N60478.AR.000068
NWS EARLE
5090.3a

Groundwater Monitoring Study

Sampling Results

Round 3

Waste Oil Storage Tank
Building C-14
Naval Weapons Station Earle
Colts Neck, New Jersey

Contract Number N62472-86-C-1487

OPTION I

Project No. 5

August 1990

Gannett Fleming, Inc.
Harrisburg, PA

Gannett Fleming

Groundwater Monitoring Study

Sampling Results

Round 3

Waste Oil Storage Tank
Building C-14
Naval Weapons Station Earle
Colts Neck, New Jersey

Contract Number N62472-86-C-1487

OPTION I

Project No. 5

August 1990

Gannett Fleming, Inc.
Harrisburg, PA

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Sampling Results

The third round of sampling of OPTION I for the Building C-14 waste oil storage tank area has been completed. A summary of the sampling results is presented in Table 1. The laboratory analysis report from QC, Inc., a New Jersey Certified Laboratory, can be found in Attachment A. The Chain of Custody forms are also found in Attachment A. The Ground Water Analysis Forms (Nos. VWX-15, VWX-16, and VWX-17) are presented in Attachment B. The location of the monitoring wells is shown in Figure 1.

For this sampling round, the following parameters were measured: lead and compounds, petroleum hydrocarbons, total dissolved solids (TDS), total organic carbon (TOC), total volatile organics, and pH. The limitations set for these parameters (as found in Table 1 of contract number N62472-86-C-1487, Amendment 7) are:

Parameter	Limitation
Base/Neutral Compounds	---
Lead and Compounds	0.05 ppm
Petroleum Hydrocarbons	10 ppm
TDS	500 ppm
TOC	---
pH	5-9
Total Volatile Organics	---

Lead and compounds were detected in wells C-14B and C-29A at concentrations of 0.0060 mg/l. Petroleum hydrocarbons were not detected in any of the wells. The TDS concentrations in all samples were below the limitation levels. The TOC concentrations measured were less than 9 mg/L. The pH of the samples from wells C-14B, C-14C and C-29A was measured to be slightly less than the lower limit of 5. No volatile organics were found in amounts exceeding the detection limit.

Groundwater Monitoring Study
Naval Weapons Station Earle
Summary of Results*

PARAMETER	Well No. C-14A	Well No. C-14B	Well No. C-14C	Well NO. C-29A	TRIP BLANK	FIELD BLANK
Elevation of top of monitor well casing above ground level	0	1.83 ft.	2.17 ft.	3.50 ft.	---	---
Depth to Water Table from top of casing	17.00	15.00 ft.	12.08 ft.	11.25 ft.	---	---
Depth to Water Table from ground level	17.00	13.17 ft.	9.91 ft.	7.75 ft.	---	---
Lead and Compounds	<0.005 mg/L	0.0060 mg/L	<0.005 mg/L	0.0060 mg/L	<0.005 mg/L	<0.005 mg/L
Petroleum Hydrocarbons	<0.5 mg/L	<0.5 mg/L	<0.5 mg/L	<0.5 mg/L	<0.5 mg/L	<0.5 mg/L
pH	5.22	4.56	4.18	4.53	5.06	7.21
Total Dissolved Solids (TDS)	82 mg/L	64 mg/L	68 mg/L	120 mg/L	6 mg/L	8 mg/L
Total Organic Carbon	7.2 mg/L	4.0 mg/L	8.5 mg/L	5.0 mg/L	<1.0 mg/L	<1.0 mg/L

*Results given with a less than symbol were undetected and the value given is the detection limit.

SUMMARY OF RESULTS
(Continued)

PARAMETER
Volatile Organics

Name	Well No. C-14A		Well No. C-14B		Well No. C-14C		Well No. C-29A		Field Blank		Trip Blank	
	Results	Comments	Results	Comments	Results	Comments	Results	Comments	Results	Comments	Results	Comments
	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
Chloromethane	10	U	10	U	10	U	10	U	10	U	10	U
Bromomethane	10	U	10	U	10	U	10	U	10	U	10	U
Vinyl Chloride	10	U	10	U	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	U	10	U	10	U	10	U
Methylene Chloride	5	U	5	U	5	U	5	U	5	U	10	U
1, 1-Dichloroethene	5	U	5	U	5	U	5	U	5	U	10	U
1, 1-Dichloroethane	5	U	5	U	5	U	5	U	5	U	10	U
1, 2-Dichloroethene (total)	5	U	5	U	5	U	5	U	5	U	10	U
Chloroform	5	U	5	U	5	U	1	J	5	U	10	U
1, 2-Dichloroethane	5	U	5	U	5	U	5	U	5	U	10	U
1, 1, 1-Trichloroethane	5	U	5	U	5	U	5	U	5	U	10	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U	10	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U	10	U
1, 2-Dichloropropane	5	U	5	U	5	U	5	U	5	U	10	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U	10	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U	10	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U	10	U
1, 1, 2-Trichloroethane	5	U	5	U	5	U	5	U	5	U	10	U
Benzene	5	U	5	U	5	U	5	U	5	U	10	U

SUMMARY OF RESULTS
(Continued)

PARAMETER
Volatile Organics

Name	Well No. C-14A		Well No. C-14B		Well No. C-14C		Well No. C-29A		Field Blank		Trip Blank	
	Results	Comments	Results	Comments	Results	Comments	Results	Comments	Results	Comments	Results	Comments
	UG/L		UG/L		UG/L		UG/L		UG/L		UG/L	
Trans-1, 3-Dichloropropene	5	U	5	U	5	U	5	U	5	U	10	U
Bromoform	5	U	5	U	5	U	5	U	5	U	10	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5		10	U
1, 1, 2, 2-Tetrachloroethane	5	U	5	U	5	U	5	U	5	U	10	U
Toluene	5	U	5	U	5	U	5	U	1	J	5	U
Chlorobenzene	5	U	5	U	5	U	5	U	5	U	10	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U	10	U
2-Chloroethylvinyl Ether	10	U	10	U	10	U	10	U	10	U	10	U

COMMENTS:
U = Not Detected
J = Detected but below Method Detection Limit
B = Compound found in Blank

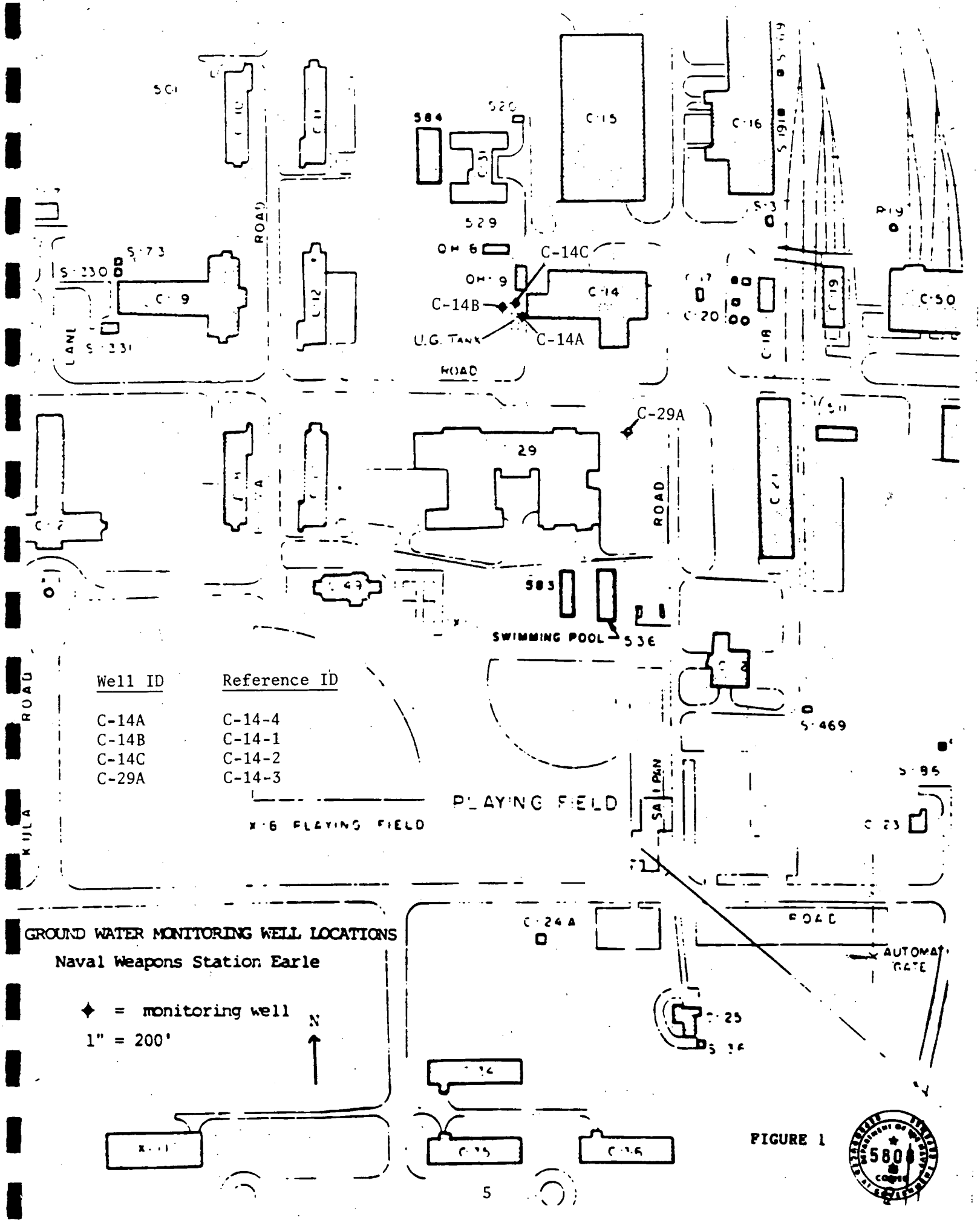
C-14C
C-14B
C-14A
U.G. TANK
C-29A
SWIMMING POOL
PLAYING FIELD
ROAD
Well ID
Reference ID
C-14A
C-14-4
C-14B
C-14-1
C-14C
C-14-2
C-29A
C-14-3
GROUND WATER MONITORING WELL LOCATIONS
Naval Weapons Station Earle
✦ = monitoring well
1" = 200'
N

FIGURE 1

ATTACHMENT A

Laboratory Analysis Results

QC Inc

1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

ANALYTICAL DATA REPORT PACKAGE
FOR
GANNET FLEMING CO.

Field Sample ID	Laboratory Sample ID	Date of Collection
TRIP BLANK	255697	08/07/90
FIELD BLANK	255698	08/07/90
WELL C-14 A	255699	08/07/90
WELL C-14 B	255700	08/07/90
WELL C-14 C	255701	08/07/90
WELL C-24 A	255702	08/07/90

Laboratory Name	QC Inc.
Certification No.	PADER No. 09-131 NJDEP No. 77166
Supervisor/Manager Signature	
Printed Name	Thomas J. Hines
Date	10-12-90

QC G-1

QC Inc

1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

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QC G-5	Laboratory Chronicles	2
QC G-6	Methodology Summary	5
	Case Narrative	6
	Volatile Organics Data Results, Surrogates, RICs, Mass Spectra and Quantitation Reports:	
	(TRIP BLANK)	8
	(FIELD BLANK)	11
	(WELL C-14 A)	14
	(WELL C-14 B)	17
	(WELL C-14 C)	20
	(WELL C-24 A)	23
	Volatile Organics Quality Control Summary	25
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	Volatile Organics Raw QC Data Package	44
QC M-3	Metals Analytical Results and Quality Assurance Data:	
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	(FIELD BLANK)	59
	(WELL C-14 A)	60
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QC M-2	Metals Initial & Continuing Calibration Verification	64
	Metals Raw Data Package	65
QC GEN-1	General Analysis Data Reports:	
	(TRIP BLANK)	69
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	(WELL C-14 A)	71
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	(WELL C-14 C)	73
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QC GEN-2	General Analysis MS/MSD Recovery	75
	General Analysis Raw Data Package	76

Chain of Custody Without Shuttle

QC Inc
1205 Industrial Highway
P.O. Box 514 • Southampton, Pennsylvania 18966-0514
(215) 355-3900

I.D. NUMBER W0196 000001

NAME OF UNIT AND ADDRESS
GANNETT FLEMING CO
P.O. BOX 1963
HARRISBURG, PA 17105
(717) 763-7211

SAMPLE NO.	NO. OF CONT.	DESCRIPTION OF SAMPLES
		TRIP BLANK
255697	6	QT. SULFURIC, PT. NITRIC, PT. SULFURIC, PT. PLAIN, 2 HCL VIALS
255698	6	FIELD BLANK - SAME AS ABOVE
255699	6	WELL C-14A — SAME AS ABOVE
255700	6	WELL C-14B — SAME AS ABOVE
255701	6	WELL C-14C — SAME AS ABOVE
255702	6	WELL C-29A — SAME AS ABOVE

PERSON ASSUMING RESPONSIBILITY FOR SAMPLE
QC INC.

SAMPLE NUMBER	RELINQUISHED BY	RECEIVED BY	TIME	DATE	REASON FOR CHANGE OF CUSTODY
	Nancy Stacy	x Scott Juley	0900	2 AUG	SAMPLE BOTTLE DELIVERY
	x Scott Juley	Cate O'Neil	1345	7 AUG	
255697	Cate O'Neil	R Goodaunt	8Am	8/9/90	Cooler
255702	R Goodaunt	D. Mele	3:30	8/9	Well Check
	R Goodaunt	T Henzione	4pm	8/9	GCMS
	R Goodaunt	D Kane	4:0	8/9	Sorted

LAB COPY

QC Inc

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LABORATORY CHRONICLE

Laboratory Sample ID No: 255697-255702

	I	Date	II
Receipt/Refrigeration	08/07/90		
Organics Extraction			
1. Base/Neutral Extractables			
2. Acid Extractables			
3. Pesticides/PCB's			
4. Dioxin			
Analyses			
1. Volatiles	08/10/90		
2. Base/Neutral Extractables			
3. Acid Extractables			
4. Pesticides/PCB's			
5. Dioxin			
Inorganics			
1. Metals			
2. Cyanides			
3. Phenols			
Other Analytes			
1.			
2.			
3.			
4.			

SECTION SUPERVISOR REVIEW & APPROVAL
(Signature) [signature]
(Printed Name) Daniel DePretis
(Date) 10-12-90

Q.A. DIRECTOR REVIEW & APPROVAL
(Signature) Mary A. Serembus
(Printed Name) Mary A. Serembus
(Date) 10-12-90

Form QC G-5

QC Inc

1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

LABORATORY CHRONICLE

Laboratory Sample ID No: 255697-255702

	I	Date	II
Receipt/Refrigeration	08/07/90		
Organics Extraction			
1. Base/Neutral Extractables			
2. Acid Extractables			
3. Pesticides/PCB's			
4. Dioxin			
Analyses			
1. Volatiles			
2. Base/Neutral Extractables			
3. Acid Extractables			
4. Pesticides/PCB's			
5. Dioxin			
Inorganics			
1. Metals	08/08-16/90		
2. Cyanides			
3. Phenols			
Other Analytes			
1.			
2.			
3.			
4.			

SECTION SUPERVISOR REVIEW & APPROVAL
(Signature) Timothy S. Sabo
(Printed Name) Timothy S. Sabo
(Date) 10-12-90

Q.A. DIRECTOR REVIEW & APPROVAL
(Signature) Mary A. Serembus
(Printed Name) Mary A. Serembus
(Date) 10-12-90

Form QC G-5

QC Inc

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LABORATORY CHRONICLE

Laboratory Sample ID No: 255697-255702

	I	Date	II
Receipt/Refrigeration	08/07/90		
Organics Extraction			
1. Base/Neutral Extractables			
2. Acid Extractables			
3. Pesticides/PCB's			
4. Dioxin			
Analyses			
1. Volatiles			
2. Base/Neutral Extractables			
3. Acid Extractables			
4. Pesticides/PCB's			
5. Dioxin			
Inorganics			
1. Metals			
2. Cyanides			
3. Phenols			
Other Analytes			
1. Petroleum Hydrocarbons	08/19/90		
2. Total Organic Carbon	08/30/90		09/04/90
3. Total Dissolved Solids	08/10/90		08/11/90
4. pH	08/09/90		

SECTION SUPERVISOR REVIEW & APPROVAL
(Signature) [signature]
(Printed Name) Raphael C. Fratti
(Date) 10-12-90

Q.A. DIRECTOR REVIEW & APPROVAL
(Signature) Mary A. Serembus
(Printed Name) Mary A. Serembus
(Date) 10-12-90

Form QC G-5

QC Inc

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METHODOLOGY SUMMARY

Purgeable Organics GC/MS	USEPA Method 624 Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater
Lead	Methods for Chemical Analysis of Water and Wastes Digestion: USEPA Method 3020 Analysis: USEPA Method 7421
Petroleum Hydrocarbons	USEPA Method 418.1 Methods for Chemical Analysis of Water and Wastes
Total Organic Carbon	USEPA Method 415.1 Methods for Chemical Analysis of Water and Wastes
Total Dissolved Solids	USEPA Method 160.2 Methods for Chemical Analysis of Water and Wastes

QC Inc

1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

CASE NARRATIVE

VOLATILE ORGANICS ANALYSES

Holding Times

Required maximum holding time for analysis of Volatile Organic samples was met.

GC/MS Tuning and Performance

Required GC/MS tune performance check frequency and Bromofluorobenzene (BFB) ion abundance criteria were met.

Initial & Continuing Calibration

All compounds met calibration and QC acceptance criteria as per USEPA Method 624.

Blanks

A method blank was run every day prior to the analysis of samples.

Surrogates

Recovery limits were met for the method blank and all samples.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Matrix spike sample frequency requirements were met.

Limits for MS/MSD percent recovery or QC check standard criteria were met as per USEPA Method 624.

The relative percent difference (RPD) between MS/MSD samples was less than the establised limits for all compounds.

QC Inc

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CASE NARRATIVE

INORGANICS ANALYSES

Holding Times

Required maximum holding time for analysis Inorganic samples was met.

Instrument Calibration

A calbration curve was prepared with a reagent blank and four standards, the curve was then verified by the analysis of a reagent blank and a standard near the mid-range.

Continung Calibration Verification

Additional standards were analyzed every ten samples and their recoveries were within the required limits.

Matrix Spike and Duplicate Sample Analysis

Matrix spike and duplicate sample frequency requirements were met and the results verifiy the precision of the method.

QC Inc

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VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab ID : 255697
Sample ID : TB
Analysis Date: 08/10/90
Instrument: E

Client: GANNETT FLEMING
Matrix: WATER
Lab File: >81002

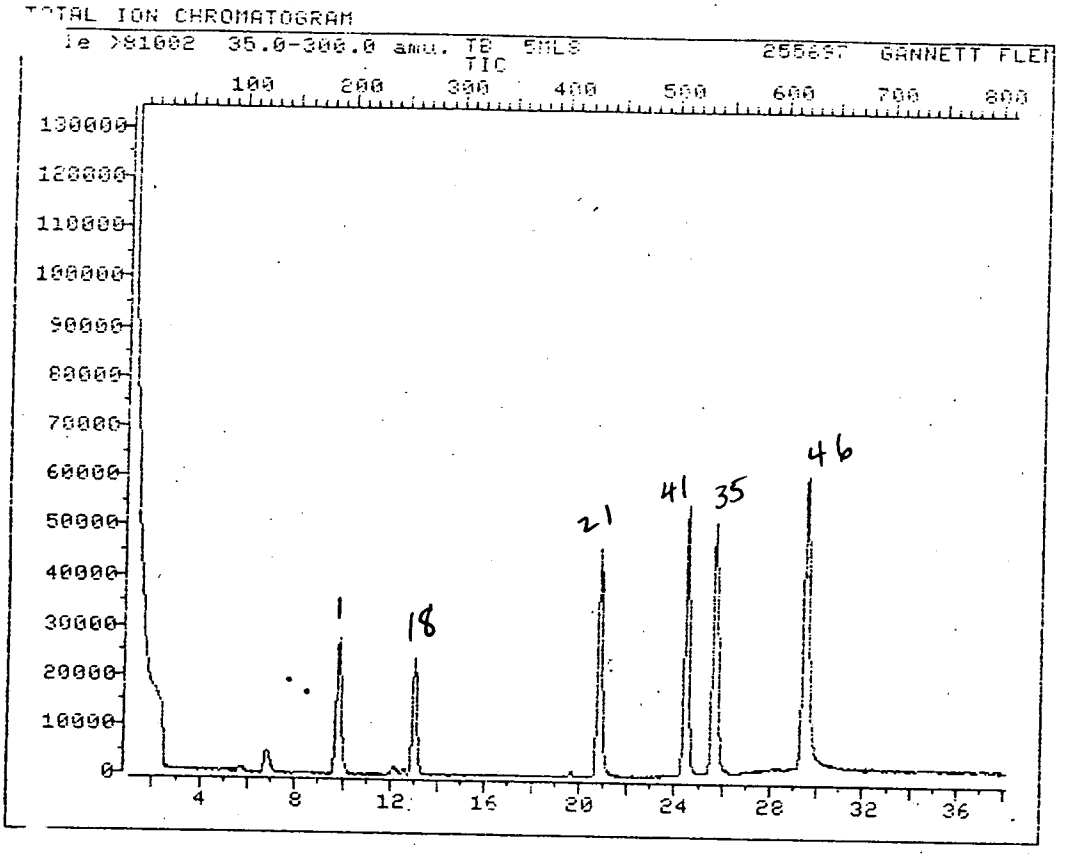
CAS NO.	COMPOUND	RESULTS(UG/L)	COMMENT
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
75-69-4	Trichlorofluoromethane	10	U
110-75-8	2-Chloroethylvinyl ether	10	U
95-50-1	1,2-Dichlorobenzene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

SURROGATE RECOVERY DATA	% RECOVERY	QC Limits
D4-1,2-Dichloroethane	97	(76-114)
D8-Toluene	99	(88-110)
Bromofluorobenzene	103	(86-115)

COMMENT
U= Not Detected
B= Compound in Blank

Signature Josephine M. Black

Name/Title Josephine M. Black
Volatile Group Leader



Compound

1) *BROMOCHLOROMETHANE
2) CHLOROETHANE
3) BROMOETHANE
4) VINYL CHLORIDE
5) CHLOROETHANE
6) METHYLENE CHLORIDE
7) ACROLEIN
8) ACETONE
9) CARBON DISULFIDE
10) ACRYLONITRILE
11) TRICHLOROFLUOROETHANE
12) 1,1-DICHLOROETHENE
13) 1,1-DICHLOROETHANE
14) METHYL TERTIARY BUTYL ETHER
15) TERTIARY BUTYL ALCOHOL
16) 1,2-DICHLOROETHENE (TOTAL)
17) CHLOROFORM
18) 1,2-DICHLOROETHANE-d4 SS
19) 2-BUTANONE
20) 1,2-DICHLOROETHANE
21) *1,4-DIFLUOROBENZENE
22) 1,1,1-TRICHLOROETHANE
23) CARBON TETRACHLORIDE
24) VINYL ACETATE
25) BROMODICHLOROMETHANE
26) 1,2-DICHLOROPROPANE
27) CIS-1,3-DICHLOROPROPENE
28) TRICHLOROETHENE
29) DIBROMOCHLOROMETHANE
30) 1,1,2-TRICHLOROETHANE
31) BENZENE
32) 2-CHLOROETHYL VINYL ETHER
33) TRANS-1,3-DICHLOROPROPENE
34) BROMOFORM
35) *CHLOROBENZENE-d5
36) 4-METHYL-2-PENTANONE
37) 2-HEXANONE
38) TETRACHLOROETHENE
39) 1,1,2,2-TETRACHLOROETHANE
40) TOLUENE
41) TOLUENE-d8 SS
42) CHLOROBENZENE
43) ETHYLBENZENE

44) STYRENE
45) XYLENE (TOTAL)2
46) BROMOFLUOROBENZENE SS
47) 1,3-DICHLOROBENZENE
48) 1,2-DICHLOROBENZENE
49) 1,4-DICHLOROBENZENE

* Compound is ISTD

Data File: >81002::D2 Quant Output File: ^81002::OU
Name: TB 5MLS
Misc: 255697 GANNETT FLEMING, INC.

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

Operator ID: USER1
Quant Time: 900810 13:33
Injected at: 900810 12:55

QUANT REPORT

Operator ID: USER1
Output File: ^81002::OU
Data File: >81002::D2
Name: TB 5MLS
Misc: 255697 GANNETT FLEMING, INC.

Quant Rev: 6 Quant Time: 900810 13:33
Injected at: 900810 12:55
Dilution Factor: 1.00000

ID File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE		9.85	194	73685	50.00	UG/L	95
8)	ACETONE		6.84	128	52301	124.17	UG/L	100
15)	TERTIARY BUTLYL ALCHOHOL		12.13	244	5153	35.81	UG/L	100
18)	1,2-DICHLOROETHANE-d4	SS	12.99	263	131814	48.49	UG/L	96
1)	*1,4-DIFLUOROBENZENE		20.84	435	254303	50.00	UG/L	99
5)	*CHLOROBENZENE-d5		25.67	541	227040	50.00	UG/L	93
41)	TOLUENE-d8	SS	24.49	515	271401	49.58	UG/L	95
7)	BROMOFLUOROBENZENE	SS	29.50	625	203531	51.35	UG/L	93

* Compound is ISTD

QC Inc
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VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab ID : 255698
Sample ID : FB
Analysis Date: 08/10/90
Instrument: E

Client: GANNETT FLEMING
Matrix: WATER
Lab File: >81003

CAS NO.	COMPOUND	RESULTS(UG/L)	COMMENT
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
75-69-4	Trichlorofluoromethane	10	U
110-75-8	2-Chloroethylvinyl ether	10	U
95-50-1	1,2-Dichlorobenzene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

SURROGATE RECOVERY DATA	% RECOVERY	QC Limits
D4-1,2-Dichloroethane	98	(76-114)
D8-Toluene	100	(88-110)
Bromofluorobenzene	102	(86-115)

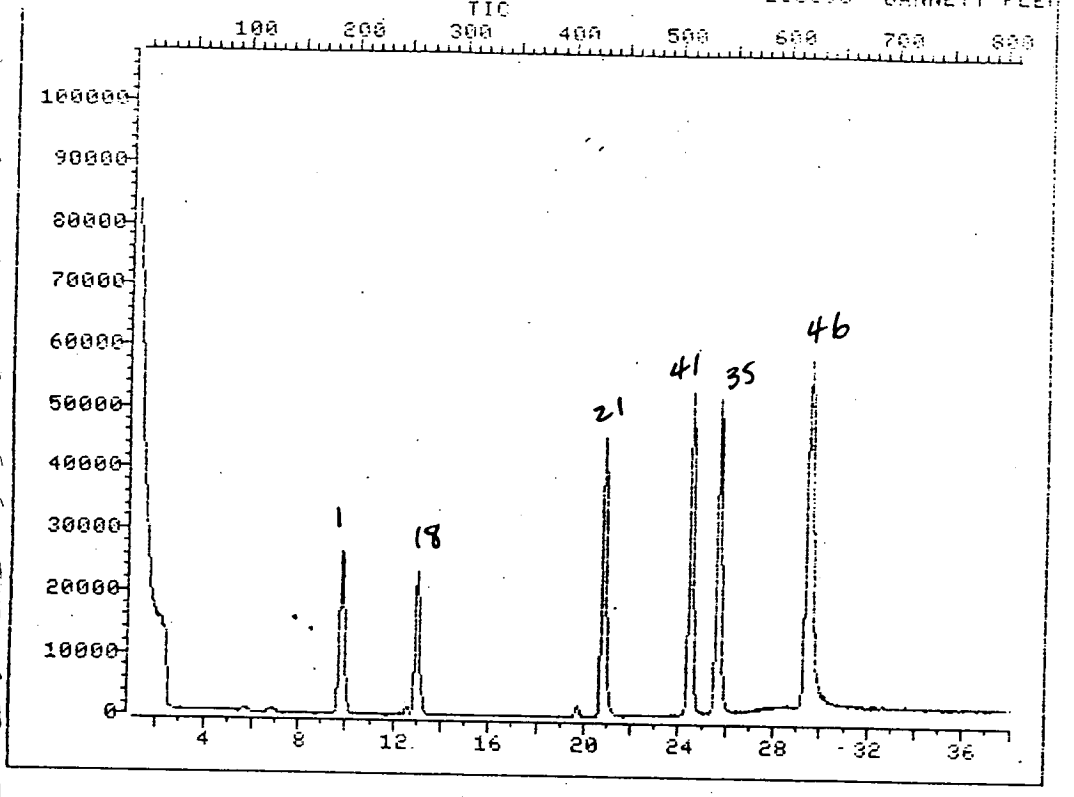
COMMENT
U= Not Detected
B= Compound in Blank

Signature Josephine M. Black

Name/Title Josephine M. Black
Volatile Group Leader

TOTAL ION CHROMATOGRAM

le >81003 35.0-300.0 amu. FB 5MLS TIC 255698 GANNETT FLEM



1) *BROMOCHLOROMETHANE
2) CHLOROMETHANE
3) BROMOMETHANE
4) VINYL CHLORIDE
5) CHLOROETHANE
6) METHYLENE CHLORIDE
7) ACROLEIN
8) ACETONE
9) CARBON DISULFIDE
10) ACRYLONITRILE
11) TRICHLOROFLUOROMETHANE
12) 1,1-DICHLOROETHENE
13) 1,1-DICHLOROETHANE
14) METHYL TERTIARY BUTYL ETHER
15) TERTIARY BUTYL ALCOHOL
16) 1,2-DICHLOROETHENE (TOTAL)
17) CHLOROFORM
18) 1,2-DICHLOROETHANE-d4 SS
19) 2-BUTANONE
20) 1,2-DICHLOROETHANE
21) *1,4-DIFLUOROBENZENE
22) 1,1,1-TRICHLOROETHANE
23) CARBON TETRACHLORIDE
24) VINYL ACETATE
25) BROMODICHLOROMETHANE
26) 1,2-DICHLOROPROPANE
27) CIS-1,3-DICHLOROPROPENE
28) TRICHLOROETHENE
29) DIBROMOCHLOROMETHANE
30) 1,1,2-TRICHLOROETHANE
31) BENZENE
32) 2-CHLOROETHYL VINYL ETHER
33) TRANS-1,3-DICHLOROPROPENE
34) BROMOFORM
35) *CHLOROBENZENE-d5
36) 4-METHYL-2-PENTANONE
37) 2-HEXANONE
38) TETRACHLOROETHENE
39) 1,1,2,2-TETRACHLOROETHANE
40) TOLUENE
41) TOLUENE-d8 SS
42) CHLOROBENZENE
43) ETHYLBENZENE

44) STYRENE
45) XYLENE (TOTAL)2
46) BROMOFLUOROBENZENE SS
47) 1,3-DICHLOROBENZENE
48) 1,2-DICHLOROBENZENE
49) 1,4-DICHLOROBENZENE

* Compound is ISTD

Data File: >81003::D2 Quant Output File: ^81003::OU
Name: FB 5MLS
Misc: 255698 GANNETT FLEMING, INC.

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

Operator ID: USER1
Quant Time: 900810 14:18
Injected at: 900810 13:39

QUANT REPORT

Operator ID: USER1
Output File: ^81003::OU
Data File: >81003::D2
Name: F8 5MLS
Misc: 255698 GANNETT FLEMING, INC.

Quant Rev: 6
Quant Time: 900810 14:18
Injected at: 900810 13:39
Dilution Factor: 1.00000

ID File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE		9.81	193	71471	50.00	UG/L	93
8)	ACETONE		6.80	127	8472	20.74	UG/L	100
9)	1,2-DICHLOROETHANE-d4	SS	13.01	263	129493	49.11	UG/L	95
21)	*1,4-DIFLUOROBENZENE		20.85	435	255542	50.00	UG/L	99
35)	*CHLOROBENZENE-d5		25.69	541	223321	50.00	UG/L	94
41)	TOLUENE-d8	SS	24.50	515	269114	49.98	UG/L	98
47)	BROMOFLUOROBENZENE	SS	29.47	624	197552	50.67	UG/L	91

* Compound is ISTD

QC Inc
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VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab ID : 255699
Sample ID : WELL C-14 A
Analysis Date: 08/10/90
Instrument: E

Client: GANNETT FLEMING
Matrix: WATER
Lab File: >81004

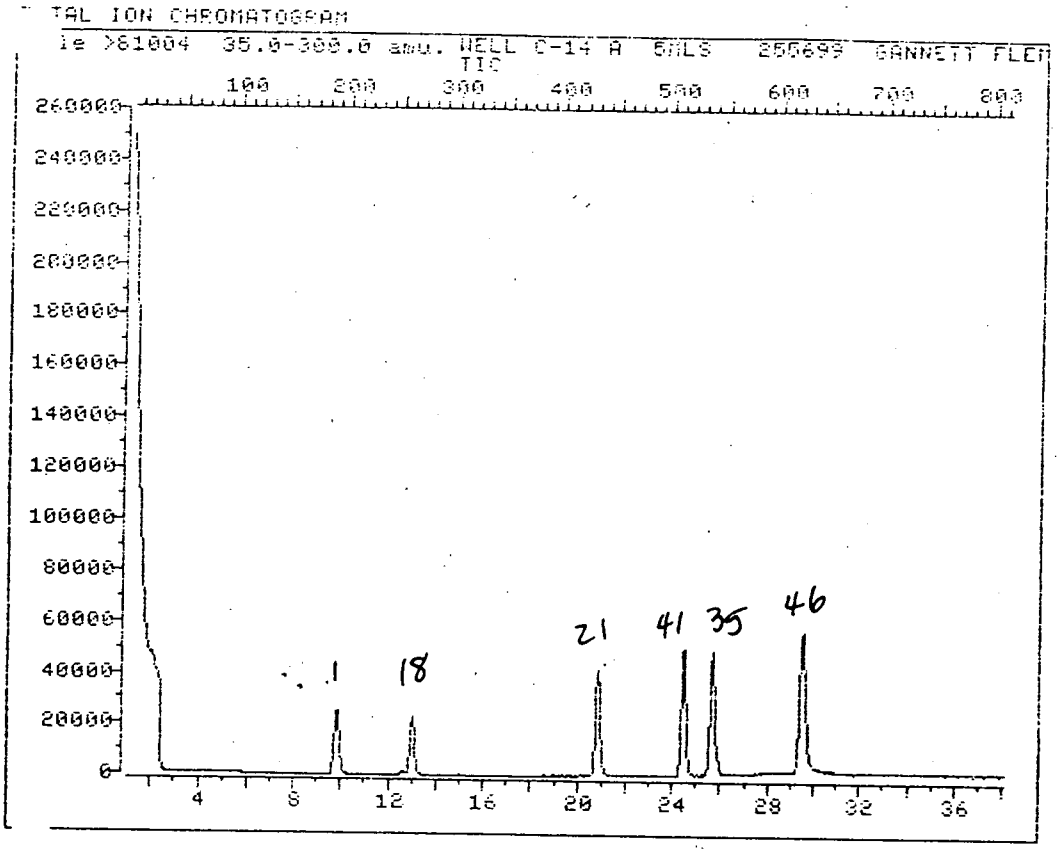
CAS NO.	COMPOUND	RESULTS(UG/L)	COMMENT
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
75-69-4	Trichlorofluoromethane	10	U
110-75-8	2-Chloroethylvinyl ether	10	U
95-50-1	1,2-Dichlorobenzene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

SURROGATE RECOVERY DATA	% RECOVERY	QC Limits
D4-1,2-Dichloroethane	96	(76-114)
D8-Toluene	101	(88-110)
Bromofluorobenzene	105	(86-115)

COMMENT
U= Not Detected
B= Compound in Blank

Signature Josephine M. Black

Name/Title Josephine M. Black
Volatile Group Leader



1) *BROMOCHLOROMETHANE
2) CHLOROMETHANE
3) BROMOMETHANE
4) VINYL CHLORIDE
5) CHLOROETHANE
6) METHYLENE CHLORIDE
7) ACROLEIN
8) ACETONE
9) CARBON DISULFIDE
10) ACRYLONITRILE
11) TRICHLOROFLUOROMETHANE
12) 1,1-DICHLOROETHENE
13) 1,1-DICHLOROETHANE
14) METHYL TERTIARY BUTYL ETHER
15) TERTIARY BUTYL ALCOHOL
16) 1,2-DICHLOROETHENE (TOTAL)
17) CHLOROFORM
18) 1,2-DICHLOROETHANE-d4 SS
19) 2-BUTANONE
20) 1,2-DICHLOROETHANE
21) *1,4-DIFLUOROBENZENE
22) 1,1,1-TRICHLOROETHANE
23) CARBON TETRACHLORIDE
24) VINYL ACETATE
25) BROMODICHLOROMETHANE
26) 1,2-DICHLOROPROPANE
27) CIS-1,3-DICHLOROPROPENE
28) TRICHLOROETHENE
29) DIBROMOCHLOROMETHANE
30) 1,1,2-TRICHLOROETHANE
31) BENZENE
32) 2-CHLOROETHYL VINYL ETHER
33) TRANS-1,3-DICHLOROPROPENE
34) BROMOFORM
35) *CHLOROBENZENE-d5
36) 4-METHYL-2-PENTANONE
37) 2-HEXANONE
38) TETRACHLOROETHENE
39) 1,1,2,2-TETRACHLOROETHANE
40) TOLUENE
41) TOLUENE-d8 SS
42) CHLOROBENZENE
43) ETHYLBENZENE

44) STYRENE
45) XYLENE (TOTAL)2
46) BROMOFLUOROBENZENE SS
47) 1,3-DICHLOROBENZENE
48) 1,2-DICHLOROBENZENE
49) 1,4-DICHLOROBENZENE

* Compound as ISTD

Data File: >81004::D2 Quant Output File: ^81004::OU
Name: WELL C-14 A 5MLS
Misc: 255699 GANNETT FLEMING, INC.

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

Operator ID: USER1
Quant Time: 900810 15:03
Injected at: 900810 14:24

QUANT REPORT

Operator ID: USER1 Quant Rev: 6 Quant Time: 900810 15:03
Output File: ^81004::OU Injected at: 900810 14:24
Data File: >81004::02 Dilution Factor: 1.00000
Name: WELL C-14 A 5MLS
Misc: 255699 GANNETT FLEMING, INC.

ID File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE		9.81	193	70111	50.00	UG/L	98
8)	1,2-DICHLOROETHANE-d4	SS	13.00	263	124056	47.96	UG/L	95
21)	*1,4-DIFLUOROBENZENE		20.80	434	233952	50.00	UG/L	99
35)	*CHLOROBENZENE-d5		25.68	541	206507	50.00	UG/L	96
1)	TOLUENE-d8	SS	24.50	515	250937	50.40	UG/L	97
7)	BROMOFLUOROBENZENE	SS	29.47	624	189358	52.52	UG/L	91

* Compound is ISTD

QC Inc

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VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab ID : 255700
Sample ID : WELL C-14 B
Analysis Date: 08/10/90
Instrument: E

Client: GANNETT FLEMING
Matrix: WATER
Lab File: >81008

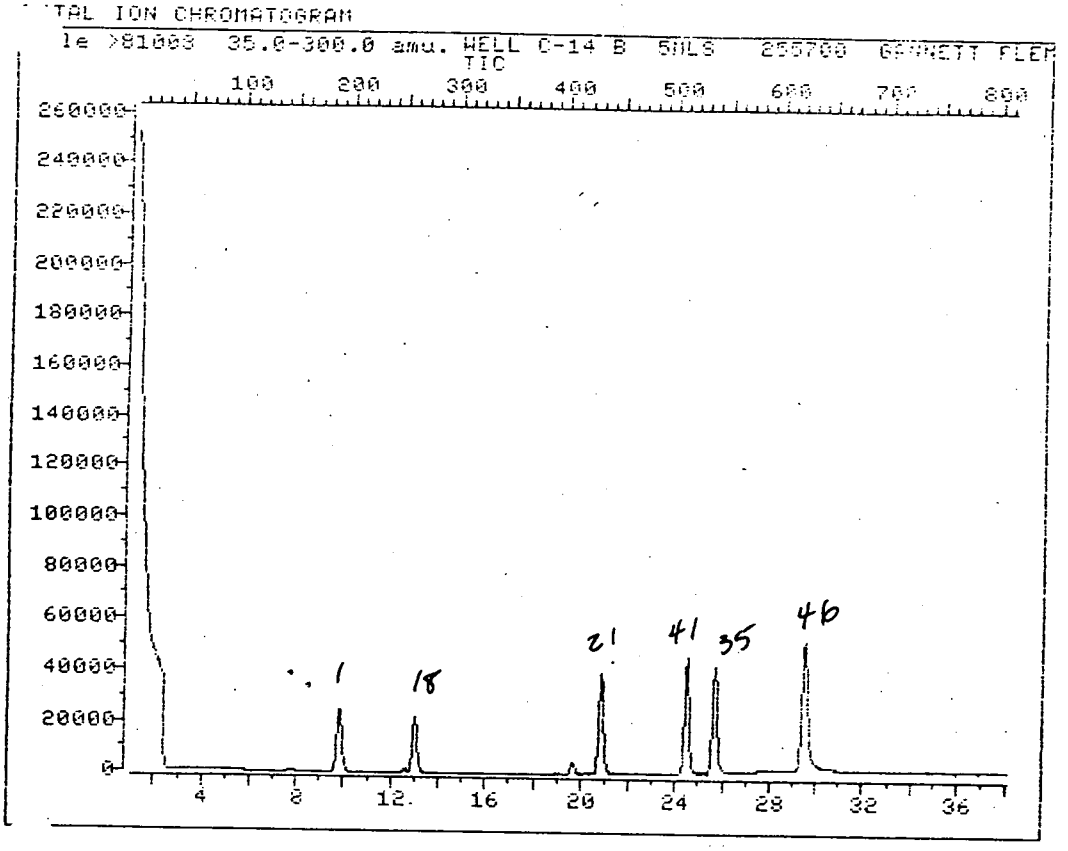
CAS NO.	COMPOUND	RESULTS(UG/L)	COMMENT
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
75-69-4	Trichlorofluoromethane	10	U
110-75-8	2-Chloroethylvinyl ether	10	U
95-50-1	1,2-Dichlorobenzene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

SURROGATE RECOVERY DATA	% RECOVERY	QC Limits
D4-1,2-Dichloroethane	98	(76-114)
D8-Toluene	100	(88-110)
Bromofluorobenzene	105	(86-115)

COMMENT
U= Not Detected
B= Compound in Blank

Signature Josephine M. Black

Name/Title Josephine M. Black
Volatile Group Leader



	Compound	
1)	*BROMOCHLOROMETHANE	
2)	CHLOROMETHANE	
3)	BROMOMETHANE	
4)	VINYL CHLORIDE	
5)	CHLOROETHANE	
6)	METHYLENE CHLORIDE	
7)	ACROLEIN	
8)	ACETONE	
9)	CARBON DISULFIDE	
10)	ACRYLONITRILE	
11)	TRICHLOROFLUOROMETHANE	
12)	1,1-DICHLOROETHENE	
13)	1,1-DICHLOROETHANE	
14)	METHYL TERTIARY BUTYL ETHER	
15)	TERTIARY BUTYL ALCOHOL	
16)	1,2-DICHLOROETHENE (TOTAL)	
17)	CHLOROFORM	
18)	1,2-DICHLOROETHANE-d4	SS
19)	2-BUTANONE	
20)	1,2-DICHLOROETHANE	
21)	*1,4-DIFLUOROBENZENE	
22)	1,1,1-TRICHLOROETHANE	
23)	CARBON TETRACHLORIDE	
24)	VINYL ACETATE	
25)	BROMODICHLOROMETHANE	
26)	1,2-DICHLOROPROPANE	
27)	CIS-1,3-DICHLOROPROPENE	
28)	TRICHLOROETHENE	
29)	DIBROMOCHLOROMETHANE	
30)	1,1,2-TRICHLOROETHANE	
31)	BENZENE	
32)	2-CHLOROETHYL VINYL ETHER	
33)	TRANS-1,3-DICHLOROPROPENE	
34)	BROMOFORM	
35)	*CHLOROBENZENE-d5	
36)	4-METHYL-2-PENTANONE	
37)	2-HEXANONE	
38)	TETRACHLOROETHENE	
39)	1,1,2,2-TETRACHLOROETHANE	
40)	TOLUENE	
41)	TOLUENE-d8	SS
42)	CHLOROBENZENE	
43)	ETHYLBENZENE	
44)	STYRENE	
45)	XYLENE (TOTAL)	
46)	BROMOFLUOROBENZENE	SS
47)	1,3-DICHLOROBENZENE	
48)	1,2-DICHLOROBENZENE	
49)	1,4-DICHLOROBENZENE	

* Compound is ISTD

Data File: >81008::D2 Quant Output File: ^81008::OU
Name: WELL C-14 B 5MLS
Misc: 255700 GANNETT FLEMING, INC.

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

Operator ID: USER1
Quant Time: 900810 18:08
Injected at: 900810 17:29

QUANT REPORT

Operator ID: USER1 Quant Rev: 6 Quant Time: 900810 18:08
Output File: ^81008::OU Injected at: 900810 17:09
Data File: >81008::D2 Dilution Factor: 1.00000
Name: WELL C-14 B 5MLS
Misc: 255700 GANNETT FLEMING, INC.

ID File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

	Compound		R.T.	Scan#	Area	Conc	Units	Q
1)	*BROMOCHLOROMETHANE		9.85	194	66985	50.00	UG/L	94
8)	1,2-DICHLOROETHANE-d4	SS	13.04	264	121666	49.23	UG/L	95
21)	*1,4-DIFLUOROBENZENE		20.84	435	218451	50.00	UG/L	98
35)	*CHLOROBENZENE-d5		25.67	541	188846	50.00	UG/L	93
41)	TOLUENE-d8	SS	24.49	515	226903	49.83	UG/L	94
57)	BROMOFLUOROBENZENE	SS	29.51	625	172853	52.43	UG/L	92

* Compound is ISTD

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VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab ID : 255701
Sample ID : WELL C-14 C
Analysis Date: 08/10/90
Instrument: E

Client: GANNETT FLEMING
Matrix: WATER
Lab File: >81009

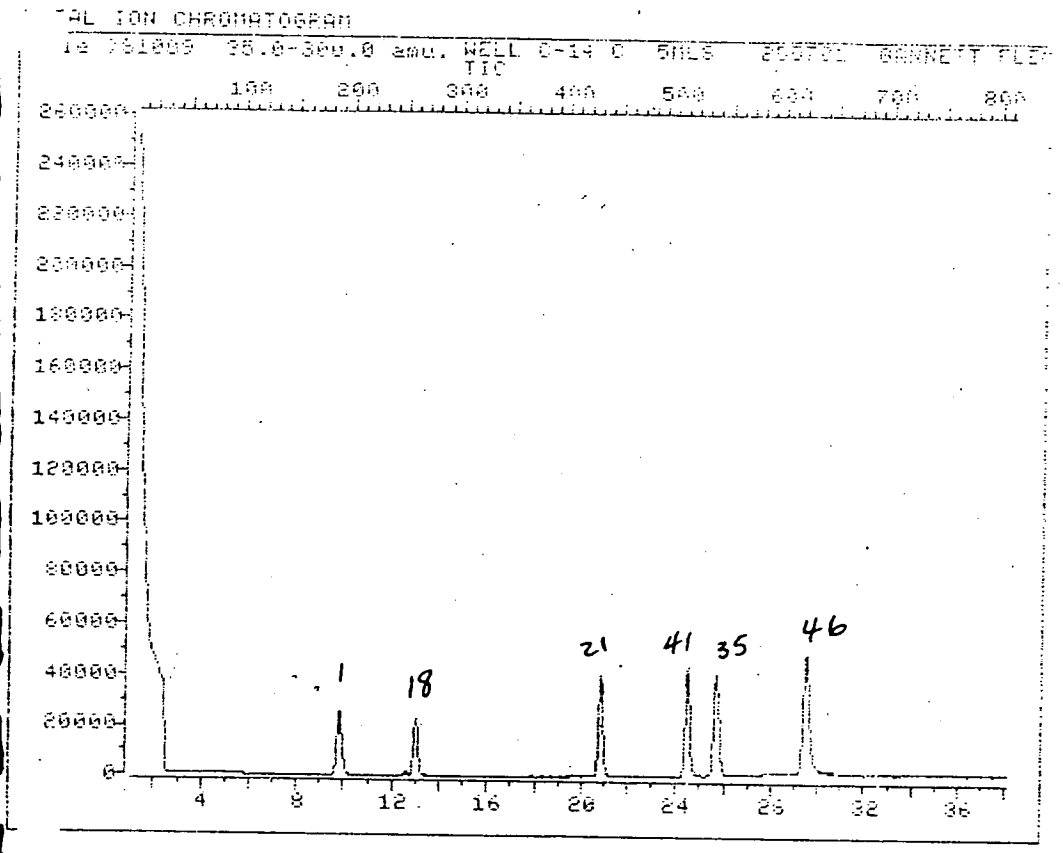
CAS NO.	COMPOUND	RESULTS(UG/L)	COMMENT
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
75-69-4	Trichlorofluoromethane	10	U
110-75-8	2-Chloroethylvinyl ether	10	U
95-50-1	1,2-Dichlorobenzene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

SURROGATE RECOVERY DATA	% RECOVERY	QC Limits
D4-1,2-Dichloroethane	97	(76-114)
D8-Toluene	103	(88-110)
Bromofluorobenzene	102	(86-115)

COMMENT
U= Not Detected
B= Compound in Blank

Signature Josephine M. Black

Name/Title Josephine M. Black
Volatile Group Leader



1) *BROMOCHLOROMETHANE
2) CHLOROETHANE
3) BROMOETHANE
4) VINYL CHLORIDE
5) CHLOROETHANE
6) METHYLENE CHLORIDE
7) ACROLEIN
8) ACETONE
9) CARBON DISULFIDE
10) ACRYLONITRILE
11) TRICHLOROFLUOROMETHANE
12) 1,1-DICHLOROETHENE
13) 1,1-DICHLOROETHANE
14) METHYL TERTIARY BUTYL ETHER
15) TERTIARY BUTYL ALCOHOL
16) 1,2-DICHLOROETHENE (TOTAL)
17) CHLOROFORM
18) 1,2-DICHLOROETHANE-d4 SS
19) 2-BUTANONE
20) 1,2-DICHLOROETHANE
21) *1,4-DIFLUOROBENZENE
22) 1,1,1-TRICHLOROETHANE
23) CARBON TETRACHLORIDE
24) VINYL ACETATE
25) BROMODICHLOROMETHANE
26) 1,2-DICHLOROPROPANE
27) CIS-1,3-DICHLOROPROPENE
28) TRICHLOROETHENE
29) DIBROMOCHLOROMETHANE
30) 1,1,2-TRICHLOROETHANE
31) BENZENE
32) 2-CHLOROETHYL VINYL ETHER
33) TRANS-1,3-DICHLOROPROPENE
34) BROMOFORM
35) *CHLOROBENZENE-d5
36) 4-METHYL-2-PENTANONE
37) 2-HEXANONE
38) TETRACHLOROETHENE
39) 1,1,2,2-TETRACHLOROETHANE
40) TOLUENE
41) TOLUENE-d8 SS
42) CHLOROBENZENE
43) ETHYLBENZENE
44) STYRENE
45) XYLENE (TOTAL)2
46) BROMOFLUOROBENZENE SS
47) 1,3-DICHLOROBENZENE
48) 1,2-DICHLOROBENZENE
49) 1,4-DICHLOROBENZENE

* Compound is ISTD

Data File: >81009::D2 Quant Output File: ^81009::OU
Name: WELL C-14 C 5MLS
Misc: 255701 GANNETT FLEMING, INC.

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

Operator ID: USER1
Quant Time: 900810 18:53
Injected at: 900810 18:14

QUANT REPORT

Operator ID: USER1 Quant Rev: 0 Quant Time: 900810 18:57
Output File: ^81009::OU Injected at: 900810 18:14
Data File: >81009::D2 Dilution Factor: 1.00000
Name: WELL C-14 C 5MLS
Misc: 255701 GANNETT FLEMING, INC.

ID File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE		9.80	193	69169	50.00	UG/L	93
8)	1,2-DICHLOROETHANE-d4	SS	13.04	264	123597	48.43	UG/L	93
21)	*1,4-DIFLUOROBENZENE		20.84	435	221784	50.00	UG/L	99
35)	*CHLOROBENZENE-d5		25.68	541	179132	50.00	UG/L	93
41)	TOLUENE-d8	SS	24.49	515	223105	51.66	UG/L	98
47)	BROMOFLUOROBENZENE	SS	29.46	624	160122	51.20	UG/L	91

* Compound is ISTD

QC Inc
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VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab ID : 255702
Sample ID : WELL C-24 A
Analysis Date: 08/10/90
Instrument: E

Client: GANNETT FLEMING
Matrix: WATER
Lab File: >81010

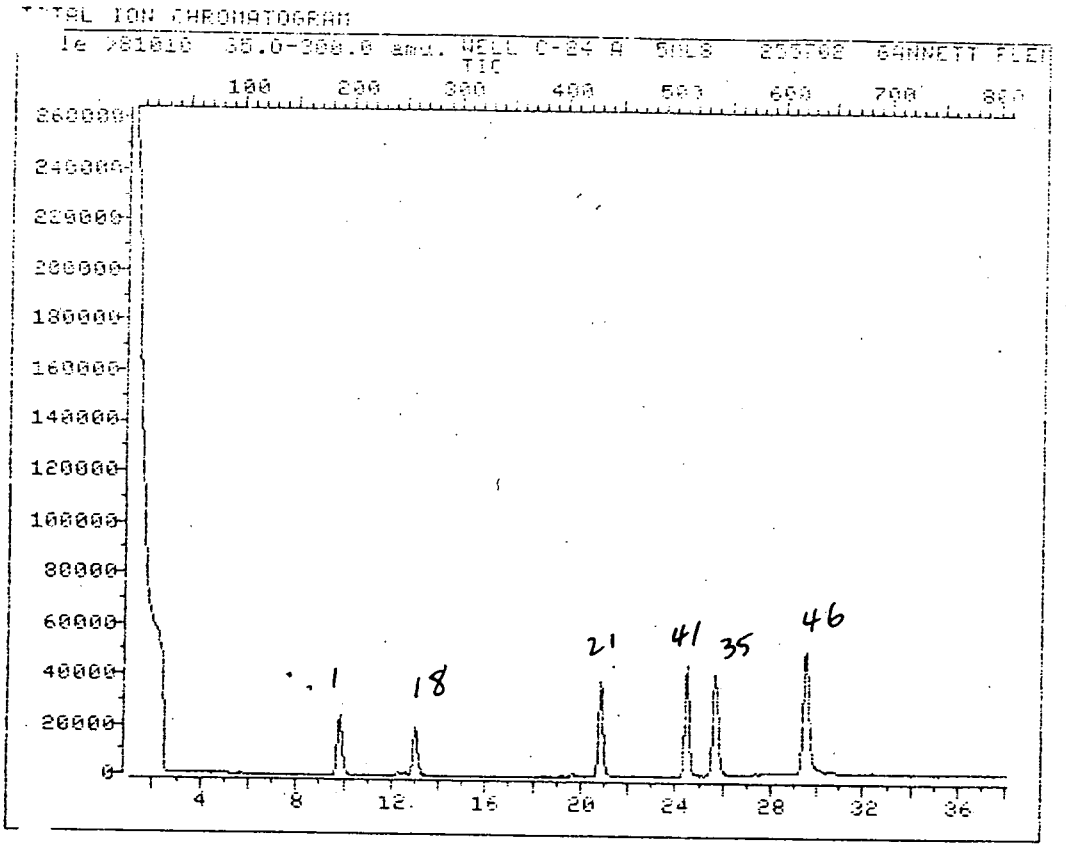
CAS NO.	COMPOUND	RESULTS(UG/L)	COMMENT
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
75-69-4	Trichlorofluoromethane	10	U
110-75-8	2-Chloroethylvinyl ether	10	U
95-50-1	1,2-Dichlorobenzene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

SURROGATE RECOVERY DATA	% RECOVERY	QC Limits
D4-1,2-Dichloroethane	96	(76-114)
D8-Toluene	100	(88-110)
Bromofluorobenzene	100	(86-115)

COMMENT
U= Not Detected
B= Compound in Blank

Signature Josephine M. Black

Name/Title Josephine M. Black
Volatile Group Leader



Compound

1) *BROMOCHLOROMETHANE
2) CHLOROMETHANE
3) BROMOMETHANE
4) VINYL CHLORIDE
5) CHLOROETHANE
6) METHYLENE CHLORIDE
7) ACROLEIN
8) ACETONE
9) CARBON DISULFIDE
10) ACRYLONITRILE
11) TRICHLOROFLUOROMETHANE
12) 1,1-DICHLOROETHENE
13) 1,1-DICHLOROETHANE
14) METHYL TERTIARY BUTYL ETHER
15) TERTIARY BUTYL ALCOHOL
16) 1,2-DICHLOROETHENE (TOTAL)
17) CHLOROFORM
18) 1,2-DICHLOROETHANE-d4 SS
19) 2-BUTANONE
20) 1,2-DICHLOROETHANE
21) *1,4-DIFLUOROBENZENE
22) 1,1,1-TRICHLOROETHANE
23) CARBON TETRACHLORIDE
24) VINYL ACETATE
25) BROMODICHLOROMETHANE
26) 1,2-DICHLOROPROPANE
27) CIS-1,3-DICHLOROPROPENE
28) TRICHLOROETHENE
29) DIBROMOCHLOROMETHANE
30) 1,1,2-TRICHLOROETHANE
31) BENZENE
32) 2-CHLOROETHYL VINYL ETHER
33) TRANS-1,3-DICHLOROPROPENE
34) BROMOFORM
35) *CHLOROBENZENE-d5
36) 4-METHYL-2-PENTANONE
37) 2-HEXANONE
38) TETRACHLOROETHENE
39) 1,1,2,2-TETRACHLOROETHANE
40) TOLUENE
41) TOLUENE-d8 SS
42) CHLOROBENZENE
43) ETHYLBENZENE

44) STYRENE
45) XYLENE (TOTAL)2
46) BROMOFLUOROBENZENE SS
47) 1,3-DICHLOROBENZENE
48) 1,2-DICHLOROBENZENE
49) 1,4-DICHLOROBENZENE

* Compound is ISTD

Data File: >81010::D2 Quant Output File: ^81010::OU
Name: WELL C-24 A 5MLS
Misc: 255702 GANNETT FLEMING, INC.

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

Operator ID: USER1
Quant Time: 900810 19:37
Injected at: 900810 18:58

QUANT REPORT

Operator ID: USER1 Quant Rev: 6 Quant Time: 900810 19:37
Output File: ^81010::DU Injected at: 900810 18:58
Data File: >81010::D2 Dilution Factor: 1.00000
Name: WELL C-24 A 5MLS
Misc: 255702 GANNETT FLEMING, INC.

ID File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE		9.85	194	64158	50.00	UG/L	96
18)	1,2-DICHLOROETHANE-d4	SS	13.04	264	113271	47.85	UG/L	92
21)	*1,4-DIFLUOROBENZENE		20.84	435	211878	50.00	UG/L	99
35)	*CHLOROBENZENE-d5		25.67	541	181990	50.00	UG/L	94
11)	TOLUENE-d8	SS	24.49	515	219839	50.10	UG/L	97
7)	BROMOFLUOROBENZENE	SS	29.50	625	159315	50.14	UG/L	92

* Compound is ISTD

QC Inc
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WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab ID : 255699
Client: GANNETT FLEMING
Sample ID : WELL C-14 A
MATRIX: WATER
Analysis Date: 08/10/90
Lab File: >81005/>81006
Instrument: E

CAS NO.	COMPOUND	MS CONC	MSD CONC	SAMP CONC	MS %REC	MSD %REC	RPD	%REC LIMITS	RPD LIMITS
74-87-3	Chloromethane	19	18		95	90	5.4	10-146	119
74-83-9	Bromomethane	20	21		100	105	4.9	41-143	62
75-01-4	Vinyl Chloride	20	20		100	100	0	33-137	91
75-00-3	Chloroethane	20	20		100	100	0	D-206	49
75-09-2	Methylene Chloride	20	20		100	100	0	39-124	40
75-35-4	1,1-Dichloroethene	20	20		100	100	0	60-112	20
75-34-3	1,1-Dichloroethane	20	20		100	100	0	59-119	14
540-59-0	1,2-Dichloroethene(total)	20	20		100	100	0	67-122	12
67-66-3	Chloroform	20	20		100	100	0	64-122	17
107-06-2	1,2-Dichloroethane	20	20		100	100	0	46-138	125
71-55-6	1,1,1-Trichloroethane	19	19		95	95	0	67-127	15
56-23-5	Carbon Tetrachloride	19	19		95	95	0	D-468	16
75-27-4	Bromodichloromethane	20	18		100	90	11	67-136	28
78-87-5	1,2-Dichloropropane	21	20		105	100	4.9	67-123	19
10061-01-5	cis-1,3-Dichloropropene	21	21		105	105	0	53-117	21
79-01-6	Trichloroethene	19	19		95	95	0	76-119	18
24-48-1	Dibromochloromethane	19	19		95	95	0	81-126	27
9-00-5	1,1,2-Trichloroethane	20	19		100	95	5.1	78-130	20
71-43-2	Benzene	21	20		105	100	4.9	65-126	12
10061-02-6	trans-1,3-Dichloropropene	21	21		105	105	0	53-117	21
75-25-2	Bromoform	16	16		80	80	0	70-147	35
127-18-4	Tetrachloroethene	21	20		105	100	4.9	72-122	26
79-34-5	1,1,2,2-Tetrachloroethane	25	23		125	115	8.3	66-136	26
108-88-3	Toluene	20	20		100	100	0	62-126	32
108-90-7	Chlorobenzene	21	20		105	100	4.9	71-121	26
100-41-4	Ethylbenzene	21	21		105	105	0	68-118	30
75-69-4	Trichlorofluoromethane	20	19		100	95	5.1	4-127	31
110-75-8	2-Chloroethylvinyl ether	0	0		0*	0*	0*	D-126	17
95-50-1	1,2-Dichlorobenzene	21	21		105	105	0	D-222	51
541-73-1	1,3-Dichlorobenzene	22	23		110	115	4.4	68-139	29
106-46-7	1,4-Dichlorobenzene	21	21		105	105	0	72-137	27

SURROGATE RECOVERY DATA	%RECOVERY MS	%RECOVERY MSD	QC LIMITS
D4-1,2-DICHLOROETHANE	99	99	(76-114)
D8-TOLUENE	100	100	(88-110)
BROMOFLUOROBENZENE	102	104	(86-115)

All concentrations are ug/l.
*=Compound out of limits.

Signature Josephine M. Black
Name/Title Josephine M. Black
Volatile Group Leader

QC Inc

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WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab ID : QCCHK0810 Client: GANNETT FLEMING
Sample ID : QC CHECK STANDARD Matrix: WATER
Analysis Date: 08/10/90 Lab File: >81007
Instrument: E

CAS NO.	COMPOUND	MS CONC.	SAMPLE CONC.	% REC	LIMITS
110-75-8	2-Chloroethylvinyl ether	20		100	D-126

Signature Josephine M. Black

Name/Title Josephine M. Black
Volatile Group Leader

QC Inc

1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

VOLATILE METHOD BLANK SUMMARY

Lab Name: QC Inc. Contract: GANNETT FLEMING
Lab Code: Case No.: SAS No.: SDG No.:
EPA Sample No. for Method Blank: Lab Sample ID: WATER BLANK
Instrument ID: E Lab File ID: >81001
Date Analyzed: 08/10/90 Time Analyzed: 12:10
Matrix: (soil/water) WATER Method: (Low/Med.) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD:

LAB SAMPLE ID	LAB FILE ID	TIME OF ANALYSIS
TRIP BLANK	>81002	12:55
FIELD BLANK	>81003	13:39
WELL C-14 A	>81004	14:24
MATRIX SPIKE	>81005	15:09
MATRIX SPIKE DUPLICATE	>81006	16:00
CHECK STANDARD	>81007	16:44
WELL C-14 B	>81008	17:29
WELL C-14 C	>81009	18:14
WELL C-24 A	>81010	18:58

COMMENTS:

QC Inc
1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

5A
VOLATILE ORGANIC GC/MS TUNING AND MASS CALIBRATION - BROMOFLUOROBENZENE

Lab Name: QC Inc.
Lab File ID: >BF153
Instrument ID:E
Matrix:(soil /water)WATER

Contract: GANNETT FLEMING
BFB Injection Date: 08/10/90
BFB Injection Time: 10:38
Level:(low/med) LOW
Column:(pack/cap) PACK

m/e	ION ABUNDANCE CRITERIA	RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.28
75	30.0 - 60.0% of mass 95	53.59
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.59
173	Less than 2.0% of mass 174	0 (0)
174	Greater than 50.0% of mass 95	60.36
175	5.0 - 9.0% of mass 174	4.88 (8.08)
176	Greater than 95%, but lessthan 101% of mass 174	57.75(95.68
177	5.0 - 9.0% of mass 176	4.15 (7.19)

1-Value is % mass 174 2- Value is % mass 176

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS,MSD,BLANKS,AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	624 STANDARD	STANDARD	>81050	08/10/90	11:04
02	WATER BLANK	BLK0810	>81001	08/10/90	12:10
03	TRIP BLANK	255697	>81002	08/10/90	12:55
04	FIELD BLANK	255698	>81003	08/10/90	13:39
05	WELL C-14 A	255699	>81004	08/10/90	14:24
06	MATRIX SPIKE	255699MS	>81005	08/10/90	15:09
07	SPIKE DUPLICATE	255699MSD	>81006	08/10/90	16:00
08	CHECK STANDARD	QCCHK0810	>81007	08/10/90	16:44
09	WELL C-14 B	255700	>81008	08/10/90	17:29
10	WELL C-14 C	255701	>81009	08/10/90	18:14
11	WELL C-24 A	255702	>81010	08/10/90	18:58
12					
13					
14					
15					
16					
17					
18					
19					
20					

QC Inc

1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

GC/MS INITIAL/CONTINUING CALIBRATION CERTIFICATION

VOLATILE ORGANICS

Lab Sample ID Nos.: 255697-255702 Client: GANNETT FLEMING

I. **Initial Calibration** Date: 08/06/90 Time: 12:30

Lab File ID:

RRF20 >80654

RRF100 >80651

RRF200 >80652

Criteria for all Compounds met? __X__YES _____NO
If not met, list below:

II. **Continuing Calibration**

Lab File ID:

RRF20 >81050 Date: 08/10/90 Time: 11:04

Criteria for all Compounds met? __X__YES _____NO
If not met, list below:

Josephine M. Black
Josephine M. Black
Volatiles Group Leader

Form QC G-7V

Calibration Report

Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Calibrated: 900806 16:41

Compound		Files: >80654 RF 20.00	>80651 RF 100.00	>80652 RF 200.00	$\overline{RF}$	% RSD	
CHLOROMETHANE		.48595	.46334	.51084	.48671	4.882	
BROMOMETHANE		.88324	.93599	.99908	.93944	6.174	
VINYL CHLORIDE		.62297	.56731	.58318	.59115	4.851	
CHLOROETHANE		.43779	.46627	.51241	.47216	7.975	
METHYLENE CHLORIDE		1.31825	1.35621	1.47230	1.38225	5.806	
ACROLEIN		.03971	.05047	.05867	.04962	19.161	(Conc=100.0,500.0,1000.0)
ACETONE		.20582	.12472	.11536	.14863	33.470	
CARBON DISULFIDE		1.52508	1.75969	2.04906	1.77794	14.762	
ACRYLONITRILE		.13349	.14112	.15039	.14166	5.973	(Conc=100.0,500.0,1000.0)
TRICHLOROFLUOROMETHANE		1.72961	1.89922	2.12152	1.91678	10.254	
1,1-DICHLOROETHENE		.65772	.71167	.76881	.71274	7.794	
1,1-DICHLOROETHANE		1.59268	1.78934	2.02395	1.80199	11.982	
METHYL TERTIARY BUTYL ETHER		1.89962	2.09437	2.21885	2.07095	7.769	
TERTIARY BUTLYL ALCHOHOL		.06001	.03888	.03433	.04440	30.859	(Conc=40.0,200.0,400.0)
1,2-DICHLOROETHENE (TOTAL)		.81691	.87934	.95379	.88335	7.758	
CHLOROFORM		2.30201	2.68387	2.99654	2.66081	13.073	
1,2-DICHLOROETHANE-d4	SS	1.59970	1.63143	1.73405	1.65506	4.243	(Conc=50.0,50.0,50.0)
2-BUTANONE		.43870	.45054	.45239	.44721	1.661	
1, CHLOROETHANE		1.49408	1.62450	1.77604	1.63154	8.649	
1,1,1-TRICHLOROETHANE		.57666	.66599	.71012	.65093	10.446	
CARBON TETRACHLORIDE		.45481	.56298	.63254	.55011	16.281	
VINYL ACETATE		.16258	.19131	.22214	.19201	15.513	
BROMODICHLOROMETHANE		.57080	.69317	.76871	.67756	14.740	
1,2-DICHLOROPROPANE		.26649	.29601	.31164	.29138	7.869	
CIS-1,3-DICHLOROPROPENE		.47128	.62389	.69518	.59678	19.167	
TRICHLOROETHENE		.36900	.38754	.40706	.38786	4.907	
DIBROMOCHLOROMETHANE		.39864	.50795	.53853	.48170	15.268	
1,1,2-TRICHLOROETHANE		.33725	.32104	.31126	.32318	4.062	
BENZENE		.65839	.74075	.76707	.72207	7.852	
2-CHLOROETHYL VINYL ETHER		.13507	.13957	.13864	.13776	1.723	
TRANS-1,3-DICHLOROPROPENE		.47128	.62389	.69518	.59678	19.167	
BROMOFORM		.11931	.20720	.24192	.18947	33.353	
4-METHYL-2-PENTANONE		.23932	.18344	.19621	.20632	14.193	
2-HEXANONE		.23932	.18344	.19621	.20632	14.193	
TETRACHLOROETHENE		.35435	.37022	.40277	.37578	6.569	
1,1,2,2-TETRACHLOROETHANE		.31475	.36458	.40725	.36219	12.782	
TOLUENE		1.00766	1.19676	1.30992	1.17145	13.036	
TOLUENE-d8	SS	1.14944	1.18344	1.19764	1.17684	2.105	(Conc=50.0,50.0,50.0)
CHLOROBENZENE		.82579	.97408	1.06849	.95612	12.795	
ETHYLBENZENE		.39652	.42050	.43927	.41876	5.117	
STYRENE		.80765	.93092	.97487	.90448	9.584	

RF - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

Calibration Report

Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Calibrated: 900806 16:41

Compound		Files: >80654 RF 20.00	>80651 RF 100.00	>80652 RF 200.00	$\overline{RF}$	% RSD	
XYLENE (TOTAL)1		-	-	-	-	-	
XYLENE (TOTAL)2		.47613	.51905	.53371	.50963	5.872	
BROMOFLUOROBENZENE	SS	.81235	.83793	.84162	.83063	1.919	(Conc=50.0,50.0,50.0)
1,3-DICHLOROBENZENE		.82395	.91424	.98728	.90849	9.006	
1,2-DICHLOROBENZENE		.74522	.83725	.81489	.79912	6.007	
1,4-DICHLOROBENZENE		.78816	.90285	1.02259	.90453	12.959	

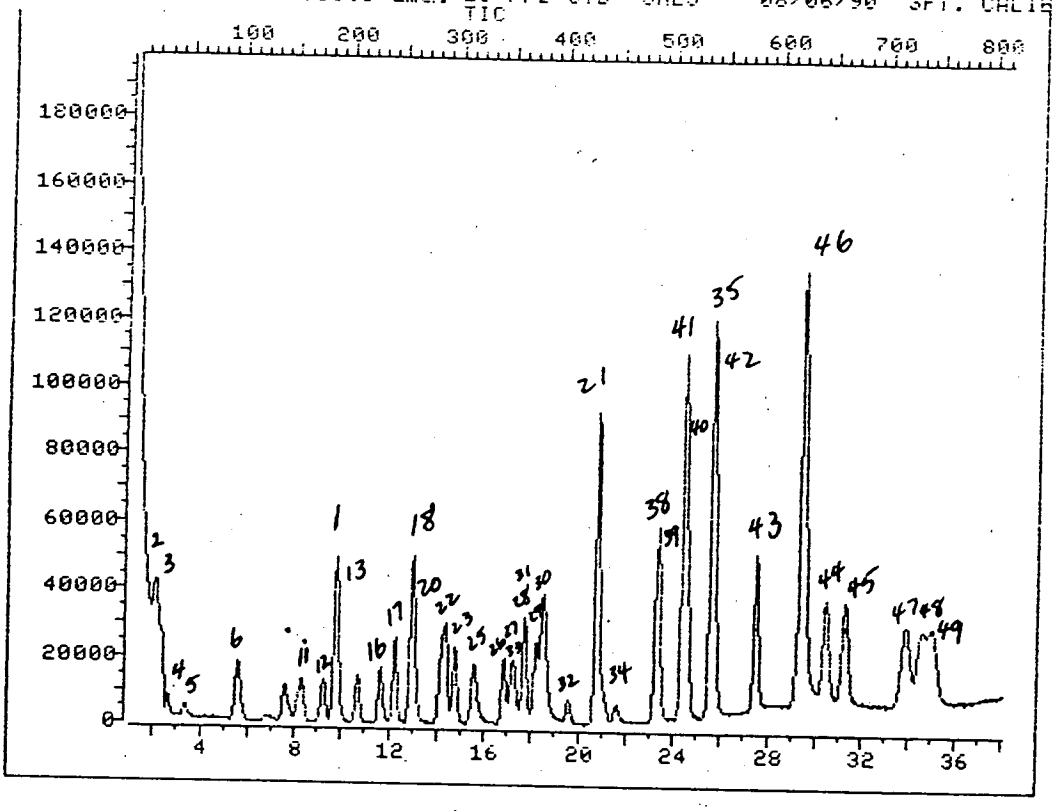
RF - Response Factor (Subscript is amount in UG/L)

$\overline{RF}$ - Average Response Factor

%RSD - Percent Relative Standard Deviation

TOTAL ION CHROMATOGRAM

le >80654 35.0-300.0 amu. 20 PPB STD 5MLS 08/06/90 3PT. CALIB
TIC



1) *BROMOCHLOROMETHANE
2) CHLOROMETHANE
3) BROMOMETHANE
4) VINYL CHLORIDE
5) CHLOROETHANE
6) METHYLENE CHLORIDE
7) ACROLEIN
8) ACETONE
9) CARBON DISULFIDE
10) ACRYLONITRILE
11) TRICHLOROFLUOROMETHANE
12) 1,1-DICHLOROETHENE
13) 1,1-DICHLOROETHANE
14) METHYL TERTIARY BUTYL ETHER
15) TERTIARY BUTYL ALCOHOL
16) 1,2-DICHLOROETHENE (TOTAL)
17) CHLOROFORM
18) 1,2-DICHLOROETHANE-d4 SS
19) 2-BUTANONE
20) 1,2-DICHLOROETHANE
21) *1,4-DIFLUOROBENZENE
22) 1,1,1-TRICHLOROETHANE
23) CARBON TETRACHLORIDE
24) VINYL ACETATE
25) BROMODICHLOROMETHANE
26) 1,2-DICHLOROPROPANE
27) CIS-1,3-DICHLOROPROPENE
28) TRICHLOROETHENE
29) DIBROMOCHLOROMETHANE
30) 1,1,2-TRICHLOROETHANE
31) BENZENE
32) 2-CHLOROETHYL VINYL ETHER
33) TRANS-1,3-DICHLOROPROPENE
34) BROMOFORM
35) *CHLOROBENZENE-d5
36) 4-METHYL-2-PENTANONE
37) 2-HEXANONE
38) TETRACHLOROETHENE
39) 1,1,2,2-TETRACHLOROETHANE
40) TOLUENE
41) TOLUENE-d8 SS
42) CHLOROBENZENE
43) ETHYLBENZENE
44) STYRENE
45) XYLENE (TOTAL)
46) BROMOFLUOROBENZENE SS
47) 1,3-DICHLOROBENZENE
48) 1,2-DICHLOROBENZENE
49) 1,4-DICHLOROBENZENE

* Compound is ISTD

Data File: >80654::D2 Quant Output File: ^80654::OU
Name: 20 PPB STD 5MLS
Misc: 08/06/90 3PT. CALIBRATION 624.1

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900803 11:12

Operator ID: USER1
Quant Time: 900806 16:37
Injected at: 900806 15:58

QUANT REPORT

Operator ID: USER1 Quant Rev: 6 Quant Time: 901011 09:14
Output File: ^80654::OU Injected at: 900806 15:58
Data File: >80654::D2 Dilution Factor: 1.00000
Name: 20 PPB STD 5MLS
Misc: 08/06/90 3PT. CALIBRATION 624.1

ID File: ID_VOA::DB
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 901011 09:14

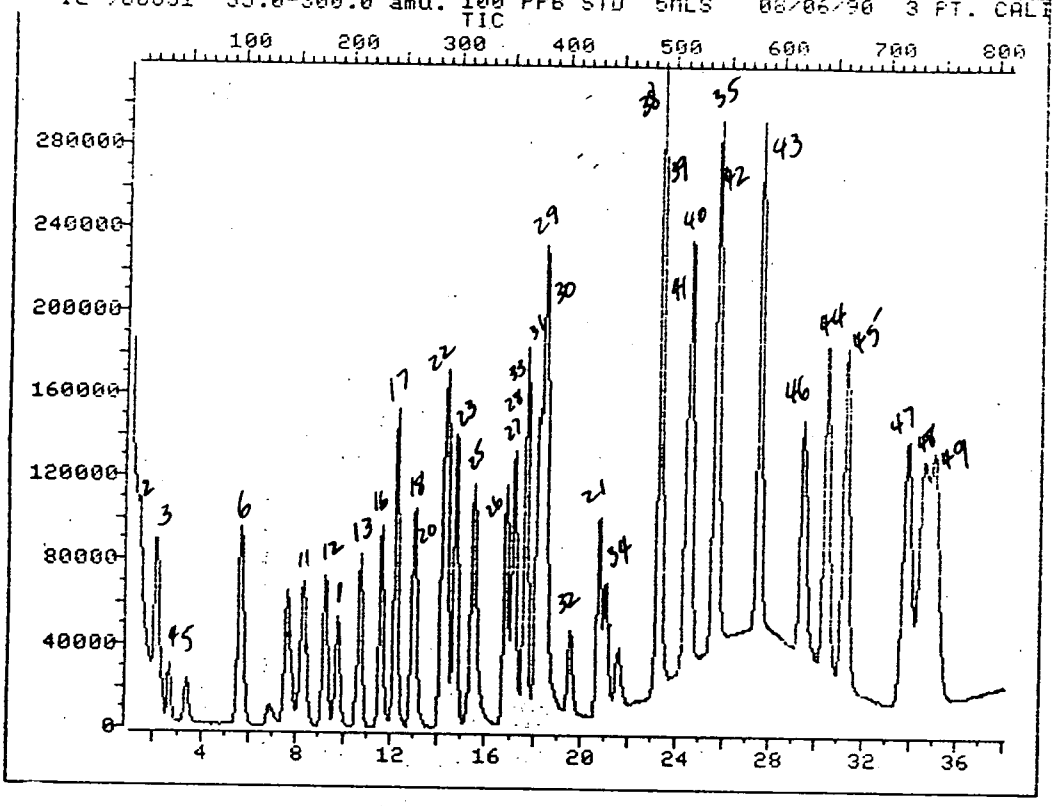
	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.78	192	146399	50.00	UG/L	96
2)	CHLOROMETHANE	1.38	8	28457	20.00	UG/L	100
3)	BROMOMETHANE	2.07	23	51722	20.00	UG/L	93
4)	VINYL CHLORIDE	2.61	35	36481	20.00	UG/L	100
5)	CHLOROETHANE	3.39	52	25637	20.00	UG/L	95
6)	METHYLENE CHLORIDE	5.58	100	77196	20.00	UG/L	94
7)	ACROLEIN	6.86	128	11628	100.00	UG/L	100
8)	ACETONE	6.77	126	12053	20.00	UG/L	100
9)	CARBON DISULFIDE	7.59	144	89308	20.00	UG/L	100
10)	ACRYLONITRILE	7.63	145	39086	100.00	UG/L	91
11)	TRICHLOROFLUOROMETHANE	8.32	160	101285	20.00	UG/L	98
12)	1,1-DICHLOROETHENE	9.27	181	38516	20.00	UG/L	81
13)	1,1-DICHLOROETHANE	10.73	213	93267	20.00	UG/L	86
14)	METHYL TERTIARY BUTYL ETHER	14.20	289	111241	20.00	UG/L	97
15)	TERTIARY BUTLYL ALCHOHOL	11.87	238	7028	20.00	UG/L	100
16	1,2-DICHLOROETHENE (TOTAL)	11.65	233	47838	20.00	UG/L	81
17)	CHLOROFORM	12.28	247	134805	20.00	UG/L	99
18)	1,2-DICHLOROETHANE-d4 SS	12.97	262	234194	50.00	UG/L	95
19)	2-BUTANONE	14.20	289	25690	20.00	UG/L	100
20)	1,2-DICHLOROETHANE	13.11	265	87493	20.00	UG/L	93
21)	*1,4-DIFLUOROBENZENE	20.77	433	532209	50.00	UG/L	92
22)	1,1,1-TRICHLOROETHANE	14.34	292	122762	20.00	UG/L	97
23)	CARBON TETRACHLORIDE	14.75	301	96821	20.00	UG/L	85
24)	VINYL ACETATE	15.07	308	147	20.00	UG/L	100
25)	BROMODICHLOROMETHANE	15.57	319	121515	20.00	UG/L	91
26)	1,2-DICHLOROPROPANE	16.89	348	56731	20.00	UG/L	95
27)	CIS-1,3-DICHLOROPROPENE	17.26	356	100328	20.00	UG/L	93
28)	TRICHLOROETHENE	17.71	366	78553	20.00	UG/L	87
29)	DIBROMOCHLOROMETHANE	18.40	381	84863	20.00	UG/L	87
30)	1,1,2-TRICHLOROETHANE	18.49	383	71795	20.00	UG/L	94
31)	BENZENE	18.17	376	140161	20.00	UG/L	90
32)	2-CHLOROETHYL VINYL ETHER	19.58	407	28755	20.00	UG/L	88
33)	TRANS-1,3-DICHLOROPROPENE	17.26	356	100328	20.00	UG/L	93
34)	BROMOFORM	21.09	440	25399	20.00	UG/L	99
35)	*CHLOROBENZENE-d5	25.65	540	468568	50.00	UG/L	90
36)	4-METHYL-2-PENTANONE	21.64	452	44856	20.00	UG/L	91
37)	2-HEXANONE	21.64	452	44856	20.00	UG/L	86
38)	TETRACHLOROETHENE	23.33	489	66414	20.00	UG/L	100
39)	1,1,2,2-TETRACHLOROETHANE	23.37	490	58993	20.00	UG/L	92
40)	TOLUENE	24.60	517	188862	20.00	UG/L	71
41)	TOLUENE-d8 SS	24.42	513	538593	50.00	UG/L	97
42)	CHLOROBENZENE	25.74	542	154776	20.00	UG/L	95
43)	ETHYLBENZENE	27.52	581	74318	20.00	UG/L	94

	Compound		R.T.	Scan#	Area	Conc	Units	q
44)	STYRENE		30.45	645	151376	20.00	UG/L	90
45)	XYLENE (TOTAL)1		30.67	650	3945	20.00	UG/L	87
46)	XYLENE (TOTAL)2		31.31	664	89239	20.00	UG/L	85
47)	BROMOFLUOROBENZENE	SS	29.44	623	380642	50.00	UG/L	90
48)	1,3-DICHLOROBENZENE		33.92	721	154430	20.00	UG/L	99
49)	1,2-DICHLOROBENZENE		34.60	736	82268	20.00	UG/L	91
50)	1,4-DICHLOROBENZENE		34.60	736	82268	20.00	UG/L	95

* Compound is ISTD

TOTAL ION CHROMATOGRAM

le >80651 35.0-300.0 amu. 100 PPB STD 5MLS 08/06/90 3 PT. CALI



1) *BROMOCHLOROMETHANE
2) CHLOROMETHANE
3) BROMOMETHANE
4) VINYL CHLORIDE
5) CHLOROETHANE
6) METHYLENE CHLORIDE
7) ACROLEIN
8) ACETONE
9) CARBON DISULFIDE
10) ACRYLONITRILE
11) TRICHLOROFLUOROMETHANE
12) 1,1-DICHLOROETHENE
13) 1,1-DICHLOROETHANE
14) METHYL TERTIARY BUTYL ETHER
15) TERTIARY BUTYL ALCOHOL
16) 1,2-DICHLOROETHENE (TOTAL)
17) CHLOROFORM
18) 1,2-DICHLOROETHANE-d4 SS
19) 2-BUTANONE
20) 1,2-DICHLOROETHANE
21) *1,4-DIFLUOROBENZENE
22) 1,1,1-TRICHLOROETHANE
23) CARBON TETRACHLORIDE
24) VINYL ACETATE
25) BROMODICHLOROMETHANE
26) 1,2-DICHLOROPROPANE
27) CIS-1,3-DICHLOROPROPENE
28) TRICHLOROETHENE
29) DIBROMOCHLOROMETHANE
30) 1,1,2-TRICHLOROETHANE
31) BENZENE
32) 2-CHLOROETHYL VINYL ETHER
33) TRANS-1,3-DICHLOROPROPENE
34) BROMOFORM
35) *CHLOROBENZENE-d5
36) 4-METHYL-2-PENTANONE
37) 2-HEXANONE
38) TETRACHLOROETHENE
39) 1,1,2,2-TETRACHLOROETHANE
40) TOLUENE
41) TOLUENE-d8 SS
42) CHLOROBENZENE
43) ETHYLBENZENE

44) STYRENE
45) XYLENE (TOTAL)2
46) BROMOFLUOROBENZENE SS
47) 1,3-DICHLOROBENZENE
48) 1,2-DICHLOROBENZENE
49) 1,4-DICHLOROBENZENE

* Compound is ISTD

Data File: >80651::D2 Quant Output File: ^80651::OU
Name: 100 PPB STD 5MLS
Misc: 08/06/90 3 PT. CALIBRATION 624.1

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900803 11:12

Operator ID: USER1
Quant Time: 900806 13:09
Injected at: 900806 12:30

QUANT REPORT

Operator ID: USER1 Quant Rev: 6 Quant Time: 901011 09:30
Output File: ^80651::OU Injected at: 900806 12:30
Data File: >80651::D2 Dilution Factor: 1.00000
Name: 100 PPB STD 5MLS
Misc: 08/06/90 3 PT. CALIBRATION 624.1

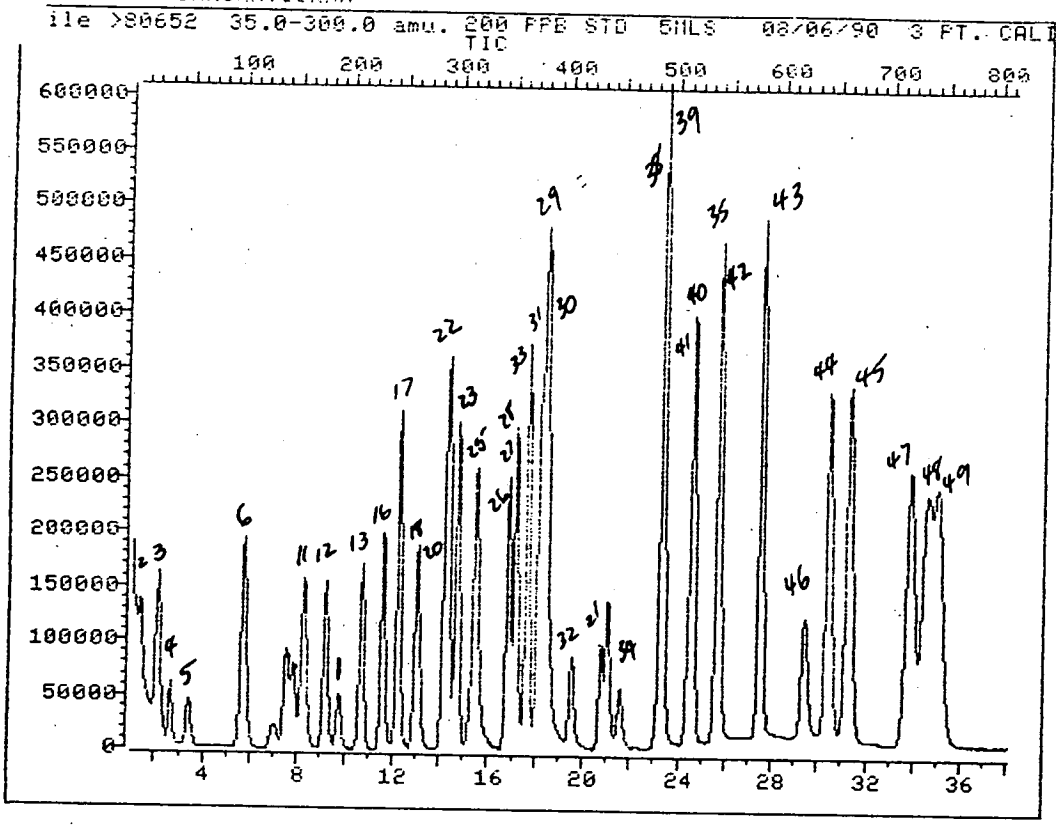
ID File: ID_VOA::DB
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 901011 09:30

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.80	193	153118	50.00	UG/L	96
2)	CHLOROMETHANE	1.41	9	141890	100.00	UG/L	100
3)	BROMOMETHANE	2.09	24	286633	100.00	UG/L	96
4)	VINYL CHLORIDE	2.64	36	173730	100.00	UG/L	100
5)	CHLOROETHANE	3.41	53	142790	100.00	UG/L	95
6)	METHYLENE CHLORIDE	5.65	102	415321	100.00	UG/L	92
7)	ACROLEIN	6.88	129	77283	500.00	UG/L	100
8)	ACETONE	6.88	129	38194	100.00	UG/L	100
9)	CARBON DISULFIDE	7.61	145	538879	100.00	UG/L	100
10)	ACRYLONITRILE	7.70	147	216073	500.00	UG/L	95
11)	TRICHLOROFLUOROMETHANE	8.30	160	581609	100.00	UG/L	95
12)	1,1-DICHLOROETHENE	9.25	181	217940	100.00	UG/L	80
13)	1,1-DICHLOROETHANE	10.71	213	547961	100.00	UG/L	83
14)	METHYL TERTIARY BUTYL ETHER	14.18	289	641371	100.00	UG/L	91
15)	TERTIARY BUTLYL ALCOHOL	11.63	233	11199	200.00	UG/L	100
16	1,2-DICHLOROETHENE (TOTAL)	11.63	233	269286	100.00	UG/L	81
17)	CHLOROFORM	12.26	247	821897	100.00	UG/L	92
18)	1,2-DICHLOROETHANE-d4 SS	12.99	263	249801	100.00	UG/L	99
19)	2-BUTANONE	14.18	289	137972	100.00	UG/L	100
20)	1,2-DICHLOROETHANE	13.09	265	497481	100.00	UG/L	88
21)	*1,4-DIFLUOROBENZENE	20.75	433	543208	50.00	UG/L	93
22)	1,1,1-TRICHLOROETHANE	14.36	293	723544	100.00	UG/L	98
23)	CARBON TETRACHLORIDE	14.73	301	611626	100.00	UG/L	89
24)	VINYL ACETATE	15.32	314	222053	100.00	UG/L	100
25)	BROMODICHLOROMETHANE	15.50	318	753067	100.00	UG/L	97
26)	1,2-DICHLOROPROPANE	16.83	347	321586	100.00	UG/L	99
27)	CIS-1,3-DICHLOROPROPENE	17.19	355	677809	100.00	UG/L	98
28)	TRICHLOROETHENE	17.69	366	421026	100.00	UG/L	85
29)	DIBROMOCHLOROMETHANE	18.33	380	551841	100.00	UG/L	85
30)	1,1,2-TRICHLOROETHANE	18.47	383	348788	100.00	UG/L	97
31)	BENZENE	18.15	376	804764	100.00	UG/L	87
32)	2-CHLOROETHYL VINYL ETHER	19.57	407	151632	100.00	UG/L	82
33)	TRANS-1,3-DICHLOROPROPENE	17.19	355	677809	100.00	UG/L	98
34)	BROMOFORM	21.07	440	225102	100.00	UG/L	96
35)	*CHLOROBENZENE-d5	25.64	540	466592	50.00	UG/L	91
36)	4-METHYL-2-PENTANONE	21.58	451	171181	100.00	UG/L	88
37)	2-HEXANONE	21.58	451	171181	100.00	UG/L	84
38)	TETRACHLOROETHENE	23.31	489	345480	100.00	UG/L	100
39)	1,1,2,2-TETRACHLOROETHANE	23.31	489	340224	100.00	UG/L	95
40)	TOLUENE	24.63	518	1116802	100.00	UG/L	86
41)	TOLUENE-d8 SS	24.41	513	552182	100.00	UG/L	98
42	CHLOROBENZENE	25.73	542	908995	100.00	UG/L	94
43)	ETHYLBENZENE	27.51	581	392404	100.00	UG/L	88

	Compound		R.T.	Scan#	Area	Conc	Units	q
4)	STYRENE		30.48	646	868723	100.00	UG/L	87
5	XYLENE (TOTAL)1		30.12	638	1718	100.00	UG/L	100
46	XYLENE (TOTAL)2		31.30	664	484372	100.00	UG/L	80
7)	BROMOFLUOROBENZENE	SS	29.43	623	390972	100.00	UG/L	87
8)	1,3-DICHLOROBENZENE		33.86	720	853156	100.00	UG/L	97
49)	1,2-DICHLOROBENZENE		34.59	736	416613	100.00	UG/L	95
50)	1,4-DICHLOROBENZENE		34.59	736	416613	100.00	UG/L	91

* Compound is ISTD

TOTAL ION CHROMATOGRAM



	Compound	
1)	*BROMOCHLOROMETHANE	
2)	CHLOROMETHANE	
3)	BROMOMETHANE	
4)	VINYL CHLORIDE	
5)	CHLOROETHANE	
6)	METHYLENE CHLORIDE	
7)	ACROLEIN	
8)	ACETONE	
9)	CARBON DISULFIDE	
10)	ACRYLONITRILE	
11)	TRICHLOROFLUOROETHANE	
12)	1,1-DICHLOROETHENE	
13)	1,1-DICHLOROETHANE	
14)	METHYL TERTIARY BUTYL ETHER	
15)	TERTIARY BUTYL ALCOHOL	
16)	1,2-DICHLOROETHENE (TOTAL)	
17)	CHLOROFORM	
18)	1,2-DICHLOROETHANE-d4	SS
19)	2-BUTANONE	
20)	1,2-DICHLOROETHANE	
21)	*1,4-DIFLUOROBENZENE	
22)	1,1,1-TRICHLOROETHANE	
23)	CARBON TETRACHLORIDE	
24)	VINYL ACETATE	
25)	BROMODICHLOROMETHANE	
26)	1,2-DICHLOROPROPANE	
27)	CIS-1,3-DICHLOROPROPENE	
28)	TRICHLOROETHENE	
29)	DIBROMOCHLOROMETHANE	
30)	1,1,2-TRICHLOROETHANE	
31)	BENZENE	
32)	2-CHLOROETHYL VINYL ETHER	
33)	TRANS-1,3-DICHLOROPROPENE	
34)	BROMOFORM	
35)	*CHLOROBENZENE-d5	
36)	4-METHYL-2-PENTANONE	
37)	2-HEXANONE	
38)	TETRACHLOROETHENE	
39)	1,1,2,2-TETRACHLOROETHANE	
40)	TOLUENE	
41)	TOLUENE-d8	SS
42)	CHLOROBENZENE	
43)	ETHYLBENZENE	
44)	STYRENE	
45)	XYLENE (TOTAL)	
46)	BROMOFLUOROBENZENE	SS
47)	1,3-DICHLOROBENZENE	
48)	1,2-DICHLOROBENZENE	
49)	1,4-DICHLOROBENZENE	

* Compound is ISTD

Data File: >80652::D2 Quant Output File: ^80652::OU
Name: 200 PPB STD 5MLS
Misc: 08/06/90 3 PT. CALIBRATION 624.1

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900803 11:12

Operator ID: USER1
Quant Time: 900806 13:54
Injected at: 900806 13:15

QUANT REPORT

000039

Operator ID: USER1 Quant Rev: 6 Quant Time: 901011 09:38
Output File: ^80652::OU Injected at: 900806 13:15
D a File: >80652::D2 Dilution Factor: 1.00000
Name: 200 PPB STD 5MLS
Misc: 08/06/90 3 PT. CALIBRATION 624.1

ID File: ID_VOA::DB
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 901011 09:37

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE		9.80	193	146790	50.00	UG/L	91
2)	CHLOROMETHANE		1.41	9	299942	200.00	UG/L	100
3)	BROMOMETHANE		2.09	24	586621	200.00	UG/L	99
4)	VINYL CHLORIDE		2.64	36	342421	200.00	UG/L	100
5)	CHLOROETHANE		3.42	53	300864	200.00	UG/L	95
6)	METHYLENE CHLORIDE		5.70	103	864476	200.00	UG/L	89
7)	ACROLEIN		6.97	131	172245	1000.00	UG/L	100
8)	ACETONE		7.11	134	67734	200.00	UG/L	100
9)	CARBON DISULFIDE		7.52	143	1203125	200.00	UG/L	100
10)	ACRYLONITRILE		7.79	149	442418	1002.06	UG/L	95
11)	TRICHLOROFLUOROMETHANE		8.25	159	1245669	200.00	UG/L	91
12)	1,1-DICHLOROETHENE		9.21	180	451415	200.00	UG/L	80
13)	1,1-DICHLOROETHANE		10.72	213	1188384	200.00	UG/L	81
14)	METHYL TERTIARY BUTYL ETHER		14.18	289	1302822	200.00	UG/L	89
15)	TERTIARY BUTLYL ALCHOHOL		11.58	232	23692	400.00	UG/L	100
16)	1,2-DICHLOROETHENE (TOTAL)		11.58	232	560028	200.00	UG/L	78
[illegible]	CHLOROFORM		12.27	247	1759446	200.00	UG/L	84
18)	1,2-DICHLOROETHANE-d4	SS	13.00	263	254541	200.00	UG/L	96
19)	2-BUTANONE		14.18	289	265626	200.00	UG/L	100
20)	1,2-DICHLOROETHANE		13.09	265	1042817	200.00	UG/L	82
21)	*1,4-DIFLUOROBENZENE		20.80	434	545060	50.00	UG/L	94
22)	1,1,1-TRICHLOROETHANE		14.37	293	1548238	200.00	UG/L	91
23)	CARBON TETRACHLORIDE		14.73	301	1379098	200.00	UG/L	98
24)	VINYL ACETATE		15.28	313	503800	200.00	UG/L	100
25)	BROMODICHLOROMETHANE		15.51	318	1675976	200.00	UG/L	93
26)	1,2-DICHLOROPROPANE		16.83	347	679456	200.00	UG/L	99
27)	CIS-1,3-DICHLOROPROPENE		17.15	354	1515656	200.00	UG/L	92
28)	TRICHLOROETHENE		17.70	366	887483	200.00	UG/L	88
29)	DIBROMOCHLOROMETHANE		18.34	380	1174116	200.00	UG/L	81
30)	1,1,2-TRICHLOROETHANE		18.47	383	678622	200.21	UG/L	98
31)	BENZENE		18.15	376	1672396	200.00	UG/L	89
32)	2-CHLOROETHYL VINYL ETHER		19.57	407	302268	200.00	UG/L	78
33)	TRANS-1,3-DICHLOROPROPENE		17.15	354	1515656	200.00	UG/L	92
34)	BROMOFORM		21.03	439	527437	200.00	UG/L	92
35)	*CHLOROBENZENE-d5		25.64	540	443496	50.00	UG/L	90
36)	4-METHYL-2-PENTANONE		21.58	451	348072	200.00	UG/L	86
37)	2-HEXANONE		21.58	451	348072	200.00	UG/L	80
38)	TETRACHLOROETHENE		23.31	489	714504	200.00	UG/L	100
39)	1,1,2,2-TETRACHLOROETHANE		23.31	489	722449	200.00	UG/L	99
40)	TOLUENE		24.59	517	2323773	200.00	UG/L	94
41)	TOLUENE-d8	SS	24.41	513	531150	200.00	UG/L	99
42	CHLOROBENZENE		25.73	542	1895478	200.00	UG/L	89
43)	ETHYLBENZENE		27.51	581	779250	200.00	UG/L	91

	Compound		R.T.	Scan#	Area	Conc	Units	q
4)	STYRENE		30.44	645	1729408	200.00	UG/L	89
5)	XYLENE (TOTAL)1		30.62	649	17611	200.00	UG/L	95
46	XYLENE (TOTAL)2		31.30	664	946786	200.00	UG/L	77
7)	BROMOFLUOROBENZENE	SS	29.43	623	373254	200.00	UG/L	86
8)	1,3-DICHLOROBENZENE		33.86	720	1751410	200.00	UG/L	96
49)	1,2-DICHLOROBENZENE		34.59	736	866947	200.00	UG/L	93
50)	1,4-DICHLOROBENZENE		34.59	736	866947	200.00	UG/L	90

* Compound is ISTD

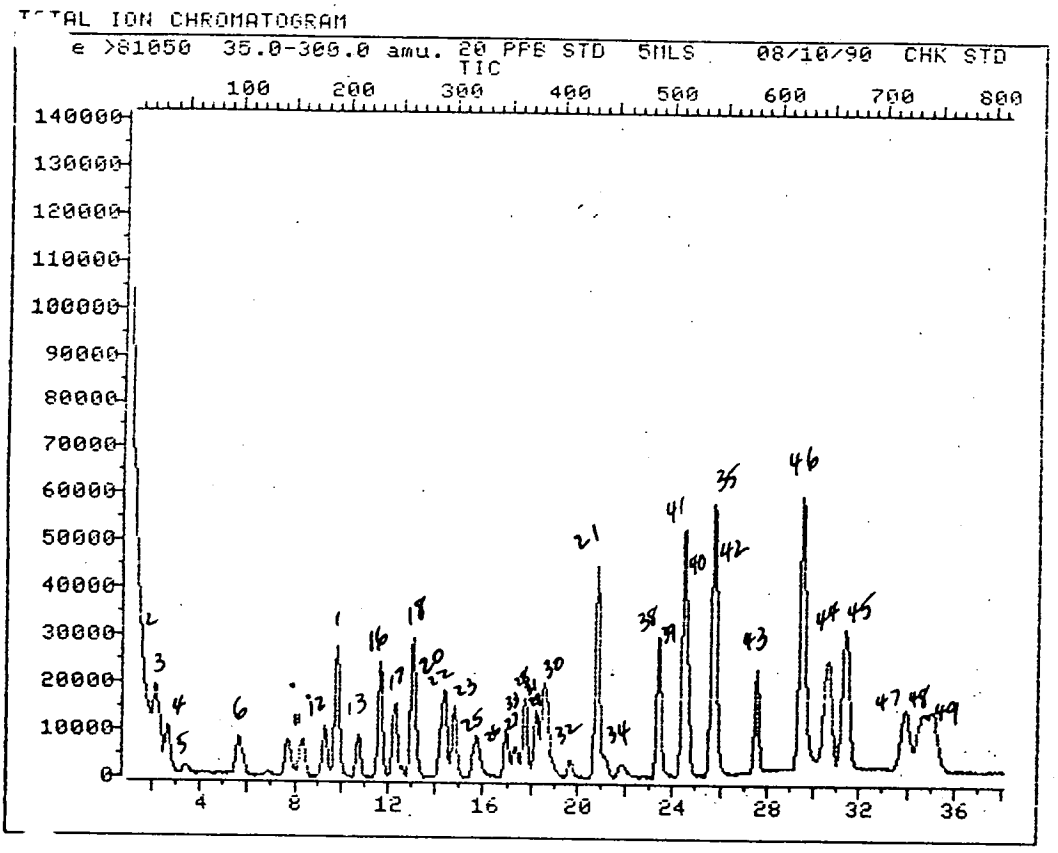
QC Inc

1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON , PA 18966-0514 • (215) 355-3900

QC ACCEPTANCE CRITERIA-METHOD 624

COMPOUNDS	DAILY STANDARDS	Range for Q (u/g/l)
Chloromethane	18.6	D-40.8
Bromomethane	19.3	2.8-37.2
Vinyl Chloride	22.4	0.8-39.2
Chloroethane	20.1	7.6-32.4
Methylene Chloride	18.8	12.1-27.9
1,1-Dichloroethene	28.5	10.1-29.9
1,1-Dichloroethane	22.3	14.5-25.5
trans-1,2-Dichloroethene	25.8	13.9-26.1
Chloroform	20.8	13.5-26.5
Trichlorofluoromethane	23.7	9.6-30.4
1,2-Dichloroethane	23.4	13.6-26.4
1,1,1-Trichloroethane	23.4	15.0-25.0
Carbon tetrachloride	24.3	14.6-25.4
Bromodichloromethane	20.4	13.1-26.9
1,2-Dichloropropane	22.6	6.8-33.2
trans-1,3-Dichloropropene	13.9	10.0-30.0
Trichloroethene	22	13.3-26.7
Dibromochloromethane	18.8	13.5-26.5
1,1,2-Trichloroethane	25.3	14.2-25.8
Benzene	23.7	12.8-27.2
cis-1,3-Dichloropropene	13.9	4.8-35.2
2-Chloroethylvinyl ether	23.7	D-44.8
Bromoform	14.8	14.2-25.8
Tetrachloroethene	20.8	14.7-25.3
1,1,2,2-Tetrachloroethane	20.7	12.1-27.9
Toluene	20.1	14.9-25.1
Chlorobenzene	18.7	13.2-26.8
Ethylbenzene	19.2	11.8-28.2
1,2-Dichlorobenzene	24.3	12.6-27.4
1,3-Dichlorobenzene	19.8	14.6-25.4
1,4-Dichlorobenzene	19.8	12.6-27.4

STANDARD FILENAME _>81050_____ TIME _11:04__



Compound

1) *BROMOCHLOROMETHANE
2) CHLOROMETHANE
3) BROMOMETHANE
4) VINYL CHLORIDE
5) CHLOROETHANE
6) METHYLENE CHLORIDE
7) ACROLEIN
8) ACETONE
9) CARBON DISULFIDE
10) ACRYLONITRILE
11) TRICHLOROFLUOROMETHANE
12) 1,1-DICHLOROETHENE
13) 1,1-DICHLOROETHANE
14) METHYL TERTIARY BUTYL ETHER
15) TERTIARY BUTYL ALCOHOL
16) 1,2-DICHLOROETHENE (TOTAL)
17) CHLOROFORM
18) 1,2-DICHLOROETHANE-d4 SS
19) 2-BUTANONE
20) 1,2-DICHLOROETHANE
21) *1,4-DIFLUOROBENZENE
22) 1,1,1-TRICHLOROETHANE
23) CARBON TETRACHLORIDE
24) VINYL ACETATE
25) BROMODICHLOROMETHANE
26) 1,2-DICHLOROPROPANE
27) CIS-1,3-DICHLOROPROPENE
28) TRICHLOROETHENE
29) DIBROMOCHLOROMETHANE
30) 1,1,2-TRICHLOROETHANE
31) BENZENE
32) 2-CHLOROETHYL VINYL ETHER
33) TRANS-1,3-DICHLOROPROPENE
34) BROMOFORM
35) *CHLOROBENZENE-d5
36) 4-METHYL-2-PENTANONE
37) 2-HEXANONE
38) TETRACHLOROETHENE
39) 1,1,2,2-TETRACHLOROETHANE
40) TOLUENE
41) TOLUENE-d8 SS
42) CHLOROBENZENE
43) ETHYLBENZENE

44) STYRENE
45) XYLENE (TOTAL)2
46) BROMOFLUOROBENZENE SS
47) 1,3-DICHLOROBENZENE
48) 1,2-DICHLOROBENZENE
49) 1,4-DICHLOROBENZENE

* Compound is ISTD

Data File: >81050::D2 Quant Output File: ^81050::OU
Name: 20 PPB STD 5MLS
Misc: 08/10/90 CHK STD

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 10:41

Operator ID: USER1
Quant Time: 900810 11:43
Injected at: 900810 11:04

QUANT REPORT

Operator ID: USER1
Output File: ^81050::OU
Data File: >81050::D2
Name: 20 PPB STD 5MLS
Misc: 08/10/90 CHK STD

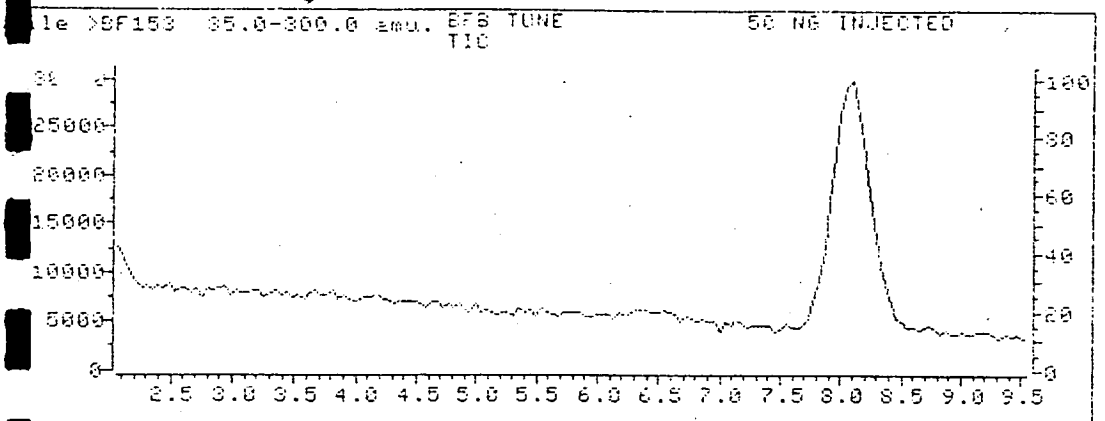
Quant Rev: 6 Quant Time: 900810 11:43
Injected at: 900810 11:04
Dilution Factor: 1.00000

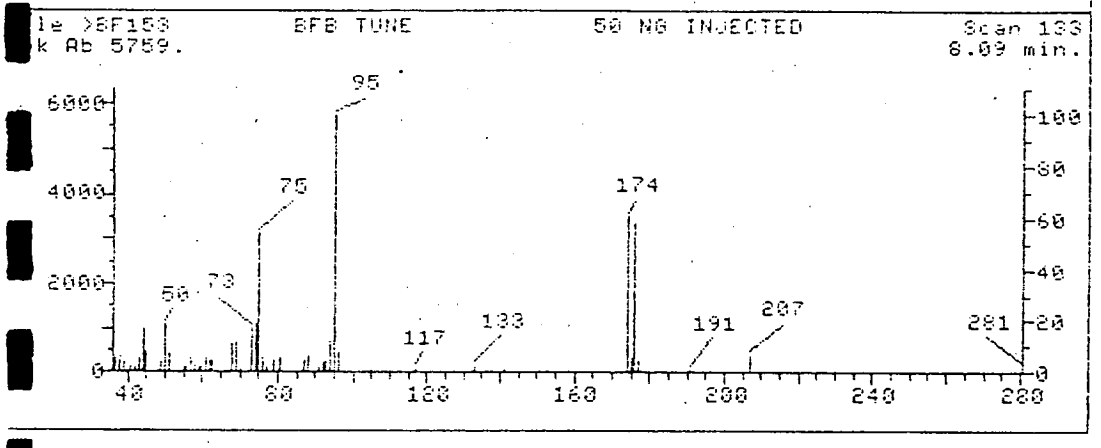
ID File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 10:41

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE		9.81	194	75820	50.00	UG/L	93
2)	CHLOROMETHANE		1.42	10	13746	18.62	UG/L	100
3)	BROMOMETHANE		2.15	26	27496	19.30	UG/L	86
4)	VINYL CHLORIDE		2.69	38	20092	22.41	UG/L	100
5)	CHLOROETHANE		3.42	54	14374	20.08	UG/L	97
6)	METHYLENE CHLORIDE		5.66	103	39384	18.79	UG/L	87
7)	ACROLEIN		6.94	131	2848	37.85	UG/L	100
8)	ACETONE		6.84	129	8668	38.46	UG/L	100
9)	CARBON DISULFIDE		7.71	148	75510	28.01	UG/L	100
10)	ACRYLONITRILE		7.71	148	24367	113.43	UG/L	86
11)	TRICHLOROFLUOROMETHANE		8.40	163	69001	23.74	UG/L	99
12)	1,1-DICHLOROETHENE		9.31	183	30788	28.49	UG/L	78
13)	1,1-DICHLOROETHANE		10.77	215	60993	22.32	UG/L	88
14)	METHYL TERTIARY BUTYL ETHER		14.23	291	70593	22.48	UG/L	94
15)	TERTIARY BUTLYL ALCHOHOL		12.14	245	1256	18.65	UG/L	100
16)	1,2-DICHLOROETHENE (TOTAL)		11.68	235	69107	51.59	UG/L	84
17)	CHLOROFORM		12.32	249	83863	20.78	UG/L	96
18)	1,2-DICHLOROETHANE-d4	SS	13.00	264	139869	55.73	UG/L	98
19)	2-BUTANONE		14.23	291	19795	29.19	UG/L	100
20)	1,2-DICHLOROETHANE		13.14	267	57940	23.42	UG/L	96
21)	*1,4-DIFLUOROBENZENE		20.85	436	249544	50.00	UG/L	98
22)	1,1,1-TRICHLOROETHANE		14.42	295	76123	23.43	UG/L	93
23)	CARBON TETRACHLORIDE		14.78	303	66729	24.30	UG/L	84
24)	VINYL ACETATE		15.79	325	5395	5.63	UG/L	100
25)	BROMODICHLOROMETHANE		15.69	323	68832	20.35	UG/L	88
26)	1,2-DICHLOROPROPANE		16.97	351	32861	22.60	UG/L	99
27)	CIS-1,3-DICHLOROPROPENE		17.38	360	41445	13.91	UG/L	97
28)	TRICHLOROETHENE		17.75	368	42590	22.00	UG/L	85
29)	DIBROMOCHLOROMETHANE		18.48	384	45287	18.84	UG/L	84
30)	1,1,2-TRICHLOROETHANE		18.61	387	40838	25.32	UG/L	99
31)	BENZENE		18.25	379	85421	23.70	UG/L	91
32)	2-CHLOROETHYL VINYL ETHER		19.66	410	15280	22.22	UG/L	84
33)	TRANS-1,3-DICHLOROPROPENE		17.38	360	41445	13.91	UG/L	97
34)	BROMOFORM		21.17	443	13959	14.76	UG/L	90
35)	*CHLOROBENZENE-d5		25.68	542	214270	50.00	UG/L	93
36)	4-METHYL-2-PENTANONE		21.81	457	27303	30.88	UG/L	89
37)	2-HEXANONE		21.81	457	27303	30.88	UG/L	81
38	TETRACHLOROETHENE		23.36	491	33560	20.84	UG/L	100
39)	1,1,2,2-TETRACHLOROETHANE		23.40	492	32157	20.72	UG/L	93
40)	TOLUENE		24.64	519	100728	20.06	UG/L	73
41)	TOLUENE-d8	SS	24.45	515	258303	51.22	UG/L	93
42)	CHLOROBENZENE		25.78	544	76683	18.72	UG/L	94
43)	ETHYLBENZENE		27.56	583	34478	19.21	UG/L	94

	Compound		R.T.	Scan#	Area	Conc	Units	q
44)	STYRENE		30.48	647	72482	18.70	UG/L	95
45)	XYLENE (TOTAL)1		30.70	652	106586	19.47	UG/L	84
46)	XYLENE (TOTAL)2		31.39	667	85856	39.31	UG/L	84
47)	BROMOFLUOROBENZENE	SS	29.47	625	187033	52.54	UG/L	93
48)	1,3-DICHLOROBENZENE		33.94	723	76907	19.75	UG/L	95
49)	1,2-DICHLOROBENZENE		34.72	740	83200M	24.30	UG/L	95
50)	1,4-DICHLOROBENZENE		35.08	748	76698M	19.79	UG/L	98

* Compound is ISTD





ORRECTED AREA OF MASS 95: 134166.0

GC/MS PERFORMANCE STANDARD

Bromofluorobenzene (BFB)

Josephine M. Blacle

m/z	Ion Abundance Criteria	% Relative Abundance Base Peak	% Relative Abundance Appropriate Peak	Status
50	15-40% of mass 95	18.28	18.28	Ok
75	30-60% of mass 95	53.59	53.59	Ok
95	Base peak, 100% relative abundance	100.00	100.00	Ok
96	5-9% of mass 95	7.59	7.59	Ok
173	Less than 2% of mass 174	0.00	0.00	Ok
174	Greater than 50% of mass 95	60.26	60.26	Ok
175	5-9% of mass 174	4.88	8.08	Ok
176	95-101% of mass 174	57.75	95.68	Ok
[illegible]	5-9% of mass 176	4.15	7.19	Ok

Injection Date: 08/10/90
Injection Time: 10:38
Data File: >BF153
Scan: 133

BF153 BFB TUNE 50 NG INJECTED
53

File: >BF153 Scan #: 133 Retn. time: 8.09

m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.	m/z	Int.
36.30	54.00	51.00	405.00	67.90	622.00	87.00	239.00	116.85	66.00
37.00	301.00	55.00	105.00	68.90	670.00	87.90	337.00	132.95	111.00
37.90	246.00	56.00	155.00	69.90	73.00	90.90	88.00	140.85	73.00
39.00	184.00	57.00	282.00	73.00	956.00	92.00	195.00	173.85	3476.00
40.90	122.00	58.00	140.00	74.00	1063.00	92.90	231.00	174.85	281.00
41.90	94.00	59.00	112.00	75.00	3086.00	94.00	711.00	175.85	3326.00
43.00	301.00	60.00	130.00	75.90	317.00	95.00	5759.00	176.85	239.00
44.00	997.00	61.00	307.00	77.00	112.00	95.90	437.00	190.85	59.00
45.00	435.00	62.00	275.00	78.90	237.00	104.75	74.00	206.85	362.00
49.00	225.00	62.90	264.00	80.80	279.00	104.95	81.00	280.85	97.00
50.00	1053.00								

QC Inc

1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab ID : BLK0810
Sample ID : WATER BLANK
Analysis Date: 08/10/90
Instrument: E

Client: GANNETT FLEMING
Matrix: WATER
Lab File: >81001

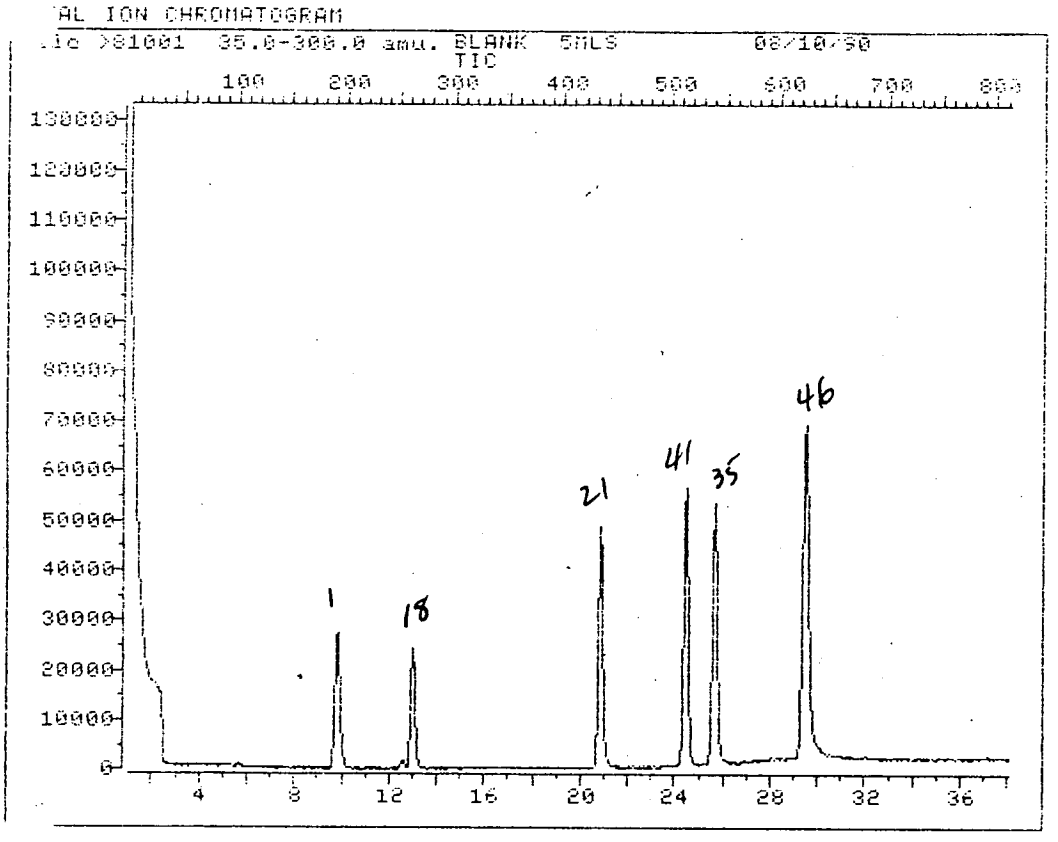
CAS NO.	COMPOUND	RESULTS(UG/L)	COMMENT
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-Dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-Dichloropropene	5	U
75-25-2	Bromoform	5	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
75-69-4	Trichlorofluoromethane	10	U
110-75-8	2-Chloroethylvinyl ether	10	U
95-50-1	1,2-Dichlorobenzene	5	U
541-73-1	1,3-Dichlorobenzene	5	U
106-46-7	1,4-Dichlorobenzene	5	U

SURROGATE RECOVERY DATA	% RECOVERY	QC Limits
D4-1,2-Dichloroethane	97	(76-114)
D8-Toluene	100	(88-110)
Bromofluorobenzene	99	(86-115)

COMMENT
U= Not Detected
B= Compound in Blank

Signature Josephine M. Black

Name/Title Josephine M. Black
Volatile Group Leader



	Compound	
1)	*BROMOCHLOROMETHANE	
2)	CHLOROMETHANE	
3)	BROMOMETHANE	
4)	VINYL CHLORIDE	
5)	CHLOROETHANE	
6)	METHYLENE CHLORIDE	
7)	ACROLEIN	
8)	ACETONE	
9)	CARBON DISULFIDE	
10)	ACRYLONITRILE	
11)	TRICHLOROFLUOROMETHANE	
12)	1,1-DICHLOROETHENE	
13)	1,1-DICHLOROETHANE	
14)	METHYL TERTIARY BUTYL ETHER	
15)	TERTIARY BUTYL ALCOHOL	
16)	1,2-DICHLOROETHENE (TOTAL)	
17)	CHLOROFORM	
18)	1,2-DICHLOROETHANE-d4	SS
19)	2-BUTANONE	
20)	1,2-DICHLOROETHANE	
21)	*1,4-DIFLUOROBENZENE	
22)	1,1,1-TRICHLOROETHANE	
23)	CARBON TETRACHLORIDE	
24)	VINYL ACETATE	
25)	BROMODICHLOROMETHANE	
26)	1,2-DICHLOROPROPANE	
27)	CIS-1,3-DICHLOROPROPENE	
28)	TRICHLOROETHENE	
29)	DIBROMOCHLOROMETHANE	
30)	1,1,2-TRICHLOROETHANE	
31)	BENZENE	
32)	2-CHLOROETHYL VINYL ETHER	
33)	TRANS-1,3-DICHLOROPROPENE	
34)	BROMOFORM	
35)	*CHLOROBENZENE-d5	
36)	4-METHYL-2-PENTANONE	
37)	2-HEXANONE	
38)	TETRACHLOROETHENE	
39)	1,1,2,2-TETRACHLOROETHANE	
40)	TOLUENE	
41)	TOLUENE-d8	SS
42)	CHLOROBENZENE	
43)	ETHYLBENZENE	
44)	STYRENE	
45)	XYLENE (TOTAL)2	
46)	BROMOFLUOROBENZENE	SS
47)	1,3-DICHLOROBENZENE	
48)	1,2-DICHLOROBENZENE	
49)	1,4-DICHLOROBENZENE	

* Compound is ISTD

Data File: >81001::D2 Quant Output File: ^81001::OU
Name: BLANK 5MLS
Misc: 08/10/90

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

Operator ID: USER1
Quant Time: 900810 12:49
Injected at: 900810 12:10

QUANT REPORT

Operator ID: USER1
Output File: ^81001::OU
Data File: >81001::D2
Name: BLANK 5MLS
Disc: 08/10/90

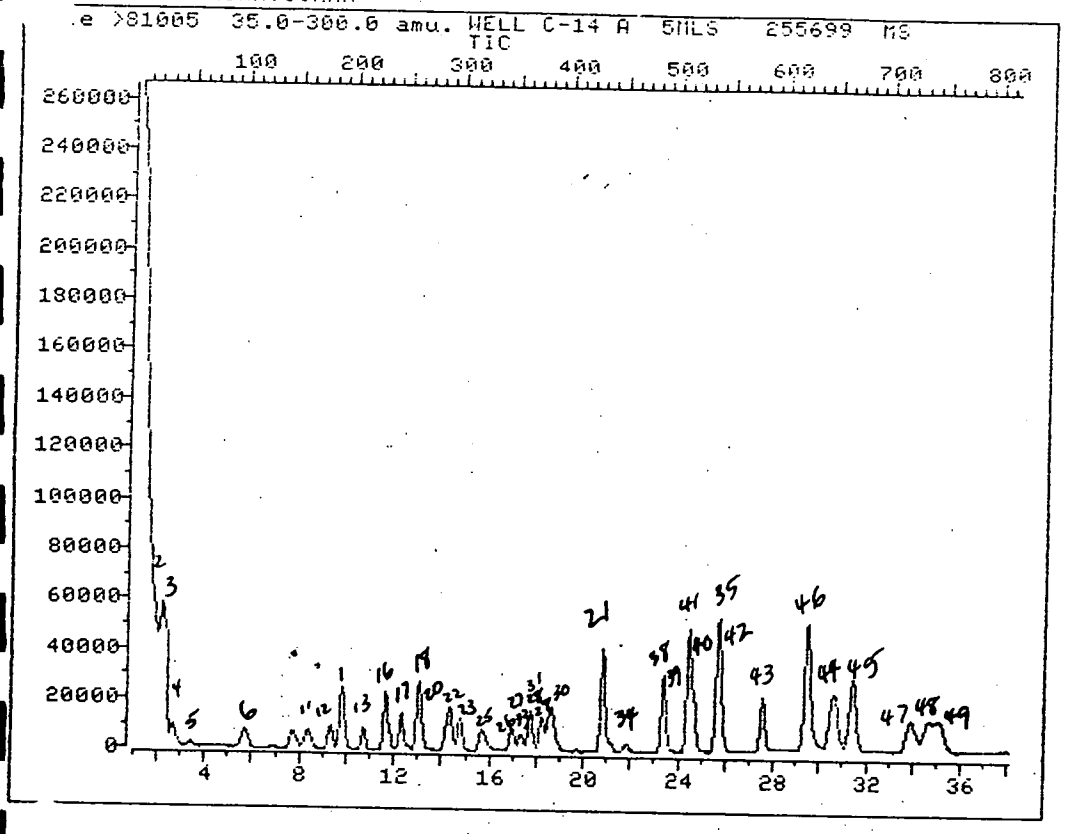
Quant Rev: 6
Quant Time: 900810 12:49
Injected at: 900810 12:10
Dilution Factor: 1.00000

ID File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE		9.80	193	74535	50.00	UG/L	94
3)	ACETONE		6.79	127	2479	5.82	UG/L	100
8)	1,2-DICHLOROETHANE-d4	SS	13.03	264	133891	48.69	UG/L	93
21)	*1,4-DIFLUOROBENZENE		20.83	435	269658	50.00	UG/L	98
36)	*CHLOROBENZENE-d5		25.67	541	234900	50.00	UG/L	93
41)	TOLUENE-d8	SS	24.48	515	282743	49.92	UG/L	95
47)	BROMOFLUOROBENZENE	SS	29.45	624	203283	49.57	UG/L	91

* Compound is ISTD

TOTAL ION CHROMATOGRAM



Compound

1) *BROMOCHLOROMETHANE
2) CHLOROMETHANE
3) BROMOMETHANE
4) VINYL CHLORIDE
5) CHLOROETHANE
6) METHYLENE CHLORIDE
7) ACROLEIN
8) ACETONE
9) CARBON DISULFIDE
10) ACRYLONITRILE
11) TRICHLOROFLUOROMETHANE
12) 1,1-DICHLOROETHENE
13) 1,1-DICHLOROETHANE
14) METHYL TERTIARY BUTYL ETHER
15) TERTIARY BUTYL ALCOHOL
16) 1,2-DICHLOROETHENE (TOTAL)
17) CHLOROFORM
18) 1,2-DICHLOROETHANE-d4 SS
19) 2-BUTANONE
20) 1,2-DICHLOROETHANE
21) *1,4-DIFLUOROBENZENE
22) 1,1,1-TRICHLOROETHANE
23) CARBON TETRACHLORIDE
24) VINYL ACETATE
25) BROMODICHLOROMETHANE
26) 1,2-DICHLOROPROPANE
27) CIS-1,3-DICHLOROPROPENE
28) TRICHLOROETHENE
29) DIBROMOCHLOROMETHANE
30) 1,1,2-TRICHLOROETHANE
31) BENZENE
32) 2-CHLOROETHYL VINYL ETHER
33) TRANS-1,3-DICHLOROPROPENE
34) BROMOFORM
35) *CHLOROBENZENE-d5
36) 4-METHYL-2-PENTANONE
37) 2-HEXANONE
38) TETRACHLOROETHENE
39) 1,1,2,2-TETRACHLOROETHANE
40) TOLUENE
41) TOLUENE-d8 SS
42) CHLOROBENZENE
43) ETHYLBENZENE
44) STYRENE
45) XYLENE (TOTAL)2
46) BROMOFLUOROBENZENE SS
47) 1,3-DICHLOROBENZENE
48) 1,2-DICHLOROBENZENE
49) 1,4-DICHLOROBENZENE

* Compound is ISTD

Data File: >81005::D2
Name: WELL C-14 A 5MLS
Misc: 255699 MS

Quant Output File: ^81005::OU

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

Operator ID: USER1
Quant Time: 900810 15:47
Injected at: 900810 15:09

QUANT REPORT

Operator ID: USER1
Output File: ^81005::OU
Data File: >81005::D2
Name: WELL C-14 A 5MLS
Disc: 255699 MS

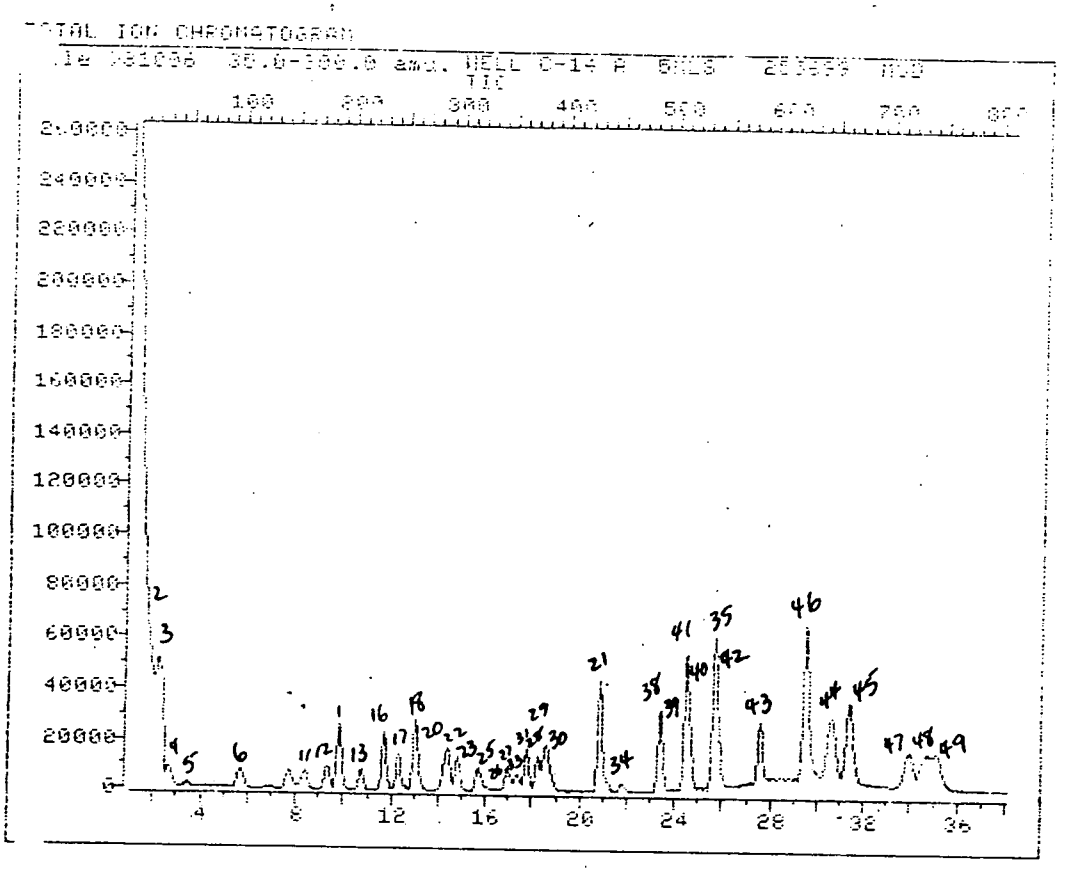
Quant Rev: 6 Quant Time: 900810 19:47
Injected at: 900810 15:09
Dilution Factor: 1.00000

ID File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.80	194	69162	50.00	UG/L	94
2)	CHLOROMETHANE	1.45	11	12099	19.30	UG/L	100
3)	BROMOMETHANE	2.18	27	25671	20.47	UG/L	94
4)	VINYL CHLORIDE	2.73	39	18715	20.42	UG/L	100
5)	CHLOROETHANE	3.46	55	13112	20.00	UG/L	99
6)	METHYLENE CHLORIDE	5.69	104	36647	20.40	UG/L	96
7)	ACROLEIN	6.88	130	3318	105.59	UG/L	100
8)	ACETONE	6.88	130	5964	15.09	UG/L	100
9)	CARBON DISULFIDE	7.74	149	63306	18.38	UG/L	100
10)	ACRYLONITRILE	7.70	148	20441	91.96	UG/L	88
11)	TRICHLOROFLUOROMETHANE	8.38	163	61850	19.65	UG/L	96
12)	1,1-DICHLOROETHENE	9.34	184	27464	19.56	UG/L	80
13)	1,1-DICHLOROETHANE	10.76	215	54675	19.65	UG/L	85
14)	METHYL TERTIARY BUTYL ETHER	14.22	291	65504	20.34	UG/L	95
15)	TERTIARY BUTLYL ALCOHOL	11.62	234	4573M	33.86	UG/L	100
16)	1,2-DICHLOROETHENE (TOTAL)	11.67	235	63504	20.15	UG/L	85
17)	CHLOROFORM	12.31	249	77939	20.38	UG/L	98
18)	1,2-DICHLOROETHANE-d4 SS	13.04	265	126735	49.67	UG/L	95
19)	2-BUTANONE	14.22	291	18848	20.88	UG/L	100
20)	1,2-DICHLOROETHANE	13.13	267	53789	20.35	UG/L	94
21)	*1,4-DIFLUOROBENZENE	20.84	436	228936	50.00	UG/L	98
22)	1,1,1-TRICHLOROETHANE	14.40	295	67839	19.43	UG/L	91
23)	CARBON TETRACHLORIDE	14.81	304	58466	19.10	UG/L	90
24)	VINYL ACETATE	15.82	326	19093	77.15	UG/L	100
25)	BROMODICHLOROMETHANE	15.68	323	62596	19.83	UG/L	96
26)	1,2-DICHLOROPROPANE	16.96	351	31160	20.67	UG/L	99
27)	CIS-1,3-DICHLOROPROPENE	17.32	359	40310	21.20	UG/L	86
28)	TRICHLOROETHENE	17.78	369	37451	19.17	UG/L	80
29)	DIBROMOCHLOROMETHANE	18.46	384	39666	19.09	UG/L	91
30)	1,1,2-TRICHLOROETHANE	18.60	387	37302	19.91	UG/L	96
31)	BENZENE	18.24	379	80971	20.66	UG/L	92
32)	TRANS-1,3-DICHLOROPROPENE	17.32	359	40310	21.20	UG/L	86
33)	BROMOFORM	21.20	444	10223	15.97	UG/L	88
35)	*CHLOROBENZENE-d5	25.67	542	196369	50.00	UG/L	93
36)	4-METHYL-2-PENTANONE	21.79	457	24321	19.44	UG/L	89
37)	2-HEXANONE	21.79	457	24321	19.44	UG/L	90
38)	TETRACHLOROETHENE	23.39	492	32324	21.07	UG/L	100
39	1,1,2,2-TETRACHLOROETHANE	23.39	492	37083	25.17	UG/L	84
40)	TOLUENE	24.67	520	94352	20.44	UG/L	75
41)	TOLUENE-d8 SS	24.48	516	237748	50.22	UG/L	96
42)	CHLOROBENZENE	25.81	545	72193	20.55	UG/L	97
43)	ETHYLBENZENE	27.59	584	74279	21.06	UG/L	93
44)	STYRENE	30.51	648	69504	20.97	UG/L	94

	Compound		R.T.	Scan#	Area	Conc	Units	q
45)	XYLENE (TOTAL)1		30.69	652	102693	21.03	UG/L	84
46)	XYLENE (TOTAL)2		31.42	668	83829	21.31	UG/L	83
47)	BROMOFLUOROBENZENE	SS	29.46	629	174783	40.97	UG/L	91
48)	1,3-DICHLOROBENZENE		33.93	723	79824	21.52	UG/L	97
49)	1,2-DICHLOROBENZENE		34.66	739	78643M	20.63	UG/L	92
50)	1,4-DICHLOROBENZENE		35.07	748	73483M	20.89	UG/L	96

* Compound is ISTD



1) *BROMOCHLOROMETHANE
2) CHLOROMETHANE
3) BROMOMETHANE
4) VINYL CHLORIDE
5) CHLOROETHANE
6) METHYLENE CHLORIDE
7) ACROLEIN
8) ACETONE
9) CARBON DISULFIDE
10) ACRYLONITRILE
11) TRICHLOROFLUOROMETHANE
12) 1,1-DICHLOROETHENE
13) 1,1-DICHLOROETHANE
14) METHYL TERTIARY BUTYL ETHER
15) TERTIARY BUTYL ALCOHOL
16) 1,2-DICHLOROETHENE (TOTAL)
17) CHLOROFORM
18) 1,2-DICHLOROETHANE-d4 SS
19) 2-BUTANONE
20) 1,2-DICHLOROETHANE
21) *1,4-DIFLUOROBENZENE
22) 1,1,1-TRICHLOROETHANE
23) CARBON TETRACHLORIDE
24) VINYL ACETATE
25) BROMODICHLOROMETHANE
26) 1,2-DICHLOROPROPANE
27) CIS-1,3-DICHLOROPROPENE
28) TRICHLOROETHENE
29) DIBROMODICHLOROMETHANE
30) 1,1,2-TRICHLOROETHANE
31) DIOXANE
32) 2-CHLOROETHYL VINYL ETHER
33) TRANS-1,3-DICHLOROPROPENE
34) BROMOFORM
35) *CHLOROBENZENE-d5
36) 4-METHYL-2-PENTANONE
37) 2-HEXANONE
38) TETRACHLOROETHENE
39) 1,1,2,2-TETRACHLOROETHANE
40) TOLUENE
41) TOLUENE-d8 SS
42) CHLOROBENZENE
43) ETHYLBENZENE

44) STYRENE
45) XYLENE (TOTAL)
46) BROMOFLUOROBENZENE SS
47) 1,3-DICHLOROBENZENE
48) 1,2-DICHLOROBENZENE
49) 1,4-DICHLOROBENZENE

* Compound is ISTD

Data File: >81006::D2
Name: WELL C-14 A 5MLS
Misc: 255699 MSD

Quant Output File: ^81006::OU

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

Operator ID: USER1
Quant Time: 900810 16:39
Injected at: 900810 16:00

QUANT REPORT

Operator ID: USER1
Output File: ^81006::OU
Data File: >81006::D2
Name: WELL C-14 A 5MLS
Misc: 255699 MSD

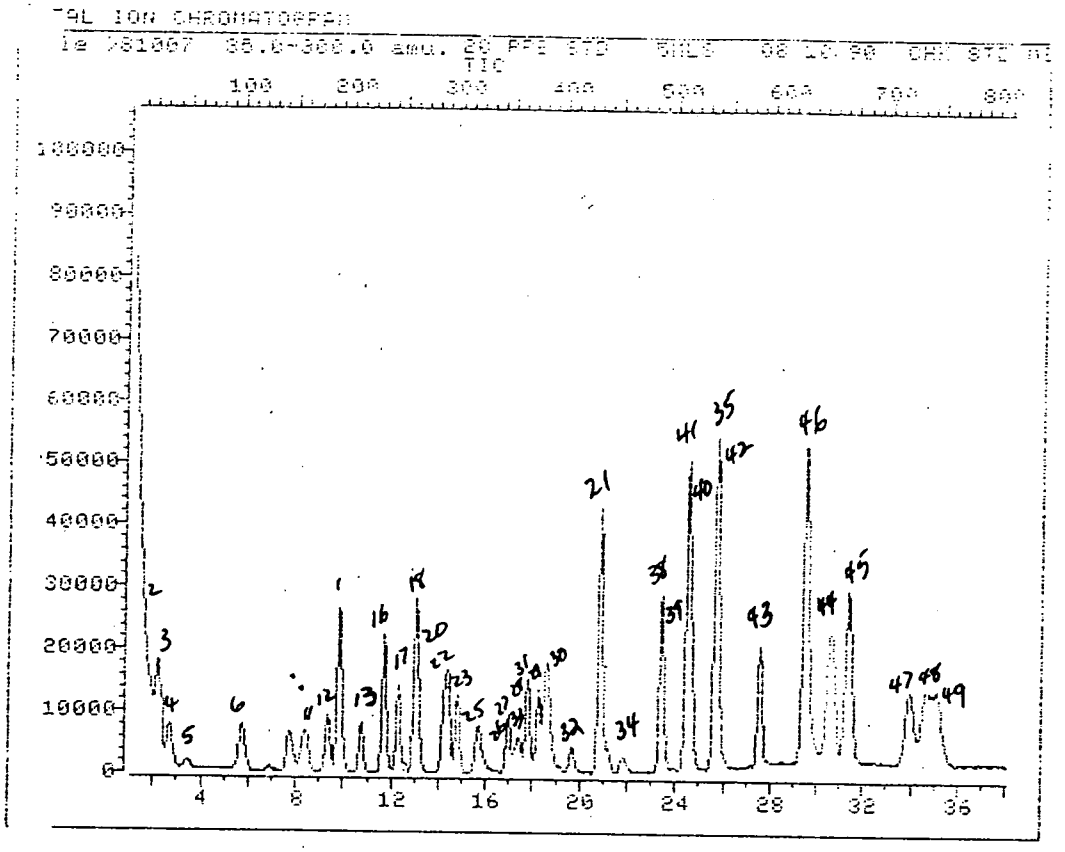
Quant Rev: 6 Quant Time: 900810 16:39
Injected at: 900810 16:00
Dilution Factor: 1.00000

ID File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

	Compound		R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE		9.81	193	70577	50.00	UG/L	89
2)	CHLOROMETHANE		1.46	10	11328	17.71	UG/L	100
3)	BROMOMETHANE		2.19	26	26693	20.86	UG/L	95
4)	VINYL CHLORIDE		2.74	38	19141	20.47	UG/L	100
5)	CHLOROETHANE		3.43	53	13049	19.51	UG/L	94
6)	METHYLENE CHLORIDE		5.71	103	37375	20.39	UG/L	85
7)	ACROLEIN		6.94	130	1026	31.99	UG/L	100
8)	ACETONE		6.85	128	6134	15.20	UG/L	100
9)	CARBON DISULFIDE		7.76	148	67506	19.21	UG/L	100
10)	ACRYLONITRILE		7.76	148	22958	101.22	UG/L	99
11)	TRICHLOROFLUOROMETHANE		8.40	162	61632	19.19	UG/L	98
12	1,1-DICHLOROETHENE		9.36	183	28416	19.83	UG/L	83
13.	1,1-DICHLOROETHANE		10.77	214	56280	19.83	UG/L	88
14)	METHYL TERTIARY BUTYL ETHER		14.24	290	68597	20.88	UG/L	97
15)	TERTIARY BUTLYL ALCOHOL		11.68	234	4789M	34.75	UG/L	100
16)	1,2-DICHLOROETHENE (TOTAL)		11.68	234	64377	20.02	UG/L	81
17)	CHLOROFORM		12.27	247	79099	20.27	UG/L	99
18)	1,2-DICHLOROETHANE-d4	SS	13.00	263	129131	49.59	UG/L	96
19)	2-BUTANONE		14.24	290	18432	20.01	UG/L	100
20)	1,2-DICHLOROETHANE		13.14	266	53308	19.77	UG/L	97
21)	*1,4-DIFLUOROBENZENE		20.85	435	243320	50.00	UG/L	98
22)	1,1,1-TRICHLOROETHANE		14.42	294	70254	18.93	UG/L	92
23)	CARBON TETRACHLORIDE		14.78	302	61495	18.90	UG/L	83
24)	VINYL ACETATE		15.79	324	18194	69.17	UG/L	100
25)	BROMODICHLOROMETHANE		15.70	322	62047	18.49	UG/L	97
26)	1,2-DICHLOROPROPANE		16.97	350	31751	19.82	UG/L	91
27)	CIS-1,3-DICHLOROPROPENE		17.34	358	42278	20.92	UG/L	83
28)	TRICHLOROETHENE		17.79	368	38638	18.61	UG/L	83
29)	DIBROMOCHLOROMETHANE		18.48	383	41280	18.70	UG/L	94
30)	1,1,2-TRICHLOROETHANE		18.57	385	37611	18.39	UG/L	94
31)	BENZENE		18.25	378	82637	19.84	UG/L	94
33)	TRANS-1,3-DICHLOROPROPENE		17.34	358	42278	20.92	UG/L	83
34)	BROMOFORM		21.17	442	10782	15.84	UG/L	99
35)	*CHLOROBENZENE-d5		25.69	541	219080	50.00	UG/L	95
36)	4-METHYL-2-PENTANONE		21.81	456	24726	17.71	UG/L	94
37)	2-HEXANONE		21.81	456	24726	17.71	UG/L	82
38)	TETRACHLOROETHENE		23.36	490	34769	20.27	UG/L	100
39	1,1,2,2-TETRACHLOROETHANE		23.41	491	38284	23.29	UG/L	93
40)	TOLUENE		24.68	519	100909	19.60	UG/L	73
41)	TOLUENE-d8	SS	24.46	514	263796	49.93	UG/L	97
42)	CHLOROBENZENE		25.78	543	77689	19.82	UG/L	96
43)	ETHYLBENZENE		27.56	582	36731	20.94	UG/L	92
44)	STYRENE		30.52	647	79833	21.1[illegible]	UG/L	99

	Compound		R.T.	Scan#	Area	Conc	Units	q
45)	XYLENE (TOTAL)1		30.71	651	117497	21.56	UG/L	85
46)	XYLENE (TOTAL)2		31.39	666	95011	21.65	UG/L	83
47)	BROMOFLUOROBENZENE	SS	29.47	624	198140	21.81	UG/L	93
48)	1,3-DICHLOROBENZENE		33.95	722	88479	22.50	UG/L	94
49)	1,2-DICHLOROBENZENE		34.68	738	90566M	21.29	UG/L	97
50)	1,4-DICHLOROBENZENE		35.04	746	83255M	21.23	UG/L	95

* Compound is ISTD



	Compound	
1)	*BROMOCHLOROMETHANE	
2)	CHLOROMETHANE	
3)	BROMOMETHANE	
4)	VINYL CHLORIDE	
5)	CHLOROETHANE	
6)	METHYLENE CHLORIDE	
7)	ACROLEIN	
8)	ACETONE	
9)	CARBON DISULFIDE	
10)	ACRYLONITRILE	
11)	TRICHLOROFLUOROMETHANE	
12)	1,1-DICHLOROETHENE	
13)	1,1-DICHLOROETHANE	
14)	METHYL TERTIARY BUTYL ETHER	
15)	TERTIARY BUTYL ALCOHOL	
16)	1,2-DICHLOROETHENE (TOTAL)	
17)	CHLOROFORM	
18)	1,2-DICHLOROETHANE-d4	SS
19)	2-BUTANONE	
20)	1,2-DICHLOROETHANE	
21)	*1,4-DIFLUOROBENZENE	
22)	1,1,1-TRICHLOROETHANE	
23)	CARBON TETRACHLORIDE	
24)	VINYL ACETATE	
25)	BROMODICHLOROMETHANE	
26)	1,2-DICHLOROPROPANE	
27)	CIS-1,3-DICHLOROPROPENE	
28)	TRICHLOROETHENE	
29)	DIBROMOCHLOROMETHANE	
30)	1,1,2-TRICHLOROETHANE	
31)	BENZENE	
32)	2-CHLOROETHYL VINYL ETHER	
33)	TRANS-1,3-DICHLOROPROPENE	
34)	BROMOFORM	
35)	*CHLOROBENZENE-d5	
36)	4-METHYL-2-PENTANONE	
37)	2-HEXANONE	
38)	TETRACHLOROETHENE	
39)	1,1,2,2-TETRACHLOROETHANE	
40)	TOLUENE	
41)	TOLUENE-d8	SS
42)	CHLOROBENZENE	
43)	ETHYLBENZENE	
44)	STYRENE	
45)	XYLENE (TOTAL)2	
46)	BROMOFLUOROBENZENE	SS
47)	1,3-DICHLOROBENZENE	
48)	1,2-DICHLOROBENZENE	
49)	1,4-DICHLOROBENZENE	

* Compound is ISTD

Data File: >81007::D2 Quant Output File: ^81007::OU
Name: 20 PPB STD 5MLS
Misc: 08/10/90 CHK STD MS/MSD

Id File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

Operator ID: USER1
Quant Time: 900810 17:23
Injected at: 900810 16:44

QUANT REPORT

Operator ID: USER1
Output File: ^81007::OU
Data File: >81007::02
Name: 20 PPB STD 5MLS
Misc: 08/10/90 CHK STD MS/MSD

Quant Rev: 6 Quant Time: 900810 17:23
Injected at: 900810 16:44
Dilution Factor: 1.00000

ID File: ID_624::QT
Title: HP VOA STANDARDS FOR 3 PT. CALIBRATION CURVE METHOD 624.1
Last Calibration: 900810 12:07

	Compound	R.T.	Scan#	Area	Conc	Units	q
1)	*BROMOCHLOROMETHANE	9.80	193	71902	50.00	UG/L	91
2)	CHLOROMETHANE	1.46	10	11326	17.38	UG/L	100
3)	BROMOMETHANE	2.19	26	24277	18.62	UG/L	94
4)	VINYL CHLORIDE	2.73	38	17862	18.75	UG/L	100
5)	CHLOROETHANE	3.42	53	12836	18.83	UG/L	93
6)	METHYLENE CHLORIDE	5.70	103	35692	19.11	UG/L	94
7)	ACROLEIN	6.93	130	3275	100.25	UG/L	100
8)	ACETONE	6.84	128	6301	15.33	UG/L	100
9)	CARBON DISULFIDE	7.75	148	60843	16.99	UG/L	100
10)	ACRYLONITRILE	7.71	147	23654	102.36	UG/L	97
11)	TRICHLOROFLUOROMETHANE	8.39	162	59311	18.13	UG/L	98
12)	1,1-DICHLOROETHENE	9.35	183	27048	18.53	UG/L	83
13)	1,1-DICHLOROETHANE	10.76	214	54839	18.96	UG/L	85
14)	METHYL TERTIARY BUTYL ETHER	14.23	290	68553	20.48	UG/L	97
15)	TERTIARY BUTLYL ALCOHOL	11.72	235	2652	18.89	UG/L	100
16)	1,2-DICHLOROETHENE (TOTAL)	11.67	234	62253	19.00	UG/L	84
17)	CHLOROFORM	12.31	248	77738	19.55	UG/L	96
18)	1,2-DICHLOROETHANE-d4 SS	13.00	263	128853	48.57	UG/L	94
19)	2-BUTANONE	14.23	290	18264	19.46	UG/L	100
20)	1,2-DICHLOROETHANE	13.13	266	53523	19.48	UG/L	98
21)	*1,4-DIFLUOROBENZENE	20.84	435	234492	50.00	UG/L	98
22)	1,1,1-TRICHLOROETHANE	14.36	293	66009	18.46	UG/L	93
23)	CARBON TETRACHLORIDE	14.78	302	57229	18.25	UG/L	84
24)	VINYL ACETATE	15.78	324	7584	29.92	UG/L	100
25)	BROMODICHLOROMETHANE	15.64	321	62841	19.43	UG/L	98
26)	1,2-DICHLOROPROPANE	16.96	350	29489	19.10	UG/L	96
27)	CIS-1,3-DICHLOROPROPENE	17.38	359	40167	20.63	UG/L	93
28)	TRICHLOROETHENE	17.79	368	38053	19.02	UG/L	80
29)	DIBROMOCHLOROMETHANE	18.47	383	38585	18.13	UG/L	90
30)	1,1,2-TRICHLOROETHANE	18.61	386	37972	19.79	UG/L	92
31)	BENZENE	18.24	378	78580	19.58	UG/L	90
32)	2-CHLOROETHYL VINYL ETHER	19.70	410	14602	20.34	UG/L	87
33)	TRANS-1,3-DICHLOROPROPENE	17.38	359	40167	20.63	UG/L	93
34)	BROMOFORM	21.16	442	11044	16.84	UG/L	90
35)	*CHLOROBENZENE-d5	25.68	541	198681	50.00	UG/L	95
36)	4-METHYL-2-PENTANONE	21.80	456	24543	19.39	UG/L	90
37)	2-HEXANONE	21.80	456	24543	19.39	UG/L	84
38)	TETRACHLOROETHENE	23.35	490	30862	19.84	UG/L	100
39)	1,1,2,2-TETRACHLOROETHANE	23.40	491	31973	21.45	UG/L	95
40)	TOLUENE	24.67	519	91258	19.54	UG/L	73
41)	TOLUENE-d8 SS	24.49	515	243740	50.88	UG/L	94
42)	CHLOROBENZENE	25.81	544	69993	19.69	UG/L	95
43)	ETHYLBENZENE	27.59	583	31325	19.68	UG/L	9[illegible]

	Compound		R.T.	Scan#	Area	Conc	Units	q
44)	STYRENE		30.51	647	67259	20.01	UG/L	98
45)	XYLENE (TOTAL)1		30.70	651	97234	19.68	UG/L	87
46)	XYLENE (TOTAL)2		31.38	666	79876	20.05	UG/L	84
47)	BROMOFLUOROBENZENE	SS	29.46	624	175743	50.67	UG/L	92
48)	1,3-DICHLOROBENZENE		33.98	723	69548	19.52	UG/L	95
49)	1,2-DICHLOROBENZENE		34.71	739	37062	9.61	UG/L	94
50)	1,4-DICHLOROBENZENE		34.71	739	37062	10.42	UG/L	98

* Compound is ISTD

QC Inc

1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON , PA 18966-0514 • (215) 355-3900

METALS

ANALYTICAL RESULTS AND QUALITY ASSURANCE DATA

CLIENT: Gannett Fleming, Icn.
SAMPLE ID: 255697
SAMPLE LABEL: Trip Blank

Analyte	Concentration (mg/l)	MDL (mg/l)	Sample ID	Sample Result	Matrix Spike Added	Matrix Spike #1 Result	Matrix Spike #2 Result	RPD	% Recovery	Method Blank
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead	ND	0.005	255698	ND	0.020	0.023	0.021	9.1	115.0	ND
Magnesium										
Manganese										
Molybdenum										
Mercury										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Titanium										
Tin										
Vanadium										
Zinc										

(1) MDL = Method Detection Limit (2) RPD = Relative Percent Difference
(3) SCH = Sample Concentration too High to accurately measure spike recovery
(4) IS = Insufficient Sample (5) ND = Not Detected (6) * = Recovery Outside Limits

Form QC M-3

QC Inc
1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

METALS
ANALYTICAL RESULTS AND QUALITY ASSURANCE DATA

CLIENT: Gannett Fleming, Icn.
SAMPLE ID: 255698
SAMPLE LABEL: Field Blank

Analyte	Concentration (mg/l)	MDL (mg/l)	Sample ID	Sample Result	Matrix Spike Added	Matrix Spike #1 Result	Matrix Spike #2 Result	RPD	% Recovery	Method Blank
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead	ND	0.005	255698	ND	0.020	0.023	0.021	9.1	115.0	ND
Magnesium										
Manganese										
Molybdenum										
Mercury										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Titanium										
Tin										
Vanadium										
Zinc										

(1) MDL = Method Detection Limit (2) RPD = Relative Percent Difference
(3) SCH = Sample Concentration too High to accurately measure spike recovery
(4) IS = Insufficient Sample (5) ND = Not Detected (6) * = Recovery Outside Limits

Form QC M-3

QC Inc

1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

METALS

ANALYTICAL RESULTS AND QUALITY ASSURANCE DATA

CLIENT: Gannett Fleming, Icn.
SAMPLE ID: 255699
SAMPLE LABEL: Well C-14 A

Analyte	Concentration (mg/l)	MDL (mg/l)	Sample ID	Sample Result	Matrix Spike Added	Matrix Spike #1 Result	Matrix Spike #2 Result	RPD	% Recovery	Method Blank
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead	ND	0.005	255698	ND	0.020	0.023	0.021	9.1	115.0	ND
Magnesium										
Manganese										
Molybdenum										
Mercury										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Titanium										
Tin										
Vanadium										
Zinc										

(1) MDL = Method Detection Limit (2) RPD = Relative Percent Difference
(3) SCH = Sample Concentration too High to accurately measure spike recovery
(4) IS = Insufficient Sample (5) ND = Not Detected (6) * = Recovery Outside Limits

Form QC M-3

QC Inc

1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON , PA 18966-0514 • (215) 355-3900

METALS

ANALYTICAL RESULTS AND QUALITY ASSURANCE DATA

CLIENT: Gannett Fleming, Icn.
SAMPLE ID: 255700
SAMPLE LABEL: Well C-14 B

Analyte	Concentration (mg/l)	MDL (mg/l)	Sample ID	Sample Result	Matrix Spike Added	Matrix Spike #1 Result	Matrix Spike #2 Result	RPD	% Recovery	Method Blank
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead	0.0060	0.005	255698	ND	0.020	0.023	0.021	9.1	115.0	ND
Magnesium										
Manganese										
Molybdenum										
Mercury										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Titanium										
Tin										
Vanadium										
Zinc										

(1) MDL = Method Detection Limit (2) RPD = Relative Percent Difference
(3) SCH = Sample Concentration too High to accurately measure spike recovery
(4) IS = Insufficient Sample (5) ND = Not Detected (6) * = Recovery Outside Limits

Form QC M-3

QC Inc

1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON , PA 18966-0514 • (215) 355-3900

METALS

ANALYTICAL RESULTS AND QUALITY ASSURANCE DATA

CLIENT: Gannett Fleming, Icn.
SAMPLE ID: 255701
SAMPLE LABEL: Well C-14 C

Analyte	Concentration (mg/l)	MDL (mg/l)	Sample ID	Sample Result	Matrix Spike Added	Matrix Spike #1 Result	Matrix Spike #2 Result	RPD	% Recovery	Method Blank
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead	ND	0.005	255698	ND	0.020	0.023	0.021	9.1	115.0	ND
Magnesium										
Manganese										
Molybdenum										
Mercury										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium										
Titanium										
Tin										
Vanadium										
Zinc										

(1) MDL = Method Detection Limit (2) RPD = Relative Percent Difference
(3) SCH = Sample Concentration too High to accurately measure spike recovery
(4) IS = Insufficient Sample (5) ND = Not Detected (6) * = Recovery Outside Limits

Form QC M-3

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1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

METALS

ANALYTICAL RESULTS AND QUALITY ASSURANCE DATA

CLIENT: Gannett Fleming, Icn.
SAMPLE ID: 255702
SAMPLE LABEL: Well C-24 A

Analyte	Concentration (mg/l)	MDL (mg/l)	Sample ID	Sample Result	Matrix Spike Added	Matrix Spike #1 Result	Matrix Spike #2 Result	RPD	% Recovery	Method Blank.
Aluminum										
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium										
Chromium										
Cobalt										
Copper										
Iron										
Lead	0.0060	0.005	255698	ND	0.020	0.023	0.021	9.1	115.0	ND
Magnesium										
Manganese										
Molybdenum										
Mercury										
Nickel										
Potassium										
Selenium										
Silver										
Sodium										
Thallium.										
Titanium										
Tin										
Vanadium										
Zinc										

(1) MDL = Method Detection Limit (2) RPD = Relative Percent Difference
(3) SCH = Sample Concentration too High to accurately measure spike recovery
(4) IS = Insufficient Sample (5) ND = Not Detected (6) * = Recovery Outside Limits

Form QC M-3

QC Inc

1205 INDUSTRIAL HIGHWAY • P. O. BOX 514 • SOUTHAMPTON , PA 18966-0514 • (215) 355-3900

METALS

INITIAL AND CONTINUING CALIBRATION VERIFICATION

CLIENT: Gannett Fleming, Inc.

PROJECT ID: 255697 - 255702

Analyte	INITIAL CALIBRATION Standard Concentration (ug/l) Blank	1	2	3	4	CONTINUING CALIBRATION VERIFICATION TRUE Value (ug/l)	Reported Value 1.000	% Recovery	Reported Value 2	% Recovery	Final Reported Value	% Recovery	FINAL BLANK ANALYSIS Continuing Calibration 1	2	Final
Aluminum															
Antimony															
Arsenic															
Barium															
Beryllium															
Cadmium															
Calcium															
Chromium															
Cobalt															
Copper															
Iron															
Lead	0	10	20	30	40	10	9	90.0	10	100.0	9.4	94.0	NA	NA	NA
Magnesium															
Manganese															
Molybdenum															
Mercury															
Nickel															
Potassium															
Selenium															
Silver															
Sodium															
Thallium															
Tin															
Vanadium															
Zinc															

(1) IS = Insufficient Sample (2) ND = Not Detected

(3) * = Recovery Outside Limits (4) NA = Not Applicable to Method

Form QC M-2 Rev. 2 9/15/88

Varian SpectrAA 30/40 System Report

00006

Method 7421

Reported ✓

done ✓

QA

OPERATOR BILL HEIM
DATE 8/16/90
BATCH

PROGRAM 25 Pb PLATFORM

INSTRUMENT MODE	ABSORBANCE
CALIBRATION MODE	CONCENTRATION
MEASUREMENT MODE	PEAK AREA
LAMP POSITION	2
LAMP CURRENT (mA)	4
SLIT WIDTH (nm)	0.5
SLIT HEIGHT	NORMAL
WAVELENGTH (nm)	283.3
SAMPLE INTRODUCTION	SAMPLER AUTOMIXING
TIME CONSTANT	0.05
MEASUREMENT TIME (sec)	3.0
REPLICATES	2
BACKGROUND CORRECTION	ON

FURNACE PARAMETERS

STEP NO.	TEMPERATURE (C)	TIME (sec)	GAS FLOW (L/min)	GAS TYPE	READ COMMAND
1	180	1.0	3.0	NORMAL	NO
2	300	50.0	3.0	NORMAL	NO
3	700	5.0	3.0	NORMAL	NO
4	700	10.0	3.0	NORMAL	NO
5	700	5.0	0.0	NORMAL	NO
6	2250	0.8	0.0	NORMAL	YES
7	2250	2.0	0.0	NORMAL	YES
8	2250	2.0	3.0	NORMAL	NO

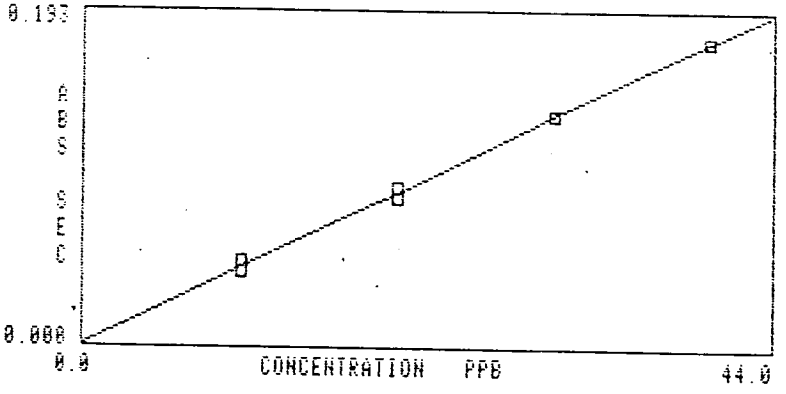
SAMPLER PARAMETERS
VOLUMES (uL)

	SOLUTION	BLANK	MODIFIER
BLANK	--	20	5
STANDARD 1	5	15	5
STANDARD 2	10	10	5
STANDARD 3	15	5	5
STANDARD 4	20		5
SAMPLE	20		5

RECALIBRATION RATE	45
RESLOPE RATE	22

MULTIPLE INJECT NO HOT INJECT YES PRE INJECT NO
TEMPERATURE 150
INJECT RATE 1

SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS		
BLANK	0.0		0.045	0.045	0.045	
BLANK	0.0		-0.000	-0.002	0.002	
STANDARD 1	10.0	10.7	0.045	0.042	0.048	
STANDARD 2	20.0	4.7	0.087	0.084	0.090	
STANDARD 3	30.0	1.2	0.133	0.131	0.134	
STANDARD 4	40.0	0.8	0.175	0.174	0.176	



BLANK	0.0		-0.010	-0.010	-0.010	
SPEX 10	9.0	3.	-0.040	-0.043	-0.040	90%
DIG BLK	0.3	49.1	0.001	0.002	0.001	
257812	2.2 <0.005	18.3	0.010	0.011	0.008	
257812+20	21.6	0.8	0.094	0.094	0.095	108%
257812+20	22.1	4.5	0.097	0.100	0.093	110.5%
257813	0.0 <0.005	99.9	0.000	0.002	-0.001	
257814	0.0 <0.005	24.9	0.000	0.002	-0.001	
257815	-0.9 <0.005	18.5	-0.004	-0.004	-0.003	
257816	0.2 <0.005	99.9	0.001	-0.001	0.003	
257817	-2.6 <0.005	5.4	-0.012	-0.011	-0.012	
257818	0.0 <0.005	99.9	0.000	0.003	-0.003	
257819	-0.9 <0.005	57.3	-0.004	-0.006	-0.002	
~~SPEX 10~~	~~8.2~~	~~0.9~~	~~0.037~~	~~0.037~~	~~0.037~~	
BLANK	0.0		-0.007	-0.009	-0.006	
SPEX 10	8.9	5.7	0.040	0.042	0.038	
BLANK	0.0		-0.003	-0.005	-0.000	
SPEX 10	8.5	8.3	0.038	0.041	0.036	
~~BLANK~~	~~0.0~~		~~0.008~~	~~0.007~~	~~0.005~~	

SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS		
SPEX 10	10.0	1.1	0.045	0.044	0.045	100%
255697	0.7 <0.005	50.9	0.003	0.004	0.002	

255698+20	22.7	0.9	0.099	0.098	0.100	113.5%
255700	6.0 0.0060	18.8	0.027	0.030	0.023	
255701	2.1 <0.005	15.4	0.009	0.010	0.008	
255702	6.0 0.0060	1.0	0.027	0.027	0.027	
SPEX 10	9.4	2.5	0.042	0.043	0.042	94%

000067

SAMPLE	CONC PPB	%RSD	MEAN ABS	READINGS		
255698+20	20.9	12.4	0.091	0.083	0.099	104.5%
~~255577~~	~~6.1~~	~~[illegible]~~	~~0.028~~	~~0.038~~	~~0.018~~	

QC Inc

1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

GENERAL ANALYSIS DATA REPORT

SAMPLE ID. #

Trip Blank

Lab Name: QC Inc.

Lab Code: 77166 Contract/P.O. No.: Gannett Fleming

Matrix (Soil/Water): Water

Lab Sample ID: 255697

Date Received: 8/7/90

RESULTS

Parameter	Date Analyzed	Sample Concentration Units	Method Blank Units
Petroleum Hydrocarbons	8/19/90	<0.5 mg/l	<0.5 mg/l
Total Organic Carbon	9/4/90	<1 mg/l	<1 mg/l
Total Dissolved Solids	8/11/90	6 mg/l	<2 mg/l
pH	8/9/90	5.06	N/A

Form QC GEN-1

QC Inc

1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

GENERAL ANALYSIS DATA REPORT

SAMPLE ID. #

Field Blank

Lab Name: QC Inc.

Lab Code: 77166 Contract/P.O. No.: Gannett Fleming

Matrix (Soil/Water): Water

Lab Sample ID: 255698

Date Received: 8/7/90

RESULTS

Parameter	Date Analyzed	Sample Concentration Units	Method Blank Units
Petroleum Hydrocarbons	8/19/90	<0.5 mg/l	<0.5 mg/l
Total Organic Carbon	9/4/90	<1 mg/l	<1 mg/l
Total Dissolved Solids	8/11/90	8 mg/l	<2 mg/l
pH	8/9/90	7.21	N/A

Form QC GEN-1

QC Inc

1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

GENERAL ANALYSIS DATA REPORT

SAMPLE ID. #

Well C-14 A

Lab Name: QC Inc.

Lab Code: 77166 Contract/P.O. No.: Gannett Fleming

Matrix (Soil/Water): Water

Lab Sample ID: 255699

Date Received: 8/7/90

RESULTS

Parameter	Date Analyzed	Sample Concentration Units	Method Blank Units
Petroleum Hydrocarbons	8/19/90	<0.5 mg/l	<0.5 mg/l
Total Organic Carbon	8/30/90	7.2 mg/l	<1 mg/l
Total Dissolved Solids	8/10/90	82 mg/l	<2 mg/l
pH	8/9/90	5.22	N/A

Form QC GEN-1

QC Inc

1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

GENERAL ANALYSIS DATA REPORT

SAMPLE ID. #

Well C-14 B

Lab Name: QC Inc.

Lab Code: 77166 Contract/P.O. No.: Gannett Fleming

Matrix (Soil/Water): Water

Lab Sample ID: 255700

Date Received: 8/7/90

RESULTS

Parameter	Date Analyzed	Sample Concentration Units	Method Blank Units
Petroleum Hydrocarbons	8/19/90	<0.5 mg/l	<0.5 mg/l
Total Organic Carbon	8/30/90	4 mg/l	<1 mg/l
Total Dissolved Solids	8/10/90	64 mg/l	<2 mg/l
pH	8/9/90	4.56	N/A

Form QC GEN-1

QC Inc

1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

GENERAL ANALYSIS DATA REPORT

SAMPLE ID. #

Well C-14 C

Lab Name: QC Inc.

Lab Code: 77166 Contract/P.O. No.: Gannett Fleming

Matrix (Soil/Water): Water

Lab Sample ID: 255701

Date Received: 8/7/90

RESULTS

Parameter	Date Analyzed	Sample Concentration Units	Method Blank Units
Petroleum Hydrocarbons	8/19/90	<0.5 mg/l	<0.5 mg/l
Total Organic Carbon	8/30/90	8.5 mg/l	<1 mg/l
Total Dissolved Solids	8/10/90	68 mg/l	<2 mg/l
pH	8/9/90	4.18	N/A

Form QC GEN-1

QC Inc

1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

GENERAL ANALYSIS DATA REPORT

SAMPLE ID. #

Well C-24 A

Lab Name: QC Inc.

Lab Code: 77166 Contract/P.O. No.: Gannett Fleming

Matrix (Soil/Water): Water

Lab Sample ID: 255702

Date Received: 8/7/90

RESULTS

Parameter	Date Analyzed	Sample Concentration Units	Method Blank Units
Petroleum Hydrocarbons	8/19/90	<0.5 mg/l	<0.5 mg/l
Total Organic Carbon	8/30/90	5 mg/l	<1 mg/l
Total Dissolved Solids	8/10/90	120 mg/l	<2 mg/l
pH	8/9/90	4.53	N/A

Form QC GEN-1

QC Inc

1205 INDUSTRIAL HIGHWAY • P.O. BOX 514 • SOUTHAMPTON, PA 18966-0514 • (215) 355-3900

GENERAL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: QC Inc.

Lab Code: 77166 Contract/P.O. No.: Gannett Fleming

Matrix Spike Sample #: see below

Lab Sample ID #: 255697 thru 255702
For 255697 and 255698 see separate QA for TOC and TDS

COMPOUND	AMT ADDED mg/l	SAMPLE RESULT mg/l	CONC. MS mg/l	MS % REC #	QC LIMITS % REC	CONC. Dup. mg/l	Dup. RPD #
TOC: 260015	8	10.6	18.2	95	80-120	11	3.7 %
PHC: 256698	4	<0.5	4	100	80-120	<0.5	0 %
TDS: 255702	368	116	472	97	80-120	126	8.3 %
TOC: 262192	NA	13	NA	NA	80-120	12	8.0 %
TDS: 256089	368	404	796	107	80-120	406	0.5 %

COLUMN TO BE USED TO FLAG RECOVERY AND RPD VALUES

* VALUES OUTSIDE OF QC LIMITS

RPD: __0__ out of __5__ outside limits

Spike Recovery: __0__ out of __4__ outside limits

COMMENTS: NA- INSTRUMENT MALFUNCTIONED prior To The ANALYSIS of A MATRIX SPIKE.

Form QC GEN-2

PHC Sample Data

Date	I.D. #	Client	ODOR	Spl. Wt.	Final Vol.	Xtra Dil.	Dil. F	Peak mm	ppm PHC	PHC ppm X df.	Init.	
8-14-90	Blank	—	—	—	—			21.1			DL	
8-14	252424	Burlington	0	500	100	—	0.2	24.3	0.6	<0.5	DL	
8-14	253012	IT Environ. Services	2-3	253	100	—	0.4	43.0	7.5	3.0	DL	
8-14	251342	Roux	0	500	100	—	0.2	19.3	<0.5	<0.5	DL	
8-14	251343	Roux	0	500	100	—	0.2	13.4	<0.5	<0.5	DL	
8-14	253017	Remtech	0	253	100	—	0.4	34.1	3.9	1.5	DL	
8-16	Blank	—	—	—	—	—		23.3	—	—	DL	
8-18	250092	Robert Bogen	0	250	100	—	0.4	77.7	19.8	7.9	DL	
8-19	255697	Garnet Fleming	0	250	100	—	0.4	10.8	0.2	<0.5	DL	8-20-90 DL
8-19	255698	Garnet Fleming	0	250	100	—	0.4	12.4	0.5	~~<0.5~~ 0.20	DL	
8-19	255698 DP	Garnet Fleming	0	250	100	—	0.4	13.2	0.5	~~0.5~~ 0.20 <0.5	DL	DUPLICATE RPD
8-19	255698 MS	Garnet Fleming	0	250	100	—	0.4	32.8	9.9	~~9.9~~ 3.96	DL	MATRIX SPIKE
8-19	255698 MSD	Garnet Fleming	0	200	100	—	0.5	37.9	10.0	~~9.9~~ 4	DL	MATRIX SPIKE DUPLICATE

INDICATE EXACTLY HOW THE SPIKES ARE PREPARED:

$\frac{2 \times 500}{250} = 4$ mg/l $\quad \frac{3.96 - 0.20}{4} \times 100 = 99.0\%$ recovery (MS)

$\frac{2 \times 500}{200} = 5$ mg/l $\quad \frac{3.96 - 0.20}{5} \times 100 = 75.2\%$ recovery (MSD)

ANY SAMPLE IS PART OF A TIER I OR II PACKAGE - THE QA MUST BE RUN ON THE SAME DAY THE SAMPLES ARE RUN.

CIRCLE SAMPLES THAT NEED TO BE RE-CHECKED.

PHC Sample Data

Date	I.D. #	Client	ODOR	Spl. Wt.	Final Vol.	Xtra Dil.	Dil. F	Peak mm	ppm PHC	PHC ppm X df.	Init.	
8-19	Blank	—	—	—	—	—	—	9.6	—	—	DL	
8-19	255699	Gannett Fleming	0	250	100	—	0.4	11.1	0.2	<0.5	DL	
8-19	255700	Gannett Fleming	0	250	100	—	0.4	12.8	0.5	<0.5	DL	
8-19	255701	Gannett Fleming	0	250	100	—	0.4	15.2	1.1	<0.5 ~~1.1~~	DL	
8-19	255702	Gannett Fleming	0	250	100	—	0.4	14.3	1.0	<0.5	DL	
8-19	254727	Burlington	0	500	100	—	0.4	23.9	4.6	1.8	DL	
8-19	256291	Freehold	0	500	100	—	0.4	10.5	0.1	<0.5	DL	
8-19	256292	Freehold	Chlorine	500	100	—	0.4	20.0	3.0	1.2	DL	chlorine
8-19	256293	Freehold	0	500	100	—	0.4	14.8	1.0	<0.5	DL	
8-22	256409	Burlington	0	250	100		0.4	15.0	0.2 <0.5	<0.5	DL WSE	
8-22	256409	Burlington	0	250	100		0.4	15.0	0.2 <0.5	<0.5	DL WSE	DUPLICATE
8-22	256409	Burlington	0	250	100		0.4	39.9	9.3	3.72	DL	MATRIX SPIKE
8-22	256409	Burlington	0	250	100		0.4	37.0	8.2	3.28	DL	MATRIX SPIKE DUPLICATE

12.6%

INDICATE EXACTLY HOW THE SPIKES ARE PREPARED:

$$\frac{2 \times 500}{250 ml} = 4 mg/l$$

$$\frac{3.72 mg/l}{4 mg/l} \times 100 = 93.0\%$$

$$\frac{3.28 mg/l}{4} \times 100 = 82.0\%$$

.. ANY SAMPLE IS PART OF A TIER I OR II PACKAGE - THE QA MUST BE RUN ON THE SAME DAY THE SAMPLES ARE RUN.

CIRCLE SAMPLES THAT NEED TO BE RE-CHECKED.

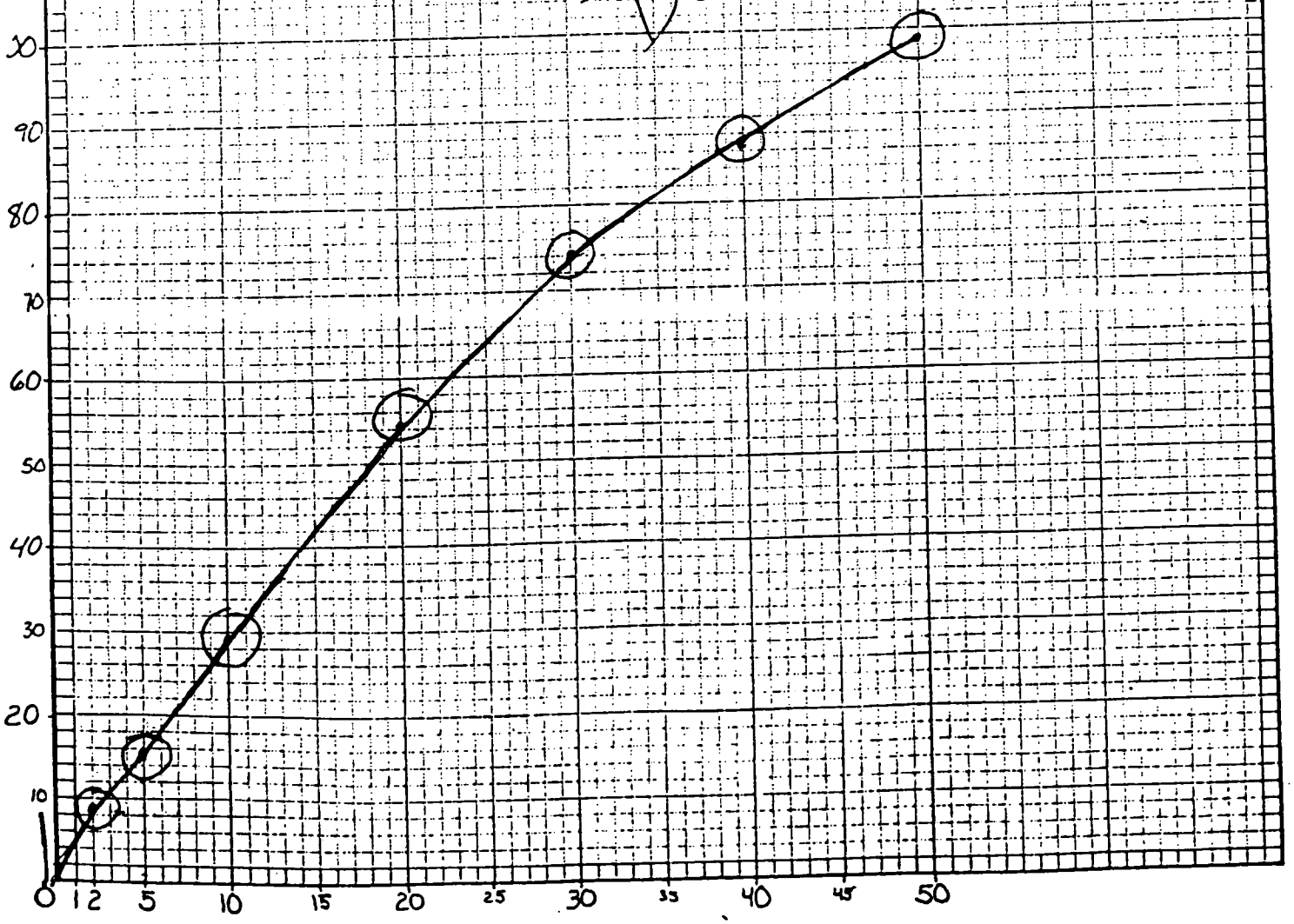
Environmental Resources Management, inc. West Chester, PA 19380 • (215) 696-9110

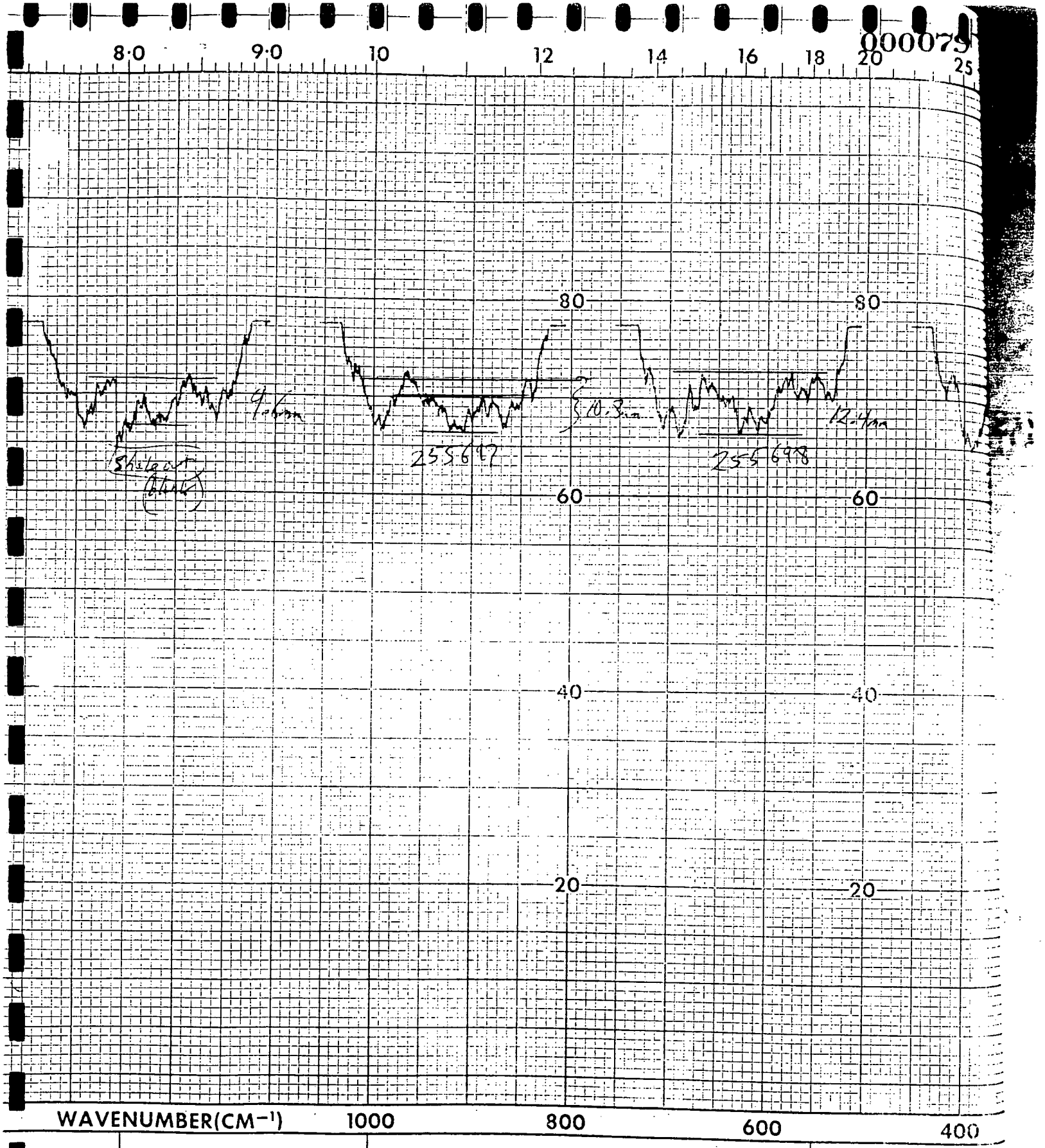
000078

Project: PHC CURVE
Subject:
W.O. No.:
By: W. Ervin
Chkd by:
Sheet ___ of ___
Date: 7/23/90
Date:

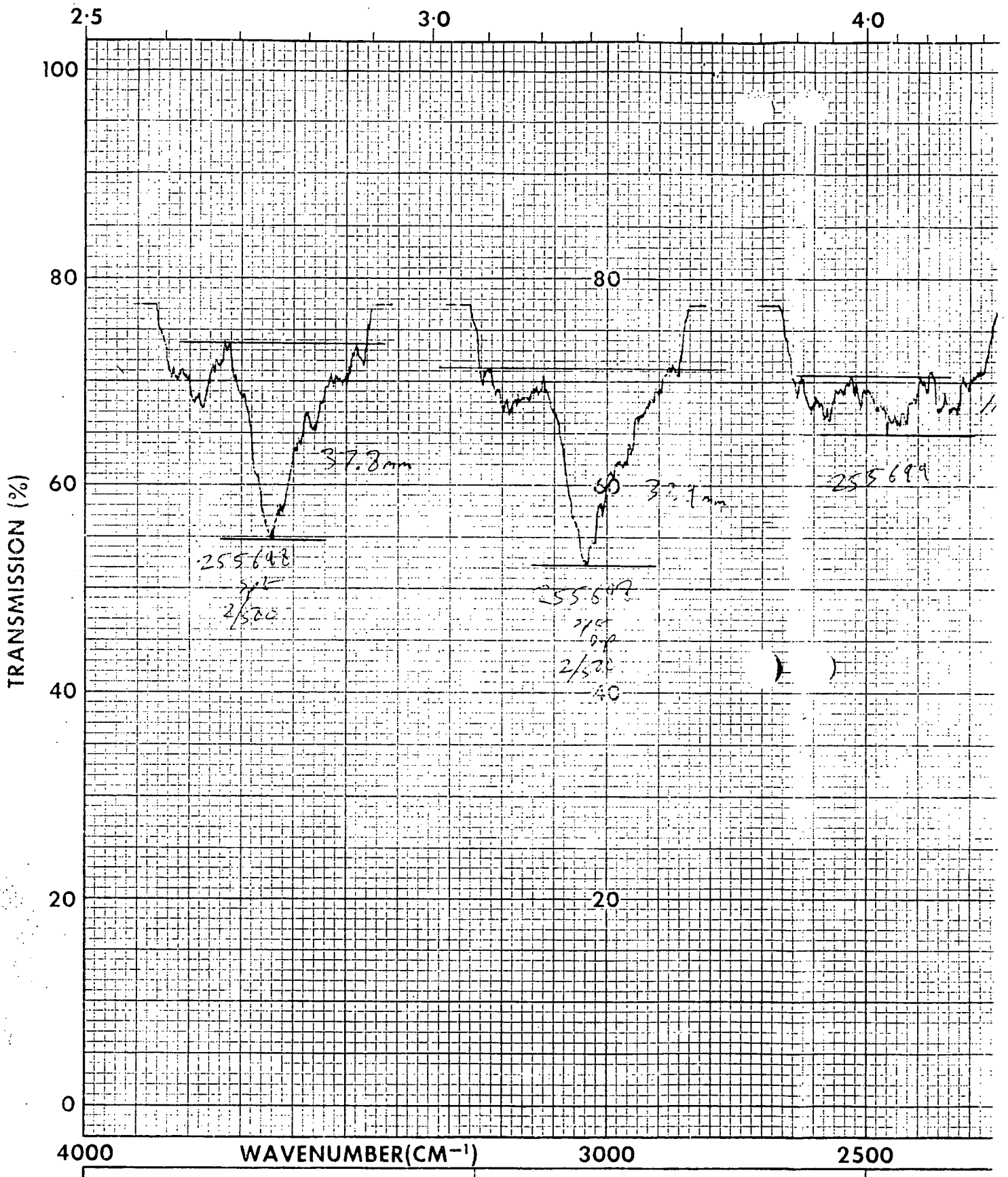
PPM PHC	Peak (mm)
2.0	9.0
5.0	15.1
10.0	29.1
20.0	54.1
30.0	74.0
40.0	87.0
50.0	98.5

8/20/90
DWS

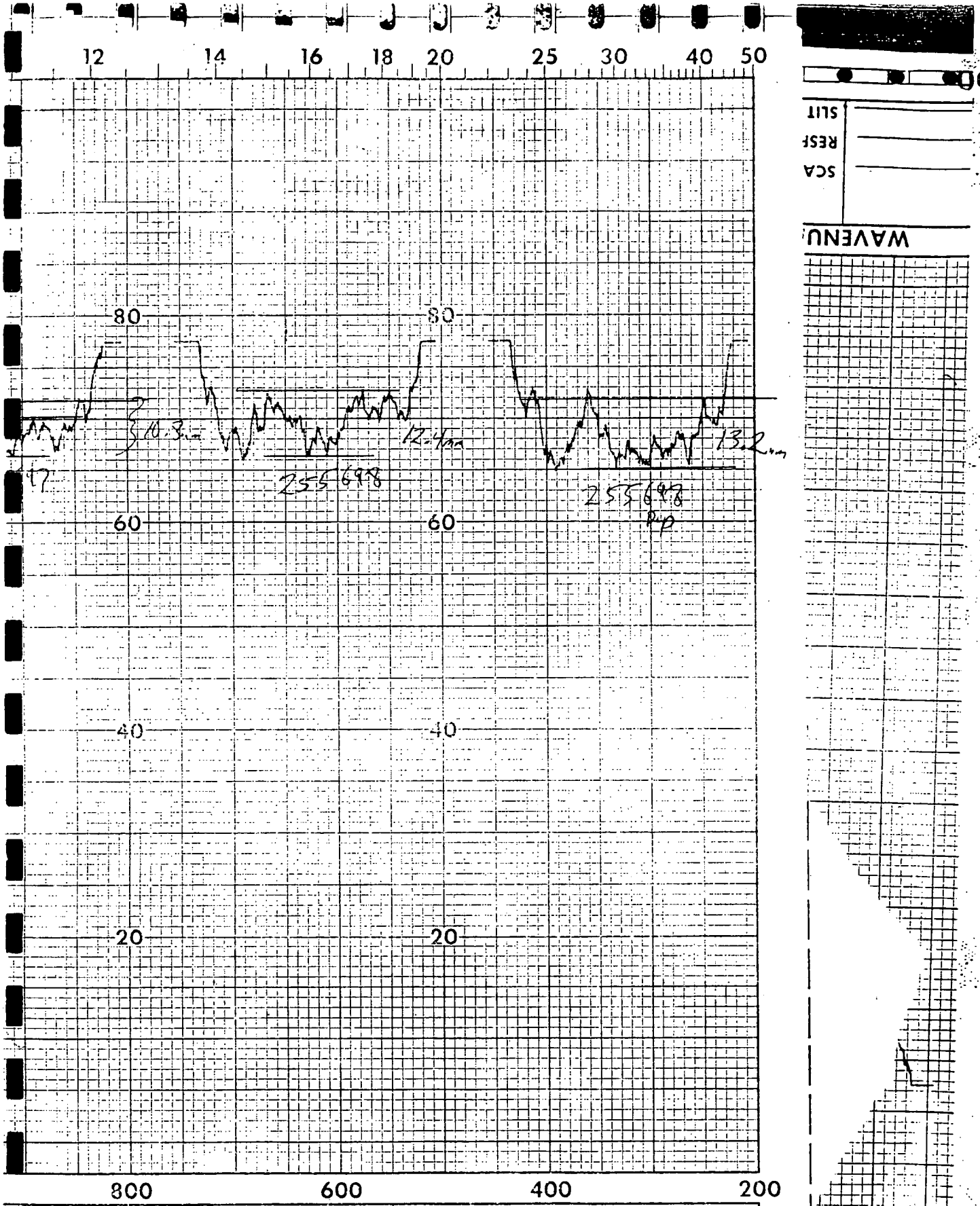




SCAN TIME	ORDINATE		WILMAD GLASS BUENA, N.J.
RESPONSE	EXPANSION	%T	CHART NO.
SLIT PROGRAM	SINGLE BEAM	ABS	OPERATOR DCW
	PRE SAMPLE CHOPPER		REF No.



SAMPLE	REMARKS	SOLVENT
		CONCENTRATI
		CELL PATH
ORIGIN		REFERENCE



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SLIT
RESP
SCA
WAVENU

ORDINATE

ON %T

AM ABS

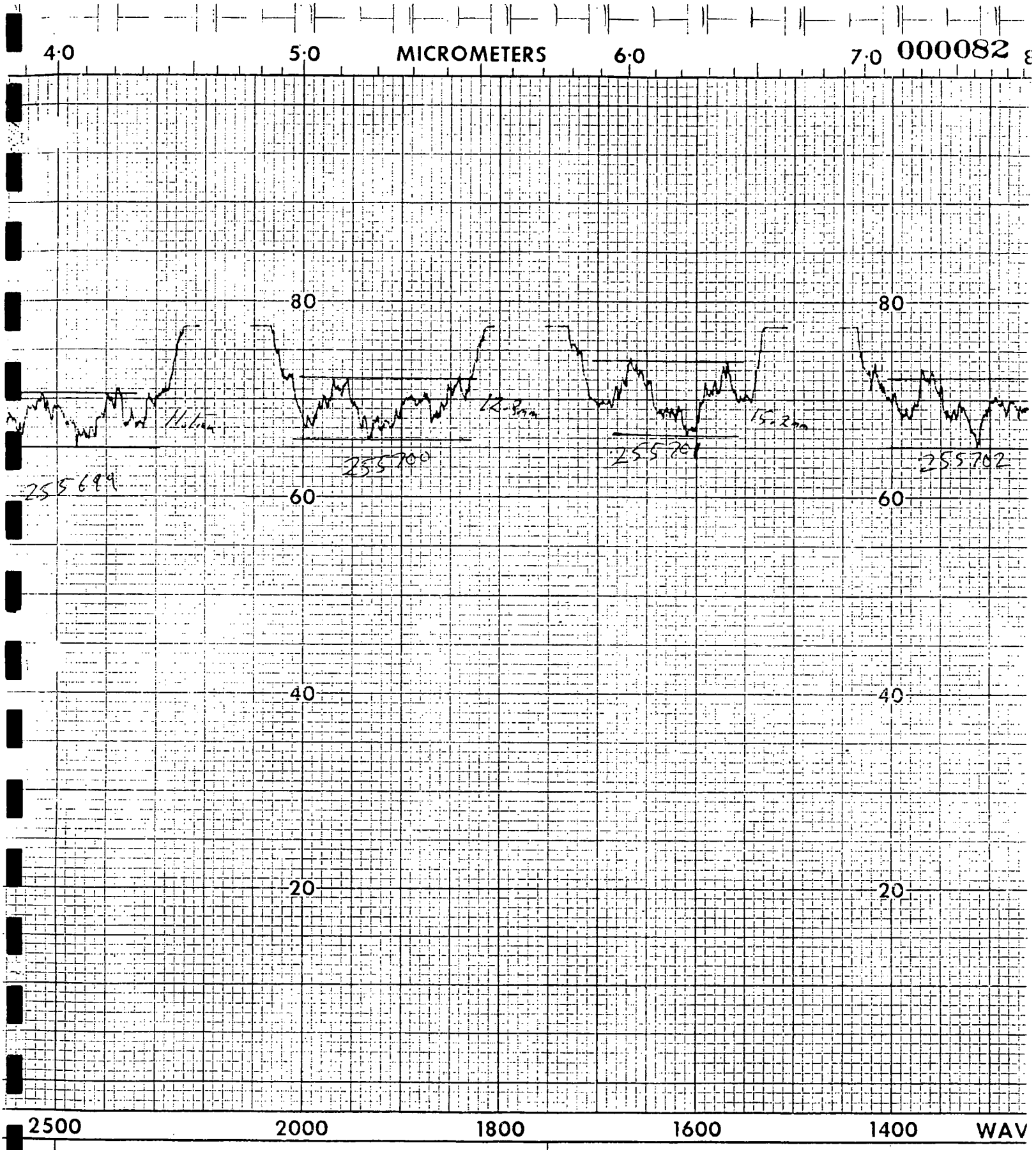
LE CHOPPER

WILMAD GLASS CO., INC.
BUENA, N.J. 08310 U.S.A.

CHART NO. WGPE-283-1251

OPERATOR DC/WSE DATE 8/20/90

REF No.



SOLVENT

CONCENTRATION

CELL PATH

REFERENCE

ABSCISSA

REP. SCAN

EXPANSION

HIGH LIMIT

SUPPRESSION

LOW LIMIT

TIME DRIVE

8-30-90
DCM

*** MODEL 700 TOC ANALYZER ***

FACTORS:

[illegible] mV IOC BLANK= [illegible] mV PTC BLANK= [illegible] mV
[illegible] ug STD. AVG.= [illegible] mV SAMPLING FACTOR= [illegible]

[illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

SETPOINTS (ppm):

[illegible] TIC HI= [illegible] TOC LO= [illegible] TOC HI= [illegible]

[illegible] TIME 00:00:00 EXTD. PURGE TIME 00:00:00

RESULTS:

00:01:17	TIC =	0.000000 mV	0.000000 ug C	0.000000 ppm
00:01:20	POC =	0.30648 mV	0.01683 ug C	0.05300 ppm
00:01:23	TOC =	0.000000 mV	0.000000 ug C	0.000000 ppm

DI H_2O

00:09:07	TIC =	11.2168 mV	0.56679 ug C	1.78257 ppm
00:14:07	TOC =	14.2200 mV	0.71854 ug C	2.25958 ppm
00:17:12	TIC =	3.63489 mV	0.18367 ug C	0.57759 ppm
00:22:12	TOC =	17.0974 mV	0.86394 ug C	2.71681 ppm
00:25:17	TIC =	3.66296 mV	0.18507 ug C	0.58205 ppm
00:30:17	TOC =	16.5494 mV	0.83625 ug C	2.62973 ppm

000084

00:43:32	TIC =	3.58757 mV	0.17511 ug C	0.5[illegible] ppm
00:48:32	TOC =	15.7717 mV	0.77225 ug C	[illegible] ppm
00:51:37	TIC =	3.59070 mV	0.17941 ug C	0.5[illegible] ppm
00:56:37	TOC =	14.1440 mV	0.71419 ug C	2.14571 ppm
00:59:42	TIC =	3.46671 mV	0.17518 ug C	0.55083 ppm
01:04:42	TOC =	14.1[illegible] mV	0.71564 ug C	2.25047 ppm
01:16:32	TIC =	5.09667 mV	0.25753 ug C	0.80987 ppm
01:21:32	TOC =	11.0172 mV	0.55670 ug C	1.75066 ppm
01:24:37	TIC =	3.01780 mV	0.15247 ug C	0.47953 ppm
01:29:37	TOC =	12.3015 mV	0.62160 ug C	1.95474 ppm
01:32:42	TIC =	2.93371 mV	0.14824 ug C	0.46617 ppm
01:37:42	TOC =	11.2453 mV	0.56823 ug C	1.78690 ppm

30 ppm std

02:06:49	TIC =	3.49457 mV	0.17638 ug C	0.55527 ppm
02:11:49	TOC =	194.394 mV	9.31758 ug C	29.3006 ppm
02:14:54	TIC =	3.66296 mV	0.18509 ug C	0.58205 ppm
02:19:54	TOC =	187.760 mV	9.48763 ug C	29.8353 ppm

High std

02:35:38	TIC =	16.6647 mV	0.85438 ug C	2.68675 ppm
02:40:38	TOC =	218.[illegible] mV	11.2153 ug C	35.[illegible]74 ppm
02:43:43	TIC =	19.0647 mV	0.97737 ug C	3.07351 ppm
02:48:43	TOC =	231.[illegible] mV	11.8599 ug C	37.2953 ppm
02:52:19	TIC =	18.1374 mV	0.92989 ug C	2.92118 ppm
02:57:19	TOC =	229.623 mV	11.7726 ug C	37.0206 ppm
03:00:24	TIC =	19.5714 mV	0.95214 ug C	2.99415 ppm
03:05:24	TOC =	228.327 mV	11.7061 ug C	36.8117 ppm
03:34:57	TIC =	5.80105 mV	0.29741 ug C	0.93526 ppm
03:39:57	TOC =	261.324 mV	13.3978 ug C	42.1315 ppm
03:43:02	TIC =	5.37830 mV	0.27574 ug C	0.86710 ppm
03:48:02	TOC =	258.421 mV	13.2490 ug C	41.6635 ppm

low std

03:56:22	TIC =	10.9317 mV	0.56048 ug C	1.76245 ppm
04:01:22	TOC =	35.0772 mV	1.79838 ug C	5.65527 ppm
04:04:27	TIC =	11.2453 mV	0.57653 ug C	1.81301 ppm
04:07:27	TOC =	34.3003 mV	1.75855 ug C	5.53002 ppm
04:12:32	TIC =	11.2160 mV	0.57507 ug C	1.80911 ppm
04:17:32	TOC =	32.9584 mV	1.68975 ug C	5.31368 ppm

05:30:14	TIC =	1.61827 mV	0.[illegible] ug C	[illegible] ppm
05:35:14	TOC =	41.2612 mV	2.62919 ug C	[illegible] ppm
05:38:19	TIC =	2.37350 mV	0.12168 ug C	0.38266 ppm
05:41:52	TIC =	3.80333 mV	0.19499 ug C	[illegible] ppm
05:46:52	TOC =	46.5046 mV	2.38425 ug C	7.49764 ppm
05:49:57	TIC =	2.45749 mV	0.12599 ug C	0.39620 ppm
05:54:57	TOC =	47.7591 mV	2.44857 ug C	7.69989 ppm

260014

05:59:11	TIC =	24.2478 mV	1.24316 ug C	3.90932 ppm
06:04:11	TOC =	873.964 mV	44.8073 ug C	140.904 ppm

DI H2O

06:11:51	TIC =	2.98976 mV	0.15328 ug C	0.48202 ppm
06:16:51	TOC =	23.0197 mV	1.18020 ug C	3.71133 ppm
06:19:56	TIC =	2.48549 mV	0.12742 ug C	0.40072 ppm
06:24:56	TOC =	14.1913 mV	0.72757 ug C	2.28798 ppm
06:28:01	TIC =	2.63551 mV	0.13604 ug C	0.42765 ppm
06:33:01	TOC =	13.3641 mV	0.68495 ug C	2.15396 ppm

260015

06:37:43	TIC =	31.5201 mV	1.62113 ug C	5.09790 ppm
06:42:43	TOC =	65.6019 mV	3.36335 ug C	10.5760 ppm
06:46:22	TIC =	30.[illegible] mV	1.56495 ug C	4.92070 ppm
06:53:22	TOC =	68.1376 mV	3.49346 ug C	10.9857 ppm

$\bar{x}$ = 10.7812
RPD = 3.8

DI H2O

08:09:16	TIC =	4.30900 mV	0.22091 ug C	0.69471 ppm
08:14:16	TOC =	14.5357 mV	0.74523 ug C	2.34350 ppm
08:19:40	TIC =	1.84192 mV	0.09443 ug C	0.29696 ppm
08:24:40	TOC =	12.7304 mV	0.65267 ug C	2.05244 ppm
08:27:45	TIC =	2.23355 mV	0.11451 ug C	0.36010 ppm

260015 spk (+8)

08:31:14	TIC =	15.0527 mV	0.77174 ug C	2.42686 ppm
08:36:14	TOC =	112.693 mV	5.77765 ug C	18.1687 ppm

92.3%

DI H2O

00:39:19	TIC = 2.86161 mV	0.14466 ug C	0.45471 ppm	

255697

00:07:47	TIC = 4.33711 mV	0.22236 ug C	0.69924 ppm	result NOT used
00:12:47	TOC = 16.7224 mV	0.85734 ug C	2.69605 ppm	

DI H2O

00:15:52	TIC = 2.03770 mV	0.10447 ug C	0.32852 ppm
00:20:52	TOC = 13.9045 mV	0.71287 ug C	2.24174 ppm

255698

00:24:26	TIC = 3.66296 mV	0.18779 ug C	0.59035 ppm	result NOT used
00:29:26	TOC = 16.6647 mV	0.85438 ug C	2.68675 ppm	

DI H2O

00:32:31	TIC = 1.86938 mV	0.09586 ug C	0.30146 ppm
00:37:31	TOC = 15.6344 mV	0.80270 ug C	2.52422 ppm

255699

00:40:56	TIC = 24.[illegible] mV	1.25366 ug C	3.94174 ppm
00:45:56	TOC = 44.[illegible] mV	2.30133 ug C	7.23690 ppm

DI H2O

00:48:41	TIC = 2.73456 mV	0.14035 ug C	0.44135 ppm
00:53:41	TOC = 13.8739 mV	0.71140 ug C	2.23711 ppm

255700

00:56:46	TIC = 43.5191 mV	2.23113 ug C	7.01614 ppm
01:01:46	TOC = 24.9509 mV	1.27921 ug C	4.02268 ppm

DI H2O

01:04:51	TIC = 1.86988 mV	0.09586 ug C	0.30146 ppm
01:09:51	TOC = 13.4174 mV	0.68789 ug C	2.16319 ppm

255701

01:12:56	TIC = 58.0888 mV	2.97916 ug C	9.36523 ppm
01:17:56	TOC = 52.7756 mV	2.70576 ug C	8.50867 ppm

DI H2O

01:21:01	TIC = 2.14751 mV	0.11020 ug C	0.34656 ppm
01:26:01	TOC = 13.5485 mV	0.69964 ug C	2.20015 ppm

256702

01:29:06	TIC =	23.6716 mV	1.21486 ug C	3.31765 ppm
01:34:06	TOC =	21.2863 mV	1.60286 ug C	5.04045 ppm

DI H2O

01:37:11	TIC =	2.20557 mV	0.11307 ug C	0.35559 ppm
01:42:11	TOC =	12.0730 mV	0.61897 ug C	1.94645 ppm

262943 X20

01:45:16	TIC =	4.50580 mV	0.23100 ug C	0.72644 ppm
01:50:16	TOC =	93.1587 mV	4.77616 ug C	15.0194 ppm
01:53:21	TIC =	4.14039 mV	0.21227 ug C	0.66752 ppm
01:58:21	TOC =	97.6239 mV	5.00509 ug C	~~15.7393~~ ppm

310.

DI H2O

02:01:26	TIC =	2.00972 mV	0.10303 ug C	0.32401 ppm
02:06:26	TOC =	20.1659 mV	1.03389 ug C	3.25122 ppm
02:10:43	TIC =	1.[illegible] mV	0.06434 ug C	0.20234 ppm
02:15:43	TOC =	14.3348 mV	0.73493 ug C	2.31111 ppm
02:18:48	TIC =	1.79884 mV	0.09013 ug C	0.28345 ppm
02:23:48	TOC =	[illegible] mV	0.72904 ug C	2.29264 ppm

260017

02:26:53	TIC =	289.133 mV	14.8236 ug C	46.6151 ppm
02:31:53	TOC =	77.2861 mV	1.05468 ug C	12.7006 ppm
02:34:58	TIC =	183.663 mV	14.5431 ug C	45.7331 ppm
02:39:58	TOC =	78.6974 mV	4.03474 ug C	12.6879 ppm

~~DI H2O~~ 260018

02:43:03	TIC =	130.529 mV	6.69208 ug C	21.0443 ppm
02:48:03	TOC =	73.7311 mV	3.78012 ug C	11.8872 ppm
02:51:08	TIC =	128.487 mV	6.58740 ug C	20.7151 ppm
02:56:08	TOC =	73.9880 mV	3.79330 ug C	11.9286 ppm

260019

02:59:13	TIC =	162.271 mV	8.31947 ug C	26.1619 ppm
03:04:13	TOC =	24.9216 mV	1.27771 ug C	4.01795 ppm
03:07:18	TIC =	159.687 mV	8.18703 ug C	25.7454 ppm
03:12:18	TOC =	23.5457 mV	1.20717 ug C	3.79612 ppm

260020

03:15:23	TIC =	998.736 mV	51.2043 ug C	161.020 ppm
03:20:23	TOC =	910.747 mV	46.6932 ug C	146.834 ppm
03:23:28	TIC =	985.648 mV	50.5333 ug C	158.910 ppm
03:28:28	TOC =	953.931 mV	48.9082 ug C	153.799 ppm

DI H2O

03:31:33	TIC =	8.57222 mV	0.43949 ug C	1.38204 ppm
03:36:33	TOC =	48.5361 mV	2.48943 ug C	7.82839 ppm
03:39:38	TIC =	4.30900 mV	0.22091 ug C	0.69471 ppm

263546

000088

03:47:13	TIC =	1759.37 mV	89.1401 ug C	290.417 ppm
03:52:13	TOC =	747.87 mV	38.4153 ug C	120.878 ppm
03:55:48	TIC =	1720.18 mV	88.1920 ug C	277.333 ppm
04:00:48	TOC =	785.066 mV	40.2496 ug C	126.571 ppm

263546 dup $\bar{x}$ = 122.3893 RPD = 2.2

04:03:53	TIC =	1708.89 mV	87.6135 ug C	275.514 ppm
04:08:53	TOC =	749.942 mV	38.4489 ug C	120.908 ppm
04:11:58	TIC =	1691.29 mV	86.7111 ug C	272.676 ppm
04:16:58	TOC =	751.627 mV	38.5353 ug C	121.190 ppm

263546 x10 +300

04:20:52	TIC =	95.0873 mV	4.87504 ug C	15.3303 ppm
04:25:52	TOC =	302.299 mV	15.4986 ug C	48.7378 ppm
04:29:57	TIC =	93.8231 mV	4.81022 ug C	15.1265 ppm
04:33:57	TOC =	292.057 mV	14.9735 ug C	47.0864 ppm

DI H_2O 118.9%

04:37:02	TIC =	5.12483 mV	0.26274 ug C	0.82624 ppm
04:42:02	TOC =	17.6725 mV	1.00859 ug C	3.17168 ppm
04:45:07	TIC =	3.29819 mV	0.16909 ug C	0.53174 ppm
04:50:07	TOC =	15.5123 mV	0.79532 ug C	2.50102 ppm

260708

04:53:12	TIC =	35.2567 mV	1.80758 ug C	5.68421 ppm
04:58:12	TOC =	30.8111 mV	1.58041 ug C	4.97021 ppm
05:01:17	TIC =	34.5587 mV	1.77892 ug C	5.59761 ppm
05:06:17	TOC =	28.3615 mV	1.38026 ug C	4.0889 ppm

260709

05:09:22	TIC =	11.0743 mV	0.56776 ug C	1.78543 ppm
05:14:22	TOC =	13.9619 mV	0.71591 ug C	2.25078 ppm
05:17:27	TIC =	10.6104 mV	0.54439 ug C	1.71173 ppm
05:22:27	TOC =	13.7039 mV	0.70258 ug C	2.20939 ppm

260710

05:25:32	TIC =	3.38235 mV	0.17341 ug C	0.54531 ppm
05:30:32	TOC =	13.7039 mV	0.70258 ug C	2.20939 ppm
05:33:37	TIC =	3.07356 mV	0.15759 ug C	0.49557 ppm
05:38:37	TOC =	13.5606 mV	0.69523 ug C	2.18629 ppm

260711

05:41:42	TIC =	3.21406 mV	0.16478 ug C	0.51818 ppm
05:46:42	TOC =	13.7612 mV	0.70552 ug C	2.21863 ppm
05:49:47	TIC =	3.21406 mV	0.16478 ug C	0.51818 ppm
05:54:47	TOC =	13.5606 mV	0.69523 ug C	2.18629 ppm

DI H_2O

05:57:52	TIC =	2.06567 mV	0.10590 ug C	0.33303 ppm
06:02:52	TOC =	12.2444 mV	0.62775 ug C	1.97408 ppm

260438

06:05:57	TIC =	164.418 mV	5.33342 ug C	16.6347 ppm
06:10:57	TOC =	32.4227 mV	1.66228 ug C	5.22780 ppm

~~260439~~ DI H_2O

SPL# 00041	06:17:02	TOC =	12.7137 mV	0.66274 ug C	2.0861 ppm

256439

SPL# 00042	06:22:07	TIC =	27.8911 mV	1.42995 ug C	4.49670 ppm
SPL# 00042	06:27:07	TOC =	21.7656 mV	1.11590 ug C	3.50912 ppm

256440

SPL# 00043	06:30:12	TIC =	90.6410 mV	4.64708 ug C	14.6135 ppm
SPL# 00043	06:35:12	TOC =	19.9337 mV	1.02198 ug C	3.21378 ppm

256441

SPL# 00044	06:38:17	TIC =	145.219 mV	7.44524 ug C	23.4127 ppm
SPL# 00044	06:43:17	TOC =	226.226 mV	11.5984 ug C	36.4730 ppm

256442

SPL# 00045	06:46:22	TIC =	443.260 mV	22.7255 ug C	71.4639 ppm
SPL# 00045	06:51:22	TOC =	83.5109 mV	4.28153 ug C	13.4639 ppm

DUP

SPL# 00045	06:54:27	TIC =	437.385 mV	22.5969 ug C	70.8394 ppm
SPL# 00045	06:59:27	TOC =	81.4244 mV	4.17456 ug C	13.1275 ppm

SPK (+4) RPD = 2.5

SPL# 00046	07:02:32	TIC =	181.457 mV	9.29822 ug C	29.2348 ppm
SPL# 00046	07:07:32	TOC =	105.790 mV	5.47005 ug C	17.2171 ppm

98.0%

DI H_2O

SPL# 00047	07:10:37	TIC =	2.56950 mV	0.13173 ug C	0.41426 ppm
SPL# 00047	07:15:37	TOC =	13.3314 mV	0.68347 ug C	2.14931 ppm
SPL# 00047	07:18:42	TIC =	1.86988 mV	0.09586 ug C	0.30146 ppm
SPL# 00047	07:23:42	TOC =	12.0158 mV	0.61604 ug C	1.93724 ppm
SPL# 00048	07:29:37	TIC =	7.77082 mV	0.39881 ug C	1.25413 ppm

20 ppm

SPL# 00048	07:34:37	TOC =	183.022 mV	9.38338 ug C	29.5075 ppm
SPL# 00048	07:37:42	TIC =	6.73241 mV	0.34516 ug C	1.08542 ppm
SPL# 00048	07:42:42	TOC =	193.223 mV	9.90637 ug C	31.1521 ppm

TOTAL DISSOLVED SOLIDS - MDL = 2 mg/l
Dried at 180C

Date	Access. #	Pan #	Pan Wt. g.	Sample Size ml	Dry Pan & Sample Wt. g.	Net Wt. g.	TDS mg/l	RPD %	Init.
8/8	253863	22	1.9188	50	1.9311	0123	246		KK
8/8	253864	23	1.9010	50	1.9062	0052	104		
8/9	252088	24	1.9~~19~~ 37 KK	50	1.9743	0606	1212		
8/9	254888	25	1.9006	50	1.9039	0033	66	11.4%	
8/9	254888 DUP	26	1.9219 KK	50	1.9256	0037	74		
8/9	254888 SPKE	27	1.9148 KK	25+25	1.9252	0104	416		
8/9	KNOWN (600227)	28	1.9151 KK	50	1.9265	0114	228		
8/8	27033	C	67.1984	100	67.2070	0086	172		
8/8	28777 (600224)	Z	70.3420	100	70.3451	0031	62		
8/9	103883	20	67.1987	100	67.2306	0319	319		
8/9	103884	Z	70.3417	100	70.3526	0109	109		KK
8/10	KNOWN	1	1.9300	~~50~~ 33 KK	1.9379	0079	237		
	255627	2	~~1.9228~~ 1.8918 KK	50	1.8966	0148	296		
	255697	3	1.9172	50	1.9182	0010	20	results NOT	
	255698	4	1.9047	50	1.9052	0005	10	used	
	255699	5	1.9186	50	1.9227	0041	82		
	255700	6	1.9198	50	1.9230	0032	64		
	255701	7	1.9040	50	1.9074	0034	68		
	255702	8	1.9033	50	1.9091	0058	116		
	255702 DUP	9	1.8980	50	1.9043	0063	126	8.3%	
	255702 SPIKE	10	1.9085	25+25	1.9203	0118	472		
	255746	11	1.9146	50	1.9228	0082	164		
	255748	12	1.9161	50	1.9200	0039	78	8%	
	255748 DUP	13	1.8946	50	1.8982	0036	72		
	255748 SPIKE	14	1.8978	25+25	1.9095	0117	468		

6/25

TOTAL DISSOLVED SOLIDS - Dried at 180C
MDL = 2 mg/l

TDS Calculation: mg/l = net wt. / sample size X 1,000,000
Use less sample when net wt. >0.2 g.

RPD: difference / average X 100 Round TDS results to 2 sig. figures.

Circle samples to be re-checked. Dup and spike: every set of ten or less.

KNOWN

Date	I.D. #	True Value mg/l	Range mg/l	Meas. Value mg/l	Recov. %	Init.
8/6	WD406	220	198-242	228	103.6%	KK
8/10	WD406	220	198-242	237	107.5%	KK

Recovery % = Measured Value / True Value X 100

SPIKE DATA

Date	Access #	Spike Sol'n Conc. mg/l A	ml Spike Sol'n B	ml Sample in Spike C	Spike Conc. mg/l D	Ave. Sample Result mg/l E	Spiked Result mg/l F	% Spike Rec.	Init.
8/6	254888	368	25	25	~~368~~ 2.4	70	416	94.0%	KK
8/10	255702	368	25	25	~~368~~ 2.4	121	472	95.2%	KK
8/10	255748	368	25	25	~~368~~ 2.4	75	468	106.2%	KK

Spike Conc. (D) = A X B / C % Spike Rec. = (F - E) / D X 100

pH

Standardize the pH meter each day.
Use a Two point calibration: pH 7 and 4.
Check a pH 10 buffer after calibrating meter.

When sample pH > 8.0 - Check a pH 10 - buffer as next sample.
Re - check duplicates if difference > 0.03 pH units.
Re-calibrate meter if duplicate re-checks do not work.

Date	Access. #	pH	RPD %	Init.
8-9	255756	7.40		HC
8-9	255734	7.21		HC
	255698	7.21		HC
	255757	5.11		HC
	255699	5.22		HC
	255697	5.06		HC
	255702	4.53		HC
	255730	6.76		HC
	255755	6.92		HC
	255751	6.84		HC
	255752	6.80		HC
	255753	6.63		HC
	255754	4.83		HC
	104045	1.64		HC
	255701	4.18		HC
	255710	6.58		HC
	255747	5.42		HC
	255748	4.83		HC
	104072	9.30 *		HC
	~~255751~~		HC	
	252886	8.33		HC

RPD: difference / Average X 100

pH

Standardize the pH meter each day.
Use a Two point calibration: pH 7 and 4.
Check a pH 10 buffer after calibrating meter.

When sample pH > 8.0 - Check a pH 10 - buffer as next sample.
Re - check duplicates if difference > 0.03 pH units.
Re-calibrate meter if duplicate re-checks do not work.

Date	Access. #	pH	RPD %	Init.
8.9	255700	4.56		HC
255739	~~255886~~			NO DATA HC
8.9	255746	4.98		
8.9	104072	9.30	0.0	HC
8.9	252886	8.31	2.4%	HC
8.9	255739	6.85		HC
8.9	255746	4.98	0.0	HC
			NO DATA	
8-10	14648	HC ~~9.67~~ 7.01		HC
8-10	14647	HC ~~7.01~~ 7.83		HC
8-10	14649	6.64		HC
8-10	14649	6.71	10%	HC
8-10	256288	7.42	0.0%	JSG
8-10	256096	7.81		JSG
8-10	255741	6.86		JSG
8-10	256090	7.91		JSG
8-10	256024	6.59		JSG
8-10	256086	5.87		JSG
8-10	256299	7.03		JSG
8-10	256457	6.43		JSG
8-10	256298	5.28		JSG

RPD: difference / Average X 100

9/4/90 yey

Reanalyses

SPL# 00000	05:47:45	TIC =	7.04327 mV	0.34613 ug C	0.07016 ppm
SPL# 00000	05:52:45	TOC =	29.8706 mV	1.46795 ug C	0.29757 ppm
SPL# 00000	05:55:50	TIC =	3.69103 mV	0.18139 ug C	0.57041 ppm
SPL# 00000	06:00:50	TOC =	24.7750 mV	1.21753 ug C	3.82873 ppm
SPL# 00000	06:03:55	TIC =	3.27015 mV	0.16070 ug C	0.50536 ppm
SPL# 00000	06:08:55	TOC =	19.0058 mV	0.93401 ug C	2.93714 ppm
SPL# 00000	06:14:03	TIC =	2.40150 mV	0.11801 ug C	0.37112 ppm
SPL# 00000	07:19:45	TIC =	13.5033 mV	0.66360 ug C	2.08679 ppm
SPL# 00000	07:24:45	TOC =	19.9466 mV	0.97533 ug C	3.06709 ppm
SPL# 00000	07:27:50	TIC =	1.95378 mV	0.09601 ug C	0.30193 ppm
.# 00000	07:32:50	TOC =	13.5606 mV	0.66641 ug C	2.09565 ppm

30ppm

SPL# 00001	07:35:55	TIC =	3.74718 mV	0.18415 ug C	0.57908 ppm
SPL# 00001	07:40:55	TOC =	185.616 mV	9.12165 ug C	28.6851 ppm
SPL# 00001	07:44:00	TIC =	4.39333 mV	0.21590 ug C	0.67894 ppm
SPL# 00001	07:49:00	TOC =	190.255 mV	9.34983 ug C	29.4020 ppm

DI H_2O

SPL# 00002	07:52:05	TIC =	3.07386 mV	0.15106 ug C	0.47503 ppm
SPL# 00002	07:57:05	TOC =	14.9953 mV	0.73692 ug C	2.31736 ppm
SPL# 00002	08:00:10	TIC =	2.40150 mV	0.11801 ug C	0.37112 ppm
SPL# 00002	08:05:10	TOC =	14.3348 mV	0.70446 ug C	2.21529 ppm
SPL# 00003	08:08:15	TIC =	2.14960 mV	0.10563 ug C	0.33219 ppm
SPL# 00003	08:13:15	TOC =	13.7039 mV	0.67345 ug C	2.11779 ppm
SPL# 00003	08:16:20	TIC =	2.28953 mV	0.11251 ug C	0.35382 ppm
SPL# 00003	08:21:20	TOC =	12.8448 mV	0.63124 ug C	1.98503 ppm
SPL# 00004	08:24:25	TIC =	2.42950 mV	0.11939 ug C	0.37545 ppm
SPL# 00004	08:29:25	TOC =	13.1024 mV	0.64389 ug C	2.02484 ppm
.# 00004	08:32:30	TIC =	1.73008 mV	0.08502 ug C	0.26736 ppm
SPL# 00005	08:45:42	TIC =	3.04593 mV	0.15461 ug C	0.48620 ppm
SPL# 00005	08:50:42	TOC =	167.995 mV	8.52[illegible] mg C	26.8169 ppm

30ppm

→ 0 ppm

SPL# 00005	08:53:17	TIC =	[illegible] mV	[illegible] ug C	[illegible] ppm

SPL# 00006 09:01:52 TIC = 4.70268 mV 0.23871 ug C 0.75068 ppm

SPL# 00006 09:11:04 TOC = 237.381 mV 12.0499 ug C 37.8928 ppm

30ppm

SPL# 00007	09:15:50	TIC =	3.83141 mV	0.19449 ug C	0.61160 ppm
SPL# 00007	09:20:50	TOC =	170.011 mV	8.63007 ug C	27.1386 ppm
SPL# 00007	09:23:55	TIC =	3.99992 mV	0.20304 ug C	0.63850 ppm
SPL# 00007	09:28:55	TOC =	166.743 mV	8.46422 ug C	26.6170 ppm
SPL# 00008	09:32:00	TIC =	4.95592 mV	0.25157 ug C	0.79110 ppm
SPL# 00007	09:38:42	TIC =	3.35429 mV	0.17027 ug C	0.53544 ppm
SPL# 00007	09:43:42	TOC =	185.999 mV	9.44165 ug C	29.6907 ppm
SPL# 00007	09:46:47	TIC =	4.05610 mV	0.20589 ug C	0.64747 ppm
SPL# 00007	09:51:47	TOC =	179.376 mV	9.10547 ug C	28.6336 ppm

High

SPL# 00008	09:54:52	TIC =	5.49099 mV	0.27873 ug C	0.87652 ppm
SPL# 00008	09:59:52	TOC =	247.863 mV	12.5820 ug C	39.5661 ppm
SPL# 00008	10:02:57	TIC =	5.51917 mV	0.28016 ug C	0.88101 ppm
SPL# 00008	10:07:57	TOC =	252.395 mV	12.8121 ug C	40.2895 ppm
SPL# 00009	10:11:02	TIC =	3.01780 mV	0.15318 ug C	0.48172 ppm
SPL# 00009	10:16:02	TOC =	11.6162 mV	0.58969 ug C	1.85427 ppm
SPL# 00009	10:19:07	TIC =	2.14960 mV	0.10911 ug C	0.34313 ppm
SPL# 00009	10:24:07	TOC =	10.9632 mV	0.55347 ug C	1.74047 ppm
SPL# 00010	10:27:12	TIC =	3.12993 mV	0.15868 ug C	0.49962 ppm
SPL# 00010	10:32:12	TOC =	48.6759 mV	2.47103 ug C	7.77035 ppm
SPL# 00010	10:35:17	TIC =	2.96173 mV	0.15034 ug C	0.47277 ppm
SPL# 00010	10:40:17	TOC =	47.7897 mV	2.42590 ug C	7.62862 ppm

OL

Low

255697

SPL# 00011	10:49:04	TIC =	34.5591 mV	1.75488 ug C	0.55172 ppm
SPL# 00011	10:51:04				
SPL# 00011	10:54:09	TIC =	28.5697 mV	1.45026 ug C	0.29399 ppm
SPL# 00011	10:59:09	TOC =	30.2555 mV	1.53583 ug C	0.31133 ppm

255698

SPL# 00012	11:02:14	TIC =	22.2319 mV	1.12853 ug C	0.22877 ppm
SPL# 00012	11:07:14	TOC =	24.4621 mV	1.24276 ug C	0.25192 ppm
SPL# 00012	11:10:19	TIC =	19.[illegible] mV	1.[illegible] ug C	0.20572 ppm
SPL# 00012	11:15:19	TOC =	21.[illegible] mV	1.1166[illegible] ug C	0.22[illegible] ppm

262189

000096

SPL# 00013	11:22:40	O.R.	TIC =	3073.85 mV	156.035 ug C	490.676 ppm
SPL# 00013	11:27:40		TOC =	1175.80 mV	59.6862 ug C	187.692 ppm
			DI H2O			
SPL# 00014	11:30:45		TIC =	11.9873 mV	0.60849 ug C	1.91352 ppm
SPL# 00014	11:35:45		TOC =	33.0478 mV	1.67757 ug C	5.27538 ppm
			262190			
SPL# 00015	11:38:50		TIC =	1651.44 mV	83.8302 ug C	263.617 ppm
SPL# 00015	11:43:50		TOC =	362.524 mV	18.4024 ug C	57.8692 ppm
			DI H2O			
SPL# 00016	11:46:55		TIC =	5.74466 mV	0.29161 ug C	0.91701 ppm
SPL# 00016	11:51:55		TOC =	15.4265 mV	0.78307 ug C	2.46251 ppm
			262191			
SPL# 00017	11:55:00	O.R.	TIC =	3078.06 mV	156.248 ug C	491.347 ppm
SPL# 00017	12:00:00		TOC =	1136.65 mV	57.6987 ug C	181.443 ppm
			DI H2O			
SPL# 00018	12:03:05		TIC =	12.3301 mV	0.62590 ug C	1.96824 ppm
SPL# 00018	12:08:05		TOC =	29.1015 mV	1.47725 ug C	4.64544 ppm
			262192			
SPL# 00019	12:11:10		TIC =	970.655 mV	49.2724 ug C	154.945 ppm
SPL# 00019	12:16:10		TOC =	82.7276 mV	4.19941 ug C	13.2057 ppm
			DUP			
SPL# 00019	12:19:15		TIC =	989.304 mV	50.2190 ug C	157.921 ppm
SPL# 00019	12:24:15		TOC =	74.4379 mV	3.77861 ug C	11.8824 ppm
SPL# 00019	12:27:20		TIC =	1000.39 mV	50.7616 ug C	159.691 ppm
SPL# 00019	12:32:20		TOC =	74.1165 mV	3.76230 ug C	11.8311 ppm
			SAMPLE ERROR			
SPL# 00019	12:35:25		TIC =	419.026 mV	21.2707 ug C	66.8889 ppm
SPL# 00019	12:40:25		TOC =	37.4853 mV	1.91298 ug C	6.01567 ppm
SPL# 00019	12:43:30		TIC =	3.63489 mV	0.18451 ug C	0.58025 ppm

Damned Sample

Reanalyses

MDL = 2 mg/l

Dried at 180C

Date	Access. #	Pan #	Pan Wt. g.	Sample Size ml	Dry Pan & Sample Wt. g.	Net Wt. g.	TDS mg/l	RPD %	Init.
8/10	255747	15	1.9030	50	1.9202	0172	344		KIC
	255751	16	1.9120	50	1.9264	0144	288		
	255752	17	1.9084	50	1.9204	0120	240		
	255753	18	1.8839	50	1.8927	0088	176		
	255754	19	1.9390	50	1.9428	0038	76		
8/10	255730	B	72.0936	100	72.0973	0037	37		
8/10	255734	C	67.2011	100	67.2089	0078	78		
8/10	255739	Z	70.3429	100	70.3498	0069	69		
	255755	28	1.9128	50	1.9331	0203	406		
	255756	29	1.9231	50	1.9463	0232	464		
8/10	255757	30	1.9067	50	1.9078	0011	22		
8/10	251714	31	1.9368	50	1.9371	0003	6		
8/10	251783	32	1.9258	50	1.9260	0002	4		
8/10	251982	33	1.9229	50	1.9235	0003	6		
8/11	255697	34	1.9108	50	1.9111	0003	6		
	255698	35	1.8851	50	1.8855	0004	8		
	255757	36	1.9250	50	1.9251	0001	1		
	KNOWN	1	1.8957	50	1.9069	0112	224		
	256089	2	1.9251	50	1.9453	0202	~~406~~ 404	0.5%	
	256089 DUP	3	1.9268	50	1.9461	0203	406		
	256089 SPIKE	4	1.9102	25+25	1.9301	0199	796		
	256092	5	1.9197	50	1.9389	0192	384		
	256149	6	1.9114	50	1.9517	0403	806		
	256291	7	1.9160	50	2.0231	0071	142		
	256384	8	1.9108	50	1.9666	0558	1116		KIC

TOTAL DISSOLVED SOLIDS - Dried at 180C
MDL = 2 mg/l

Calculation: mg/l = net wt. / sample size X 1,000,000
e ss sample when net wt. >0.2 g.

: difference / average X 100 Round TDS results to 2 sig. figures.

rcle samples to be re-checked. Dup and spike: every set of ten or less.

KNOWN

Date	I.D. #	True Value mg/l	Range mg/l	Meas. Value mg/l	Recov. %	Init.
8/11	WD406	220	198~242	224	101.8%	KK

covery % = Measured Value / True Value X 100

SPIKE DATA

Date	Access. #	Spike Sol'n Conc. mg/l A	ml Spike Sol'n B	ml Sample in Spike C	Spike Conc. mg/l D	Ave. Sample Result mg/l E	Spiked Result mg/l F	% Spike Rec.	Init.
8/11	256089	368	25	25	368	405	796	106.1%	KK

Spike Conc. (D) = A X B / C % Spike Rec. = (F - E) / D X 100

Date
8/10
8/10
8/10
8/10
8/10
8/10
8/10
8/10
8/1

ATTACHMENT B

Ground Water Analysis Forms

DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – MONITORING WELL REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME: Naval Weapons Station Earle

SW ID NO.:

LAB NAME: QC Inc.

R (1)

NJPDES NO.: NJ 0 0 2 3 5 4 0 (2–8)

WELL PERMIT NO.: 2 9 - 2 0 6 6 8 - 5 (9–16)

SAMPLE DATE (YR. | MO. | DAY): 9 0 0 8 0 7 (17–22)

NJ LAB CERT. NO.: 7 7 1 6 6 (23–27)

77648

WQM USE (28)

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 0 1 9 0 (MO. YR.) TO 1 2 9 0 (MO. YR.)

SUBMIT WITH SIGNED T-VWX-014

Owners Well No. C-14-A
(C-14-4)

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	ANALYSIS	UNITS	PARAMETER	VALUE	REMARKS
	X			X			X			X		Elevation of top of well casing with cap off (as specified in well completion report)	feet MSL: to nearest .01		104.1	
	X			X			X			X		Elevation of original ground level (as specified in well completion report)	feet MSL: to nearest .01		104.1	
	X			X			X			X		Depth to water table from top of casing prior to sampling with cap off	feet: to nearest .01	82546	17.00	
	X			X			X			X		Depth to water table from original ground level prior to sampling	feet: to nearest .01	72019	17.00	
												Arsenic, Dissolved	UG/L as As	01000		
												Barium, Dissolved	UG/L as Ba	01005		
												Biochemical Oxygen Demand - 5 Day	MG/L	00310		
												Cadmium, Dissolved	UG/L as Cd	01025		
												Chloride, Dissolved	UG/L as Cl	82295		
												Chromium, Dissolved	UG/L as Cr	01030		
												Chromium, Dissolved, Hexavalent	UG/L as Cr	01220		
												Chemical Oxygen Demand (COD), Dissolved	MG/L	00341		
												Coliform Group	N/100 ML	74056		
												Color	Pt - Co	00080		
												Copper, Dissolved	UG/L as Cu	01040		
												Cyanide, Total	MG/L as CN	00720		
												Endrin, Total	UG/L	39390		
												Fluoride, Dissolved	MG/L as F	00950		
												Gross Alpha, Dissolved	Pc/L	01503		
												Gross Beta, Dissolved	Pc/L	03503		
												Hardness, Total as $CaCO_3$	MG/L	00900		
												Iron, Dissolved	UG/L as Fe	01046		
	X						X					Lead, Dissolved	UG/L as Pb	01049	0.005	K
												Lindane, Total	UG/L	39782		
												Manganese, Dissolved	UG/L	01056		
												Mercury, Dissolved	UG/L	71890		

VALUE CODING RULES AND REMARK CODES ON REVERSE

38 42 46 50 54 | 33 34 46 47 50 51 72 73 | 40 41 53 54 66 67 79 80

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – MONITORING WELL REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME: Naval Weapons Station Earle
SW ID NO.:

LAB NAME: QC Inc.

NJPDES NO.	WELL PERMIT NO.	SAMPLE DATE YR. MO. DAY	NJ LAB CERT. NO.	WQM USE
S NJ 0023540	29-20668-5	90 08 07	77166	

(77648)

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 01 90 (MO. YR.) TO 12 90 (MO. YR.)

Owner's Well N. C-14-A
(C-14-4)

SUBMIT WITH SIGNED T-VWX-014

Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	ANALYSIS	UNITS	PARAMETER	VALUE	REMARKS
												Methoxychlor, Total	UG/L	39460		
												Methylene Blue Active Substances	MG/L	38260		
												Nitrogen, Ammonia, Dissolved $NH_3 + NH_4$ as N	MG/L as N	00608		
												Nitrogen, Nitrate Dissolved	MG/L as N	00618		
												Odor	T.O.N.	00085		
x			x				x			x		pH	Standard Units	00400	5.22	
												Phenols, Total Recoverable	UG/L	32730		
												Radium 226, Dissolved	Pc/L	09503		
												Radium 228, Dissolved	Pc/L	81366		
												Selenium, Dissolved	UG/L	01145		
												Silver, Dissolved	UG/L	01075		
												Sodium, Dissolved	MG/L	00930		
												Sulfate, Dissolved (as SO_4)	MG/L	00946		
x			x				x			x		Total Dissolved Solids (TDS)	PPM	70300	821.	
x			x				x			x		Total Organic Carbon (TOC)	PPM	00680	7.2	
												Total Organic Halogen (TOX)	UG/L	70353		
												Toxaphene	UG/L	39400		
												Turbidity	NTU	00076		
												Zinc, Dissolved	UG/L	01090		
												2, 4–D, Total	UG/L	39370		
												2, 4, 5–TP, Total	UG/L	39045		
x			x				x			x		Petroleum Hydrocarbons	PPM	45501	0.5	K

VALUE CODING RULES AND REMARK CODES ON REVERSE

Form VWX-016
1/83

NEW JE Y DEPARTMENT OF ENVIRONMENTAL PROTE N
DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – VOLATILE ORGANICS REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME: Naval Weapons Station Earle

SW ID NO.:

LAB NAME: QC Inc.

T -NJ 0 0 2 3 5 4 0 (NJPDES NO.)

WELL PERMIT NO.: 2 9 - 2 0 6 6 8 - 5

SAMPLE DATE: YR. 9 0 MO. 0 8 DAY 0 7

NJ LAB CERT. NO.: 7 7 1 6 6

WOM USE

77648

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 0 1 9 0 (MO. YR.) TO 1 2 9 0 (MO. YR.)

OWNER'S WELL # C-14A

SUBMIT WITH SIGNED T-VWX-014

(C-14-4)

SAMPLING MONTHS												ANALYTES	UNITS	PARAMETER	VALUE	REMARKS
	X						X					Acrylonitrile	UG/L	34215		
												Benzene	UG/L	34030	5	K
												Bromoform	UG/L	32104	5	K
												Carbon Tetrachloride	UG/L	32102	5	K
												Chlorobenzene	UG/L	34301	5	K
												Chlorodibromomethane	UG/L	34306	5	K
												Chloroform	UG/L	32106	5	K
												1, 1 - Dichloroethane	UG/L	34496	5	K
												1, 2 - Dichloroethane	UG/L	34531	5	K
												1, 1 - Dichloroethylene	UG/L	34501	5	K
												1, 2 - Dichloropropane	UG/L	34541	5	K
												Ethylbenzene	UG/L	34371	5	K
												Methylene Chloride	UG/L	34423	5	K
												1, 1, 2, 2 - Tetrachloroethane	UG/L	34516	10	K
												Tetrachloroethylene	UG/L	34475	5	K
												Toluene	UG/L	34012	5	K
												1, 1, 1 - Trichloroethane	UG/L	34506	5	K
												1, 1, 2 - Trichloroethane	UG/L	34511	5	K
												Trichloroethylene	UG/L	39180	5	K
												Vinyl Chloride	UG/L	39175	10	K
												Acrolein	UG/L	34210		
												Chloroethane	UG/L	34311	10	K
												2 - Chloroethylvinyl Ether	UG/L	34576	10	K
												Dichlorobromomethane	UG/L	32106	5	K
												1, 3 - Dichloropropylene	UG/L	34699	5	K
												Methyl Bromide	UG/L	34413	10	K
												Methyl Chloride	UG/L	34418	10	K
X							X					1, 2 - trans - Dichloroethylene	UG/L	34546	5	K
												1, 2 Dichlorobenzene	UG/L	34526		
												1, 3 Dichlorobenzene	UG/L	34566		
												1, 4 Dichlorobenzene	UG/L	34571		

VALUE CODING RULES AND
REMARK CODES ON REVERSE

DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – MONITORING WELL REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME: Naval Weapons Stati n Earle

SW ID NO.:

LAB NAME: QC Inc.

R (1) NJPDES NO.: NJ 0023540 (2–8)

WELL PERMIT NO.: 29-20666-9 (9–16)

SAMPLE DATE (YR. MO. DAY): 900807 (17–22)

NJ LAB CERT. NO.: 77166 (23–27) 77648

WQM USE (28)

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 0190 (MO. YR.) TO 1290 (MO. YR.)

Owners Well No. C-14-B (C-14-1)

SUBMIT WITH SIGNED T-VWX-014

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	ANALYSIS	UNITS	PARAMETER	VALUE	REMARKS
	X			X			X			X		Elevation of top of well casing with cap off (as specified in well completion report)	feet MSL: to nearest .01		110.71	
	X			X			X			X		Elevation of original ground level (as specified in well completion report)	feet MSL: to nearest .01		108.81	
	X			X			X			X		Depth to water table from top of casing prior to sampling with cap off	feet: to nearest .01	82546	15.00	
	X			X			X			X		Depth to water table from original ground level prior to sampling	feet: to nearest .01	72019	13.17	
												Arsenic, Dissolved	UG/L as As	01000		
												Barium, Dissolved	UG/L as Ba	01005		
												Biochemical Oxygen Demand - 5 Day	MG/L	00310		
												Cadmium, Dissolved	UG/L as Cd	01025		
												Chloride, Dissolved	UG/L as Cl	82285		
												Chromium, Dissolved	UG/L as Cr	01030		
												Chromium, Dissolved, Hexavalent	UG/L as Cr	01220		
												Chemical Oxygen Demand (COD), Dissolved	MG/L	00341		
												Coliform Group	N/100 ML	74056		
												Color	Pt - Co	00080		
												Copper, Dissolved	UG/L as Cu	01040		
												Cyanide, Total	MG/L as CN	00720		
												Endrin, Total	UG/L	39390		
												Fluoride, Dissolved	MG/L as F	00950		
												Gross Alpha, Dissolved	Pc/L	01503		
												Gross Beta, Dissolved	Pc/L	03503		
												Hardness, Total as $CaCO_3$	MG/L	00900		
												Iron, Dissolved	UG/L as Fe	01046		
	X						X					Lead, Dissolved	UG/L as Pb	01049	0.0060	
												Lindane, Total	UG/L	39782		
												Manganese, Dissolved	UG/L	01056		
												Mercury, Dissolved	UG/L	71890		

VALUE CODING RULES AND REMARK CODES ON REVERSE

28 42 55 68 — 33 34 46 47 59 60 72 73 — 40 41 53 54 66 67 79 80

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – MONITORING WELL REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME: Naval Weapons Station Earle | SW ID NO.

LAB NAME: QC Inc.

S	NJPDES NO.	WELL PERMIT NO.	SAMPLE DATE YR. MO. DAY	NJ LAB CERT. NO.	WQM USE
	NJ 0 0 2 3 5 4 0	29.20666.9	90 08 07	77166	

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 01 90 (MO. YR.) TO 12 90 (MO. YR.)

77648

Owner's Well No. C-14-B

(C-14-1)

SUBMIT WITH SIGNED T-VWX-014

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	ANALYSIS	UNITS	PARAMETER	VALUE	REMARKS
												Methoxychlor, Total	UG/L	39480		
												Methylene Blue Active Substances	MG/L	38260		
												Nitrogen, Ammonia, Dissolved $NH_3 + NH_4$ as N	MG/L as N	00608		
												Nitrogen, Nitrate Dissolved	MG/L as N	00618		
												Odor	T.O.N.	00085		
x			x				x				x	pH	Standard Units	00400	4.56	
												Phenols, Total Recoverable	UG/L	32730		
												Radium 226, Dissolved	Pc/L	09503		
												Radium 228, Dissolved	Pc/L	81366		
												Selenium, Dissolved	UG/L	01145		
												Silver, Dissolved	UG/L	01075		
												Sodium, Dissolved	MG/L	00930		
												Sulfate, Dissolved (as SO_4)	MG/L	00946		
x			x				x				x	Total Dissolved Solids (TDS)	PPM	70300	641.	
x			x				x				x	Total Organic Carbon (TOC)	PPM	00680	4.0	
												Total Organic Halogen (TOX)	UG/L	70353		
												Toxaphene	UG/L	39400		
												Turbidity	NTU	00076		
												Zinc, Dissolved	UG/L	01090		
												2, 4–D, Total	UG/L	39370		
												2, 4, 5–TP, Total	UG/L	39045		
x			x				x				x	Petroleum Hydrocarbons	PPM	45501	0.5	K

VALUE CODING RULES AND REMARK CODES ON REVERSE

Form VWX-016
1/83

NEW JE Y DEPARTMENT OF ENVIRONMENTAL PROTE N
DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – VOLATILE ORGANICS REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME: Naval Weapons Station Earle
SW ID NO.:
LAB NAME: QC Inc.

T -NJ 0 0 2 3 5 4 0 (NJPDES NO.)
WELL PERMIT NO.: 29-20666-9
SAMPLE DATE (YR. MO. DAY): 90 08 07
NJ LAB CERT. NO.: 77166
WQM USE

77648

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 01 90 (MO. YR.) TO 12 90 (MO. YR.)

OWNER'S WELL # C-14B

SUBMIT WITH SIGNED T-VWX-014

(C-14-1)

SAMPLING MONTHS	ANALYSIS	UNITS	PARAMETER	VALUE	
X	Acrylonitrile	UG/L	34215		
	Benzene	UG/L	34030	5	K
	Bromoform	UG/L	32104	5	K
	Carbon Tetrachloride	UG/L	32102	5	K
	Chlorobenzene	UG/L	34301	5	K
	Chlorodibromomethane	UG/L	34306	5	K
	Chloroform	UG/L	32106	5	K
	1, 1 - Dichloroethane	UG/L	34496	5	K
	1, 2 - Dichloroethane	UG/L	34531	5	K
	1, 1 - Dichloroethylene	UG/L	34501	5	K
	1, 2 - Dichloropropane	UG/L	34541	5	K
	Ethylbenzene	UG/L	34371	5	K
	Methylene Chloride	UG/L	34423	3	J
	1, 1, 2, 2 - Tetrachloroethane	UG/L	34516	10	K
	Tetrachloroethylene	UG/L	34475	5	K
	Toluene	UG/L	34012	5	K
	1, 1, 1 - Trichloroethane	UG/L	34506	5	K
	1, 1, 2 - Trichloroethane	UG/L	34511	5	K
	Trichloroethylene	UG/L	39180	5	K
	Vinyl Chloride	UG/L	39175	10	K
	Acrolein	UG/L	34210		
	Chloroethane	UG/L	34311	10	K
	2 - Chloroethylvinyl Ether	UG/L	34576	10	K
	Dichlorobromomethane	UG/L	32106	5	K
	1, 3 - Dichloropropylene	UG/L	34699	5	K
	Methyl Bromide	UG/L	34413	10	K
	Methyl Chloride	UG/L	34418	10	K
X	1, 2 - trans - Dichloroethylene	UG/L	34546	5	K
	1, 2 Dichlorobenzene	UG/L	34536		
	1, 3 Dichlorobenzene	UG/L	34566		
	1, 4 Dichlorobenzene	UG/L	34571		

VALUE CODING RULES AND
REMARK CODES ON REVERSE

DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – MONITORING WELL REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME: Naval Weapons Station Earle | SW ID NO.:

LAB NAME: QC Inc.

R | NJPDES NO.: NJ 0023540 | WELL PERMIT NO.: 29-20669-3 | SAMPLE DATE YR. MO. DAY: 90 08 07 | NJ LAB CERT. NO.: 77166 | WQM USE

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 0190 (MO. YR.) TO 1290 (MO. YR.)

77648

SUBMIT WITH SIGNED T-VWX-014

Owners Well No. C-14-C

(C-14-2)

SAMPLING MONTHS: Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	ANALYSIS	UNITS	PARAMETER	VALUE	REMARKS
	X			X			X			X		Elevation of top of well casing with cap off (as specified in well completion report)	feet MSL: to nearest .01		108.30	
	X			X			X			X		Elevation of original ground level (as specified in well completion report)	feet MSL: to nearest .01		106.13	
	X			X			X			X		Depth to water table from top of casing prior to sampling with cap off	feet: to nearest .01	82546	12.08	
	X			X			X			X		Depth to water table from original ground level prior to sampling	feet: to nearest .01	72019	9.91	
												Arsenic, Dissolved	UG/L as As	01000		
												Barium, Dissolved	UG/L as Ba	01005		
												Biochemical Oxygen Demand - 5 Day	MG/L	00310		
												Cadmium, Dissolved	UG/L as Cd	01025		
												Chloride, Dissolved	UG/L as Cl	82295		
												Chromium, Dissolved	UG/L as Cr	01030		
												Chromium, Dissolved, Hexavalent	UG/L as Cr	01220		
												Chemical Oxygen Demand (COD), Dissolved	MG/L	00341		
												Coliform Group	N/100 ML	74056		
												Color	Pt - Co	00080		
												Copper, Dissolved	UG/L as Cu	01040		
												Cyanide, Total	MG/L as CN	00720		
												Endrin, Total	UG/L	39390		
												Fluoride, Dissolved	MG/L as F	00950		
												Gross Alpha, Dissolved	Pc/L	01503		
												Gross Beta, Dissolved	Pc/L	03503		
												Hardness, Total as $CaCO_3$	MG/L	00800		
												Iron, Dissolved	UG/L as Fe	01046		
	X						X					Lead, Dissolved	UG/L as Pb	01049	0.005	K
												Lindane, Total	UG/L	39782		
												Manganese, Dissolved	UG/L	01056		
												Mercury, Dissolved	UG/L	71890		

VALUE CODING RULES AND REMARK CODES ON REVERSE

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – MONITORING WELL REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME: Naval Weapons Station Earle | SW ID NO.

LAB NAME: QC Inc.

S	NJPDES NO.	WELL PERMIT NO.	SAMPLE DATE YR. MO. DAY	NJ LAB CERT. NO.	WQM USE
	NJ 0 0 2 3 5 4 0	29-20669-3	9 0 0 8 0 7	7 7 1 6 6	
				77648	

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 0 1 9 0 (MO. YR.) TO 1 2 9 0 (MO. YR.)

Owner's Well No. C-14-C (C-14-2)

SUBMIT WITH SIGNED T-VWX-014

SAMPLING MONTHS: Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	ANALYSIS	UNITS	PARAMETER	VALUE	REMARKS
												Methoxychlor, Total	UG/L	39460		
												Methylene Blue Active Substances	MG/L	38260		
												Nitrogen, Ammonia, Dissolved $NH_3 + NH_4$ as N	MG/L as N	00608		
												Nitrogen, Nitrate Dissolved	MG/L as N	00618		
												Odor	T.O.N.	00085		
x			x				x			x		pH	Standard Units	00400	4.18	
												Phenols, Total Recoverable	UG/L	32730		
												Radium 226, Dissolved	Pc/L	09503		
												Radium 228, Dissolved	Pc/L	81366		
												Selenium, Dissolved	UG/L	01145		
												Silver, Dissolved	UG/L	01075		
												Sodium, Dissolved	MG/L	00930		
												Sulfate, Dissolved (as SO_4)	MG/L	00946		
x			x				x			x		Total Dissolved Solids (TDS)	PPM	70300	68.	
x			x				x			x		Total Organic Carbon (TOC)	PPM	00680	8.5	
												Total Organic Halogen (TOX)	UG/L	70353		
												Toxaphene	UG/L	39400		
												Turbidity	NTU	00076		
												Zinc, Dissolved	UG/L	01090		
												2, 4–D, Total	UG/L	39370		
												2, 4, 5–TP, Total	UG/L	39045		
x			x				x			x		Petroleum Hydrocarbons	PPM	45501	0.5	K

VALUE CODING RULES AND REMARK CODES ON REVERSE

Form VWX-016
1/83

NEW JE Y DEPARTMENT OF ENVIRONMENTAL PROTE IN
DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – VOLATILE ORGANICS REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME	Naval Weapons Station Earle	SW ID NO.
LAB NAME	QC Inc.	

T -NJ 0 0 2 3 5 4 0 (NJPDES NO.)

WELL PERMIT NO. 2 9 - 2 0 6 6 9 - 3

SAMPLE DATE YR. MO. DAY: 9 0 0 8 0 7

NJ LAB CERT. NO. 7 7 1 6 6

77648

WQM USE

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 0 1 9 0 (MO. YR.) TO 1 2 9 0 (MO. YR.)

OWNER'S WELL # C-14C

(C-14-2)

SUBMIT WITH SIGNED T-VWX-014

SAMPLING MONTHS	ANALYSIS	UNITS	PARAMETER	VALUE	REMARKS
X X	Acrylonitrile	UG/L	34215		
	Benzene	UG/L	34030	5	K
	Bromoform	UG/L	32104	5	K
	Carbon Tetrachloride	UG/L	32102	5	K
	Chlorobenzene	UG/L	34301	5	K
	Chlorodibromomethane	UG/L	34306	5	K
	Chloroform	UG/L	32106	5	K
	1, 1 - Dichloroethane	UG/L	34496	5	K
	1, 2 - Dichloroethane	UG/L	34531	5	K
	1, 1 - Dichloroethylene	UG/L	34501	5	K
	1, 2 - Dichloropropane	UG/L	34541	5	K
	Ethylbenzene	UG/L	34371	5	K
	Methylene Chloride	UG/L	34423	4	J
	1, 1, 2, 2 - Tetrachloroethane	UG/L	34516	10	K
	Tetrachloroethylene	UG/L	34478	5	K
	Toluene	UG/L	34012	5	K
	1, 1, 1 - Trichloroethane	UG/L	34506	5	K
	1, 1, 2 - Trichloroethane	UG/L	34511	5	K
	Trichloroethylene	UG/L	39180	5	K
	Vinyl Chloride	UG/L	39175	10	K
	Acrolein	UG/L	34210		
	Chloroethane	UG/L	34311	10	K
	2 - Chloroethylvinyl Ether	UG/L	34576	10	K
	Dichlorobromomethane	UG/L	32105	5	K
	1, 3 - Dichloropropylene	UG/L	34699	5	K
	Methyl Bromide	UG/L	34413	10	K
	Methyl Chloride	UG/L	34418	10	K
X X	1, 2 - trans - Dichloroethylene	UG/L	34546	5	K
	1, 2 Dichlorobenzene	UG/L	34536		
	1, 3 Dichlorobenzene	UG/L	34566		
	1, 4 Dichlorobenzene	UG/L	34571		

VALUE CODING RULES AND
REMARK CODES ON REVERSE

DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – MONITORING WELL REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME: Naval Weapons Station Earle | SW ID NO.

LAB NAME: QC Inc.

R (1) | NJPDES NO. NJ 0023540 (2–8) | WELL PERMIT NO. 29-20667-7 (9–16) | SAMPLE DATE YR. MO. DAY 90 08 07 (17–22) | NJ LAB CERT. NO. 77166 (23–27) | WQM USE (28)

77648

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 0190 (MO. YR.) TO 1290 (MO. YR.)

SUBMIT WITH SIGNED T-VWX-014

Owners Well No. C-29-A (C-14-3)

SAMPLING MONTHS: Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	ANALYSIS	UNITS	PARAMETER	VALUE	REMARKS
	X			X			X			X		Elevation of top of well casing with cap off (as specified in well completion report)	feet MSL: to nearest .01		108.23	
	X			X			X			X		Elevation of original ground level (as specified in well completion report)	feet MSL: to nearest .01		104.90	
	X			X			X			X		Depth to water table from top of casing prior to sampling with cap off	feet: to nearest .01	82546	11.25	
	X			X			X			X		Depth to water table from original ground level prior to sampling	feet: to nearest .01	72019	7.75	
												Arsenic, Dissolved	UG/L as As	01000		
												Barium, Dissolved	UG/L as Ba	01005		
												Biochemical Oxygen Demand - 5 Day	MG/L	00310		
												Cadmium, Dissolved	UG/L as Cd	01025		
												Chloride, Dissolved	UG/L as Cl	82295		
												Chromium, Dissolved	UG/L as Cr	01030		
												Chromium, Dissolved, Hexavalent	UG/L as Cr	01220		
												Chemical Oxygen Demand (COD), Dissolved	MG/L	00341		
												Coliform Group	N/100 ML	74056		
												Color	Pt - Co	00080		
												Copper, Dissolved	UG/L as Cu	01040		
												Cyanide, Total	MG/L as CN	00720		
												Endrin, Total	UG/L	39390		
												Fluoride, Dissolved	MG/L as F	00850		
												Gross Alpha, Dissolved	Pc/L	01503		
												Gross Beta, Dissolved	Pc/L	03503		
												Hardness, Total as $CaCO_3$	MG/L	00900		
												Iron, Dissolved	UG/L as Fe	01046		
	X						X					Lead, Dissolved	UG/L as Pb	01049	0.0060	
												Lindane, Total	UG/L	38782		
												Manganese, Dissolved	UG/L	01056		
												Mercury, Dissolved	UG/L	71890		

VALUE CODING RULES AND REMARK CODES ON REVERSE

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – MONITORING WELL REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME: Naval Weapons Station Earle | SW ID NO.

LAB NAME: QC Inc.

S	NJPDES NO.	WELL PERMIT NO.	SAMPLE DATE YR. MO. DAY	NJ LAB CERT. NO.	WQM USE
	NJ 0023540	29-20667-7	90 08 07	77166	

77648

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 01 90 (MO. YR.) TO 12 90 (MO. YR.)

Owner's Well N . C-29-A

(C-14-3)

SUBMIT WITH SIGNED T-VWX-014

SAMPLING MONTHS: Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	ANALYSIS	UNITS	PARAMETER	VALUE	REMARKS
												Methoxychlor, Total	UG/L	39480		
												Methylene Blue Active Substances	MG/L	38260		
												Nitrogen, Ammonia, Dissolved $NH_3 + NH_4$ as N	MG/L as N	00608		
												Nitrogen, Nitrate Dissolved	MG/L as N	00618		
												Odor	T.O.N.	00085		
x			x				x				x	pH	Standard Units	00400	4.53	
												Phenols, Total Recoverable	UG/L	32730		
												Radium 226, Dissolved	Pc/L	09503		
												Radium 228, Dissolved	Pc/L	81366		
												Selenium, Dissolved	UG/L	01145		
												Silver, Dissolved	UG/L	01075		
												Sodium, Dissolved	MG/L	00930		
												Sulfate, Dissolved (as SO_4)	MG/L	00946		
x			x				x				x	Total Dissolved Solids (TDS)	PPM	70300	120.	
x			x				x				x	Total Organic Carbon (TOC)	PPM	00680	5.0	
												Total Organic Halogen (TOX)	UG/L	70353		
												Toxaphene	UG/L	39400		
												Turbidity	NTU	00076		
												Zinc, Dissolved	UG/L	01090		
												2, 4–D, Total	UG/L	39370		
												2, 4, 5–TP, Total	UG/L	39045		
x			x				x				x	Petroleum Hydrocarbons	PPM	45501	0.5	K

VALUE CODING RULES AND REMARK CODES ON REVERSE

Form VWX-016
1/83

NEW JE Y DEPARTMENT OF ENVIRONMENTAL PROTE N
DIVISION OF WATER RESOURCES
WATER QUALITY MANAGEMENT ELEMENT

GROUND WATER ANALYSIS – VOLATILE ORGANICS REPORT

PLEASE TYPE OR PRINT WITH BALLPOINT PEN

FACILITY NAME: Naval Weapons Station Earle | SW ID NO.

LAB NAME: QC Inc.

NJPDES NO.: T -NJ 0 0 2 3 5 4 0

WELL PERMIT NO.: 2 9 - 2 0 6 6 7 - 7

SAMPLE DATE YR. MO. DAY: 9 0 0 8 0 7

NJ LAB CERT. NO.: 7 7 1 6 6

WQM USE

77648

THE SCHEDULE INDICATED BELOW IS TO BE OBSERVED FROM 0 1 9 0 (MO. YR.) TO 1 2 9 0 (MO. YR.)

OWNER'S WELL # C-29A

SUBMIT WITH SIGNED T-VWX-014

(C-14-3)

SAMPLING MONTHS

												ANALYTE	UNITS	PARAMETER	VALUE	REMARKS
	X						X					Acrylonitrile	UG/L	34215		
												Benzene	UG/L	34030	5	K
												Bromoform	UG/L	32104	5	K
												Carbon Tetrachloride	UG/L	32102	5	K
												Chlorobenzene	UG/L	34301	5	K
												Chlorodibromomethane	UG/L	34306	5	K
												Chloroform	UG/L	32106	1	J
												1, 1 - Dichloroethane	UG/L	34496	5	K
												1, 2 - Dichloroethane	UG/L	34531	5	K
												1, 1 - Dichloroethylene	UG/L	34501	5	K
												1, 2 - Dichloropropane	UG/L	34541	5	K
												Ethylbenzene	UG/L	34371	5	K
												Methylene Chloride	UG/L	34423	4	J
												1, 1, 2, 2 - Tetrachloroethane	UG/L	34516	10	K
												Tetrachloroethylene	UG/L	34475	5	K
												Toluene	UG/L	34012	5	K
												1, 1, 1 - Trichloroethane	UG/L	34506	5	K
												1, 1, 2 - Trichloroethane	UG/L	34511	5	K
												Trichloroethylene	UG/L	39180	5	K
												Vinyl Chloride	UG/L	39175	10	K
												Acrolein	UG/L	34210		
												Chloroethane	UG/L	34311	10	K
												2 - Chloroethylvinyl Ether	UG/L	34576	10	K
												Dichlorobromomethane	UG/L	32106	5	K
												1, 3 - Dichloropropylene	UG/L	34699	5	K
												Methyl Bromide	UG/L	34413	10	K
												Methyl Chloride	UG/L	34418	10	K
X							X					1, 2 - trans - Dichloroethylene	UG/L	34546	5	K
												1, 2 Dichlorobenzene	UG/L	34536		
												1, 3 Dichlorobenzene	UG/L	34566		
												1, 4 Dichlorobenzene	UG/L	34571		

VALUE CODING RULES AND
REMARK CODES ON REVERSE