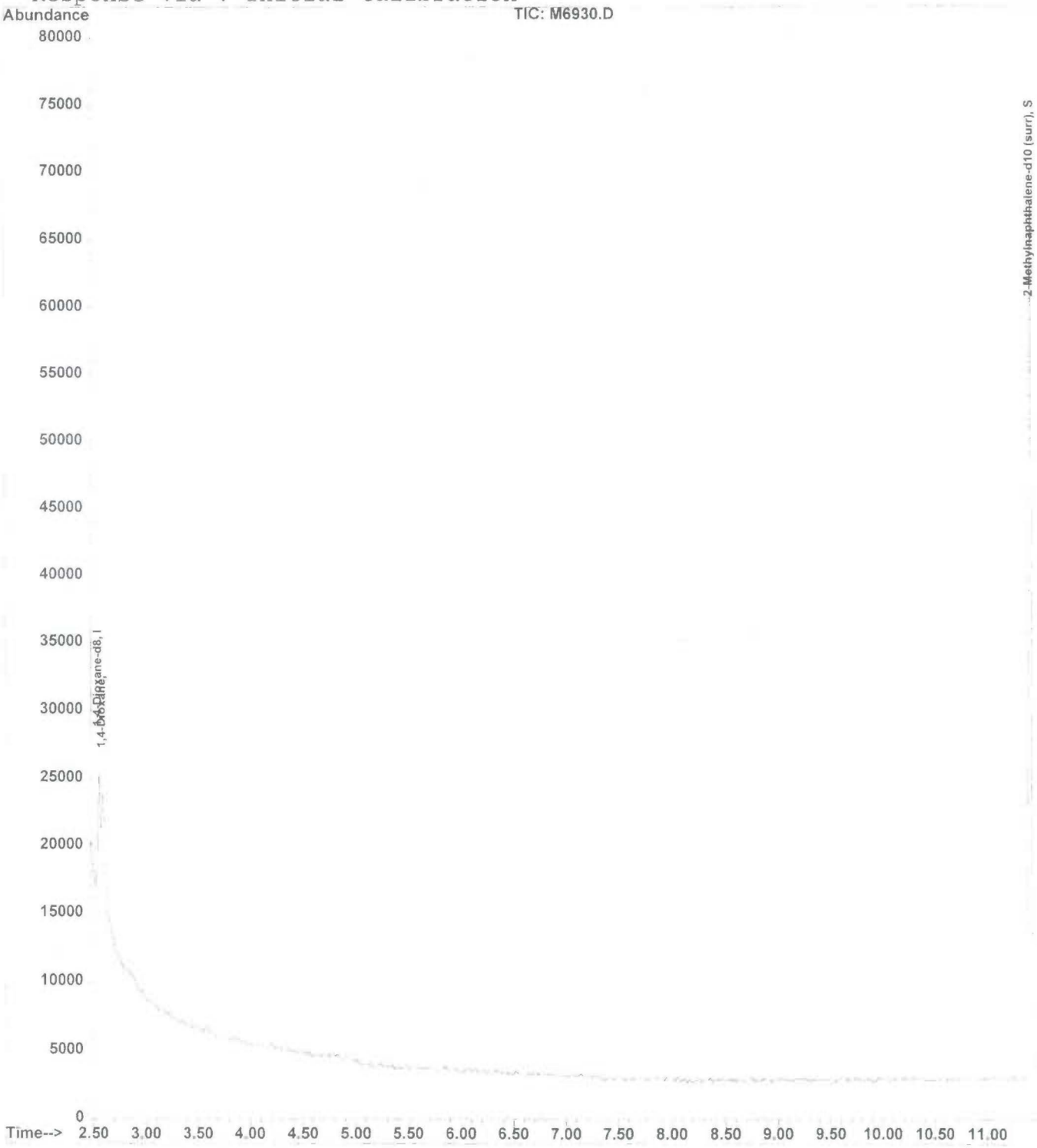
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6930.D
Acq On : 18 May 06 15:35
Sample : SSTD0.625
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 16:21 19106

Vial: 7
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

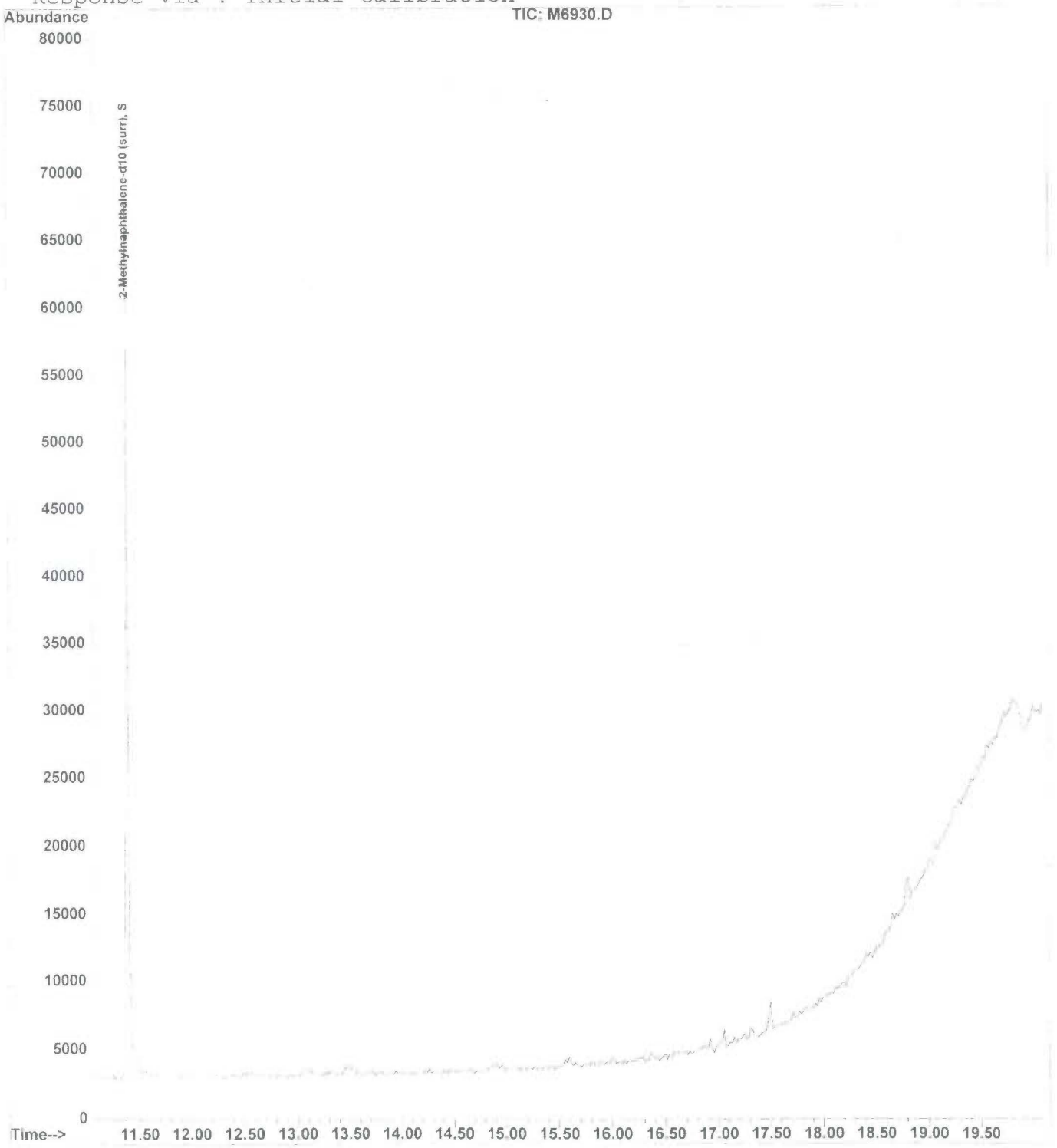


Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6930.D
Acq On : 18 May 06 15:35
Sample : SSTD0.625
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 16:21 19106

Vial: 7
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

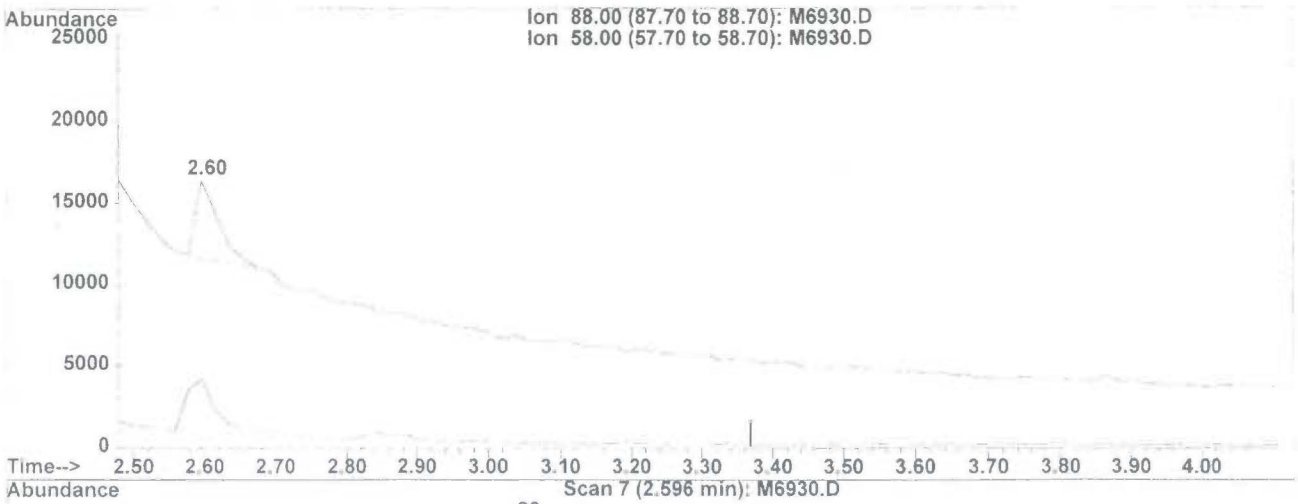


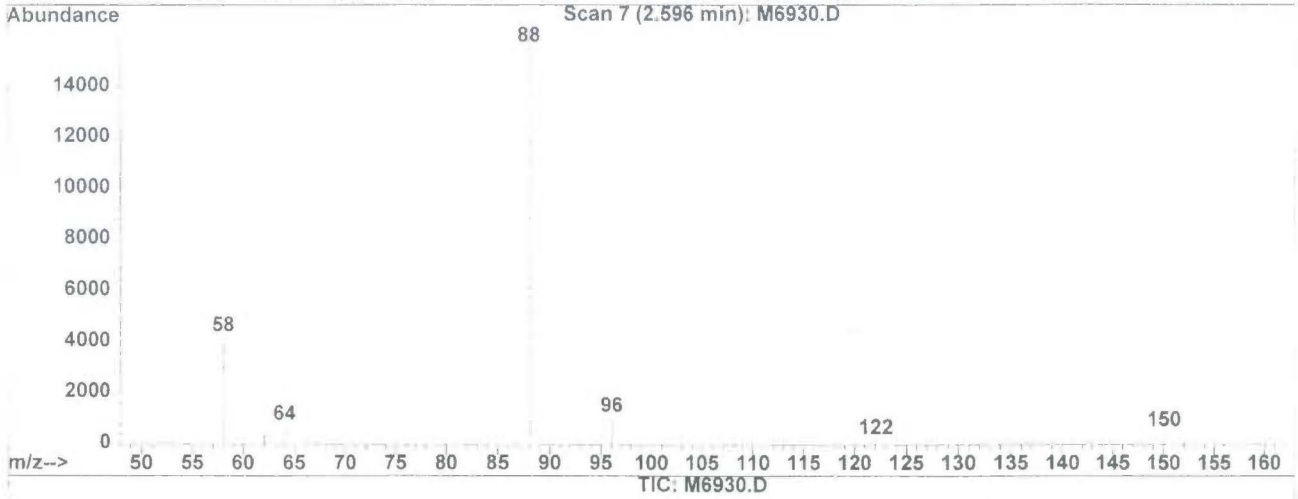
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6930.D
Acq On : 18 May 06 15:35
Sample : SSTD0.625
Misc :
Quant Time: May 18 16:21 19106

Vial: 7
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration





(2) 1,4-Dioxane

2.60min 0.44ug/L m

response 10407

Ion	Exp%	Act%
88.00	100	100
58.00	90.00	136.33
0.00	0.00	0.00
0.00	0.00	0.00

after - JJC 05/2006

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6928.D
Acq On : 18 May 06 14:30
Sample : SSTD1.25
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 14:56 19106

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Fri Jan 06 09:01:47 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	11213	0.80 ug/L	-0.27
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.40	152	104341	1.68 ug/L	-0.27
Spiked Amount 2.000	Range 20 - 150		Recovery =	84.00%	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.58	88	13925m 05 2006	0.62 ug/L	26

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

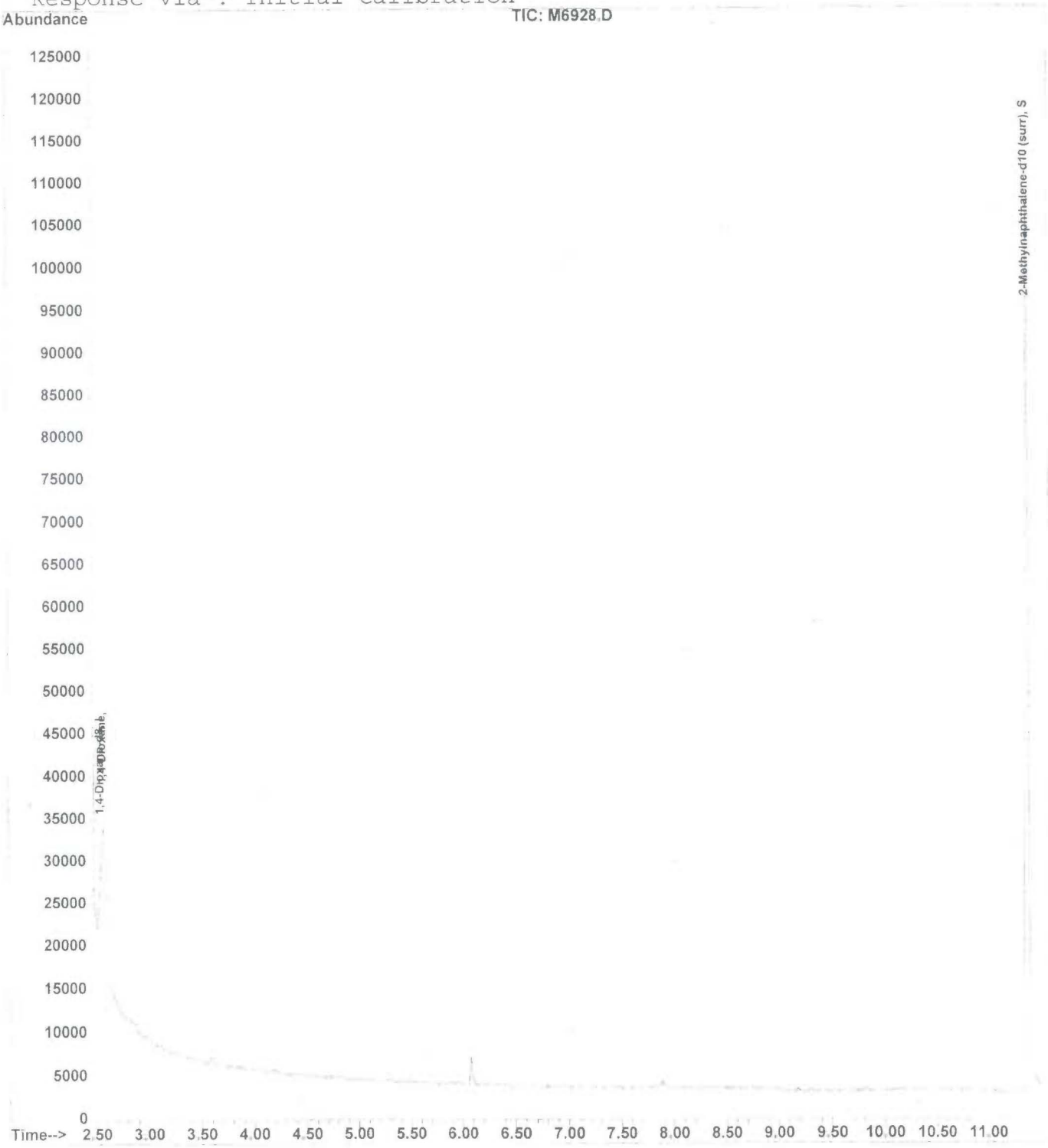
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6928.D
Acq On : 18 May 06 14:30
Sample : SSTD1.25
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 14:56 19106

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



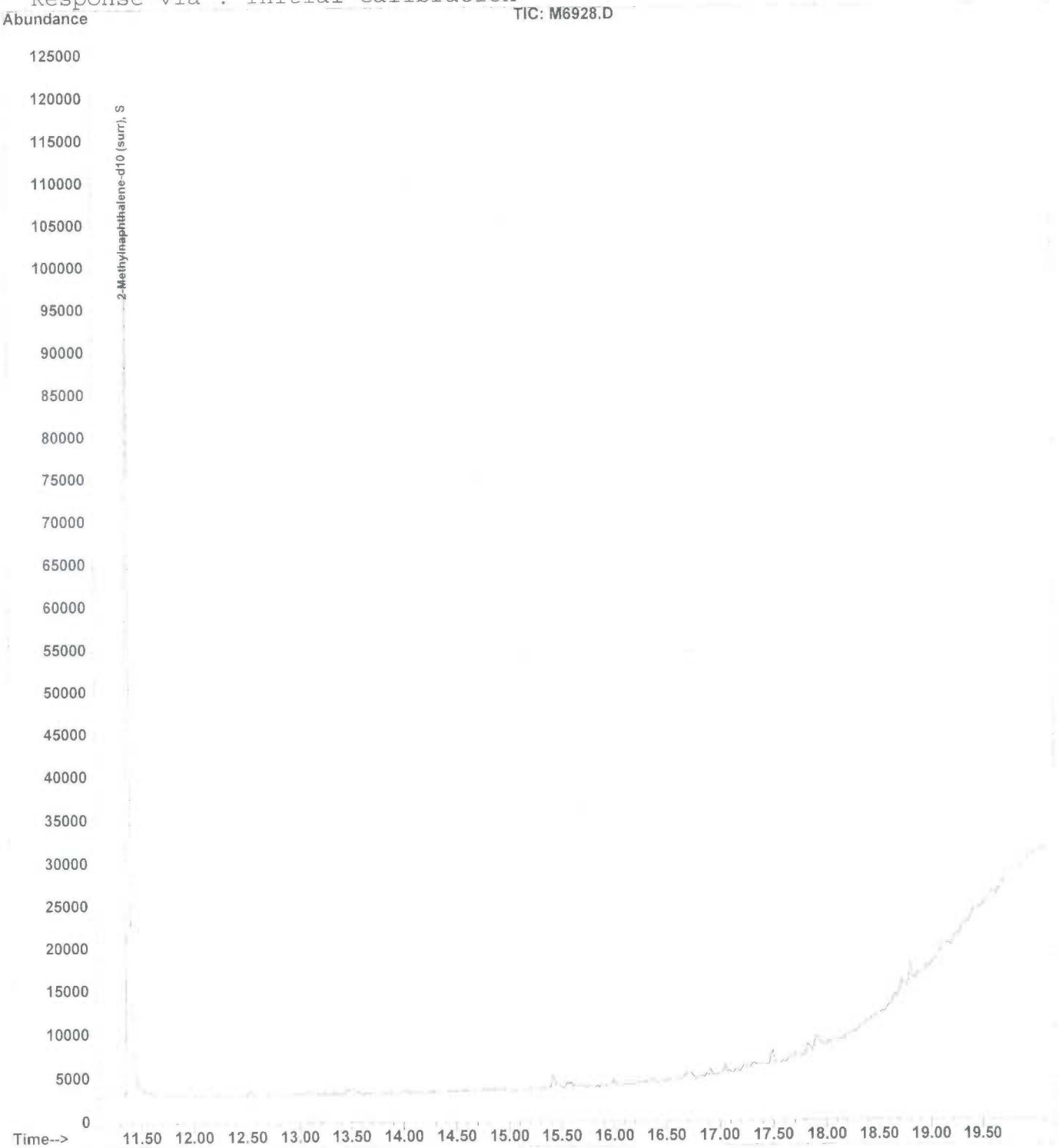
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6928.D
Acq On : 18 May 06 14:30
Sample : SSTD1.25
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 14:56 19106

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

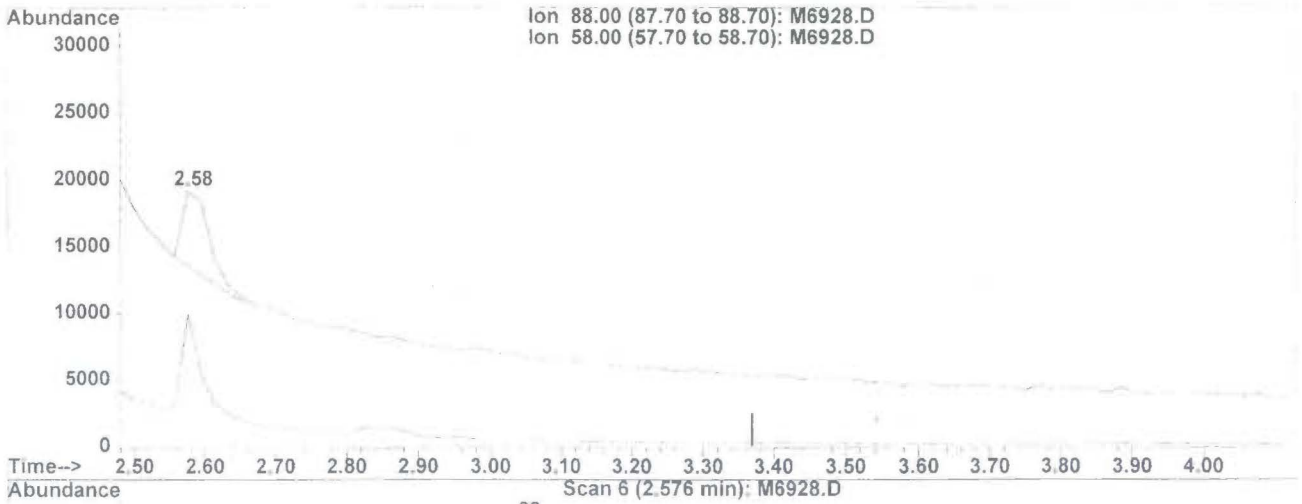


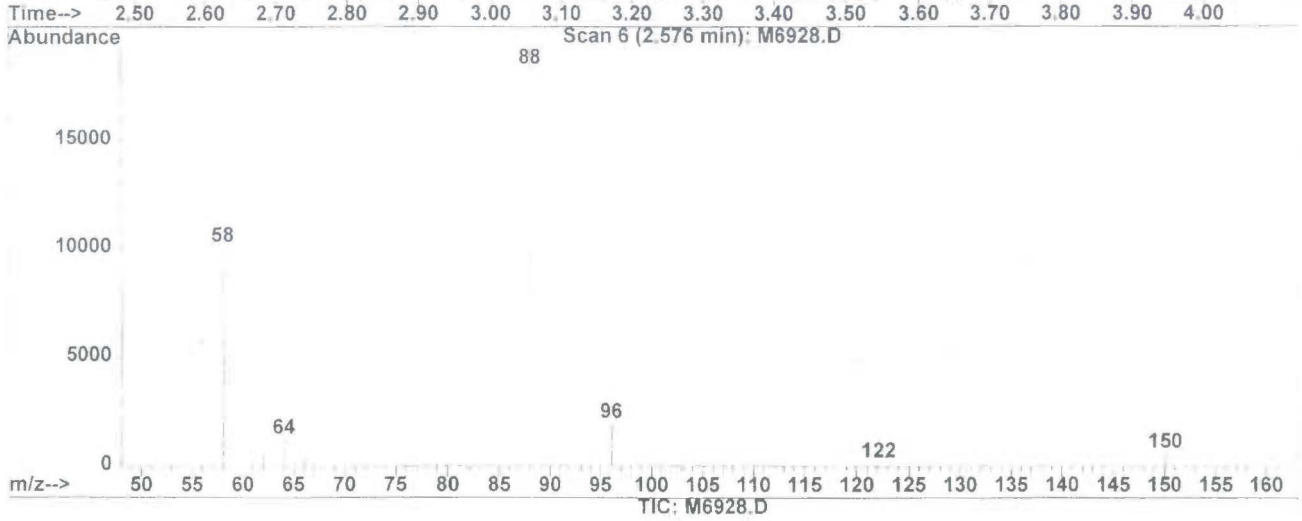
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6928.D
Acq On : 18 May 06 14:30
Sample : SSTD1.25
Misc :
Quant Time: May 18 14:56 19106

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration





(2) 1,4-Dioxane

2.58min 0.62ug/L m

response 13925

Ion	Exp%	Act%
88.00	100	100
58.00	90.00	179.27#
0.00	0.00	0.00
0.00	0.00	0.00

after - 99P
052006

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6931.D
Acq On : 18 May 06 16:05
Sample : SSTD2.00
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 16:32 19106

Vial: 8
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	10074	0.80 ug/L	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.39	152	168234	2.26 ug/L	0.00
Spiked Amount 2.000	Range 20 - 150		Recovery	= 113.00%	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.58	88	22418m	2.05 ug/L	70

MC 05/2006

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

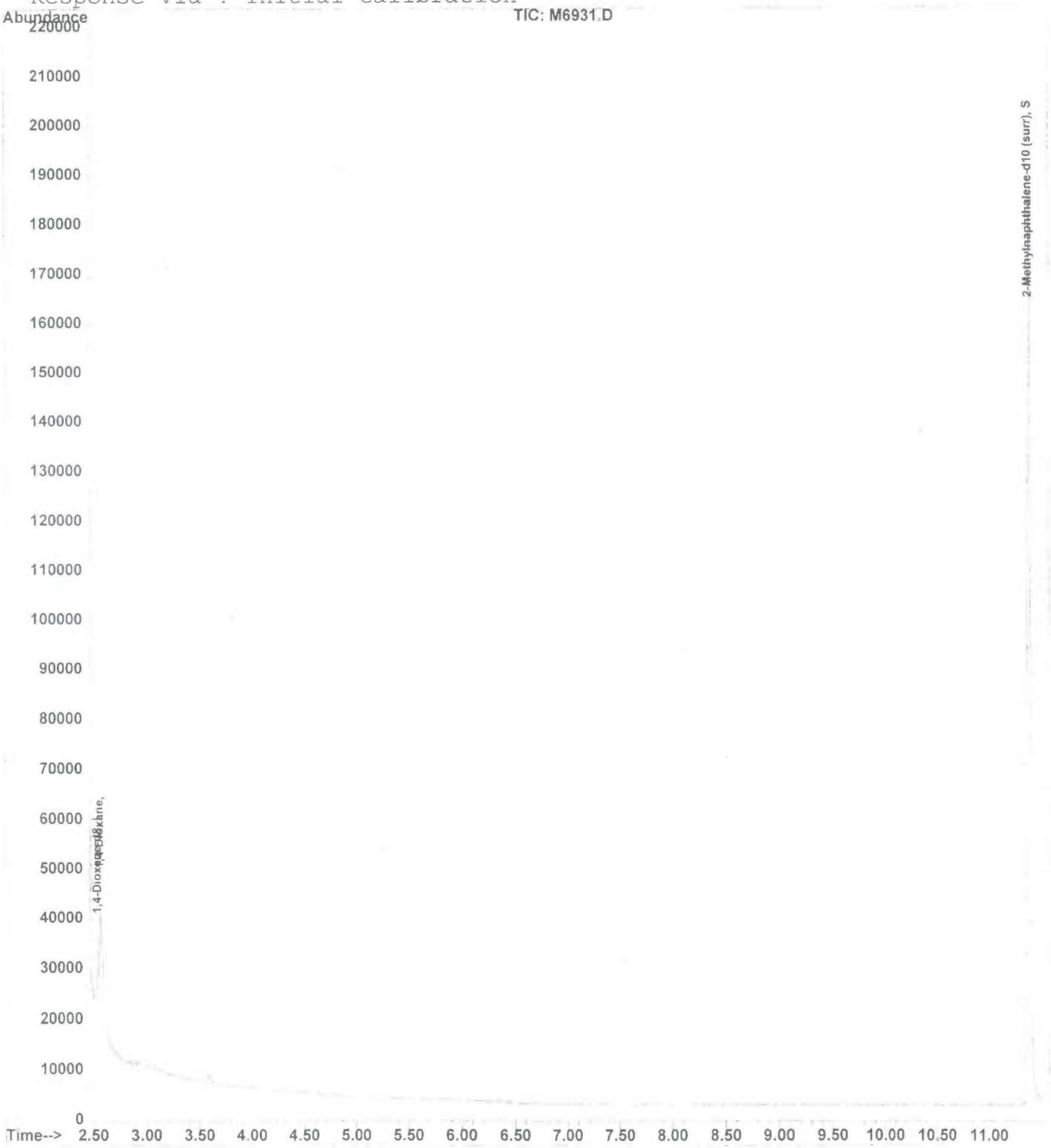
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6931.D
Acq On : 18 May 06 16:05
Sample : SSTD2.00
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 16:32 19106

Vial: 8
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



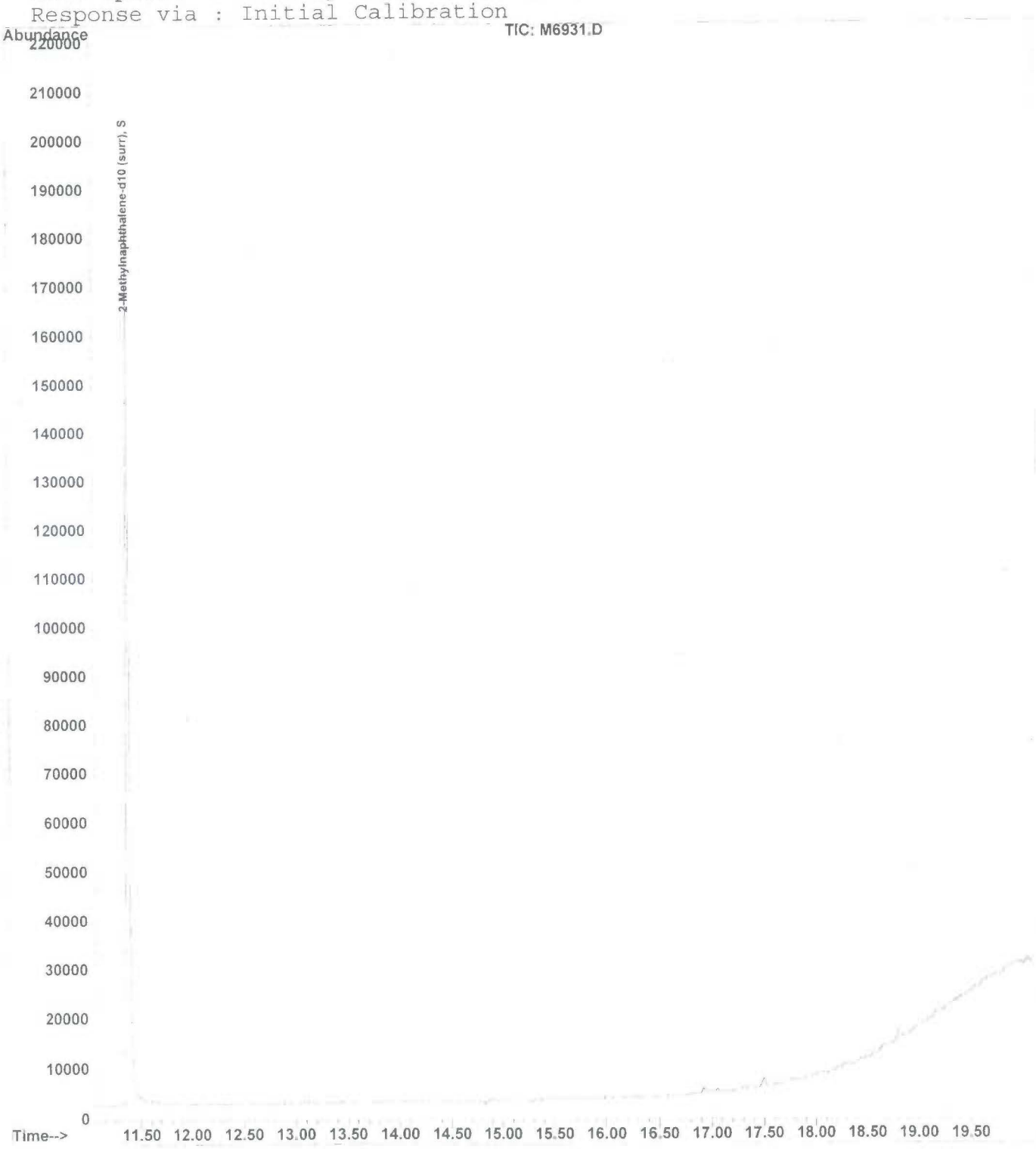
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6931.D
Acq On : 18 May 06 16:05
Sample : SSTD2.00
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 16:32 19106

Vial: 8
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

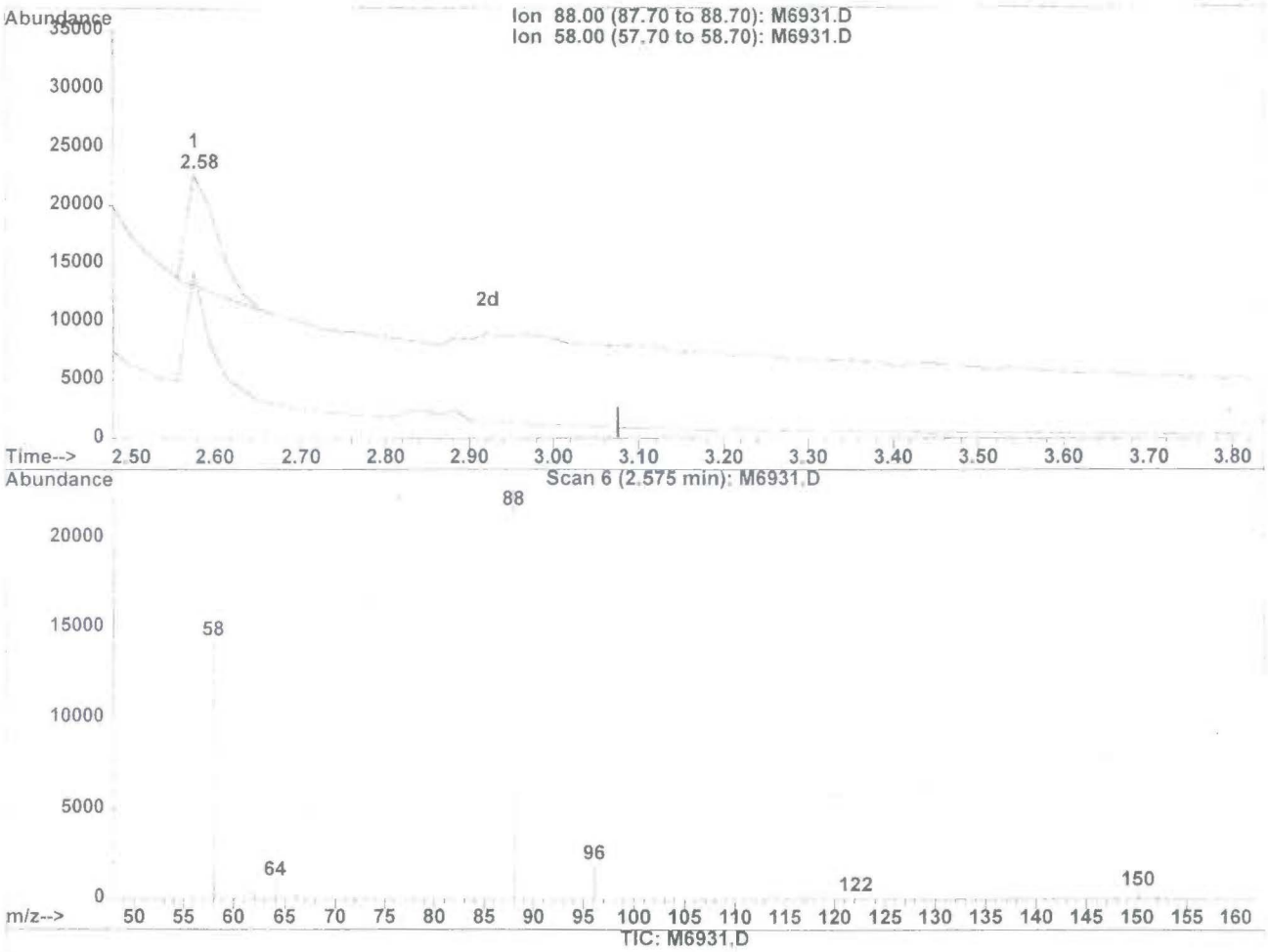


Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6931.D
Acq On : 18 May 06 16:05
Sample : SSTD2.00
Misc :
Quant Time: May 18 16:32 19106

Vial: 8
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration



(2) 1,4-Dioxane

2.58min 2.05ug/L m

response 22418

Ion	Exp%	Act%
88.00	100	100
58.00	90.00	168.51
0.00	0.00	0.00
0.00	0.00	0.00

after - 9/6/05/2006

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6932.D
Acq On : 18 May 06 16:35
Sample : SSTD2.50
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:12 19106

Vial: 9
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	11738	0.80 ug/L	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.39	152	224506	2.51 ug/L	0.00
Spiked Amount 2.000	Range 20 - 150		Recovery = 125.50%		
Target Compounds					Qvalue
2) 1,4-Dioxane	2.58	88	36885m	2.87 ug/L	73

MC 05/2006

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

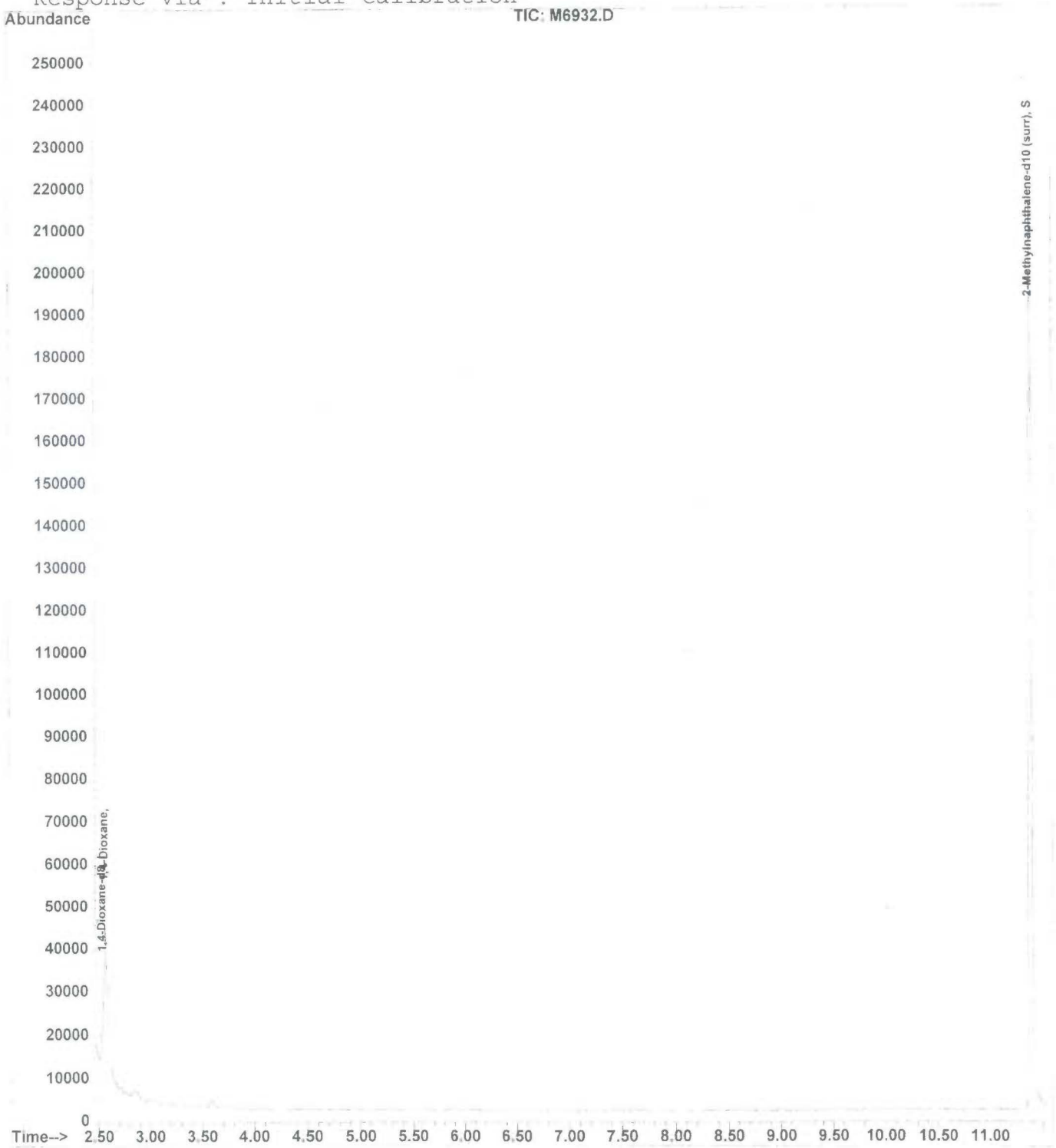
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6932.D
Acq On : 18 May 06 16:35
Sample : SSTD2.50
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:12 19106

Vial: 9
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



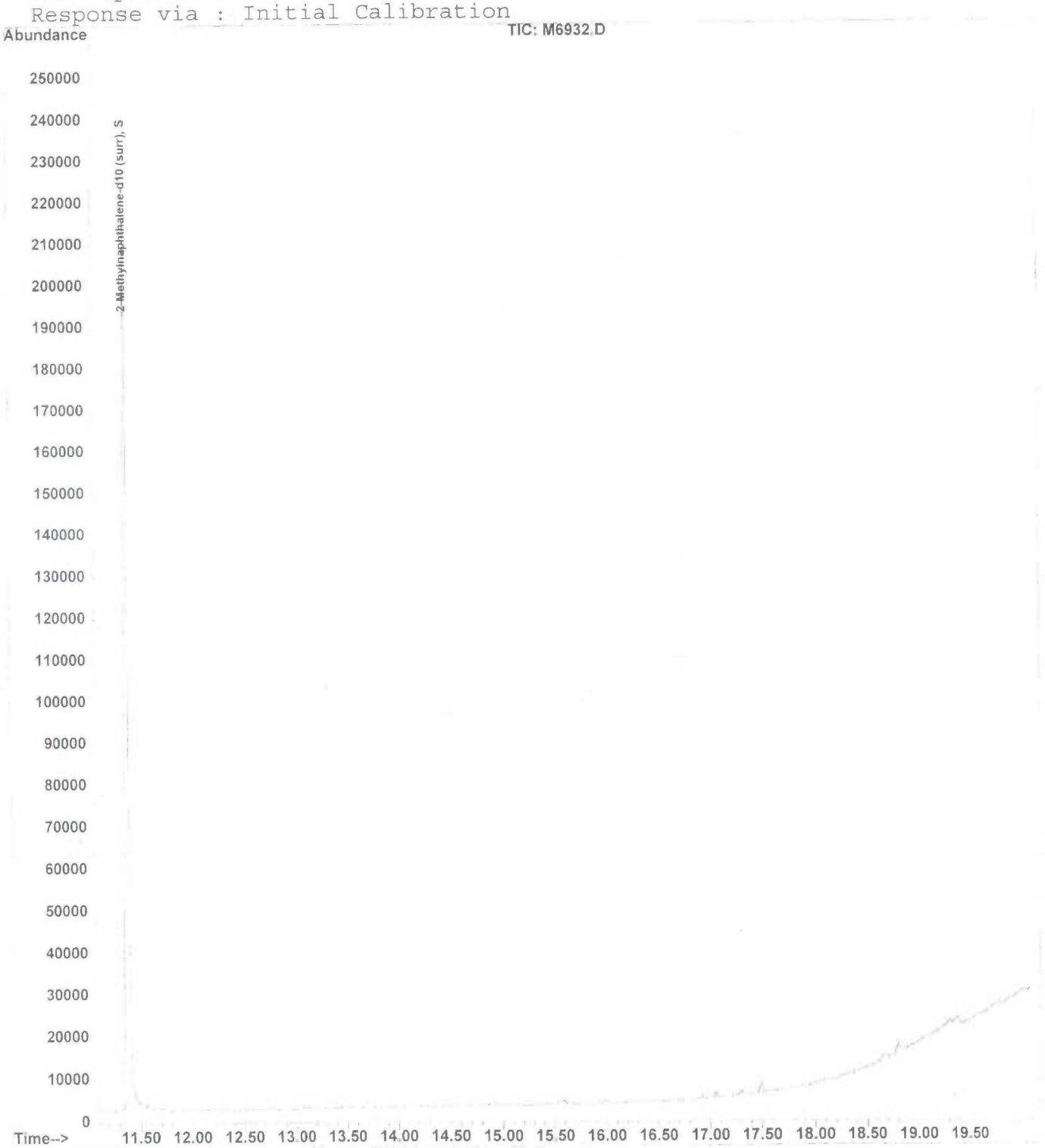
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6932.D
Acq On : 18 May 06 16:35
Sample : SSTD2.50
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:12 19106

Vial: 9
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

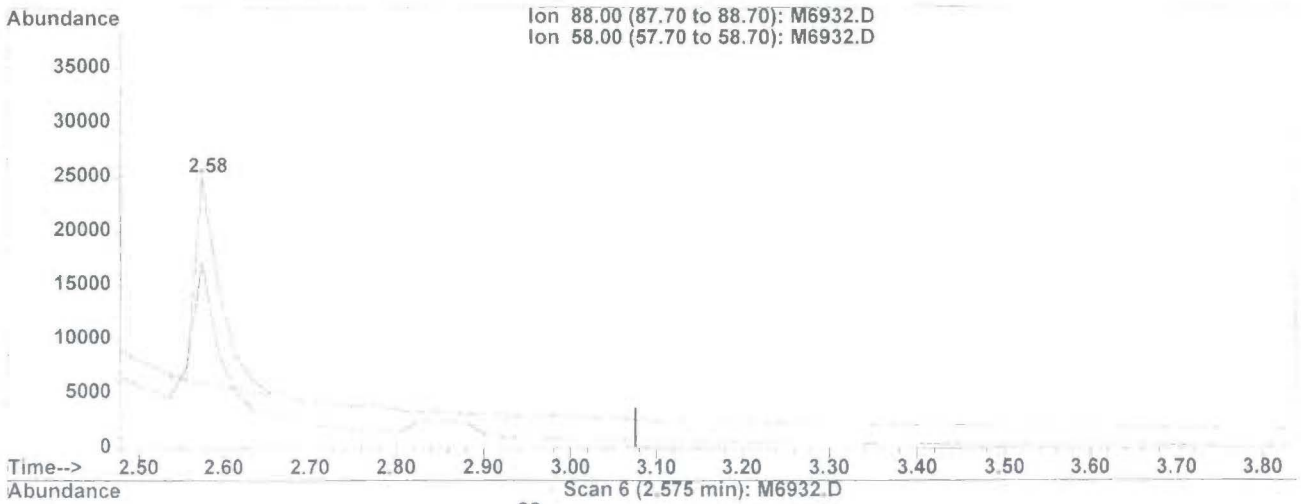


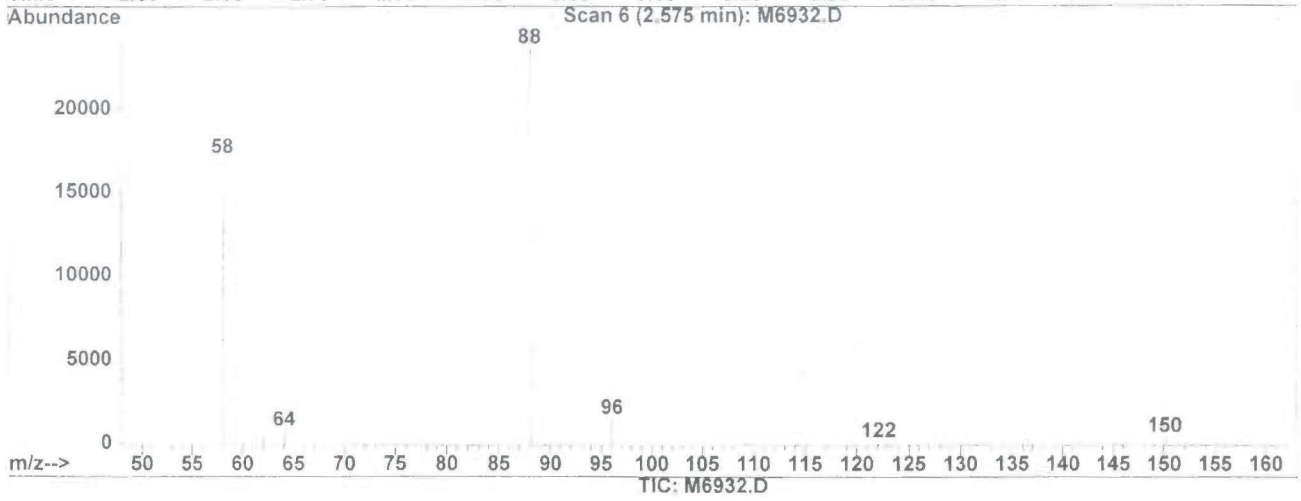
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6932.D
Acq On : 18 May 06 16:35
Sample : SSTD2.50
Misc :
Quant Time: May 19 8:12 19106

Vial: 9
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration





(2) 1,4-Dioxane

2.58min 2.87ug/L m

response 36885

Ion	Exp%	Act%
88.00	100	100
58.00	90.00	120.38
0.00	0.00	0.00
0.00	0.00	0.00

after JJC 05/2006

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6933.D
Acq On : 18 May 06 17:05
Sample : SSTD3.00
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:13 19106

Vial: 10
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	8275	0.80 ug/L	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.39	152	244785	3.88 ug/L	0.00
Spiked Amount 2.000	Range 20 - 150		Recovery	= 194.00%#	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.58	88	39362m	4.35 ug/L	90

JFC 052006

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

111

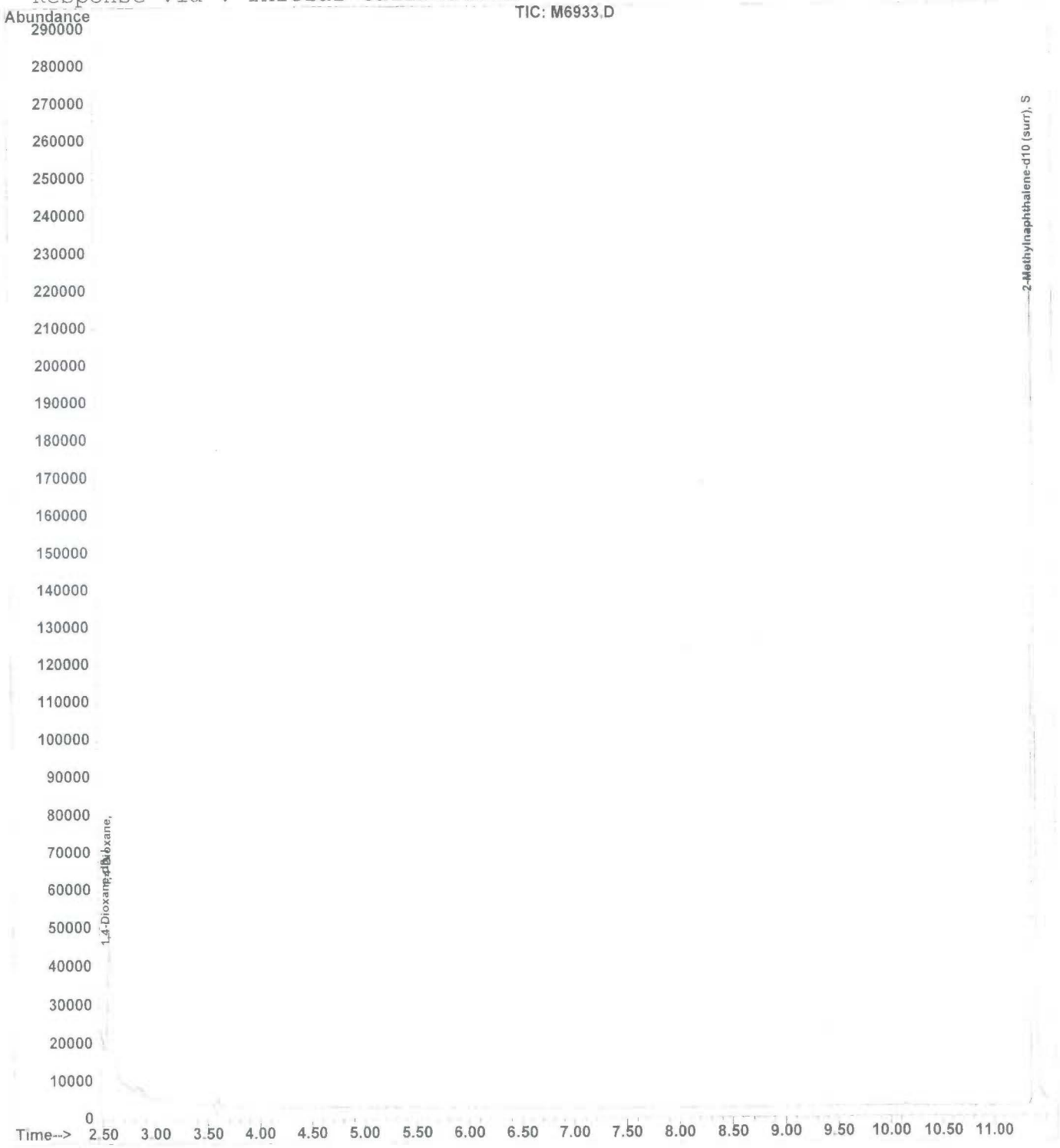
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6933.D
Acq On : 18 May 06 17:05
Sample : SSTD3.00
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:13 19106

Vial: 10
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



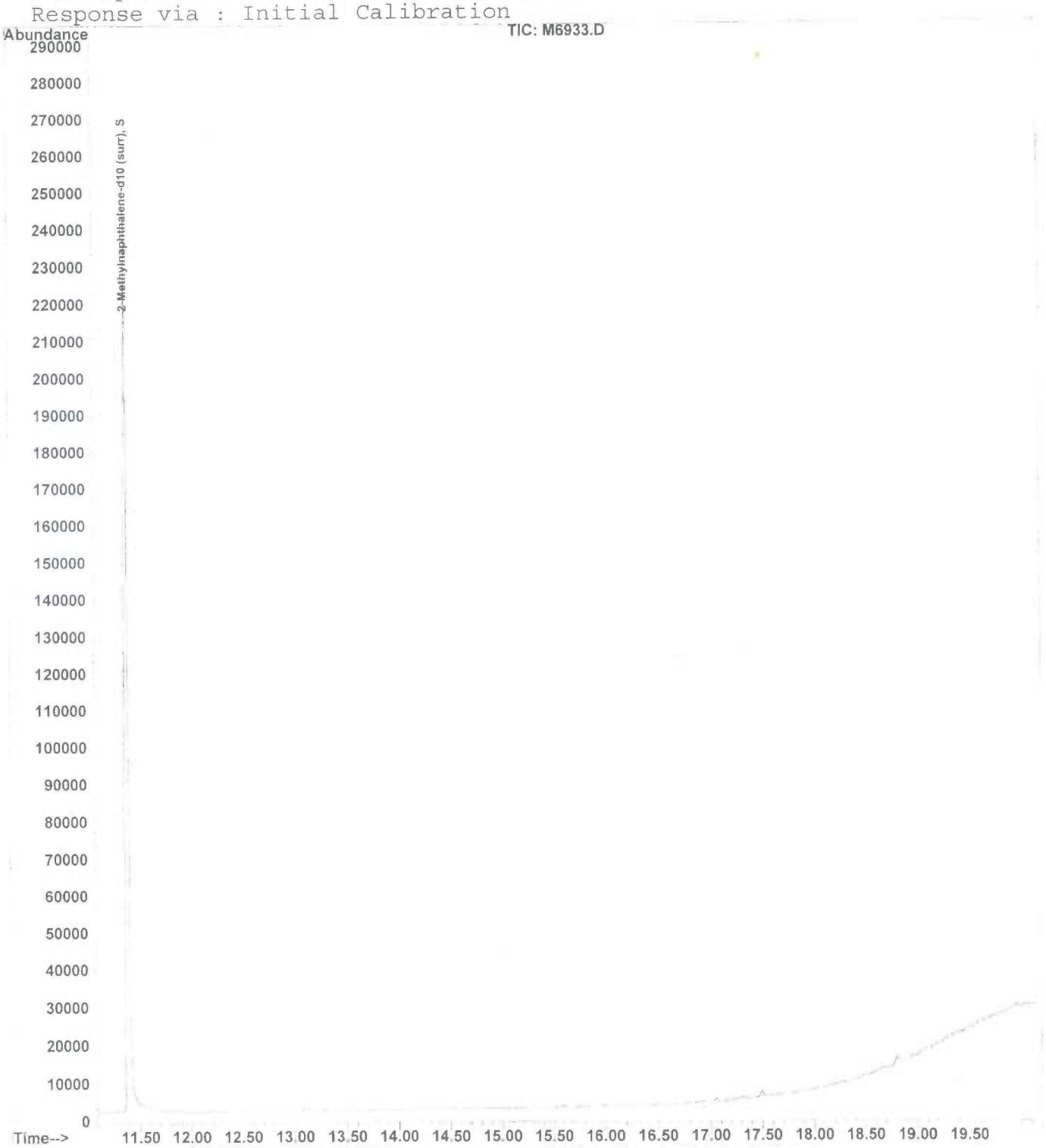
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6933.D
Acq On : 18 May 06 17:05
Sample : SSTD3.00
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:13 19106

Vial: 10
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

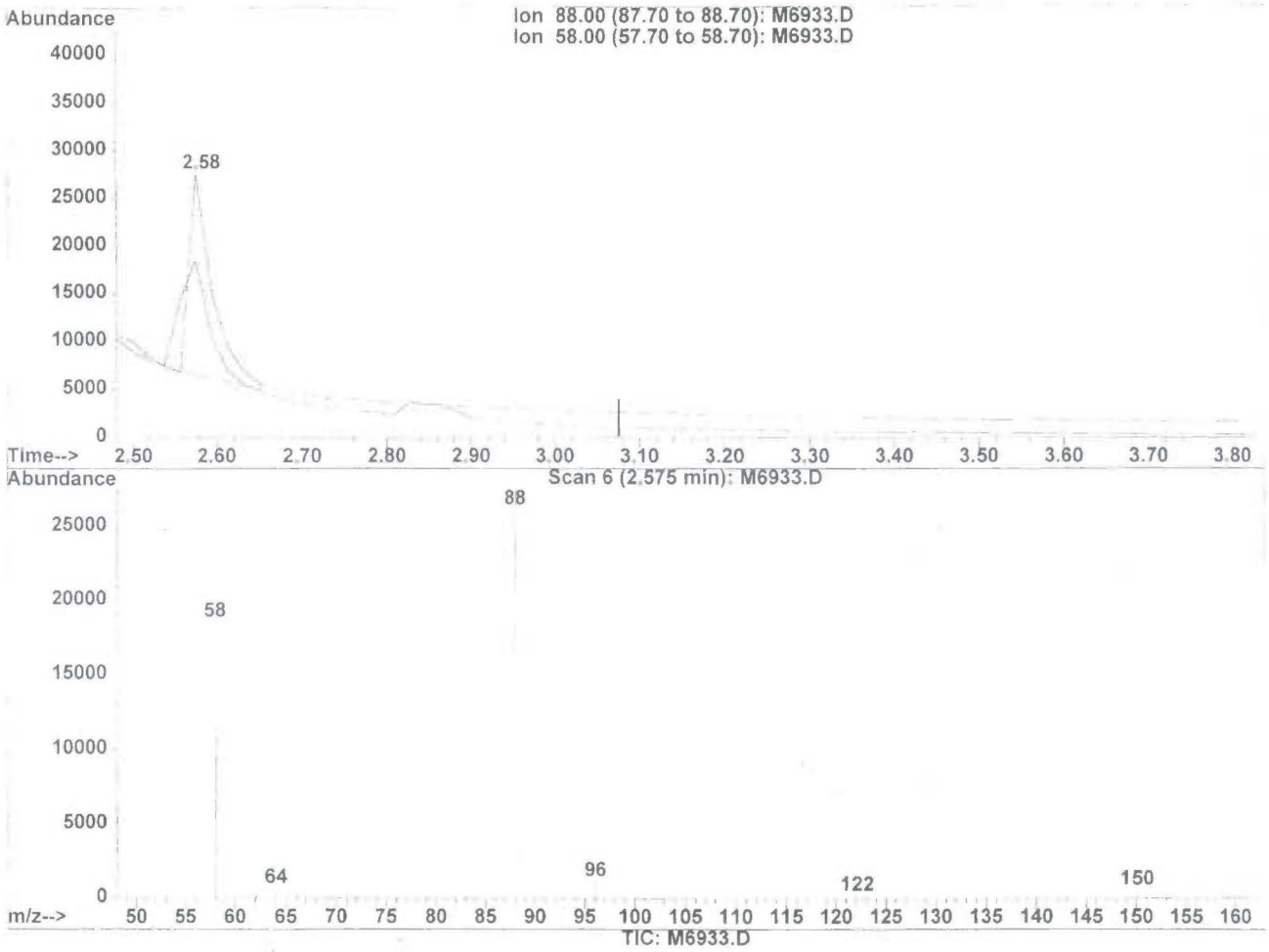


Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6933.D
Acq On : 18 May 06 17:05
Sample : SSTD3.00
Misc :
Quant Time: May 19 8:13 19106

Vial: 10
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration



after 9/6/05 2006

(2) 1,4-Dioxane

2.58min 4.35ug/L m

response 39362

Ion	Exp%	Act%
88.00	100	100
58.00	90.00	159.89
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6928.D
Acq On : 18 May 06 14:30
Sample : SSTD1.25
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 14:56 19106

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Fri Jan 06 09:01:47 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	11213	0.80 ug/L	-0.27
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.40	152	104341	1.68 ug/L	-0.27
Spiked Amount 2.000	Range 20 - 150		Recovery =	84.00%	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.58	88	13925m 05 2006	0.62 ug/L	26

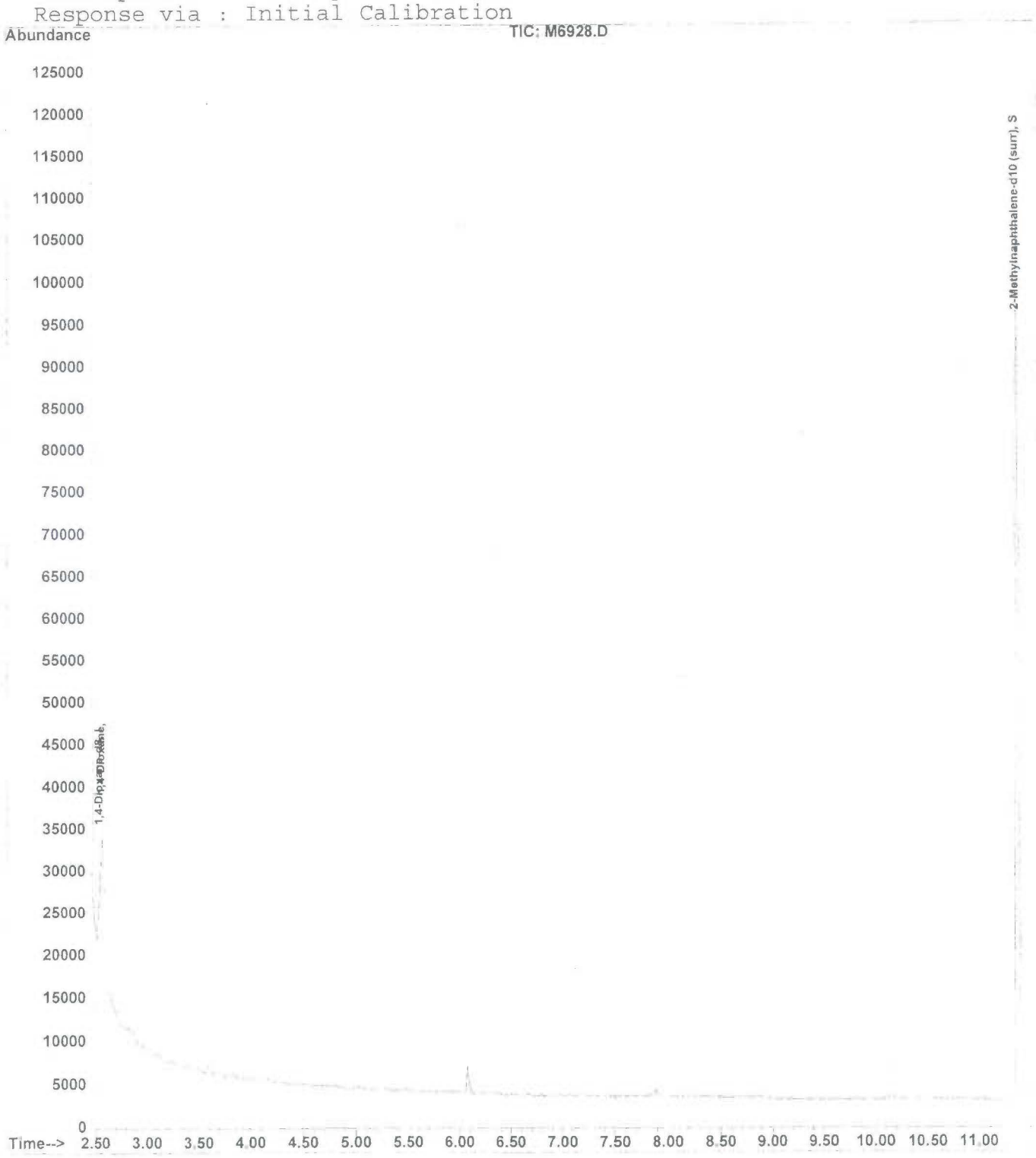
(#) = qualifier out of range (m) = manual integration

Data File : C:\HPCHEM\1\DATA\M6928.D
Acq On : 18 May 06 14:30
Sample : SSTD1.25
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 14:56 19106

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

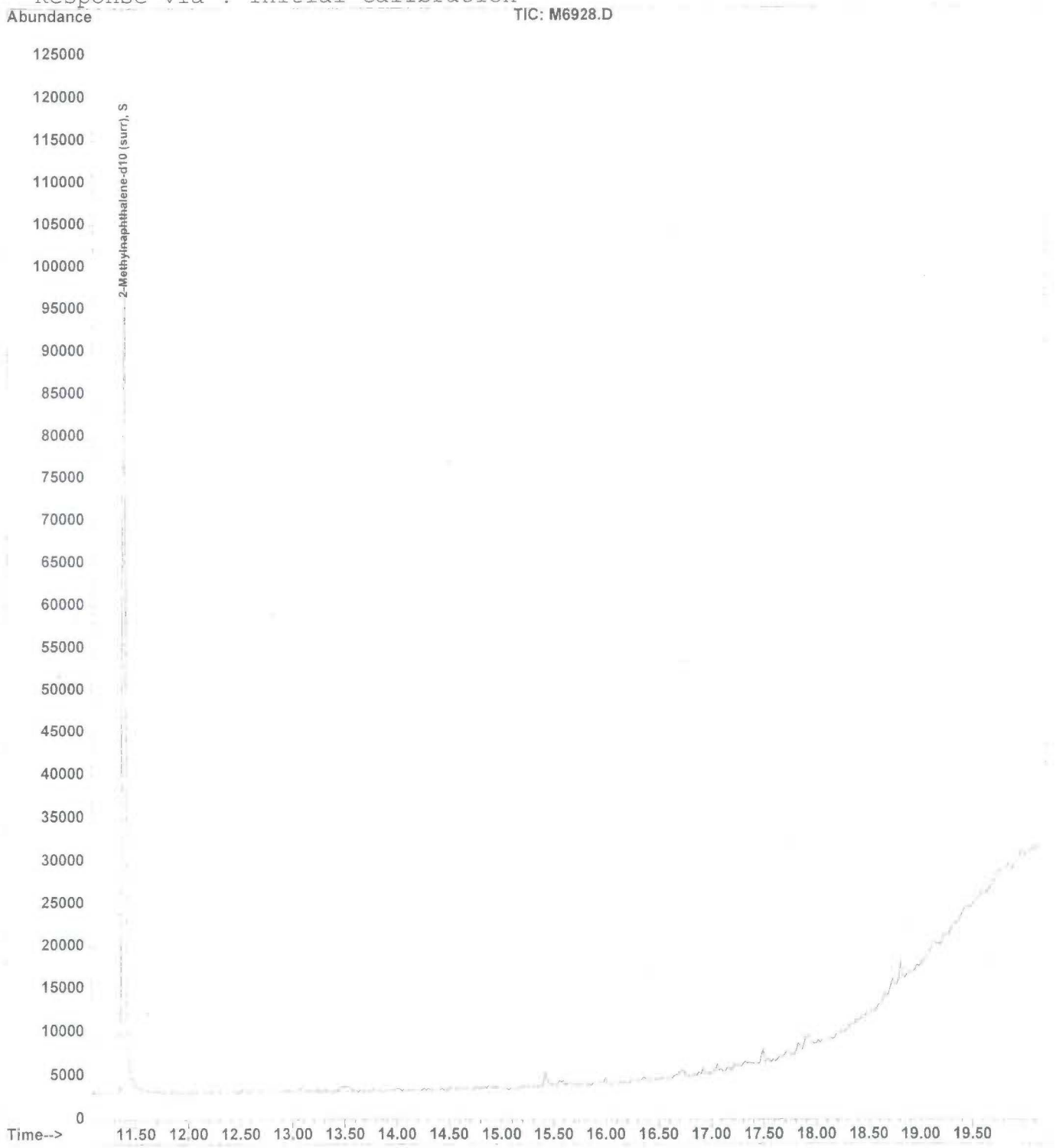
Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\M6928.D
Acq On : 18 May 06 14:30
Sample : SSTD1.25
Misc :
MS Integration Params: rteint.p
Quant Time: May 18 14:56 19106

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

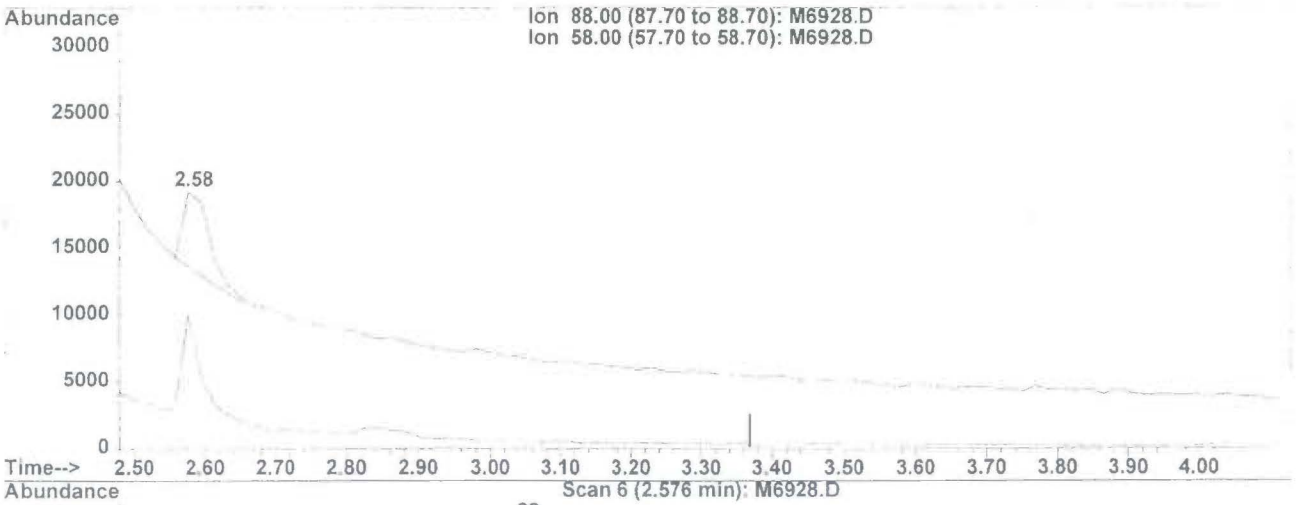


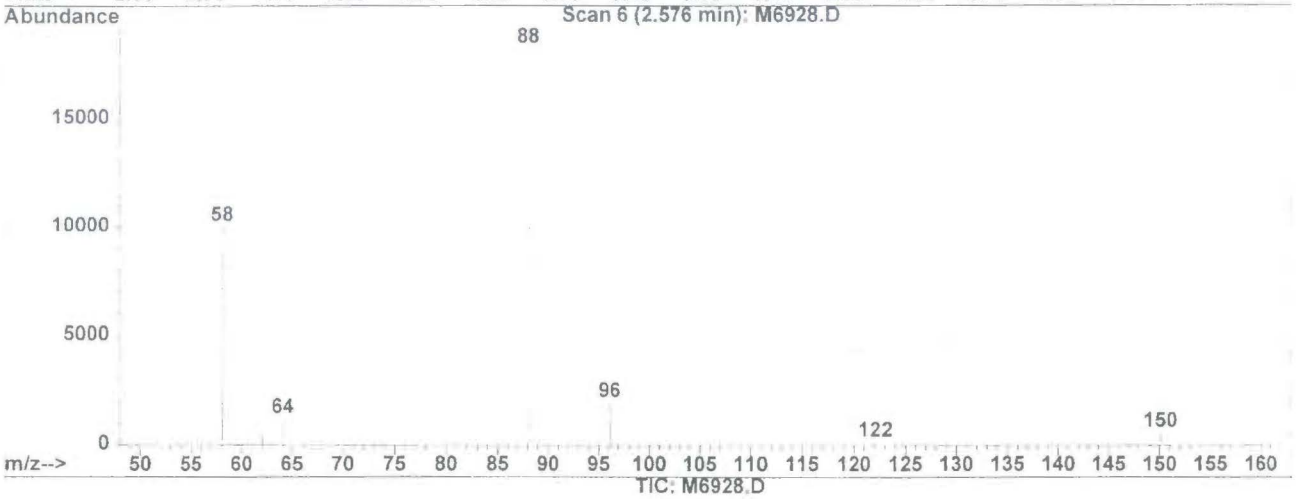
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6928.D
Acq On : 18 May 06 14:30
Sample : SSTD1.25
Misc :
Quant Time: May 18 14:56 19106

Vial: 5
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration





(2) 1,4-Dioxane

2.58min 0.62ug/L m

response 13925

Ion	Exp%	Act%
88.00	100	100
58.00	90.00	179.27#
0.00	0.00	0.00
0.00	0.00	0.00

after - 99P
05 2006

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6952.D
Acq On : 19 May 06 11:19
Sample : SSTD1.25
Misc :
MS Integration Params: rteint.p
Quant Time: May 20 12:38 19106

Vial: 2
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0519.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0519

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.53	96	12717	0.80 ug/L	-0.03
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.37	152	115681	1.14 ug/L	-0.03
Spiked Amount 2.000	Range 20 - 150		Recovery = 57.00%		
Target Compounds					Qvalue
2) 1,4-Dioxane	2.57	88	17630m	1.15 ug/L	63

MC 05 2006

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

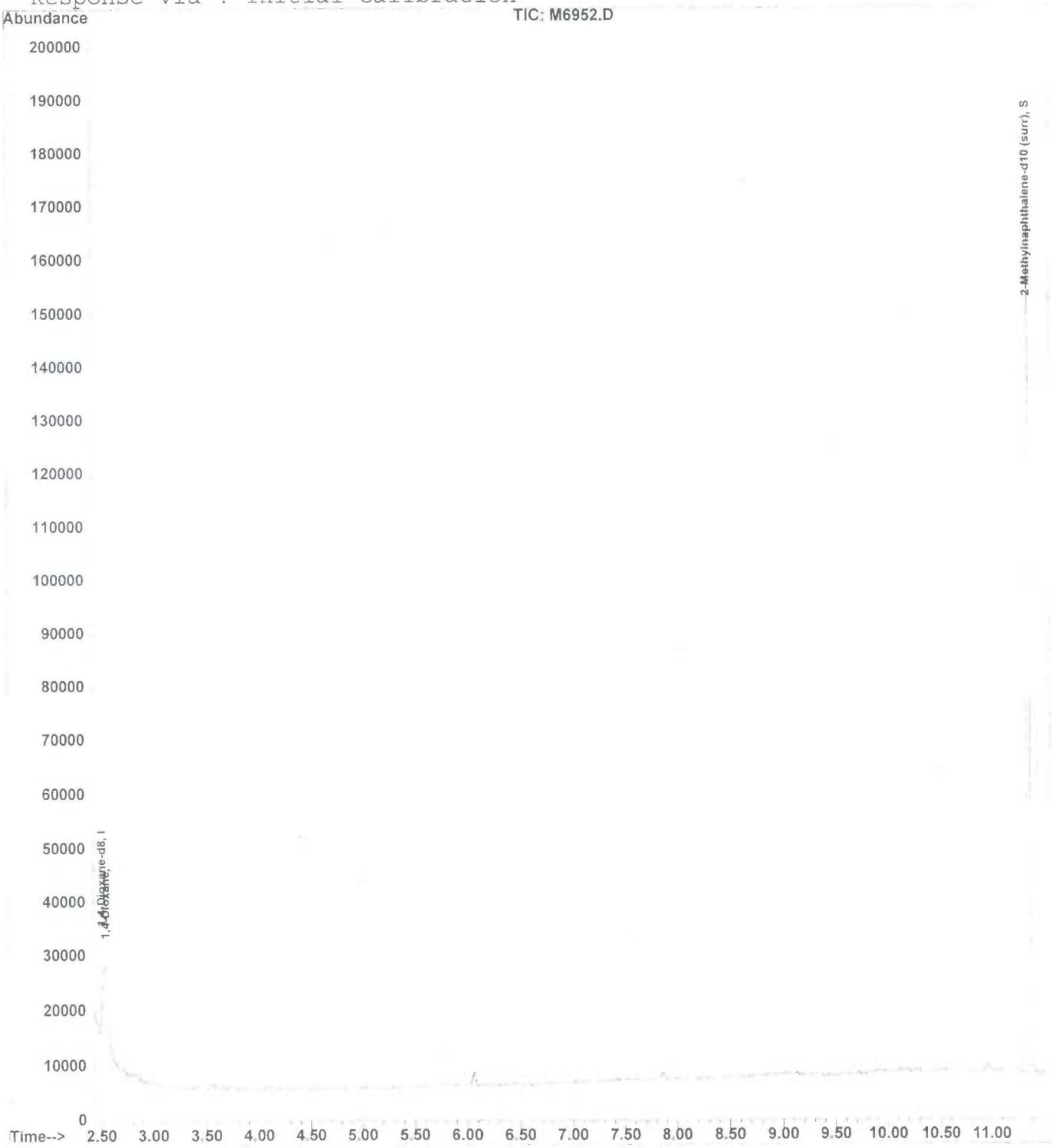
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6952.D
Acq On : 19 May 06 11:19
Sample : SSTD1.25
Misc :
MS Integration Params: rteint.p
Quant Time: May 20 12:38 19106

Vial: 2
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



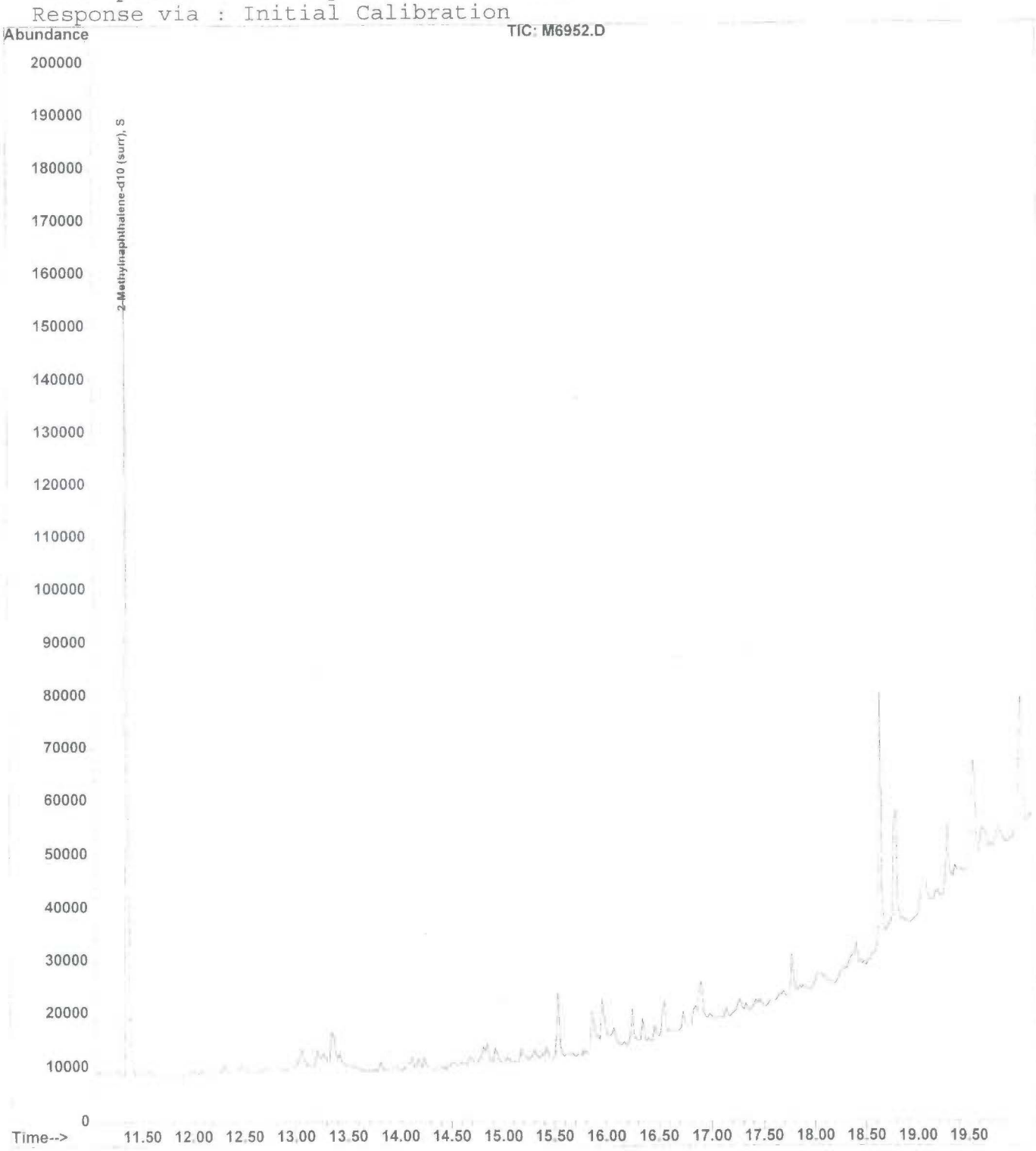
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6952.D
Acq On : 19 May 06 11:19
Sample : SSTD1.25
Misc :
MS Integration Params: rteint.p
Quant Time: May 20 12:38 19106

Vial: 2
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

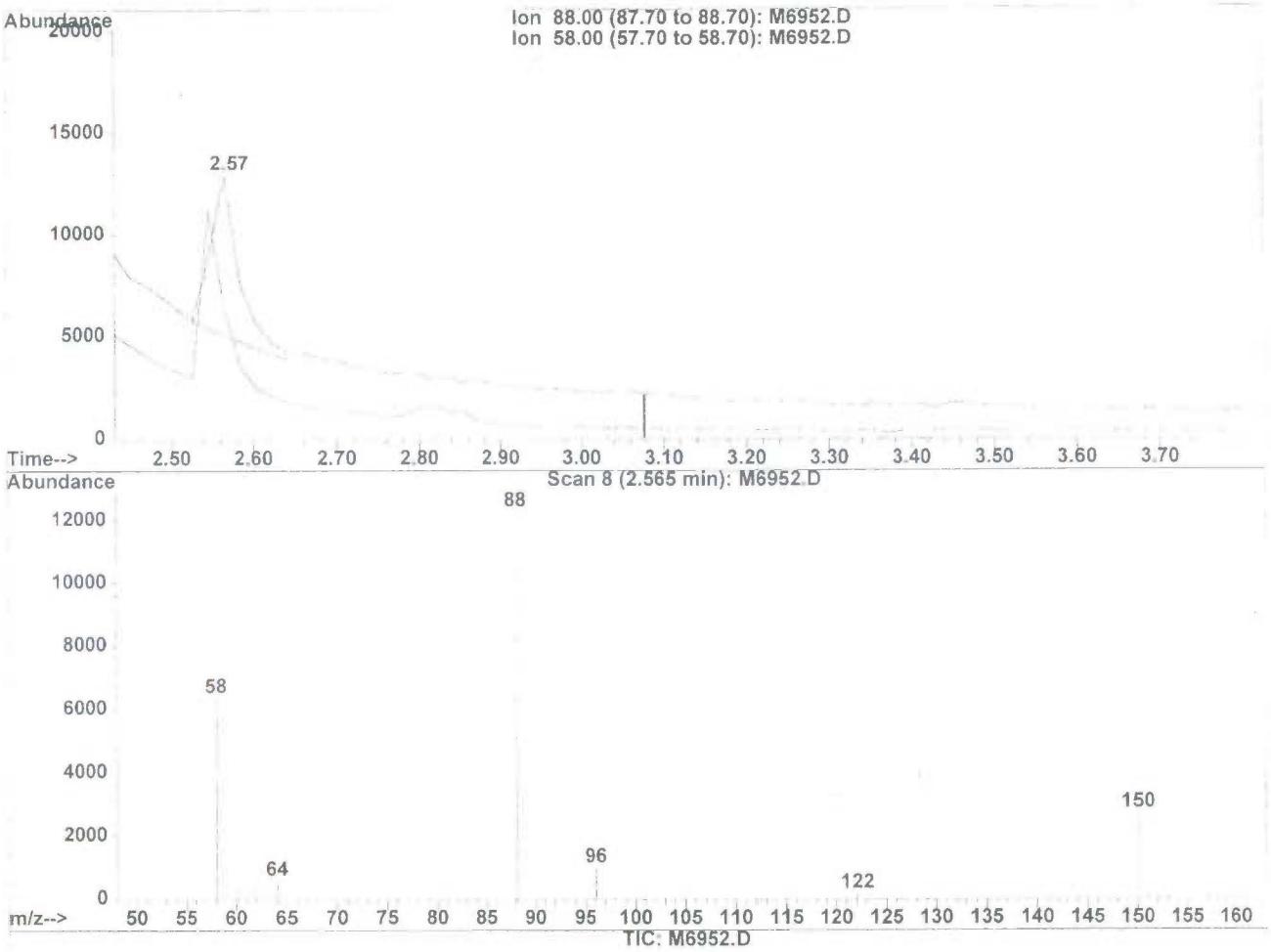


Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6952.D
Acq On : 19 May 06 11:19
Sample : SSTD1.25
Misc :
Quant Time: May 20 12:38 19106

Vial: 2
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration



(2) 1,4-Dioxane

2.57min 1.15ug/L m

response 17630

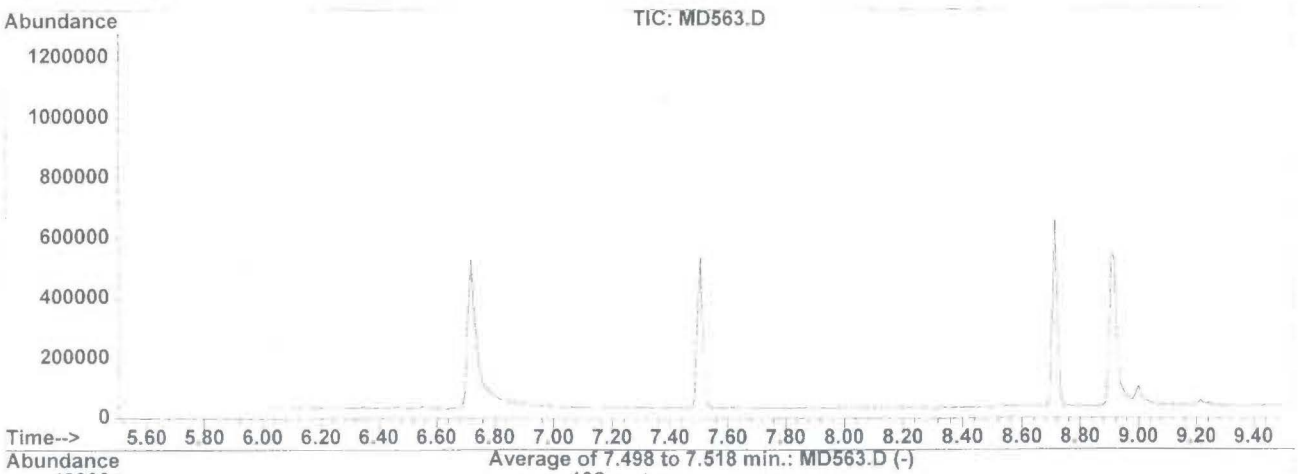
Ion	Exp%	Act%
88.00	100	100
58.00	90.00	161.58
0.00	0.00	0.00
0.00	0.00	0.00

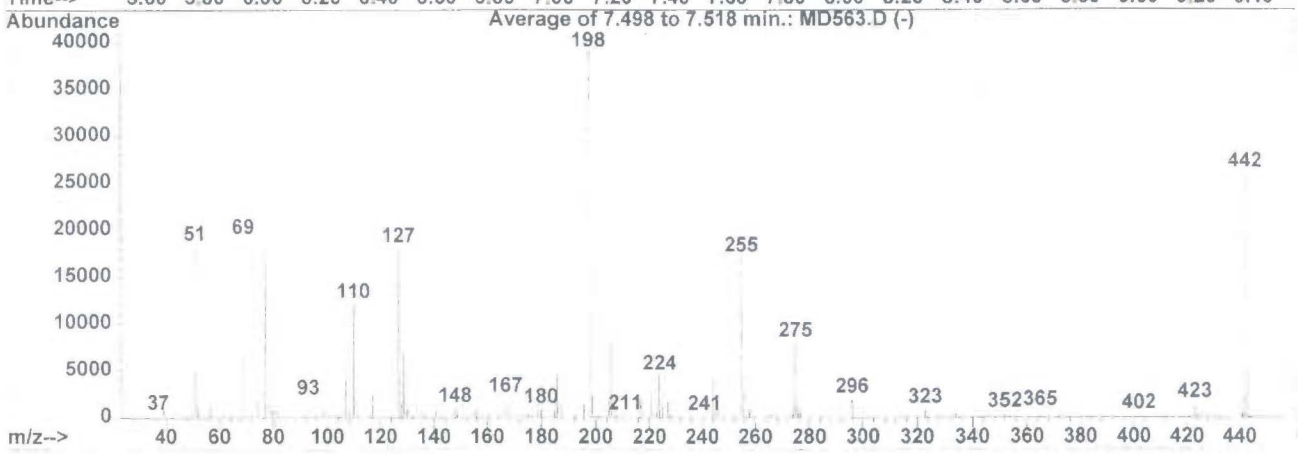
after - 91C 05-2006

DFTPP

Data File : C:\HPCHEM\1\DATA\MD563.D
Acq On : 18 May 06 14:07
Sample : 50 NG DFTPP
Misc :
MS Integration Params: rteint.p
Method : C:\HPCHEM\1\METHODS\DFTPP4.M (RTE Integrator)
Title :

Vial: 1
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00





AutoFind: Scans 145, 146, 147; Background Corrected with Scan 141

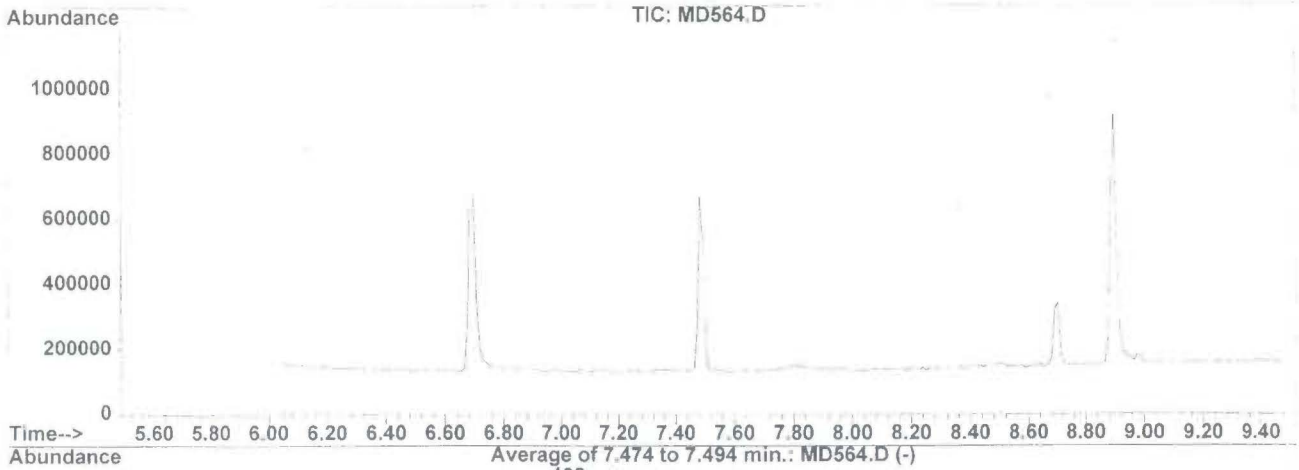
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.6	18254	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	48.5	18991	PASS
70	69	0.00	2	1.1	218	PASS
127	198	40	60	46.0	18047	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	39197	PASS
199	198	5	9	6.3	2486	PASS
275	198	10	30	20.3	7965	PASS
365	198	1	100	1.5	574	PASS
441	443	0.01	100	39.7	2022	PASS
442	198	40	100	66.3	25986	PASS
443	442	17	23	19.6	5095	PASS

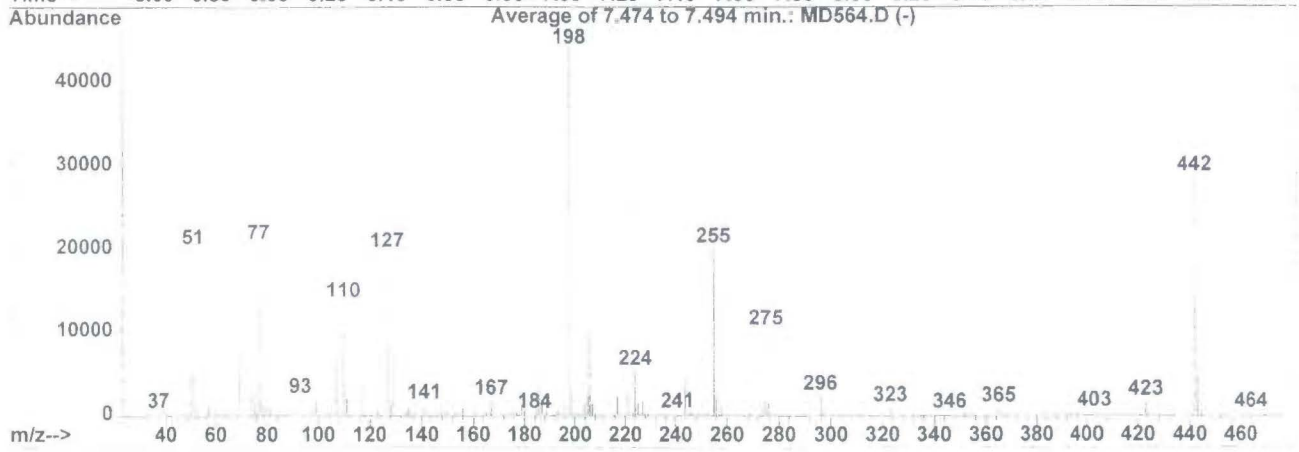
MD563.D DFTPP4.M Sat May 20 12:28:58 2006 SEMIVOA

DFTPP

Data File : C:\HPCHEM\1\DATA\MD564.D
Acq On : 19 May 06 10:57
Sample : 50 NG DFTPP
Misc :
MS Integration Params: rteint.p
Method : C:\HPCHEM\1\METHODS\DFTPP4.M (RTE Integrator)
Title :

Vial: 1
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00





AutoFind: Scans 142, 143, 144; Background Corrected with Scan 138

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	45.1	19917	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	45.5	20093	PASS
70	69	0.00	2	0.0	0	PASS
127	198	40	60	44.1	19504	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	44195	PASS
199	198	5	9	7.8	3457	PASS
275	198	10	30	22.9	10128	PASS
365	198	1	100	2.0	864	PASS
441	443	0.01	100	4.2	235	PASS
442	198	40	100	64.6	28556	PASS
443	442	17	23	19.4	5536	PASS

MD564.D DFTPP4.M Sat May 20 12:29:39 2006 SEMIVOA

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6935.D
Acq On : 18 May 06 18:05
Sample : WBLK;051706
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:27 19106

Vial: 12
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	13017	0.80 ug/L	0.00

System Monitoring Compounds

3) 2-Methylnaphthalene-d10 (s	11.39	152	125860	1.21 ug/L	0.00

Spiked Amount 2.000 Range 20 - 150 Recovery = 60.50%

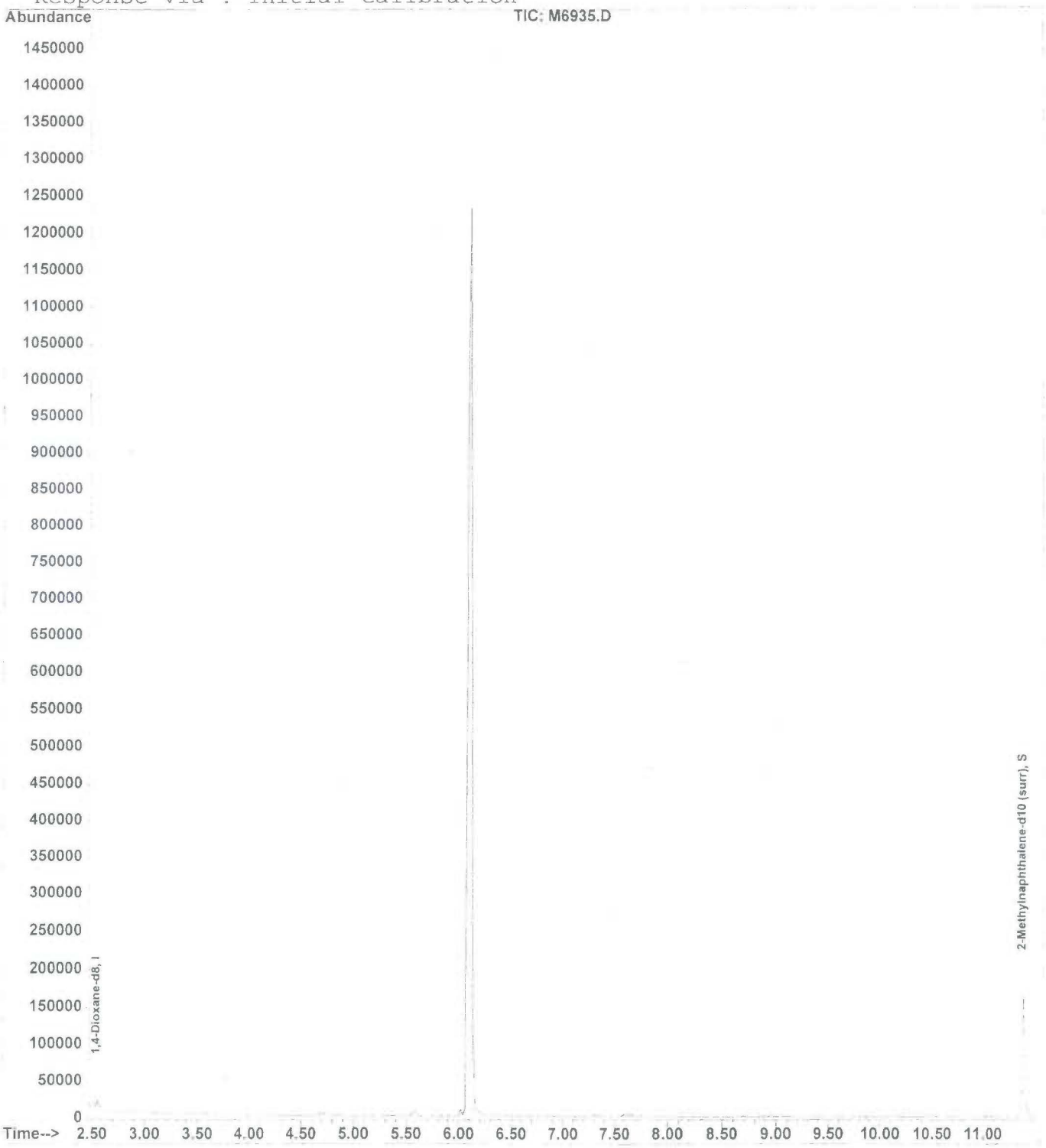
Target Compounds Qvalue

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

Data File : C:\HPCHEM\1\DATA\M6935.D
Acq On : 18 May 06 18:05
Sample : WBLK;051706
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:27 19106

Vial: 12
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

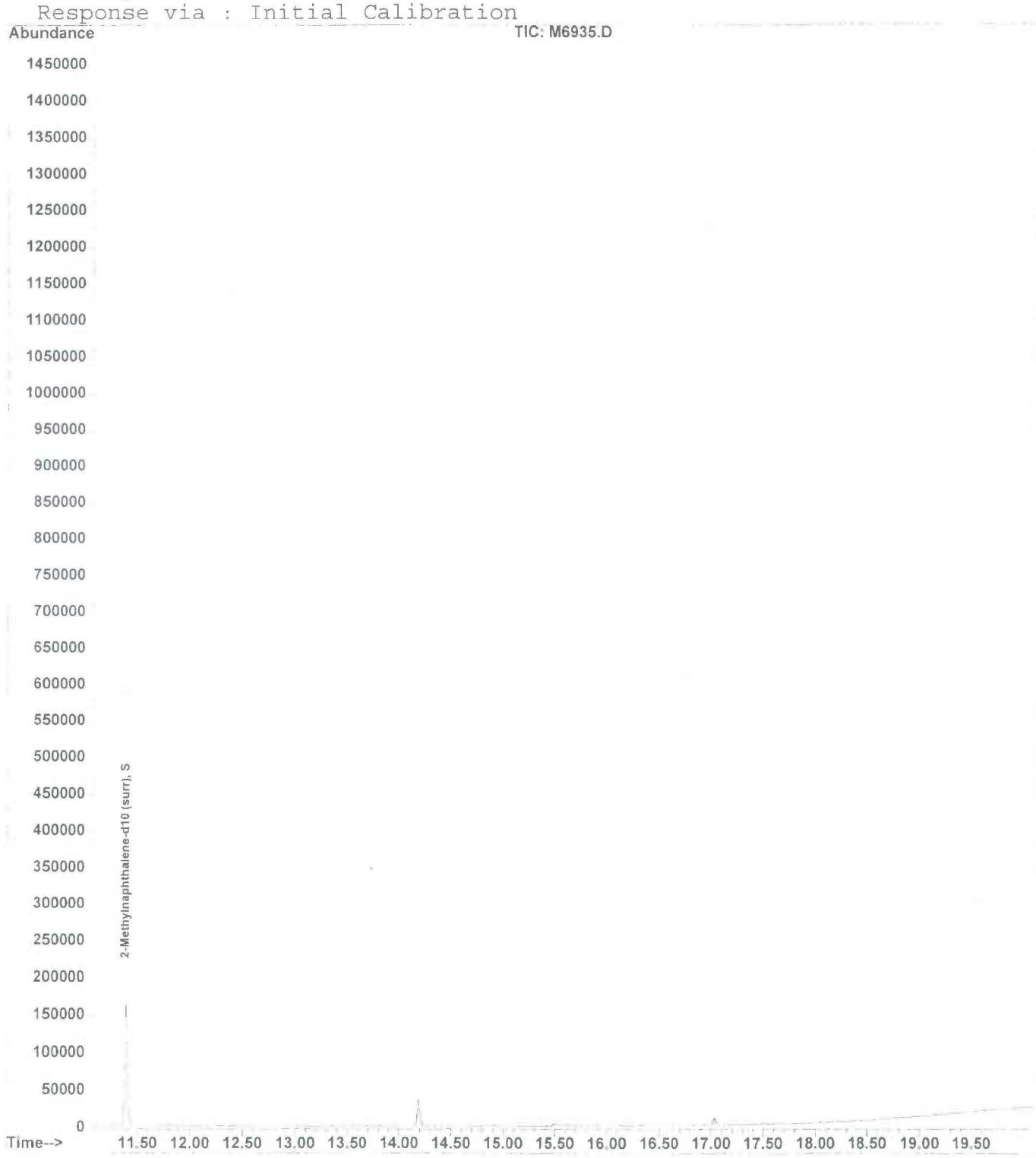
Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\M6935.D
Acq On : 18 May 06 18:05
Sample : WBLK;051706
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:27 19106

Vial: 12
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6936.D
Acq On : 18 May 06 18:35
Sample : WLCS;051706
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:25 19106

Vial: 13
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	11253	0.80 ug/L	0.00
System Monitoring Compounds					
3) 2-Methylnaphthalene-d10 (s	11.40	152	111204	1.24 ug/L	0.00
Spiked Amount 2.000	Range 20 - 150		Recovery	= 62.00%	
Target Compounds					Qvalue
2) 1,4-Dioxane	2.60	88	9453m	0.70 ug/L	21

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

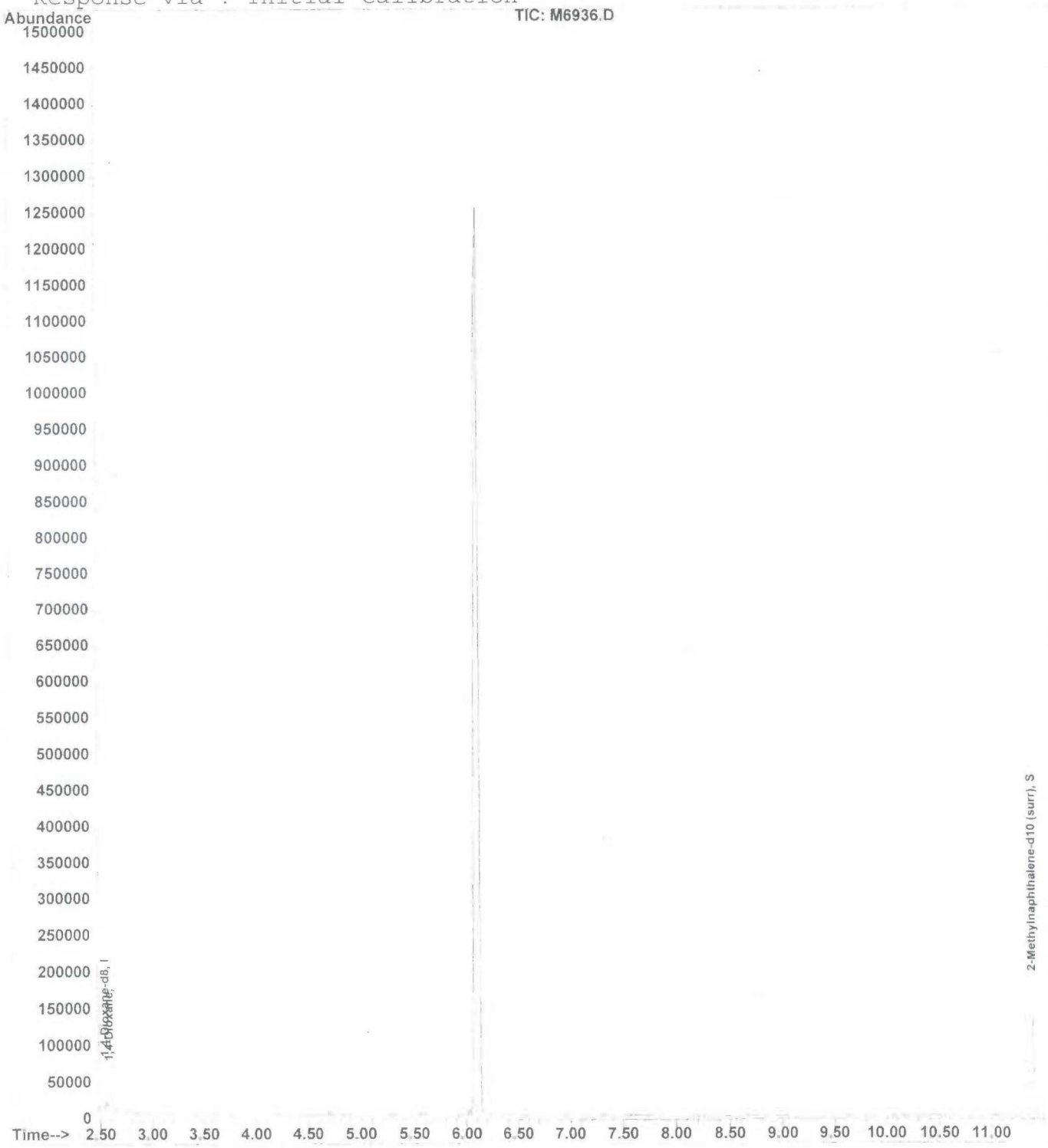
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6936.D
Acq On : 18 May 06 18:35
Sample : WLCS;051706
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:25 19106

Vial: 13
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



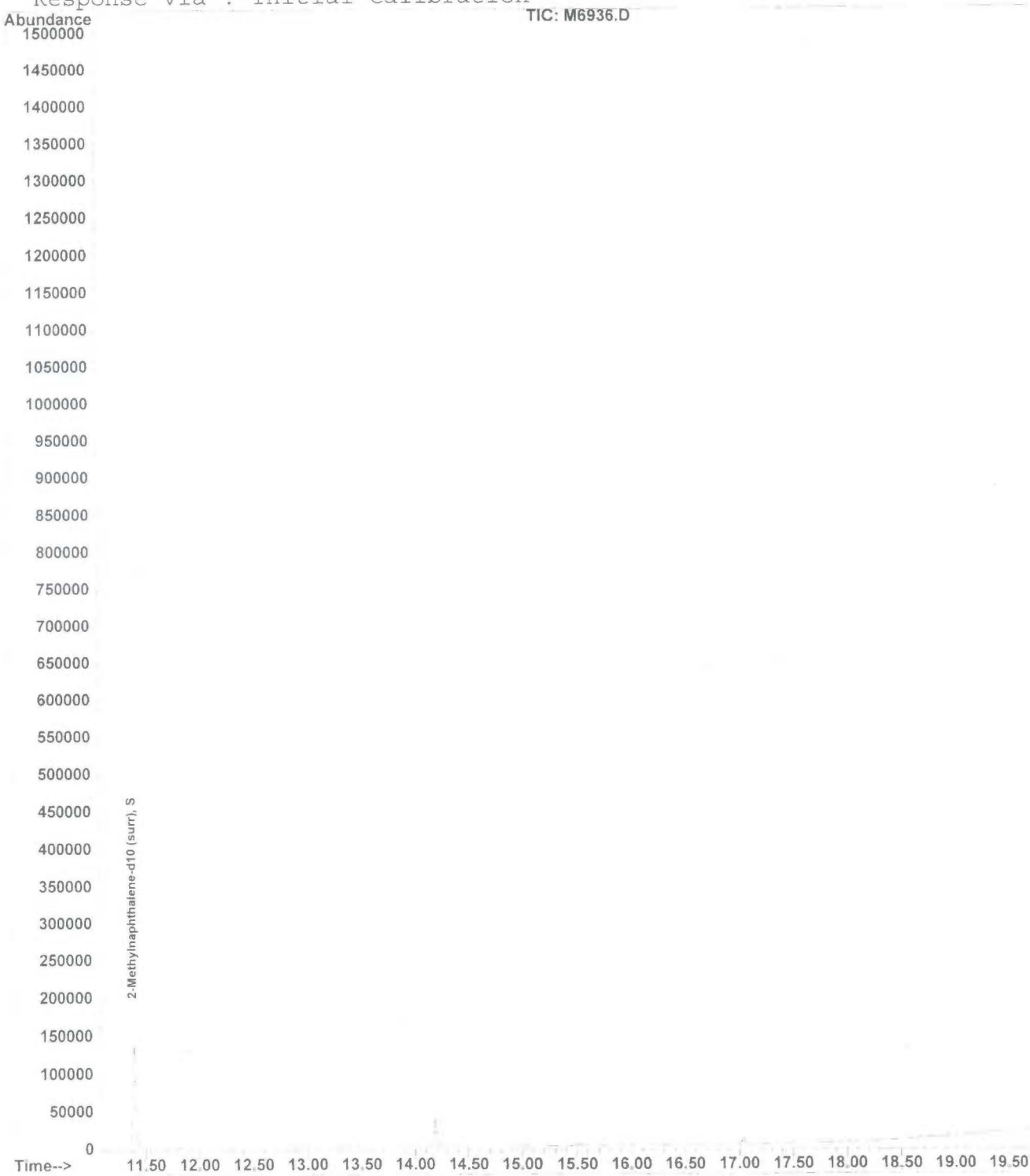
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6936.D
Acq On : 18 May 06 18:35
Sample : WLCS;051706
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:25 19106

Vial: 13
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

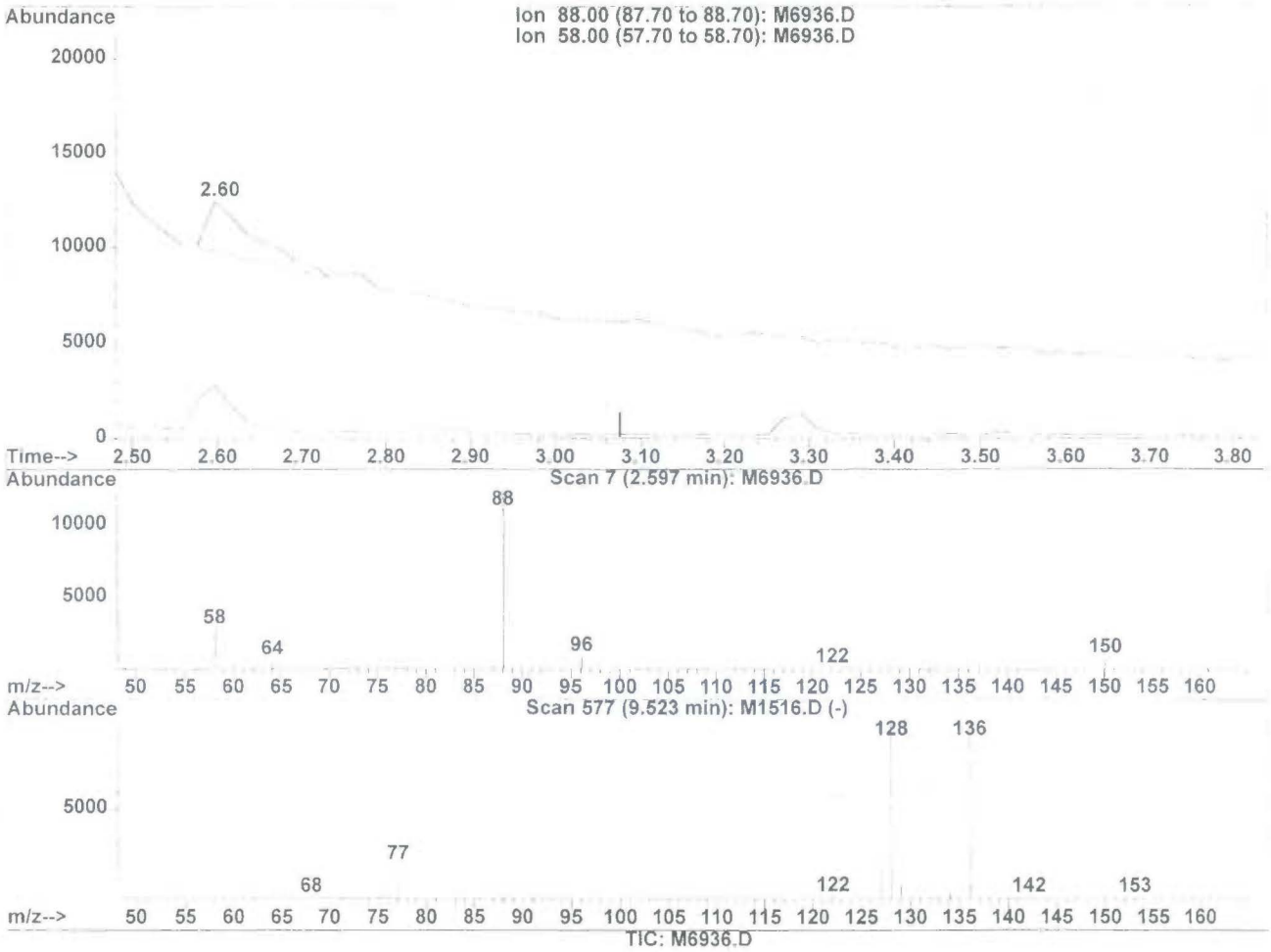


Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6936.D
Acq On : 18 May 06 18:35
Sample : WLCS;051706
Misc :
Quant Time: May 19 8:25 19106

Vial: 13
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration



(2) 1,4-Dioxane

2.60min 0.70ug/L m

after-99% 05 2006

response 9453

Ion	Exp%	Act%
88.00	100	100
58.00	90.00	89.15
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6937.D
Acq On : 18 May 06 19:04
Sample : WLCSD;051706
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:26 19106

Vial: 14
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0518.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0518

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.56	96	15074	0.80	ug/L	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10 (s	11.39	152	131413	1.09	ug/L	0.00
Spiked Amount 2.000	Range 20 - 150		Recovery	=	54.50%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.59	88	14432m	0.80	ug/L	18

MC 05 2006

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

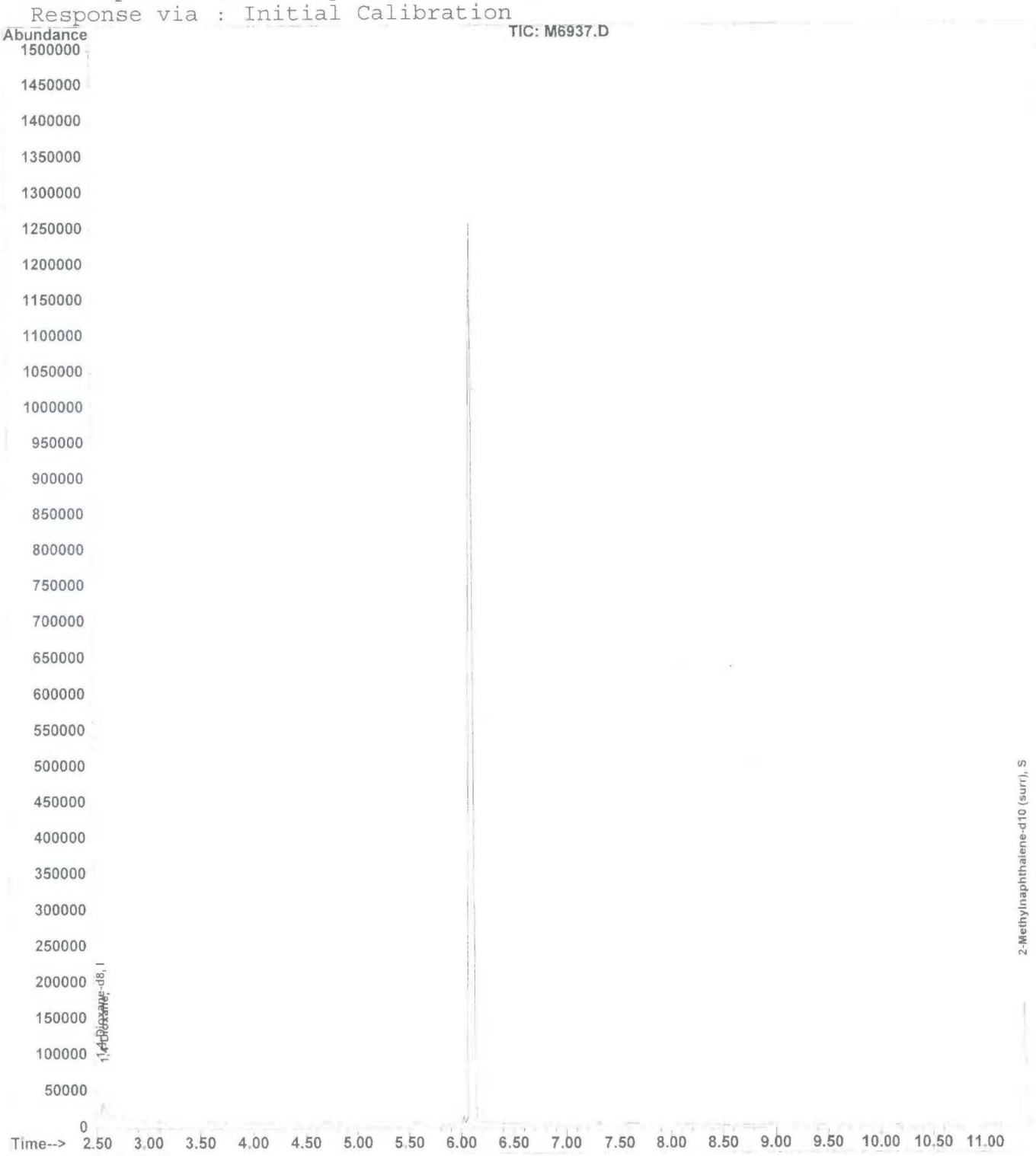
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6937.D
Acq On : 18 May 06 19:04
Sample : WLCSD;051706
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:26 19106

Vial: 14
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



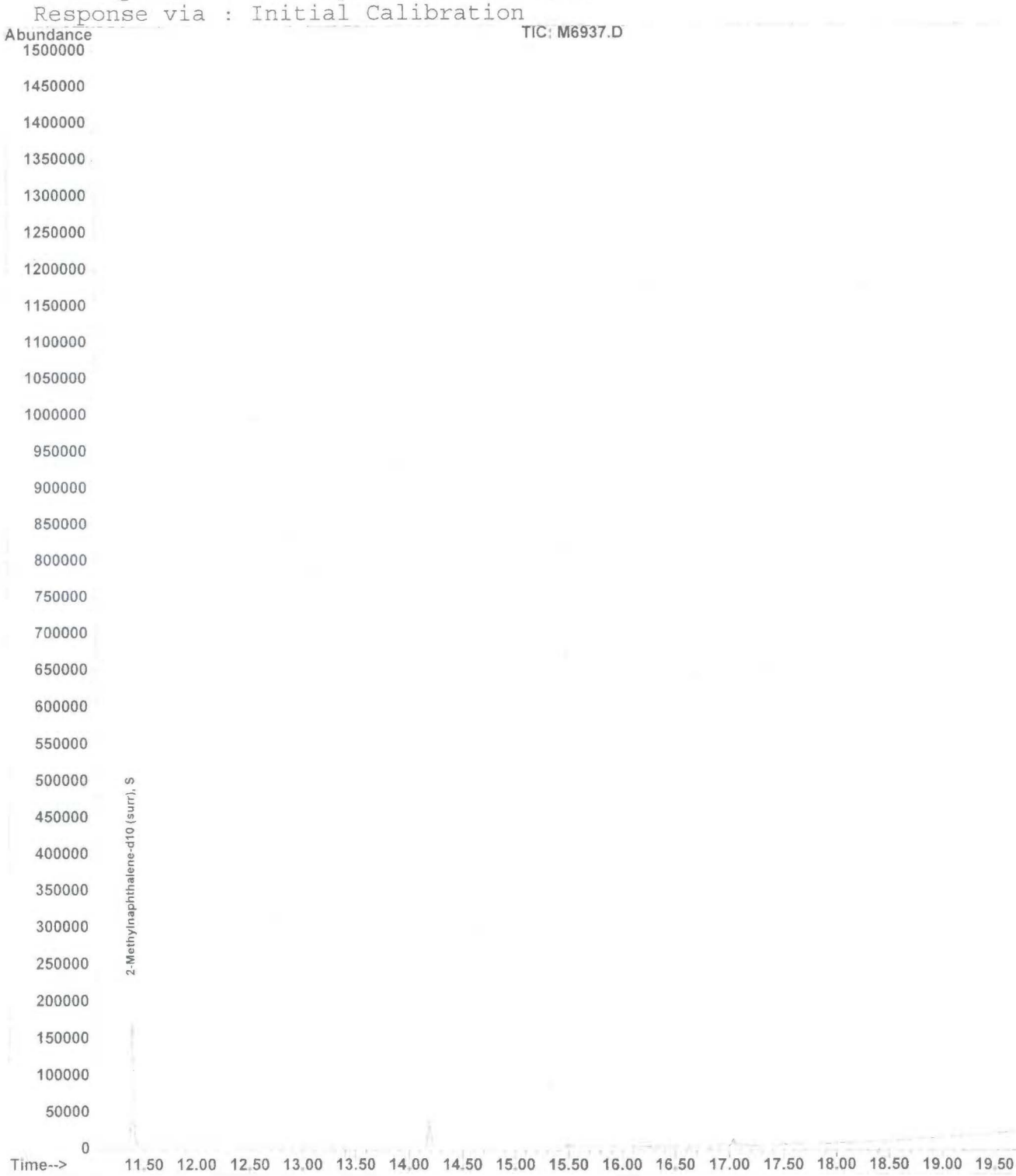
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6937.D
Acq On : 18 May 06 19:04
Sample : WLCSD;051706
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 8:26 19106

Vial: 14
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0518.RE

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

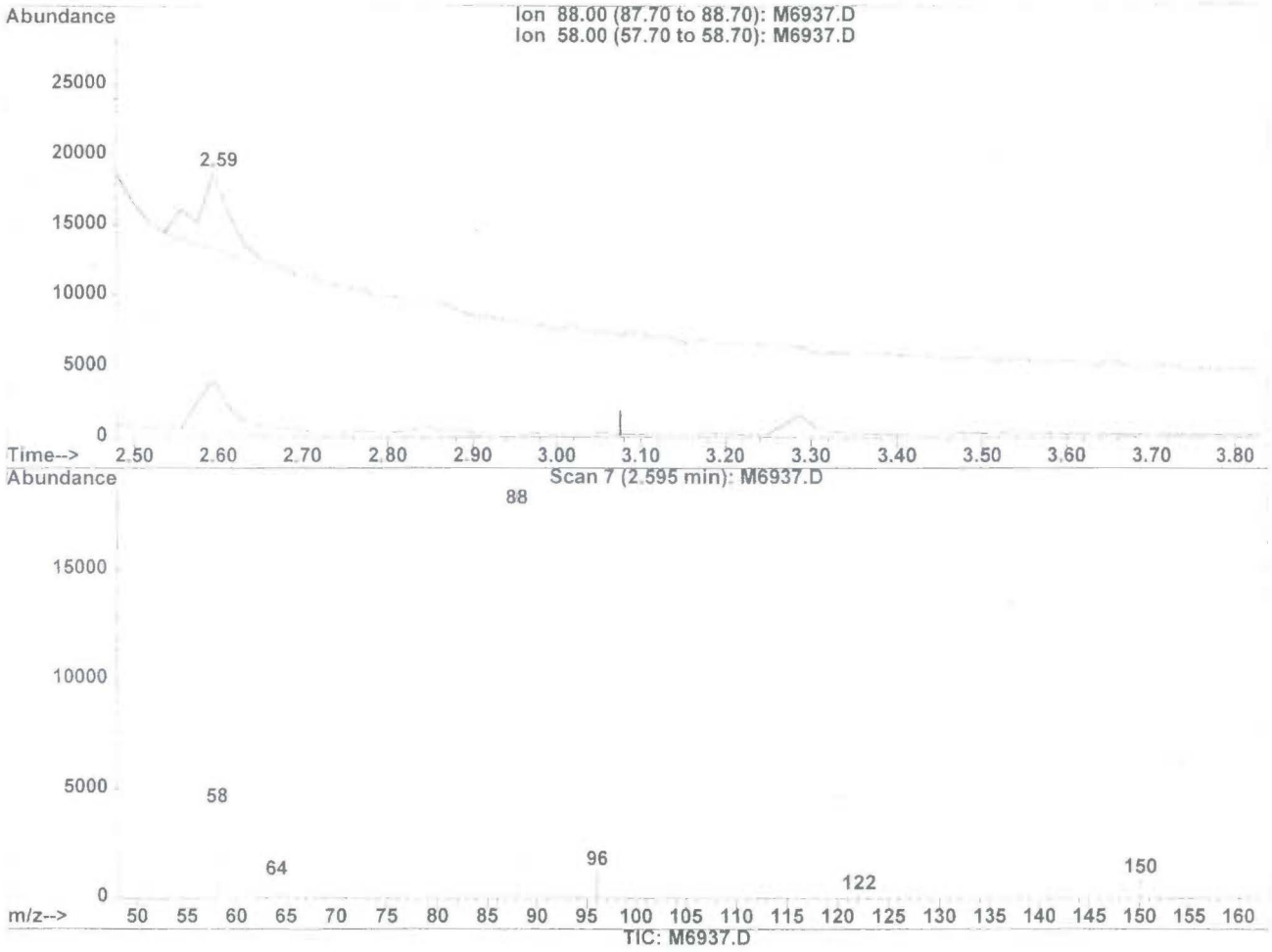


Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6937.D
Acq On : 18 May 06 19:04
Sample : WLCSD;051706
Misc :
Quant Time: May 19 8:26 19106

Vial: 14
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0518.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration



(2) 1,4-Dioxane

after - 9AC05206

2.59min 0.80ug/L m

response 14432

Ion	Exp%	Act%
88.00	100	100
58.00	90.00	84.08
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6953.D
Acq On : 19 May 06 11:50
Sample : AI04617MS
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 12:59 19106

Vial: 3
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0519.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0519

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.53	96	12329m	0.80	ug/L	-0.03
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10 (s	11.36	152	141279	1.43	ug/L	-0.03
Spiked Amount 2.000	Range 20 - 150		Recovery =	71.50%		
Target Compounds						Qvalue
2) 1,4-Dioxane	2.56	88	11060	0.75	ug/L	51

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

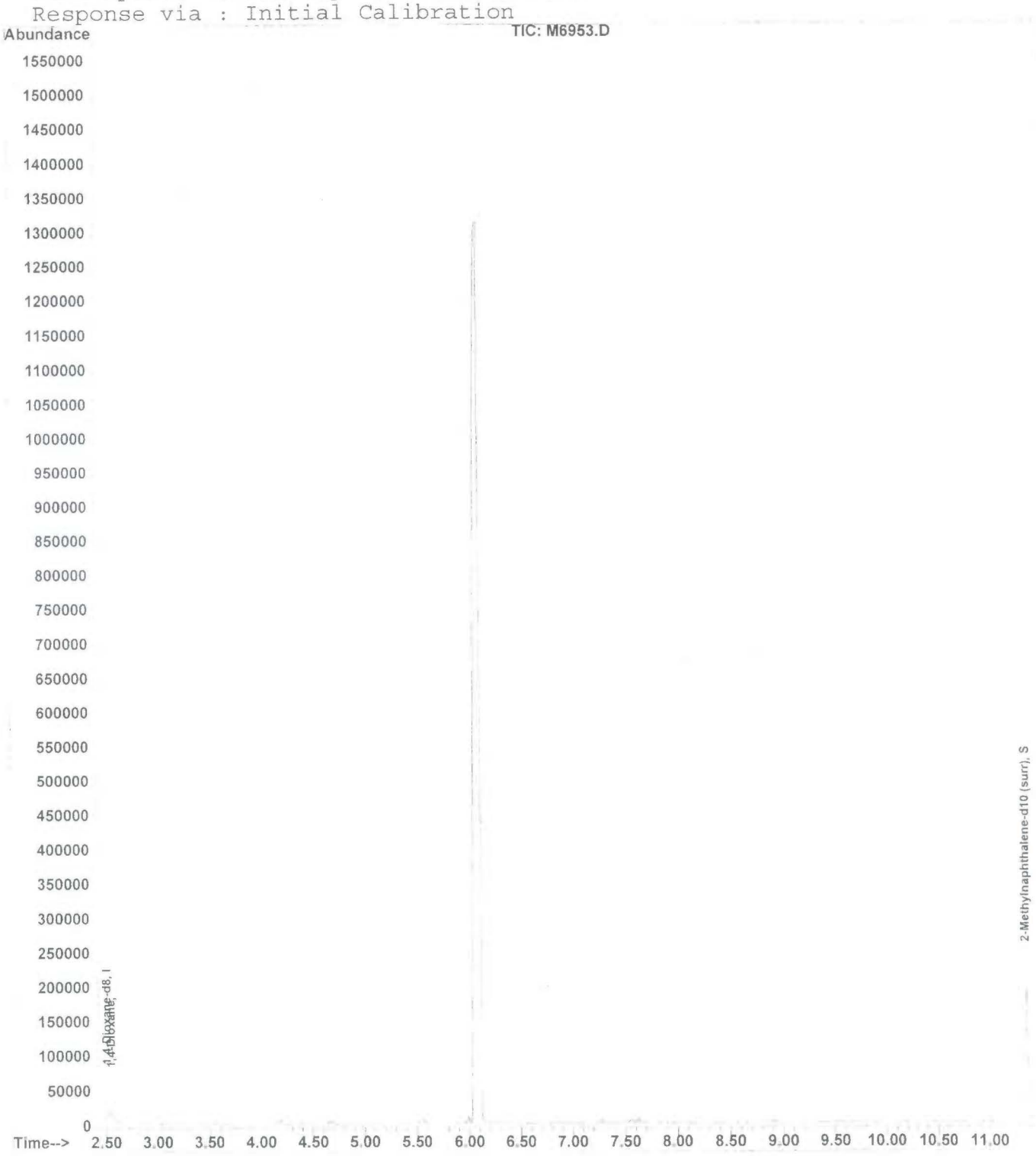
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6953.D
Acq On : 19 May 06 11:50
Sample : AI04617MS
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 12:59 19106

Vial: 3
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



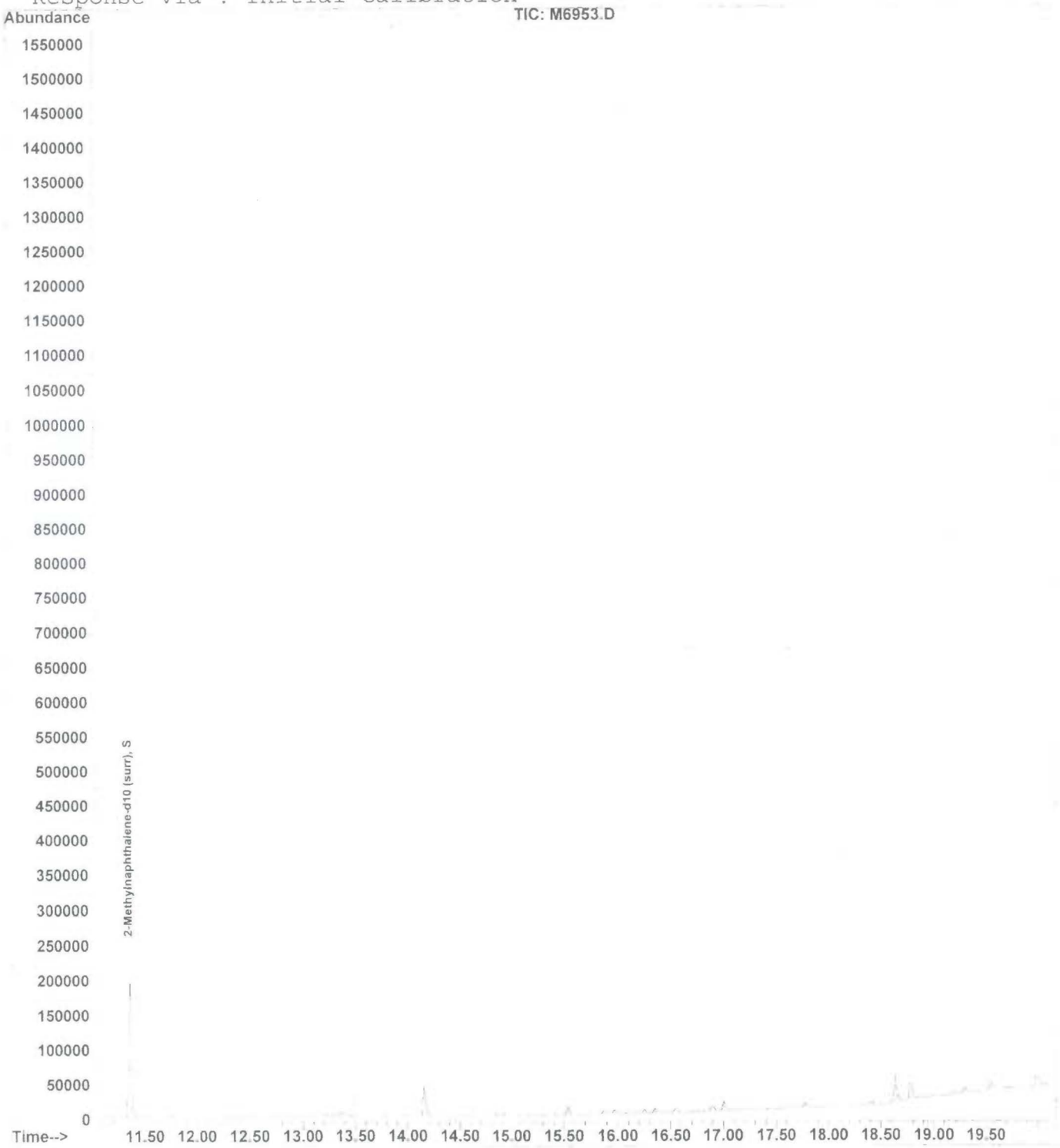
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6953.D
Acq On : 19 May 06 11:50
Sample : AI04617MS
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 12:59 19106

Vial: 3
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

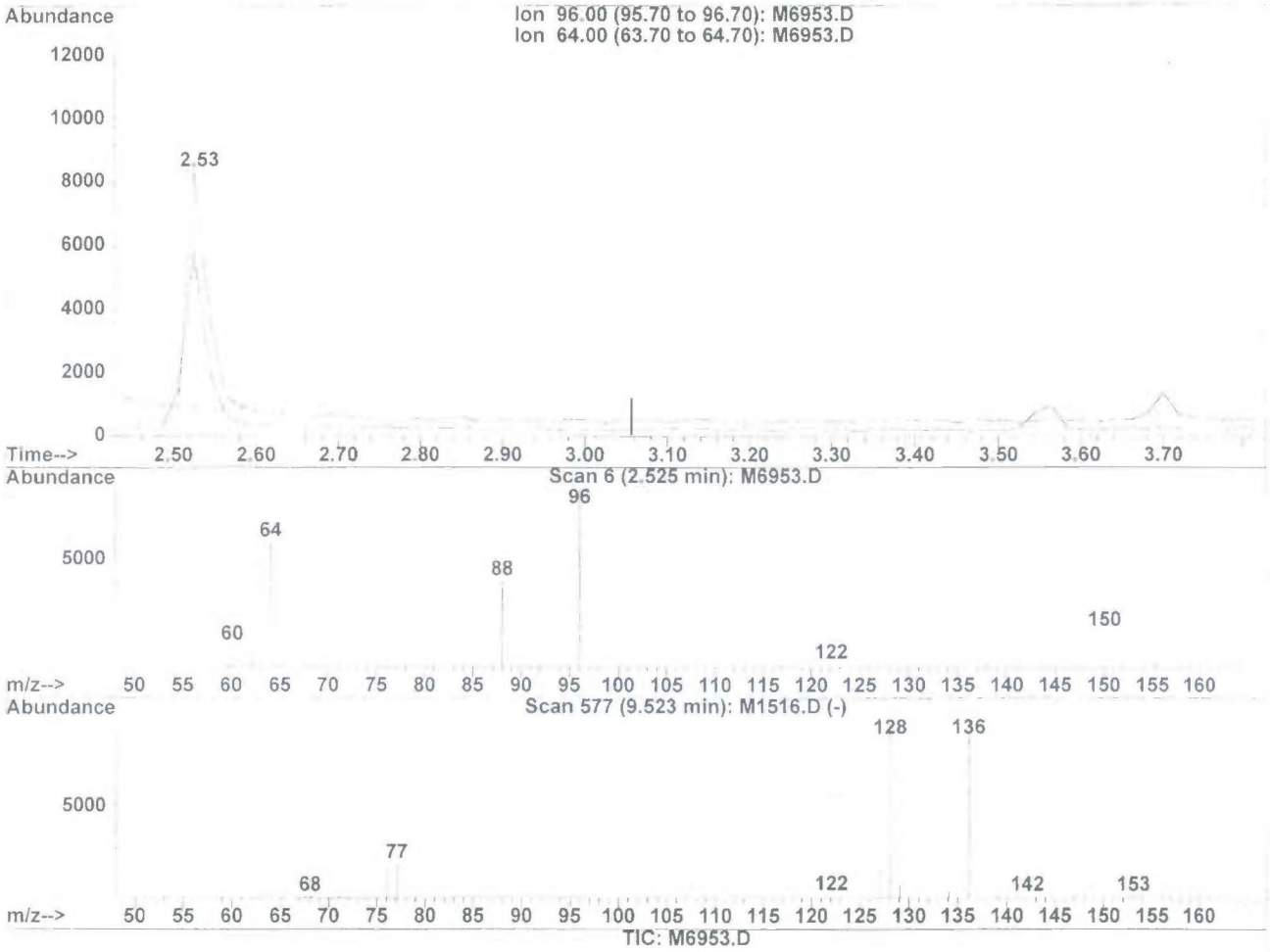


Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6953.D
Acq On : 19 May 06 11:50
Sample : AI04617MS
Misc :
Quant Time: May 19 12:59 19106

Vial: 3
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration



(1) 1,4-Dioxane-d8 (I)

2.53min 0.80ug/L m

after-MC052006

response 12329

Ion	Exp%	Act%
96.00	100	100
64.00	90.00	87.70
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\M6954.D
Acq On : 19 May 06 12:21
Sample : AI04617MSD
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 13:01 19106

Vial: 4
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0519.RE

Quant Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration
DataAcq Meth : SMDX0519

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dioxane-d8	2.53	96	14955	0.80	ug/L	-0.03
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10 (s	11.36	152	142212	1.19	ug/L	-0.03
Spiked Amount 2.000	Range 20 - 150		Recovery	=	59.50%	
Target Compounds						Qvalue
2) 1,4-Dioxane	2.56	88	11540m	0.64	ug/L	44

MC 05 2006

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

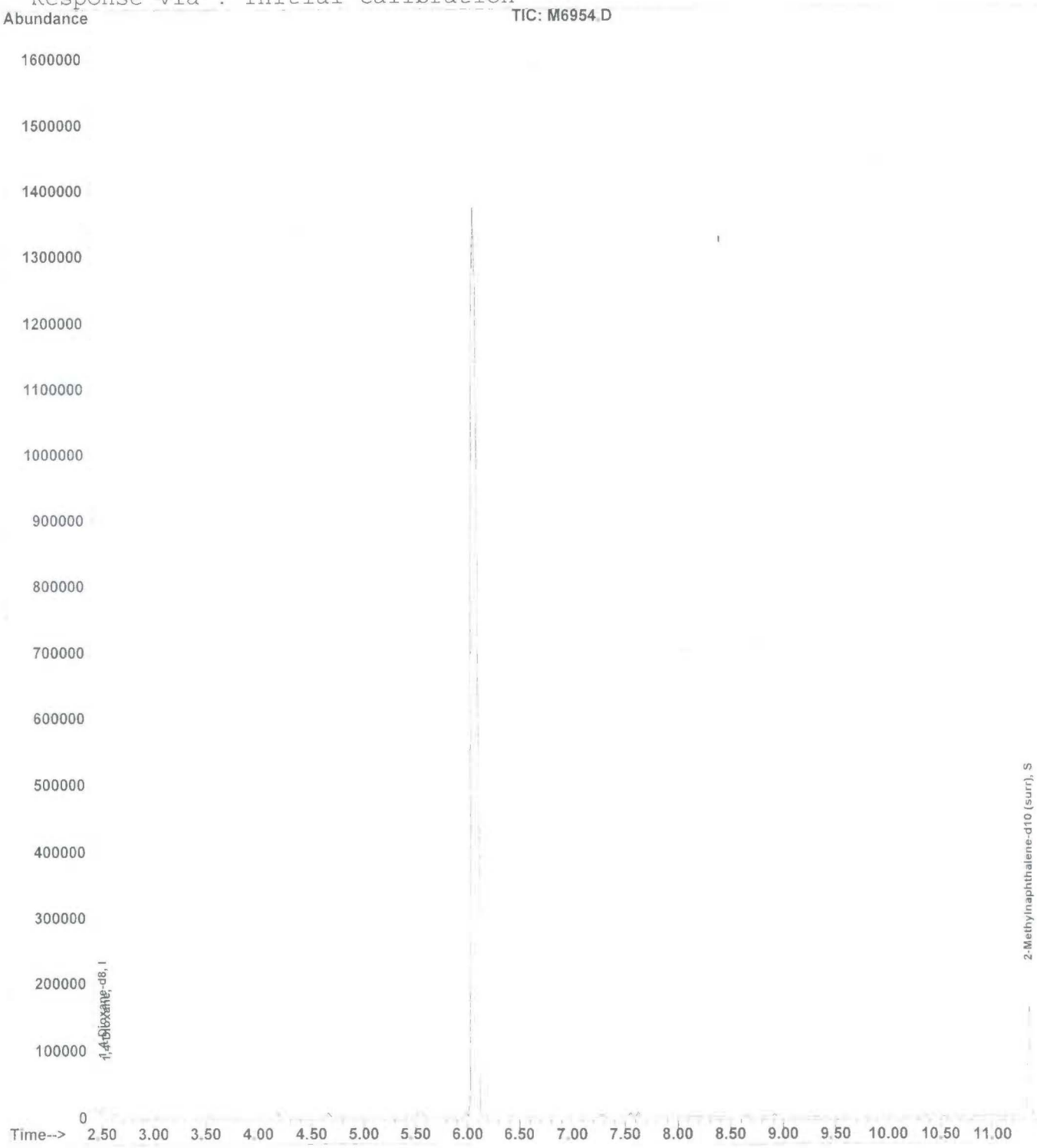
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6954.D
Acq On : 19 May 06 12:21
Sample : AI04617MSD
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 13:01 19106

Vial: 4
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration

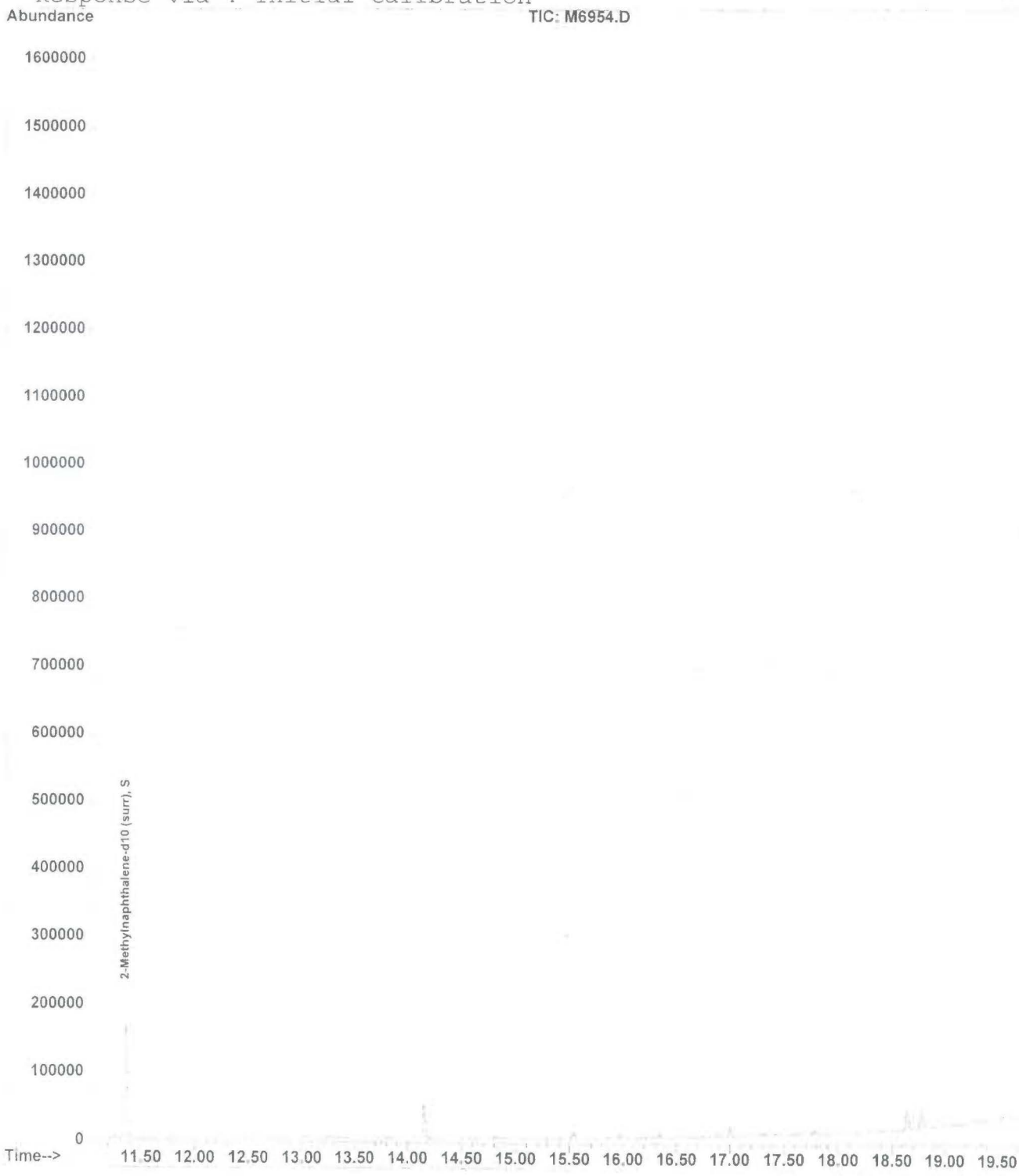


Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6954.D
Acq On : 19 May 06 12:21
Sample : AI04617MSD
Misc :
MS Integration Params: rteint.p
Quant Time: May 19 13:01 19106

Vial: 4
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: SMDX0519.RE

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Initial Calibration



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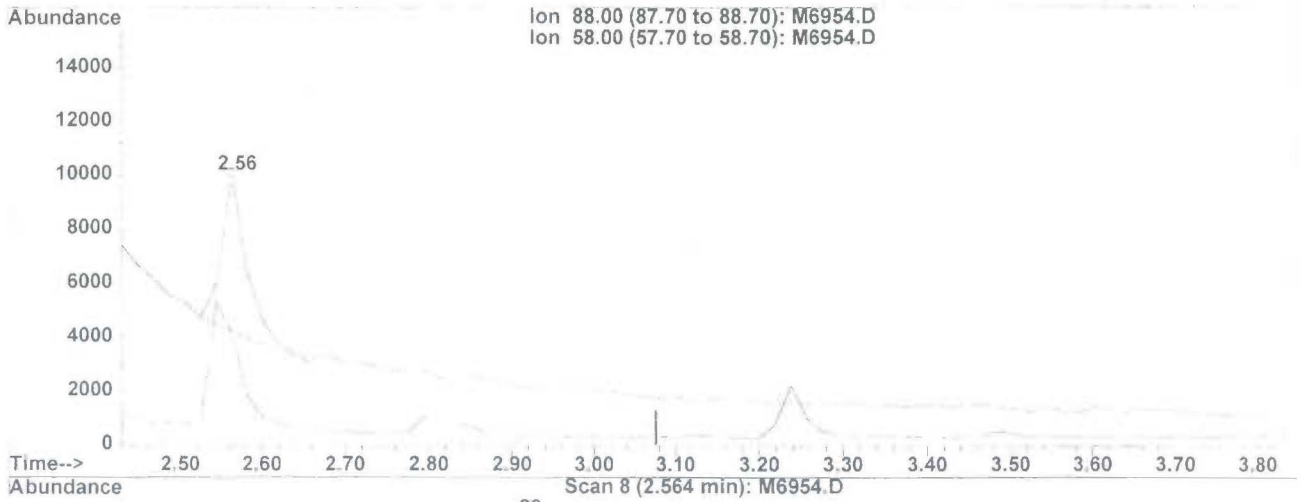
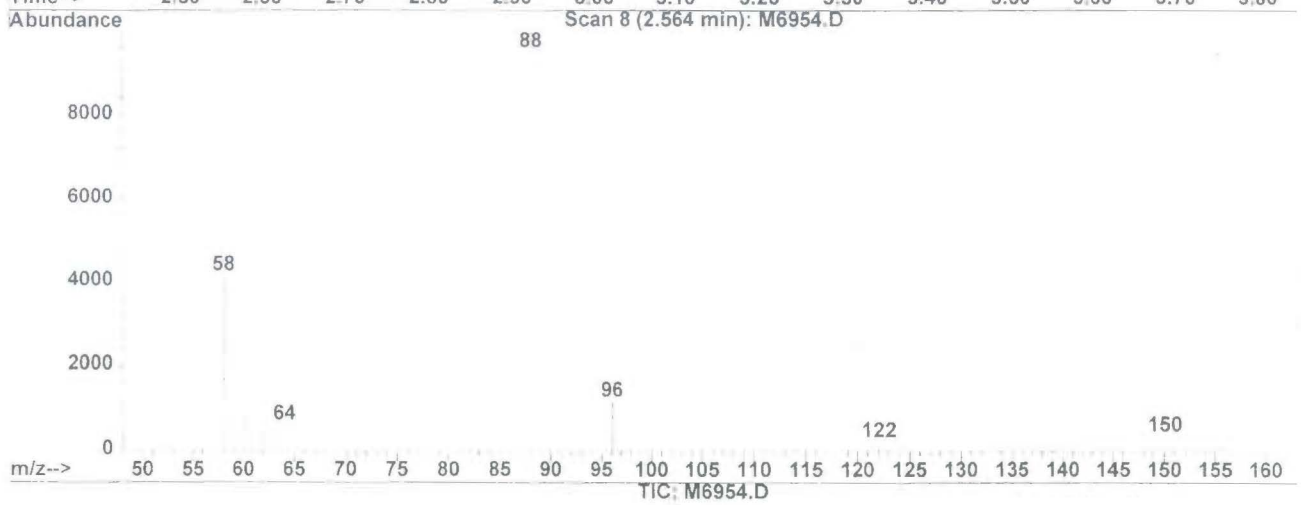
Quantitation Report

Data File : C:\HPCHEM\1\DATA\M6954.D
Acq On : 19 May 06 12:21
Sample : AI04617MSD
Misc :
Quant Time: May 19 13:01 19106

Vial: 4
Operator: JFG
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: temp.res

Method : C:\HPCHEM\1\METHODS\SMDX0519.M (RTE Integrator)
Title : Sim PAH 8270
Last Update : Thu May 18 16:21:50 2006
Response via : Multiple Level Calibration





(2) 1,4-Dioxane

2.56min 0.64ug/L m

response 11540

Ion	Exp%	Act%
88.00	100	100
58.00	90.00	119.40
0.00	0.00	0.00
0.00	0.00	0.00

after · MC 052006

BNA Water Extractions

Northeast Laboratory SERVICES

EPA Methods: 8270C, 8270C(SIM), 3510C, 3580, 625

NEL SOP #'s: 3.3.15; 3.3.29; 3.3.34; 3.3.39; 3.3.46; 3.3.49

Extraction date: 5/17/06 Start: 9:00 Surrogate: SIM Surrogate GC1105 2.0 µg/ml

Extracted by: JVM Finish: 10:40 Spike: 1,4 Dioxane Spike GC1145 2.0 µg/ml

Solvent tag: MeCl2 1650 DI Lot: 051706

	Client Name	Sample ID Number	Sample Volume	Surr. Added	Spike Added	Final Volume	Notes and Comments
01	Nel QC	W - Blank	1000 ml	1 ml	–		*Basic/Neutral Only
02	↓	W - LCS	1000 ml	↓	1 ml		
03	↓	W - LCS D	1000 ml	↓	1 ml		
04	Tetra Tech	W - AI04617	1050 ml	↓	–		
05	↓	W - AI04617 MS	1050 ml	↓	1 ml		
06	↓	W - AI04617 MSD	1050 ml	↓	1 ml		
07	↓	W - AI04618	1050 ml	↓	–		
08	↓	W - AI04619	1050 ml	↓	–		
09	↓	W - AI04620	1050 ml	↓	–		
10	↓	W - AI04621	1050 ml	↓	–		
11	↓	W - AI04622	1050 ml	↓	–		
12	↓	W - AI04623	1050 ml	↓	–		
13	↓	W - AI04624	1050 ml	↓	–		
14	↓	W - AI04625	1050 ml	↓	–		
15	↓	W - AI04626	1050 ml	↓	–		
16	↓	W - AI04627	1050 ml	↓	–		
17	↓	W - AI04628	1050 ml	↓	–		↑
18	Dragon Products	W - AI04693	1 ml	1 ml	–	10 ml	*see below
19							
20							
21							
22							
23							
24							
25							

Additional Comments:

*AI04693 is a waste oil. I diluted 1 ml of sample up to 9 ml of MeCl2 and added 1 ml of BNA Surrogate (GC1144) for a final volume of 10 ml

Reviewed by: Review date: 05/16

144

NEL
INSTRUMENT RUN LOG
5890M

Column:Rtx-5MS

Sample ID	File Number	Method	Matrix	Analyst	Date Analyzed	Dilution Factor	Accept (Y/N)	Comments
50ng DFTPP	MD562	DFTPP4	—	JJC	051800	1.0	Y	
SSTD1.25	M6925	SMDX0518	—				N	
SSTD1.25	M6926		—				N	
SSTD1.25	M6927		—				N	
								3PE051806
50ng DFTPP	MD563	DFTPP4	—	JJC	051806	1.0	Y	1407
SSTD1.25	M6928	SMDX0518	—				Y	use
SSTD0.125	M6929		—				Y	
SSTD0.625	M6930		—				Y	
SSTD2.00	M6931		—				Y	
SSTD2.50	M6932		—				Y	
SSTD3.00	M6933		—				Y	
SSTD0.625	M6934		—				N	
WBLK;051706	M6935		AQ				Y	
WLES;051706	M6936						Y	
WLESD;051706	M6937						Y	
AI04617	M6938						Y	
AI04617MS	M6939						N	R
AI04617MSD	M6940						N	
AI04618	M6941						Y	
AI04619	M6942						N	R
AI04620	M6943						N	
AI04621	M6944						N	
AI04622	M6945						N	
AI04623	M6946						N	

DFTPP: SV349
CV: SV353 → SV360
IS: SV287

Reviewed by: [illegible]
Date: [illegible]

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NEL
INSTRUMENT RUN LOG
5890M

Column:Rtx-5MS

Sample ID	File Number	Method	Matrix	Analyst	Date Analyzed	Dilution Factor	Accept (Y/N)	Comments
AI04624	M6947	SMDX0518	AQ	JJC	051806	1.0	Y	
AI04625	M6948						Y	
AI04626	M6949						Y	
AI04627	M6950						Y	
AI04628	M6951						N	OOC (R)
50ng DFTPP	MD564	DFTPP4	—	JJC	051906	1.0	Y	1057
SSTD1:25	M6952	SMDX0519	—				Y	
AI04617MS	M6953		AQ				Y	
AI04617MSD	M6954						Y	
AI04628	M6955						Y	
WLCS;051706	M6956						N	Not needed
WLCSD;051706	M6957						N	
AI04622	M6958						Y	
AI04623	M6959						Y	
AI04620	~~M6960~~ M6960						Y	
AI04621	M6961						Y	
AI04619	M6962						Y	
						99 C051906		

DFTPP: SV349
CV: SV357
IS: SV287

Reviewed by: [signature]
Date: 05/20

Northeast Laboratory SERVICES

P.O. Box 788
Waterville, Maine 04903-0788

RT. 137, China Road
Winslow, Maine 04901

Administrative Offices
Phone: 207-873-7711
Fax: 207-873-7022
Customer Service
Phone: 800-244-8378
Fax: 207-873-7022

Section III

Chain of Custody Records

Northeast Laboratory SERVICES

P.O. Box 788 • Waterville, ME 04903-0788
207-873-7711 / Fax: 207-873-7022

Shipping: 227 China Road
Winslow, Maine 04901

CHAIN OF CUSTODY RECORD

Company Name: Tetra Tech NUS, Inc

Reporting Address: Foster Plaza 7 661 Anderson DR Pit. PA 15220

Client Contact: Lee Ann Sinagoga Phone 412 921 7090 Fax

Billing Name: Same as above

Billing Address: Same as above Pittsburgh PA

PO #: Quote # G00234 0505

Project Name: Davisville

Lab Comments:

Sample Designation	Sample Date/Time	Preservation: 1 H_2SO_4, 2=HNO_3, 3=HCl, 4=NaOH, 5=Thio, 6=4°C, 7=None	Container Size, Type	QTY	Sample Type Code: G = Grab C = Composite	Matrix Code Choose One: GW = Ground Water WW = Waste Water DW = Drinking Water SW = Surface Water O = Oil WP = Wipe S = Soil F = Food Other (Please List)	Analyses Requested	Lab Sample ID
MW16-15D-NWG	5/11/06 0905	6	1-L	6	G	GW	1,4 DIOXANE 8270C SIM	A104617.1-6
MW16-59I-NWG	1042	6	1-L	2				618.1-2
MW16-10D-NWG	1250	6	1-L	2				619.1-2
MW16-37S-NWG	1330	6	1-L	2				620
MW16-37I-NWG	1447	6	1-L	2				621
MW16-05D-NWG	1645	6	1-L	2				622
FD 051106 01	1650	6	1-L	2				623
MW16-04D-NWG	1753	6	1-L	2				624
MW16-05I-NWG	5/11/06 1825	6	1-L	2	G	GW		625
MW16-45I-NWG	5/12/06 0845	6	1-L	2	G	GW	1,4 Dioxane	626

Notes: Use MW16-15D-NWG for Lab QC "Blue Ice" packs leaked on outside of bottles, noted on receipt at TtNUS

Sampled By: K. O'Neill + P Seward

Known hazards associated with samples:

Relinquished By	Date/Time	Received By	Date/Time	pH
Kevin O'Neill	5/12/06 1430	D. Mitchell	5/13/06 1130A	
Relinquished By	Date/Time	Received By	Date/Time	Rush Yes: 5 days 50% surcharge; 2 days 100% surcharge
Relinquished By	Date/Time	Received By	Date/Time	Field Filtered Y / N: N

The recommended temperature of the internal container is 2-6°C. Do you authorize analysis if the temp is out of range? Yes No

2.7 1.2 1.5

Chain of Custody must be filled out completely. This includes signature, sample description, analysis requested, date and time sampled.

If not completed, samples will be rejected.

If a sample is hazardous or radioactive, the sample will be returned to the client at the client's expense.
Standard turn around time is 10 business days - depending on season.

1062

Rev. 8/04 Form #NEL 100

Northeast Laboratory SERVICES

P.O. Box 788 • Waterville, ME 04903-0788
207-873-7711 / Fax: 207-873-7022

Shipping: 227 China Road
Winslow, Maine 04901

CHAIN OF CUSTODY RECORD

Company Name: Tetra Tech NUS, Inc

Reporting Address: Foster Plaza 7 661 Anderson DR

Client Contact: Lee Ann Sinagoga Phone 412 921 7090 Fax

Billing Name: Pittsburgh, PA

Billing Address: 15220

PO #: G00234 0505
Quote #
Project Name Davisville

Lab Comments:

Sample Designation	Sample Date/Time	Preservation: 1 H_2SO_4, 2=HNO_3, 3=HCL, 4=NaOH, 5=Thio, 6=4°C, 7=None	Container Size, Type	QTY	Sample Type Code: G = Grab C = Composite	Matrix Code Choose One: GW = Ground Water WW = Waste Water DW = Drinking Water SW = Surface Water O = Oil WP = Wipe S = Soil F = Food Other (Please List)	Analyses Requested	Lab Sample ID
MW16-39I-NWG	5/12/06 1000	6	1-L	2	G	GW	1,4 Dioxane 8270C SIM	A104627.1-2
RB05120601	5/12/06 1100	6	1-L	2	G	GW	↓ ↓	628 /

KTO 5/12/06

Notes: SATURDAY Delivery SDG TT051306

Sampled By: Kevin O'Neill Pete Seward

Known hazards associated with samples:

Relinquished By	Date/Time	Received By	Date/Time	pH	
Kevin O'Neill	5/12/06 1430	D. Mitchell	5/13/06 1130A		The recommended temperature of the internal container is 2-6°C. Do you authorize analysis if the temp is out of range?
Relinquished By	Date/Time	Received By	Date/Time	Rush Yes 5 days 50% surcharge / 2 days 100% surcharge	
Relinquished By	Date/Time	Received By	Date/Time	Field Filtered Y N	Yes No

Chain of Custody must be filled out completely. This includes signature, sample description, analysis requested, date and time sampled.

If not completed, samples will be rejected.

2 of 2

Rev. 8/04 Form #NEL 100

If a sample is hazardous or radioactive, the sample will be returned to the client at the client's expense.
Standard turn-around-time is 10 business days - depending on season.

150

Sample Receipt Report

200550 **Tetra Tech NUS Inc**

Sample ID	Sample Description	Project	Matrix	Date Sampled	Date Received	Analyte	Due Date	Location	SDG Number
AI04617	MW16-15D-NWG ms/msd	Davisville	G-WATER	5/11/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	MW16-15D-NWG ms/msd	Davisville	G-WATER	5/11/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	MW16-15D-NWG ms/msd	Davisville	G-WATER	5/11/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306
AI04618	MW16-59I-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	MW16-59I-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	MW16-59I-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306
AI04619	MW16-10D-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	MW16-10D-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	MW16-10D-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306
AI04620	MW16-37S-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	MW16-37S-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	MW16-37S-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306
AI04621	MW16-37I-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	MW16-37I-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	MW16-37I-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306
AI04622	MW16-05D-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	MW16-05D-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	MW16-05D-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306
AI04623	FD05110601	Davisville	G-WATER	5/11/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	FD05110601	Davisville	G-WATER	5/11/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	FD05110601	Davisville	G-WATER	5/11/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306
AI04624	MW16-04D-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	MW16-04D-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	MW16-04D-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306

Sample ID	Sample Description	Project	Matrix	Date Sampled	Date Received	Analyte	Due Date	Location	SDG Number
AI04625	MW16-05I-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	MW16-05I-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	MW16-05I-NWG	Davisville	G-WATER	5/11/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306
AI04626	MW16-45I-NWG	Davisville	G-WATER	5/12/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	MW16-45I-NWG	Davisville	G-WATER	5/12/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	MW16-45I-NWG	Davisville	G-WATER	5/12/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306
AI04627	MW16-39I-NWG	Davisville	G-WATER	5/12/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	MW16-39I-NWG	Davisville	G-WATER	5/12/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	MW16-39I-NWG	Davisville	G-WATER	5/12/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306
AI04628	RB05120601	Davisville	G-WATER	5/12/2006	5/13/2006	QC Level 4-SEMI VOLA	6/2/2006		TT051306
	RB05120601	Davisville	G-WATER	5/12/2006	5/13/2006	Semi Volatile Organics 1	6/2/2006		TT051306
	RB05120601	Davisville	G-WATER	5/12/2006	5/13/2006	Separatory Funnel-BNA	6/2/2006		TT051306

ESI

ATTACHMENT NO. 6

Field Sampling Forms for Fall 2004 and Spring 2006 Sampling Events

Fall 2004 Sampling Event

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 9/28/04

Well ID: MW16-45I Personnel: H. Ballew Start Time: 0900 Finish Time: 1130

Air Monitoring Equipment Used (Make/Model/Serial No.): Photovac 2020

Calibration Information: See orange calibration log

Ambient Air Reading: 0 ppm Well Headspace Reading: 0 ppm

Well Data/ Integrity

Well Locked	√ Yes ___ No	Well Material:	√ PVC/ ___ SS/Other ___
Protective Casing Secure	√ Yes ___ No	Well Diameter:	√ 2-in. / ___ 4-in./ ___ 6-in./ Other
Concrete Collar Intact	√ Yes ___ No	Water Level Equip. Used:	√ Elect. Cond. Probe
Other: ___			___ Interface Probe
Protective Casing Stick Up (ft): 2.91			___ Press. Transducer
Casing/Well Difference (ft): 0.26			___ ___

Water Level Data Measured from: Top of Riser

Depth to Bottom of Well: 42.0 (ft) Depth to Pump Intake: 33.0 (ft)

Depth to Top of Water: 9.46 (ft) Depth of Screened Interval: 32.0 – 42.0 (ft)

Field Hach Kit Data

Concentration of Fe: 3.3 Mg/L

Concentration of CO_2: 70 Mg/L

Analytical Parameter	Check if Field Filtered	Volume Required/ Sample Container	Sample ID	Preservation Method
TCL VOC (detection limit, <1 ug/L)(5030B / 8260B) and TCL VOC SIM		4@ 40 ml VOA	MW16-45I	HCL, < 4°C
Alkalinity, Sulfate, Total Chloride, Nitrate, Nitrite, Salinity		1 liter poly	MW16-45I	< 4°C
Total metals		1 liter poly	MW16-45I	HNO_3< 4°C
Dissolved metals	√	1 liter poly	MW16-45I	HNO_3< 4°C
Total ammonia		500 ml poly	MW16-45I	H_2SO_4 < 4°C
Dissolved organic carbon Dissolved inorganic carbon		2@ 40 ml VOA	MW16-45I	H_2SO_4< 4°C
Hydrogen sulfide		1 liter poly	MW16-45I	ZnAC / NaOH, < 4°C
Methane / Ethane / Ethene		3@ 40 ml VOA	MW16-45I	HCL, < 4°C
Cyanide		1 500 ml poly	MW16-45I	NaOH, < 4°C

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 9/28/04

Well ID: MW16-45I Personnel: H. Ballew Start Time: 0900 Finish Time: 1130

Equipment Identify equipment used (i.e., pumps, ballers, tubing, filters, etc.)

P = Purge S = Sample		Equipment Used (serial number)	Decon Method
P	S	Solinst Water Level Indicator	Alconox, isopropyl, DI
P	S	YSI 600XL Water Quality Meter w/Flow-Through Cell	Alconox, isopropyl, DI
P	S	Geolog dedicated bladder pump and tubing, MP 10 control box, nitrogen tank	NA
P	S	Lamotte 2020 Turbidimeter or similar	NA
P	S	Hach Kit DR-700 or similar (dissolved ferrous iron)	DI
P	S	Hach Kit 8205 or similar (dissolved carbon dioxide)	DI

See orange calibration log for equipment serial numbers and daily calibration information

Parameter (units)		Initial	Volume	Volume	Volume	Volume	Volume	Volume
Liters		0	2	4	5	6	7	8
Time		0900	0910	0920	0925	0930	0935	0940
Temperature	(°C)	14.09	14.02	13.95	14.03	14.05	14.05	14.05
pH		6.65	6.67	6.67	6.67	6.68	6.68	6.69
Conductivity	(ms/cm)	0.320	0.318	0.314	0.314	0.315	0.316	0.316
DO	(mg/L)	3.64	2.66	2.53	2.54	2.53	2.52	2.73
Turbidity	(NTUs)	122	69.0	33.6	31.4	26.4	22.4	20.8
Salinity	(ppth)	0.20	0.19	0.19	0.19	0.19	0.19	0.19
Eh	(mV)	-34.6	-41.7	-44.2	-47.0	-47.5	-48.7	-50.3
Water Level	(ft from TOR)	9.65	9.70	9.70	9.72	9.72	9.72	9.72
Flow Rate	(mL/min.)	210	210	210	210	210	210	210

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters		9	10	11				
Time		0945	0950	0955				
Temperature	(°C)	14.08	14.09	14.09				
pH		6.69	6.69	6.69				
Conductivity	(ms/cm)	0.317	0.315	0.316				
DO	(mg/L)	2.79	2.81	2.80				
Turbidity	(NTUs)	15.5	14.2	13.7				
Salinity	(ppth)	0.19	0.19	0.19				
Eh	(mV)	-51.1	-51.3	-51.9				
Water Level	(ft from TOR)	9.72	9.73	9.73				
Flow Rate	(mL/min.)	210	210	210				

Notes:

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/04/04

Well ID: MW16-04D Personnel: M. Magilton Start Time: 1330 Finish Time: 1610

Air Monitoring Equipment Used (Make/Model/Serial No.): Photovac 2020

Calibration Information: See white calibration log

Ambient Air Reading: 0 ppm Well Headspace Reading: 0 ppm

Well Data/ Integrity

Well Locked √ Yes ___ No

Protective Casing Secure √ Yes ___ No

Concrete Collar Intact √ Yes ___ No

Other: ___

Protective Casing Stick Up (ft): 2.13

Casing/Well Difference (ft): 0.65

Well Material: √ PVC/ ___ SS/Other ___

Well Diameter: √ 2-in. / ___ 4-in./ ___ 6-in./ Other

Water Level Equip. Used: √ Elect. Cond. Probe

___ Interface Probe

___ Press. Transducer

___ ___

Water Level Data Measured from: Top of Riser

Depth to Bottom of Well: 53.0 (ft) Depth to Pump Intake: 50.0 (ft)

Depth to Top of Water: 7.3 (ft) Depth of Screened Interval: 43.0 – 53.0 (ft)

Field Hach Kit Data

Concentration of Fe: 1.54 Mg/L

Concentration of CO_2: 71 Mg/L

Analytical Parameter	Check if Field Filtered	Volume Required/ Sample Container	Sample ID	Preservation Method
TCL VOC (detection limit, <1 ug/L)(5030B / 8260B) and TCL VOC SIM		4@ 40 ml VOA	MW16-04D	HCL, < 4°C
Alkalinity, Sulfate, Total Chloride, Nitrate, Nitrite, Salinity		1 liter poly	MW16-04D	< 4°C
Total metals		1 liter poly	MW16-04D	HNO_3< 4°C
Dissolved metals	√	1 liter poly	MW16-04D	HNO_3< 4°C
Total ammonia		500 ml poly	MW16-04D	H_2SO_4 < 4°C
Dissolved organic carbon Dissolved inorganic carbon		2@ 40 ml VOA	MW16-04D	H_2SO_4< 4°C
Hydrogen sulfide		1 liter poly	MW16-04D	ZnAC / NaOH, < 4°C
Methane / Ethane / Ethene		3@ 40 ml VOA	MW16-04D	HCL, < 4°C
Cyanide		1 500 ml poly	MW16-04D	NaOH, < 4°C

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/04/04

Well ID: MW16-04D Personnel: M. Magilton Start Time: 1330 Finish Time: 1610

Equipment Identify equipment used (i.e., pumps, bailers, tubing, filters, etc.)

P = Purge S = Sample		Equipment Used (serial number)	Decon Method
P	S	Solinst Water Level Indicator	Alconox, isopropyl, DI
P	S	YSI 600XL Water Quality Meter w/Flow-Through Cell	Alconox, isopropyl, DI
P	S	Geolog dedicated bladder pump and tubing, MP 10 control box, nitrogen tank	NA
P	S	Lamotte 2020 Turbidimeter or similar	NA
P	S	Hach Kit DR-700 or similar (dissolved ferrous iron)	DI
P	S	Hach Kit 8205 or similar (dissolved carbon dioxide)	DI

See white calibration log for equipment serial numbers and daily calibration information

Parameter (units)		Initial	Volume	Volume	Volume	Volume	Volume	Volume
Liters		0	1	2	3	4	5	6
Time		1345	1400	1405	1410	1415	1420	1425
Temperature	(°C)	14.46	13.99	14.04	14.16	14.31	14.58	14.70
pH		6.55	6.42	6.43	6.42	6.42	6.42	6.43
Conductivity	(ms/cm)	0.316	0.305	0.305	0.306	0.307	0.308	0.309
DO	(mg/L)	17.99	16.24	15.15	14.80	14.58	14.24	13.94
Turbidity	(NTUs)	19	90	340	180	180	120	120
Salinity	(ppth)	0.19	0.19	0.19	0.19	0.19	0.18	0.18
Eh	(mV)	0.8	2.6	4.0	6.0	7.2	7.7	8.2
Water Level	(ft from TOR)	7.6	7.55	7.55	7.50	7.50	7.6	7.6
Flow Rate	(mL/min.)	100	100	100	100	100	100	100

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters		7	8	9	10			
Time		1430	1435	1440	1445			
Temperature	(°C)	15.15	15.26	15.10	15.22			
pH		6.44	6.41	6.42	6.43			
Conductivity	(ms/cm)	0.312	0.312	0.310	0.312			
DO	(mg/L)	13.76	13.56	13.10	13.80			
Turbidity	(NTUs)	85	84	55	55			
Salinity	(ppth)	0.18	0.19	0.18	0.18			
Eh	(mV)	8.8	9.4	9.7	10.1			
Water Level	(ft from TOR)	7.55	7.55	7.55	7.55			
Flow Rate	(mL/min.)	100	10	100	100			

Notes:

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/05/04

Well ID: MW16-37S Personnel: H. Ballew Start Time: 1300 Finish Time: 1435

Air Monitoring Equipment Used (Make/Model/Serial No.): Photovac 2020

Calibration Information: See orange calibration log

Ambient Air Reading: 0 ppm Well Headspace Reading: 0 ppm

Well Data/ Integrity

Well Locked	√ Yes ___ No	Well Material:	√ PVC/ ___ SS/Other ___
Protective Casing Secure	√ Yes ___ No	Well Diameter:	√ 2-in. / ___ 4-in./ ___ 6-in./ Other
Concrete Collar Intact	√ Yes ___ No	Water Level Equip. Used:	√ Elect. Cond. Probe
Other: ___			___ Interface Probe
Protective Casing Stick Up (ft): 2.44			___ Press. Transducer
Casing/Well Difference (ft): 0.25			___ ___

Water Level Data Measured from: Top of Riser

Depth to Bottom of Well: 22.0 (ft) Depth to Pump Intake: 20.0 (ft)

Depth to Top of Water: 12.16 (ft) Depth of Screened Interval: 7.0 – 22.0 (ft)

Field Hach Kit Data

Concentration of Fe: 0.0 Mg/L

Concentration of CO_2: 48 Mg/L

Analytical Parameter	Check if Field Filtered	Volume Required/ Sample Container	Sample ID	Preservation Method
TCL VOC (detection limit, <1 ug/L)(5030B / 8260B) and TCL VOC SIM		4@ 40 ml VOA	MW16-37S	HCL, < 4°C
Alkalinity, Sulfate, Total Chloride, Nitrate, Nitrite, Salinity		1 liter poly	MW16-37S	< 4°C
Total metals		1 liter poly	MW16-37S	HNO_3< 4°C
Dissolved metals	√	1 liter poly	MW16-37S	HNO_3< 4°C
Total ammonia		500 ml poly	MW16-37S	H_2SO_4 < 4°C
Dissolved organic carbon Dissolved inorganic carbon		2@ 40 ml VOA	MW16-37S	H_2SO_4< 4°C
Hydrogen sulfide		1 liter poly	MW16-37S	ZnAC / NaOH, < 4°C
Methane / Ethane / Ethene		3@ 40 ml VOA	MW16-37S	HCL, < 4°C
Cyanide		1 500 ml poly	MW16-37S	NaOH, < 4°C

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/05/04

Well ID: MW16-37S Personnel: H. Ballew Start Time: 1300 Finish Time: 1435

Equipment Identify equipment used (i.e., pumps, bailers, tubing, filters, etc.)

P = Purge S = Sample		Equipment Used (serial number)	Decon Method
P	S	Solinst Water Level Indicator	Alconox, isopropyl, DI
P	S	YSI 600XL Water Quality Meter w/Flow-Through Cell	Alconox, isopropyl, DI
P	S	Geolog dedicated bladder pump and tubing, MP 10 control box, nitrogen tank	NA
P	S	Lamotte 2020 Turbidimeter or similar	NA
P	S	Hach Kit DR-700 or similar (dissolved ferrous iron)	DI
P	S	Hach Kit 8205 or similar (dissolved carbon dioxide)	DI

See orange calibration log for equipment serial numbers and daily calibration information

Parameter (units)		Initial	Volume	Volume	Volume	Volume	Volume	Volume
Liters		1	2	3	4	6	8	10
Time		1305	1310	1315	1320	1325	1330	1335
Temperature	(°C)	15.41	16.11	16.21	16.23	16.51	16.55	16.60
pH		5.93	5.31	5.37	5.90	5.70	6.08	5.66
Conductivity	(ms/cm)	0.069	0.066	0.061	0.052	0.049	0.048	0.047
DO	(mg/L)	8.41	8.47	8.44	8.62	8.70	8.77	8.79
Turbidity	(NTUs)	0.46	0.66	0.94	0.28	0.00	0.00	0.37
Salinity	(ppth)	0.04	0.04	0.03	0.03	0.03	0.03	0.03
Eh	(mV)	204.2	205.5	209.6	207.9	209.9	211.2	225.7
Water Level	(ft from TOR)	12.19	12.19	12.19	12.19	12.19	12.19	12.19
Flow Rate	(mL/min.)	400	350	350	400	350	350	350

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters		12	14					
Time		13.40	13.45					
Temperature	(°C)	16.59	16.60					
pH		5.50	5.51					
Conductivity	(ms/cm)	0.047	0.047					
DO	(mg/L)	8.81	8.78					
Turbidity	(NTUs)	0.00	0.00					
Salinity	(ppth)	0.03	0.03					
Eh	(mV)	228.0	228.3					
Water Level	(ft from TOR)	12.19	12.19					
Flow Rate	(mL/min.)	350	350					

Notes:

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/05/04

Well ID: MW16-37I Personnel: S. Roberts Start Time: 1300 Finish Time: 1430

Air Monitoring Equipment Used (Make/Model/Serial No.): Photovac 2020

Calibration Information: See purple calibration log

Ambient Air Reading: 0 ppm Well Headspace Reading: 0 ppm

Well Data/ Integrity

Well Locked	√ Yes ___ No	Well Material:	√ PVC/ ___ SS/Other ___
Protective Casing Secure	√ Yes ___ No	Well Diameter:	√ 2-in. / ___ 4-in./ ___ 6-in./ Other
Concrete Collar Intact	√ Yes ___ No	Water Level Equip. Used:	√ Elect. Cond. Probe
Other: ___			___ Interface Probe
Protective Casing Stick Up (ft): 2.47			___ Press. Transducer
Casing/Well Difference (ft): 0.20			___ ___

Water Level Data Measured from: Top of Riser

Depth to Bottom of Well: 38.0 (ft) Depth to Pump Intake: 37.0 (ft)

Depth to Top of Water: 12.42 (ft) Depth of Screened Interval: 24.0 – 38.0 (ft)

Field Hach Kit Data

Concentration of Fe: 0.39 Mg/L

Concentration of CO_2: 237 Mg/L

Analytical Parameter	Check if Field Filtered	Volume Required/ Sample Container	Sample ID	Preservation Method
TCL VOC (detection limit, <1 ug/L)(5030B / 8260B) and TCL VOC SIM		4@ 40 ml VOA	MW16-37I	HCL, < 4°C
Alkalinity, Sulfate, Total Chloride, Nitrate, Nitrite, Salinity		1 liter poly	MW16-37I	< 4°C
Total metals		1 liter poly	MW16-37I	HNO_3< 4°C
Dissolved metals	√	1 liter poly	MW16-37I	HNO_3< 4°C
Total ammonia		500 ml poly	MW16-37I	H_2SO_4 < 4°C
Dissolved organic carbon Dissolved inorganic carbon		2@ 40 ml VOA	MW16-37I	H_2SO_4< 4°C
Hydrogen sulfide		1 liter poly	MW16-37I	ZnAC / NaOH, < 4°C
Methane / Ethane / Ethene		3@ 40 ml VOA	MW16-37I	HCL, < 4°C
Cyanide		1 500 ml poly	MW16-37I	NaOH, < 4°C

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/05/04

Well ID: MW16-37I Personnel: S. Roberts Start Time: 1300 Finish Time: 1430

Equipment Identify equipment used (i.e., pumps, bailers, tubing, filters, etc.)

P = Purge S = Sample		Equipment Used (serial number)	Decon Method
P	S	Solinst Water Level Indicator	Alconox, isopropyl, DI
P	S	YSI 600XL Water Quality Meter w/Flow-Through Cell	Alconox, isopropyl, DI
P	S	Geolog dedicated bladder pump and tubing, MP 10 control box, nitrogen tank	NA
P	S	Lamotte 2020 Turbidimeter or similar	NA
P	S	Hach Kit DR-700 or similar (dissolved ferrous iron)	DI
P	S	Hach Kit 8205 or similar (dissolved carbon dioxide)	DI

See purple calibration log for equipment serial numbers and daily calibration information

Parameter (units)		Initial	Volume	Volume	Volume	Volume	Volume	Volume
Liters		0	1	2	3	4	5	6
Time		1310	1315	1320	1325	1330	1335	1345
Temperature	(°C)	15.48	15.24	14.83	14.71	14.76	14.81	14.60
pH		5.65	5.42	5.43	5.46	5.48	5.47	5.54
Conductivity	(ms/cm)	0.068	0.064	0.063	0.062	0.063	0.063	0.063
DO	(mg/L)	6.91	6.25	6.03	5.88	5.96	6.04	6.17
Turbidity	(NTUs)	50	38	55	100	47	263	437
Salinity	(ppth)	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Eh	(mV)	-29.2	-20.6	-13.6	-10.9	-10.2	-8.4	40.8
Water Level	(ft from TOR)	12.64	12.64	12.64	12.64	12.64	12.64	12.64
Flow Rate	(mL/min.)	200	200	200	200	200	200	200

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters		7	8	9	10	11	12	
Time		1350	1355	1400	1405	1410	1415	
Temperature	(°C)	14.41	14.51	14.47	14.41	14.47	14.55	
pH		5.43	5.45	5.46	5.44	5.45	5.45	
Conductivity	(ms/cm)	0.062	0.062	0.062	0.062	0.062	0.062	
DO	(mg/L)	5.78	5.64	5.63	5.55	5.52	5.51	
Turbidity	(NTUs)	280	340	320	350	330	400	
Salinity	(ppth)	0.04	0.04	0.04	0.04	0.04	0.04	
Eh	(mV)	40.3	37.1	36.4	62.4	60.8	29.3	
Water Level	(ft from TOR)	12.64	12.64	12.64	12.64	12.64	12.64	
Flow Rate	(mL/min.)	200	200	200	200	200	200	

Notes:

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/07/04

Well ID: MW16-10D Personnel: B. Harvey Start Time: 1315 Finish Time: 1430

Air Monitoring Equipment Used (Make/Model/Serial No.): Photovac 2020

Calibration Information: See green calibration log

Ambient Air Reading: 0 ppm Well Headspace Reading: 0 ppm

Well Data/ Integrity

Well Locked	___ Yes √ No	Well Material:	√ PVC/ ___ SS/Other ___
Protective Casing Secure	√ Yes ___ No	Well Diameter:	√ 2-in. / ___ 4-in./ ___ 6-in./ Other
Concrete Collar Intact	√ Yes ___ No	Water Level Equip. Used:	√ Elect. Cond. Probe
Other: ___			___ Interface Probe
Protective Casing Stick Up (ft): flushmount			___ Press. Transducer
Casing/Well Difference (ft): 0.22			___ ___

Water Level Data Measured from: Top of Riser

Depth to Bottom of Well: 58.5 (ft) Depth to Pump Intake: 52.5 (ft)

Depth to Top of Water: 15.05 (ft) Depth of Screened Interval: 48.5 – 58.5 (ft)

Field Hach Kit Data

Concentration of Fe: 4.9 Mg/L

Concentration of CO_2: 300 Mg/L

Analytical Parameter	Check if Field Filtered	Volume Required/ Sample Container	Sample ID	Preservation Method
TCL VOC (detection limit, <1 ug/L)(5030B / 8260B), TCL VOC SIM, and 1,4-Dioxane		4@ 40 ml VOA	MW16-10D	HCL, < 4°C
Alkalinity, Sulfate, Total Chloride, Nitrate, Nitrite, Salinity		1 liter poly	MW16-10D	< 4°C
Total metals		1 liter poly	MW16-10D	HNO_3< 4°C
Dissolved metals	√	1 liter poly	MW16-10D	HNO_3< 4°C
Total ammonia		500 ml poly	MW16-10D	H_2SO_4 < 4°C
Dissolved organic carbon Dissolved inorganic carbon		2@ 40 ml VOA	MW16-10D	H_2SO_4< 4°C
Hydrogen sulfide		1 liter poly	MW16-10D	ZnAC / NaOH, < 4°C
Methane / Ethane / Ethene		3@ 40 ml VOA	MW16-10D	HCL, < 4°C
Cyanide		1 500 ml poly	MW16-10D	NaOH, < 4°C

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/07/04

Well ID: MW16-10D Personnel: B. Harvey Start Time: 1315 Finish Time: 1430

Equipment Identify equipment used (i.e., pumps, bailers, tubing, filters, etc.)

P = Purge S = Sample		Equipment Used (serial number)	Decon Method
P	S	Solinst Water Level Indicator	Alconox, isopropyl, DI
P	S	YSI 600XL Water Quality Meter w/Flow-Through Cell	Alconox, isopropyl, DI
P	S	Geolog dedicated bladder pump and tubing, MP 10 control box, nitrogen tank	NA
P	S	Lamotte 2020 Turbidimeter or similar	NA
P	S	Hach Kit DR-700 or similar (dissolved ferrous iron)	DI
P	S	Hach Kit 8205 or similar (dissolved carbon dioxide)	DI

See green calibration log for equipment serial numbers and daily calibration information

Parameter (units)		Initial	Volume	Volume	Volume	Volume	Volume	Volume
Liters		0	4	6	8	10	12	14
Time		1330	1340	1345	1350	1355	1400	1405
Temperature	(°C)	20.0	15.98	15.65	15.69	15.61	15.56	15.54
pH		6.40	6.42	6.46	6.51	6.51	6.52	6.54
Conductivity	(ms/cm)	0.159	0.154	0.155	0.158	0.159	0.160	0.161
DO	(mg/L)	2.31	0.91	0.77	2.22	1.27	0.99	0.84
Turbidity	(NTUs)	55	14.0	7.90	8.50	8.40	9.20	8.30
Salinity	(ppth)	0.07	0.07	0.07	0.07	0.08	0.08	0.08
Eh	(mV)	-20.2	-27.4	-34.7	-31.2	-40.5	-44.8	-48.8
Water Level	(ft from TOR)	15.10	15.95	15.99	15.96	15.99	15.99	15.99
Flow Rate	(mL/min.)	400	400	400	400	400	400	400

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters								
Time								
Temperature	(°C)							
pH								
Conductivity	(ms/cm)							
DO	(mg/L)							
Turbidity	(NTUs)							
Salinity	(ppth)							
Eh	(mV)							
Water Level	(ft from TOR)							
Flow Rate	(mL/min.)							

Notes:

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 9/29/04

Well ID: MW16-05I Personnel: H. Ballew Start Time: 1345 Finish Time: 1535

Air Monitoring Equipment Used (Make/Model/Serial No.): Photovac 2020

Calibration Information: See orange calibration log

Ambient Air Reading: 0 ppm Well Headspace Reading: 0 ppm

Well Data/ Integrity

Well Locked	√ Yes ___ No	Well Material:	√ PVC/ ___ SS/Other ___
Protective Casing Secure	√ Yes ___ No	Well Diameter:	√ 2-in. / ___ 4-in./ ___ 6-in./ Other
Concrete Collar Intact	√ Yes ___ No	Water Level Equip. Used:	√ Elect. Cond. Probe
Other: ___			___ Interface Probe
Protective Casing Stick Up (ft):	2.16		___ Press. Transducer
Casing/Well Difference (ft):	0.26		___ ___

Water Level Data Measured from: Top of Riser

Depth to Bottom of Well: 36.0 (ft) Depth to Pump Intake: 34.5 (ft)

Depth to Top of Water: 13.37 (ft) Depth of Screened Interval: 22.0 – 36.0 (ft)

Field Hach Kit Data

Concentration of Fe: 0.3 Mg/L

Concentration of CO_2: 342 Mg/L

Analytical Parameter	Check if Field Filtered	Volume Required/ Sample Container	Sample ID	Preservation Method
TCL VOC (detection limit, <1 ug/L)(5030B / 8260B) and TCL VOC SIM		4@ 40 ml VOA	MW16-05I	HCL, < 4°C
Alkalinity, Sulfate, Total Chloride, Nitrate, Nitrite, Salinity		1 liter poly	MW16-05I	< 4°C
Total metals		1 liter poly	MW16-05I	HNO_3< 4°C
Dissolved metals	√	1 liter poly	MW16-05I	HNO_3< 4°C
Total ammonia		500 ml poly	MW16-05I	H_2SO_4 < 4°C
Dissolved organic carbon Dissolved inorganic carbon		2@ 40 ml VOA	MW16-05I	H_2SO_4< 4°C
Hydrogen sulfide		1 liter poly	MW16-05I	ZnAC / NaOH, < 4°C
Methane / Ethane / Ethene		3@ 40 ml VOA	MW16-05I	HCL, < 4°C
Cyanide		1 500 ml poly	MW16-05I	NaOH, < 4°C

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 9/29/04

Well ID: MW16-05I Personnel: H. Ballew Start Time: 1345 Finish Time: 1535

Equipment Identify equipment used (i.e., pumps, bailers, tubing, filters, etc.)

P = Purge S = Sample		Equipment Used (serial number)	Decon Method
P	S	Solinst Water Level Indicator	Alconox, isopropyl, DI
P	S	YSI 600XL Water Quality Meter w/Flow-Through Cell	Alconox, isopropyl, DI
P	S	Geolog dedicated bladder pump and tubing, MP 10 control box, nitrogen tank	NA
P	S	Lamotte 2020 Turbidimeter or similar	NA
P	S	Hach Kit DR-700 or similar (dissolved ferrous iron)	DI
P	S	Hach Kit 8205 or similar (dissolved carbon dioxide)	DI

See orange calibration log for equipment serial numbers and daily calibration information

Parameter (units)		Initial	Volume	Volume	Volume	Volume	Volume	Volume
Liters		2	3	4	5	6	7	8
Time		1350	1400	1405	1410	1415	1420	1425
Temperature	(°C)	13.53	13.37	13.28	13.26	13.25	13.27	13.26
pH		6.78	6.78	6.79	6.80	6.80	6.79	6.80
Conductivity	(ms/cm)	0.204	0.205	0.206	0.206	0.205	0.204	0.204
DO	(mg/L)	26.88	14.68	11.88	9.51	6.62	6.73	5.25
Turbidity	(NTUs)	36.1	21.0	332	113	27.7	20.7	14.2
Salinity	(ppth)	0.12	0.13	0.13	0.13	0.13	0.13	0.13
Eh	(mV)	39.0	37.4	35.1	29.5	28.3	27.7	25.9
Water Level	(ft from TOR)	13.42	13.45	13.45	13.45	13.45	13.45	13.44
Flow Rate	(mL/min.)	225	225	225	225	225	225	225

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters		9	10	11	12	13	14	
Time		1430	1435	1440	1445	1450	1455	
Temperature	(°C)	13.26	13.25	13.24	13.22	13.22	13.21	
pH		6.80	6.80	6.80	6.80	6.80	6.80	
Conductivity	(ms/cm)	0.204	0.204	0.204	0.204	0.204	0.205	
DO	(mg/L)	5.24	4.75	4.61	4.43	4.41	4.40	
Turbidity	(NTUs)	11.9	15.3	12.6	10.17	9.76	9.24	
Salinity	(ppth)	0.13	0.13	0.13	0.13	0.13	0.13	
Eh	(mV)	25.9	25.3	25.0	24.8	24.7	24.6	
Water Level	(ft from TOR)	13.45	13.45	13.45	13.45	13.45	13.45	
Flow Rate	(mL/min.)	225	225	225	225	225	225	

Notes:

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 9/29/04

Well ID: MW16-05D Personnel: C. Dill Start Time: 1350 Finish Time: 1530

Air Monitoring Equipment Used (Make/Model/Serial No.): Photovac 2020

Calibration Information: See blue calibration log

Ambient Air Reading: 0 ppm Well Headspace Reading: 0 ppm

Well Data/ Integrity

Well Locked	√ Yes ___ No	Well Material:	√ PVC/ ___ SS/Other ___
Protective Casing Secure	√ Yes ___ No	Well Diameter:	√ 2-in. / ___ 4-in./ ___ 6-in./ Other
Concrete Collar Intact	√ Yes ___ No	Water Level Equip. Used:	√ Elect. Cond. Probe
Other: ___			___ Interface Probe
Protective Casing Stick Up (ft): 2.8			___ Press. Transducer
Casing/Well Difference (ft): 0.29			___ ___

Water Level Data Measured from: Top of Riser

Depth to Bottom of Well: 52.0 (ft) Depth to Pump Intake: 46.0 (ft)

Depth to Top of Water: 13.54 (ft) Depth of Screened Interval: 42.0 – 52.0 (ft)

Field Hach Kit Data

Concentration of Fe: 0.52 Mg/L

Concentration of CO_2: 110 Mg/L

Analytical Parameter	Check if Field Filtered	Volume Required/ Sample Container	Sample ID	Preservation Method
TCL VOC (detection limit, <1 ug/L)(5030B / 8260B), TCL VOC SIM AND 1,4-Dioxane		4@ 40 ml VOA	MW16-05D	HCL, < 4°C
Alkalinity, Sulfate, Total Chloride, Nitrate, Nitrite, Salinity		1 liter poly	MW16-05D	< 4°C
Total metals		1 liter poly	MW16-05D	HNO_3< 4°C
Dissolved metals	√	1 liter poly	MW16-05D	HNO_3< 4°C
Total ammonia		500 ml poly	MW16-05D	H_2SO_4 < 4°C
Dissolved organic carbon Dissolved inorganic carbon		2@ 40 ml VOA	MW16-05D	H_2SO_4< 4°C
Hydrogen sulfide		1 liter poly	MW16-05D	ZnAC / NaOH, < 4°C
Methane / Ethane / Ethene		3@ 40 ml VOA	MW16-05D	HCL, < 4°C
Cyanide		1 500 ml poly	MW16-05D	NaOH, < 4°C

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 9/29/04

Well ID: MW16-05D Personnel: C. Dill Start Time: 1350 Finish Time: 1530

Equipment Identify equipment used (i.e., pumps, bailers, tubing, filters, etc.)

P = Purge S = Sample		Equipment Used (serial number)	Decon Method
P	S	Solinst Water Level Indicator	Alconox, isopropyl, DI
P	S	YSI 600XL Water Quality Meter w/Flow-Through Cell	Alconox, isopropyl, DI
P	S	Geolog dedicated bladder pump and tubing, MP 10 control box, nitrogen tank	NA
P	S	Lamotte 2020 Turbidimeter or similar	NA
P	S	Hach Kit DR-700 or similar (dissolved ferrous iron)	DI
P	S	Hach Kit 8205 or similar (dissolved carbon dioxide)	DI

See blue calibration log for equipment serial numbers and daily calibration information

Parameter (units)		Initial	Volume	Volume	Volume	Volume	Volume	Volume
Liters		0	1	2	3	4	5	6
Time		1355	1400	1405	1410	1415	1420	1425
Temperature	(°C)	13.14	13.19	13.56	13.61	13.73	13.80	13.91
pH		6.39	6.30	6.23	6.22	6.22	6.22	6.22
Conductivity	(ms/cm)	0.100	0.100	0.100	0.101	0.101	0.101	0.101
DO	(mg/L)	30.06	20.41	18.61	16.62	14.80	13.16	12.01
Turbidity	(NTUs)	>1100	860	210	230	220	170	160
Salinity	(ppth)	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Eh	(mV)	279	277	276	265	254	244	233
Water Level	(ft from TOR)	13.66	13.65	13.64	13.64	13.64	13.64	13.64
Flow Rate	(mL/min.)	200	200	200	200	200	200	200

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters		7	8	9	10	11	12	13
Time		1430	1435	1440	1445	1450	1455	1500
Temperature	(°C)	13.97	14.00	14.01	14.01	14.00	14.00	14.00
pH		6.23	6.23	6.23	6.23	6.23	6.24	6.24
Conductivity	(ms/cm)	0.101	0.101	0.101	0.101	0.101	0.101	0.101
DO	(mg/L)	11.27	10.53	9.94	9.34	9.11	8.74	8.48
Turbidity	(NTUs)	130	130	120	100	95	80	70
Salinity	(ppth)	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Eh	(mV)	229	223	217	213	211	208	203
Water Level	(ft from TOR)	13.64	13.64	13.64	13.64	13.64	13.64	13.64
Flow Rate	(mL/min.)	200	200	200	200	200	200	200

Notes:

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 9/29/04

Well ID: MW16-05D Personnel: C. Dill Start Time: 1350 Finish Time: 1530

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters		14	15	16	17	18	19	
Time		1505	1510	1515	1520	1525	1530	
Temperature	(°C)	13.99	13.99	13.98	13.97	13.95	13.92	
pH		6.24	6.24	6.24	6.25	6.25	6.25	
Conductivity	(ms/cm)	0.101	0.101	0.101	0.100	0.101	0.100	
DO	(mg/L)	8.22	8.12	8.11	7.66	7.69	7.51	
Turbidity	(NTUs)	55	55	45	40	40	38	
Salinity	(ppth)	0.06	0.06	0.06	0.06	0.06	0.06	
Eh	(mV)	199	200	200	196	196	194	
Water Level	(ft from TOR)	13.64	13.64	13.64	13.64	13.64	13.64	
Flow Rate	(mL/min.)	200	200	200	200	200	200	

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters								
Time								
Temperature	(°C)							
pH								
Conductivity	(ms/cm)							
DO	(mg/L)							
Turbidity	(NTUs)							
Salinity	(ppth)							
Eh	(mV)							
Water Level	(ft from TOR)							
Flow Rate	(mL/min.)							

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters								
Time								
Temperature	(°C)							
pH								
Conductivity	(ms/cm)							
DO	(mg/L)							
Turbidity	(NTUs)							
Salinity	(ppth)							
Eh	(mV)							
Water Level	(ft from TOR)							
Flow Rate	(mL/min.)							

Notes:

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/14/04

Well ID: MW16-15D Personnel: B. Harvey Start Time: 1245 Finish Time: 1350

Air Monitoring Equipment Used (Make/Model/Serial No.): Photovac 2020

Calibration Information: See green calibration log

Ambient Air Reading: 0 ppm Well Headspace Reading: 0 ppm

Well Data/ Integrity

Well Locked	√ Yes ___ No	Well Material:	√ PVC/ ___ SS/Other ___
Protective Casing Secure	√ Yes ___ No	Well Diameter:	√ 2-in. / ___ 4-in./ ___ 6-in./ Other
Concrete Collar Intact	√ Yes ___ No	Water Level Equip. Used:	√ Elect. Cond. Probe
Other: ___			___ Interface Probe
Protective Casing Stick Up (ft): 2.83			___ Press. Transducer
Casing/Well Difference (ft): ___			___ ___

Water Level Data Measured from: Top of Riser

Depth to Bottom of Well: 56.0 (ft) Depth to Pump Intake: 52.0 (ft)

Depth to Top of Water: 15.15 (ft) Depth of Screened Interval: 46.0 – 56.0 (ft)

Field Hach Kit Data

Concentration of Fe: 2.78 Mg/L

Concentration of CO_2: 20 Mg/L

Analytical Parameter	Check if Field Filtered	Volume Required/ Sample Container	Sample ID	Preservation Method
TCL VOC (detection limit, <1 ug/L)(5030B / 8260B), TCL VOC SIM, 1,4-Dioxane		4@ 40 ml VOA	MW16-15D	HCL, < 4°C
Alkalinity, Sulfate, Total Chloride, Nitrate, Nitrite, Salinity		1 liter poly	MW16-15D	< 4°C
Total metals		1 liter poly	MW16-15D	HNO_3< 4°C
Dissolved metals	√	1 liter poly	MW16-15D	HNO_3< 4°C
Total ammonia		500 ml poly	MW16-15D	H_2SO_4 < 4°C
Dissolved organic carbon Dissolved inorganic carbon		2@ 40 ml VOA	MW16-15D	H_2SO_4< 4°C
Hydrogen sulfide		1 liter poly	MW16-15D	ZnAC / NaOH, < 4°C
Methane / Ethane / Ethene		3@ 40 ml VOA	MW16-15D	HCL, < 4°C
Cyanide		1 500 ml poly	MW16-15D	NaOH, < 4°C

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/14/04

Well ID: MW16-15D Personnel: B. Harvey Start Time: 1245 Finish Time: 1350

Equipment Identify equipment used (i.e., pumps, bailers, tubing, filters, etc.)

P = Purge S = Sample		Equipment Used (serial number)	Decon Method
P	S	Solinst Water Level Indicator	Alconox, isopropyl, DI
P	S	YSI 600XL Water Quality Meter w/Flow-Through Cell	Alconox, isopropyl, DI
P	S	Geolog dedicated bladder pump and tubing, MP 10 control box, nitrogen tank	NA
P	S	Lamotte 2020 Turbidimeter or similar	NA
P	S	Hach Kit DR-700 or similar (dissolved ferrous iron)	DI
P	S	Hach Kit 8205 or similar (dissolved carbon dioxide)	DI

See green calibration log for equipment serial numbers and daily calibration information

Parameter (units)		Initial	Volume	Volume	Volume	Volume	Volume	Volume
Liters		0	2	3.5	5.5	7.5	9.5	11.5
Time		1250	1300	1305	1310	1315	1320	1325
Temperature	(°C)	13.09	14.64	13.99	13.96	13.93	13.91	13.90
pH		6.50	6.42	6.40	6.38	6.39	6.38	6.38
Conductivity	(ms/cm)	0.133	0.133	0.133	0.133	0.133	0.133	0.133
DO	(mg/L)	2.61	1.24	0.64	0.53	0.46	1.44	0.42
Turbidity	(NTUs)	140	150	40	29	14	13	14
Salinity	(ppth)	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Eh	(mV)	-19.2	-25.5	-24.4	-23.4	-22.9	-22.4	-22.1
Water Level	(ft from TOR)	15.30	15.20	15.20	15.20	15.20	15.20	15.20
Flow Rate	(mL/min.)	200	300	400	400	400	400	400

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters								
Time								
Temperature	(°C)							
pH								
Conductivity	(ms/cm)							
DO	(mg/L)							
Turbidity	(NTUs)							
Salinity	(ppth)							
Eh	(mV)							
Water Level	(ft from TOR)							
Flow Rate	(mL/min.)							

Notes:

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/25/04

Well ID: MW16-59I Personnel: C. Dill Start Time: 1325 Finish Time: 1435

Air Monitoring Equipment Used (Make/Model/Serial No.): Photovac 2020

Calibration Information: See orange calibration log

Ambient Air Reading: 0 ppm Well Headspace Reading: 0 ppm

Well Data/ Integrity

Well Locked	___ Yes √ No	Well Material:	√ PVC/ ___ SS/Other ___
Protective Casing Secure	√ Yes ___ No	Well Diameter:	√ 2-in. / ___ 4-in./ ___ 6-in./ Other
Concrete Collar Intact	√ Yes ___ No	Water Level Equip. Used:	√ Elect. Cond. Probe
Other: ___			___ Interface Probe
Protective Casing Stick Up (ft): flushmount			___ Press. Transducer
Casing/Well Difference (ft): 0.55			___ ___

Water Level Data Measured from: Top of Riser

Depth to Bottom of Well: 48.0 (ft) Depth to Pump Intake: 46.5 (ft)

Depth to Top of Water: 15.40 (ft) Depth of Screened Interval: 38.0 – 48.0 (ft)

Field Hach Kit Data

Concentration of Fe: NA Mg/L Turbidity off scale. Could

Concentration of CO_2: NA Mg/L not conduct color tests.

Analytical Parameter	Check if Field Filtered	Volume Required/ Sample Container	Sample ID	Preservation Method
TCL VOC (detection limit, <1 ug/L)(5030B / 8260B) and TCL VOC SIM		4@ 40 ml VOA	MW16-59I	HCL, < 4°C
Alkalinity, Sulfate, Total Chloride, Nitrate, Nitrite, Salinity		1 liter poly	MW16-59I	< 4°C
Total metals		1 liter poly	MW16-59I	HNO_3< 4°C
Dissolved metals	√	1 liter poly	MW16-59I	HNO_3< 4°C
Total ammonia		500 ml poly	MW16-59I	H_2SO_4 < 4°C
Dissolved organic carbon Dissolved inorganic carbon		2@ 40 ml VOA	MW16-59I	H_2SO_4< 4°C
Hydrogen sulfide		1 liter poly	MW16-59I	ZnAC / NaOH, < 4°C
Methane / Ethane / Ethene		3@ 40 ml VOA	MW16-59I	HCL, < 4°C
Cyanide		1 500 ml poly	MW16-59I	NaOH, < 4°C

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/25/04

Well ID: MW16-59I Personnel: C. Dill Start Time: 1325 Finish Time: 1435

Equipment Identify equipment used (i.e., pumps, bailers, tubing, filters, etc.)

P = Purge S = Sample		Equipment Used (serial number)	Decon Method
P	S	Solinst Water Level Indicator	Alconox, isopropyl, DI
P	S	YSI 600XL Water Quality Meter w/Flow-Through Cell	Alconox, isopropyl, DI
P	S	Geolog dedicated bladder pump and tubing, MP 10 control box, nitrogen tank	NA
P	S	Lamotte 2020 Turbidimeter or similar	NA
P	S	Hach Kit DR-700 or similar (dissolved ferrous iron)	DI
P	S	Hach Kit 8205 or similar (dissolved carbon dioxide)	DI

See orange calibration log for equipment serial numbers and daily calibration information

Parameter (units)		Initial	Volume	Volume	Volume	Volume	Volume	Volume
Liters		0	1	2	3	4	5	6
Time		1340	1345	1350	1355	1400	1405	1410
Temperature	(°C)	15.04	15.25	15.70	15.72	15.36	15.20	15.23
pH		6.51	6.66	6.76	6.79	6.78	6.77	6.79
Conductivity	(ms/cm)	0.188	0.210	0.208	0.203	0.190	0.177	0.159
DO	(mg/L)	1.68	0.23	0.18	0.12	0.17	0.13	0.13
Turbidity	(NTUs)	>1100	>1100	>1100	>1100	>1100	>1100	>1100
Salinity	(ppth)	0.11	0.12	0.12	0.12	0.11	0.10	0.09
Eh	(mV)	-28.0	-49.5	-65.3	-69.9	-70.9	-74.4	-80.7
Water Level	(ft from TOR)	16.89	16.25	16.01	16.00	16.28	16.54	16.57
Flow Rate	(mL/min.)	200	200	200	200	200	200	200

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters		7	8	9	10	11		
Time		1415	1420	1425	1430	1435		
Temperature	(°C)	15.22	15.08	15.02	14.97	14.99		
pH		6.80	6.81	6.82	6.83	6.83		
Conductivity	(ms/cm)	0.104	0.142	0.136	0.133	0.131		
DO	(mg/L)	0.12	0.12	0.12	0.12	0.12		
Turbidity	(NTUs)	>1100	>1100	>1100	>1100	>1100		
Salinity	(ppth)	0.06	0.08	0.08	0.08	0.08		
Eh	(mV)	-84.7	-87.0	-88.6	-89.2	-89.6		
Water Level	(ft from TOR)	16.56	16.57	16.57	16.57	16.58		
Flow Rate	(mL/min.)	200	200	200	200	200		

Notes:

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/06/04

Well ID: MW16-39I Personnel: S. Roberts Start Time: 0820 Finish Time: 1015

Air Monitoring Equipment Used (Make/Model/Serial No.): Photovac 2020

Calibration Information: See purple calibration log

Ambient Air Reading: 0 ppm Well Headspace Reading: 0 ppm

Well Data/ Integrity

Well Locked	___ Yes √ No	Well Material:	√ PVC/ ___ SS/Other ___
Protective Casing Secure	√ Yes ___ No	Well Diameter:	√ 2-in. / ___ 4-in./ ___ 6-in./ Other
Concrete Collar Intact	√ Yes ___ No	Water Level Equip. Used:	√ Elect. Cond. Probe
Other: Flushmount – well bolted			___ Interface Probe
Protective Casing Stick Up (ft): Flushmount			___ Press. Transducer
Casing/Well Difference (ft): 0.58			___ ___

Water Level Data Measured from: Top of Riser

Depth to Bottom of Well: 55.0 (ft) Depth to Pump Intake: 51.0 (ft)

Depth to Top of Water: 7.56 (ft) Depth of Screened Interval: 45.0 – 55.0 (ft)

Field Hach Kit Data

Concentration of Fe: 0 Mg/L

Concentration of CO_2: 201 Mg/L

Analytical Parameter	Check if Field Filtered	Volume Required/ Sample Container	Sample ID	Preservation Method
TCL VOC (detection limit, <1 ug/L)(5030B / 8260B), TCL VOC SIM, 1,4-Dioxane		4@ 40 ml VOA	MW16-39I	HCL, < 4°C
Alkalinity, Sulfate, Total Chloride, Nitrate, Nitrite, Salinity		1 liter poly	MW16-39I	< 4°C
Total metals		1 liter poly	MW16-39I	HNO_3< 4°C
Dissolved metals	√	1 liter poly	MW16-39I	HNO_3< 4°C
Total ammonia		500 ml poly	MW16-39I	H_2SO_4 < 4°C
Dissolved organic carbon Dissolved inorganic carbon		2@ 40 ml VOA	MW16-39I	H_2SO_4< 4°C
Hydrogen sulfide		1 liter poly	MW16-39I	ZnAC / NaOH, < 4°C
Methane / Ethane / Ethene		3@ 40 ml VOA	MW16-39I	HCL, < 4°C
Cyanide		1 500 ml poly	MW16-39I	NaOH, < 4°C

Ground Water Field Sampling Form

Project Name: Site 16 Phase II Supplemental Invest. Project No.: 29600.97 Task: 3202 Date: 10/06/04

Well ID: MW16-39I Personnel: S. Roberts Start Time: 0820 Finish Time: 1015

Equipment Identify equipment used (i.e., pumps, bailers, tubing, filters, etc.)

P = Purge S = Sample		Equipment Used (serial number)	Decon Method
P	S	Solinst Water Level Indicator	Alconox, isopropyl, DI
P	S	YSI 600XL Water Quality Meter w/Flow-Through Cell	Alconox, isopropyl, DI
P	S	Geolog dedicated bladder pump and tubing, MP 10 control box, nitrogen tank	NA
P	S	Lamotte 2020 Turbidimeter or similar	NA
P	S	Hach Kit DR-700 or similar (dissolved ferrous iron)	DI
P	S	Hach Kit 8205 or similar (dissolved carbon dioxide)	DI

See purple calibration log for equipment serial numbers and daily calibration information

Parameter (units)		Initial	Volume	Volume	Volume	Volume	Volume	Volume
Liters		0	0.5	1.0	1.5	2.0	2.5	3.0
Time		0835	0840	0845	0850	0855	0900	0905
Temperature	(°C)	14.82	15.07	15.39	15.37	15.35	15.43	15.39
pH		6.26	6.18	6.36	6.37	6.38	6.39	6.40
Conductivity	(ms/cm)	0.096	0.094	0.091	0.091	0.090	0.089	0.089
DO	(mg/L)	1.63	1.84	1.16	1.00	0.82	0.71	0.69
Turbidity	(NTUs)	23	16	11	10	8	7	6
Salinity	(ppth)	0.06	0.05	0.05	0.05	0.05	0.05	0.05
Eh	(mV)	-80.1	-91.5	-104.1	-107.9	-111.4	-113.3	-118.3
Water Level	(ft from TOR)	7.55	7.55	7.55	7.55	7.55	7.55	7.55
Flow Rate	(mL/min.)	100	100	100	100	100	100	100

Parameter (units)		Volume	Volume	Volume	Volume	Volume	Volume	Volume
Liters		3.5	4.0	4.5				
Time		0910	0915	0920				
Temperature	(°C)	15.37	15.40	15.42				
pH		6.40	6.41	6.41				
Conductivity	(ms/cm)	0.089	0.089	0.089				
DO	(mg/L)	0.66	0.67	0.66				
Turbidity	(NTUs)	6	6	6				
Salinity	(ppth)	0.05	0.05	0.05				
Eh	(mV)	-121.4	-123.8	-124.1				
Water Level	(ft from TOR)	7.55	7.55	7.55				
Flow Rate	(mL/min.)	100	100	100				

Notes:

Spring 2006 Sampling Event

Northeast Laboratory SERVICES

P.O. Box 788 • Waterville, ME 04903-0788
207-873-7711 / Fax: 207-873-7022

Shipping: 227 China Road
Winslow, Maine 04901

CHAIN OF CUSTODY RECORD

Company Name: Tetra Tech NUS, Inc

Reporting Address: Foster Plaza 7 661 Anderson DR Pitt. PA 15220

Client Contact: Lee Ann Sinagoga Phone 412 921 7090 Fax

Billing Name: Same as above

Billing Address: Same as above Pittsburgh PA

PO #:
Quote # G00234 0505
Project Name Davisville

Lab Comments: N/A

Sample Designation	Sample Date/Time	Preservation: 1 H_2SO_4, 2=HNO_3, 3=HCL, 4=NaOH, 5=Thio, 6=4°C, 7=None	Container Size, Type	QTY	Sample Type Code: G = Grab C = Composite	Matrix Code Choose One: GW = Ground Water WW = Waste Water DW = Drinking Water SW = Surface Water O = Oil WP = Wipe S = Soil F = Food Other (Please List)	Analyses Requested	Lab Sample ID
MW16-15D-NWG	5/11/06 0905	6	1-L	6	G	GW	1,4 DIOXANE 8270C SIM	LAB QC
MW16-59I-NWG	1042	6	1-L	2				
MW16-10D-NWG	1250	6	1-L	2				
MW16-37S-NWG	1330	6	1-L	2				
MW16-37I-NWG	1447	6	1-L	2				
MW16-05D-NWG	1645	6	1-L	2				DUP 1
FD051106 01	1650	6	1-L	2				DUP 1
MW16-04D-NWG	1753	6	1-L	2				
MW16-05I-NWG	5/11/06 1825	6	1-L	2	G	GW		
MW16-45I-NWG	5/12/06 0845	6	1-L	2	G	GW	1,4 Dioxane	

Notes: Use MW16-15D-NWG for Lab QC "Blue Ice" packs leaked on outside of bottles, stored on ice at T+LVS

Sampled By: K. O'Neill + P Seward

Known hazards associated with samples:

Relinquished By	Date/Time	Received By	Date/Time	pH	
Kevin O'Neill	5/12/06 1430				The recommended temperature of the internal container is 2-6°C. Do you authorize analysis if the temp is out of range?
Relinquished By	Date/Time	Received By	Date/Time	Rush Yes 5 days 50% surcharge / 2 days 100% surcharge	
Relinquished By	Date/Time	Received By	Date/Time	Field Filtered Y / N N	Yes No

Chain of Custody must be filled out completely. This includes signature, sample description, analysis requested, date and time sampled.

If not completed, samples will be rejected.

1062

Rev. 8/04 Form #NEL 100

If a sample is hazardous or radioactive, the sample will be returned to the client at the client's expense.
Standard turn-around-time is 10 business days - depending on season.

Northeast Laboratory SERVICES

P.O. Box 788 • Waterville, ME 04903-0788
207-873-7711 / Fax: 207-873-7022

Shipping: 227 China Road
Winslow, Maine 04901

CHAIN OF CUSTODY RECORD

Company Name: Tetra Tech NUS, Inc

Reporting Address: Foster Plaza 7 661 Anderson DR

Client Contact: Lee Ann Sinagoga Phone 412 921 7090 Fax

Billing Name: Pittsburgh, PA

Billing Address: 15220

PO #:
Quote # G00234 0505
Project Name Davisville

Lab Comments:

Sample Designation	Sample Date/Time	Preservation: 1 H_2SO_4, 2=HNO_3, 3=HCL, 4=NaOH, 5=Thio, 6=4°C, 7=None	Container Size, Type	QTY	Sample Type Code: G = Grab C = Composite	Matrix Code Choose One: GW = Ground Water WW = Waste Water DW = Drinking Water SW = Surface Water O = Oil WP = Wipe S = Soil F = Food Other (Please List)	Analyses Requested	Lab Sample ID
MW16-39I-NWG	5/12/06 1000	6	1-L	2	G	GW	1,4 Dioxane 8270C SIM	
RB05120601	5/12/06 1100	6	1-L	2	G	GW	↓ ↓	Rinseate

KTO
5/12/06

Notes: SATURDAY Delivery

Sampled By: Kevin O'Neill Pete Seward

Known hazards associated with samples:

Relinquished By	Date/Time	Received By	Date/Time	pH	The recommended temperature of the internal container is 2-6°C. Do you authorize analysis if the temp is out of range?
Kevin O'Neill	5/12/06 1430				
Relinquished By	Date/Time	Received By	Date/Time	Rush Yes 5 days 50% surcharge / 2 days 100% surcharge	
Relinquished By	Date/Time	Received By	Date/Time	Field Filtered Y / N	Yes No

Chain of Custody must be filled out completely. This includes signature, sample description, analysis requested, date and time sampled.

If not completed, samples will be rejected.

2 of 2

Rev. 8/04 Form #NEL 100

If a sample is hazardous or radioactive, the sample will be returned to the client at the client's expense.
Standard turn-around-time is 10 business days - depending on season.

TETRA TECH NUS INC.

FIELD MODIFICATION RECORD

Site Name: Davisville Site 16 Location: RI

Project Number: 00234-0505 Task Assignment: GW

To: Lee Ann Smagoga Location: Pitts PA Date: 5/10/06

Description: Use peristaltic pumps instead of dedicated bladder pumps as per the April 2006 QAPP.

Reason for Change: On 5/9/06 it was determined that some of the existing bladder pumps appear not to be functioning properly - unable to collect samples.

Recommended Action: Use peristaltic pumps + new Teflon tubing to collect 1,4 Dioxane samples. The 1,4 dioxane is considered a semivolatile in GW - using Method 8270C-SIM analysis

Field Operations Leader (Signature): Kevin O'Neill Date: 5/10/06

Disposition/Action:

Project Manager (Signature): Date:

Distribution:

Program Manager:	J. Trepanowski ~~G. Gaetto~~ KPO	Others as Required:
Project Manager:	L Smagoga	
Quality Assurance Officer:	~~L. Guzzione~~ T. Johnson FTO 5/10/06	
Field Operations Leader:	K O'Neill	
Project File:	00234-	

Tt NUS Form 0003

TETRA TECH NUS INC.

FIELD MODIFICATION RECORD

Site Name: Davisville Site 16 Location: RI

Project Number: 00234-0505 Task Assignment: GW

To: Lee Ann Smagoga Location: Pitts PA Date: 5/12/06

Description: No Source Blank (SB) collected as referred to in April 2006 QAPP.

Reason for Change: Source blank was to be collected from the water source used for decontamination. All tubing, etc used for sampling was disposable, therefore not deconned.

Recommended Action: Delete SB sample from QC list of samples for analysis

Field Operations Leader (Signature): Kevin O'Neill Date: 5/12/06

Disposition/Action:

Project Manager (Signature): Date:

Distribution:

Program Manager: J. Trepanowski

Project Manager: L. Smagoga

Quality Assurance Officer: T. Johnson

Field Operations Leader: K. O'Neill

Project File: 00234

Others as Required:

Tt NUS Form 0003

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Dovisville - Site 16
Sample ID: MW16-15D-NWG

Tetra Tech NUS Job No./PMS
QC: MS MSD (If applicable)

Sample Method: low flow w/ peristaltic
Depth Sampled: 49.3 Feet Screened Interval Depth 46-56' feet
Sample Date & Time: 05/10/06 0905 hours NA /Dup
Sampler(s): Kevin O'Neill/Peter seward
Data Recorded By: Peter Seward Signature: Peter Sd
Notes:
MP = top of PVC casing

H&S Survey Meter ____ PPM* Field Instrument Group (A)/B/C/D
Pre-pump insertion WL NA ft Post - pump insertion WL NA ft
* did not use - raining

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
1,4 dioxane	6 1L bottles				

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1 N/A	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
0813	14.8										
0820	14.85		240		13.3	0.124	5.76	-1	3.5	25.2	
0825	14.86		240		13.3	0.120	5.88	-3	2.9	13.7	
0830	14.86	~1 gal	240		13.4	0.119	5.84	0.3	2.4	9.31	
0835	14.86		240		13.4	0.118	5.86	-4	2.3	7.79	
0840	14.86	2.5 gal	240		13.4	0.118	5.85	-4	2.3	6.72	
0845	14.86	~3 gal	240		13.4	0.117	5.84	-4	2.0	5.70	
	stabilization achieved will begin sampling										

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Davisville Site 16
Sample ID: MW16-59I-NWG

Tetra Tech NUS Job No./PMS
QC: N/A (If applicable)

Sample Method: peristaltic pump w/ teflon tubing
Depth Sampled: 46.5* Feet Screened Interval Depth _____ feet
Sample Date & Time: 5/14/06 1042 hours _____ /Dup
Sampler(s): K Neal
Data Recorded By: Kevin O'Neal Signature:
Notes:
*Sneaked by side of existing bladder pump

H&S Survey Meter _____ PPM
Pre-pump insertion WL N/A ft
Field Instrument Group A/B/C/D
Post - pump insertion WL N/A ft

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
1,4 dioxane		2 Liters			

Clock Time 24hr	Water Depth below MP ft (Top of PVC)	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
0935	15.14	N/A Start									
0940	15.81	N/A	120		13.5	0.028	6.47	231	2.31	19	
0945	15.84				13.6	0.028	6.53	219		22	
0950	15.86		120		13.6	0.027	6.56	207		18	
0955	15.89				13.7	0.026	6.55	196	1.79	19	
1000	15.90		120		13.9	0.205	6.62	172	1.46	17	
1005	15.91				13.8	0.548**	6.60	95	1.30	16	
1010	15.91		120		13.8	0.836	6.60	46	1.20	17	
1015	15.92				13.8	0.823	6.60	36	1.15	18	
1020	15.92		120		13.9	0.806	6.60	14	1.18	17	
1025	15.92				14.0	0.795	6.61	0	1.15	17	
1030	15.93		120		14.0	0.790	6.61	-4	1.13	18	
1035	15.93				14.0	0.788	6.62	-5	1.12	18	
1040	5.93		120		14.0	0.784	6.62	-6	1.15	18	
Stabilized & sampled at 1042 hours KO											

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

** conductivity measurement error unit displays Error 2
Conductivity not considered accurate or functional
Called U.S. Environmental for replacement unit
twill re-cal after this sample is completed

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: ~~MW 10 D~~ Dansville Site 16
Sample ID: ~~MW 10 D~~ MW16-10D-NWG KTO 8/11/06

Tetra Tech NUS Job No./PMS
QC: NA (If applicable)

Sample Method: low flow w/ peristaltic pump
Depth Sampled: 49 Feet / Screened Interval Depth _____ feet
Sample Date & Time: 08 / ~~AUG~~ 11 / 06 1250 hours NA /Dup
Sampler(s): Peter Sewards/Kevin O'Neil
Data Recorded By: Peter Sewards Signature: Peter Sewards
Notes:
MP = top of PVC casing

H&S Survey Meter _____ PPM*
Pre-pump insertion WL NA ft
Did not use - raining
Field Instrument Group (A)/B/C/D
Post - pump insertion WL NA ft

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
1,4 Dioxane	2	1L Bottles (amber)			

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1125	15.08	N/A	180			~~0.03~~	~~5.31~~ 15				
1130	15.30		180		14.3	0.034	5.31	-6	8.3	28.1	
1135	15.35		180		14.2	0.038	5.22	-6	7.5	23.4	
1140	15.34		180	~1 gal	14.2	0.038	5.26	-6	6.4	19.6	
1145	15.29		120		14.2	0.038	5.22	-6	6.2	19.9	
1150	15.29		120		14.2	0.038	5.20	-6	5.9	21.0	
1155	15.29		120		14.3	0.038	5.19	-6	5.7	30.9	
1200	15.29		120	~2 gal	14.3	0.037	5.14	-6	5.3	41.3	
1205	15.29		120		14.3	0.038	5.14	-6	2.6	45.6	
1210	15.29		120		14.3	0.040	5.14	-6	2.0	41.5	
1215	15.29		120		14.3	0.042	5.17	-6	2.3	37.0	
1225	15.29		120		14.4	0.044	5.16	-6	2.1	26.8	
1230	15.29		120		14.4	0.045	5.18	-6	2.1	22.7	
1235	15.29		120		14.4	0.046	5.17	-6	2.0	20.5	
1240	15.29		120	~3.5 gal	14.4	0.047	5.16	-6	1.9	19.1	

parameters stabilized set up for sample collection

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC. 37$

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Dansville rte 16
Sample ID: NW16-37S-NW6

Tetra Tech NUS Job No./PMS
QC: N/A (If applicable)

Sample Method: Peristaltic pump w/ Teflon tubing
Depth Sampled: 19 Feet Screened Interval Depth 7-22 feet
Sample Date & Time: 5/18/06 1330 hours /Dup
Sampler(s): Kevin O'Neill
Data Recorded By: Signature: Kevin O'Neill
Notes:

H&S Survey Meter 0 PPM
Pre-pump insertion WL NA ft
Field Instrument Group A/B/C/D
Post - pump insertion WL NA ft

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
1,4 dioxane		2-1 Liter bottles			

light mist + rain

Top of PVC

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1225	12.35	N/A	190								
1235					12.7	0.456	5.37	30	1.97	27	
1245					12.5	0.442	5.37	303	2.07	16	
1250	12.35		190	5.6 0.452	12.3	0.[illegible]	5.38	315	2.14	8.4	
1255					12.3	0.415	5.40	319	1.82		
1300	12.38		220		12.3	0.404	5.40	320	1.41	5.4	
1305					12.3	0.396	5.41	321	1.53	~~4.0~~ (4.0)	TD 5/10/06
1310	12.38		220							2.1	TO 5/60/9
1315										2.0	
1320	12.38		220		12.5	0.374	5.42	322	1.63	2.1	
1325					12.5	0.370	5.42	325	1.59	2.0	
1330	12.39		220		12.6	0.368	5.42	327	1.62	1.9	
			Parameters stabilized @ 1330 Collected Sample								

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Site 16 Dansville
Sample ID: MW16-37I-NWG

Tetra Tech NUS Job No./PMS
QC: N/A (If applicable)

Sample Method: Peristaltic pump w/ teflon Tubing
Depth Sampled: 34 Feet Screened Interval Depth 24-38 feet
Sample Date & Time: 5/11/06 1447 hours /Dup
Sampler(s): Kevin O'Neill
Data Recorded By: Signature: Kevin O'Neill
Notes:

H&S Survey Meter 0 PPM
Pre-pump insertion WL N/A ft
Field Instrument Group A/B/C/D
Post - pump insertion WL N/A ft

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
1,4 dioxane		2 - 1 Liter bottles		NO LOT # on bottles	

Clock Time 24hr	Water Depth below MP ft (Top of PVC)	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1350	12.58	N/A start	280	muddy/silty → gray silt							
1400	12.63		clearing up -	dumped silty water out of flow thru cell							
1410	12.74		200		14.3	0.011	5.80	321	7.56	17	
1420	12.73				14.3	0.310	5.57	318	6.56	26	much clearer
1425			200		14.2	0.309	5.57	319	6.38	7.3	
1430	12.73				14.1	0.308	5.57	321	6.33	7.0	
1435			200		14.1	0.310	5.56	322	6.25	3.5	
1440					14.0	0.311	5.56	322	6.24	3.6	
1445					14.1	0.312	5.57	321	6.24	3.2	
→ Parameters Stabilized collected sample											

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: ~~MW16-05D~~ → 75 Davisville Site 16
Sample ID: MW16-05D-NW6
Field Duplicate →

Tetra Tech NUS Job No./PMS
QC: Dup01 FD05110601 Duplicate (If applicable)
FIELD DUPLICATE

Sample Method: low flow using peristaltic pump.
Depth Sampled: 42.6 Feet Screened Interval Depth ____ feet
Sample Date & Time: 05 / 11 / 06 1645 hours 1650 /Dup
Sampler(s): Peter Seward / Kevin O'Neil
Data Recorded By: Peter Seward Signature: Peter Seward
Notes:
MP = PVC casing (top)

H&S Survey Meter ____ PPM*
Pre-pump insertion WL NA ft
* not used - raining
Field Instrument Group (A)/B/C/D
Post - pump insertion WL NA ft

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
1,4-dioxane		4 amber 1L Bottles			

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1445	13.57		120								
1450	13.62		120		13.0	0.094	5.72	-11	14.9	11.8	
1455	13.61		120		13.0	0.094	5.74	-11	10.5	11.8	
1500	13.61		120	~1 gal	13.0	0.093	5.73	-10	11.0	12.4	
1505	13.61		120		13.0	0.093	5.73	-9	10.7	12.4	
1510	13.61		120		12.9	0.093	5.71	-8	10.5	19.1	
1515	13.61		120		12.8	0.094	5.54	-8	10.3	39.7	
1520	13.61		120		12.8	0.094	5.48	-8	10.0	57.8	
1525	13.59		120		12.8	0.095	5.35	-8	~~10.0~~ 9.7	88.7	
1530	13.58		120	~~~2.5 gal~~	12.9	0.0960	5.34	-8	~~9.7~~ 9.4	81.4	
1535	13.58		120		12.9	0.096	5.34	-7	8.7	57.2	
1540	13.58		120	~2.5 gal	13.0	0.096	5.33	-8	8.5	48.2	
1545	13.58		120		13.0	0.097	5.32	-7	8.3	45.9	
1550	13.58		120		13.0	0.097	5.32	-8	8.1	32.7	
1555	13.58		120		13.0	0.096	5.32	-7	8.0	35.8	
1600	13.58		120	~3 gal	12.9	0.096	5.32	-7	7.9	27.1	

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Davisville Site 16
Sample ID: MW16-050-NW6

Tetra Tech NUS Job No./PMS
QC: Dup 01 (If applicable)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1605	13.58		120		12.9	0.096	5.32	-7	7.4	19.5	
1610	13.58		120		12.9	0.096	5.31	-7	7.3	18.3	
1615	13.58		120		12.9	0.096	5.33	-7	7.1	16.7	
1620	13.58		120	~4gal	12.9	0.096	5.30	-7	6.9	22.1	
1625	13.58		120		12.9	0.096	5.31	-7	6.3	21.2	
1630	13.58		120		12.9	0.096	5.30	-7	6.2	23.7	
~~1630~~ 1635	13.58		120		12.9	0.096	5.31	-7	6.1	~~27.6~~ 23.6	
	parameters stabilized										

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Davisville - Site 16
Sample ID: MW16-04D-NWG

Tetra Tech NUS Job No./PMS
QC: N/A (If applicable)

Sample Method: peristaltic pump w/ Teflon tubing
Depth Sampled: 50 Feet bgs Screened Interval Depth 43-53 feet bgs
Sample Date & Time: 5 / 11 / 06 1753 hours /Dup
Sampler(s): Kevin O'Neill
Data Recorded By: Kevin O'Neill Signature:
Notes:
clumps of material (algae?) or floc were dumped several times from flow-thru PVC Top of all before 1710 hours

H&S Survey Meter 0 PPM
Pre-pump insertion WL N/A ft
Field Instrument Group A/B/C/D
Post - pump insertion WL N/A ft
Well is about 50' from tidal area

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
1,4 dioxane		2-1 Liter bottles			

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 mS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
		N/A		N/R							
1630	7.88	rusty red color, milky appearance									
1640	7.95	varying pump rate, clogged line still milky red appearance (opaque)									
1650	7.88	Purge water finally clearing up - Installed Horiba U-22									
1705	7.89	U22 installed			11.64	0.326	5.82	17	8.37	emptied cell several time	
1710	7.88		220		11.51	0.319	5.96	12	5.65	3.8	
1710		N/A			11.54	0.318	6.05	11	4.81	4.0	
1715	7.88		200		12.85	0.300	6.16	14	4.95	3.8	
1720					12.64	0.	6.22	21	4.83	3.5	
1725	7.89		220	leak fixed	13.75	0.229	6.20	31	4.60	2.1	leak fixed
1730					11.87	0.304	6.25	16	4.32	1.9	
1735	7.88		220		11.50	0.308	6.27	8	4.15	2.2	
1740					11.46	0.312	6.27	5	4.28	2.1	
1745	7.89		220		11.45	0.315	6.27	6	4.30	2.0	
1750					11.43	0.316	6.28	5	4.27	1.99	

→ Parameters have stabilized, so sampled @ 1753 hours

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Davisville - Site 16
Sample ID: MW1605I - NGW

Tetra Tech NUS Job No./PMS
QC: NA (If applicable)

Sample Method: low flow w/ peristaltic pump
Depth Sampled: 32.77 Feet Screened Interval Depth _____ feet
Sample Date & Time: 05/11/06 1825 hours NA /Dup
Sampler(s): Peter Seward / Kevin O'Neil
Data Recorded By: Peter Seward Signature: Peter Seward
Notes: MP = top of PVC casing

H&S Survey Meter _____ PPM * Field Instrument Group A/B/C/D
Pre-pump insertion WL NA ft Post - pump insertion WL NA ft
* PID not used - raining

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
2 1L amber bottles					
1,4-dioxane					

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
~~1740~~ 1735 ps	13.54		180								
1740	13.54		180		12.7	0.275	5.86	-8	2.8	42.3	
1745	13.54		180		12.7	0.273	5.90	-7	1.9	30.5	
1750	13.54		180		12.7	0.267	5.89	-7	1.6	14.9	
1755	13.54		180		12.7	0.265	5.90	-7	1.4	4.09	
1800	13.54		180		12.7	0.267	5.90	-6	1.3	2.23	
1805	13.54		180		12.7	0.270	5.90	-6	1.2	0.59	
1810	13.54		180	~1 gal	12.6	0.270	5.90	-6	1.1	0.06	
1815	13.54		180		12.6	0.271	5.91	-6	1.1	0.07	
1820	13.54		180		12.7	0.272	5.91	-6	1.1	0.00	
			parameters stabilized								

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: ~~MW45I MW16-45I-NWG~~ Dausville-Site16
Sample ID: MW16-45I-NWG

Tetra Tech NUS Job No./PMS
QC: NA (If applicable)

Sample Method: Low flow - w/ peristaltic pump
Depth Sampled: 32.7 Feet Screened Interval Depth ____ feet
Sample Date & Time: 05 / 12 / 06 0845 hours NA /Dup
Sampler(s): Peter J. Seward / Kyun O'Neil
Data Recorded By: Peter Seward Signature:
Notes:
MP = Top of PVC casing

H&S Survey Meter 1 PPM* Field Instrument Group A/B/C/D
Pre-pump insertion WL NA ft Post - pump insertion WL NA ft
* not used - high humidity

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
2 1L amber bottles					

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
0725	8.79		180								
0730	8.85		180		11.7	0.276	6.00	-2	7.9	31.9	
0735	8.85		120		11.4	0.265	6.18	-2	6.5	27.7	
0740	8.88		120		11.7	0.251	6.17	-2	7.3	22.7	
0745	8.89		120		11.8	0.257	6.28	-2	5.3	18.8	
0750	8.89		120		11.8	0.257	6.27	-2	4.4	17.6	
0755	8.89		120	~1.5 gal	11.8	0.257	6.25	-2	3.5	11.2	
0800	8.89		120		11.8	0.257	6.23	-2	3.2	9.93	
0805	8.89		120		11.8	0.257	6.23	-2	2.9	8.37	
0810	8.89		120		11.8	0.258	6.22	-2	2.8	10.55	
0815	8.89		120		11.8	0.259	6.21	-2	2.7	6.48	
0820	8.89		120	~2.5 gal	11.8	0.258	~~6.20~~	-2	2.6	5.79	
0825	8.89		120		11.8	0.258	6.20	-2	2.5	4.62	
0830	8.89		120		11.8	0.258	6.19	-2	2.4	4.76	
0835	8.89		120		11.8	0.258	6.19	-2	2.2	4.78	
0840	8.89		120	~~4 gal~~ ~3.5 gal	11.9	0.259	6.16	-2	2.1	4.73	

parameters stabilized

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Davisville Site 16
Sample ID: MW16-39I-NW6

Tetra Tech NUS Job No./PMS
QC: NA (If applicable)

Sample Method: peristaltic pump w/ Teflon tubing
Depth Sampled: 50 Feet bgs Screened Interval Depth 45-55 feet bgs
Sample Date & Time: 5 / 12 / 2006 1000 hours NA Dup
Sampler(s): K. O'Neill / Peter Seward
Data Recorded By: Peter Seward Signature:
Notes:

H&S Survey Meter ____ PPM*
Pre-pump insertion WL NA ft.
*not used - high humidity
Field Instrument Group A/B/C/D
Post - pump insertion WL NA ft

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
1,4 dioxane		2 - 1 Liter bottles			

from Top of PVC

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
0920	7.85		120								
0925	7.97		120		12.5	0.076	6.23	-3	5.6	4.02	
0930	7.97		120		12.6	0.078	5.96	-3	3.4	2.97	
0935	7.97		120		12.6	0.078	5.86	-2	3.0	4.35	
0940	7.97		120		12.6	0.075	5.83	-3	2.8	3.25	
0945	7.97		120		12.6	0.075	5.79	-3	2.7	3.19	
0950	7.97		120		12.6	0.075	5.80	-3	2.6	3.22	
0955	7.97		120		12.6	0.076	5.78	-3	2.5	3.10	
1000	7.97		120	~1.0 gal	12.7	0.076	5.74	-3	2.4	3.10	
				parameters		stabilized					

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Davisville
Sample ID: RB0512060 01

Tetra Tech NUS Job No./PMS
QC: TUBING RINSEATE (If applicable)

Sample Method: Peristaltic Pump w/ Teflon tubing
Depth Sampled: N/A Feet Screened Interval Depth N/A feet
Sample Date & Time: 5/12/06 1100 hours /Dup
Sampler(s): P. Seward
Data Recorded By: Peter Seward Signature: Peter Seward
Notes: Used clean, unused tubing Pump DIUF water (Reagent Grade) thru tubing. DIUF Lot #1096 exp 01/2007

H&S Survey Meter N/A PPM Field Instrument Group A/B/C/D N/A
Pre-pump insertion WL N/A ft Post - pump insertion WL N/A ft

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
1,4 dioxane	2-1 Liter Amber bottles				

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
N/A											
								TO 5/12/06			

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TURBIDITY FIELD INSTRUMENT CALIBRATION LOG

INSTRUMENT MODEL: Lamotte 2024

TETRA TECH NUS JOB NO. [redacted] KTU

Instrument Group ID: A / B / C (circle one)

Serial No. 1736-1600

Cal. Std. Lot Nos.: NA supplied by U.S. Env.

CALIBRATION DATE	PROCEDURE	A.M. CALIBRATION READING	P.M. CALIBRATION CHECK	SIGNATURE
5/11/06	per Manf. Instructions	0 - 0.00 10 - 10.0	0 - 0.00 10 - 10.0	A.M. [signature] P.M. [signature]
5/12/06	"	0 - 0.00 10 - 10.00	0 - 0.00 10 - 10.00	A.M. [signature] P.M. [signature]
		0 - 10 -	0 - 10 -	A.M. P.M.
		0 - 10 -	0 - 10 -	A.M. P.M.
		0 - 10 -	0 - 10 -	A.M. P.M.
		0 - 10 -	0 - 10 -	A.M. P.M.
		0 - 10 -	0 - 10 -	A.M. P.M.
		0 - 10 -	0 - 10 -	A.M. P.M.
		0 - 10 -	0 - 10 -	A.M. P.M.
		0 - 10 -	0 - 10 -	A.M. P.M.
		0 - 10 -	0 - 10 -	A.M. P.M.
		0 - 10 -	0 - 10 -	A.M. P.M.
		0 - 10 -	0 - 10 -	A.M. P.M.

TURBIDITY FIELD INSTRUMENT CALIBRATION LOG

INSTRUMENT MODEL: LaMotte 2020 TETRA TECH NUS JOB NO. [redacted] KO

Instrument Group ID: A / B / C (circle one) Serial No. 0301-3997

Cal. Std. Lot Nos.: NA supplied by U.S. Env.

CALIBRATION DATE	PROCEDURE	A.M. CALIBRATION READING	P.M. CALIBRATION CHECK	SIGNATURE
5/11/06	per Manf. Instruction	0 - 0.00 10 – 10.0	0 - 0.00 10 – 9.4	A.M. [signature] P.M. [signature]
5/12/06	"	0 - 0.00 10 – 10.00	0 - 10 – Not used	A.M. [signature] P.M. [signature]
		0 - 10 –	0 - 10 –	A.M. P.M.
		0 - 10 –	0 - 10 –	A.M. P.M.
		0 - 10 –	0 - 10 –	A.M. P.M.
		0 - 10 –	0 - 10 –	A.M. P.M.
		0 - 10 –	0 - 10 –	A.M. P.M.
		0 - 10 –	0 - 10 –	A.M. P.M.
		0 - 10 –	0 - 10 –	A.M. P.M.
		0 - 10 –	0 - 10 –	A.M. P.M.
		0 - 10 –	0 - 10 –	A.M. P.M.
		0 - 10 –	0 - 10 –	A.M. P.M.
		0 - 10 –	0 - 10 –	A.M. P.M.

TETRA TECH NUS, INC.

HORIBA U-10 WATER QUALITY CHECKER

Serial No.: 4153009 Model No.: U-22xD Decal No.: A

Site Name: Davisville - Site 16 Job No.: Buffer Lot No.: 5216

Instrument is calibrated in accordance with Manufacturer's Instructions

Calibration Date	am. Calibration ~~Initial~~ Readings ORP						PM Calibration Check Final Readings ORP						Signature	Comments
	pH = 4.0	Cond. m/cm	~~Turbidity NTUs~~	D.O. mg/l	Temp. (°C)	Salinity	pH = 4.0	Cond. m/cm	~~Turbidity NTUs~~	D.O. mg/l	Temp. (°C)	Salinity		
5-11-06	4.00	3.27	1	11.0	11.0	0.2	3.92	3.57	-4	9.0	16.9	0.2	AM Peter PM Peter	
5/12/06	4.00	3.39	0 N/A	10.5	12.5	0.2	4.10	3.39	0	10.7	13.5	0.2	am Karen pm Peter	

Tt NUS Form 0023

TETRA TECH NUS, INC.

HORIBA U-10 WATER QUALITY CHECKER

Serial No.: 0102137 Model No.: U-22 Decal No.: B

Site Name: Dausille site 16 Job No.: Buffer Lot No.: 5216

Instrument is calibrated in accordance with Manufacturer's Instructions

Calibration Date	Initial Readings pH = 4.0	Cond m/cm	~~Turbidity NTUs~~ ORP	D.O. mg/l	Temp. (°C)	Salinity	Final Readings pH = 4.0	Cond. m/cm	Turbidity NTUs	D.O. mg/l	Temp. (°C)	Salinity	Signature	Comments
05-11-06 ~~04-10-06~~	3.97	~~5.52~~ Error 6	224	10.44	10.9	1.3	4.0	4.49	0.0	10.12	11.0	0.0	Peter [illegible] KO [illegible]	Error 6 did not calibrate
				Unit returned to USEPA 1600 hours on 5/11/06 (replaced)										

Tt NUS Form 0023

TETRA TECH NUS, INC.

HORIBA U-~~10~~ 22 WATER QUALITY CHECKER

Serial No.: 5023012 Model No.: U-22 Decal No.: "New" B

Site Name: Davisville Site 16 Job No.: Buffer Lot No.: 5216 3/20/08

Instrument is calibrated in accordance with Manufacturer's Instructions

Calibration Date	a.m calibration Initial Readings						PM cal check Final Readings						Signature	Comments
	pH = 4.0	Cond. ~~m/cm~~ mS/cm	Turbidity NTUs	D.O. mg/l	Temp. (°C)	Salinity	pH = 4.0	Cond. m/cm	Turbidity NTUs	D.O. mg/l	Temp. (°C)	Salinity		
5/11/06	4.04	0.018	5.5	10.02	19.91	0.00	4.00 ~~3.99~~	0.013	0.0	9.17	19.88	0.00	KMcellan	Replaced other unit
5/11/06	N/A					KMD	4.16	3.91	2.3 ~~2.3~~	6.98	18.24	0.20	KMcellan	PM check
5/12/06	4.00	0.004	0.00	10.65	12.46	0.00	Not used					KMcellan		~~KMcellan~~

Tt NUS Form 0023