

DRINKING WATER ORGANICS

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ICF TECHNOLOGY INCORPORATED

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MEMORANDUM

TO: Kevin Mayer
Environmental Engineer
South Coast Ground Water Section (H-6-4)

THROUGH: Richard Bauer
Environmental Scientist
Quality Assurance Management Section (P-3-2)

FROM: Carolyn Studeny
Senior Organic Data Reviewer
Environmental Services Assistance Team (ESAT)

DATE: June 18, 1993

SUBJECT: Review of Analytical Data

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

SITE: Newmark-Muscoy
EPA SSI NO.: J5
CERCLIS ID NO.: CAD981434517
CASE/SAS NO.: SAS 7841Y Memo #01
SDG NO.: SY5569

LABORATORY: Analytical Resources, Inc. (ARI)
ANALYSIS: SAS Volatiles

SAMPLE NO.: 20 Water Samples (see Case Summary)

COLLECTION DATES: April 16 through 22, 1993

REVIEWER: Barbara Gordon
ESAT/ICF Technology, Inc.

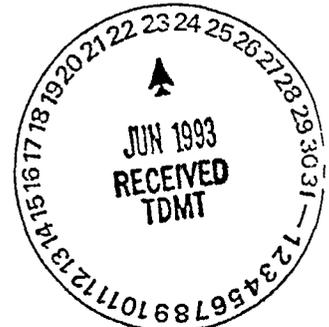
If there are any questions, please contact Carolyn Studeny at (415) 882-3184.

Attachment

cc: Bruce Woods, TPO USEPA Region X
Steve Remaley, USEPA Region IX
Loren Minnich, Sample Management Office
Larry Zinky, URS - SACTO

TPO: FYI Attention Action

SAMPLING ISSUES: Yes No



Data Validation Report

Case No.: SAS 7841Y Memo #01
Site: Newmark-Muscoy
Laboratory: Analytical Resources, Inc. (ARI)
Reviewer: Barbara Gordon, ESAT/ICF Technology, Inc.
Date: June 18, 1993

I. Case Summary

SAMPLE INFORMATION:

VOA Sample Numbers: SY5569 through SY5588
Concentration and Matrix: Low Level Water
Analysis: SAS Volatiles
SOW: N/A
EPA Method : 524.2
Collection Dates: April 16 through 22, 1993
Sample Receipt Date: April 23, 1993
Analyses Dates: April 23, 24, 26 and May 4, 1993

FIELD QC:

Trip Blanks (TB): SY5580
Field Blanks (FB): SY5579 and SY5583
Water Blank (WB): SY5575
Equipment Blanks (EB): None
Background Samples (BG): None
Field Duplicates (D1): SY5570 and SY5571
(D2): SY5585 and SY5586

METHOD BLANKS AND ASSOCIATED SAMPLES:

VBLK1: SY5569 through SY5575 and VBLK1MS
VBLK2: SY5576 through SY5582 and VBLK2MS
VBLK3: SY5583 through SY5588
VBLK4: SY5581DL, SY5585DL, SY5586DL, SY5587DL and
VBLK3MS

TABLES:

1A: Analytical Results with Qualifications
1B: Data Qualifiers
2: Sample Quantitation Limits of Target Compound
List (TCL) Analytes
3: Initial and Continuing Calibrations

TPO ACTION:

The internal standards, chlorobenzene-d₅ and 1,4-difluorobenzene were not analyzed as specified in the SAS request. Due to poor response in the initial and continuing calibrations, the quantitation limits for 1,2-dibromo-3-chloropropane were estimated in all samples

ADDITIONAL COMMENTS:

No Tentatively Identified Compounds were reported for this package.

This report was prepared according to the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

DL - Dilution; VBLK#MS - Laboratory Fortified Blank

ESAT-QA-9A-8553/7841Y1M1.RPT

METHOD NON-COMPLIANCE: See TPO ATTENTION

SAMPLING ISSUES:

Due to field, water and trip blank contamination, positive results for methylene chloride, chloroform and toluene in several samples were reported as nondetected.

II. Validation Summary

	VOA	
	Acceptable/Comment	
HOLDING TIMES	[Y]	[]
GC/MS TUNE/GC PERFORMANCE	[Y]	[]
CALIBRATIONS	[N]	[C]
FIELD QC	[N]	[B]
LABORATORY BLANKS	[Y]	[]
SURROGATES	[Y]	[]
LABORATORY FORTIFIED BLANKS	[Y]	[]
INTERNAL STANDARDS	[Y]	[]
COMPOUND IDENTIFICATION	[Y]	[]
COMPOUND QUANTITATION	[Y]	[A]
SYSTEM PERFORMANCE	[Y]	[]

N/A = Not Applicable

III. Validity and Comments

A. The following results are estimated and flagged "J" in Table 1A:

- All results below the Quantitation Limits (denoted with an "L" qualifier)

Results below the Quantitation Limits (QL) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

B. Due to trip and field blank contamination, the results reported in Table 1A for the following analytes are estimated (J):

- Chloroform in sample numbers SY5581 and SY5587
- Toluene in sample numbers SY5587 and SY5588

A trip blank is intended to detect contaminants introduced during the transport of the samples to the laboratory. Contaminants that are found in the trip blank which are absent in the laboratory blank could be indicative of a problem in transportation, storage, the bottle preparation procedure or other indeterminate error.

Field blanks are intended to detect contaminants that may have been introduced in the field. Contaminants that are found in the field blank which are absent in the laboratory preparation blank could be indicative of a field QC problem, a deficiency in the bottle preparation procedure, blank contamination from manufacturers, a difference in preparation of the laboratory and field blanks or other indeterminate error.

A water blank is intended to detect contamination in the organic-free and deionized water used to create field QC blanks such as trip, field and equipment blanks.

Methylene chloride and chloroform were found in field blank numbers SY5579 and SY5583, in water blank number SY5575 and trip blank number SY5580 (see Table 1A for concentrations). Toluene was also detected in trip blank number SY5580 at a concentration of 0.2 ug/L. The results for the samples listed above are considered nondetected and estimated (U,J) and the quantitation limits have been increased according to the blank qualification rules listed below.

No positive results are reported unless the concentration of the compound in the sample exceeds 10 times the amount in any associated blank for the common laboratory contaminants or 5 times the amount for other compounds. If the sample result is greater than the QL, the quantitation limit is raised to the sample result (U,J). If the sample result is less than the QL, the result is reported as nondetected (U,J) at the QL.

- C. Due to low Relative Response Factors (RRF) in the Initial and Continuing Calibrations, the quantitation limits for the following analyte are estimated (J) (see Table 2):

- 1,2-Dibromo-3-chloropropane in all samples and method blanks

The determination of the Relative Response Factors evaluates instrument sensitivity and is used in the quantitation of the target analytes.

Average Relative Response Factors (RRFs) below the 0.05 QC advisory validation criteria were observed for 1,2-dibromo-3-chloropropane in the Initial Calibrations performed February 24 and May 2, 1993 (see Table 3). RRFs below the 0.05 QC Advisory validation criteria were observed for 1,2-dibromo-3-chloropropane performed April 23, 24 and 26, 1993. Since the results for 1,2-dibromo-3-chloropropane are nondetected, false negatives may exist.

ANALYTICAL RESULTS
TABLE IA*

Case No.: SAS 7841Y Memo #01
 Site: Newmark-Muscovy
 Lab.: Analytical Resources, Inc. (ARI)
 Reviewer: Barbara Gordon, ESAT/ICF Technology, Inc.
 Date: June 18, 1993

Analysis Type: Low Level Water Samples
 for SAS Volatiles

Concentration in ug/L

Station Location	MUNI-101-01			MUNI-104-01			MUNI-104-02			MUNI-108-01			MUNI-112-01			MUNI-105-01			WA01-01		
Sample I.D.	SY5569			SY5570 D1			SY5571 D1			SY5572			SY5573			SY5574			SY5575 WB		
Date of Collection	4/20/93			4/20/93			4/20/93			4/20/93			4/20/93			4/16/93			4/22/93		
Compound	Result	Val	Com	Result	Val	Com															
Dichlorodifluoromethane	0.2 U			8			8			0.3			0.2 U			10			0.2 U		
Vinyl chloride	0.2 U			0.2 U																	
Chloroethane	0.2 U			0.2 U																	
Trichlorofluoromethane	0.2 U			0.8			0.8			0.2 U			0.2 U			1			0.2 U		
1,1-Dichloroethene	0.2 U			0.2 U																	
Methylene chloride	0.2 U			0.2 U																	
trans-1,2-Dichloroethene	0.2 U			0.2 U																	
1,1-Dichloroethane	0.2 U			0.3			0.2 U														
cis-1,2-Dichloroethene	0.2 U			0.6			0.6			0.2 U			0.2 U			2			0.2 U		
Chloroform	0.2 U			0.2 U																	
Trichloroethene	0.2 U			0.4			0.5			0.2 U			0.2 U			0.8			0.2 U		
1,2-Dichloropropane	0.2 U			0.2 U																	
Toluene	0.2 U			0.2 U																	
Tetrachloroethene	0.2 U			6			6			0.2 U	J	A	0.2 U			6			0.2 U		

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter

QJ -Quantitation Limits

NA-Not Analyzed

D1 D2, etc -Field Duplicate Pairs

IB-Field Blank, WB-Water Blank, TB-Travel Blank

BG-Background Sample

ND-Not Detected

ANALYTICAL RESULTS
TABLE 1A*

Case No.: SAS 7841Y Memo #01
 Site: Newmark-Muscoy
 Lab.: Analytical Resources, Inc. (ARI)
 Reviewer: Barbara Gordon, ESAT/ICF Technology, Inc.
 Date: June 18, 1993

Analysis Type: Low Level Water Samples
 for SAS Volatiles

Concentration in ug/L

Station Location	MUNI-25-21			MUNI-110-01			MUNI-111-01			WFI110-01			WTR01-01			MUNI-106-01			MUNI-102-01			
Sample I.D.	SY5576			SY5577			SY5578			SY5579 FB			SY5580 TB			SY5581			SY5582			
Date of Collection	4/20/93			4/21/93			4/21/93			4/21/93			4/21/93			4/22/93			4/22/93			
Compound	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	
Dichlorodifluoromethane	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		28			0.2	U		
Vinyl chloride	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.1	L	J A	0.2	U		
Chloroethane	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		
Trichlorofluoromethane	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		4			0.2	U		
1,1-Dichloroethene	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		
Methylene chloride	0.2	U		0.2	U		0.2	U		0.8			1			0.2	U		0.2	U		
trans-1,2-Dichloroethene	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.4			0.2	U		
1,1-Dichloroethane	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.8			0.2	U		
cis-1,2-Dichloroethene	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		6			0.2	U		
Chloroform	0.2	U		0.2	U		0.2	U		3			2			0.2	U	J B	0.2	U		
Trichloroethene	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		6			0.2	U		
1,2-Dichloropropane	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.3			0.2	U		
Toluene	0.2	U		0.2	U		0.2	U		0.2	U		0.2	L	J A	0.2	U		0.2	U		
Tetrachloroethene	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		27			0.2	U		

*The other requested analytes were analyzed for but "Not Detected". The Sample Quantitation Limits are listed in Table 2

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter

QL -Quantitation Limits

NA-Not Analyzed

D1 D2 etc -Field Duplicate Pairs

1B-Field Blank, WB-Water Blank 1B-Travel Blank

BC- Background Sample

ND- Not Detected

ANALYTICAL RESULTS
TABLE IX*

Case No.: SAS 7841Y Memo #01
Site: Newmark-Muscovy
Lab.: Analytical Resources, Inc. (ARI)
Reviewer: Barbara Gordon, ESAT/ICF Technology, Inc.
Date: June 18, 1993

Analysis Type: Low Level Water Samples
for SAS Volatiles

Concentration in ug/L

Station Location Sample I.D. Date of Collection	WF101-01 SY5583 FB 4/22/93			MUNI-01-21 SY5584 4/22/93			MUNI-14-21 SY5585 D2 4/22/93			MUNI-14-22 SY5586 D2 4/22/93			MUNI-16-21 SY5587 4/22/93			MUNI-19-21 SY5588 4/22/93			Method Blank VBLK1		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.2	U		0.2	U		26			33			35			2			0.2	U	
Vinyl chloride	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.2	U	
Chloroethane	0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.2	U	
Trichlorofluoromethane	0.2	U		0.2	U		4			4			5			0.3			0.2	U	
1,1-Dichloroethene	0.2	U		0.2	U		0.2	U		0.2	U		0.1	L J A		0.2	U		0.2	U	
Methylene chloride	0.8			0.2	U		0.2	U		0.2	U		0.2	U		0.2	U		0.2	U	
trans-1,2-Dichloroethene	0.2	U		0.2	U		0.1	L J A		0.1	L J A		0.2	L J A		0.2	U		0.2	U	
1,1-Dichloroethane	0.2	U		0.2	U		0.5			0.5			0.9			0.2	U		0.2	U	
cis-1,2-Dichloroethene	0.2	U		0.2	U		1			1			1			0.2	L J A		0.2	U	
Chloroform	3			0.2	U		0.2	U		0.2	U		0.2	U J B		0.2	U		0.2	U	
Trichloroethene	0.2	U		0.2	U		4			4			5			0.4			0.2	U	
1,2-Dichloropropane	0.2	U		0.2	U		0.2	U		0.1	L J A		0.2	L J A		0.2	U		0.2	U	
Toluene	0.2	U		0.2	U		0.2	U		0.2	U		0.5	U J B		0.2	U J B		0.2	U	
Tetrachloroethene	0.2	U		0.2	U		18			20			28			1			0.2	U	

*The other requested analytes were analyzed for but "Not Detected". The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter

QI -Quantitation Limits

NA-Not Analyzed

D1 D2 etc -Field Duplicate Pairs

IB Field Blank, WB-Water Blank TB-Travel Blank

BC- Background Sample

ND Not Detected

ANALYTICAL RESULTS

Page 4 of 4

TABLE 1A*

Case No.: SAS 7841Y Memo #01

Site: Newark-Muscoy

Lab.: Analytical Resources, Inc. (ARI)

Reviewer: Barbara Gordon, ESAT/ICF Technology, Inc.

Date: June 18, 1993

Analysis Type: Low Level Water Samples
for SAS Volatiles

Concentration in ug/L

Station Location Sample I.D. Date of Collection	Method Blank VBLK2			Method Blank VBLK3			Method Blank VBLK4			QL												
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	
Dichlorodifluoromethane	0.2	U		0.2	U		0.2	U		0.2												
Vinyl chloride	0.2	U		0.2	U		0.2	U		0.2												
Chloroethane	0.2	U		0.2	U		0.2	U		0.2												
Trichlorofluoromethane	0.2	U		0.2	U		0.2	U		0.2												
1,1-Dichloroethene	0.2	U		0.2	U		0.2	U		0.2												
Methylene chloride	0.2	U		0.2	U		0.2	U		0.2												
trans-1,2-Dichloroethene	0.2	U		0.2	U		0.2	U		0.2												
1,1-Dichloroethane	0.2	U		0.2	U		0.2	U		0.2												
cis-1,2-Dichloroethene	0.2	U		0.2	U		0.2	U		0.2												
Chloroform	0.2	U		0.2	U		0.2	U		0.2												
Trichloroethene	0.2	U		0.2	U		0.2	U		0.2												
1,2-Dichloropropane	0.2	U		0.2	U		0.2	U		0.2												
Toluene	0.2	U		0.2	U		0.2	U		0.2												
Tetrachloroethene	0.2	U		0.2	U		0.2	U		0.2												

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter

QL-Quantitation Limits

NA-Not Analyzed

D1, D2, etc -Field Duplicate Pairs

TB-Field Blank, WB-Water Blank, Tr-Travel Blank

BG-Background Sample

ND-Not Detected

TABLE 1B
DATA QUALIFIERS

The definitions of the following qualifiers are prepared according to the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

NO QUALIFIERS indicate that the data are acceptable both qualitatively and quantitatively.

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- L Indicates results which fall below the Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

TABLE 2
Sample Quantitation Limits

Case No.: SAS 7841Y Memo #01
 Site: Newmark-Muscoy
 Laboratory: Analytical Resources, Inc. (ARI)
 Reviewer: Barbara Gordon
 ESAT/ICF Technology, Inc.
 Date: June 18, 1993

<u>Volatile Compounds</u>	<u>Units, ug/L</u>	<u>Q</u>	<u>C</u>
Dichlorodifluoromethane	0.2		
Chloromethane	0.2		
Vinyl chloride	0.2		
Bromomethane	0.2		
Chloroethane	0.2		
Trichlorofluoromethane	0.2		
1,1-Dichloroethene	0.2		
Methylene chloride	0.2		
trans-1,2-Dichloroethene	0.2		
1,1-Dichloroethane	0.2		
2,2-Dichloropropane	0.2		
cis-1,2-Dichloroethene	0.2		
Chloroform	0.2		
Bromochloromethane	0.2		
1,1,1-Trichloroethane	0.2		
1,1-Dichloropropene	0.2		
Carbon tetrachloride	0.2		
1,2-Dichloroethane	0.2		
Benzene	0.2		
Trichloroethene	0.2		
1,2-Dichloropropane	0.2		
Bromodichloromethane	0.2		
Dibromomethane	0.2		
cis-1,3-Dichloropropene	0.2		
Toluene	0.2		
trans-1,3-Dichloropropene	0.2		
1,1,2-Trichloroethane	0.2		
1,3-Dichloropropane	0.2		
Tetrachloroethene	0.2		
Dibromochloromethane	0.2		
1,2-Dibromoethane	0.2		
Chlorobenzene	0.2		
1,1,1,2-Tetrachloroethane	0.2		
Ethylbenzene	0.2		
Xylenes (meta & para)	0.4		
Xylene (ortho)	0.2		
Styrene	0.2		
Isopropylbenzene	0.2		
Bromoform	0.5		

TABLE 2
(cont'd)

1,1,2,2-Tetrachloroethane	0.2
1,2,3-Trichloropropane	0.2
N-Propylbenzene	0.2
Bromobenzene	0.2
1,3,5-Trimethylbenzene	0.2
2-Chlorotoluene	0.2
4-Chlorotoluene	0.2
T-Butylbenzene	0.2
1,2,4-Trimethylbenzene	0.2
S-Butylbenzene	0.2
4-Isopropyltoluene	0.2
1,3-Dichlorobenzene	0.2
1,4-Dichlorobenzene	0.2
N-Butylbenzene	0.2
1,2-Dichlorobenzene	0.2
1,2-Dibromo-3-Chloropropane	0.5
1,2,4-Trichlorobenzene	0.2
Hexachlorobutadiene	0.2
Naphthalene	0.2
1,2,3-Trichlorobenzene	0.2
2-Chloroethylvinylether	0.2

J

C

Q - Qualifier
C - Comment

TABLE 2
(cont'd)

To calculate the sample quantitation limits, multiply QL by the following factors:

<u>Sample No.</u>	<u>Volatiles</u>
SY5569	1.00
SY5570	1.00
SY5571	1.00
SY5572	1.00
SY5573	1.00
SY5574	1.00
SY5575	1.00
SY5576	1.00
SY5577	1.00
SY5578	1.00
SY5579	1.00
SY5580	1.00
SY5581	1.00
SY5582	1.00
SY5583	1.00
SY5584	1.00
SY5585	1.00
SY5586	1.00
SY5587	1.00
SY5588	1.00
Method Blanks	1.00

TABLE 3
Initial and Continuing Calibrations

Case No.: SAS 7841Y Memo #01
Site: Newmark-Muscoy
Laboratory: Analytical Resources, Inc. (ARI)
Reviewer: Barbara Gordon
ESAT/ICF Technology, Inc.
Date: June 18, 1993

Initial Calibrations

<u>Date</u>	<u>Analyte</u>	<u>RRF</u>	<u>Associated Samples</u>
2/24/93	1,2-Dibromo-3-chloropropane	0.022	All Samples
5/2/93	1,2-Dibromo-3-chloropropane	0.014	All Samples

Continuing Calibrations

<u>Date</u>	<u>Analyte</u>	<u>RRF</u>	<u>Associated Samples</u>
4/23/93	1,2-Dibromo-3-chloropropane	0.021	SY5569 through SY5575
4/24/93	1,2-Dibromo-3-chloropropane	0.018	SY5576 through SY5581
4/26/93	1,2-Dibromo-3-chloropropane	0.023	SY5582 through SY5588

TPO: []FYI [X]Attention []Action

Region IX

ORGANIC REGIONAL DATA ASSESSMENT

Case No. SAS 7841Y Memo #01 LABORATORY Analytical Resources, Inc.

SDG NO. SY5569 SITE NAME Newmark-Muscoy

SOW EPA Method 524.2 REVIEW COMPLETION DATE June 18, 1993

REVIEWER [] ESD [X] ESAT REVIEWER'S NAME Barbara Gordon

NO. OF SAMPLES 20 WATER _____ SOIL _____ OTHER _____

	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	<u>0</u>	_____	_____	_____
2. GC-MS TUNE/GC PERFORMANCE	<u>0</u>	_____	_____	_____
3. INITIAL CALIBRATIONS	<u>X</u>	_____	_____	_____
4. CONTINUING CALIBRATIONS	<u>X</u>	_____	_____	_____
5. FIELD QC	<u>X</u>	_____	_____	_____
6. LABORATORY BLANKS	<u>0</u>	_____	_____	_____
7. SURROGATES	<u>0</u>	_____	_____	_____
8. MATRIX SPIKE/DUPLICATES	<u>0</u>	_____	_____	_____
9. REGIONAL QC	<u>F</u>	_____	_____	_____
10. INTERNAL STANDARDS	<u>0</u>	_____	_____	_____
11. COMPOUND IDENTIFICATION	<u>0</u>	_____	_____	_____
12. COMPOUND QUANTITATION	<u>0</u>	_____	_____	_____
13. SYSTEM PERFORMANCE	<u>0</u>	_____	_____	_____
14. OVERALL ASSESSMENT	<u>X</u>	_____	_____	_____

0 - No problems or minor problems that affect data quality.

X - No more than about 5% of the data points have limitations on data quality.
Data points are either qualified as estimates or rejected.

M - More than about 5% of the data points are qualified as estimates.

Z - More than about 5% of the data points have been rejected.

F - Not Applicable

TPO: []FYI [X]Attention []Action Region IX
ORGANIC REGIONAL DATA ASSESSMENT (Cont'd)

Case No. SAS 7841Y Memo #01 LABORATORY Analytical Resources, Inc.
SDG NO. SY5569 SITE NAME Newmark-Muscoy
SOW EPA Method 524.2 REVIEW COMPLETION DATE June 18, 1993
REVIEWER [] ESD [X] ESAT REVIEWER'S NAME Barbara Gordon
NO. OF SAMPLES 20 WATER _____ SOIL _____ OTHER _____

TPO ATTENTION: The internal standards, chlorobenzene-d₅ and 1,4-difluorobenzene were not analyzed as specified in the SAS request. Due to poor response in the initial and continuing calibrations, the quantitation limits for 1,2-dibromo-3-chloropropane were estimated in all samples.

AREA OF CONCERN: Due to field and trip blank contamination, positive results for methylene chloride, chloroform and toluene in several samples were reported as nondetected.

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URS TDMT Only TDCN: 0301
Project #: 62251 Loc: 09.63 Type: 63



ICF TECHNOLOGY INCORPORATED

JCS CONSULTANTS, INC.
JUN 28 1993
MEMORANDUM
RECEIVED

Kevin Mayer
Environmental Engineer
South Coast Ground Water Section (H-6-4)

THROUGH: Richard Bauer
Environmental Scientist
Quality Assurance Management Section (P-3-2)

FROM: Carolyn Studeny
Senior Organic Data Reviewer
Environmental Services Assistance Team (ESAT)

DATE: June 25, 1993

SUBJECT: Review of Analytical Data

Attached are comments resulting from ESAT Region 9 review of the following analytical data:

SITE: Newmark-Muscoy
EPA SSI NO.: J5
CERCLIS ID NO.: CAD981434517
CASE/SAS NO.: SAS 7841Y Memo #02
SDG NO.: SY5589

LABORATORY: Analytical Resources, Inc. (ARI)
ANALYSIS: SAS Volatiles by
EPA Drinking Water Method 524.2

SAMPLE NO.: SY5589 through SY5600 and SY5603 through SY5610

COLLECTION DATE: April 22, 23 and 25 through 28, 1993

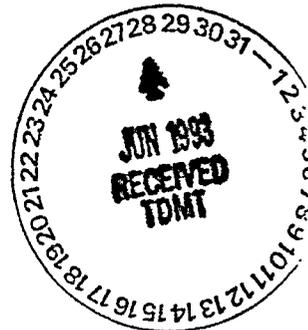
REVIEWER: Anjana Vig
ESAT/ICF Technology, Inc.

If there are any questions, please contact Carolyn Studeny at (415) 882-3184.
Attachment

cc: Bruce Woods, TPO USEPA Region X
Steve Remaley, USEPA Region IX
Loren Minnich, Sample Management Office
Larry Zinky, URS SAC

TPO: []FYI [X]Attention []Action

SAMPLING ISSUES: [X]Yes []No



Data Validation Report

Case No.: SAS 7841Y Memo #02
Site: Newmark-Muscoy
Laboratory: Analytical Resources, Inc. (ARI)
Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.
Date: June 25, 1993

I. Case Summary

SAMPLE INFORMATION:

VOA Sample Numbers: SY5589 through SY5600 and SY5603 through SY5610
Concentration and Matrix: Low Level Water
Analysis: SAS Volatiles by EPA Drinking Water Method 524.2
SOW: Not Applicable
Collection Date: April 22, 23 and 25 through 28, 1993
Sample Receipt Date: April 23, 24, 27, 28 and 29, 1993
Analysis Date: May 5, 6, 7 and 11, 1993

FIELD QC:

Trip Blanks (TB): SY5589, SY5593, SY5597 and SY5607
Field Blanks (FB): SY5599
Equipment Blanks (EB): SY5592 and SY5596
Background Samples (BG): None
Field Duplicates (D1): SY5608 and SY5611* (*See Additional Comments)

METHOD BLANKS AND ASSOCIATED SAMPLES:

VBLK1: SY5589 through SY5595 and VBLK1MS
VBLK2: SY5596 through SY5600, SY5603, SY5604 and VBLK2MS
VBLK3: SY5605 through SY5610 and VBLK3MS
VBLK4: SY5591DL, SY5595DL, SY5610DL and VBLK4MS

TABLES:

1A: Analytical Results with Qualifications
1B: Data Qualifiers
2: Sample Quantitation Limits of Target Compound List (TCL) Analytes
3: Volatiles: Initial and Continuing Calibrations

TPO ATTENTION:

Due to calibration problems detected results and quantitation limits for several analytes were estimated.

METHOD NON-COMPLIANCE:

TPO ATTENTION:

Several samples were analyzed 2 and 3 days outside of the contractual holding time of 10 days from sample receipt.

DL - Dilution; VBLK#MS - Laboratory Fortified Blank

ESAT-QA-9A-8589/7841YM02.RPT

SAMPLING ISSUES:

TPO ATTENTION:

Due to Field QC contamination, several detected results were reported as nondetected

ADDITIONAL COMMENTS:

2-Chloroethylvinylether was added as a target analyte in compliance with the SAS request.

The results for sample number SY5611, the field duplicate of sample number SY5608, are in SAS 7841Y Memo #03.

This report was prepared according to the SAS requirements for the analysis of purgeable halocarbons and aromatics in water samples by EPA Drinking Water Method 524.2 (1989 Revision) and the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

II. Validation Summary

	VOA	
	Acceptable/Comment	
HOLDING TIMES	[Y]	[]
GC/MS TUNE/GC PERFORMANCE	[Y]	[]
CALIBRATIONS	[N]	[CD]
FIELD QC	[N]	[B]
LABORATORY BLANKS	[Y]	[]
SURROGATES	[Y]	[]
LABORATORY FORTIFIED BLANK	[Y]	[]
INTERNAL STANDARDS	[Y]	[]
COMPOUND IDENTIFICATION	[Y]	[]
COMPOUND QUANTITATION	[N]	[A]
SYSTEM PERFORMANCE	[Y]	[]

N/A = Not Applicable

III. Validity and Comments

A. The following results are estimated and flagged "J" in Table 1A:

- All results below the Quantitation Limits (denoted with an "L" qualifier)

Results below the Quantitation Limits (QL) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

B. Due to trip, equipment and field blank contamination, the results reported in Table 1A for the following analytes are estimated (J):

- Chloroform in sample numbers SY5595 and SY5610

- Toluene in sample numbers SY5594, SY5595, SY5600, SY5603 through SY5606 and SY5608 through SY5610
- Tetrachloroethene in sample numbers SY5600, SY5603, SY5605 and SY5609

A trip blank is intended to detect contaminants introduced during the transport of the samples to the laboratory. Contaminants that are found in the trip blank which are absent in the laboratory blank could be indicative of a problem in transportation, storage, the bottle preparation procedure or other indeterminate error.

An equipment blank is reagent water that has been collected as a sample using decontaminated sampling equipment. The intent of an equipment blank is to monitor for contamination introduced by the sampling activity, although any laboratory introduced contamination will also be present.

Field blanks are intended to detect contaminants that may have been introduced in the field. Contaminants that are found in the field blank which are absent in the laboratory preparation blank could be indicative of a field QC problem, a deficiency in the bottle preparation procedure, blank contamination from manufacturers, a difference in preparation of the laboratory and field blanks or other indeterminate error.

Analytes were found in trip, equipment and field blank at various concentrations (see Table 1A). The results for the samples listed above are considered nondetected and estimated (U,J) and the quantitation limits have been increased according to the blank qualification rules listed below.

No positive results are reported unless the concentration of the compound in the sample exceeds 10 times the amount in any associated blank for the common laboratory contaminants or 5 times the amount for other compounds. If the sample result is greater than the CRQL, the quantitation limit is raised to the sample result (U,J). If the sample result is less than the CRQL, the result is reported as nondetected (U,J) at the CRQL.

- C. Due to low Relative Response Factors (RRF) in the Initial and Continuing Calibrations, the quantitation limits for the following analytes are estimated (J) (see Table 2):

- 1,2-Dibromo-3-chloropropane in all samples and method blanks
- 2-Chloroethylvinylether in sample numbers SY5596 through SY5600, SY5603 and SY5604 and method blank VBLK2

The determination of the Relative Response Factors evaluates instrument sensitivity and is used in the quantitation of the target analytes.

An Average Relative Response Factor (RRF) below the 0.05 QC advisory validation criterion was observed for 1,2-dibromo-3-chloropropane in the Initial Calibration performed May 2, 1993 (see Table 3). RRFs below the 0.05 QC advisory validation criterion were also observed

for 1,2-dibromo-3-chloropropane and 2-chloroethylvinylether in the Continuing Calibrations performed May 5, 6, 7 and 11, 1993 (see Table 3).

Since the results for these analytes are nondetected, false negatives may exist.

D. Due to large percent Differences (%D) in the Continuing Calibrations, the detected results and quantitation limits for the following analytes are estimated (J) (see Tables 1A and 2):

- Methylene chloride in sample numbers SY5589 through SY5600, SY5603 and SY5604 and method blanks VBLK1 and VBLK2
- 1,2-Dibromo-3-chloropropane in sample numbers SY5589 through SY5595 and method blank VBLK1
- 2-Chloroethylvinylether in sample numbers SY5596 through SY5600, SY5603 and SY5604 and method blank VBLK2
- Dibromomethane in sample numbers SY5605 through SY5610 and method blank VBLK3
- 1,2,3-Trichloropropane in and method blank VBLK4

The Continuing Calibration checks the instrument performance daily and produces the Relative Response Factors for each target analyte that are used for quantitation.

%Ds exceeding the $\pm 25\%$ QC advisory validation criterion were observed for several analytes in the Continuing Calibrations performed May 5, 6, 7 and 11, 1993 (see Table 3).

ANALYTICAL RESULTS
TABLE 1A*

Case No.: SAS 7841Y Memo #02
 Site: Newmark-Muscoy
 Lab.: Analytical Resources, Inc. (ARI)
 Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.
 Date: June 25, 1993

Analysis Type: Low Level Water Samples
 for SAS Volatiles by EPA
 Drinking Water Method 524.2

Concentration in ug/L

Station Location Sample I.D. Date of Collection	WTR01-02 SY5589 TB 4/22/93			WMW02A-21 SY5590 4/23/93			WMW02B-21 SY5591 4/23/93			WEQ02B-01 SY5592 EB 4/23/93			WTR03-01 SY5593 TB 4/23/93			WMW03A-21 SY5594 4/25/93			WMW03B-21 SY5595 4/25/93		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.2 U			0.2 U			32			0.2 U			0.2 U			0.2 U			39		
Vinyl chloride	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Trichlorofluoromethane	0.2 U			0.2 U			3			0.2 U			0.2 U			0.2 U			5		
Methylene chloride	1 U	D		0.2 U	D		0.2 U	D		0.9 U	D		1 U	D		0.2 U	D		0.2 U	D	
trans-1,2-Dichloroethene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		A
1,1-Dichloroethane	0.2 U			0.2 U			0.6			0.2 U			0.2 U			0.2 U			2		
cis-1,2-Dichloroethane	0.2 U			0.2 U			1			0.2 U			0.2 U			0.2 U			2		
Chloroform	3			0.2 U			0.2 U			2			3			0.2 U			0.2 U		B
1,1,1-Trichloroethane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Carbon tetrachloride	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Benzene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Trichloroethene	0.2 U			0.2 U			2			0.2 U			0.2 U			0.2 U			4		
1,2-Dichloropropane	0.2 U			0.2 U			0.4			0.2 U			0.2 U			0.2 U			0.4		
Toluene	0.5			0.2 U			0.2 U			0.4			0.3			0.2 U	B		0.2 U		B
Tetrachloroethene	0.2 U			0.2 U			16			0.4			0.2 U			0.2 U			22		
m,p-Xylene	0.4 U			0.4 U			0.4 U			0.1 U	A		0.4 U			0.4 U			0.4 U		
o-Xylene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
1,2,4-Trimethylbenzene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		

*The other requested analytes were analyzed for, but "Not Detected". The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter

QL-Quantitation Limits

NA-Not Analyzed

D1, D2, etc -Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

ND-Not Detected

ANALYTICAL RESULTS
TABLE 1A*

Case No.: SAS 7841Y Memo #02
Site: Newmark-Muscoy
Lab.: Analytical Resources, Inc. (ARI)
Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.
Date: June 25, 1993

Analysis Type: Low Level Water Samples
for SAS Volatiles by EPA
Drinking Water Method 524.2

Concentration in ug/L

17.6.93

Station Location	WEQ03B-01			WTR04-01			WMW06A-21			WFI06B-21			WMW06B-21			WMW08A-21			WMW01F-21		
Sample I.D.	SY5596 EB			SY5597 TB			SY5598			SY5599 FB			SY5600			SY5603			SY5604 F		
Date of Collection	4/26/93			4/26/93			4/26/93			4/26/93			4/26/93			4/27/93			4/27/93		
Compound	Result	Val	Com																		
Dichlorodifluoromethane	0.2 U			2																	
Vinyl chloride	0.2 U			0.1 U	L	A															
Trichlorofluoromethane	0.2 U																				
Methylene chloride	0.8 U	J	D	1 U	J	D	0.2 U	J	D	0.8 U	J	D	0.2 U	J	D	0.2 U	J	D	0.2 U	J	D
trans-1,2-Dichloroethene	0.2 U																				
1,1-Dichloroethane	0.2 U			0.2																	
cis-1,2-Dichloroethene	0.2 U			0.2 U	L	A															
Chloroform	2			3			0.2 U			3			0.2 U			0.2 U			0.2 U		
1,1,1-Trichloroethane	0.2 U																				
Carbon tetrachloride	0.2 U			1			0.2 U														
Benzene	0.2 U	L	A	0.2 U																	
Trichloroethene	0.2 U			0.2																	
1,2-Dichloropropane	0.2 U																				
Toluene	0.3			0.2			0.2 U			0.2 U			0.3 U	J	B	0.3 U	J	B	2 U	J	B
Tetrachloroethene	0.3			0.2 U			0.2 U			0.2 U			0.6 U	J	B	0.6 U	J	B	0.2 U		
m,p-Xylene	0.4 U																				
o-Xylene	0.2 U																				
1,2,4-Trimethylbenzene	0.2 U																				

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter

QL-Quantitation Limits

NA-Not Analyzed

D1, D2, etc -Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

ND-Not Detected

ANALYTICAL RESULTS
TABLE 1A*

Case No.: SAS 7841Y Memo #02
 Site: Newmark-Muscoy
 Lab.: Analytical Resources, Inc. (ARI)
 Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.
 Date: June 25, 1993

Analysis Type: Low Level Water Samples
 for SAS Volatiles by EPA
 Drinking Water Method 524.2

Concentration in ug/L

Station Location Sample I.D. Date of Collection	WMW04A-21 SY5605 4/27/93			WMW04B-21 SY5606 4/27/93			WTR05-01 SY5607 TB 4/27/93			WMW01E-21 SY5608 D1 4/28/93			WMW05A-21 SY5609 4/28/93			WMW05B-21 SY5610 4/28/93			Method Blank VBLK1		
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com
Dichlorodifluoromethane	0.2 U			9			0.2 U			0.2 U			0.2 U			51			0.2 U		
Vinyl chloride	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Trichlorofluoromethane	0.4			1			0.2 U			0.2 U			0.2 U			6			0.2 U		
Methylene chloride	0.2 U			0.2 U			1			0.2 U			0.2 U			0.2 U			0.2 U		D
trans-1,2-Dichloroethene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.1 L			0.2 U		
1,1-Dichloroethane	0.2 U			0.2 L		A	0.2 U			0.2 U			0.2 U			2			0.2 U		
cis-1,2-Dichloroethene	0.2 U			0.4			0.2 U			0.2			0.2 U			3			0.2 U		
Chloroform	0.2 U			0.2 U			3			0.2 U			0.2 U			0.2 U		B	0.2 U		
1,1,1-Trichloroethane	0.2 U			0.2 U			0.2 U			0.2 L		A	0.2 U			0.2 U			0.2 U		
Carbon tetrachloride	0.2 U			0.2 U			0.2 U			0.2 U			0.5			0.2 U			0.2 U		
Benzene	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2 U		
Trichloroethene	0.2 U			0.9			0.2 U			0.4			0.2 U			6			0.2 U		
1,2-Dichloropropane	0.2 U			0.2 U			0.2 U			0.2 U			0.2 U			0.2			0.2 U		
Toluene	0.2 U		B	0.2 U		B	0.4			1 U		B	0.6 U		B	0.5 U		B	0.2 U		
Tetrachloroethene	0.3 U		B	6			0.2 U			0.2 U			0.6 U		B	32			0.2 U		
m,p-Xylene	0.4 U			0.4 U			0.4 U			0.2 L		A	0.4 U			0.4 U			0.4 U		
o-Xylene	0.2 U			0.2 U			0.2 U			0.1 L		A	0.2 U			0.2 U			0.2 U		
1,2,4-Trimethylbenzene	0.2 U			0.2 U			0.2 U			0.1 L		A	0.2 U			0.2 U			0.2 U		

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

QL-Quantitation Limits

NA-Not Analyzed

D1, D2, etc.-Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

ND-Not Detected

ANALYTICAL RESULTS
TABLE 1A*

Case No.: SAS 7841Y Memo #02
 Site: Newmark-Muscoy
 Lab.: Analytical Resources, Inc. (ARI)
 Reviewer: Anjana Vig, ESAT/ICF Technology, Inc.
 Date: June 25, 1993

Analysis Type: Low Level Water Samples
 for SAS Volatiles by EPA
 Drinking Water Method 524.2

Concentration in ug/L

Station Location Sample I.D. Date of Collection	Method Blank VBLK2			Method Blank VBLK3			Method Blank VBLK4			QL												
	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	Result	Val	Com	
Dichlorodifluoromethane	0.2 U			0.2 U			0.2 U			0.2												
Vinyl chloride	0.2 U			0.2 U			0.2 U			0.2												
Trichlorofluoromethane	0.2 U			0.2 U			0.2 U			0.2												
Methylene chloride	0.2 U	D		0.2 U			0.2 U			0.2												
trans-1,2-Dichloroethene	0.2 U			0.2 U			0.2 U			0.2												
1,1-Dichloroethane	0.2 U			0.2 U			0.2 U			0.2												
cis-1,2-Dichloroethene	0.2 U			0.2 U			0.2 U			0.2												
Chloroform	0.2 U			0.2 U			0.2 U			0.2												
1,1,1-Trichloroethane	0.2 U			0.2 U			0.2 U			0.2												
Carbon tetrachloride	0.2 U			0.2 U			0.2 U			0.2												
Benzene	0.2 U			0.2 U			0.2 U			0.2												
Trichloroethene	0.2 U			0.2 U			0.2 U			0.2												
1,2-Dichloropropane	0.2 U			0.2 U			0.2 U			0.2												
Toluene	0.2 U			0.2 U			0.2 U			0.2												
Tetrachloroethene	0.2 U			0.2 U			0.2 U			0.2												
m,p-Xylene	0.4 U			0.4 U			0.4 U			0.4												
o-Xylene	0.2 U			0.2 U			0.2 U			0.2												
1,2,4-Trimethylbenzene	0.2 U			0.2 U			0.2 U			0.2												

*The other requested analytes were analyzed for, but "Not Detected." The Sample Quantitation Limits are listed in Table 2.

Val-Validity Refer to Data Qualifiers in Table 1B

Com-Comments Refer to the Corresponding Section in the Narrative for each letter.

QL-Quantitation Limits

NA-Not Analyzed

D1, D2, etc.-Field Duplicate Pairs

FB-Field Blank, EB-Equipment Blank, TB-Travel Blank

BG-Background Sample

ND-Not Detected

TABLE 1B
DATA QUALIFIERS

The definitions of the following qualifiers are prepared according to the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

NO QUALIFIERS indicate that the data are acceptable both qualitatively and quantitatively.

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- L Indicates results which fall below the Quantitation Limit. Results are estimated and are considered qualitatively acceptable but quantitatively unreliable due to uncertainties in the analytical precision near the limit of detection.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
- UJ The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

TABLE 2
Sample Quantitation Limits

Case No.: SAS 7841Y Memo #02
 Site: Newmark-Muscoy
 Laboratory: Analytical Resources, Inc. (ARI)
 Reviewer: Anjana Vig
 ESAT/ICF Technology, Inc.
 Date: June 25, 1993

<u>Volatile Compounds</u>	<u>Units. ug/L</u>	<u>Q</u>	<u>C</u>
Benzene	0.2		
Bromobenzene	0.2		
Bromochloromethane	0.2		
Bromodichloromethane	0.2		
Bromoform	0.5		
Bromomethane	0.2		
n-Butylbenzene	0.2		
sec-Butylbenzene	0.2		
tert-Butylbenzene	0.2		
Carbon tetrachloride	0.2		
Chlorobenzene	0.2		
Chloroethane	0.2		
Chloroform	0.2		
Chloromethane	0.2		
2-Chlorotoluene	0.2		
4-Chlorotoluene	0.2		
Dibromochloromethane	0.2		
1,2-Dibromo-3-chloropropane	0.5	J	CD
1,2-Dibromoethane	0.2		
Dibromomethane	0.2	J	D
1,2-Dichlorobenzene	0.2		
1,3-Dichlorobenzene	0.2		
1,4-Dichlorobenzene	0.2		
Dichlorodifluoromethane	0.2		
1,1-Dichloroethane	0.2		
1,2-Dichloroethane	0.2		
1,1-Dichloroethene	0.2		
cis-1,2-Dichloroethene	0.2		
trans-1,2-Dichloroethene	0.2		
1,2-Dichloropropane	0.2		
1,3-Dichloropropane	0.2		
2,2-Dichloropropane	0.2		
1,1-Dichloropropene	0.2		
cis-1,3-Dichloropropene	0.2		
trans-1,3-Dichloropropene	0.2		

Q - Qualifier
 C - Comment

TABLE 2
(cont'd)

<u>Volatile Compounds</u>	<u>Units. ug/L</u>	<u>Q</u>	<u>C</u>
Ethylbenzene	0.2		
Hexachlorobutadiene	0.2		
Isopropylbenzene	0.2		
4-Isopropyltoluene	0.2		
Methylene chloride	0.2	J	D
Naphthalene	0.2		
n-Propylbenzene	0.2		
Styrene	0.2		
1,1,1,2-Tetrachloroethane	0.2		
1,1,2,2-Tetrachloroethane	0.2		
Tetrachloroethene	0.2		
Toluene	0.2		
1,2,3-Trichlorobenzene	0.2		
1,2,4-Trichlorobenzene	0.2		
1,1,1-Trichloroethane	0.2		
1,1,2-Trichloroethane	0.2		
Trichloroethene	0.2		
Trichlorofluoromethane	0.2		
1,2,3-Trichloropropane	0.2	J	D
1,2,4-Trimethylbenzene	0.2		
1,3,5-Trimethylbenzene	0.2		
Vinyl chloride	0.2		
Xylene (ortho)	0.2		
Xylene (meta & para)	0.4		
2-Chloroethylvinylether	0.2	J	CD

Q - Qualifier

C - Comment

TABLE 2
(cont'd)

To calculate the sample quantitation limits, multiply QL by the following factors:

<u>Sample No.</u>	<u>Volatiles</u>
SY5589	1.00
SY5590	1.00
SY5591	1.00
SY5592	1.00
SY5593	1.00
SY5594	1.00
SY5595	1.00
SY5596	1.00
SY5597	1.00
SY5598	1.00
SY5599	1.00
SY5600	1.00
SY5603	1.00
SY5604	1.00
SY5605	1.00
SY5606	1.00
SY5607	1.00
SY5608	1.00
SY5609	1.00
SY5610	1.00
Method Blanks	1.00

TABLE 3
Volatiles: Initial & Continuing Calibrations

Case No.: SAS 7841Y Memo #02
Site: Newmark-Muscoy
Lab.: Analytical Resources Inc. (ARI)
Reviewer: Anjana Vig. ESAT/ICF Technology, Inc.
Date: June 25, 1993

Analysis Date:	Initial		Continuing		Continuing		Continuing		Continuing	
	5/02/93		5/05/93		5/06/93		5/07/93		5/11/93	
Associated Samples:	SY5589		SY5589		SY5596		SY5605		SY5591DL	
	SY5590		SY5590		SY5597		SY5606		SY5595DL	
	SY5591		SY5591		SY5598		SY5607		SY5610DL	
	SY5592		SY5592		SY5599		SY5608		VBLK4	
	SY5593		SY5593		SY5600		SY5609			
	SY5594		SY5594		SY5603		SY5610			
	SY5595		SY5595		SY5604		VBLK3			
	SY5596		VBLK1		VBLK2					
	SY5597									
	SY5598									
	SY5599									
	SY5600									
	SY5603									
	SY5604									
	SY5605									
	SY5606									
	SY5607									
	SY5608									
	SY5609									
	SY5610									
	SY5591DL									
	SY5595DL									
	SY5610DL									
	VBLK1									
	VBLK2									
	VBLK3									
	VBLK4									
Compound:	%RSD	Avg RRF	%D	RRF	%D	RRF	%D	RRF	%D	RRF
Methylene chloride	----	----	26.9	----	25.5	----	----	----	----	----
1,2-Dibromo-3-chloropropane	----	0.014	30.4	0.018	----	0.016	----	0.015	----	0.012
2-Chloroethylvinylether	----	----	----	----	27.4	0.045	----	----	----	----
1,2,3-Trichloropropane	----	----	----	----	----	----	----	----	----	25.8
Dibromomethane	----	----	----	----	----	----	28.6	----	----	----

TPO: []FYI [X]Attention []Action

Region IX

ORGANIC REGIONAL DATA ASSESSMENT

Case No. SAS 7841Y Memo #02 LABORATORY Analytical Resources Inc.

SDG NO. SY5589 SITE NAME Newmark-Muscoy

SOW EPA Drinking Water Method 524.2 REVIEW COMPLETION DATE June 25, 1993

REVIEWER [] ESD [X] ESAT REVIEWER'S NAME Anjana Vig

NO. OF SAMPLES 20 WATER _____ SOIL _____ OTHER _____

	VOA	BNA	PEST	OTHER
1. HOLDING TIMES	<u>0</u>	_____	_____	_____
2. GC-MS TUNE/GC PERFORMANCE	<u>0</u>	_____	_____	_____
3. INITIAL CALIBRATIONS	<u>X</u>	_____	_____	_____
4. CONTINUING CALIBRATIONS	<u>X</u>	_____	_____	_____
5. FIELD QC	<u>X</u>	_____	_____	_____
6. LABORATORY BLANKS	<u>0</u>	_____	_____	_____
7. SURROGATES	<u>0</u>	_____	_____	_____
8. LABORATORY FORTIFIED BLANK	<u>0</u>	_____	_____	_____
9. REGIONAL QC	<u>F</u>	_____	_____	_____
10. INTERNAL STANDARDS	<u>0</u>	_____	_____	_____
11. COMPOUND IDENTIFICATION	<u>0</u>	_____	_____	_____
12. COMPOUND QUANTITATION	<u>X</u>	_____	_____	_____
13. SYSTEM PERFORMANCE	<u>0</u>	_____	_____	_____
14. OVERALL ASSESSMENT	<u>X</u>	_____	_____	_____

O - No problems or minor problems that affect data quality.

X - No more than about 5% of the data points have limitations on data quality.
Data points are either qualified as estimates or rejected.

M - More than about 5% of the data points are qualified as estimates.

Z - More than about 5% of the data points have been rejected.

F - Not Applicable

TPO ATTENTION ITEMS: Due to calibration problems detected results and quantitation limits for several analytes were estimated for samples.

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ICF TECHNOLOGY INCORPORATED

URS TDMT Only TDCN: 0310
Project #: 62251 Loc: 09.63 Type: 63

MEMORANDUM

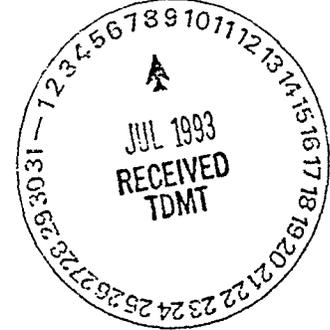
TO: Kevin Mayer
Environmental Engineer
South Coast Groundwater Section (H-6-4)

THROUGH: Richard Bauer
Environmental Scientist
Quality Assurance Management Section (P-3-2)

FROM: *JS* Carolyn Studeny
Senior Organic Data Reviewer
Environmental Services Assistance Team (ESAT)

DATE: July 2, 1993

SUBJECT: Review of Analytical Data



Attached are comments resulting from ESAT Region 9 review of the following analytical data:

SITE: Newmark-Muscoy
EPA SSI NO.: J5
CERCLIS ID NO.: CAD981434517
CASE/SAS NO.: SAS 7841Y Memo #03
SDG NO.: SY5611

LABORATORY: Analytical Resources, Inc. (ARI)
ANALYSIS: SAS Volatiles by EPA Drinking Water Method 524.2

SAMPLE NO.: 15 Water Samples (see Case Summary)

COLLECTION DATE: April 28, 29, May 3 and 4, 1993

REVIEWER: Rameen Moezzi
ESAT/ICF Technology, Inc.

If there are any questions, please contact Carolyn Studeny at (415) 882-3184.

Attachment

cc: Bruce Woods, TPO USEPA Region X
Steve Remaley, USEPA Region IX
Loren Minnich, Sample Management Office
Larry Zinky, URS - SAC

TPO: []FYI [X]Attention []Action
SAMPLING ISSUES: []Yes [X]No

Data Validation Report

Case No.: SAS 7841Y Memo #03
Site: Newmark-Muscoy
Laboratory: Analytical Resources, Inc. (ARI)
Reviewer: Rameen Moezzi, ESAT/ICF Technology, Inc.
Date: July 2, 1993

I. Case Summary

SAMPLE INFORMATION:

VOA Sample Numbers: SY5611 through SY5623, SY5625 and SY5629
Concentration and Matrix: Low Level Water
Analysis: SAS Volatiles by EPA Drinking Water Method
524.2
SOW: N/A
Collection Date: April 28, 29, May 3 and 4, 1993
Sample Receipt Date: April 29, 30, May 4 and 5, 1993
Analysis Date: May 7, 13, 14 and 17, 1993

FIELD QC:

Trip Blanks (TB): SY5616 and SY5629
Field Blanks (FB): SY5620
Equipment Blanks (EB): None
Background Samples (BG): None
Field Duplicates (D1): SY5608* and SY5611

METHOD BLANKS AND ASSOCIATED SAMPLES:

VBLK1: SY5611 and VBLKMS1
VBLK2: SY5612 through SY5618, and VBLKMS2
VBLK3: SY5619 through SY5623, SY5625, SY5629 and
VBLKMS3
VBLK4: SY5614DL, SY5615DL, SY5619DL and VBLKMS4

TABLES:

1A: Analytical Results with Qualifications
1B: Data Qualifiers
2: Sample Quantitation Limits of Target Compound
List (TCL) Analytes

METHOD NON-COMPLIANCE:

TPO ATTENTION: Samples SY5612 and SY5613 were analyzed one day past the 14-day technical holding time. Samples SY5612 through SY5617 were analyzed outside the 10-day contractual holding time to optimize instrument time, according to the case narrative. Dichlorodifluoromethane had a high percent recovery in one of the Laboratory Fortified Blanks (LFBs).

ADDITIONAL COMMENTS:

2-Chloroethylvinylether was added as a target analyte in accordance with the SAS request. This report was prepared according to the SAS request, EPA Drinking Water Method 524.2, and the EPA draft document, "National Functional Guidelines for Organic Data Review," December, 1990 (6/91 Revision).

* Field duplicate sample SY608 is not included with this SDG.

DL - Dilution; VBLKMS - Laboratory Fortified Blank

ESAT-QA-9A-8627/7841YM3.RPT

II. Validation Summary

	VOA	
	Acceptable/Comment	
HOLDING TIMES	[N]	[C]
GC/MS TUNE/GC PERFORMANCE	[Y]	[]
CALIBRATIONS	[N]	[D]
FIELD QC	[N]	[B]
LABORATORY BLANKS	[Y]	[]
SURROGATES	[Y]	[]
LABORATORY FORTIFIED BLANK	[N]	[E]
INTERNAL STANDARDS	[Y]	[]
COMPOUND IDENTIFICATION	[Y]	[]
COMPOUND QUANTITATION	[Y]	[A]
SYSTEM PERFORMANCE	[Y]	[]

N/A - Not Applicable

III. Validity and Comments

A. The following results are estimated and flagged "J" in Table 1A:

- All results below the Contract Required Quantitation Limits (denoted with an "L" qualifier)

Results below the Contract Required Quantitation Limits (CRQL) are considered to be qualitatively acceptable, but quantitatively unreliable, due to the uncertainty in analytical precision near the limit of detection.

B. Due to trip and field blank contamination, the results reported in Table 1A for the following analytes are estimated (J):

- Methylene chloride in in sample numbers SY5619, SY5622 and SY5625
- Chloroform in sample numbers SY5619 and SY5622
- Toluene in sample numbers SY5611 through SY5615, SY5617 through SY5619, SY5622, SY5623 and SY5625

A trip blank is intended to detect contaminants introduced during the transport of the samples to the laboratory. Contaminants that are found in the trip blank which are absent in the laboratory blank could be indicative of a problem in transportation, storage, the bottle preparation procedure or other indeterminate error.

Field blanks are intended to detect contaminants that may have been introduced in the field. Contaminants that are found in the field blank which are absent in the laboratory preparation blank could be indicative of a field QC problem, a deficiency in the bottle preparation procedure, blank contamination from manufacturers, a difference in preparation of the laboratory and field blanks or other indeterminate error.

Methylene chloride and chloroform were found in trip blanks SY5616 and SY5629, and in field blank SY5620. Toluene was found in the trip blanks (see Table 1A for concentrations). The results for the samples listed above are considered nondetected and estimated (U,J) and the quantitation limits have been increased according to the blank qualification rules listed below.

No positive results are reported unless the concentration of the compound in the sample exceeds 10 times the amount in any associated blank for the common laboratory contaminants or 5 times the amount for other compounds. If the sample result is greater than the CRQL, the quantitation limit is raised to the sample result (U,J). If the sample result is less than the CRQL, the result is reported as nondetected (U,J) at the CRQL.

- C. Due to holding time outside method QC limits, the detected results and quantitation limits for the following analytes are estimated (J) (see Tables 1A and 2):

- All target analytes in sample numbers SY5612 and SY5613

The samples were collected on April 28, 1993 and analyzed 15 days later on May 13, 1993. The analyses exceeded the 14 day 40 CFR 136 technical holding time by 1 day.

The detected results for the samples listed above may be biased low and are the minimum values at which these analytes are present in the samples. Where the results are nondetected, false negatives may exist.

- D. Due to low Relative Response Factors (RRF) in the Initial and Continuing Calibrations, the quantitation limit for the following analyte is estimated (J) (see Table 2):

- 1,2-Dibromo-3-chloropropane (DBCP) in all samples and method blanks

The determination of the Relative Response Factors evaluates instrument sensitivity and is used in the quantitation of the target analytes.

An Average Relative Response Factor (RRF) of 0.014 was observed for DBCP in the Initial Calibration performed May 2, 1993. Relative Response Factors of 0.015 and 0.018 were observed for DBCP in the Continuing Calibrations performed May 7, 13, 14 and 17, 1993. These RRFs are below the 0.05 advisory validation criterion.

Since the results for DBCP are nondetected, false negatives may exist.

- E. Due to laboratory fortified blank (LFB) recovery outside SAS QC limits, the detected results for the following analyte are estimated (J) (see Table 1A):

- Dichlorodifluoromethane in sample numbers SY5619 and SY5625

According to the SAS request, one LFB containing each analyte of interest should be analyzed per SDG. The laboratory analyzed one LFB during each analytical sequence.

A recovery of 182% was reported for dichlorodifluoromethane in VBLKMS3, the LFB analyzed on May 14, 1993. The SAS QC limits for LFB recoveries are 80-120%. The reported results for dichlorodifluoromethane in the samples listed above are considered as estimated and may be biased high.