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REMEDIAL INVESTIGATION REPORT

ORANGE & ROCKLAND UTILITIES, INC.

INACTIVE HAZARDOUS WASTE DISPOSAL SITE (I.D.#: 3-44-014)

WEST NYACK, NY

VOLUME 3 OF 3 (APPENDIX L)

Prepared for:

Orange and Rockland Utilities, Inc.
1 Blue Hill Plaza
Pearl River, New York

Prepared by:

Rust E & I
12 Metro Park Road
Albany, New York 12205

April 24, 1996

Rust Environment & Infrastructure

APPENDIX L

Data Validation Reports

Volatile Organic Data Validation Summary
Orange & Rockland Utilities, Inc.
West Nyack, New York
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group 25668

Analytical results for ten (10) soil samples with matrix QC and one (1) field duplicate from Orange & Rockland's West Nyack, New York site were reviewed to evaluate the data quality. Data were assessed in accordance with the New York State Department of Environmental Conservation (NYSDEC) **Analytical Services Protocol** (12/91 Revision), the United States Environmental Protection Agency (USEPA) document **USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review** (February 1994) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (Rust) personnel on November 14, 1995.

HA-1 (1-2')	**HA-2 (1-2')**	**HA-4 (1-2')**
HA-1 (1-2') MS	**HA-2 (3-4')**	**HA-4 (3-4')**
HA-1 (1-2') MSD	**HA-3 (1-2')**	**X-1**
HA-1 (3-4')	**HA-3 (3-4')**	**HA-5 (1-2')**
		HA-5 (3-4')

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- System Monitoring Compound (SMC) Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Blank Summary and Data
- GC/MS Instrument Performance Check
- Target Compound Identification/Quantitation
- EPA/NIH Mass Spectral Library Search for TICs
- Quantitation Reports and Mass Spectral Data
- Initial and Continuing Calibration Data
- Internal Standard Areas and Retention Times
- Field Duplicate Data

The above items were in compliance with NYSDEC ASP laboratory QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Deliverable Requirements

The NYSDEC ASP requires that the sample result for each compound be reported from the analysis with the lowest dilution factor, provided that the compound result is not above the linear range of the calibration. Samples HA-4 (3-4') and HA-5 (3-4') were initially analyzed as low level soils with no dilution and then as medium level soils with a dilution factor of ten due to the high concentrations of certain target compounds detected in the original, undiluted sample analyses. Sample X-1 was initially analyzed as a low level soil with a dilution factor of five and then as medium level soils with a dilution factor of ten due to the high concentrations of certain target compounds detected in the low level sample analysis. In accordance with the reporting requirements of the ASP, only those compounds which exceeded the linear range of the instrument in the low level analysis of samples HA-4 (3-4'), HA-5 (3-4') and X-1 have been reported from the medium level analysis of these samples.

System Monitoring Compound (SMC) Recoveries

System monitoring compounds bromofluorobenzene, toluene-d8 and 1,2-dichloroethane-d4 exhibited percent recoveries for HA-4 (3-4') that were outside of the specified QC limits. These exceedances are summarized below. The bromofluorobenzene, toluene-d8 and 1,2-dichloroethane-d4 percent recoveries were all high, indicating a potential high bias. However, since all data associated with sample HA-4 (3-4') were either non-detect or greater than the linear range of the instrument, and since compounds that exceeded the linear range were reported from a medium level analysis of the sample, no data were qualified based on the high percent recoveries.

Non-Compliant SMC Recoveries

Sample ID	SMC	% Recovery	QC Limits
HA-4 (3-4')	Toluene-d8	156%	84-138%
	Bromofluorobenzene	237%	59-113%
	1,2-Dichloroethane-d4	219%	70-121%

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

Sample HA-1 (3-4') was selected for low level matrix spike/matrix spike duplicate (MS/MSD) analysis. While each of the percent recoveries for the MS and the MSD were within QC limits, the relative percent difference (RPD) between the MS and MSD recoveries for chlorobenzene exceeded the QC limit (RPD=22, QC limit=21). No data have been qualified based upon these exceedances, however, because data are not qualified based solely upon MS/MSD data and the other data does not indicate the need for further qualification of the results reported.

Sample X-1 DL was selected for medium level MS/MSD analysis. The X-1 DL MS/MSD exhibited a total of seven percent recoveries and one RPD value that were outside of the specified QC limits. These exceedances are summarized below. Although the MS/MSD data indicates potential matrix interference, no data have been qualified based upon these exceedances because data are not qualified based solely upon MS/MSD data and the other data does not indicate the need for further qualification of the results reported. Furthermore, extremely high concentrations of target compounds are known to interfere with the spike recoveries.

Non-Compliant Medium Level MS/MSD Data

Compound	MS %R	MSD %R	QC Limits	RPD	QC Limit
1,1-Dichloroethene	54*	56*	59-172%	4	22
Trichloroethane	56*	59*	62-137%	5	24
Benzene	64*	90	66-142%	34*	21
Toluene	256*	256*	59-139%	0	21

** Indicates values outside of QC limits.*

Blank Summary and Data

The compound methylene chloride, a common laboratory contaminant, was detected in every method blank associated with this package. Methylene chloride was also detected in every sample associated with this package, with the exception of the original (undiluted) analysis of samples HA4 3-4 and X-1, at a concentration less than ten times the value detected in their associated method blank. In accordance with NYSDEC ASP and the USEPA validation guidelines, the methylene chloride sample results have been reported as non-detect at the contract required quantitation limit (CRQL) and are considered to be laboratory derived and not site related.

Internal Standard Areas and Retention Times

Those samples exhibiting internal standard areas outside of QC limits are summarized below. Samples HA-4 (3-4') and HA-5 (3-4') exhibited chlorobenzene-d5 areas that were outside of the applicable QC limits. In accordance with EPA validation guidelines, all positive results for samples HA-4 (3-4') and HA-5 (3-4') associated with internal standard chlorobenzene-d5 have been flagged with a "V" and are considered estimated. Sample HA-4 (3-4') exhibited a bromochloromethane area that was less than the lower QC limit. In accordance with EPA validation guidelines, all sample results for HA-4 (3-4') associated with the internal standard bromochloromethane have been flagged with a "V" and are considered estimated.

Non-Compliant Internal Standard Areas

Sample ID	Internal Standard	Area	Lower Limit	Upper Limit
HA-4 (3-4')	Chlorobenzene-d5	1967421	324181	1296724
HA-5 (3-4')	Chlorobenzene-d5	317421	324181	1296724
HA-4 (3-4')	Bromochloromethane	66372	83548	334190

EPA/NIH Mass Spectral Library Search for TICs

One or more tentatively identified compounds (TICs) identified as "UNKNOWN SILOXANE" were reported in samples HA-1 (1-2'), HA-2 (1-2'), HA-2 (3-4'), HA-4 (1-2'), HA-5 (1-2') and HA-5 (3-4'). Siloxanes are common column degradation products, and these compounds are considered to be laboratory derived and not site related. Therefore, in accordance with EPA validation guidelines, the unknown siloxane results reported have been rejected and are considered unusable. Please note that the rejection of these non-target compounds does not effect the results reported for target compounds.

Field Duplicate Data

Sample HA-4 (3-4') was selected for duplicate analysis. Although there are no established QC limits for field duplicate RPD data, Rust considers RPD values of 40% or less an indication of acceptable sampling and analytical precision. The field duplicate RPD values summarized below indicate acceptable sampling and analytical precision.

Compound	HA-4 (3-4')	X-1	RPD
Benzene	20,000	17,000	16.2%
Ethylbenzene	76,000	95,000	22.2%
Toluene	120,000	160,000	28.6%
Xylene (total)	390,000	490,000	29.4%

Results expressed in ug/Kg.

Summary

In summary, based on 330 sample data points, 13 of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this package is 100%.

Anthony M. Noce — Reviewed By — 26 FEB 96 — Date

E/ Johnson — Approved By — 2-26-96 — Date

Volatile Organic Analytical Data - Shallow Soil

Orange & Rockland Utilities
West Nyack, New York

Sampling Date: November 14, 1995

Sample ID / Compound	HA-1 (1-2')	HA-1 (3-4')	HA-2 (1-2')	HA-2 (3-4')	HA-3 (1-2')	HA-3 (3-4')	HA-4 (1-2')	HA-4 (3-4')	X-1	HA-5 (1-2')	HA-5 (3-4')
Chloromethane	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 UV	62 U	11 U	12 U
Bromomethane	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 UV	62 U	11 U	12 U
Vinyl Chloride	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 UV	62 U	11 U	12 U
Chloroethane	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 UV	62 U	11 U	12 U
Methylene Chloride	13 U	13 U	12 U	15 U	12 U	13 U	12 U	12 UV	62 U	11 U	12 U
Acetone	**16**	**39**	**22**	**30**	**11 J**	**26**	**22**	12 UV	62 U	**18**	12 U
Carbon Disulfide	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 UV	62 U	11 U	12 U
1,1-Dichloroethene	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 UV	62 U	11 U	12 U
1,1-Dichloroethane	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 UV	62 U	11 U	12 U
1,2-Dichloroethene (total)	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 UV	62 U	11 U	12 U
Chloroform	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 UV	62 U	11 U	12 U
1,2-Dichloroethane	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 UV	62 U	11 U	12 U
2-Butanone	11 U	**16**	**7 J**	**13**	**7 J**	**9 J**	12 U	12 UV	62 U	11 U	12 U
1,1,1-Trichloroethane	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
Carbon Tetrachloride	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
Bromodichloromethane	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
1,2-Dichloropropane	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
cis-1,3-Dichloropropene	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
Trichloroethene	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
Dibromochloromethane	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
1,1,2-Trichloroethane	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
Benzene	11 U	11 U	11 U	12 U	12 U	12 U	**4 J**	**20,000 D**	**17,000 D**	**6 J**	**1,900 JD**
trans-1,3-Dichloropropene	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
Bromoform	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
4-Methyl-2-Pentanone	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
2-Hexanone	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
Tetrachloroethene	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
1,1,2,2-Tetrachloroethane	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
Toluene	11 U	11 U	11 U	**3 J**	12 U	12 U	**8 J**	**120,000 D**	**160,000 D**	**5 J**	**13,000 JD**
Chlorobenzene	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
Ethylbenzene	11 U	11 U	11 U	12 U	12 U	12 U	12 U	**76,000 D**	**95,000 D**	**8 J**	**6,800 JD**
Styrene	11 U	11 U	11 U	12 U	12 U	12 U	12 U	12 U	62 U	11 U	12 U
Xylene (total)	11 U	11 U	11 U	**2 J**	12 U	12 U	**3 J**	**390,000 D**	**490,000 D**	**32**	**39,000 D**

All results expressed in ug/Kg.
Standard Organic Data Qualifiers have been used.
Sample X-1 is a blind field duplicate of sample HA-4 (3-4').

RUST Environmental
12 Metro Park Road
Albany, N.Y. 12205 (518) 458-1313

RUST

Client Name: ORANGE & ROCKLAND UTILITIES, INC.
Project No.: 38301.300
Site Location: West Nyack, New York
Sampler: Kevin Slater

RUST Contact: Ed Fahrenkopf
Laboratory Contact:
Lab Identification: NYTEST Environmental, Inc.
Date Report Required: Normal

Sample Identification	1995 Date	Time	Sample Matrix	Collection Vessel	Lowering Device	# Sample Containers	Preserv.	Comp. or Grab	Comment
HA-1 1-2'	11/14	0930	SOIL	Trowel and HAND AUGER	Rods	1 4oz.	ICE	G	TCL VOCs CLP 91-1
HA-1 3-4'		0950							
HA-2 1-2'		0720							
HA-2 3-4'		1015							
HA-3 1-2'		0735							
HA-3 3-4'		1040							
HA-4 1-2'		0855							
HA-4 3-4'		1105							
HA-5 1-2'		0915							
HA-5 3-4'		1210							
HA-1 3-4' ms/msd	11/14/95	0950	SOIL	HAND AUGER	RODS	1 4oz.	ICE	G	TCL VOCs CLP 91-1
X-1		-							

	Name	Affiliation	Date	Time
Relinquished by:	Kevin Slater	RUST	11/14/95	1930
Received by:				
Relinquished by:				
Received by:				

	Name	Date	Time
Received by Laboratory:	[illegible]	11/15/95	0945
Samples Intact & Properly Preserved:	(Yes) or No		
Laboratory Comments:	Rec'd 5°C		

FORM50

Rust Environment and Infrastructure
NYSDEC Data Validation Compliance Summary

Validator: Timothy J Fahrenkopf
Date: 12/15/95
SDG: 25668
Protocol: ORanye & Rockland

Sample ID	Matrix	VOA	BNA	Pest/PCB	Metals	Cyanide	Rejected Data Refer to Validation Summary for discussion
		Compliancy (Yes, No or Yes w/ exceptions)					
HA-1 1-2'	Soil	X					No Data were Rejected
HA-1 3-4'		X					
HA-2 1-2'		X					
HA-2 3-4'		X					
HA-3 1-2'		X					
HA-3 3-4'		X					
HA-4 1-2'		X					
HA-4 3-4'		X					
HA-5 1-2'		X					
HA-5 3-4'		X					

NOTE: Estimated noncompliant data that are considered valid and usable are discussed in the Data Validation Summary (attached).

STANDARD OPERATING PROCEDURE
Date: January 1992
Revision: 8

	YES	NO	N/A

PART A: VOA ANALYSES

1.0 Traffic Reports and Laboratory Narrative

		YES	NO	N/A
1.1	Are the Traffic Report Forms present for all samples?	✓		
	ACTION: If no, contact lab for replacement of missing or illegible copies.			
1.2	Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		✓	
	ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be flagged as estimated (J). If a soil sample other than TCLP contains more than 90% water, all data should be qualified as unusable (R).			
	ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all Non-Detects "UJ".			
	ACTION: If both VOA vials for a sample have air bubbles or the VOA vial analyzed had air bubbles, flag all positive results "J" and all non-detects "R".			

YES NO N/A

2.0 Holding Times

2.1 Have any VOA technical holding times, determined from ~~date of collection~~ to date of analysis, been exceeded? VTSR ___ ✓ ___

If unpreserved, aqueous samples maintained at 4°C which are to be analyzed for aromatic hydrocarbons must be analyzed within 7 days of collection. If preserved with HCl (pH<2) and stored at 4°C, then aqueous samples must be analyzed within ~~14~~ 10 days of collection. If uncertain about preservation, contact sampler to determine whether or not samples were preserved.

The holding time for soils is ~~10~~ 7 days.

Table of Holding Time Violations

Sample ID	Sample Matrix	Preserved?	(See Traffic Report) Date Sampled	Date Lab Received	Date Analyzed

ON: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon re-analysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R). If holding times are exceeded by more than 28 days, all non detect data are unusable (R).

	YES	NO	N/A

3.0 System Monitoring Compound (SMC) Recovery (Form II)

3.1 Are the VOA SMC Recovery Summaries (Form II) present for each of the following matrices:

a. Low Water	[ ]	—	✓
b. Low Soil	[ ]	—	—
c. Med Soil	[ ]	—	—

3.2 Are all the VOA samples listed on the appropriate System Monitoring Compound Recovery Summary for each of the following matrices:

a. Low Water	[ ]	—	✓
b. Low Soil	[ ]	—	—
c. Med Soil	[ ]	—	—

ACTION: Call lab for explanation/ resubmittals. If missing deliverables are unavailable, document effect in data assessments.

? Were outliers marked correctly with an asterisk? [ ] — —

ACTION: Circle all outliers in red.

Was one or more VOA system monitoring compound recovery outside of contract specifications for any sample or method blank? — [ ] —

yes, were samples re-analyzed? [ ] — —

e method blanks re-analyzed? [ ] — —

	YES	NO	N/A

ACTION: If recoveries are > 10% but 1 or more compounds fail to meet SOW specifications:

1. All positive results are qualified as estimated (J).
2. Flag all non-detects as estimated detection limits ("UJ") where recovery is less than the lower acceptance limit.
3. If SMC recoveries are above allowable levels, do not qualify non-detects.

If any system monitoring compound recovery is <10% :

1. Flag all positive results as estimated ("J").
2. Flag all non-detects as unusable ("R").

Professional judgement should be used to qualify data that only have method blank SMC recoveries out of specification in both original and re-analyses. Check the internal standard areas.

3.5 Are there any transcription/calculation errors between raw data and Form II? ___ [ ] ___

ACTION: If large errors exist, call lab for explanation/resubmittal, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spikes (Form III)

4.1 s the Matrix Spike/Matrix Spike Duplicate ·covery Form (Form III) present? [✓] ___ ___

YES NO N/A

4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices:

a. Low Water [ ] ___ ___

b. Low Soil [ ] ___ ___

c. Med Soil [ ] ___ ___

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

4.3 How many VOA spike recoveries are outside QC limits?

~~Water~~ Soil	Soils med
1 out of 10	7 out of 10

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

~~Water~~ Soil	Soils med
0 out of 5	1 out of 5

ACTION: No action is taken based on MS/MSD data alone. However, using informed professional judgement, the MS/MSD results may be used in conjunction with other QC criteria to determine the need for qualification of the data.

5.0 Blanks (Form IV)

5. s the Method Blank Summary (Form IV) esent? [ ] ___ ___

5.2 quency of Analysis: for the analysis VOA TCL compounds, has a reagent/method k been analyzed for each SDG or every amples of similar matrix (low water, oil, medium soil), whichever is more ent? [ ] ___ ___

	YES	NO	N/A
5.3 Has a VOA method/instrument blank been analyzed at least once every twelve hours for each concentration level and GC/MS system used?	✓		

ACTION: If any method blank data are missing, call lab for explanation/ resubmittal. If method blank data are not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank or trip blank data for missing method blank data.

5.4 Chromatography: review the blank raw data - chromatograms (RICs), quant reports or data system printouts and spectra. Is the chromatographic performance (baseline stability) for each instrument acceptable for VOAs?	✓		

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

6.. Do any method/instrument/reagent blanks have positive results (TCL and/or TIC) for VOAs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor and corrected for % moisture when necessary.	✓		
6.2 Any field/trip/rinse blanks have positive results (TCL and/or TIC)?			✓

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

YES NO N/A

NOTE: All field blank results associated to a particular group of samples (may exceed one per case) must be used to qualify data. Trip blanks are used to qualify only those samples with which they were shipped and are not required for non-aqueous matrices. Blanks may not be qualified because of contamination in another blank. Field Blanks & Trip Blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R).

	Sample conc > CRQL but < 10x blank value	Sample conc < CRQL & <10x blank value	Sample conc > CRQL & >10x blank value
Methylene Chloride Acetone Toluene 2-Butanone	Flag sample result with a "U;	Report CRQL & qualify "U"	No qualification is needed

	Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL value & > 5x blank value
Other Contam-inants	Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are not considered as "hits" when qualifying for classification criteria.

		YES	NO	N/A
ACTION:	For TIC compounds, if the concentration in the sample is less than five times the concentration in the most contaminated associated blank, flag the sample data "R" (unusable).			
6.3	Are there field/rinse/equipment blanks associated with every sample?	[ ]	___	✓
ACTION:	For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.			
7.0	GC/MS Instrument Performance Check (Form V)			
7.1	Are the GC/MS Instrument Performance Check Forms (Form V) present for Bromofluorobenzene (BFB)?	[✓]	___	___
7.2	Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the BFB provided for each twelve hour shift?	[✓]	___	___
7.3	Has an instrument performance compound been analyzed for every twelve hours of sample analysis per instrument?	[✓]	___	___

YES NO N/A

ACTION: List date, time, instrument ID, and sample analysis for which no associated GC/MS tuning data are available.

DATE	TIME	INSTRUMENT	SAMPLE NUMBERS

ACTION: If lab cannot provide missing data, reject ("R") all data generated outside an acceptable twelve hour calibration interval.

7.4 Have the ion abundances been normalized to m/z 95? ✓

ACTION: If mass assignment is in error, qualify all associated data as unusable (R).

7.5 Have the ion abundance criteria been met for each instrument used? ✓

ACTION: List all data which do not meet ion abundance criteria (attach a separate sheet).

ACTION: If ion abundance criteria are not met, the Region II TPO must be notified.

7.6 e there any transcription/calculation errors : tween mass lists and Form Vs? (Check at least t values but if errors are found, check m. ?.) ✓

	YES	NO	N/A
7.7 Have the appropriate number of significant figures ~~(two)~~ three been reported?	✓		
ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.			
7.8 Are the spectra of the mass calibration compound acceptable?	✓		
ACTION: Use professional judgement to determine whether associated data should be accepted, qualified, or rejected.			

8.0 Target Compound List (TCL) Analytes

8.1 Are the Organic Analysis Data Sheets (Form I VOA) present with required header information on each page, for each of the following:			
a. Samples and/or fractions as appropriate	✓		
b. Matrix spikes and matrix spike duplicates	✓		
c. Blanks	✓		
8.2 Are the VOA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following?			
a. Samples and/or fractions as appropriate	✓		
Matrix spikes and matrix spike duplicates (Mass spectra not required)	✓		
c Blanks	✓		
ACTION: If any data are missing, take action specified in 3.2 above.			

		YES	NO	N/A
8.3	Are the response factors shown in the Quant Report?	☑	—	—
8.4	Is chromatographic performance acceptable with respect to:			
	Baseline stability?	☑	—	—
	Resolution?	☑	—	—
	Peak shape?	☑	—	—
	Full-scale graph (attenuation)?	☑	—	—
	Other: _____	☑	—	—

ACTION: Use professional judgement to determine the acceptability of the data.

8.5	Are the lab-generated standard mass spectra of the identified VOA compounds present for each sample?	☑	—	—

ACTION: If any mass spectra are missing, take action specified in 3.2 above. If lab does not generate their own standard spectra, make note in "Contract Problems/Non-compliance".

8.	Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	☑	—	—
8.7	e all ions present in the standard mass ectrum at a relative intensity greater n 10% also present in the sample mass ctrum?	☑	—	—

	YES	NO	N/A
8.8 Do sample and standard relative ion intensities agree within 20%?	[ ]	—	—

ACTION: Use professional judgement to determine acceptability of data. If it is determined that incorrect identifications were made, all such data should be rejected (R), flagged "N" (presumptive evidence of the presence of the compound) or changed to not detected (U) at the calculated detection limit. In order to be positively identified, the data must comply with the criteria listed in 8.6, 8.7, and 8.8.

ACTION: When sample carry-over is a possibility, professional judgement should be used to determine if instrument cross-contamination has affected any positive compound identification.

9.0 Tentatively Identified Compounds (TIC)

9.1 Are all Tentatively Identified Compound Forms (Form I Part B) present; and do listed TICs include scan number or retention time, estimated concentration and "JN" qualifier?	[/]	—	—
Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following:			
Samples and/or fractions as appropriate	[/]	—	—
Blanks	[/]	—	—

ACTION: If any TIC data are missing, take action specified in 3.2 above.

ACTION: Add "JN" qualifier if missing.

	YES	NO	N/A
9.3 Are any TCL compounds (from any fraction) listed as TIC compounds (example: 1,2-dimethylbenzene is xylene- a VOA TCL analyte - and should not be reported as a TIC)?	___	[/]	___
ACTION: Flag with "R" any TCL compound listed as a TIC.			
9.4 Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	[/]	___	___
9.5 Do TIC and "best match" standard relative ion intensities agree within 20%?	[/]	___	___

ACTION: Use professional judgement to determine acceptability of TIC identifications. If it is determined that an incorrect identification was made, change identification to "unknown" or to some less specific identification (example: "C3 substituted benzene") as appropriate.

Also, when a compound is not found in any blank, but is detected in a sample and is a suspected artifact of a common laboratory contaminant, the result should be qualified as unusable (R). (i.e. Common Lab Contaminants: CO_2 (M/E 44), Siloxanes (M/E 73) Hexane, Aldol Condensation Products, Solvent Preservatives, and related by products - see Functional Guidelines for more guidance).

	YES	NO	N/A

10.0 Compound Quantitation and Reported Detection Limits

10.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the correct internal standard, quantitation ion, and RRF were used to calculate Form I result. Were any errors found? | | ✓ | |

10.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture? ✓ | | |

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note errors under "Conclusions".

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

11.0 Standards Data (GC/MS)

11.1 Are the Reconstructed Ion Chromatograms, and data system printouts (Quant. Reports) present for initial and continuing calibration? ✓ | |

ACTION: If any calibration standard data are missing, take action specified in 3.2 above.

	YES	NO	N/A

12.0 GC/MS Initial Calibration (Form VI)

12.1 Are the Initial Calibration Forms (Form VI) present and complete for the volatile fraction at concentrations of 10, 20, 50, 100, 200 ug/l? Are there separate calibrations for low water/med soils and low soil samples? ✓ — —

ACTION: If any calibration standard forms are missing, take action specified in 3.2 above.

12.2 Were all low level soil standards, blanks and samples analyzed by heated purge? ✓ — —

ACTION: If low level soil samples were not heated during purge, qualify positive hits "J" and non-detects "R".

12.3 Are response factors stable for VOA's over the concentration range of the calibration (%Relative Standard Deviation $(\%RSD)_{\Lambda}$)? ✓ — —
less than maximum %RSD
ACTION: Circle all outliers in red.

12.4 Are the RRFs above the minimum RRFs? ✓ — —

Action: Circle all outliers in red.

	YES	NO	N/A
12.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %RSD? (Check at least 2 values, but if errors are found, check more.)		✓	

13.0 GC/MS Continuing Calibration (Form VII)

	YES	NO	N/A
13.1 Are the Continuing Calibration Forms (Form VII) present and complete for the volatile fraction?	✓		
13.2 Has a continuing calibration standard been analyzed for every twelve hours of sample analysis per instrument?	✓		

ACTION: List below all sample analyses that were not within twelve hours of the previous continuing calibration analysis.

_____

_____

_____

ACTION: If any forms are missing or no continuing calibration standard has been analyzed within twelve hours of every sample analysis, call lab for explanation/resubmittal. If continuing calibration data are not available, flag all associated sample data as unusable ("R").

	YES	NO	N/A
13.3 Do any volatile compounds have a % Difference (% D) between the initial and continuing RRF which exceeds the criteria?		✓	

ACTION: Circle all outliers in red.

	YES	NO	N/A
13.4 Do any volatile compounds have a RRF less than the minimum RRF? ACTION: Circle all outliers in red.	✓		
13.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %difference (%D) between initial and continuing RRFs? (Check at least two values but if errors are found, check more.) ACTION: Circle errors in red. ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note errors under "Conclusions".		✓	
14.0 Internal Standard (Form VIII)			
14.1 Are the internal standard areas (Form VIII) of every sample and blank within the upper and lower limits (-50% to + 100%) for each continuing calibration?			✓

ACTION: List all the outliers below. SDG Report

Sample #	Internal Std	Area	Lower Limit	Upper Limit

(Attach additional sheets if necessary.)

	YES	NO	N/A

ACTION: 1. If the internal standard area count is outside the upper or lower limit, flag with "J" all positive results quantitated with this internal standard.

2. Non-detects associated with IS area counts > 100% should not be qualified.

3. If IS area is below the lower limit (< 50%), qualify all associated non-detects (U values) "J". If extremely low area counts are reported, (< 25%) or if performance exhibits a major abrupt drop off, flag all associated non-detects as unusable ("R").

14.2 Are the retention times of the internal standards within 30 seconds of the associated calibration standard? [✓] — —

ACTION: Professional judgement should be used to qualify data if the retention times differ by more than 30 seconds.

15.0 Field Duplicates

15.1 Were any field duplicates submitted for VOA analysis? [✓] — —

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

Organic Data Qualifiers

U - The compound was analyzed for but not detected at or above the quantitation limit indicated.

J - The compound was analyzed for and determined to be present in the sample because the mass spectrum of the compound meets the identification criteria of the method. The concentration reported is an estimated value, less than the practical quantitation limit for the sample.

B - The compound is also found in an associated blank.

V - The reported value is considered estimated due to variance from quality control criteria

S - The reported value is suspected to be due to laboratory contamination.

R - The reported value is unusable and rejected due to variance from quality control criteria.

D - The reported value is taken from the analysis of a diluted sample.

E - The reported value exceeds the calibration range of the instrument.

N - Indicates presumptive evidence for compound identification.

A - Indicates that the compound is an aldol condensation product.

C - Compound identification has been qualitatively confirmed by GC/MS.

P - Indicates that the percent difference between the results from the two analytical columns is greater than 25%.

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA11-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566801

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7190.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 10 Date Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	13	~~B~~ U
67-64-1	Acetone	16	
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

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000010

~~FORM I VOA~~

NYSDEC ASP 12/91

1E

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HA11-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566801

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7190.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 10 Data Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		~~UNKNOWN SILOXANE~~	~~17.168~~	~~15~~	~~J~~ R
2.		~~UNKNOWN SILOXANE~~	~~21.296~~	~~22~~	~~J~~ R
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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CMM 19FEB96

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA13-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566802

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7191.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 13 Date Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	13	~~B~~ U
67-64-1	Acetone	39	
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	16	
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

TJF 15DEC95
GMM 19FEB96

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

HA13-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566802

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7191.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 13 Data Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
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CMM 19 FEB 96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA21-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566803

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7192.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 8 Date Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	12	~~B~~ U
67-64-1	Acetone	22	
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	7	J
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	11	U
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	11	U
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	11	U

TJF 15 DEC 95
CMM 19 FEB 96

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

HA21-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566803

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7192.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 8 Data Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 2 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.		~~UNKNOWN SILOXANE~~	~~17.178~~	~~10~~	~~J~~	R
2.		~~UNKNOWN SILOXANE~~	~~21.305~~	~~19~~	~~J~~	R
3.						
4.						
5.						
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CLM 19 FEB96

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA23-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566804

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7193.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 15 Date Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	15	~~B~~ U
67-64-1	Acetone	30	
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	13	
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	3	J
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	2	J

TJF 15DEC95
CMT 19 FEB96

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1E

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HA23-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566804

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7193.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 15 Data Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: ~~2~~ 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.		~~UNKNOWN SILOXANE~~	~~17.187~~	~~11~~	~~J~~	R
2.		~~UNKNOWN SILOXANE~~	~~21.296~~	~~18~~	~~J~~	R
3.						
4.						
5.						
6.						
7.						
8.						
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TJF 15 DEC 95
CMT 19 FEB 96

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA31-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566805

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7194.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 14 Date Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q
74-87-3	Chloromethane		12	U
74-83-9	Bromomethane		12	U
75-01-4	Vinyl Chloride		12	U
75-00-3	Chloroethane		12	U
75-09-2	Methylene Chloride	.12	~~11~~	~~JB~~ U
67-64-1	Acetone		11	J
75-15-0	Carbon Disulfide		12	U
75-35-4	1,1-Dichloroethene		12	U
75-34-3	1,1-Dichloroethane		12	U
540-59-0	1,2-Dichloroethene (total)		12	U
67-66-3	Chloroform		12	U
107-06-2	1,2-Dichloroethane		12	U
78-93-3	2-Butanone		7	J
71-55-6	1,1,1-Trichloroethane		12	U
56-23-5	Carbon Tetrachloride		12	U
75-27-4	Bromodichloromethane		12	U
78-87-5	1,2-Dichloropropane		12	U
10061-01-5	cis-1,3-Dichloropropene		12	U
79-01-6	Trichloroethene		12	U
124-48-1	Dibromochloromethane		12	U
79-00-5	1,1,2-Trichloroethane		12	U
71-43-2	Benzene		12	U
10061-02-6	trans-1,3-Dichloropropene		12	U
75-25-2	Bromoform		12	U
108-10-1	4-Methyl-2-Pentanone		12	U
591-78-6	2-Hexanone		12	U
127-18-4	Tetrachloroethene		12	U
79-34-5	1,1,2,2-Tetrachloroethane		12	U
108-88-3	Toluene		12	U
108-90-7	Chlorobenzene		12	U
100-41-4	Ethylbenzene		12	U
100-42-5	Styrene		12	U
1330-20-7	Xylene (total)		12	U

TJF 15DEC95
GMM 19FEB96

000018

1E

NYSDEC SAMPLE NO.

HA31-2

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566805

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7194.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 14 Data Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TJF 15DEC95
CMM 19FEB96

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA33-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566806

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7195.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 16 Date Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	13	~~B~~ U
67-64-1	Acetone	26	
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	9	J
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	12	U
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	12	U

TJF 15DEC95

CMM 19FEB96

000020

1E

NYSDEC SAMPLE NO.

HA33-4

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566806

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7195.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 16 Data Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 /

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
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19.					
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24.					
25.					
26.					
27.					
28.					
29.					
30.					

TJF 15 DEC 95
CMM 19 FEB 96

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA44-2 dmn 19FEB96

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566807

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7208.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 20 Date Analyzed: 11/20/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	12	U
74-83-9	Bromomethane	12	U
75-01-4	Vinyl Chloride	12	U
75-00-3	Chloroethane	12	U
75-09-2	Methylene Chloride	12	~~JB~~ U
67-64-1	Acetone	22	
75-15-0	Carbon Disulfide	12	U
75-35-4	1,1-Dichloroethene	12	U
75-34-3	1,1-Dichloroethane	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
67-66-3	Chloroform	12	U
107-06-2	1,2-Dichloroethane	12	U
78-93-3	2-Butanone	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
75-27-4	Bromodichloromethane	12	U
78-87-5	1,2-Dichloropropane	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
79-01-6	Trichloroethene	12	U
124-48-1	Dibromochloromethane	12	U
79-00-5	1,1,2-Trichloroethane	12	U
71-43-2	Benzene	4	J
10061-02-6	trans-1,3-Dichloropropene	12	U
75-25-2	Bromoform	12	U
108-10-1	4-Methyl-2-Pentanone	12	U
591-78-6	2-Hexanone	12	U
127-18-4	Tetrachloroethene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
108-88-3	Toluene	8	J
108-90-7	Chlorobenzene	12	U
100-41-4	Ethylbenzene	12	U
100-42-5	Styrene	12	U
1330-20-7	Xylene (total)	3	J

TJF 15DEC95
dmn 19FEB96

1E

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HA44-2 WMN 19 FEB96

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566807

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7208.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 20 Data Analyzed: 11/20/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 32

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	4.471	17	J
2.		UNKNOWN	4.757	9	J
3.		~~UNKNOWN SILOXANE~~	~~21.312~~	~~10~~	~~J~~ R
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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16.					
17.					
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24.					
25.					
26.					
27.					
28.					
29.					
30.					

TJF 15 DEC95
WMN 19 FEB96

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA43-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566808

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7197.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 20 Date Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	
74-87-3	Chloromethane		12	U	V
74-83-9	Bromomethane		12	U	V
75-01-4	Vinyl Chloride		12	U	V
75-00-3	Chloroethane		12	U	V
75-09-2	Methylene Chloride		12	U	V
67-64-1	Acetone		12	U	V
75-15-0	Carbon Disulfide		12	U	V
75-35-4	1,1-Dichloroethene		12	U	V
75-34-3	1,1-Dichloroethane		12	U	V
540-59-0	1,2-Dichloroethene (total)		12	U	V
67-66-3	Chloroform		12	U	V
107-06-2	1,2-Dichloroethane		12	U	V
78-93-3	2-Butanone		12	U	V
71-55-6	1,1,1-Trichloroethane		12	U	
56-23-5	Carbon Tetrachloride		12	U	
75-27-4	Bromodichloromethane		12	U	
78-87-5	1,2-Dichloropropane		12	U	
10061-01-5	cis-1,3-Dichloropropene		12	U	
79-01-6	Trichloroethene		12	U	
124-48-1	Dibromochloromethane		12	U	
79-00-5	1,1,2-Trichloroethane		12	U	
71-43-2	Benzene	20000	~~2800~~	~~E~~	D
10061-02-6	trans-1,3-Dichloropropene		12	U	
75-25-2	Bromoform		12	U	
108-10-1	4-Methyl-2-Pentanone		12	U	
591-78-6	2-Hexanone		12	U	
127-18-4	Tetrachloroethene		12	U	
79-34-5	1,1,2,2-Tetrachloroethane		12	U	
108-88-3	Toluene	120000	~~27000~~	~~E~~	D
108-90-7	Chlorobenzene		12	U	
100-41-4	Ethylbenzene	76000	~~12~~	~~U~~	D
100-42-5	Styrene		12	U	
1330-20-7	Xylene (total)	390000	~~73000~~	~~E~~	D

amm 17FEB96 ~~ETHYLBENZENE~~

HE BENZENE, TOLUENE, AND XYLENE (TOTAL) RESULTS REPORTED HAVE BEEN TRANSFERRED FROM THE FORM I OF HA-4(3-4')DL, A 10X DILUTION OF SAMPLE HA-4(3-4').

000022

TJF 15DEC95

amm 17 FEB96

1E

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

HA43-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566808

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7197.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 20 Data Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 10 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	10.268	140	J
2.		UNKNOWN HYDROCARBON	10.681	180	J
3.		UNKNOWN HYDROCARBON	10.921	65	J
4.		UNKNOWN HYDROCARBON	11.285	260	J
5.		UNKNOWN HYDROCARBON	11.602	250	J
6.		UNKNOWN HYDROCARBON	12.466	250	J
7.		UNKNOWN	12.735	83	J
8.		UNKNOWN HYDROCARBON	14.464	96	J
9.		UNKNOWN AROMATIC	16.453	160	J
10.		UNKNOWN AROMATIC	19.455	96	J
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

TJF 15DEC95
CMM 19FEB96

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA43-4DL

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566808

Sample wt/vol: 4.0 (g/mL) G Lab File ID: P7987.D

Level: (low/med) MED Date Received: 11/15/95

% Moisture: not dec. 20 Date Analyzed: 11/20/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
74-87-3	Chloromethane	15000	U	
74-83-9	Bromomethane	15000	U	
75-01-4	Vinyl Chloride	15000	U	
75-00-3	Chloroethane	15000	U	
75-09-2	Methylene Chloride	43000	BD	
67-64-1	Acetone	15000	U	
75-15-0	Carbon Disulfide	15000	U	
75-35-4	1,1-Dichloroethene	6000	JD	
75-34-3	1,1-Dichloroethane	15000	U	
540-59-0	1,2-Dichloroethene (total)	15000	U	
67-66-3	Chloroform	~~1700~~	~~JD~~	15000 U
107-06-2	1,2-Dichloroethane	15000	U	
78-93-3	2-Butanone	15000	U	
71-55-6	1,1,1-Trichloroethane	15000	U	
56-23-5	Carbon Tetrachloride	15000	U	
75-27-4	Bromodichloromethane	15000	U	
78-87-5	1,2-Dichloropropane	15000	U	
10061-01-5	cis-1,3-Dichloropropene	15000	U	
79-01-6	Trichloroethene	5600	JD	
124-48-1	Dibromochloromethane	15000	U	
79-00-5	1,1,2-Trichloroethane	15000	U	
71-43-2	Benzene	20000	D	
10061-02-6	trans-1,3-Dichloropropene	15000	U	
75-25-2	Bromoform	15000	U	
108-10-1	4-Methyl-2-Pentanone	15000	U	
591-78-6	2-Hexanone	15000	U	
127-18-4	Tetrachloroethene	15000	U	
79-34-5	1,1,2,2-Tetrachloroethane	15000	U	
108-88-3	Toluene	120000	D	
108-90-7	Chlorobenzene	~~6700~~	~~JD~~	15000 U
100-41-4	Ethylbenzene	76000	D	
100-42-5	Styrene	15000	U	
1330-20-7	Xylene (total)	390000	D	

THE BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE (TOTAL) RESULTS REPORTED HAVE BEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, UNDILUTED ANALYSIS OF SAMPLE HA-4 (3-4'). FORM I VOA TJF 15 DEC 95

CLM 19 FEB 96

1E

NYSDEC SAMPLE NO.

HA43-4DL

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566808

Sample wt/vol: 4.0 (g/mL) G Lab File ID: P7987.D

Level: (low/med) MED Date Received: 11/15/95

% Moisture: not dec. 20 Data Analyzed: 11/20/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100 (uL)

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	5.115	120000	JD
2.		UNKNOWN HYDROCARBON	5.455	81000	JD
3.		UNKNOWN HYDROCARBON	5.775	95000	JD
4.		UNKNOWN HYDROCARBON	7.435	90000	JD
5.		UNKNOWN HYDROCARBON	7.714	120000	JD
6.		UNKNOWN HYDROCARBON	10.375	89000	JD
7.		UNKNOWN HYDROCARBON	10.694	79000	JD
8.		UNKNOWN AROMATIC	18.182	160000	JD
9.		UNKNOWN AROMATIC	19.224	170000	JD
10.		UNKNOWN AROMATIC	20.960	73000	JD
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
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29.					
30.					

TJF 15DEC95
CMM 19FEB96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

X-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566813

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7203.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 20 Date Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	
74-87-3	Chloromethane		62	U	
74-83-9	Bromomethane		62	U	
75-01-4	Vinyl Chloride		62	U	
75-00-3	Chloroethane		62	U	
75-09-2	Methylene Chloride		62	U	
67-64-1	Acetone		62	U	
75-15-0	Carbon Disulfide		62	U	
75-35-4	1,1-Dichloroethene		62	U	
75-34-3	1,1-Dichloroethane		62	U	
540-59-0	1,2-Dichloroethene (total)		62	U	
67-66-3	Chloroform		62	U	
107-06-2	1,2-Dichloroethane		62	U	
78-93-3	2-Butanone		62	U	
71-55-6	1,1,1-Trichloroethane		62	U	
56-23-5	Carbon Tetrachloride		62	U	
75-27-4	Bromodichloromethane		62	U	
78-87-5	1,2-Dichloropropane		62	U	
10061-01-5	cis-1,3-Dichloropropene		62	U	
79-01-6	Trichloroethene		62	U	
124-48-1	Dibromochloromethane		62	U	
79-00-5	1,1,2-Trichloroethane		62	U	
71-43-2	Benzene	170000	~~11000~~	~~E~~	D
10061-02-6	trans-1,3-Dichloropropene		62	U	
75-25-2	Bromoform		62	U	
108-10-1	4-Methyl-2-Pentanone		62	U	
591-78-6	2-Hexanone		62	U	
127-18-4	Tetrachloroethene		62	U	
79-34-5	1,1,2,2-Tetrachloroethane		62	U	
108-88-3	Toluene	1600000	~~67000~~	~~E~~	D
108-90-7	Chlorobenzene		62	U	
100-41-4	Ethylbenzene	930000	~~62~~	~~U~~	D
100-42-5	Styrene		62	U	
1330-20-7	Xylene (total)	4900000	~~170000~~	~~E~~	D

IE BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE (TOTAL) RESULTS HAVE BEE TRANSFERRED FROM THE FORM I FOR ~~HA-5C~~ X-1 DL, A 10 X DILUTION OF A MEDIUM LEVEL EXTRACT OF SAMPLE X-1

000034

TJF 15 DEC 95
ADD 19 FEB 96

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

X-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566813

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7203.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 20 Data Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 10 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	10.199	700	J
2.		UNKNOWN HYDROCARBON	10.650	910	J
3.		UNKNOWN HYDROCARBON	11.245	1400	J
4.		UNKNOWN	11.552	1400	J
5.		UNKNOWN HYDROCARBON	12.406	1300	J
6.		UNKNOWN	12.694	460	J
7.		UNKNOWN HYDROCARBON	14.433	520	J
8.		UNKNOWN AROMATIC	16.441	1000	J
9.		UNKNOWN AROMATIC	19.444	570	J
10.		UNKNOWN AROMATIC	20.512	420	J
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
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30.					

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

X-1DL

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566813

Sample wt/vol: 4.0 (g/mL) G Lab File ID: P7989.D

Level: (low/med) MED Date Received: 11/15/95

% Moisture: not dec. 20 Date Analyzed: 11/20/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	15000	U
74-83-9	Bromomethane	15000	U
75-01-4	Vinyl Chloride	15000	U
75-00-3	Chloroethane	15000	U
75-09-2	Methylene Chloride	41000	BD
67-64-1	Acetone	15000	U
75-15-0	Carbon Disulfide	15000	U
75-35-4	1,1-Dichloroethene	15000	U
75-34-3	1,1-Dichloroethane	15000	U
540-59-0	1,2-Dichloroethene (total)	15000	U
67-66-3	Chloroform	15000	U
107-06-2	1,2-Dichloroethane	15000	U
78-93-3	2-Butanone	15000	U
71-55-6	1,1,1-Trichloroethane	15000	U
56-23-5	Carbon Tetrachloride	15000	U
75-27-4	Bromodichloromethane	15000	U
78-87-5	1,2-Dichloropropane	15000	U
10061-01-5	cis-1,3-Dichloropropene	15000	U
79-01-6	Trichloroethene	15000	U
124-48-1	Dibromochloromethane	15000	U
79-00-5	1,1,2-Trichloroethane	15000	U
71-43-2	Benzene	17000	D
10061-02-6	trans-1,3-Dichloropropene	15000	U
75-25-2	Bromoform	15000	U
108-10-1	4-Methyl-2-Pentanone	15000	U
591-78-6	2-Hexanone	15000	U
127-18-4	Tetrachloroethene	15000	U
79-34-5	1,1,2,2-Tetrachloroethane	15000	U
108-88-3	Toluene	160000	D
108-90-7	Chlorobenzene	15000	U
100-41-4	Ethylbenzene	95000	D
100-42-5	Styrene	15000	U
1330-20-7	Xylene (total)	490000	D

THE BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE (TOTAL) RESULTS HAVE BEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, ~~UNDILUTED~~ 5X DILUTION LOW LEVEL ANALYSIS OF SAMPLE X-1. TJF 15 DEC 95 (MM) 19 FEB 96

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

X-1DL

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566813

Sample wt/vol: 4.0 (g/mL) G Lab File ID: P7989.D

Level: (low/med) MED Date Received: 11/15/95

% Moisture: not dec. 20 Data Analyzed: 11/20/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100 (uL)

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	5.115	140000	JD
2.		UNKNOWN HYDROCARBON	5.455	95000	JD
3.		UNKNOWN HYDROCARBON	5.775	110000	JD
4.		UNKNOWN HYDROCARBON	7.436	100000	JD
5.		UNKNOWN HYDROCARBON	7.724	140000	JD
6.		UNKNOWN HYDROCARBON	10.386	110000	JD
7.		UNKNOWN HYDROCARBON	10.705	92000	JD
8.		UNKNOWN AROMATIC	18.183	190000	JD
9.		UNKNOWN AROMATIC	19.224	210000	JD
10.		UNKNOWN AROMATIC	20.957	85000	JD
11.					
12.					
13.					
14.					
15.					
16.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA51-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566809

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7209.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 9 Date Analyzed: 11/20/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	11	U
74-83-9	Bromomethane	11	U
75-01-4	Vinyl Chloride	11	U
75-00-3	Chloroethane	11	U
75-09-2	Methylene Chloride	11 ~~6~~	~~JB~~ U
67-64-1	Acetone	18	
75-15-0	Carbon Disulfide	11	U
75-35-4	1,1-Dichloroethene	11	U
75-34-3	1,1-Dichloroethane	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
67-66-3	Chloroform	11	U
107-06-2	1,2-Dichloroethane	11	U
78-93-3	2-Butanone	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
75-27-4	Bromodichloromethane	11	U
78-87-5	1,2-Dichloropropane	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
79-01-6	Trichloroethene	11	U
124-48-1	Dibromochloromethane	11	U
79-00-5	1,1,2-Trichloroethane	11	U
71-43-2	Benzene	6	J
10061-02-6	trans-1,3-Dichloropropene	11	U
75-25-2	Bromoform	11	U
108-10-1	4-Methyl-2-Pentanone	11	U
591-78-6	2-Hexanone	11	U
127-18-4	Tetrachloroethene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
108-88-3	Toluene	5	J
108-90-7	Chlorobenzene	11	U
100-41-4	Ethylbenzene	8	J
100-42-5	Styrene	11	U
1330-20-7	Xylene (total)	32	

TJF 15 DEC 95 QMM 19FEB96

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

HA51-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566809

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7209.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 9 Data Analyzed: 11/20/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 3

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q	
1.		~~UNKNOWN SILOXANE~~	~~17.169~~	~~10~~	~~J~~	R
2.		UNKNOWN AROMATIC	20.354	6	J	
3.		~~UNKNOWN SILOXANE~~	~~21.307~~	~~10~~	~~J~~	R
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA53-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566810

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7199.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 14 Date Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG		Q	
74-87-3	Chloromethane		12	U	
74-83-9	Bromomethane		12	U	
75-01-4	Vinyl Chloride		12	U	
75-00-3	Chloroethane		12	U	
75-09-2	Methylene Chloride		12	U	
67-64-1	Acetone		12	U	
75-15-0	Carbon Disulfide		12	U	
75-35-4	1,1-Dichloroethene		12	U	
75-34-3	1,1-Dichloroethane		12	U	
540-59-0	1,2-Dichloroethene (total)		12	U	
67-66-3	Chloroform		12	U	
107-06-2	1,2-Dichloroethane		12	U	
78-93-3	2-Butanone		12	U	
71-55-6	1,1,1-Trichloroethane		12	U	
56-23-5	Carbon Tetrachloride		12	U	
75-27-4	Bromodichloromethane		12	U	
78-87-5	1,2-Dichloropropane		12	U	
10061-01-5	cis-1,3-Dichloropropene		12	U	
79-01-6	Trichloroethene		12	U	
124-48-1	Dibromochloromethane		12	U	
79-00-5	1,1,2-Trichloroethane		12	U	
71-43-2	Benzene	1900	~~1800~~	~~E~~	JD
10061-02-6	trans-1,3-Dichloropropene		12	U	
75-25-2	Bromoform		12	U	
108-10-1	4-Methyl-2-Pentanone		12	U	
591-78-6	2-Hexanone		12	U	
127-18-4	Tetrachloroethene		12	U	
79-34-5	1,1,2,2-Tetrachloroethane		12	U	
108-88-3	Toluene	130000	~~9700~~	~~E~~	JD
108-90-7	Chlorobenzene		12	U	
100-41-4	Ethylbenzene	6300	~~4300~~	~~E~~	JD
100-42-5	Styrene		12	U	
1330-20-7	Xylene (total)	39000	~~16000~~	~~E~~	D

RESULTS

THE BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE (TOTAL) HAVE BEEN TRANSFERRED FROM THE FORM I FOR HA-5 (3-4') DL, A 10X DILUTION OF A MEDIUM LEVEL EXTRACT OF SAMPLE HA-5 (3-4'). TNF 15DEC95

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.: HA53-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566810

Sample wt/vol: 5.0 (g/mL) G Lab File ID: M7199.D

Level: (low/med) LOW Date Received: 11/15/95

% Moisture: not dec. 14 Data Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	10.607	200	J
2.		UNKNOWN HYDROCARBON	11.153	260	J
3.		UNKNOWN HYDROCARBON	11.470	250	J
4.		UNKNOWN	12.303	180	J
5.		UNKNOWN HYDROCARBON	14.347	180	J
6.		UNKNOWN AROMATIC	19.328	340	J
7.		UNKNOWN AROMATIC	19.453	140	J
8.		UNKNOWN AROMATIC	20.414	400	J
9.		UNKNOWN AROMATIC	21.539	160	J
10.		UNKNOWN AROMATIC	22.116	140	J
11.					
12.					
13.					
14.					
15.					
16.					
17.					
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19.					
20.					
21.					
22.					
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29.					
30.					

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CMM 19 FEB 96

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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

HA53-4DL

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566810

Sample wt/vol: 4.0 (g/mL) G Lab File ID: P7988.D

Level: (low/med) MED Date Received: 11/15/95

% Moisture: not dec. 14 Date Analyzed: 11/20/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100 (uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	14000	U
74-83-9	Bromomethane	14000	U
75-01-4	Vinyl Chloride	14000	U
75-00-3	Chloroethane	14000	U
75-09-2	Methylene Chloride	34000	BD
67-64-1	Acetone	14000	U
75-15-0	Carbon Disulfide	14000	U
75-35-4	1,1-Dichloroethene	14000	U
75-34-3	1,1-Dichloroethane	14000	U
540-59-0	1,2-Dichloroethene (total)	14000	U
67-66-3	Chloroform	14000	U
107-06-2	1,2-Dichloroethane	14000	U
78-93-3	2-Butanone	14000	U
71-55-6	1,1,1-Trichloroethane	14000	U
56-23-5	Carbon Tetrachloride	14000	U
75-27-4	Bromodichloromethane	14000	U
78-87-5	1,2-Dichloropropane	14000	U
10061-01-5	cis-1,3-Dichloropropene	14000	U
79-01-6	Trichloroethene	14000	U
124-48-1	Dibromochloromethane	14000	U
79-00-5	1,1,2-Trichloroethane	14000	U
71-43-2	Benzene	1900	JD
10061-02-6	trans-1,3-Dichloropropene	14000	U
75-25-2	Bromoform	14000	U
108-10-1	4-Methyl-2-Pentanone	14000	U
591-78-6	2-Hexanone	14000	U
127-18-4	Tetrachloroethene	14000	U
79-34-5	1,1,2,2-Tetrachloroethane	14000	U
108-88-3	Toluene	13000	JD
108-90-7	Chlorobenzene	14000	U
100-41-4	Ethylbenzene	6800	JD
100-42-5	Styrene	14000	U
1330-20-7	Xylene (total)	39000	D

E. BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE (TOTAL) RESULTS HAVE BEEN TRANSFERRED ~~FROM~~ TO THE FORM I FOR THE ORIGINAL, LOW-LEVEL UNDILUTED ANALYSIS OF SAMPLE HA-5 (3-4').

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TJF 15DEC95

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

HA53-4DL

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 25668 SAS No.: SDG No.: OR1

Matrix: (soil/water) SOIL Lab Sample ID: 2566810

Sample wt/vol: 4.0 (g/mL) G Lab File ID: P7988.D

Level: (low/med) MED Date Received: 11/15/95

% Moisture: not dec. 14 Data Analyzed: 11/20/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 100 (uL)

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN HYDROCARBON	5.108	9000	JD
2.		UNKNOWN HYDROCARBON	10.389	11000	JD
3.		UNKNOWN HYDROCARBON	10.698	8600	JD
4.		UNKNOWN HYDROCARBON	11.523	9100	JD
5.		UNKNOWN HYDROCARBON	13.535	9300	JD
6.		UNKNOWN AROMATIC	18.176	24000	JD
7.		UNKNOWN AROMATIC	18.300	10000	JD
8.		UNKNOWN AROMATIC	19.218	26000	JD
9.		UNKNOWN AROMATIC	20.760	8500	JD
10.		UNKNOWN AROMATIC	20.950	10000	JD
11.					
12.					
13.					
14.					
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16.					
17.					
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CJM 19 DEC 95

PCB Data Validation Summary
Orange & Rockland Utilities, Inc.
West Nyack, New York
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group NYACK2

Analytical results for three (3) surface water samples with matrix QC and one (1) field duplicate from Orange & Rockland's West Nyack, New York site were reviewed to evaluate the data quality. Data were assessed in accordance with the New York State Department of Environmental Conservation (NYSDEC) **Analytical Services Protocol** (12/91 Revision), the United States Environmental Protection Agency (USEPA) document **USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review** (February 1994) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (Rust) personnel on December 27, 1995.

SW-1
SW-1 MS
SW-1 MSD
SW-2
X-2
SW-3

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Method Blank Summary and Data
- Calibration and GC Performance
- Analyte Resolution Check
- Analytical Sequence
- Cleanup Efficiency
- Pesticide/PCB Identification
- Compound Quantitation and Reported Detection Limits
- Chromatogram Quality
- Field Duplicate Data

The above items were compliant with NYSDEC ASP laboratory QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Surrogate Recoveries

The samples in this SDG which exhibited low recoveries for the surrogate compounds tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) are summarized below:

Sample ID	TCX DB-608	TCX DB-1701	DCB DB-608	DCB DB-1701
SW-1	82	82	38*	38*
SW-1 MS	85	84	33*	34*
SW-1 MSD	95	92	43*	42*
SW-2	71	72	33*	34*
X-2	73	70	50*	50*
SW-3	66	67	56*	54*

** Values outside of advisory QC limits (60-150%).*

No data have been qualified for these samples based upon the low DCB recoveries, however, because the TCX and DCB QC limits are only advisory and the surrogate compound TCX recovered within QC limits on each analytical column for each of these samples.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

Sample SW-1 was selected for matrix spike/matrix spike duplicate (MS/MSD) analysis. While each of the percent recoveries for the MS were within QC limits, the relative percent difference (RPD) between the MS and MSD recoveries for the spike compound aldrin exceeded the QC limit (RPD=36, QC limit=22). Furthermore, the percent recovery for the spike compound endrin in the MSD recovered outside of QC limits (129%, QC limits= 56-121%) No data have been qualified based upon these exceedances, however, because data are not qualified based solely upon MS/MSD data and the other data does not indicate the need for further qualification of the results reported.

Field Duplicate Data

Sample X-2 is a blind field duplicate of sample SW-2. No PCB target compounds were detected in either sample MW-2 or its field duplicate. Therefore, the field duplicate data is indicative of acceptable sampling and analytical precision.

Summary

In summary, based on 28 sample data points, none of which were qualified as estimated, and none qualified as unusable the usability of this package is 100%.

Anthony M. Noel
Reviewed By

19 FEB 96
Date

Ed Fuhrmann
Approved By

2-19-96
Date

PCB Analytical Data - Surface Water

Orange & Rockland Utilities
West Nyack, New York

Sampling Date: December 27, 1995

Sample ID / Compound	SW-1	SW-2	X-2	SW-3
Aroclor-1016	1 U	1 U	1 U	1 U
Aroclor-1221	2 U	2 U	2 U	2 U
Aroclor-1232	1 U	1 U	1 U	1 U
Aroclor-1242	1 U	1 U	1 U	1 U
Aroclor-1248	1 U	1 U	1 U	1 U
Aroclor-1254	1 U	1 U	1 U	1 U
Aroclor-1260	1 U	1 U	1 U	1 U

All results expressed in ug/L.
Standard Organic Data Qualifiers have been used.
Sample X-2 is a blind field duplicate of sample SW-2.

RU-WEST NYACK
SDG: NYACK2

	YES	NO	N/A

PART C: PESTICIDE/PCB ANALYSIS

1.0 Traffic Reports and Laboratory Narrative

1.1 Are Traffic Report Forms present for all samples? — YES ✓ — NO — N/A

ACTION: If no, contact lab for replacement of missing or illegible copies.

1.2 Do the Traffic Reports or SDG Narrative indicate any problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? — YES ✓ — NO — N/A

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be qualified as estimated (J). If a soil sample, other than TCLP, contains more than 90% water, all data should be qualified as unusable (R).

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any PEST/PCB technical holding times, determined from date of collection to date of extraction, been exceeded? — YES — NO ✓ — N/A

Water and soil samples for PEST/PCB analysis must be extracted within 7 days of the date of collection. Extracts must be analyzed within 40 days of the date extraction.

YES NO N/A

ACTION: If technical holding times are exceeded, flag all positive results as estimated (J) and sample quantitation limits (UJ) and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon re-analysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all the data should at least be qualified "J", but the reviewer may determine that non-detects are unusable (R).

3.0 Surrogate Recovery (Form II)

3.1 Are the PEST/PCB Surrogate Recovery Summaries (Form II) present for each of the following matrices?

a. Low Water [✓] — —

b. Soil [ ] — ✓

3.2 Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices?

a. Low Water [✓] — —

b. Soil [ ] — ✓

ACTION: Call lab for explanation/resubmittals. If missing deliverables are unavailable, document effect in data assessments.

3.3 Were outliers marked correctly with an asterisk? [✓] — —

ACTION: Circle all outliers in red.

3.4 Were surrogate recoveries of TCX or DCB outside of the contract specification for any sample or blank? (60-150%) ✓ [ ] —

		YES	NO	N/A
	ACTION: No qualification is done if surrogates are diluted out. If recovery for <u>both</u> surrogates is below the contract limit, but above 10%, flag all results for that sample 'J". If recovery is < 10% for either surrogate, qualify positive results 'J" and flag non-detects "R". If recovery is above the contract advisory limits for <u>both</u> surrogates qualify positive values "J".			
3.5	Were surrogate retention times (RT) within the windows established during the initial 3-point analysis of Individual Standard Mixture A?	[√]	___	___
	ACTION: If the RT limits are not met, the analysis may be qualified unusable (R) for that sample on the basis of professional judgement.			
3.6	Are there any transcription/calculation errors between raw data and Form II?	___	[√]	___
	ACTION: If large errors exist, call lab for explanation/resubmittal. Make any necessary corrections and document effect in data assessments.			
4.0	<u>Matrix Spikes (Form III)</u>			
4.1	Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present?	[√]	___	___
4.2	Were matrix spikes analyzed at the required frequency for each of the following matrices? (1 MS/MSD must be performed for every 20 samples of similar matrix or concentration level)			
	a. Low Water	[√]	___	___
	b. Soil	[ ]	___	✓
	ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.			

YES NO N/A

4.3 How many PEST/PCB spike recoveries are outside QC limits?

Water	Soil
1 out of 12	N/A out of 12

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Water	Soil
1 out of 6	N/A out of 6

ACTION: No action is taken on MS/MSD data alone. However, using informed professional judgement, the data reviewer may use the matrix spike and matrix spike duplicate results in conjunction with other QC criteria and determine the need for some qualification of the data.

5.0 Blanks (Form IV)

5.1 Is the Method Blank Summary (Form IV) present? [√]

5.2 Frequency of Analysis: For the analysis of Pesticide/PCB TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix or concentration or each extraction batch, whichever is more frequent? [√]

ACTION: If any blank data are missing, take the action specified above in 3.2. If blank data is not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 Has a PEST/PCB instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence? (minimum contract requirement)

YES NO N/A

ACTION: If any blank data are missing, call lab for explanation/resubmittals. If missing deliverables are unavailable, document the effect in data assessments.

5.4 Chromatography: review the blank raw data - chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable for PEST/PCBs? √ — —

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

NOTE: "Water blanks", "distilled water blanks" and "drilling water blanks" are validated like any other sample and are not used to qualify the data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/instrument/reagent/cleanup blanks have positive results for PEST/PCBs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample Dilution Factor and corrected for % moisture when necessary. — √ —

6.2 Do any field/rinse blanks have positive PEST/PCB results? — √ —

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet)

NOTE: All field blank results associated to a particular group of samples (may exceed one per case or one per day) may be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks.

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U";	Report CRQL & qualify "U"	No qualification is needed

NOTE: If gross blank contamination exists, all data in the associated samples should be qualified as unusable (R).

6.3 Are there field/rinse/equipment blanks associated with every sample? [V] — —

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Calibration and GC Performance

7.1 Are the following Gas Chromatograms and Data Systems Printouts for both columns present for all samples, blanks, MS/MSD?

a. peak resolution check [/] — —

b. performance evaluation mixtures [/] — —

c. aroclor 1016/1260 [/] — —

d. aroclors 1221, 1232, 1242, 1248, 1254 [/] — —

e. toxaphene [/] — —

f. low points individual mixtures A & B [/] — —

g. med points individual mixtures A & B [/] — —

h. high points individual mixtures A & B [/] — —

	YES	NO	N/A
i. instrument blanks	✓		

ACTION: If no, take action specified in 3.2 above.

7.2 Are Forms VI - PEST 1-4 present and complete for each column and each analytical sequence? ✓

ACTION: If no, take action specified in 3.2 above.

7.3 Are there any transcription/calculation errors between raw data and Forms VI? ✓

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.

7.4 Do all standard retention times, including each pesticide in each level of Individual Mixtures A & B, fall within the windows established during the initial calibration analytical sequence? (For Initial Calibration Standards, Form VI - PEST - 1). ✓

ACTION: If no, all samples in the entire analytical sequence are potentially affected. Check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through pattern recognition or using a revised RT window, qualify all positive results and non-detects as unusable (R).
For aroclors, RT may be outside the RT window, but the aroclor may still be identified from the individual pattern.

7.5 Are the linearity criteria for the initial analyses of Individual Standards A & B within limits for both columns? (% RSD must be < 20.0% for all analytes except for the 2 surrogates, which must not exceed 30.0% RSD). See Form VI PEST - 2. ✓

	YES	NO	N/A

ACTION: If no, qualify all associated positive results generated during the entire analytical sequence "J" and all non-detects "UJ". When RSD >90%, flag all non-detect results for that analyte R (unusable).

7.6 Is the resolution between any two adjacent peaks in the Resolution Check Mixture > 60.0% for both columns? (Form VI-PEST - 4) — ✓ — —

ACTION: If no, positive results for compounds that were not adequately resolved should be qualified "J". Use professional judgement to determine if non-detects which elute in areas affected by co-eluting peaks should be qualified "N" as presumptive evidence of presence or unusable (R).

7.7 Is Form VII - Pest-1 present and complete for each Performance Evaluation Mixture analyzed during the analytical sequence for both columns? — ✓ — —

ACTION: If no, take action as specified in 3.2 above.

7.8 Has the individual % breakdown exceeded 20.0% on either column. — ✓ —

- for 4,4' - DDT? — ✓ —

- for endrin? — ✓ —

Has the combined % breakdown for 4,4'- DDT/ Endrin exceeded 30.0% on either column? (required in all instances) — ✓ —

ACTION: 1. If any % breakdown has failed the QC criteria in either PEM in steps 2 and 17 in the initial calibration sequence (p. D-38/Pest SOW 3/90), qualify all sample analyses in the entire analytical sequence as described below.

YES NO N/A

2. If any % breakdown has failed the QC criteria in a PEM Verification calibration, review data beginning with the samples which followed the last <u>in-control</u> standard until the next acceptable PEM & qualify the data as described below.

a. 4,4'-DDT Breakdown: If 4,4'-DDT breakdown is greater than 20.%:

i. Qualify all positive results for DDT with 'J". If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable (R).

ii. Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity (NJ).

b. Endrin Breakdown: If endrin breakdown is greater than 20.0%:

i. Qualify all positive results for endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable (R).

ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity (NJ).

c. Combined Breakdown: If the combined 4,4'-DDT and endrin breakdown is greater than 30.0%:

i. Qualify all positive results for DDT and endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable (R). If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable (R).

	YES	NO	N/A

ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity (NJ). Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity (NJ).

7.9 Are the relative percent difference (RPD) values for all PEM analytes <25.0%? (Form VII-PEST-1) | /1 | ___ | ___

ACTION: If no, qualify all associated positive results generated during the analytical sequence "J" and sample quantitation limits "UJ".

NOTE: If the failing PEM is part of the initial calibration. all samples are potentially affected. If the offending standard is a verification calibration, the associated samples are those which followed the last in-control standard until the next passing standard.

7.10 Have all samples been injected within a 12 hr. period beginning with the injection of an Instrument Blank? | /1 | ___ | ___

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify accordingly.

7.11 Is Form VII - Pest-2 present and complete for each INDA and INDB Verification Calibration analyzed? | /1 | ___ | ___

ACTION: If no, take action specified in 3.2 above.

7.12 Are there any transcription/calculation errors between raw data and Form VII - Pest-2? | ___ | /1 | ___

ACTION: If large errors exists, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments. under "Conclusions".

	YES	NO	N/A

7.13 Do all standard retention times for each INDA and INDB Verification Calibration fall within the windows established by the initial calibration sequence? /1 — —

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through pattern recognition or using a revised RT window, qualify all positive results and non-detects as unusable (R).

7.14 Are RPD values for all verification calibration standard compounds < 25.0%? /1 — —

ACTION: If the RPD is >25.0% for the compound being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard containing the analyte which failed the criteria. If the RPD is >90%, flag all non-detects for that analyte R (unusable).

8.0 Analytical Sequence Check (Form VIII-PEST)

8.1 Is Form VIII present and complete for each column and each period of analyses? /1 — —

ACTION: If no, take action specified in 3.2 above.

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? (see CLP SOW p. D-39 & D-41/PEST) /1 — —

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify it accordingly. Generally, the effect is negligible unless the sequence was grossly altered or the calibration was also out of limits.

		YES	NO	N/A
9.0	**Cleanup Efficiency Verification (Form IX)**			
9.1	Is Form IX - Pest-1 present and complete for each lot of Florisil Cartridges used? (Florisil Cleanup is required for all Pest/PCB extracts.)	[✓]	—	—
	ACTION: If no, take action specified in 3.2 above. If data suggests that florisil cleanup was not performed, make note in "Contract Problems/Non-Compliance".			
9.2	Are all samples listed on the Pesticide Florisil Cartridge Check Form?	[✓]	—	—
	ACTION: If no, take action specified in 3.2 above.			
9.3	If GPC Cleanup was performed, (mandatory for all soil sample extracts) is Form IX - Pest-2 present?	[ ]	—	/
	ACTION: If no, take action specified in 3.2 above.			
	ACTION: If GPC was not performed when required, make note in" Contract Problems/Non-Compliance" section of data assessment.			
9.4	Are percent recoveries (% R) of the pesticide and surrogate compounds used to check the efficiency of the cleanup procedures within QC limits: 80-120% for florisil cartridge check?	[✓]	—	—
	80-110% for GPC calibration?	[ ]	—	✓
	Qualify only the analyte(s) which fail the recovery criteria as follows:			
	ACTION: If % R are < 80%, qualify positive results "J" and quantitation limits "UJ". Non-detects should be qualified "R" if zero %R was obtained for pesticide compounds. Use professional judgement to qualify positive results if recoveries are greater than the upper limit.			

	YES	NO	N/A

NOTE: Sample data should be evaluated for potential interferences if recovery of 2,4,5-trichlorophenol was > 5% in the Florisil Cartridge Performance Check analysis. Make note in Contract Problems/ Non-Compliance section of reviewer narrative.

NOTE: The raw data of the GPC Calibration Check analysis is evaluated for pattern similarity with previously run Aroclor standards.

10.0 Pesticide/PCB Identification

10.1 Is Form X complete for every sample in which a pesticide or PCB was detected?	[/]	—	—
ACTION: If no, take action specified in 3.2 above.			
10.2 Are there any transcription/calculation errors between raw data and Forms 6E, 6G, 7E, 7D, 8D, 9A, B, 10A.	—	[/]	—
ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and note error under "Conclusions".			
10.3 Are retention times (RT) of sample compounds within the established RT windows for both analyses?	[/]	—	—
Was GC/MS confirmation provided when required (when compound concentration is > 10 ug/ml in final extract)?	[ ]	—	/
Action: Use professional judgement to qualify positive results which were not confirmed by GC/MS. Qualify as unusable (R) all positive results which were not confirmed by second GC column analysis. Also qualify as unusable (R) all positive results not meeting RT window unless associated standard compounds are similarly biased. (see Functional Guidelines) The reviewer should use professional judgement to assign an appropriate quantitation limit.			

	YES	NO	N/A

10.4 Is the percent difference (% D) calculated for the positive sample results on the two GC columns < 25.0%? [OK] ___ ___

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-50 %	J
50-90 %	JN
> 90 %	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

10.5 Check chromatograms for false negatives, especially the multiple peak compounds toxaphene and PCBs. Were there any false negatives? ___ [✓] ___

ACTION: Use professional judgement to decide if the compound should be reported. If the appropriate PCB standards were not analyzed, qualify the data unusable (R).

11.0 Compound Quantitation and Reported Detection Limits

11.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Were any errors found? ___ [✓] ___

NOTE: Single-peak pesticide results can be checked for rough agreement between quantitative results obtained on the two GC columns. The reviewer should use professional judgement to decide whethera much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity (NJ). This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

	YES	NO	N/A

11.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, % moisture? ✓ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with data from the analysis of diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

ACTION: Quantitation limits affected by large, off-scale peaks should be qualified as unusable (R). If the interference is on-scale, the reviewer can provide an approximated quantitation limit (UJ) for each affected compound.

12.0 Chromatogram Quality

12.1 Were baselines stable? ✓ ___ ___

12.2 Were any electropositive displacement (negative peaks) or unusual peaks seen? ___ ✓ ___

ACTION: Address comments under System Performance of data assessment.

	YES	NO	N/A

13.0 Field Duplicates

13.1 Were any field duplicates submitted for PEST/PCB analysis? | ✓ | | |

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between field duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

Organic Data Qualifiers

U - The compound was analyzed for but not detected at or above the quantitation limit indicated.

J - The compound was analyzed for and determined to be present in the sample because the mass spectrum of the compound meets the identification criteria of the method. The concentration reported is an estimated value, less than the practical quantitation limit for the sample.

B - The compound is also found in an associated blank.

V - The reported value is considered estimated due to variance from quality control criteria

S - The reported value is suspected to be due to laboratory contamination.

R - The reported value is unusable and rejected due to variance from quality control criteria.

D - The reported value is taken from the analysis of a diluted sample.

E - The reported value exceeds the calibration range of the instrument.

N - Indicates presumptive evidence for compound identification.

A - Indicates that the compound is an aldol condensation product.

C - Compound identification has been qualitatively confirmed by GC/MS.

P - Indicates that the percent difference between the results from the two analytical columns is greater than 25%.

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26080 SAS No.: ______ SDG No.: NYACK2

Matrix: (soil/water) WATER Lab Sample ID: 2608001

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ______

% Moisture: ______ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/28/95✓

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/10/96✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00✓

GPC Cleanup: (Y/N) N ✓ pH: 7.0 Sulfur Cleanup: (Y/N) N ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

SW-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26080 SAS No.: _____ SDG No.: NYACK2

Matrix: (soil/water) WATER Lab Sample ID: 2608005

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/28/95 ✓

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/11/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓ pH: 7.0 Sulfur Cleanup: (Y/N) N ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

NA 02/12/96

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26080 SAS No.: ______ SDG No.: NYACK2

Matrix: (soil/water) WATER Lab Sample ID: 2608004

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ______

% Moisture: ______ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/28/95 ✓

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/11/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓ pH: 7.0 Sulfur Cleanup: (Y/N) N ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SW-3

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26080 SAS No.: _____ SDG No.: NYACK2

Matrix: (soil/water) WATER Lab Sample ID: 2608006

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/28/95

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/11/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

NA 01-12-96

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000038

PCB Data Validation Summary
Orange & Rockland Utilities, Inc.
West Nyack, New York
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group NYACK3

Analytical results for 18 sediment samples with matrix QC and one (1) field duplicate from Orange & Rockland's West Nyack, New York site were reviewed to evaluate the data quality. Data were assessed in accordance with the New York State Department of Environmental Conservation (NYSDEC) **Analytical Services Protocol** (12/91 Revision), the United States Environmental Protection Agency (USEPA) document **USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review** (February 1994) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (Rust) personnel on December 28, 1995.

SED-1	**SED-5**	**SED-7**	**SED-11**	**SED-14**
SED-2	**SED-5 MS**	**SED-8**	**SED-12**	**SED-15**
SED-3	**SED-5 MSD**	**SED-9**	**X-3**	**SED-16**
SED-4	**SED-6**	**SED-10**	**SED-13**	**SED-17**
				SED-18

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Method Blank Summary and Data
- Calibration and GC Performance
- Analyte Resolution Check
- Analytical Sequence
- Cleanup Efficiency
- PCB Identification
- Compound Quantitation and Reported Detection Limits
- Chromatogram Quality
- Field Duplicate Data

The above items were compliant with NYSDEC ASP laboratory QC criteria with the exception of the items discussed in the following text. The data have been validated

according to the above procedures and qualified as described on the attached definitions list.

Case Narrative

The laboratory Case Narrative states that "a diluted analysis was required for sample SED-3 based on screening analysis of colored extracts to meet baseline requirements." A review of the raw data reveals that a diluted analysis was **not** submitted for sample SED-3. No data have been qualified based upon this minor clerical nonconformance, however.

Holding Times

The initial extraction of the samples in this SDG, which occurred within the five (5) day holding time, failed to meet all applicable QC criteria and reextraction and reanalysis of the samples were required. This reextraction occurred 22 days after sample receipt, or 17 days outside of holding time, and each of the results reported from this reextraction and reanalysis have been flagged with a "V" and are considered estimated.

Please refer to the **PCB Identification** section of this data validation summary for an explanation of which results have been reported from the initial analysis and which results have been reported from the reextraction and reanalysis of these samples.

Surrogate Recoveries

The samples in this SDG which exhibited recoveries outside of QC limits for the surrogate compounds tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) are summarized below:

Sample ID	TCX DB-608	TCX DB-1701	DCB DB-608	DCB DB-1701
PBLK50	6*	7*	58*	56*
MSB	0*	0*	4*	4*
SED-8	41*	44*	108	105
SED-11	22*	39*	115	98
SED-12	2*	3*	30*	32*
SED-13	4*	5*	31*	17*
SED-14	2*	5*	32*	33*
SED-15	3*	7*	36*	33*
SED-16	16*	23*	85	88
SED-17	8*	12*	69	66
SED-18	0*	3*	2*	0*

PBLK57	6*	5*	58*	56*
SED-1	72	108	198*	146
SED-2	55*	76	91	88
SED-3	28*	48*	113	88
SED-4	18*	65	96	76
SED-5	37*	177*	134	101
SED-5 MS	40*	186*	118	106
SED-5 MSD	78	184*	120	94
SED-6	40*	43*	124	106
SED-7	45*	46*	135	112
SED-1RE	82	70	156*	122
SED-5RE	59*	64	102	70
SED-5 MSD RE	57*	60	84	68
SED-11RE DL	70	58*	151*	80
SED-13RE	25*	40*	48*	204*
SED-14RE	22*	23*	60	25*
SED-15RE	22*	26*	26*	24*
SED-16RE	56*	59*	71	52*

** Values outside of advisory QC limits (60-150%).*

Due to the extremely low (*i.e.*, <10%) surrogate recoveries exhibited by methods blanks PBLK50 and PBLK57, each of the associated samples were reextracted and reanalyzed. The results of this reanalysis have been labeled with an "RE" to differentiate them from the original analysis. A complete set of results have been provided by the laboratory for each of these extractions and subsequent analyses. Please refer to the **PCB Identification** section of this data validation summary for an explanation of which results have been reported from the initial analysis and which results have been reported from the reextraction and reanalysis of these samples.

The results reported as non-detect for the initial extraction and analysis of samples SED-12, SED-13, SED-14, SED-15 and SED-18 have been rejected and are considered unusable due to the extremely low surrogate recoveries exhibited. The results of the initial matrix spike blank (MSB) have also been rejected and are considered unusable due to the extremely low surrogate recoveries exhibited. The positive result reported for Aroclor 1254 in sample SED-15 has been flagged with a "V" and is considered estimated due to the low surrogate recoveries exhibited in this sample. The results reported for sample SED-17 have each been flagged with a "V" and are considered estimated due to the extremely low TCX recovery exhibited on the DB-608 column coupled with the low TCX recovery (12%) for the DB-1701 column. No data have been qualified for samples SED-1, SED-2, SED-3, SED-4, SED-5, SED-5 MS, SED-5 MSD, SED-6, SED-7, SED-8 and SED-16 based upon the surrogate

recoveries exhibited, however, because the TCX and DCB QC limits are only advisory and at least one of the surrogates recovered within QC limits on each analytical column for each of these samples.

The results reported for samples SED-13RE, SED-14RE and SED-15RE have each been flagged with a "V" and are considered estimated due to the surrogates recoveries exhibited. No data have been qualified for samples SED-1RE, SED-5RE or SED-5 MSD RE based upon the surrogate recoveries exhibited, however, these results have not replaced the results for the initial extraction and analysis of these samples.

Please refer to the **PCB Identification** section of this data validation summary for a discussion of the SED-11 and SED-11RE DL surrogate recoveries.

PCB Identification

As noted in the **Holding Times** and **Surrogate Recoveries** sections of this summary, the surrogate recoveries for method blanks PBLK50 and PBLK57 were extremely low, requiring the laboratory to reextract and reanalyze the associated samples. Wherever possible, the results from the initial extraction and analysis have been reported following the careful review and evaluation of the surrogate recoveries. The results reported for samples SED-12, SED-13, SED-14 and SED-18 have been taken from the reextraction and reanalysis of these samples. With the exception of the result for Aroclor 1254, the results reported for sample SED-15 have been taken from the reextraction and reanalysis of this sample.

Although the surrogate recoveries for the initial analysis of sample SED-11 were acceptable, the Aroclor 1260 result reported was 30 ug/Kg and the Aroclor 1260 result reported for the reextraction and reanalysis of SED-11 was 3,000 ug/Kg. This difference is most probably due to the nonhomogeneous nature of this sample. A comparison of the results for the initial analysis of the other samples in this SDG to the results for the reextraction and reanalysis of those samples revealed that the results reported generally exhibit excellent agreement and do not indicate widespread problems with nonhomogeneity for the samples in this SDG.

The percent difference (%D) between the Aroclor 1254 result reported for sample SED-18 RE on the DB-608 analytical column and the Aroclor 1254 result reported for this sample on the DB-1701 analytical column was 55.0%, which exceeds the QC limit of 25.0%. In accordance with EPA validation guidelines, the Aroclor 1254 result reported for SED-18 has been flagged "VN" and is considered estimated with presumptive evidence for the identification of the compound reported.

Field Duplicate Data

Sample X-3 is a blind field duplicate of sample SED-12. No PCB target compounds were

detected in either sample SED-12 or its field duplicate. Therefore, the field duplicate data are indicative of acceptable sampling and analytical precision.

Summary

In summary, based on a total of 133 sample data points which have been reported, 49 of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this package is 100%.

Anthony M. Doce	19 FEB 96
Reviewed By	Date
Ed Fallenberg	2-19-96
Approved By	Date

PCB Analytical Data - Sediment

Orange & Rockland Utilities
West Nyack, New York

Sampling Date: December 28, 1995

Sample ID / Compound	SED-1	SED-2	SED-3	SED-4	SED-5	SED-6	SED-7	SED-8	SED-9	SED-10
Aroclor-1016	42 U	46 U	48 U	52 U	73 U	73 U	42 U	41 U	45 U	69 U
Aroclor-1221	86 U	94 U	97 U	110 U	150 U	150 U	86 U	84 U	91 U	140 U
Aroclor-1232	42 U	46 U	48 U	52 U	73 U	73 U	42 U	41 U	45 U	69 U
Aroclor-1242	42 U	46 U	48 U	52 U	73 U	73 U	42 U	41 U	45 U	69 U
Aroclor-1248	42 U	46 U	48 U	52 U	73 U	73 U	42 U	41 U	45 U	69 U
Aroclor-1254	**71**	46 U	48 U	52 U	73 U	**100**	**230**	41 U	45 U	69 U
Aroclor-1260	42 U	46 U	48 U	52 U	73 U	73 U	42 U	41 U	45 U	69 U

Sample ID / Compound	SED-11	SED-12	X-3	SED-13	SED-14	SED-15	SED-16	SED-17	SED-18
Aroclor-1016	46 UV	38 UV	37 U	70 UV	56 UV	54 UV	130 U	52 UV	41 UV
Aroclor-1221	94 UV	77 UV	76 U	140 UV	110 UV	110 UV	260 U	110 UV	84 UV
Aroclor-1232	46 UV	38 UV	37 U	70 UV	56 UV	54 UV	130 U	52 UV	41 UV
Aroclor-1242	46 UV	38 UV	37 U	70 UV	56 UV	54 UV	130 U	52 UV	41 UV
Aroclor-1248	46 UV	38 UV	37 U	70 UV	56 UV	54 UV	130 U	52 UV	41 UV
Aroclor-1254	46 UV	38 UV	37 U	70 UV	56 UV	**62 V**	130 U	52 UV	**60 PVN**
Aroclor-1260	**3000 DV**	38 UV	37 U	70 UV	56 UV	54 UV	130 U	52 UV	41 UV

All results expressed in ug/Kg.
Standard Organic Data Qualifiers have been used.
Sample X-3 is a blind field duplicate of sample SED-12.

ORJ - WEST NYACK
SDG: NYACK3

	YES	NO	N/A

PART C: PESTICIDE/PCB ANALYSIS

1.0 Traffic Reports and Laboratory Narrative

1.1 Are Traffic Report Forms present for all samples? [✓] [ ] [ ]

ACTION: If no, contact lab for replacement of missing or illegible copies.

1.2 Do the Traffic Reports or SDG Narrative indicate any problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? [✓] [ ] [ ]

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be qualified as estimated (J). If a soil sample, other than TCLP, contains more than 90% water, all data should be qualified as unusable (R).

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any PEST/PCB technical holding times, determined from date of collection to date of extraction, been exceeded? [ ] [ ] [ ]

Water and soil samples for PEST/PCB analysis must be extracted within 7 days of the date of collection. Extracts must be analyzed within 40 days of the date extraction.

YES NO N/A

ACTION: If technical holding times are exceeded, flag all positive results as estimated (J) and sample quantitation limits (UJ) and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon re-analysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all the data should at least be qualified "J", but the reviewer may determine that non-detects are unusable (R).

3.0 Surrogate Recovery (Form II)

3.1 Are the PEST/PCB Surrogate Recovery Summaries (Form II) present for each of the following matrices?

a. Low Water [ ] — [✓]

b. Soil [✓] — —

3.2 Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices?

a. Low Water [ ] — [✓]

b. Soil [✓] — —

ACTION: Call lab for explanation/resubmittals. If missing deliverables are unavailable, document effect in data assessments.

3.3 Were outliers marked correctly with an asterisk? [✓] — —

ACTION: Circle all outliers in red.

3.4 Were surrogate recoveries of TCX or DCB outside of the contract specification for any sample or blank? (60-150%) [✓] [ ] —

	YES	NO	N/A

ACTION: No qualification is done if surrogates are diluted out. If recovery for <u>both</u> surrogates is below the contract limit, but above 10%, flag all results for that sample 'J". If recovery is < 10% for either surrogate, qualify positive results 'J" and flag non-detects "R". If recovery is above the contract advisory limits for <u>both</u> surrogates qualify positive values "J".

		YES	NO	N/A
3.5	Were surrogate retention times (RT) within the windows established during the initial 3-point analysis of Individual Standard Mixture A?	[✓]	___	___

ACTION: If the RT limits are not met, the analysis may be qualified unusable (R) for that sample on the basis of professional judgement.

		YES	NO	N/A
3.6	Are there any transcription/calculation errors between raw data and Form II?	___	[✓]	___

ACTION: If large errors exist, call lab for explanation/resubmittal. Make any necessary corrections and document effect in data assessments.

4.0 <u>Matrix Spikes (Form III)</u>

		YES	NO	N/A
4.1	Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present?	[✓]	___	___
4.2	Were matrix spikes analyzed at the required frequency for each of the following matrices? (1 MS/MSD must be performed for every 20 samples of similar matrix or concentration level)			
	a. Low Water	[✓]	___ CMM 14FEB96	✓
	b. Soil	[✓]	___	___

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

YES NO N/A

4.3 How many PEST/PCB spike recoveries are outside QC limits?

Water	Soil
0 out of 12	N/A out of 12

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Water	Soil
0 out of 6	N/A out of 6

ACTION: No action is taken on MS/MSD data alone. However, using informed professional judgement, the data reviewer may use the matrix spike and matrix spike duplicate results in conjunction with other QC criteria and determine the need for some qualification of the data.

5.0 Blanks (Form IV)

5.1 Is the Method Blank Summary (Form IV) present? [√]

5.2 Frequency of Analysis: For the analysis of Pesticide/PCB TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix or concentration or each extraction batch, whichever is more frequent? [√]

ACTION: If any blank data are missing, take the action specified above in 3.2. If blank data is not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 Has a PEST/PCB instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence? (minimum contract requirement)

YES NO N/A

ACTION: If any blank data are missing, call lab for explanation/resubmittals. If missing deliverables are unavailable, document the effect in data assessments.

5.4 Chromatography: review the blank raw data - chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable for PEST/PCBs? OK? — —

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

NOTE: "Water blanks", "distilled water blanks" and "drilling water blanks" are validated like any other sample and are not used to qualify the data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/instrument/reagent/cleanup blanks have positive results for PEST/PCBs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample Dilution Factor and corrected for % moisture when necessary. — ✓ —

6.2 Do any field/rinse blanks have positive PEST/PCB results? — ✓ —

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet)

NOTE: All field blank results associated to a particular group of samples (may exceed one per case or one per day) may be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks.

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U";	Report CRQL & qualify "U"	No qualification is needed

NOTE: If gross blank contamination exists, all data in the associated samples should be qualified as unusable (R).

6.3 Are there field/rinse/equipment blanks associated with every sample? [ ] — ✓

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Calibration and GC Performance

7.1 Are the following Gas Chromatograms and Data Systems Printouts for both columns present for all samples, blanks, MS/MSD?

a. peak resolution check [✓] — —

b. performance evaluation mixtures [✓] — —

c. aroclor 1016/1260 [✓] — —

d. aroclors 1221, 1232, 1242, 1248, 1254 [✓] — —

e. toxaphene [✓] — —

f. low points individual mixtures A & B [✓] — —

g. med points individual mixtures A & B [✓] — —

h. high points individual mixtures A & B [✓] — —

	YES	NO	N/A
i. instrument blanks	[✓1]	—	—

ACTION: If no, take action specified in 3.2 above.

7.2 Are Forms VI - PEST 1-4 present and complete for each column and each analytical sequence? [✓1] — —

ACTION: If no, take action specified in 3.2 above.

7.3 Are there any transcription/calculation errors between raw data and Forms VI? — [✓1] —

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.

7.4 Do all standard retention times, including each pesticide in each level of Individual Mixtures A & B, fall within the windows established during the initial calibration analytical sequence? (For Initial Calibration Standards, Form VI - PEST - 1). [✓1] — —

ACTION: If no, all samples in the entire analytical sequence are potentially affected. Check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through pattern recognition or using a revised RT window, qualify all positive results and non-detects as unusable (R).
For aroclors, RT may be outside the RT window, but the aroclor may still be identified from the individual pattern.

7.5 Are the linearity criteria for the initial analyses of Individual Standards A & B within limits for both columns? (% RSD must be < 20.0% for all analytes except for the 2 surrogates, which must not exceed 30.0 % RSD). See Form VI PEST - 2. [✓1] — —

	YES	NO	N/A

ACTION: If no, qualify all associated positive results generated during the entire analytical sequence "J" and all non-detects "UJ". When RSD >90%, flag all non-detect results for that analyte R (unusable).

7.6 Is the resolution between any two adjacent peaks in the Resolution Check Mixture > 60.0% for both columns? (Form VI-PEST - 4) [✓] — —

ACTION: If no, positive results for compounds that were not adequately resolved should be qualified "J". Use professional judgement to determine if non-detects which elute in areas affected by co-eluting peaks should be qualified "N" as presumptive evidence of presence or unusable (R).

7.7 Is Form VII - Pest-1 present and complete for each Performance Evaluation Mixture analyzed during the analytical sequence for both columns? [✓] — —

ACTION: If no, take action as specified in 3.2 above.

7.8 Has the individual % breakdown exceeded 20.0% on either column. — [✓] —

- for 4,4' - DDT? — [✓] —

- for endrin? — [✓] —

Has the combined % breakdown for 4,4'- DDT/ Endrin exceeded 30.0% on either column? (required in all instances) — [✓] —

ACTION: 1. If any % breakdown has failed the QC criteria in either PEM in steps 2 and 17 in the initial calibration sequence (p. D-38/Pest SOW 3/90), qualify all sample analyses in the entire analytical sequence as described below.

YES NO N/A

2. If any % breakdown has failed the QC criteria in a PEM verification calibration, review data beginning with the samples which followed the last <u>in-control</u> standard until the next acceptable PEM & qualify the data as described below.

a. 4,4'-DDT Breakdown: If 4,4'-DDT breakdown is greater than 20.%:

i. Qualify all positive results for DDT with 'J". If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable (R).

ii. Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity (NJ).

b. Endrin Breakdown: If endrin breakdown is greater than 20.0%:

i. Qualify all positive results for endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable (R).

ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity (NJ).

c. Combined Breakdown: If the combined 4,4'-DDT and endrin breakdown is greater than 30.0%:

i. Qualify all positive results for DDT and endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable (R). If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable (R).

	YES	NO	N/A

ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity (NJ). Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity (NJ).

7.9 Are the relative percent difference (RPD) values for all PEM analytes <25.0%? (Form VII-PEST-1) [✓] ___ ___

ACTION: If no, qualify all associated positive results generated during the analytical sequence "J" and sample quantitation limits "UJ".

NOTE: If the failing PEM is part of the initial calibration. all samples are potentially affected. If the offending standard is a verification calibration, the associated samples are those which followed the last in-control standard until the next passing standard.

7.10 Have all samples been injected within a 12 hr. period beginning with the injection of an Instrument Blank? [✓] ___ ___

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify accordingly.

7.11 Is Form VII - Pest-2 present and complete for each INDA and INDB Verification Calibration analyzed? [✓] ___ ___

ACTION: If no, take action specified in 3.2 above.

7.12 Are there any transcription/calculation errors between raw data and Form VII - Pest-2? ___ [✓] ___

ACTION: If large errors exists, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments. under "Conclusions".

YES NO N/A

7.13 Do all standard retention times for each INDA and INDB Verification Calibration fall within the windows established by the initial calibration sequence? [✓] — —

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through pattern recognition or using a revised RT window, qualify all positive results and non-detects as unusable (R).

7.14 Are RPD values for all verification calibration standard compounds < 25.0%? [✓] — —

ACTION: If the RPD is >25.0% for the compound being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard containing the analyte which failed the criteria. If the RPD is >90%, flag all non-detects for that analyte R (unusable).

8.0 Analytical Sequence Check (Form VIII-PEST)

8.1 Is Form VIII present and complete for each column and each period of analyses? [✓] — —

ACTION: If no, take action specified in 3.2 above.

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? (see CLP SOW p. D-39 & D-41/PEST) [✓] — —

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify it accordingly. Generally, the effect is negligible unless the sequence was grossly altered or the calibration was also out of limits.

	YES	NO	N/A

9.0 Cleanup Efficiency Verification (Form IX)

9.1 Is Form IX - Pest-1 present and complete for each lot of Florisil Cartridges used? (Florisil Cleanup is required for all Pest/PCB extracts.) [√] — —

ACTION: If no, take action specified in 3.2 above. If data suggests that florisil cleanup was not performed, make note in "Contract Problems/Non-Compliance".

9.2 Are all samples listed on the Pesticide Florisil Cartridge Check Form? [√] — —

ACTION: If no, take action specified in 3.2 above.

9.3 If GPC Cleanup was performed, (mandatory for all soil sample extracts) is Form IX - Pest-2 present? [√] — —

ACTION: If no, take action specified in 3.2 above.

ACTION: If GPC was not performed when required, make note in" Contract Problems/Non-Compliance" section of data assessment.

9.4 Are percent recoveries (% R) of the pesticide and surrogate compounds used to check the efficiency of the cleanup procedures within QC limits:
80-120% for florisil cartridge check? [√] — —

80-110% for GPC calibration? [√] — —

Qualify only the analyte(s) which fail the recovery criteria as follows:

ACTION: If % R are < 80%, qualify positive results "J" and quantitation limits "UJ". Non-detects should be qualified "R" if zero %R was obtained for pesticide compounds. Use professional judgement to qualify positive results if recoveries are greater than the upper limit.

YES NO N/A

NOTE: Sample data should be evaluated for potential interferences if recovery of 2,4,5-trichlorophenol was > 5% in the Florisil Cartridge Performance Check analysis. Make note in Contract Problems/ Non-Compliance section of reviewer narrative.

NOTE: The raw data of the GPC Calibration Check analysis is evaluated for pattern similarity with previously run Aroclor standards.

10.0 Pesticide/PCB Identification

10.1 Is Form X complete for every sample in which a pesticide or PCB was detected? [√] ___ ___

ACTION: If no, take action specified in 3.2 above.

10.2 Are there any transcription/calculation errors between raw data and Forms 6E, 6G, 7E, 7D, 8D, 9A, B, 10A. ___ [√] ___

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and note error under "Conclusions".

10.3 Are retention times (RT) of sample compounds within the established RT windows for both analyses? [√] ___ ___

Was GC/MS confirmation provided when required (when compound concentration is > 10 ug/ml in final extract)? [ ] ___ [√]

Action: Use professional judgement to qualify positive results which were not confirmed by GC/MS. Qualify as unusable (R) all positive results which were not confirmed by second GC column analysis. Also qualify as unusable (R) all positive results not meeting RT window unless associated standard compounds are similarly biased. (see Functional Guidelines) The reviewer should use professional judgement to assign an appropriate quantitation limit.

	YES	NO	N/A

10.4 Is the percent difference (% D) calculated for the positive sample results on the two GC columns < 25.0%? [ ] ✓ —

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-50 %	J
50-90 %	JN
> 90 %	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

10.5 Check chromatograms for false negatives, especially the multiple peak compounds toxaphene and PCBs. Were there any false negatives? — [✓] —

ACTION: Use professional judgement to decide if the compound should be reported. If the appropriate PCB standards were not analyzed, qualify the data unusable (R).

11.0 Compound Quantitation and Reported Detection Limits

11.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Were any errors found? — [✓] —

NOTE: Single-peak pesticide results can be checked for rough agreement between quantitative results obtained on the two GC columns. The reviewer should use professional judgement to decide whethera much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity (NJ). This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

	YES	NO	N/A
11.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, % moisture?	✓		

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with data from the analysis of diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

ACTION: Quantitation limits affected by large, off-scale peaks should be qualified as unusable (R). If the interference is on-scale, the reviewer can provide an approximated quantitation limit (UJ) for each affected compound.

12.0 Chromatogram Quality

12.1 Were baselines stable?	✓		
12.2 Were any electropositive displacement (negative peaks) or unusual peaks seen?		✓	

ACTION: Address comments under System Performance of data assessment.

	YES	NO	N/A

13.0 Field Duplicates

13.1 Were any field duplicates submitted for PEST/PCB analysis? ✓ | | |

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between field duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

Organic Data Qualifiers

U - The compound was analyzed for but not detected at or above the quantitation limit indicated.

J - The compound was analyzed for and determined to be present in the sample because the mass spectrum of the compound meets the identification criteria of the method. The concentration reported is an estimated value, less than the practical quantitation limit for the sample.

B - The compound is also found in an associated blank.

V - The reported value is considered estimated due to variance from quality control criteria

S - The reported value is suspected to be due to laboratory contamination.

R - The reported value is unusable and rejected due to variance from quality control criteria.

D - The reported value is taken from the analysis of a diluted sample.

E - The reported value exceeds the calibration range of the instrument.

N - Indicates presumptive evidence for compound identification.

A - Indicates that the compound is an aldol condensation product.

C - Compound identification has been qualitatively confirmed by GC/MS.

P - Indicates that the percent difference between the results from the two analytical columns is greater than 25%.

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608720

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/24/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~220~~	~~U~~
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	86	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	71	
11096-82-5	Aroclor-1260	42	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-1RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608720RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 22 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL) Dilution Factor: 3.00

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
8001-35-2	Toxaphene	650	U
12674-11-2	Aroclor-1016	130	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	130	U
53469-21-9	Aroclor-1242	130	U
12672-29-6	Aroclor-1248	130	U
11097-69-1	Aroclor-1254	52	JP
11096-82-5	Aroclor-1260	130	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608719

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 29 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/24/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 7.7 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~240~~	~~U~~
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	94	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-2RE

Lab Name: NYTEST ENV INC   Contract: 9521637

Lab Code: NYTEST   Case No.: 26087   SAS No.: ______   SDG No.: NYACK3

Matrix: (soil/water) SOIL   Lab Sample ID: 2608719RE

Sample wt/vol: 30.0 (g/mL) G   Lab File ID: ______

% Moisture: 29   decanted: (Y/N) N   Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC   Date Extracted: 01/19/96 /EXCEEDANCE

Concentrated Extract Volume: 5000 (uL)   Date Analyzed: 01/25/96 ✓

Injection Volume: 1.00 (uL)   Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓   pH: 7.7   Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~240~~	~~U~~
12674-11-2	Aroclor-1016	46	U ✓
11104-28-2	Aroclor-1221	94	U ✓
11141-16-5	Aroclor-1232	46	U ✓
53469-21-9	Aroclor-1242	46	U ✓
12672-29-6	Aroclor-1248	46	U ✓
11097-69-1	Aroclor-1254	46	U ✓
11096-82-5	Aroclor-1260	46	U ✓

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-3

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608718

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 31 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/24/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~250~~	~~U~~
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	97	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U

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EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

SED-3RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608718RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 31 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 / EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~250~~	~~U~~
12674-11-2	Aroclor-1016	48	U ✓
11104-28-2	Aroclor-1221	97	U ✓
11141-16-5	Aroclor-1232	48	U ✓
53469-21-9	Aroclor-1242	48	U ✓
12672-29-6	Aroclor-1248	48	U ✓
11097-69-1	Aroclor-1254	48	U ✓
11096-82-5	Aroclor-1260	48	U ✓

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608717

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 37 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/24/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.8 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~270~~	~~U~~
12674-11-2	Aroclor-1016	52	U
11104-28-2	Aroclor-1221	110	U
11141-16-5	Aroclor-1232	52	U
53469-21-9	Aroclor-1242	52	U
12672-29-6	Aroclor-1248	52	U
11097-69-1	Aroclor-1254	52	U
11096-82-5	Aroclor-1260	52	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-4RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608717RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 37 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION (UG/KG)	Q
~~8001-35-2~~	~~Toxaphene~~	~~270~~	~~U~~
12674-11-2	Aroclor-1016	52	U ✓
11104-28-2	Aroclor-1221	110	U ✓
11141-16-5	Aroclor-1232	52	U ✓
53469-21-9	Aroclor-1242	52	U ✓
12672-29-6	Aroclor-1248	52	U ✓
11097-69-1	Aroclor-1254	52	U ✓
11096-82-5	Aroclor-1260	52	U ✓

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-5

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608714

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 55 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/24/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 7.5 Sulfur Cleanup: (Y/N) Y ✓

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~380~~	~~U~~
12674-11-2	Aroclor-1016	73	U
11104-28-2	Aroclor-1221	150	U
11141-16-5	Aroclor-1232	73	U
53469-21-9	Aroclor-1242	73	U
12672-29-6	Aroclor-1248	73	U
11097-69-1	Aroclor-1254	73	U
11096-82-5	Aroclor-1260	73	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-5RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608714RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 55 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.5 Sulfur Cleanup: (Y/N) Y

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
~~8001-35-2~~	~~Toxaphene~~	~~380~~	~~U~~
12674-11-2	Aroclor-1016	73	U ✓
11104-28-2	Aroclor-1221	150	U ✓
11141-16-5	Aroclor-1232	73	U ✓
53469-21-9	Aroclor-1242	73	U ✓
12672-29-6	Aroclor-1248	73	U ✓
11097-69-1	Aroclor-1254	73	U ✓
11096-82-5	Aroclor-1260	73	U ✓

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-6

Lab Name: NYTEST ENV INC   Contract: 9521637

Lab Code: NYTEST   Case No.: 26087   SAS No.: ______   SDG No.: NYACK3

Matrix: (soil/water) SOIL   Lab Sample ID: 2608713

Sample wt/vol: 30.0 (g/mL) G   Lab File ID: ______

% Moisture: 55   decanted: (Y/N) N   Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC   Date Extracted: 12/29/95 ✓

Concentrated Extract Volume: 5000 (uL)   Date Analyzed: 01/24/96 ✓

Injection Volume: 1.00 (uL)   Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓   pH: 7.3   Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~380~~	~~U~~
12674-11-2	Aroclor-1016	73	U
11104-28-2	Aroclor-1221	150	U
11141-16-5	Aroclor-1232	73	U
53469-21-9	Aroclor-1242	73	U
12672-29-6	Aroclor-1248	73	U
11097-69-1	Aroclor-1254	100	
11096-82-5	Aroclor-1260	73	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-6RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608713RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 55 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓ EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~380~~	~~U~~
12674-11-2	Aroclor-1016	73	U ✓
11104-28-2	Aroclor-1221	150	U ✓
11141-16-5	Aroclor-1232	73	U ✓
53469-21-9	Aroclor-1242	73	U ✓
12672-29-6	Aroclor-1248	73	U ✓
11097-69-1	Aroclor-1254	52	JP ✓
11096-82-5	Aroclor-1260	73	U ✓

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-7

Lab Name: NYTEST ENV INC   Contract: 9521637

Lab Code: NYTEST   Case No.: 26087   SAS No.: ______   SDG No.: NYACK3

Matrix: (soil/water) SOIL   Lab Sample ID: 2608712

Sample wt/vol: 30.0 (g/mL) G   Lab File ID: ______

% Moisture: 22   decanted: (Y/N) N   Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC   Date Extracted: 12/29/95

Concentrated Extract Volume: 5000 (uL)   Date Analyzed: 01/24/96

Injection Volume: 1.00 (uL)   Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y   pH: 7.0   Sulfur Cleanup: (Y/N) Y

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION (UG/KG)	Q
~~8001-35-2~~	~~Toxaphene~~	~~220~~	~~U~~
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	86	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	230	
11096-82-5	Aroclor-1260	42	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-7RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608712RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 22 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓ EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) Y

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION (UG/KG)	Q
~~8001-35-2~~	~~Toxaphene~~	~~220~~	~~U~~
12674-11-2	Aroclor-1016	42	U ✓
11104-28-2	Aroclor-1221	86	U ✓
11141-16-5	Aroclor-1232	42	U ✓
53469-21-9	Aroclor-1242	42	U ✓
12672-29-6	Aroclor-1248	42	U ✓
11097-69-1	Aroclor-1254	27	JP ✓
11096-82-5	Aroclor-1260	42	U ✓

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-8

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608711

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 20 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/17/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.8 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~210~~	~~U~~
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	84	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-8RE

Lab Name: NYTEST ENV INC   Contract: 9521637

Lab Code: NYTEST   Case No.: 26087   SAS No.: ______   SDG No.: NYACK3

Matrix: (soil/water) SOIL   Lab Sample ID: 2608711RE

Sample wt/vol: 30.0 (g/mL) G   Lab File ID: ______

% Moisture: 20   decanted: (Y/N) N   Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC   Date Extracted: 01/19/96 / EXCEEDANCE

Concentrated Extract Volume: 5000 (uL)   Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL)   Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y   pH: 6.8   Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~210~~	~~U~~
12674-11-2	Aroclor-1016	41	U √
11104-28-2	Aroclor-1221	84	U √
11141-16-5	Aroclor-1232	41	U √
53469-21-9	Aroclor-1242	41	U √
12672-29-6	Aroclor-1248	41	U √
11097-69-1	Aroclor-1254	41	U √
11096-82-5	Aroclor-1260	24	J √

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-9

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608710

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 26 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/17/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 /

GPC Cleanup: (Y/N) Y / pH: 7.7 Sulfur Cleanup: (Y/N) Y /

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~230~~	~~U~~
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	91	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	45	U
11096-82-5	Aroclor-1260	45	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-9RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608710RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 26 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.7 Sulfur Cleanup: (Y/N) Y

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION	Q
~~8001-35-2~~	~~Toxaphene~~	~~230~~	~~U~~
12674-11-2	Aroclor-1016	45	U ✓
11104-28-2	Aroclor-1221	91	U ✓
11141-16-5	Aroclor-1232	45	U ✓
53469-21-9	Aroclor-1242	45	U ✓
12672-29-6	Aroclor-1248	45	U ✓
11097-69-1	Aroclor-1254	45	U ✓
11096-82-5	Aroclor-1260	45	U ✓

WH 01/24/9[illegible]

CLMR
14 FEB 96

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-10

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608709

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 52 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/17/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.9 Sulfur Cleanup: (Y/N) Y ✓

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~350~~	~~U~~
12674-11-2	Aroclor-1016	69	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	69	U
53469-21-9	Aroclor-1242	69	U
12672-29-6	Aroclor-1248	69	U
11097-69-1	Aroclor-1254	69	U
11096-82-5	Aroclor-1260	69	U

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CMM
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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-10RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608709RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 52 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~350~~	~~U~~
12674-11-2	Aroclor-1016	69	U
11104-28-2	Aroclor-1221	140	U
11141-16-5	Aroclor-1232	69	U
53469-21-9	Aroclor-1242	69	U
12672-29-6	Aroclor-1248	69	U
11097-69-1	Aroclor-1254	69	U
11096-82-5	Aroclor-1260	69	U

NR 01-26-96

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14 FEB 96

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-11

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608708

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 29 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/17/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~240~~	~~U~~
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	94	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	30	JP

WH 01-24-96

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14 FEB 96

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-11RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608708RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 29 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓ EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.8 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~240~~	~~U~~	WAS FLAGGED
12674-11-2	Aroclor-1016	46	U V	
11104-28-2	Aroclor-1221	94	U V	
11141-16-5	Aroclor-1232	46	U V	
53469-21-9	Aroclor-1242	46	U V	
12672-29-6	Aroclor-1248	46	U V	
11097-69-1	Aroclor-1254	46	U V	
11096-82-5	Aroclor-1260	~~3000~~ 3600	~~E~~ DV	

THE AROCLOR 1260 RESULT REPORTED HAS BEEN TRANSFERRED FROM THE FORM I FOR SED-11RE DL, A 10X DILUTION OF THE REEXTRACTION OF SAMPLE SED-11.

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-11REDL

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608708REDL

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 29 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓ EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/26/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 10.0 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.8 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~2400~~	~~U~~ WA 01-24-96
12674-11-2	Aroclor-1016	460	U ✓
11104-28-2	Aroclor-1221	940	U ✓
11141-16-5	Aroclor-1232	460	U ✓
53469-21-9	Aroclor-1242	460	U ✓
12672-29-6	Aroclor-1248	460	U ✓
11097-69-1	Aroclor-1254	460	U ✓
11096-82-5	Aroclor-1260	3000	D ✓

THE AROCLOR-1260 RESULT REPORTED HAS BEEN TRANSFERRED TO THE FORM I FOR SED-11RE, THE ORIGINAL, UNDILUTED ANALYSIS OF THE REEXTRACTION OF SAMPLE SED-11.

CMM
14 FEB 96

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-12

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608707

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 13 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/17/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.5 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~200~~	~~U~~
12674-11-2	Aroclor-1016	~~38~~	~~U~~ R
11104-28-2	Aroclor-1221	~~77~~	~~U~~ R
11141-16-5	Aroclor-1232	~~38~~	~~U~~ R
53469-21-9	Aroclor-1242	~~38~~	~~U~~ R
12672-29-6	Aroclor-1248	~~38~~	~~U~~ R
11097-69-1	Aroclor-1254	~~38~~	~~U~~ R
11096-82-5	Aroclor-1260	~~38~~	~~U~~ R

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-12RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608707RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 13 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓ EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 7.5 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~200~~	~~U~~
12674-11-2	Aroclor-1016	38	U ✓
11104-28-2	Aroclor-1221	77	U ✓
11141-16-5	Aroclor-1232	38	U ✓
53469-21-9	Aroclor-1242	38	U ✓
12672-29-6	Aroclor-1248	38	U ✓
11097-69-1	Aroclor-1254	38	U ✓
11096-82-5	Aroclor-1260	38	U ✓

WH 01-26-96

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14 FEB 96

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X-3

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608721

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/24/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 7.1 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~	WA 01/24/96
12674-11-2	Aroclor-1016	37	U	
11104-28-2	Aroclor-1221	76	U	
11141-16-5	Aroclor-1232	37	U	
53469-21-9	Aroclor-1242	37	U	
12672-29-6	Aroclor-1248	37	U	
11097-69-1	Aroclor-1254	37	U	
11096-82-5	Aroclor-1260	37	U	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X-3RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYAQK3

Matrix: (soil/water) SOIL Lab Sample ID: 26087721RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 12 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓ EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~190~~	~~U~~
12674-11-2	Aroclor-1016	37	U ✓
11104-28-2	Aroclor-1221	76	U ✓
11141-16-5	Aroclor-1232	37	U ✓
53469-21-9	Aroclor-1242	37	U ✓
12672-29-6	Aroclor-1248	37	U ✓
11097-69-1	Aroclor-1254	37	U ✓
11096-82-5	Aroclor-1260	37	U ✓

WH 96/1-24-96

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-13

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608706

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 53 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/17/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.7 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~360~~	~~U~~
12674-11-2	Aroclor-1016	~~70~~	~~U~~ R
11104-28-2	Aroclor-1221	~~140~~	~~U~~ R
11141-16-5	Aroclor-1232	~~70~~	~~U~~ R
53469-21-9	Aroclor-1242	~~70~~	~~U~~ R
12672-29-6	Aroclor-1248	~~70~~	~~U~~ R
11097-69-1	Aroclor-1254	~~70~~	~~U~~ R
11096-82-5	Aroclor-1260	~~70~~	~~U~~ R

NA 01-16-96

CLM
14 FEB 96

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-13RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608706RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 53 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓ EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 7.7 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~360~~	~~U~~
12674-11-2	Aroclor-1016	70	U ✓
11104-28-2	Aroclor-1221	140	U ✓
11141-16-5	Aroclor-1232	70	U ✓
53469-21-9	Aroclor-1242	70	U ✓
12672-29-6	Aroclor-1248	70	U ✓
11097-69-1	Aroclor-1254	70	U ✓
11096-82-5	Aroclor-1260	70	U ✓

NA ug/kg

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-14

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608705

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 41 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/17/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~290~~	~~U~~
12674-11-2	Aroclor-1016	~~56~~	~~U~~ R
11104-28-2	Aroclor-1221	~~110~~	~~U~~ R
11141-16-5	Aroclor-1232	~~56~~	~~U~~ R
53469-21-9	Aroclor-1242	~~56~~	~~U~~ R
12672-29-6	Aroclor-1248	~~56~~	~~U~~ R
11097-69-1	Aroclor-1254	~~56~~	~~U~~ R
11096-82-5	Aroclor-1260	~~56~~	~~U~~ R

WA 01/17/96

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-14RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608705RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 41 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 / EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 6.9 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
~~8001-35-2~~	~~Toxaphene~~	~~290~~	~~U~~	N/A OK 1-26-96
12674-11-2	Aroclor-1016	56	U ✓	
11104-28-2	Aroclor-1221	110	U ✓	
11141-16-5	Aroclor-1232	56	U ✓	
53469-21-9	Aroclor-1242	56	U ✓	
12672-29-6	Aroclor-1248	56	U ✓	
11097-69-1	Aroclor-1254	56	U ✓	
11096-82-5	Aroclor-1260	56	U ✓	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-15

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608704

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ________

% Moisture: 39 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/17/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y / pH: 7.1 Sulfur Cleanup: (Y/N) Y ✓

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
~~8001-35-2~~	~~Toxaphene~~	~~280~~	~~U~~
12674-11-2	Aroclor-1016	~~54~~	~~U~~ R
11104-28-2	Aroclor-1221	~~110~~	~~U~~ R
11141-16-5	Aroclor-1232	~~54~~	~~U~~ R
53469-21-9	Aroclor-1242	~~54~~	~~U~~ R
12672-29-6	Aroclor-1248	~~54~~	~~U~~ R
11097-69-1	Aroclor-1254	62	V
11096-82-5	Aroclor-1260	~~54~~	~~U~~ R

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-15RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608704RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 39 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓ EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 7.1 Sulfur Cleanup: (Y/N) Y ✓

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	280	U
12674-11-2	Aroclor-1016	54	U ✓
11104-28-2	Aroclor-1221	110	U ✓
11141-16-5	Aroclor-1232	54	U ✓
53469-21-9	Aroclor-1242	54	U ✓
12672-29-6	Aroclor-1248	54	U ✓
11097-69-1	Aroclor-1254	~~54~~	~~U ✓~~
11096-82-5	Aroclor-1260	54	U ✓

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-16

Lab Name: NYTEST ENV INC   Contract: 9521637

Lab Code: NYTEST   Case No.: 26087   SAS No.: ______   SDG No.: NYACK3

Matrix: (soil/water) SOIL   Lab Sample ID: 2608703

Sample wt/vol: 30.0 (g/mL) G   Lab File ID: ______

% Moisture: 74   decanted: (Y/N) N   Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC   Date Extracted: 12/29/95 ✓

Concentrated Extract Volume: 5000 (uL)   Date Analyzed: 01/17/96 ✓

Injection Volume: 1.00 (uL)   Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓   pH: 7.0   Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~650~~	~~U~~
12674-11-2	Aroclor-1016	130	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	130	U
53469-21-9	Aroclor-1242	130	U
12672-29-6	Aroclor-1248	130	U
11097-69-1	Aroclor-1254	130	U
11096-82-5	Aroclor-1260	130	U

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-16RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608703RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 74 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~650~~	~~U~~
12674-11-2	Aroclor-1016	130	U ✓
11104-28-2	Aroclor-1221	260	U ✓
11141-16-5	Aroclor-1232	130	U ✓
53469-21-9	Aroclor-1242	130	U ✓
12672-29-6	Aroclor-1248	130	U ✓
11097-69-1	Aroclor-1254	130	U ✓
11096-82-5	Aroclor-1260	130	U ✓

NK 01-24-96

GM7
14 FEB 96

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-17

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608702

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 37 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/17/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 7.6 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~270~~	~~U~~ NA
12674-11-2	Aroclor-1016	52	U ✓
11104-28-2	Aroclor-1221	110	U ✓
11141-16-5	Aroclor-1232	52	U ✓
53469-21-9	Aroclor-1242	52	U ✓
12672-29-6	Aroclor-1248	52	U ✓
11097-69-1	Aroclor-1254	52	U ✓
11096-82-5	Aroclor-1260	52	U ✓

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-17RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608702RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 37 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	270	U
12674-11-2	Aroclor-1016	52	U ✓
11104-28-2	Aroclor-1221	110	U ✓
11141-16-5	Aroclor-1232	52	U ✓
53469-21-9	Aroclor-1242	52	U ✓
12672-29-6	Aroclor-1248	52	U ✓
11097-69-1	Aroclor-1254	52	U ✓
11096-82-5	Aroclor-1260	52	U ✓

NA 01-26-96

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14 FEB 96

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-18

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: ______ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608701

Sample wt/vol: 30.0 (g/mL) G Lab File ID: ______

% Moisture: 20 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 12/29/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/17/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) Y

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND	Concentration	Q
~~8001-35-2~~	~~Toxaphene~~	~~210~~	~~U~~
12674-11-2	Aroclor-1016	~~41~~	~~U~~ R
11104-28-2	Aroclor-1221	~~84~~	~~U~~ R
11141-16-5	Aroclor-1232	~~41~~	~~U~~ R
53469-21-9	Aroclor-1242	~~41~~	~~U~~ R
12672-29-6	Aroclor-1248	~~41~~	~~U~~ R
11097-69-1	Aroclor-1254	~~41~~	~~U~~ R
11096-82-5	Aroclor-1260	~~41~~	~~U~~ R

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SED-18RE

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26087 SAS No.: _____ SDG No.: NYACK3

Matrix: (soil/water) SOIL Lab Sample ID: 2608701RE

Sample wt/vol: 30.0 (g/mL) G Lab File ID: _____

% Moisture: 20 decanted: (Y/N) N Date Received: 12/28/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 01/19/96 ✓ EXCEEDANCE

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 01/25/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) Y ✓ pH: 7.3 Sulfur Cleanup: (Y/N) Y ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
~~8001-35-2~~	~~Toxaphene~~	~~210~~	~~U~~
12674-11-2	Aroclor-1016	41	U ✓
11104-28-2	Aroclor-1221	84	U ✓
11141-16-5	Aroclor-1232	41	U ✓
53469-21-9	Aroclor-1242	41	U ✓
12672-29-6	Aroclor-1248	41	U ✓
11097-69-1	Aroclor-1254	60	P ✓ N
11096-82-5	Aroclor-1260	41	U ✓

MA 2-28-96

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Volatile Organic Data Validation Summary
Orange & Rockland Utilities, Inc.
West Nyack, New York
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group NYACK1

Analytical results for ten (10) groundwater samples with matrix QC, one (1) field duplicate and two (2) trip blanks from Orange & Rockland's West Nyack, New York site were reviewed to evaluate the data quality. Data were assessed in accordance with the New York State Department of Environmental Conservation (NYSDEC) **Analytical Services Protocol** (12/91 Revision), the United States Environmental Protection Agency (USEPA) document **USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review** (February 1994) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (Rust) personnel on December 26 and 27, 1995.

EXW-4	**MW-5 MSD**	**MW-8S**
EXW-5	**MW-5B**	**X-1**
MW-1	**MW-6**	**MW-9B**
MW-5	**MW-7**	**TB-1**
MW-5 MS	**MW-8**	**TB-2**

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- System Monitoring Compound (SMC) Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Blank Summary and Data
- GC/MS Instrument Performance Check
- Target Compound Identification/Quantitation
- EPA/NIH Mass Spectral Library Search for TICs
- Quantitation Reports and Mass Spectral Data
- Initial and Continuing Calibration Data
- Internal Standard Areas and Retention Times
- Field Duplicate Data

The above items were in compliance with USEPA laboratory QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

System Monitoring Compound (SMC) Compounds

The SMC 1,2-dichloroethane-d4 exhibited a recovery of 134% in the analysis of sample MW-9B DL, which exceeds the upper QC limit of 114%. The associated result reported has been flagged with a "V" and is considered estimated.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

Sample MW-5 was selected for matrix spike/matrix spike duplicate (MS/MSD) analysis. While each of the percent recoveries for the MS and the MSD were within QC limits, the relative percent difference (RPD) between the MS and MSD recoveries for three spike compounds exceeded the QC limit: 1,1-Dichloroethene (RPD=20, QC limit=14), trichloroethene (RPD=16, QC limit=14) and benzene (RPD=15, QC limit=11). No data have been qualified based upon these exceedances, however, because data are not qualified based solely upon MS/MSD data and the other data does not indicate the need for further qualification of the results reported.

Blank Summary and Data

The compound methylene chloride, a common laboratory contaminant, was detected in each of the method blanks and both of the trip blanks associated with the samples in this SDG. In accordance with EPA validation criteria, the methylene chloride sample results have been reported as non-detect at the contract required quantitation limit (CRQL) or the result reported, whichever is greater, and are considered to be laboratory derived and not site related.

Target Compound Identification/Quantitation

The compound acetone, another common laboratory contaminant, was detected at low levels in samples EXW-5 and MW-6. Although acetone was not detected in any of the associated blanks, these results have each been flagged with an "S" and are suspected to be laboratory derived and not site related.

Initial and Continuing Calibration Data

The percent relative standard deviation (%RSD) in the initial calibration for the instrument designated "HPP" exceeded the USEPA technical criteria of 30.0%RSD for methylene chloride (61.3%RSD). This is most likely associated with the background concentrations of methylene chloride in the laboratory. The associated methylene chloride results have been flagged with a "V" and are considered estimated.

The calibration check standard on 12/28/95 for instrument "HPP" contained one (1) compound, tetrachloroethene, whose percent difference (%D) between the average RRF from

the initial calibration and the RRF for the continuing calibration exceeded the maximum %D of 25.0 specified in the SOW. Each of the tetrachloroethene (-26.5%D) results associated with this standard have been flagged with a "V" and are considered estimated. This continuing calibration standard is fully compliant and usable, however, because the Statement of Work (SOW) allows for up to two (2) %D to exceed the specified QC limits.

The calibration check standard on 12/28/95 also contained three (3) compounds whose %D exceeded the USEPA technical criteria of 25.0%D. The methylene chloride (41.2%D), acetone (-53.7%D) and carbon disulfide (-27.1%D) results associated with this continuing calibration standard have been flagged with a "V" and are considered estimated.

The calibration check standard on 12/29/95 for instrument "HPP" contained one (1) compound, 1,2-dichloroethane (29.1%D) which exceeds the maximum %D of 25.0 specified in the SOW. No data have been qualified based upon this nonconformance, however, because none of the 1,2-dichloroethane results associated with this calibration standard have been reported. This continuing calibration standard is also fully compliant and usable because the SOW allows for up to two (2) %D to exceed the specified QC limits. The calibration check standard on 12/29/95 also contained three (3) compounds whose %D exceeded the USEPA technical criteria of 25.0%D: Chloromethane (47.0%D), methylene chloride (40.6%D) and acetone (-44.6%D). No data have been qualified based upon this nonconformance, however, because none of the chloromethane, methylene chloride or acetone results associated with this calibration standard have been reported.

The %RSD for two (2) compounds in the initial calibration for the instrument designated "HPN" exceeded the USEPA technical criteria of 30.0%RSD. Each of the associated methylene chloride (53.8%RSD) and 2-butanone (55.3%RSD) results reported have been flagged with a "V" and are considered estimated.

The calibration check standard on 12/28/95 for instrument "HPN" contained four (4) compounds whose %D exceeded the USEPA technical criteria of 25.0%D. The chloroethane (36.3%D), methylene chloride (28.2%D), acetone (28.7%D) and 2-butanone (41.5%D) results associated with this continuing calibration standard have been flagged with a "V" and are considered estimated.

The calibration check standard on 12/29/95 for instrument "HPN" contained two (2) compounds whose %D exceeded the USEPA technical criteria of 25.0%D: Carbon disulfide (27.5%D) and 2-butanone (31.8%D). No data have been qualified based upon this nonconformance, however, because none of the carbon disulfide or 2-butanone results associated with this calibration standard have been reported.

Both the *cis* and *trans* isomers of 1,3-dichloropropene were improperly calibrated using the same peak in each of the individual initial calibration standards for the instrument designated "HPN". No data have been qualified based upon this nonconformance, however, because

each of the continuing calibration standards have properly quantified both the *cis* and *trans* isomers using two distinct peaks in the standard and neither isomer has been identified in any of the samples in this SDG.

Field Duplicate Data

Sample X-1 is a blind field duplicate of sample MW-8S. Although there are no established QC limits for field duplicate RPD data, Rust considers RPD values of 40% or less an indication of acceptable sampling and analytical precision. The field duplicate RPD values summarized below indicate acceptable sampling and analytical precision.

Compound	MW-8S	X-1	RPD
1,1-Dichloroethene	49	51	4.0%
1,1-Dichloroethane	7	7	0.0%
1,2-Dichloroethene (total)	120	120	0.0%
1,1,1-Trichloroethane	310	310	0.0%
Trichloroethene	190	200	5.1%
Tetrachloroethane	3	3	0.0%

Results expressed in ug/L.

Summary

In summary, based on 363 sample data points, 44 of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered fully compliant and usable, the usability of this data package is 100%.

Anthony M. Noce — Reviewed By

13 FEB 96 — Date

Approved By

February 13 1996 — Date

Volatile Organic Analytical Data - Groundwater

Orange & Rockland Utilities
West Nyack, New York

Sampling Dates: December 26 and 27, 1995

Sample ID / Compound	EXW-4	EXW-5	MW-1	MW-5	MW-5B	MW-6	MW-7	MW-8	MW-8S	X-1	MW-9B	TB-1	TB-2
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	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	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl Chloride	4 J	4 J	10 U	10 U	10 U	10 U	10 U	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	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene Chloride	10 UV	15 UV	10 UV	10 UV	10 UV	16 UV	10 UV	10 UV	10 UV	10 UV	10 UV	12 BV	13 BV
Acetone	10 UV	11 SV	10 UV	10 UV	10 UV	6 JSV	10 UV	10 UV	10 UV	10 UV	10 UV	10 UV	10 UV
Carbon Disulfide	10 UV	10 UV	10 UV	10 UV	10 UV	10 UV	10 UV	10 UV	10 UV	10 UV	10 UV	10 UV	10 UV
1,1-Dichloroethene	2 J	10 U	10 U	10 U	10 U	57	10 U	9 J	49	51	10 U	10 U	10 U
1,1-Dichloroethane	2 J	10 U	10 U	10 U	10 U	3 J	10 U	10 U	7 J	7 J	10 U	10 U	10 U
1,2-Dichloroethene (total)	130	13	10 U	10 U	24	180	10 U	160	120	120	87	10 U	10 U
Chloroform	10 U	10 U	10 U	10	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone	10 UV	10 UV	10 U	10 U	10 UV	10 UV	10 U	10 U	10 U	10 U	10 U	10 U	10 UV
1,1,1-Trichloroethane	8 J	10 U	1 J	10 U	2 J	150	10 U	44	310 D	310 D	2 J	10 U	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	3 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Trichloroethene	170	14	10 U	10 U	35	360 D	2 J	310 D	190	200 D	350 D	10 U	10 U
Dibromochloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	4 J	10 U	10 UV	10 UV	3 J	4 J	10 UV	4 JV	3 JV	3 JV	5 JV	10 UV	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	2 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	9 J	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylene (total)	10 U	10 U	28	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U

All results expressed in ug/L.
Standard Organic Data Qualifiers have been used.
Sample X-1 is a blind field duplicate of sample MW-8S.

SDG: NJACK1

STANDARD OPERATING PROCEDURE
Date: January 1992
Revision: 8

	YES	NO	N/A

PART A: VOA ANALYSES

1.0 Traffic Reports and Laboratory Narrative

1.1 Are the Traffic Report Forms present for all samples? [✓] ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

1.2 Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be flagged as estimated (J). If a soil sample other than TCLP contains more than 90% water, all data should be qualified as unusable (R).

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all Non-Detects "UJ".

ACTION: If both VOA vials for a sample have air bubbles or the VOA vial analyzed had air bubbles, flag all positive results "J" and all non-detects "R".

YES NO N/A

2.0 Holding Times

2.1 Have any VOA technical holding times, determined from date of collection to date of analysis, been exceeded? ___ [√] ___

If unpreserved, aqueous samples maintained at 4°C which are to be analyzed for aromatic hydrocarbons must be analyzed within 7 days of collection. If preserved with HCl (pH<2) and stored at 4°C, then aqueous samples must be analyzed within 14 days of collection. If uncertain about preserving, contact sampler to determine whether or not samples were preserved.

The holding time for soils is 10 days.

Table of Holding Time Violations

			(See Traffic Report)		
Sample ID	Sample Matrix	Preserved?	Date Sampled	Date Lab Received	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon re-analysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R). If holding times are exceeded by more than 28 days, all non detect data are unusable (R).

	YES	NO	N/A

3.0 System Monitoring Compound (SMC) Recovery (Form II)

		YES	NO	N/A
3.1	Are the VOA SMC Recovery Summaries (Form II) present for each of the following matrices:			
	a. Low Water	[✓]	—	—
	b. Low Soil	[ ]	—	✓
	c. Med Soil	[ ]	—	✓
3.2	Are all the VOA samples listed on the appropriate System Monitoring Compound Recovery Summary for each of the following matrices:			
	a. Low Water	[✓]	—	—
	b. Low Soil	[ ]	—	✓
	c. Med Soil	[ ]	—	✓
	ACTION: Call lab for explanation/ resubmittals. If missing deliverables are unavailable, document effect in data assessments.			
3.3	Were outliers marked correctly with an asterisk?	[✓]	—	—
	ACTION: Circle all outliers in red.			
3.4	Was one or more VOA system monitoring compound recovery outside of contract specifications for any sample or method blank?	✓	[ ]	—
	If yes, were samples re-analyzed?	[ ]	✓	—
	Were method blanks re-analyzed?	[ ]	—	✓

YES NO N/A

ACTION: If recoveries are > 10% but 1 or more compounds fail to meet SOW specifications:

1. All positive results are qualified as estimated (J).
2. Flag all non-detects as estimated detection limits ("UJ") where recovery is less than the lower acceptance limit.
3. If SMC recoveries are above allowable levels, do not qualify non-detects.

If any system monitoring compound recovery is <10% :

1. Flag all positive results as estimated ("J").
2. Flag all non-detects as unusable ("R").

Professional judgement should be used to qualify data that only have method blank SMC recoveries out of specification in both original and re-analyses. Check the internal standard areas.

3.5 Are there any transcription/calculation errors between raw data and Form II? ___ [√] ___

ACTION: If large errors exist, call lab for explanation/resubmittal, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spikes (Form III)

4.1 Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present? [√] ___ ___

	YES	NO	N/A

4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices:

a.	Low Water	[✓]	___	___
b.	Low Soil	[ ]	___	✓
c.	Med Soil	[ ]	___	✓

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

4.3 How many VOA spike recoveries are outside QC limits?

Water	Soils
0 out of 10	N/A out of 10

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Water	Soils
3 out of 5	N/A out of 5

ACTION: No action is taken based on MS/MSD data alone. However, using informed professional judgement, the MS/MSD results may be used in conjunction with other QC criteria to determine the need for qualification of the data.

5.0 Blanks (Form IV)

5.1	Is the Method Blank Summary (Form IV) present?	[✓]	___	___
5.2	Frequency of Analysis: for the analysis of VOA TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix (low water, low soil, medium soil), whichever is more frequent?	[✓]	___	___

	YES	NO	N/A

5.3 Has a VOA method/instrument blank been analyzed at least once every twelve hours for each concentration level and GC/MS system used? [/] ___ ___

ACTION: If any method blank data are missing, call lab for explanation/ resubmittal. If method blank data are not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank or trip blank data for missing method blank data.

5.4 Chromatography: review the blank raw data - chromatograms (RICs), quant reports or data system printouts and spectra.

Is the chromatographic performance (baseline stability) for each instrument acceptable for VOAs? [/] ___ ___

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/instrument/reagent blanks have positive results (TCL and/or TIC) for VOAs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor and corrected for % moisture when necessary. ___ [ ] ___

6.2 Do any field/trip/rinse blanks have positive VOA results (TCL and/or TIC)? ___ [ ] ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

YES NO N/A

NOTE: All field blank results associated to a particular group of samples (may exceed one per case) must be used to qualify data. Trip blanks are used to qualify only those samples with which they were shipped and are not required for non-aqueous matrices. Blanks may not be qualified because of contamination in another blank. Field Blanks & Trip Blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R).

	Sample conc > CRQL but < 10x blank value	Sample conc < CRQL & <10x blank value	Sample conc > CRQL & >10x blank value
Methylene Chloride Acetone Toluene 2-Butanone	Flag sample result with a "U;	Report CRQL & qualify "U"	No qualification is needed

	Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL value & > 5x blank value
Other Contam-inants	Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration criteria.

	YES	NO	N/A

ACTION: For TIC compounds, if the concentration in the sample is less than five times the concentration in the most contaminated associated blank, flag the sample data "R" (unusable).

6.3 Are there field/rinse/equipment blanks associated with every sample? [✓] ___ ___

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 GC/MS Instrument Performance Check (Form V)

7.1 Are the GC/MS Instrument Performance Check Forms (Form V) present for Bromofluorobenzene (BFB)? [✓] ___ ___

7.2 Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the BFB provided for each twelve hour shift? [✓] ___ ___

7.3 Has an instrument performance compound been analyzed for every twelve hours of sample analysis per instrument? [✓] ___ ___

	YES	NO	N/A

ACTION: List date, time, instrument ID, and sample analysis for which no associated GC/MS tuning data are available.

DATE	TIME	INSTRUMENT	SAMPLE NUMBERS
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

ACTION: If lab cannot provide missing data, reject ("R") all data generated outside an acceptable twelve hour calibration interval.

7.4 Have the ion abundances been normalized to m/z 95? [✓] ___ ___

ACTION: If mass assignment is in error, qualify all associated data as unusable (R).

7.5 Have the ion abundance criteria been met for each instrument used? [✓] ___ ___

ACTION: List all data which do not meet ion abundance criteria (attach a separate sheet).

ACTION: If ion abundance criteria are not met, the Region II TPO must be notified.

7.6 Are there any transcription/calculation errors between mass lists and Form Vs? (Check at least two values but if errors are found, check more.) ___ [✓] ___

		YES	NO	N/A
7.7	Have the appropriate number of significant figures (two) been reported?	[✓]	___	___
	ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.			
7.8	Are the spectra of the mass calibration compound acceptable?	[✓]	___	___
	ACTION: Use professional judgement to determine whether associated data should be accepted, qualified, or rejected.			
8.0	Target Compound List (TCL) Analytes			
8.1	Are the Organic Analysis Data Sheets (Form I VOA) present with required header information on each page, for each of the following:			
	a. Samples and/or fractions as appropriate	[✓]	___	___
	b. Matrix spikes and matrix spike duplicates	[✓]	___	___
	c. Blanks	[✓]	___	___
8.2	Are the VOA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following?			
	a. Samples and/or fractions as appropriate	[✓]	___	___
	b. Matrix spikes and matrix spike duplicates (Mass spectra not required)	[✓]	___	___
	c. Blanks	[✓]	___	___
	ACTION: If any data are missing, take action specified in 3.2 above.			

		YES	NO	N/A
8.3	Are the response factors shown in the Quant Report?	[✓]	___	___
8.4	Is chromatographic performance acceptable with respect to:			
	Baseline stability?	[✓]	___	___
	Resolution?	[✓]	___	___
	Peak shape?	[✓]	___	___
	Full-scale graph (attenuation)?	[✓]	___	___
	Other: _____	[ ]	___	✓

ACTION: Use professional judgement to determine the acceptability of the data.

8.5	Are the lab-generated standard mass spectra of the identified VOA compounds present for each sample?	[✓]	___	___

ACTION: If any mass spectra are missing, take action specified in 3.2 above. If lab does not generate their own standard spectra, make note in "Contract Problems/Non-compliance".

8.6	Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	[✓]	___	___
8.7	Are all ions present in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum?	[✓]	___	___

	YES	NO	N/A

8.8 Do sample and standard relative ion intensities agree within 20%? [✓1] ___ ___

ACTION: Use professional judgement to determine acceptability of data. If it is determined that incorrect identifications were made, all such data should be rejected (R), flagged "N" (presumptive evidence of the presence of the compound) or changed to not detected (U) at the calculated detection limit. In order to be positively identified, the data must comply with the criteria listed in 8.6, 8.7, and 8.8.

ACTION: When sample carry-over is a possibility, professional judgement should be used to determine if instrument cross-contamination has affected any positive compound identification.

9.0 Tentatively Identified Compounds (TIC)

9.1 Are all Tentatively Identified Compound Forms (Form I Part B) present; and do listed TICs include scan number or retention time, estimated concentration and "JN" qualifier? [✓1] ___ ___

9.2 Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following:

a. Samples and/or fractions as appropriate [✓1] ___ ___

b. Blanks [✓1] ___ ___

ACTION: If any TIC data are missing, take action specified in 3.2 above.

ACTION: Add "JN" qualifier if missing.

	YES	NO	N/A
9.3 Are any TCL compounds (from any fraction) listed as TIC compounds (example: 1,2-dimethylbenzene is xylene- a VOA TCL analyte - and should not be reported as a TIC)?		✓ 1	
ACTION: Flag with "R" any TCL compound listed as a TIC.			
9.4 Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	✓ 1		
9.5 Do TIC and "best match" standard relative ion intensities agree within 20%?	✓ 1		

ACTION: Use professional judgement to determine acceptability of TIC identifications. If it is determined that an incorrect identification was made, change identification to "unknown" or to some less specific identification (example: "C3 substituted benzene") as appropriate.

Also, when a compound is not found in any blank, but is detected in a sample and is a suspected artifact of a common laboratory contaminant, the result should be qualified as unusable (R). (i.e. Common Lab Contaminants: CO_2 (M/E 44), Siloxanes (M/E 73) Hexane, Aldol Condensation Products, Solvent Preservatives, and related by products - see Functional Guidelines for more guidance).

	YES	NO	N/A

10.0 Compound Quantitation and Reported Detection Limits

10.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the correct internal standard, quantitation ion, and RRF were used to calculate Form I result. Were any errors found? ___ [√] ___

10.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture? [√] ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note errors under "Conclusions".

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

11.0 Standards Data (GC/MS)

11.1 Are the Reconstructed Ion Chromatograms, and data system printouts (Quant. Reports) present for initial and continuing calibration? [√] ___ ___

ACTION: If any calibration standard data are missing, take action specified in 3.2 above.

	YES	NO	N/A

12.0 GC/MS Initial Calibration (Form VI)

12.1 Are the Initial Calibration Forms (Form VI) present and complete for the volatile fraction at concentrations of 10, 20, 50, 100, 200 ug/l? Are there separate calibrations for low water/med soils and low soil samples? [✓] ___ ___

ACTION: If any calibration standard forms are missing, take action specified in 3.2 above.

12.2 Were all low level soil standards, blanks and samples analyzed by heated purge? [ ] ___ ✓

ACTION: If low level soil samples were not heated during purge, qualify positive hits "J" and non-detects "R".

12.3 Are response factors stable for VOA's over the concentration range of the calibration (%Relative Standard Deviation (%RSD) <30.0%)? [ ] ✓ ___

ACTION: Circle all outliers in red.

NOTE: Although 11 VOA compounds have a minimum RRF and no maximum %RSD, the technical criteria are the same for all analytes.

ACTION: If %RSD > 30.0%, qualify associated positive results for that analyte "J" and non-detects using professional judgement. When RSD > 90%, flag all non-detects for that analyte R (unusable).

NOTE: Analytes previously qualified "U" for blank contamination are still considered as "hits" when qualifying for initial calibration criteria.

12.4 Are the RRFs above 0.05? [✓] ___ ___

Action: Circle all outliers in red.
Action: If any RRF are < 0.05, qualify associated non-detects (R) and flag associated positive data as estimated (J).

	YES	NO	N/A
12.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %RSD? (Check at least 2 values, but if errors are found, check more.)	___	[√]	___

13.0 GC/MS Continuing Calibration (Form VII)

13.1 Are the Continuing Calibration Forms (Form VII) present and complete for the volatile fraction?	[√]	___	___
13.2 Has a continuing calibration standard been analyzed for every twelve hours of sample analysis per instrument?	[√]	___	___

ACTION: List below all sample analyses that were not within twelve hours of the previous continuing calibration analysis.

_____

_____

_____

ACTION: If any forms are missing or no continuing calibration standard has been analyzed within twelve hours of every sample analysis, call lab for explanation/resubmittal. If continuing calibration data are not available, flag all associated sample data as unusable ("R").

13.3 Do any volatile compounds have a % Difference (% D) between the initial and continuing RRF which exceeds the ± 25% criteria?	√	[ ]	___

ACTION: Circle all outliers in red.

ACTION: Qualify both positive results and non-detects for the outlier compound(s) as estimated. When % D is above 90%, reject all non-detects for that analyte (R) unusable.

	YES	NO	N/A
13.4 Do any volatile compounds have a RRF <0.05?	[1]		

ACTION: Circle all outliers in red.

ACTION: If the RRF <0.05, qualify associated non-detects as unusable (R) and "J" associated positive values.

13.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %difference (%D) between initial and continuing RRFs? (Check at least two values but if errors are found, check more.)		[1]	

ACTION: Circle errors in red.

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note errors under "Conclusions".

14.0 Internal Standard (Form VIII)

14.1 Are the internal standard areas (Form VIII) of every sample and blank within the upper and lower limits (-50% to + 100%) for each continuing calibration?	[1]		

ACTION: List all the outliers below.

Sample #	Internal Std	Area	Lower Limit	Upper Limit

(Attach additional sheets if necessary.)

YES NO N/A

ACTION: 1. If the internal standard area count is outside the upper or lower limit, flag with "J" all positive results quantitated with this internal standard.

2. Non-detects associated with IS area counts > 100% should not be qualified.

3. If IS area is below the lower limit (< 50%), qualify all associated non-detects (U values) "J". If extremely low area counts are reported, (< 25%) or if performance exhibits a major abrupt drop off, flag all associated non-detects as unusable ("R").

14.2 Are the retention times of the internal standards within 30 seconds of the associated calibration standard? [✓] — —

ACTION: Professional judgement should be used to qualify data if the retention times differ by more than 30 seconds.

15.0 Field Duplicates

15.1 Were any field duplicates submitted for VOA analysis? [✓] — —

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

Organic Data Qualifiers

U - The compound was analyzed for but not detected at or above the quantitation limit indicated.

J - The compound was analyzed for and determined to be present in the sample because the mass spectrum of the compound meets the identification criteria of the method. The concentration reported is an estimated value, less than the practical quantitation limit for the sample.

B - The compound is also found in an associated blank.

V - The reported value is considered estimated due to variance from quality control criteria

S - The reported value is suspected to be due to laboratory contamination.

R - The reported value is unusable and rejected due to variance from quality control criteria.

D - The reported value is taken from the analysis of a diluted sample.

E - The reported value exceeds the calibration range of the instrument.

N - Indicates presumptive evidence for compound identification.

A - Indicates that the compound is an aldol condensation product.

C - Compound identification has been qualitatively confirmed by GC/MS.

P - Indicates that the percent difference between the results from the two analytical columns is greater than 25%.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

EXW-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607811

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5958.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Date Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	4	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	U ~~B~~ V
67-64-1	Acetone	10	U V
75-15-0	Carbon Disulfide	10	U V
75-35-4	1,1-Dichloroethene	2	J
75-34-3	1,1-Dichloroethane	2	J
540-59-0	1,2-Dichloroethene (total)	130	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U V
71-55-6	1,1,1-Trichloroethane	8 ~~7~~	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	170	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	4	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

EXW-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607811

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5958.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					
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22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					

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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

EXW-5

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607812

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5957.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Date Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	4	J
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	15	~~B~~ U
67-64-1	Acetone	11	S
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	13	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	14	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

EXW-5

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607812

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5957.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
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29.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607306

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8602.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/28/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
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	~~9~~ 10	~~JB~~ U	✓
67-64-1	Acetone	10	U	✓
75-15-0	Carbon Disulfide	10	U	✓
75-35-4	1,1-Dichloroethene	10	U	
75-34-3	1,1-Dichloroethane	10	U	
540-59-0	1,2-Dichloroethene (total)	10	U	
67-66-3	Chloroform	10	U	
107-06-2	1,2-Dichloroethane	10	U	
78-93-3	2-Butanone	10	U	
71-55-6	1,1,1-Trichloroethane	1	J	
56-23-5	Carbon Tetrachloride	10	U	
75-27-4	Bromodichloromethane	10	U	
78-87-5	1,2-Dichloropropane	10	U	
10061-01-5	cis-1,3-Dichloropropene	10	U	
79-01-6	Trichloroethene	10	U	
124-48-1	Dibromochloromethane	10	U	
79-00-5	1,1,2-Trichloroethane	10	U	
71-43-2	Benzene	10	U	
10061-02-6	trans-1,3-Dichloropropene	10	U	
75-25-2	Bromoform	10	U	
108-10-1	4-Methyl-2-Pentanone	10	U	
591-78-6	2-Hexanone	10	U	
127-18-4	Tetrachloroethene	10	U	✓
79-34-5	1,1,2,2-Tetrachloroethane	10	U	
108-88-3	Toluene	2	J	
108-90-7	Chlorobenzene	10	U	
100-41-4	Ethylbenzene	9	J	
100-42-5	Styrene	10	U	
1330-20-7	Xylene (total)	28		

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

MW-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607306

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8602.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 9

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	3.763	7	J
2.		UNKNOWN	3.784	9	J
3.		UNKNOWN HYDROCARBON	5.145	6	J
4.		UNKNOWN	5.486	8	J
5.		UNKNOWN	6.899	9	J
6.		UNKNOWN AROMATIC	18.182	8	J
7.		UNKNOWN AROMATIC	18.894	7	J
8.		UNKNOWN AROMATIC	19.213	18	J
9.		UNKNOWN AROMATIC	21.070	7	J
10.					
11.					
12.					
13.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-5

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607307

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8603.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/28/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
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	10 ~~9~~	U ~~JB~~	✓
67-64-1	Acetone	10	U	✓
75-15-0	Carbon Disulfide	10	U	✓
75-35-4	1,1-Dichloroethene	10	U	
75-34-3	1,1-Dichloroethane	10	U	
540-59-0	1,2-Dichloroethene (total)	10	U	
67-66-3	Chloroform	10		
107-06-2	1,2-Dichloroethane	10	U	
78-93-3	2-Butanone	10	U	
71-55-6	1,1,1-Trichloroethane	10	U	
56-23-5	Carbon Tetrachloride	10	U	
75-27-4	Bromodichloromethane	3	J	
78-87-5	1,2-Dichloropropane	10	U	
10061-01-5	cis-1,3-Dichloropropene	10	U	
79-01-6	Trichloroethene	10	U	
124-48-1	Dibromochloromethane	10	U	
79-00-5	1,1,2-Trichloroethane	10	U	
71-43-2	Benzene	10	U	
10061-02-6	trans-1,3-Dichloropropene	10	U	
75-25-2	Bromoform	10	U	
108-10-1	4-Methyl-2-Pentanone	10	U	
591-78-6	2-Hexanone	10	U	
127-18-4	Tetrachloroethene	10	U	✓
79-34-5	1,1,2,2-Tetrachloroethane	10	U	
108-88-3	Toluene	10	U	
108-90-7	Chlorobenzene	10	U	
100-41-4	Ethylbenzene	10	U	
100-42-5	Styrene	10	U	
1330-20-7	Xylene (total)	10	U	

lmn
7 FEB 96

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

MW-5

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607307

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8603.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0/

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-5B

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607809

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5960.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Date Analyzed: 12/28/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	10	U ~~B~~ ✓✓
67-64-1	Acetone	10	U ✓
75-15-0	Carbon Disulfide	10	U ✓
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	24	
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U ✓
71-55-6	1,1,1-Trichloroethane	2	J
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	35	
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	3	J
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total)	10	U

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1E

NYSDEC SAMPLE NO.

MW-5B

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607809

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5960.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 /

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-6

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607810

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5959.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Date Analyzed: 12/28/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
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		16	U ~~B~~ ✓
67-64-1	Acetone		6	J ✓
75-15-0	Carbon Disulfide		10	U ✓
75-35-4	1,1-Dichloroethene		57	
75-34-3	1,1-Dichloroethane		3	J
540-59-0	1,2-Dichloroethene (total)		180	
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
78-93-3	2-Butanone		10	U ✓
71-55-6	1,1,1-Trichloroethane		150	
56-23-5	Carbon Tetrachloride		10	U
75-27-4	Bromodichloromethane		10	U
78-87-5	1,2-Dichloropropane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
79-01-6	Trichloroethene	360	~~250~~	D ~~B~~
124-48-1	Dibromochloromethane		10	U
79-00-5	1,1,2-Trichloroethane		10	U
71-43-2	Benzene		10	U
10061-02-6	trans-1,3-Dichloropropene		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-Pentanone		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		4	J
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-88-3	Toluene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
1330-20-7	Xylene (total)		10	U

TRICHLORDETHENE RESULT REPORTED HAS BEEN TRANSFERRED FROM THE FORM I FOR THE ANALYSIS OF MW-6DL, A 5X DILUTION OF SAMPLE MW-6.

GMM 8FEB96

1E

NYSDEC SAMPLE NO.

MW-6

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607810

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5959.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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2.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-6DL

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607810

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5970.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Date Analyzed: 12/29/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	50	U
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	110	U ~~BD~~ ✓
67-64-1	Acetone	50	U
75-15-0	Carbon Disulfide	50	U ✓
75-35-4	1,1-Dichloroethene	60	D
75-34-3	1,1-Dichloroethane	50	U
540-59-0	1,2-Dichloroethene (total)	230	D
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U
78-93-3	2-Butanone	50	U ✓
71-55-6	1,1,1-Trichloroethane	200	D
56-23-5	Carbon Tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	360	D
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	7	JD
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (total)	50	U

THE TRICHLORDETHENE RESULT REPORTED HAS BEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, UNDILUTED ANALYSIS OF SAMPLE MW-6. GMM 8FEB96

1E

NYSDEC SAMPLE NO.

MW-6DL

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607810

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5970.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Data Analyzed: 12/29/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-7

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607305

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8601.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/28/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q	
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	10	~~9~~	U ~~JB~~	✓
67-64-1	Acetone		10	U	✓
75-15-0	Carbon Disulfide		10	U	✓
75-35-4	1,1-Dichloroethene		10	U	
75-34-3	1,1-Dichloroethane		10	U	
540-59-0	1,2-Dichloroethene (total)		10	U	
67-66-3	Chloroform		10	U	
107-06-2	1,2-Dichloroethane		10	U	
78-93-3	2-Butanone		10	U	
71-55-6	1,1,1-Trichloroethane		10	U	
56-23-5	Carbon Tetrachloride		10	U	
75-27-4	Bromodichloromethane		10	U	
78-87-5	1,2-Dichloropropane		10	U	
10061-01-5	cis-1,3-Dichloropropene		10	U	
79-01-6	Trichloroethene		2	J	
124-48-1	Dibromochloromethane		10	U	
79-00-5	1,1,2-Trichloroethane		10	U	
71-43-2	Benzene		10	U	
10061-02-6	trans-1,3-Dichloropropene		10	U	
75-25-2	Bromoform		10	U	
108-10-1	4-Methyl-2-Pentanone		10	U	
591-78-6	2-Hexanone		10	U	
127-18-4	Tetrachloroethene		10	U	✓
79-34-5	1,1,2,2-Tetrachloroethane		10	U	
108-88-3	Toluene		10	U	
108-90-7	Chlorobenzene		10	U	
100-41-4	Ethylbenzene		10	U	
100-42-5	Styrene		10	U	
1330-20-7	Xylene (total)		10	U	

AMN
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1E

NYSDEC SAMPLE NO.

MW-7

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607305

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8601.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-8

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607304

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8600.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q	
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		10 ~~9~~	U ~~JB~~	✓
67-64-1	Acetone		10	U	✓✓
75-15-0	Carbon Disulfide		10	U	✓
75-35-4	1,1-Dichloroethene		9	J	
75-34-3	1,1-Dichloroethane		10	U	
540-59-0	1,2-Dichloroethene (total)		160		
67-66-3	Chloroform		10	U	
107-06-2	1,2-Dichloroethane		10	U	
78-93-3	2-Butanone		10	U	
71-55-6	1,1,1-Trichloroethane		44		
56-23-5	Carbon Tetrachloride		10	U	
75-27-4	Bromodichloromethane		10	U	
78-87-5	1,2-Dichloropropane		10	U	
10061-01-5	cis-1,3-Dichloropropene		10	U	
79-01-6	Trichloroethene		⊃10 ~~270~~	D ~~E~~	
124-48-1	Dibromochloromethane		10	U	
79-00-5	1,1,2-Trichloroethane		10	U	
71-43-2	Benzene		10	U	
10061-02-6	trans-1,3-Dichloropropene		10	U	
75-25-2	Bromoform		10	U	
108-10-1	4-Methyl-2-Pentanone		10	U	
591-78-6	2-Hexanone		10	U	
127-18-4	Tetrachloroethene		4	J	✓
79-34-5	1,1,2,2-Tetrachloroethane		10	U	
108-88-3	Toluene		10	U	
108-90-7	Chlorobenzene		10	U	
100-41-4	Ethylbenzene		10	U	
100-42-5	Styrene		10	U	
1330-20-7	Xylene (total)		10	U	

⊃ = TRICHLORODETHENE RESULT REPORTED HAS BEEN TRANSFERRED FROM THE FORM I FOR MW-8DL, A 5X DILUTION OF SAMPLE MW-8.

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1E

NYSDEC SAMPLE NO.

MW-8

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607304

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8600.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-8DL

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607304

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8621.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/29/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
74-87-3	Chloromethane	50	U	✓
74-83-9	Bromomethane	50	U	
75-01-4	Vinyl Chloride	50	U	
75-00-3	Chloroethane	50	U	
75-09-2	Methylene Chloride	86	U ~~BD~~	✓
67-64-1	Acetone	50	U	✓
75-15-0	Carbon Disulfide	50	U	
75-35-4	1,1-Dichloroethene	38	JD	
75-34-3	1,1-Dichloroethane	50	U	
540-59-0	1,2-Dichloroethene (total)	200	D	
67-66-3	Chloroform	50	U	
107-06-2	1,2-Dichloroethane	50	U	✓
78-93-3	2-Butanone	50	U	
71-55-6	1,1,1-Trichloroethane	43	JD	
56-23-5	Carbon Tetrachloride	50	U	
75-27-4	Bromodichloromethane	50	U	
78-87-5	1,2-Dichloropropane	50	U	
10061-01-5	cis-1,3-Dichloropropene	50	U	
79-01-6	Trichloroethene	310	D	
124-48-1	Dibromochloromethane	50	U	
79-00-5	1,1,2-Trichloroethane	50	U	
71-43-2	Benzene	26	JD	
10061-02-6	trans-1,3-Dichloropropene	50	U	
75-25-2	Bromoform	50	U	
108-10-1	4-Methyl-2-Pentanone	50	U	
591-78-6	2-Hexanone	50	U	
127-18-4	Tetrachloroethene	50	U	
79-34-5	1,1,2,2-Tetrachloroethane	50	U	
108-88-3	Toluene	24	JD	
108-90-7	Chlorobenzene	25	JD	
100-41-4	Ethylbenzene	50	U	
100-42-5	Styrene	50	U	
1330-20-7	Xylene (total)	50	U	

THE TRICHLOROETHENE RESULT REPORTED HAS BEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, UNDILUTED ANALYSIS OF SAMPLE MW-8. CMM 7FEB96

1E

NYSDEC SAMPLE NO.

MW-8DL

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607304

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8621.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/29/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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CMM
7 Feb 96

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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-8S

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607303

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8599.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/28/95✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q	
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	10	~~9~~	U ~~JB~~	✓
67-64-1	Acetone		10	U	✓
75-15-0	Carbon Disulfide		10	U	✓
75-35-4	1,1-Dichloroethene		49		
75-34-3	1,1-Dichloroethane		7	J	
540-59-0	1,2-Dichloroethene (total)		120		
67-66-3	Chloroform		10	U	
107-06-2	1,2-Dichloroethane		10	U	
78-93-3	2-Butanone		10	U	
71-55-6	1,1,1-Trichloroethane	310	~~310~~	D ~~E~~	
56-23-5	Carbon Tetrachloride		10	U	
75-27-4	Bromodichloromethane		10	U	
78-87-5	1,2-Dichloropropane		10	U	
10061-01-5	cis-1,3-Dichloropropene		10	U	
79-01-6	Trichloroethene		190		
124-48-1	Dibromochloromethane		10	U	
79-00-5	1,1,2-Trichloroethane		10	U	
71-43-2	Benzene		10	U	
10061-02-6	trans-1,3-Dichloropropene		10	U	
75-25-2	Bromoform		10	U	
108-10-1	4-Methyl-2-Pentanone		10	U	
591-78-6	2-Hexanone		10	U	
127-18-4	Tetrachloroethene		3	J	✓
79-34-5	1,1,2,2-Tetrachloroethane		10	U	
108-88-3	Toluene		10	U	
108-90-7	Chlorobenzene		10	U	
100-41-4	Ethylbenzene		10	U	
100-42-5	Styrene		10	U	
1330-20-7	Xylene (total)		10	U	

THE 1,1,1-TRICHLOROETHANE RESULTS REPORTED HAS BEEN TRANSFERRED FROM THE FORM I FOR MW-8S DL, A 5X DILUTION OF SAMPLE MW-8

AMM 6FEB96

1E

NYSDEC SAMPLE NO.

MW-8S

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607303

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8599.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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CMM
6FEB96

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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-8SDL

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607303

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8622.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/29/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
74-87-3	Chloromethane	50	U	✓
74-83-9	Bromomethane	50	U	
75-01-4	Vinyl Chloride	50	U	
75-00-3	Chloroethane	50	U	
75-09-2	Methylene Chloride	76	U ~~BD~~	✓
67-64-1	Acetone	50	U	✓
75-15-0	Carbon Disulfide	50	U	
75-35-4	1,1-Dichloroethene	56	D	
75-34-3	1,1-Dichloroethane	50	U	
540-59-0	1,2-Dichloroethene (total)	140	D	
67-66-3	Chloroform	50	U	
107-06-2	1,2-Dichloroethane	50	U	✓
78-93-3	2-Butanone	50	U	
71-55-6	1,1,1-Trichloroethane	310	D	
56-23-5	Carbon Tetrachloride	50	U	
75-27-4	Bromodichloromethane	50	U	
78-87-5	1,2-Dichloropropane	50	U	
10061-01-5	cis-1,3-Dichloropropene	50	U	
79-01-6	Trichloroethene	190	D	
124-48-1	Dibromochloromethane	50	U	
79-00-5	1,1,2-Trichloroethane	50	U	
71-43-2	Benzene	50	U	
10061-02-6	trans-1,3-Dichloropropene	50	U	
75-25-2	Bromoform	50	U	
108-10-1	4-Methyl-2-Pentanone	50	U	
591-78-6	2-Hexanone	50	U	
127-18-4	Tetrachloroethene	50	U	
79-34-5	1,1,2,2-Tetrachloroethane	50	U	
108-88-3	Toluene	50	U	
108-90-7	Chlorobenzene	50	U	
100-41-4	Ethylbenzene	50	U	
100-42-5	Styrene	50	U	
1330-20-7	Xylene (total)	50	U	

E 1,1,1-TRICHLOROETHANE RESULT REPORTED HAS BEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, UNDILUTED ANALYSIS OF SAMPLE MW-8S.

AMM 7FEB96

1E

NYSDEC SAMPLE NO.

MW-8SDL

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607303

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8622.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/29/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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7FEB96

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

X-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607302

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8598.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/28/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q	
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		10	U ~~B~~	✓
67-64-1	Acetone		10	U	✓
75-15-0	Carbon Disulfide		10	U	✓
75-35-4	1,1-Dichloroethene		51		
75-34-3	1,1-Dichloroethane		7	J	
540-59-0	1,2-Dichloroethene (total)		120		
67-66-3	Chloroform		10	U	
107-06-2	1,2-Dichloroethane		10	U	
78-93-3	2-Butanone		10	U	
71-55-6	1,1,1-Trichloroethane	310	~~340~~	D ~~E~~	
56-23-5	Carbon Tetrachloride		10	U	
75-27-4	Bromodichloromethane		10	U	
78-87-5	1,2-Dichloropropane		10	U	
10061-01-5	cis-1,3-Dichloropropene		10	U	
79-01-6	Trichloroethene	200	~~210~~	D ~~E~~	
124-48-1	Dibromochloromethane		10	U	
79-00-5	1,1,2-Trichloroethane		10	U	
71-43-2	Benzene		10	U	
10061-02-6	trans-1,3-Dichloropropene		10	U	
75-25-2	Bromoform		10	U	
108-10-1	4-Methyl-2-Pentanone		10	U	
591-78-6	2-Hexanone		10	U	
127-18-4	Tetrachloroethene		3	J	✓
79-34-5	1,1,2,2-Tetrachloroethane		10	U	
108-88-3	Toluene		10	U	
108-90-7	Chlorobenzene		10	U	
100-41-4	Ethylbenzene		10	U	
100-42-5	Styrene		10	U	
1330-20-7	Xylene (total)		10	U	

THE 1,1,1-TRICHLOROETHANE AND TRICHLOROETHENE RESULTS REPORTE
HAVE BEEN TRANSFERRED FROM THE FORM I FOR X-1DL, A 5X DILUTI
OF SAMPLE X-1. GMM
6 FEB96

1E

NYSDEC SAMPLE NO.

X-1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607302

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8598.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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AMM
6FEB96

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

X-1DL

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607302

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8623.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/29/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	50	U ✓
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	75	U ~~BD~~ ✓
67-64-1	Acetone	50	U ✓
75-15-0	Carbon Disulfide	50	U
75-35-4	1,1-Dichloroethene	55	D
75-34-3	1,1-Dichloroethane	7	JD
540-59-0	1,2-Dichloroethene (total)	140	D
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U ✓
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	310	D
56-23-5	Carbon Tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	200	D
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (total)	50	U

E 1,1,1-TRICHLOROETHANE AND TRICHLOROETHENE RESULTS REPORTED HAVE BEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, UNDILUTED FORM I VOA ANALYSIS OF SAMPLE X-1. GMM 8FEB96

1E

NYSDEC SAMPLE NO.

X-1DL

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607302

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8623.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/29/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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7 FEB 96

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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-9B

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607301

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8597.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/28/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
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		10	U ~~B~~ ✓
67-64-1	Acetone		10	U ✓
75-15-0	Carbon Disulfide		10	U ✓
75-35-4	1,1-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
540-59-0	1,2-Dichloroethene (total)		87	
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
78-93-3	2-Butanone		10	U
71-55-6	1,1,1-Trichloroethane		2	J
56-23-5	Carbon Tetrachloride		10	U
75-27-4	Bromodichloromethane		10	U
78-87-5	1,2-Dichloropropane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
79-01-6	Trichloroethene	350	~~340~~	D ~~E~~
124-48-1	Dibromochloromethane		10	U
79-00-5	1,1,2-Trichloroethane		10	U
71-43-2	Benzene		10	U
10061-02-6	trans-1,3-Dichloropropene		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-Pentanone		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		5	J ✓
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-88-3	Toluene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
1330-20-7	Xylene (total)		10	U

'E TRICHLOROETHENE RESULT REPORTED HAS BEEN TRANSFERRED FROM THE FORM I FOR MW-9BDL, A 5X DILUTION OF SAMPLE MW-9B. CLM 6 FEB 96

1E

NYSDEC SAMPLE NO.

MW-9B

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607301

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8597.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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2.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-9BDL

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607301

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8624.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/29/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	50	U ✓
74-83-9	Bromomethane	50	U
75-01-4	Vinyl Chloride	50	U
75-00-3	Chloroethane	50	U
75-09-2	Methylene Chloride	77	U ~~BD~~ ✓
67-64-1	Acetone	50	U ✓
75-15-0	Carbon Disulfide	50	U
75-35-4	1,1-Dichloroethene	50	U
75-34-3	1,1-Dichloroethane	50	U
540-59-0	1,2-Dichloroethene (total)	83	D
67-66-3	Chloroform	50	U
107-06-2	1,2-Dichloroethane	50	U ✓
78-93-3	2-Butanone	50	U
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon Tetrachloride	50	U
75-27-4	Bromodichloromethane	50	U
78-87-5	1,2-Dichloropropane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
79-01-6	Trichloroethene	350	D
124-48-1	Dibromochloromethane	50	U
79-00-5	1,1,2-Trichloroethane	50	U
71-43-2	Benzene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
75-25-2	Bromoform	50	U
108-10-1	4-Methyl-2-Pentanone	50	U
591-78-6	2-Hexanone	50	U
127-18-4	Tetrachloroethene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
108-88-3	Toluene	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
100-42-5	Styrene	50	U
1330-20-7	Xylene (total)	50	U

THE TRICHLOROETHENE RESULTS REPORTED HAS BEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, UNDILUTE ANALYSIS OF SAMPLE MW-9B. AMM 8FEB96

1E

NYSDEC SAMPLE NO.

MW-9BDL

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607301

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8624.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/29/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

TB-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607310

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8596.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Date Analyzed: 12/28/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
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	12	B	✓
67-64-1	Acetone	10	U	✓
75-15-0	Carbon Disulfide	10	U	✓
75-35-4	1,1-Dichloroethene	10	U	
75-34-3	1,1-Dichloroethane	10	U	
540-59-0	1,2-Dichloroethene (total)	10	U	
67-66-3	Chloroform	10	U	
107-06-2	1,2-Dichloroethane	10	U	
78-93-3	2-Butanone	10	U	
71-55-6	1,1,1-Trichloroethane	10	U	
56-23-5	Carbon Tetrachloride	10	U	
75-27-4	Bromodichloromethane	10	U	
78-87-5	1,2-Dichloropropane	10	U	
10061-01-5	cis-1,3-Dichloropropene	10	U	
79-01-6	Trichloroethene	10	U	
124-48-1	Dibromochloromethane	10	U	
79-00-5	1,1,2-Trichloroethane	10	U	
71-43-2	Benzene	10	U	
10061-02-6	trans-1,3-Dichloropropene	10	U	
75-25-2	Bromoform	10	U	
108-10-1	4-Methyl-2-Pentanone	10	U	
591-78-6	2-Hexanone	10	U	
127-18-4	Tetrachloroethene	10	U	✓
79-34-5	1,1,2,2-Tetrachloroethane	10	U	
108-88-3	Toluene	10	U	
108-90-7	Chlorobenzene	10	U	
100-41-4	Ethylbenzene	10	U	
100-42-5	Styrene	10	U	
1330-20-7	Xylene (total)	10	U	

GM7
6 FEB96

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

TB-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607310

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8596.D

Level: (low/med) LOW Date Received: 12/27/94

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

TB-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607813

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5956.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Date Analyzed: 12/28/95 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q	
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	13	B	✓
67-64-1	Acetone	10	U	✓
75-15-0	Carbon Disulfide	10	U	✓
75-35-4	1,1-Dichloroethene	10	U	
75-34-3	1,1-Dichloroethane	10	U	
540-59-0	1,2-Dichloroethene (total)	10	U	
67-66-3	Chloroform	10	U	
107-06-2	1,2-Dichloroethane	10	U	
78-93-3	2-Butanone	10	U	✓
71-55-6	1,1,1-Trichloroethane	10	U	
56-23-5	Carbon Tetrachloride	10	U	
75-27-4	Bromodichloromethane	10	U	
78-87-5	1,2-Dichloropropane	10	U	
10061-01-5	cis-1,3-Dichloropropene	10	U	
79-01-6	Trichloroethene	10	U	
124-48-1	Dibromochloromethane	10	U	
79-00-5	1,1,2-Trichloroethane	10	U	
71-43-2	Benzene	10	U	
10061-02-6	trans-1,3-Dichloropropene	10	U	
75-25-2	Bromoform	10	U	
108-10-1	4-Methyl-2-Pentanone	10	U	
591-78-6	2-Hexanone	10	U	
127-18-4	Tetrachloroethene	10	U	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	
108-88-3	Toluene	10	U	
108-90-7	Chlorobenzene	10	U	
100-41-4	Ethylbenzene	10	U	
100-42-5	Styrene	10	U	
1330-20-7	Xylene (total)	10	U	

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8 FEB 96

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

TB-2

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607813

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N5956.D

Level: (low/med) LOW Date Received: 12/27/95

% Moisture: not dec. _____ Data Analyzed: 12/28/95

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
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8 FEB 96

Volatile Organic Data Validation Summary
Orange & Rockland Utilities, Inc.
West Nyack, New York
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group NYACK4

Analytical results for four (4) groundwater samples with matrix QC and one (1) trip blank from Orange & Rockland's West Nyack, New York site were reviewed to evaluate the data quality. Data were assessed in accordance with the New York State Department of Environmental Conservation (NYSDEC) **Analytical Services Protocol** (12/91 Revision), the United States Environmental Protection Agency (USEPA) document **USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review** (February 1994) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (Rust) personnel on January 12, 1996.

EXW-1
MW-2
MW-2 MS
MW-2 MSD
MW-3
MW-4
TB-1

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- System Monitoring Compound (SMC) Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Blank Summary and Data
- GC/MS Instrument Performance Check
- Target Compound Identification/Quantitation
- EPA/NIH Mass Spectral Library Search for TICs
- Quantitation Reports and Mass Spectral Data
- Initial and Continuing Calibration Data
- Internal Standard Areas and Retention Times

The above items were in compliance with NYSDEC ASP laboratory QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

Sample MW-2 was selected for matrix spike/matrix spike duplicate (MS/MSD) analysis. While each of the percent recoveries for the MS were within QC limits, the percent recovery for the spike compound benzene (180%, QC limits=76-127%) and the relative percent difference (RPD) between the MS and MSD recoveries for the spike compounds benzene (RPD=57, QC limit=11) and toluene (RPD=18, QC limit=13) exceeded the specified QC limits. No data have been qualified based upon these exceedances, however, because data are not qualified based solely upon MS/MSD data and the other data does not indicate the need for further qualification of the results reported. Furthermore, the benzene sample concentration is more than four (4) times the spike concentration and therefore MS/MSD results for spike compounds with a sample concentration greater than four times the spike concentration are not used for qualification of the data.

Blank Summary and Data

The compound methylene chloride, a common laboratory contaminant, was detected in the method blank. Both methylene chloride and acetone, another common laboratory contaminant, were detected in the trip blank associated with the samples in this SDG. In accordance with EPA validation criteria, the methylene chloride and acetone sample results have been reported as non-detect at the contract required quantitation limit (CRQL) or the result reported, whichever is greater, and are considered to be laboratory derived and not site related.

Target Compound Identification/Quantitation

Although the laboratory reported the presence of the compounds chloromethane, carbon disulfide and 2-butanone in sample MW-2, a review of the mass spectra for these compounds reveals that the mass spectra fails to meet the minimum criteria required for identification. In accordance with EPA validation guidelines, the chloromethane, carbon disulfide and 2-butanone results for sample MW-2 have been reported as non-detect at the CRQL.

Initial and Continuing Calibration Data

The percent relative standard deviation (%RSD) in the initial calibration exceeded the USEPA technical criteria of 30.0%RSD for methylene chloride (51.7%RSD). This is most likely associated with the background concentrations of methylene chloride in the laboratory. The associated methylene chloride results have been flagged with a "V" and are considered estimated.

The calibration check standard on 1/15/96 contained two (2) compounds whose %D exceeded the USEPA technical criteria of 25.0%D. The methylene chloride (49.3%D) and 2-butanone (-26.7%D) results associated with this continuing calibration standard have been

flagged with a "V" and are considered estimated.

The %D for methylene chloride (46.7) in the calibration check standard on 1/16/96 also exceeded the USEPA technical criteria of 25.0%D. No data have been qualified based upon this nonconformance, however, because none of the methylene chloride results associated with this calibration standard have been reported.

Summary

In summary, based on 132 sample data points, eight (8) of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered fully compliant and usable, the usability of this data package is 100%.

Anthony M. Doce — Reviewed By

19 FEB 96 — Date

Ed Fuhrmann — Approved By

2-26-96 — Date

Volatile Organic Analytical Data - Groundwater

Orange & Rockland Utilities
West Nyack, New York

Sampling Date: January 12, 1996

Sample ID / Compound	EXW-1	MW-2	MW-3	MW-4	TB-1
Chloromethane	10 U	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U	10 U
Vinyl Chloride	10 U	**4 J**	10 U	**36**	10 U
Chloroethane	10 U	**7 J**	**5 J**	10 U	10 U
Methylene Chloride	14 UV	12 UV	10 UV	10 UV	**12 BV**
Acetone	10 U	10 U	10 U	10 U	**13**
Carbon Disulfide	10 U	10 U	10 U	**2 J**	10 U
1,1-Dichloroethene	10 U	**24**	**650 D**	**10**	10 U
1,1-Dichloroethane	10 U	**23**	**28**	**19**	10 U
1,2-Dichloroethene (total)	10 U	**12**	**220**	**110**	10 U
Chloroform	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U
2-Butanone	10 UV	10 UV	10 UV	10 UV	10 UV
1,1,1-Trichloroethane	10 U	**58**	**1900 D**	**15**	10 U
Carbon Tetrachloride	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U
Trichloroethene	10 U	**18**	**430 D**	**70**	10 U
Dibromochloromethane	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	**3 J**	10 U	10 U	10 U
Benzene	10 U	**1200 D**	**14**	**42**	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-Pentanone	10 U	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U	**5 J**	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U	10 U
Toluene	10 U	**160**	10 U	**2 J**	10 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	**100**	10 U	**2 J**	10 U
Styrene	10 U	10 U	10 U	10 U	10 U
Xylene (total)	**3 J**	**310**	10 U	10 U	10 U

All results expressed in ug/L.
Standard Organic Data Qualifiers have been used.

GRU - WEST NYACK
SDG: NYACK 4

STANDARD OPERATING PROCEDURE
Date: January 1992
Revision: 8

	YES	NO	N/A

PART A: VOA ANALYSES

1.0 Traffic Reports and Laboratory Narrative

		YES	NO	N/A
1.1	Are the Traffic Report Forms present for all samples?	[✓]	—	—
	ACTION: If no, contact lab for replacement of missing or illegible copies.			
1.2	Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?	—	[✓]	—
	ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be flagged as estimated (J). If a soil sample other than TCLP contains more than 90% water, all data should be qualified as unusable (R).			
	ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all Non-Detects "UJ".			
	ACTION: If both VOA vials for a sample have air bubbles or the VOA vial analyzed had air bubbles, flag all positive results "J" and all non-detects "R".			

YES NO N/A

2.0 Holding Times

2.1 Have any VOA technical holding times, determined from date of collection to date of analysis, been exceeded? ___ [✓] ___

If unpreserved, aqueous samples maintained at 4°C which are to be analyzed for aromatic hydrocarbons must be analyzed within 7 days of collection. If preserved with HCl (pH<2) and stored at 4°C, then aqueous samples must be analyzed within 14 days of collection. If uncertain about preserving, contact sampler to determine whether or not samples were preserved.

The holding time for soils is 10 days.

Table of Holding Time Violations

			(See Traffic Report)		
Sample ID	Sample Matrix	Preserved?	Date Sampled	Date Lab Received	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon re-analysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R). If holding times are exceeded by more than 28 days, all non detect data are unusable (R).

	YES	NO	N/A

3.0 System Monitoring Compound (SMC) Recovery (Form II)

3.1 Are the VOA SMC Recovery Summaries (Form II) present for each of the following matrices:

a. Low Water	[✓]	—	—
b. Low Soil	[ ]	—	✓
c. Med Soil	[ ]	—	✓

3.2 Are all the VOA samples listed on the appropriate System Monitoring Compound Recovery Summary for each of the following matrices:

a. Low Water	[✓]	—	—
b. Low Soil	[ ]	—	✓
c. Med Soil	[ ]	—	✓

ACTION: Call lab for explanation/ resubmittals. If missing deliverables are unavailable, document effect in data assessments.

3.3 Were outliers marked correctly with an asterisk?	[ ]	—	✓

ACTION: Circle all outliers in red.

3.4 Was one or more VOA system monitoring compound recovery outside of contract specifications for any sample or method blank?	—	[✓]	—
If yes, were samples re-analyzed?	[ ]	—	✓
Were method blanks re-analyzed?	[ ]	—	✓

YES NO N/A

ACTION: If recoveries are > 10% but 1 or more compounds fail to meet SOW specifications:

1. All positive results are qualified as estimated (J).
2. Flag all non-detects as estimated detection limits ("UJ") where recovery is less than the lower acceptance limit.
3. If SMC recoveries are above allowable levels, do not qualify non-detects.

If any system monitoring compound recovery is <10% :

1. Flag all positive results as estimated ("J").
2. Flag all non-detects as unusable ("R").

Professional judgement should be used to qualify data that only have method blank SMC recoveries out of specification in both original and re-analyses. Check the internal standard areas.

3.5 Are there any transcription/calculation errors between raw data and Form II? ___ 1/1 ___

ACTION: If large errors exist, call lab for explanation/resubmittal, make any necessary corrections and note errors in the data assessment.

4.0 Matrix Spikes (Form III)

4.1 Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present? 1/1 ___ ___

	YES	NO	N/A

4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices:

a. Low Water	[✓]	—	—
b. Low Soil	[ ]	—	✓
c. Med Soil	[ ]	—	✓

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

4.3 How many VOA spike recoveries are outside QC limits?

Water	Soils
1 out of 10	N/A out of 10

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Water	Soils
1 out of 5	N/A out of 5

ACTION: No action is taken based on MS/MSD data alone. However, using informed professional judgement, the MS/MSD results may be used in conjunction with other QC criteria to determine the need for qualification of the data.

5.0 Blanks (Form IV)

5.1 Is the Method Blank Summary (Form IV) present?	[✓]	—	—
5.2 Frequency of Analysis: for the analysis of VOA TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix (low water, low soil, medium soil), whichever is more frequent?	[✓]	—	—

	YES	NO	N/A

5.3 Has a VOA method/instrument blank been analyzed at least once every twelve hours for each concentration level and GC/MS system used? [✓] ___ ___

ACTION: If any method blank data are missing, call lab for explanation/ resubmittal. If method blank data are not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank or trip blank data for missing method blank data.

5.4 Chromatography: review the blank raw data - chromatograms (RICs), quant reports or data system printouts and spectra.

Is the chromatographic performance (baseline stability) for each instrument acceptable for VOAs? [✓] ___ ___

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/instrument/reagent blanks have positive results (TCL and/or TIC) for VOAs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor and corrected for % moisture when necessary. ___ [ ] ___

6.2 Do any field/trip/rinse blanks have positive VOA results (TCL and/or TIC)? ___ [ ] ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

YES NO N/A

NOTE: All field blank results associated to a particular group of samples (may exceed one per case) must be used to qualify data. Trip blanks are used to qualify only those samples with which they were shipped and are not required for non-aqueous matrices. Blanks may not be qualified because of contamination in another blank. Field Blanks & Trip Blanks must be qualified for system monitoring compound, instrument performance criteria, spectral or calibration QC problems.

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R).

	Sample conc > CRQL but < 10x blank value	Sample conc < CRQL & <10x blank value	Sample conc > CRQL & >10x blank value
Methylene Chloride Acetone Toluene 2-Butanone	Flag sample result with a "U;	Report CRQL & qualify "U"	No qualification is needed

	Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL value & > 5x blank value
Other Contaminants	Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration criteria.

	YES	NO	N/A

ACTION: For TIC compounds, if the concentration in the sample is less than five times the concentration in the most contaminated associated blank, flag the sample data "R" (unusable).

6.3 Are there field/rinse/equipment blanks associated with every sample? [✓] — —

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 GC/MS Instrument Performance Check (Form V)

7.1 Are the GC/MS Instrument Performance Check Forms (Form V) present for Bromofluorobenzene (BFB)? [✓] — —

7.2 Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the BFB provided for each twelve hour shift? [✓] — —

7.3 Has an instrument performance compound been analyzed for every twelve hours of sample analysis per instrument? [✓] — —

YES NO N/A

ACTION: List date, time, instrument ID, and sample analysis for which no associated GC/MS tuning data are available.

DATE	TIME	INSTRUMENT	SAMPLE NUMBERS

ACTION: If lab cannot provide missing data, reject ("R") all data generated outside an acceptable twelve hour calibration interval.

7.4 Have the ion abundances been normalized to m/z 95? [✓] — —

ACTION: If mass assignment is in error, qualify all associated data as unusable (R).

7.5 Have the ion abundance criteria been met for each instrument used? [✓] — —

ACTION: List all data which do not meet ion abundance criteria (attach a separate sheet).

ACTION: If ion abundance criteria are not met, the Region II TPO must be notified.

7.6 Are there any transcription/calculation errors between mass lists and Form Vs? (Check at least two values but if errors are found, check more.) — [✓] —

		YES	NO	N/A
7.7	Have the appropriate number of significant figures (two) been reported?	[✓]	___	___
	ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.			
7.8	Are the spectra of the mass calibration compound acceptable?	[✓]	___	___
	ACTION: Use professional judgement to determine whether associated data should be accepted, qualified, or rejected.			
8.0	Target Compound List (TCL) Analytes			
8.1	Are the Organic Analysis Data Sheets (Form I VOA) present with required header information on each page, for each of the following:			
	a. Samples and/or fractions as appropriate	[✓]	___	___
	b. Matrix spikes and matrix spike duplicates	[✓]	___	___
	c. Blanks	[✓]	___	___
8.2	Are the VOA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following?			
	a. Samples and/or fractions as appropriate	[✓]	___	___
	b. Matrix spikes and matrix spike duplicates (Mass spectra not required)	[✓]	___	___
	c. Blanks	[✓]	___	___
	ACTION: If any data are missing, take action specified in 3.2 above.			

		YES	NO	N/A
8.3	Are the response factors shown in the Quant Report?	[✓]	___	___
8.4	Is chromatographic performance acceptable with respect to:			
	Baseline stability?	[✓]	___	___
	Resolution?	[✓]	___	___
	Peak shape?	[✓]	___	___
	Full-scale graph (attenuation)?	[✓]	___	___
	Other: _____	[ ]	___	✓

ACTION: Use professional judgement to determine the acceptability of the data.

8.5	Are the lab-generated standard mass spectra of the identified VOA compounds present for each sample?	[✓]	___	___

ACTION: If any mass spectra are missing, take action specified in 3.2 above. If lab does not generate their own standard spectra, make note in "Contract Problems/Non-compliance".

8.6	Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	[✓]	___	___
8.7	Are all ions present in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum?	[✓]	___	___

	YES	NO	N/A
8.8 Do sample and standard relative ion intensities agree within 20%?	[/]	—	—

ACTION: Use professional judgement to determine acceptability of data. If it is determined that incorrect identifications were made, all such data should be rejected (R), flagged "N" (presumptive evidence of the presence of the compound) or changed to not detected (U) at the calculated detection limit. In order to be positively identified, the data must comply with the criteria listed in 8.6, 8.7, and 8.8.

ACTION: When sample carry-over is a possibility, professional judgement should be used to determine if instrument cross-contamination has affected any positive compound identification.

9.0 Tentatively Identified Compounds (TIC)

9.1 Are all Tentatively Identified Compound Forms (Form I Part B) present; and do listed TICs include scan number or retention time, estimated concentration and "JN" qualifier?	[/]	—	—
9.2 Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following:			
a. Samples and/or fractions as appropriate	[/]	—	—
b. Blanks	[/]	—	—

ACTION: If any TIC data are missing, take action specified in 3.2 above.

ACTION: Add "JN" qualifier if missing.

	YES	NO	N/A
9.3 Are any TCL compounds (from any fraction) listed as TIC compounds (example: 1,2-dimethylbenzene is xylene- a VOA TCL analyte - and should not be reported as a TIC)?	___	[/]	___
ACTION: Flag with "R" any TCL compound listed as a TIC.			
9.4 Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?	[/]	___	___
9.5 Do TIC and "best match" standard relative ion intensities agree within 20%?	[/]	___	___

ACTION: Use professional judgement to determine acceptability of TIC identifications. If it is determined that an incorrect identification was made, change identification to "unknown" or to some less specific identification (example: "C3 substituted benzene") as appropriate.

Also, when a compound is not found in any blank, but is detected in a sample and is a suspected artifact of a common laboratory contaminant, the result should be qualified as unusable (R). (i.e. Common Lab Contaminants: CO_2 (M/E 44), Siloxanes (M/E 73) Hexane, Aldol Condensation Products, Solvent Preservatives, and related by products - see Functional Guidelines for more guidance).

	YES	NO	N/A

10.0 Compound Quantitation and Reported Detection Limits

10.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the correct internal standard, quantitation ion, and RRF were used to calculate Form I result. Were any errors found?	___	/1	___
10.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture?	/1	___	___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note errors under "Conclusions".

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

11.0 Standards Data (GC/MS)

11.1 Are the Reconstructed Ion Chromatograms, and data system printouts (Quant. Reports) present for initial and continuing calibration?	/1	___	___

ACTION: If any calibration standard data are missing, take action specified in 3.2 above.

	YES	NO	N/A

12.0 GC/MS Initial Calibration (Form VI)

12.1 Are the Initial Calibration Forms (Form VI) present and complete for the volatile fraction at concentrations of 10, 20, 50, 100, 200 ug/l? Are there separate calibrations for low water/med soils and low soil samples? [/] ___ ___

ACTION: If any calibration standard forms are missing, take action specified in 3.2 above.

12.2 Were all low level soil standards, blanks and samples analyzed by heated purge? [/] ___ ___

ACTION: If low level soil samples were not heated during purge, qualify positive hits "J" and non-detects "R".

12.3 Are response factors stable for VOA's over the concentration range of the calibration (%Relative Standard Deviation (%RSD) <30.0%)? [/] ___ ___

ACTION: Circle all outliers in red.

NOTE: Although 11 VOA compounds have a minimum RRF and no maximum %RSD, the technical criteria are the same for all analytes.

ACTION: If %RSD > 30.0%, qualify associated positive results for that analyte "J" and non-detects using professional judgement. When RSD > 90%, flag all non-detects for that analyte R (unusable).

NOTE: Analytes previously qualified "U" for blank contamination are still considered as "hits" when qualifying for initial calibration criteria.

12.4 Are the RRFs above 0.05? [/] ___ ___

Action: Circle all outliers in red.
Action: If any RRF are < 0.05, qualify associated non-detects (R) and flag associated positive data as estimated (J).

	YES	NO	N/A
12.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %RSD? (Check at least 2 values, but if errors are found, check more.)		[/]	

13.0 GC/MS Continuing Calibration (Form VII)

	YES	NO	N/A
13.1 Are the Continuing Calibration Forms (Form VII) present and complete for the volatile fraction?	[/]		
13.2 Has a continuing calibration standard been analyzed for every twelve hours of sample analysis per instrument?	[/]		

ACTION: List below all sample analyses that were not within twelve hours of the previous continuing calibration analysis.

_____

_____

_____

ACTION: If any forms are missing or no continuing calibration standard has been analyzed within twelve hours of every sample analysis, call lab for explanation/resubmittal. If continuing calibration data are not available, flag all associated sample data as unusable ("R").

	YES	NO	N/A
13.3 Do any volatile compounds have a % Difference (% D) between the initial and continuing RRF which exceeds the ± 25% criteria?		[/]	

ACTION: Circle all outliers in red.

ACTION: Qualify both positive results and non-detects for the outlier compound(s) as estimated. When % D is above 90%, reject all non-detects for that analyte (R) unusable.

	YES	NO	N/A
13.4 Do any volatile compounds have a RRF <0.05?	✓	—	—

ACTION: Circle all outliers in red.

ACTION: If the RRF <0.05, qualify associated non-detects as unusable (R) and "J" associated positive values.

13.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %difference (%D) between initial and continuing RRFs? (Check at least two values but if errors are found, check more.)	—	✓	—

ACTION: Circle errors in red.

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note errors under "Conclusions".

14.0 Internal Standard (Form VIII)

14.1 Are the internal standard areas (Form VIII) of every sample and blank within the upper and lower limits (-50% to + 100%) for each continuing calibration?	✓	—	—

ACTION: List all the outliers below.

Sample #	Internal Std	Area	Lower Limit	Upper Limit

(Attach additional sheets if necessary.)

	YES	NO	N/A

ACTION: 1. If the internal standard area count is outside the upper or lower limit, flag with "J" all positive results quantitated with this internal standard.

2. Non-detects associated with IS area counts > 100% should not be qualified.

3. If IS area is below the lower limit (< 50%), qualify all associated non-detects (U values) "J". If extremely low area counts are reported, (< 25%) or if performance exhibits a major abrupt drop off, flag all associated non-detects as unusable ("R").

14.2 Are the retention times of the internal standards within 30 seconds of the associated calibration standard? [✓] — —

ACTION: Professional judgement should be used to qualify data if the retention times differ by more than 30 seconds.

15.0 Field Duplicates

15.1 Were any field duplicates submitted for VOA analysis? [ ] ✓ —

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

Organic Data Qualifiers

U - The compound was analyzed for but not detected at or above the quantitation limit indicated.

J - The compound was analyzed for and determined to be present in the sample because the mass spectrum of the compound meets the identification criteria of the method. The concentration reported is an estimated value, less than the practical quantitation limit for the sample.

B - The compound is also found in an associated blank.

V - The reported value is considered estimated due to variance from quality control criteria

S - The reported value is suspected to be due to laboratory contamination.

R - The reported value is unusable and rejected due to variance from quality control criteria.

D - The reported value is taken from the analysis of a diluted sample.

E - The reported value exceeds the calibration range of the instrument.

N - Indicates presumptive evidence for compound identification.

A - Indicates that the compound is an aldol condensation product.

C - Compound identification has been qualitatively confirmed by GC/MS.

P - Indicates that the percent difference between the results from the two analytical columns is greater than 25%.

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

EXW-1

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615104

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6145.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Date Analyzed: 01/15/96 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
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	14	U ~~B~~ ✓
67-64-1	Acetone	10	U
75-15-0	Carbon Disulfide	10	U
75-35-4	1,1-Dichloroethene	10	U
75-34-3	1,1-Dichloroethane	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
67-66-3	Chloroform	10	U
107-06-2	1,2-Dichloroethane	10	U
78-93-3	2-Butanone	10	U ✓
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
75-27-4	Bromodichloromethane	10	U
78-87-5	1,2-Dichloropropane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
79-01-6	Trichloroethene	10	U
124-48-1	Dibromochloromethane	10	U
79-00-5	1,1,2-Trichloroethane	10	U
71-43-2	Benzene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
75-25-2	Bromoform	10	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
108-88-3	Toluene	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
100-42-5	Styrene	10	U
1330-20-7	Xylene (total) ✓	3	J

AMD
17 FEB 96

1E

NYSDEC SAMPLE NO.

EXW-1

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615104

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6145.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Data Analyzed: 01/15/96

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 1

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	8.819	36	J
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
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30.					

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17 FEB96

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-2

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615101

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6148.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Date Analyzed: 01/15/96

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q	
74-87-3	Chloromethane	10	~~16~~	U	
74-83-9	Bromomethane		10	U	
75-01-4	Vinyl Chloride		4	J	
75-00-3	Chloroethane		7	J	
75-09-2	Methylene Chloride		12	U	~~B~~
67-64-1	Acetone	10	~~6~~	U	~~J~~
75-15-0	Carbon Disulfide	10	~~2~~	U	~~J~~
75-35-4	1,1-Dichloroethene		24		
75-34-3	1,1-Dichloroethane		23		
540-59-0	1,2-Dichloroethene (total)		12		
67-66-3	Chloroform		10	U	
107-06-2	1,2-Dichloroethane		10	U	
78-93-3	2-Butanone	10	~~21~~	U	
71-55-6	1,1,1-Trichloroethane		58		
56-23-5	Carbon Tetrachloride		10	U	
75-27-4	Bromodichloromethane		10	U	
78-87-5	1,2-Dichloropropane		10	U	
10061-01-5	cis-1,3-Dichloropropene		10	U	
79-01-6	Trichloroethene		18		
124-48-1	Dibromochloromethane		10	U	
79-00-5	1,1,2-Trichloroethane		3	J	
71-43-2	Benzene	1200	~~620~~	D	~~B~~
10061-02-6	trans-1,3-Dichloropropene		10	U	
75-25-2	Bromoform		10	U	
108-10-1	4-Methyl-2-Pentanone		10	U	
591-78-6	2-Hexanone		10	U	
127-18-4	Tetrachloroethene		10	U	
79-34-5	1,1,2,2-Tetrachloroethane		10	U	
108-88-3	Toluene		160		
108-90-7	Chlorobenzene		10	U	
100-41-4	Ethylbenzene		100		
100-42-5	Styrene		10	U	
1330-20-7	Xylene (total)		310		

THE BENZENE RESULT REPORTED HAS BEEN TRANSFERRED FROM MW-2DL, A 10X DILUTION OF SAMPLE MW-2. (LMT) 17FEB96

1E

NYSDEC SAMPLE NO.

MW-2

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615101

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6148.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Data Analyzed: 01/15/96

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 10 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.671	34	J
2.		UNKNOWN	7.579	33	J
3.		UNKNOWN HYDROCARBON	8.294	17	J
4.		UNKNOWN	8.797	56	J
5.		UNKNOWN AROMATIC	21.601	22	J
6.		UNKNOWN AROMATIC	21.843	43	J
7.		UNKNOWN AROMATIC	22.588	23	J
8.		UNKNOWN AROMATIC	22.888	71	J
9.		UNKNOWN AROMATIC	24.038	27	J
10.		UNKNOWN AROMATIC	24.851	54	J
11.					
12.					
13.					
14.					
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16.					
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1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-2DL

Lab Name: NYTEST ENV INC   Contract: 9622158

Lab Code: NYTEST   Case No.: 26151   SAS No.:   SDG No.: NYACK

Matrix: (soil/water) WATER   Lab Sample ID: 2615101

Sample wt/vol: 5.0 (g/mL) ML   Lab File ID: N6156.D

Level: (low/med) LOW   Date Received: 01/12/96

% Moisture: not dec. ________   Date Analyzed: 01/16/96 ✓

GC Column:CAP   ID: 0.53 (mm)   Dilution Factor: 10.0 ✓

Soil Extract Volume: ______(uL)   Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	100	U
74-83-9	Bromomethane	100	U
75-01-4	Vinyl Chloride	14	JD
75-00-3	Chloroethane	100	U
75-09-2	Methylene Chloride	150	U ~~BD~~ V
67-64-1	Acetone	100 ~~66~~	U ~~JBD~~
75-15-0	Carbon Disulfide	100	U
75-35-4	1,1-Dichloroethene	18	JD
75-34-3	1,1-Dichloroethane	34	JD
540-59-0	1,2-Dichloroethene (total)	100	U
67-66-3	Chloroform	100	U
107-06-2	1,2-Dichloroethane	100	U
78-93-3	2-Butanone	100	U
71-55-6	1,1,1-Trichloroethane	52	JD
56-23-5	Carbon Tetrachloride	100	U
75-27-4	Bromodichloromethane	100	U
78-87-5	1,2-Dichloropropane	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
79-01-6	Trichloroethene	17	JD
124-48-1	Dibromochloromethane	100	U
79-00-5	1,1,2-Trichloroethane	100	U
71-43-2	Benzene	1200	D
10061-02-6	trans-1,3-Dichloropropene	100	U
75-25-2	Bromoform	100	U
108-10-1	4-Methyl-2-Pentanone	100	U
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethene	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
108-88-3	Toluene	330	D
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	230	D
100-42-5	Styrene	100	U
1330-20-7	Xylene (total)	680	D

THE BENZENE RESULT REPORTED HAS BEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, UNDILUTED ANALYSIS OF MW-2. (initials) 17 FEB 96

1E

NYSDEC SAMPLE NO.

MW-2DL

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615101

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6156.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Data Analyzed: 01/16/96

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 7

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	6.670	77	JD
2.		UNKNOWN	7.587	85	JD
3.		UNKNOWN	8.813	140	JD
4.		UNKNOWN	10.349	120	JD
5.		UNKNOWN AROMATIC	21.876	69	JD
6.		UNKNOWN AROMATIC	22.919	110	JD
7.		UNKNOWN AROMATIC	24.878	99	JD
8.					
9.					
10.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-3

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615102

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6147.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Date Analyzed: 01/15/96

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q	
74-87-3	Chloromethane		10	U	
74-83-9	Bromomethane		10	U	
75-01-4	Vinyl Chloride		10	U	
75-00-3	Chloroethane		5	J	
75-09-2	Methylene Chloride	10	~~9~~	U ~~JB~~	V
67-64-1	Acetone		10	U	
75-15-0	Carbon Disulfide		10	U	
75-35-4	1,1-Dichloroethene	650	~~580~~	D E	
75-34-3	1,1-Dichloroethane		28		
540-59-0	1,2-Dichloroethene (total)		220		
67-66-3	Chloroform		10	U	
107-06-2	1,2-Dichloroethane		10	U	
78-93-3	2-Butanone		10	U	V
71-55-6	1,1,1-Trichloroethane	1900	~~1400~~	D ~~E~~	
56-23-5	Carbon Tetrachloride		10	U	
75-27-4	Bromodichloromethane		10	U	
78-87-5	1,2-Dichloropropane		10	U	
10061-01-5	cis-1,3-Dichloropropene		10	U	
79-01-6	Trichloroethene	430	~~330~~	D ~~E~~	
124-48-1	Dibromochloromethane		10	U	
79-00-5	1,1,2-Trichloroethane		10	U	
71-43-2	Benzene		14		
10061-02-6	trans-1,3-Dichloropropene		10	U	
75-25-2	Bromoform		10	U	
108-10-1	4-Methyl-2-Pentanone		10	U	
591-78-6	2-Hexanone		10	U	
127-18-4	Tetrachloroethene		5	J	
79-34-5	1,1,2,2-Tetrachloroethane		10	U	
108-88-3	Toluene		10	U	
108-90-7	Chlorobenzene		10	U	
100-41-4	Ethylbenzene		10	U	
100-42-5	Styrene		10	U	
1330-20-7	Xylene (total)		10	U	

THE 1,1-DICHLOROETHENE, 1,1,1-TRICHLOROETHANE AND TRICHLOROETHENE RESULTS REPORTED HAVE BEEN TRANSFERRED FROM THE FORM I FOR MW-3DL, A 10X DILUTION OF SAMPLE MW-3. LMM 17 FEB 96

~~FORM I VOA~~

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

MW-3

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615102

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6147.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Data Analyzed: 01/15/96

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
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17 FEB'96

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-3DL

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615102

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6155.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Date Analyzed: 01/16/96 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 10.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
74-87-3	Chloromethane	100	U
74-83-9	Bromomethane	100	U
75-01-4	Vinyl Chloride	100	U
75-00-3	Chloroethane	100	U
75-09-2	Methylene Chloride	120	U ~~BD~~ V
67-64-1	Acetone	100 ~~43~~	U ~~JBD~~
75-15-0	Carbon Disulfide	100	U
75-35-4	1,1-Dichloroethene	650	D
75-34-3	1,1-Dichloroethane	28	JD
540-59-0	1,2-Dichloroethene (total)	240	D
67-66-3	Chloroform	100	U
107-06-2	1,2-Dichloroethane	100	U
78-93-3	2-Butanone	100	U
71-55-6	1,1,1-Trichloroethane	1900	D
56-23-5	Carbon Tetrachloride	100	U
75-27-4	Bromodichloromethane	100	U
78-87-5	1,2-Dichloropropane	100	U
10061-01-5	cis-1,3-Dichloropropene	100	U
79-01-6	Trichloroethene	430	D
124-48-1	Dibromochloromethane	100	U
79-00-5	1,1,2-Trichloroethane	100	U
71-43-2	Benzene	19	JD
10061-02-6	trans-1,3-Dichloropropene	100	U
75-25-2	Bromoform	100	U
108-10-1	4-Methyl-2-Pentanone	100	U
591-78-6	2-Hexanone	100	U
127-18-4	Tetrachloroethene	100	U
79-34-5	1,1,2,2-Tetrachloroethane	100	U
108-88-3	Toluene	100	U
108-90-7	Chlorobenzene	100	U
100-41-4	Ethylbenzene	100	U
100-42-5	Styrene	100	U
1330-20-7	Xylene (total)	100	U

THE 1,1-DICHLOROETHENE, 1,1,1-TRICHLOROETHANE AND TRICHLOROETHENE RESULTS REPORTED HAVE BEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, UNDILUTED ANALYSIS OF SAMPLE MW-3 CLM 17 FEB 96

1E

NYSDEC SAMPLE NO.

MW-3DL

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615102

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6155.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Data Analyzed: 01/16/96

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 10.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-4

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615103

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6146.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Date Analyzed: 01/15/96

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q	
74-87-3	Chloromethane		10	U	
74-83-9	Bromomethane		10	U	
75-01-4	Vinyl Chloride		36		
75-00-3	Chloroethane		10	U	
75-09-2	Methylene Chloride		~~8~~ 10	U ~~JB~~	✓
67-64-1	Acetone		~~5~~ 10	U ~~J~~	
75-15-0	Carbon Disulfide		2	J	
75-35-4	1,1-Dichloroethene		10		
75-34-3	1,1-Dichloroethane		19		
540-59-0	1,2-Dichloroethene (total)		110		
67-66-3	Chloroform		10	U	
107-06-2	1,2-Dichloroethane		10	U	
78-93-3	2-Butanone		10	U	✓
71-55-6	1,1,1-Trichloroethane		15		
56-23-5	Carbon Tetrachloride		10	U	
75-27-4	Bromodichloromethane		10	U	
78-87-5	1,2-Dichloropropane		10	U	
10061-01-5	cis-1,3-Dichloropropene		10	U	
79-01-6	Trichloroethene		70		
124-48-1	Dibromochloromethane		10	U	
79-00-5	1,1,2-Trichloroethane		10	U	
71-43-2	Benzene		42		
10061-02-6	trans-1,3-Dichloropropene		10	U	
75-25-2	Bromoform		10	U	
108-10-1	4-Methyl-2-Pentanone		10	U	
591-78-6	2-Hexanone		10	U	
127-18-4	Tetrachloroethene		10	U	
79-34-5	1,1,2,2-Tetrachloroethane		10	U	
108-88-3	Toluene		2	J	
108-90-7	Chlorobenzene		10	U	
100-41-4	Ethylbenzene		2	J	
100-42-5	Styrene		10	U	
1330-20-7	Xylene (total)		10	U	

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1E

NYSDEC SAMPLE NO.

MW-4

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615103

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6146.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Data Analyzed: 01/15/96

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 5

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		UNKNOWN	5.917	8	J
2.		UNKNOWN	6.680	12	J
3.		UNKNOWN	8.793	17	J
4.		UNKNOWN	10.328	8	J
5.		UNKNOWN AROMATIC	24.852	8	J
6.					
7.					
8.					
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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

TB-1

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615105

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6144.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Date Analyzed: 01/15/96 ✓

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0 ✓

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
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	✓	12	B ✓
67-64-1	Acetone	✓	13	
75-15-0	Carbon Disulfide		10	U
75-35-4	1,1-Dichloroethene		10	U
75-34-3	1,1-Dichloroethane		10	U
540-59-0	1,2-Dichloroethene (total)		10	U
67-66-3	Chloroform		10	U
107-06-2	1,2-Dichloroethane		10	U
78-93-3	2-Butanone		10	U ✓
71-55-6	1,1,1-Trichloroethane		10	U
56-23-5	Carbon Tetrachloride		10	U
75-27-4	Bromodichloromethane		10	U
78-87-5	1,2-Dichloropropane		10	U
10061-01-5	cis-1,3-Dichloropropene		10	U
79-01-6	Trichloroethene		10	U
124-48-1	Dibromochloromethane		10	U
79-00-5	1,1,2-Trichloroethane		10	U
71-43-2	Benzene		10	U
10061-02-6	trans-1,3-Dichloropropene		10	U
75-25-2	Bromoform		10	U
108-10-1	4-Methyl-2-Pentanone		10	U
591-78-6	2-Hexanone		10	U
127-18-4	Tetrachloroethene		10	U
79-34-5	1,1,2,2-Tetrachloroethane		10	U
108-88-3	Toluene		10	U
108-90-7	Chlorobenzene		10	U
100-41-4	Ethylbenzene		10	U
100-42-5	Styrene		10	U
1330-20-7	Xylene (total)		10	U

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

TB-1

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615105

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: N6144.D

Level: (low/med) LOW Date Received: 01/12/96

% Moisture: not dec. _____ Data Analyzed: 01/15/96

GC Column:CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____(uL) Soil Aliquot Volume: _____(uL)

Number TICs found: 0 ✓

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
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10.					
11.					
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WMN
17FEB96

PCB Data Validation Summary
Orange & Rockland Utilities, Inc.
West Nyack, New York
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group NYACK4

Analytical results for four (4) groundwater samples from Orange & Rockland's West Nyack, New York site were reviewed to evaluate the data quality. Data were assessed in accordance with the New York State Department of Environmental Conservation (NYSDEC) **Analytical Services Protocol** (12/91 Revision), the United States Environmental Protection Agency (USEPA) document **USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review** (February 1994) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (Rust) personnel on January 12, 1996.

EXW-1
MW-2
MW-2 MS
MW-2 MSD
MW-3
MW-4

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Method Blank Summary and Data
- Calibration and GC Performance
- Analyte Resolution Check
- Analytical Sequence
- Cleanup Efficiency
- Pesticide/PCB Identification
- Compound Quantitation and Reported Detection Limits
- Chromatogram Quality

The above items were compliant with NYSDEC ASP laboratory QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Surrogate Recoveries

The samples in this SDG which exhibited low recoveries for the surrogate compounds tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) are summarized below:

Sample ID	TCX DB-608	TCX DB-1701	DCB DB-608	DCB DB-1701
EXW-1	51*	47*	24*	23*
MW-2	37	39*	55*	43*
MW-3	72	73	62	56*
MW-4	60	60	25*	23*

** Values outside of advisory QC limits (60-150%).*

The results reported for samples EXW-1 and MW-2 have each been flagged with a "V" and are considered estimated due to the low surrogate recoveries exhibited. No data have been qualified for samples MW-3 and MW-4 based upon these low surrogate recoveries, however, because the TCX and DCB QC limits are only advisory and at least one of the surrogates recovered within QC limits on each analytical column for each of these samples.

Summary

In summary, based on 28 sample data points, 14 of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this package is 100%.

Cynthia M. Rice — Reviewed By — 19 FEB 96 — Date

Ed Fahrenkopf — Approved By — 2-26-96 — Date

PCB Analytical Data - Groundwater

Orange & Rockland Utilities
West Nyack, New York

Sampling Date: January 12, 1996

Sample ID / Compound	EXW-1	MW-2	MW-3	MW-4
Aroclor-1016	1 UV	1 UV	1 U	1 U
Aroclor-1221	2 UV	2 UV	2 U	2 U
Aroclor-1232	1 UV	1 UV	1 U	1 U
Aroclor-1242	1 UV	1 UV	1 U	1 U
Aroclor-1248	1 UV	1 UV	1 U	1 U
Aroclor-1254	1 UV	**1 V**	**0.40 J**	1 U
Aroclor-1260	1 UV	1 UV	1 U	1 U

All results expressed in ug/L.
Standard Organic Data Qualifiers have been used.

WEST NJACK
SDG: NJACK4

	YES	NO	N/A

PART C: PESTICIDE/PCB ANALYSIS

1.0 Traffic Reports and Laboratory Narrative

1.1 Are Traffic Report Forms present for all samples?	✓		

ACTION: If no, contact lab for replacement of missing or illegible copies.

1.2 Do the Traffic Reports or SDG Narrative indicate any problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data?		✓	

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be qualified as estimated (J). If a soil sample, other than TCLP, contains more than 90% water, all data should be qualified as unusable (R).

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any PEST/PCB technical holding times, determined from date of collection to date of extraction, been exceeded?		✓	

Water and soil samples for PEST/PCB analysis must be extracted within 7 days of the date of collection. Extracts must be analyzed within 40 days of the date extraction.

YES NO N/A

ACTION: If technical holding times are exceeded, flag all positive results as estimated (J) and sample quantitation limits (UJ) and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon re-analysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all the data should at least be qualified "J", but the reviewer may determine that non-detects are unusable (R).

3.0 Surrogate Recovery (Form II)

3.1 Are the PEST/PCB Surrogate Recovery Summaries (Form II) present for each of the following matrices?

a. Low Water [√] — —

b. Soil [ ] — √

3.2 Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices?

a. Low Water [√] — —

b. Soil [ ] — √

ACTION: Call lab for explanation/resubmittals. If missing deliverables are unavailable, document effect in data assessments.

3.3 Were outliers marked correctly with an asterisk? [√] — —

ACTION: Circle all outliers in red.

3.4 Were surrogate recoveries of TCX or DCB outside of the contract specification for any sample or blank? (60-150%) / [ ] —

	YES	NO	N/A

ACTION: No qualification is done if surrogates are diluted out. If recovery for both surrogates is below the contract limit, but above 10%, flag all results for that sample 'J". If recovery is < 10% for either surrogate, qualify positive results 'J" and flag non-detects "R". If recovery is above the contract advisory limits for both surrogates qualify positive values "J".

3.5 Were surrogate retention times (RT) within the windows established during the initial 3-point analysis of Individual Standard Mixture A? [/] ___ ___

ACTION: If the RT limits are not met, the analysis may be qualified unusable (R) for that sample on the basis of professional judgement.

3.6 Are there any transcription/calculation errors between raw data and Form II? ___ [/] ___

ACTION: If large errors exist, call lab for explanation/resubmittal. Make any necessary corrections and document effect in data assessments.

4.0 Matrix Spikes (Form III)

4.1 Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present? [ ] ___ [/]

4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices? (1 MS/MSD must be performed for every 20 samples of similar matrix or concentration level)

a. Low Water [ ] ___ [/]

b. Soil [ ] ___ [/]

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

YES NO N/A

4.3 How many PEST/PCB spike recoveries are outside QC limits?

Water	Soil
N/A out of 12	N/A out of 12

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Water	Soil
N/A out of 6	N/A out of 6

ACTION: No action is taken on MS/MSD data alone. However, using informed professional judgement, the data reviewer may use the matrix spike and matrix spike duplicate results in conjunction with other QC criteria and determine the need for some qualification of the data.

5.0 Blanks (Form IV)

5.1 Is the Method Blank Summary (Form IV) present? √

5.2 Frequency of Analysis: For the analysis of Pesticide/PCB TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix or concentration or each extraction batch, whichever is more frequent? √

ACTION: If any blank data are missing, take the action specified above in 3.2. If blank data is not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 Has a PEST/PCB instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence? (minimum contract requirement)

YES NO N/A

ACTION: If any blank data are missing, call lab for explanation/resubmittals. If missing deliverables are unavailable, document the effect in data assessments.

5.4 Chromatography: review the blank raw data - chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable for PEST/PCBs? [√] ___ ___

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

NOTE: "Water blanks", "distilled water blanks" and "drilling water blanks" are validated like any other sample and are not used to qualify the data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/instrument/reagent/cleanup blanks have positive results for PEST/PCBs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample Dilution Factor and corrected for % moisture when necessary. ___ [√] ___

6.2 Do any field/rinse blanks have positive PEST/PCB results? ___ [√] ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet)

NOTE: All field blank results associated to a particular group of samples (may exceed one per case or one per day) may be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks.

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U";	Report CRQL & qualify "U"	No qualification is needed

NOTE: If gross blank contamination exists, all data in the associated samples should be qualified as unusable (R).

6.3 Are there field/rinse/equipment blanks associated with every sample? [✓] — —

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Calibration and GC Performance

7.1 Are the following Gas Chromatograms and Data Systems Printouts for both columns present for all samples, blanks, MS/MSD?

a. peak resolution check [✓] — —

b. performance evaluation mixtures [✓] — —

c. aroclor 1016/1260 [✓] — —

d. aroclors 1221, 1232, 1242, 1248, 1254 [✓] — —

e. toxaphene [✓] — —

f. low points individual mixtures A & B [✓] — —

g. med points individual mixtures A & B [✓] — —

h. high points individual mixtures A & B [✓] — —

	YES	NO	N/A
i. instrument blanks	[✓1]	—	—

ACTION: If no, take action specified in 3.2 above.

7.2 Are Forms VI - PEST 1-4 present and complete for each column and each analytical sequence? [✓1] — —

ACTION: If no, take action specified in 3.2 above.

7.3 Are there any transcription/calculation errors between raw data and Forms VI? — [✓1] —

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.

7.4 Do all standard retention times, including each pesticide in each level of Individual Mixtures A & B, fall within the windows established during the initial calibration analytical sequence? (For Initial Calibration Standards, Form VI - PEST - 1). [✓1] — —

ACTION: If no, all samples in the entire analytical sequence are potentially affected. Check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through pattern recognition or using a revised RT window, qualify all positive results and non-detects as unusable (R).
For aroclors, RT may be outside the RT window, but the aroclor may still be identified from the individual pattern.

7.5 Are the linearity criteria for the initial analyses of Individual Standards A & B within limits for both columns? (% RSD must be < 20.0% for all analytes except for the 2 surrogates, which must not exceed 30.0 % RSD). See Form VI PEST - 2. [✓1] — —

	YES	NO	N/A

ACTION: If no, qualify all associated positive results generated during the entire analytical sequence "J" and all non-detects "UJ". When RSD >90%, flag all non-detect results for that analyte R (unusable).

7.6 Is the resolution between any two adjacent peaks in the Resolution Check Mixture > 60.0% for both columns? (Form VI-PEST - 4) ✓1

ACTION: If no, positive results for compounds that were not adequately resolved should be qualified "J". Use professional judgement to determine if non-detects which elute in areas affected by co-eluting peaks should be qualified "N" as presumptive evidence of presence or unusable (R).

7.7 Is Form VII - Pest-1 present and complete for each Performance Evaluation Mixture analyzed during the analytical sequence for both columns? ✓1

ACTION: If no, take action as specified in 3.2 above.

7.8 Has the individual % breakdown exceeded 20.0% on either column. ✓1

- for 4,4' - DDT? ✓1

- for endrin? ✓1

Has the combined % breakdown for 4,4'- DDT/ Endrin exceeded 30.0% on either column? (required in all instances) ✓1

ACTION: 1. If any % breakdown has failed the QC criteria in either PEM in steps 2 and 17 in the initial calibration sequence (p. D-38/Pest SOW 3/90), qualify all sample analyses in the entire analytical sequence as described below.

YES NO N/A

2. If any % breakdown has failed the QC criteria in a PEM Verification calibration, review data beginning with the samples which followed the last in-control standard until the next acceptable PEM & qualify the data as described below.

a. 4,4'-DDT Breakdown: If 4,4'-DDT breakdown is greater than 20.%:

i. Qualify all positive results for DDT with 'J". If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable (R).

ii. Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity (NJ).

b. Endrin Breakdown: If endrin breakdown is greater than 20.0%:

i. Qualify all positive results for endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable (R).

ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity (NJ).

c. Combined Breakdown: If the combined 4,4'-DDT and endrin breakdown is greater than 30.0%:

i. Qualify all positive results for DDT and endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable (R). If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable (R).

YES NO N/A

ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity (NJ). Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity (NJ).

7.9 Are the relative percent difference (RPD) values for all PEM analytes <25.0%? (Form VII-PEST-1) ✓ ___ ___

ACTION: If no, qualify all associated positive results generated during the analytical sequence "J" and sample quantitation limits "UJ".

NOTE: If the failing PEM is part of the initial calibration. all samples are potentially affected. If the offending standard is a verification calibration, the associated samples are those which followed the last in-control standard until the next passing standard.

7.10 Have all samples been injected within a 12 hr. period beginning with the injection of an Instrument Blank? ✓ ___ ___

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify accordingly.

7.11 Is Form VII - Pest-2 present and complete for each INDA and INDB Verification Calibration analyzed? ✓ ___ ___

ACTION: If no, take action specified in 3.2 above.

7.12 Are there any transcription/calculation errors between raw data and Form VII - Pest-2? ___ ✓ ___

ACTION: If large errors exists, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments. under "Conclusions".

	YES	NO	N/A

7.13 Do all standard retention times for each INDA and INDB Verification Calibration fall within the windows established by the initial calibration sequence? [/] — —

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through pattern recognition or using a revised RT window, qualify all positive results and non-detects as unusable (R).

7.14 Are RPD values for all verification calibration standard compounds < 25.0%? [/] — —

ACTION: If the RPD is >25.0% for the compound being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard containing the analyte which failed the criteria. If the RPD is >90%, flag all non-detects for that analyte R (unusable).

8.0 Analytical Sequence Check (Form VIII-PEST)

8.1 Is Form VIII present and complete for each column and each period of analyses? [/] — —

ACTION: If no, take action specified in 3.2 above.

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? (see CLP SOW p. D-39 & D-41/PEST) [/] — —

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify it accordingly. Generally, the effect is negligible unless the sequence was grossly altered or the calibration was also out of limits.

	YES	NO	N/A

9.0 Cleanup Efficiency Verification (Form IX)

9.1 Is Form IX - Pest-1 present and complete for each lot of Florisil Cartridges used? (Florisil Cleanup is required for all Pest/PCB extracts.) [✓] ___ ___

ACTION: If no, take action specified in 3.2 above. If data suggests that florisil cleanup was not performed, make note in "Contract Problems/Non-Compliance".

9.2 Are all samples listed on the Pesticide Florisil Cartridge Check Form? [✓] ___ ___

ACTION: If no, take action specified in 3.2 above.

9.3 If GPC Cleanup was performed, (mandatory for all soil sample extracts) is Form IX - Pest-2 present? [ ] ___ [✓]

ACTION: If no, take action specified in 3.2 above.

ACTION: If GPC was not performed when required, make note in" Contract Problems/Non-Compliance" section of data assessment.

9.4 Are percent recoveries (% R) of the pesticide and surrogate compounds used to check the efficiency of the cleanup procedures within QC limits:

80-120% for florisil cartridge check? [✓] ___ ___

80-110% for GPC calibration? [ ] ___ [✓]

Qualify only the analyte(s) which fail the recovery criteria as follows:

ACTION: If % R are < 80%, qualify positive results "J" and quantitation limits "UJ". Non-detects should be qualified "R" if zero %R was obtained for pesticide compounds. Use professional judgement to qualify positive results if recoveries are greater than the upper limit.

YES NO N/A

NOTE: Sample data should be evaluated for potential interferences if recovery of 2,4,5-trichlorophenol was > 5% in the Florisil Cartridge Performance Check analysis. Make note in Contract Problems/ Non-Compliance section of reviewer narrative.

NOTE: The raw data of the GPC Calibration Check analysis is evaluated for pattern similarity with previously run Aroclor standards.

10.0 Pesticide/PCB Identification

10.1 Is Form X complete for every sample in which a pesticide or PCB was detected? [✓] ___ ___

ACTION: If no, take action specified in 3.2 above.

10.2 Are there any transcription/calculation errors between raw data and Forms 6E, 6G, 7E, 7D, 8D, 9A, B, 10A. ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and note error under "Conclusions".

10.3 Are retention times (RT) of sample compounds within the established RT windows for both analyses? [✓] ___ ___

Was GC/MS confirmation provided when required (when compound concentration is > 10 ug/ml in final extract)? [ ] ___ [✓]

Action: Use professional judgement to qualify positive results which were not confirmed by GC/MS. Qualify as unusable (R) all positive results which were not confirmed by second GC column analysis. Also qualify as unusable (R) all positive results not meeting RT window unless associated standard compounds are similarly biased. (see Functional Guidelines) The reviewer should use professional judgement to assign an appropriate quantitation limit.

YES NO N/A

10.4 Is the percent difference (% D) calculated for the positive sample results on the two GC columns < 25.0%? ✓ — —

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-50 %	J
50-90 %	JN
> 90 %	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

10.5 Check chromatograms for false negatives, especially the multiple peak compounds toxaphene and PCBs. Were there any false negatives? — ✓ —

ACTION: Use professional judgement to decide if the compound should be reported. If the appropriate PCB standards were not analyzed, qualify the data unusable (R).

11.0 Compound Quantitation and Reported Detection Limits

11.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Were any errors found? — ✓ —

NOTE: Single-peak pesticide results can be checked for rough agreement between quantitative results obtained on the two GC columns. The reviewer should use professional judgement to decide whethera much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity (NJ). This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

	YES	NO	N/A
11.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, % moisture?	[✓]	—	—

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

ACTION: When a sample is analysed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" value on the original Form I and substituting it with data from the analysis of diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

ACTION: Quantitation limits affected by large, off-scale peaks should be qualified as unusable (R). If the interference is on-scale, the reviewer can provide an approximated quantitation limit (UJ) for each affected compound.

12.0 Chromatogram Quality

12.1 Were baselines stable?	[✓]	—	—
12.2 Were any electropositive displacement (negative peaks) or unusual peaks seen?	—	[✓]	—

ACTION: Address comments under System Performance of data assessment.

	YES	NO	N/A

13.0 Field Duplicates

13.1 Were any field duplicates submitted for PEST/PCB analysis? [ ] ✓ —

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between field duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

Organic Data Qualifiers

U - The compound was analyzed for but not detected at or above the quantitation limit indicated.

J - The compound was analyzed for and determined to be present in the sample because the mass spectrum of the compound meets the identification criteria of the method. The concentration reported is an estimated value, less than the practical quantitation limit for the sample.

B - The compound is also found in an associated blank.

V - The reported value is considered estimated due to variance from quality control criteria

S - The reported value is suspected to be due to laboratory contamination.

R - The reported value is unusable and rejected due to variance from quality control criteria.

D - The reported value is taken from the analysis of a diluted sample.

E - The reported value exceeds the calibration range of the instrument.

N - Indicates presumptive evidence for compound identification.

A - Indicates that the compound is an aldol condensation product.

C - Compound identification has been qualitatively confirmed by GC/MS.

P - Indicates that the percent difference between the results from the two analytical columns is greater than 25%.

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EXW-1

Lab Name: NYTEST ENV INC Contract: 9522158

Lab Code: NYTEST Case No.: 26151 SAS No.: _____ SDG No.: NYACK4

Matrix: (soil/water) WATER Lab Sample ID: 2615104

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 01/12/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/16/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/24/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~	
12674-11-2	Aroclor-1016	1.0	U	
11104-28-2	Aroclor-1221	2.0	U	
11141-16-5	Aroclor-1232	1.0	U	
53469-21-9	Aroclor-1242	1.0	U	
12672-29-6	Aroclor-1248	1.0	U	
11097-69-1	Aroclor-1254	1.0	U	
11096-82-5	Aroclor-1260	1.0	U	

NA 24-Q1

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-2

Lab Name: NYTEST ENV INC Contract: 9522158

Lab Code: NYTEST Case No.: 26151 SAS No.: _____ SDG No.: NYACK4

Matrix: (soil/water) WATER Lab Sample ID: 2615101

Sample wt/vol: 990.0 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 01/12/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/16/96 ✓

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/24/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓ pH: 7.0 Sulfur Cleanup: (Y/N) N ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~	
12674-11-2	Aroclor-1016	1.0	U	✓
11104-28-2	Aroclor-1221	2.0	U	✓
11141-16-5	Aroclor-1232	1.0	U	✓
53469-21-9	Aroclor-1242	1.0	U	✓
12672-29-6	Aroclor-1248	1.0	U	✓
11097-69-1	Aroclor-1254	1.0	U	✓
11096-82-5	Aroclor-1260	1.0	U	✓

WK 01-24-96

01-24-96

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17 FEB 96

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-3

Lab Name: NYTEST ENV INC Contract: 9522158

Lab Code: NYTEST Case No.: 26151 SAS No.: _____ SDG No.: NYACK4

Matrix: (soil/water) WATER Lab Sample ID: 2615102

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 01/12/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/16/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/24/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	0.40	J
11096-82-5	Aroclor-1260	1.0	U

WN QA 1-24-96

WMN 17 FEB 96

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-4

Lab Name: NYTEST ENV INC Contract: 9522158

Lab Code: NYTEST Case No.: 26151 SAS No.: _____ SDG No.: NYACK4

Matrix: (soil/water) WATER Lab Sample ID: 2615103

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 01/12/96

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 01/16/96

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/24/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

NA 01-24-96

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17 FEB 96

000031

PCB Data Validation Summary
Orange & Rockland Utilities, Inc.
West Nyack, New York
Analytical Laboratory: NYTEST Environmental, Inc.
Sample Delivery Group NYACK1

Analytical results for ten (10) groundwater samples with matrix QC and one (1) field duplicate from Orange & Rockland's West Nyack, New York site were reviewed to evaluate the data quality. Data were assessed in accordance with the New York State Department of Environmental Conservation (NYSDEC) **Analytical Services Protocol** (12/91 Revision), the United States Environmental Protection Agency (USEPA) document **USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review** (February 1994) and the USEPA Region II document **CLP Organics Data Review and Preliminary Review** (SOP No. HW-6, Revision No. 8, January, 1992), where applicable. This validation pertains to the following samples collected by Rust Environment & Infrastructure (Rust) personnel on December 26 and 27, 1995.

EXW-4	**MW-6**
EXW-5	**MW-7**
MW-1	**MW-8**
MW-5	**MW-8S**
MW-5 MS	**X-1**
MW-5 MSD	**MW-9B**
MW-5B	

The following items/criteria applicable to the samples listed above were reviewed:

- Deliverable Requirements
- Case Narrative
- Holding Times
- Surrogate Recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Method Blank Summary and Data
- Calibration and GC Performance
- Analyte Resolution Check
- Analytical Sequence
- Cleanup Efficiency
- Pesticide/PCB Identification
- Compound Quantitation and Reported Detection Limits
- Chromatogram Quality
- Field Duplicate Data

The above items were compliant with USEPA QC criteria with the exception of the items discussed in the following text. The data have been validated according to the above procedures and qualified as described on the attached definitions list.

Surrogate Recoveries

The samples in this SDG which exhibited low recoveries for the surrogate compounds tetrachloro-m-xylene (TCX) and decachlorobiphenyl (DCB) are summarized below:

Sample ID	TCX DB-608	TCX DB-1701	DCB DB-608	DCB DB-1701
EXW-4	57*	57*	25*	39*
EXW-5	68	70	26*	36*
MW-1	51*	48*	50*	46*
MW-5	48*	46*	62	60
MW-5 MS	37*	38*	46*	43*
MW-5 MSD	62	62	42*	41*
MW-5B	37*	37*	18*	23*
MW-6	68	69	30*	49*
MW-7	60	60	60	54*
MW-8	31*	31*	43*	41*
MW-8S	38*	38*	52*	49*
X-1	32*	33*	44*	41*
MW-9B	52*	52*	57*	55*

** Values outside of advisory QC limits (60-150%).*

The results reported for samples EXW-4, MW-1, MW-5 MS, MW-5B, MW-8, MW-8S, X-1 and MW-9B have each been flagged with a "V" and are considered estimated due to the low surrogate recoveries exhibited. No data have been qualified for samples EXW-5, MW-5, MW-5 MSD, MW-6 and MW-7 based upon these low surrogate recoveries, however, because the TCX and DCB QC limits are only advisory and at least one of the surrogates recovered within QC limits on each analytical column for each of these samples.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results

Sample MW-5 was selected for matrix spike/matrix spike duplicate (MS/MSD) analysis. While each of the percent recoveries for the MS and the MSD were within QC limits, the relative percent difference (RPD) between the MS and MSD recoveries for four spike compounds exceeded the QC limit: gamma-BHC (RPD=16, QC limit=15), heptachlor

(RPD=25, QC limit=20), dieldrin (RPD=28, QC limit=18) and endrin (RPD=28, QC limit=21). No data have been qualified based upon these exceedances, however, because data are not qualified based solely upon MS/MSD data and the other data does not indicate the need for further qualification of the results reported.

Field Duplicate Data

Sample X-1 is a blind field duplicate of sample MW-8S. No PCB target compounds were detected in either sample MW-8S or its field duplicate. Therefore, the field duplicate data is indicative of acceptable sampling and analytical precision.

Summary

In summary, based on 77 sample data points, 49 of which were qualified as estimated, and none qualified as unusable, and since estimated data are considered valid and usable, the usability of this package is 100%.

Anthony M. Noce — Reviewed By — 8FEB96 — Date

Approved By — 2-8-96 — Date

PCB Analytical Data - Groundwater

Orange & Rockland Utilities
West Nyack, New York

Sampling Dates: December 26 and 27, 1995

Sample ID / Compound	EXW-4	EXW-5	MW-1	MW-5	MW-5B	MW-6	MW-7	MW-8	MW-8S	X-1	MW-9B
Aroclor-1016	1 UV	1 U	1 UV	1 U	1 UV	1 U	1 U	1 UV	1 UV	1 UV	1 UV
Aroclor-1221	2 UV	2 U	2 UV	2 U	2 UV	2 U	2 U	2 UV	2 UV	2 UV	2 UV
Aroclor-1232	1 UV	1 U	1 UV	1 U	1 UV	1 U	1 U	1 UV	1 UV	1 UV	1 UV
Aroclor-1242	1 UV	1 U	1 UV	1 U	1 UV	1 U	1 U	1 UV	1 UV	1 UV	1 UV
Aroclor-1248	1 UV	1 U	1 UV	1 U	1 UV	1 U	1 U	1 UV	1 UV	1 UV	1 UV
Aroclor-1254	1 UV	1 U	1 UV	1 U	1 UV	1 U	1 U	1 UV	1 UV	1 UV	1 UV
Aroclor-1260	1 UV	1 U	1 UV	1 U	1 UV	1 U	1 U	1 UV	1 UV	1 UV	1 UV

All results expressed in ug/L.
Standard Organic Data Qualifiers have been used.
Sample X-1 is a blind field duplicate of sample MW-8S.

JRJ - WEST NYACK
SDG: NYACK1

STANDARD OPERATING PROCEDURE
Date: January 1992
Revision: 8

	YES	NO	N/A

PART C: PESTICIDE/PCB ANALYSIS
PCBs ONLY

1.0 Traffic Reports and Laboratory Narrative

1.1 Are Traffic Report Forms present for all samples? [✓] ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

1.2 Do the Traffic Reports or SDG Narrative indicate any problems with sample receipt, condition of the samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

ACTION: If any sample analyzed as a soil, other than TCLP, contains 50%-90% water, all data should be qualified as estimated (J). If a soil sample, other than TCLP, contains more than 90% water, all data should be qualified as unusable (R).

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

2.0 Holding Times

2.1 Have any PEST/PCB technical holding times, determined from date of collection to date of extraction, been exceeded? ___ [✓] ___

Water and soil samples for PEST/PCB analysis must be extracted within 7 days of the date of collection. Extracts must be analyzed within 40 days of the date extraction.

YES NO N/A

ACTION: If technical holding times are exceeded, flag all positive results as estimated (J) and sample quantitation limits (UJ) and document in the narrative that holding times were exceeded. If analyses were done more than 14 days beyond holding time, either on the first analysis or upon re-analysis, the reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all the data should at least be qualified "J", but the reviewer may determine that non-detects are unusable (R).

3.0 Surrogate Recovery (Form II)

3.1 Are the PEST/PCB Surrogate Recovery Summaries (Form II) present for each of the following matrices?

a. Low Water [✓] — —

b. Soil [ ] — ✓

3.2 Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices?

a. Low Water [✓] — —

b. Soil [ ] — ✓

ACTION: Call lab for explanation/resubmittals. If missing deliverables are unavailable, document effect in data assessments.

3.3 Were outliers marked correctly with an asterisk? [✓] — —

ACTION: Circle all outliers in red.

3.4 Were surrogate recoveries of TCX or DCB outside of the contract specification for any sample or blank? (60-150%) ✓ [ ] —

	YES	NO	N/A

ACTION: No qualification is done if surrogates are diluted out. If recovery for <u>both</u> surrogates is below the contract limit, but above 10%, flag all results for that sample 'J'. If recovery is < 10% for either surrogate, qualify positive results 'J' and flag non-detects "R". If recovery is above the contract advisory limits for <u>both</u> surrogates qualify positive values "J".

3.5 Were surrogate retention times (RT) within the windows established during the initial 3-point analysis of Individual Standard Mixture A? [✓] ___ ___

ACTION: If the RT limits are not met, the analysis may be qualified unusable (R) for that sample on the basis of professional judgement.

3.6 Are there any transcription/calculation errors between raw data and Form II? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittal. Make any necessary corrections and document effect in data assessments.

4.0 <u>Matrix Spikes (Form III)</u>

4.1 Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present? [✓] ___ ___

4.2 Were matrix spikes analyzed at the required frequency for each of the following matrices? (1 MS/MSD must be performed for every 20 samples of similar matrix or concentration level)

a. Low Water [✓] ___ ___

b. Soil [ ] ___ [✓]

ACTION: If any matrix spike data are missing, take the action specified in 3.2 above.

YES NO N/A

4.3 How many PEST/PCB spike recoveries are outside QC limits?

Water	Soil
0 out of 12	N/A out of 12

4.4 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?

Water	Soil
4 out of 6	N/A out of 6

ACTION: No action is taken on MS/MSD data alone. However, using informed professional judgement, the data reviewer may use the matrix spike and matrix spike duplicate results in conjunction with other QC criteria and determine the need for some qualification of the data.

5.0 Blanks (Form IV)

5.1 Is the Method Blank Summary (Form IV) present? [✓]

5.2 Frequency of Analysis: For the analysis of Pesticide/PCB TCL compounds, has a reagent/ method blank been analyzed for each SDG or every 20 samples of similar matrix or concentration or each extraction batch, whichever is more frequent? [✓]

ACTION: If any blank data are missing, take the action specified above in 3.2. If blank data is not available, reject (R) all associated positive data. However, using professional judgement, the data reviewer may substitute field blank data for missing method blank data.

5.3 Has a PEST/PCB instrument blank been analyzed at the beginning of every 12 hr. period following the initial calibration sequence? (minimum contract requirement)

	YES	NO	N/A

ACTION: If any blank data are missing, call lab for explanation/resubmittals. If missing deliverables are unavailable, document the effect in data assessments.

5.4 Chromatography: review the blank raw data - chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable for PEST/PCBs? OK [✓1] — —

ACTION: Use professional judgement to determine the effect on the data.

6.0 Contamination

NOTE: "Water blanks", "distilled water blanks" and "drilling water blanks" are validated like any other sample and are not used to qualify the data. Do not confuse them with the other QC blanks discussed below.

6.1 Do any method/instrument/reagent/cleanup blanks have positive results for PEST/PCBs? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample Dilution Factor and corrected for % moisture when necessary. — [✓1] —

6.2 Do any field/rinse blanks have positive PEST/PCB results? — [✓1] —

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet)

NOTE: All field blank results associated to a particular group of samples (may exceed one per case or one per day) may be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in the table below to qualify TCL results due to contamination. Use the largest value from all the associated blanks.

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U";	Report CRQL & qualify "U"	No qualification is needed

NOTE: If gross blank contamination exists, all data in the associated samples should be qualified as unusable (R).

6.3 Are there field/rinse/equipment blanks associated with every sample? [✓] — —

ACTION: For low level samples, note in data assessment that there is no associated field/rinse/equipment blank. Exception: samples taken from a drinking water tap do not have associated field blanks.

7.0 Calibration and GC Performance

7.1 Are the following Gas Chromatograms and Data Systems Printouts for both columns present for all samples, blanks, MS/MSD?

a. peak resolution check [✓] — —

b. performance evaluation mixtures [ ] — ✓

c. aroclor 1016/1260 [✓] — —

d. aroclors 1221, 1232, 1242, 1248, 1254 [✓] — —

e. toxaphene [ ] — ✓

f. low points individual mixtures A & B [OK] — —

g. med points individual mixtures A & B [OK] — —

h. high points individual mixtures A & B [OK] — —

	YES	NO	N/A
i. instrument blanks	[✓]	—	—

ACTION: If no, take action specified in 3.2 above.

7.2 Are Forms VI - PEST 1-4 present and complete for each column and each analytical sequence? [✓] — —

ACTION: If no, take action specified in 3.2 above.

7.3 Are there any transcription/calculation errors between raw data and Forms VI? — [✓] —

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and document effect in data assessments.

7.4 Do all standard retention times, including each pesticide in each level of Individual Mixtures A & B, fall within the windows established during the initial calibration analytical sequence? (For Initial Calibration Standards, Form VI - PEST - 1). [✓] — —

ACTION: If no, all samples in the entire analytical sequence are potentially affected. Check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through pattern recognition or using a revised RT window, qualify all positive results and non-detects as unusable (R).
For aroclors, RT may be outside the RT window, but the aroclor may still be identified from the individual pattern.

7.5 Are the linearity criteria for the initial analyses of Individual Standards A & B within limits for both columns? (% RSD must be < 20.0% for all analytes except for the 2 surrogates, which must not exceed 30.0 % RSD). See Form VI PEST - 2. OK — —

	YES	NO	N/A

ACTION: If no, qualify all associated positive results generated during the entire analytical sequence "J" and all non-detects "UJ". When RSD >90%, flag all non-detect results for that analyte R (unusable).

7.6 Is the resolution between any two adjacent peaks in the Resolution Check Mixture > 60.0% for both columns? (Form VI-PEST - 4) [✓] — —

ACTION: If no, positive results for compounds that were not adequately resolved should be qualified "J". Use professional judgement to determine if non-detects which elute in areas affected by co-eluting peaks should be qualified "N" as presumptive evidence of presence or unusable (R).

7.7 Is Form VII - Pest-1 present and complete for each Performance Evaluation Mixture analyzed during the analytical sequence for both columns? [✓] — —

ACTION: If no, take action as specified in 3.2 above.

7.8 Has the individual % breakdown exceeded 20.0% on either column. — [✓] —

- for 4,4' - DDT? — [✓] —

- for endrin? — [✓] —

Has the combined % breakdown for 4,4'- DDT/ Endrin exceeded 30.0% on either column? (required in all instances) — [✓] —

ACTION: 1. If any % breakdown has failed the QC criteria in either PEM in steps 2 and 17 in the initial calibration sequence (p. D-38/Pest SOW 3/90), qualify all sample analyses in the entire analytical sequence as described below.

YES NO N/A

2. If any % breakdown has failed the QC criteria in a PEM Verification calibration, review data beginning with the samples which followed the last <u>in-control</u> standard until the next acceptable PEM & qualify the data as described below.

a. 4,4'-DDT Breakdown: If 4,4'-DDT breakdown is greater than 20.%:

   i. Qualify all positive results for DDT with 'J". If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable (R).

   ii. Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity (NJ).

b. Endrin Breakdown: If endrin breakdown is greater than 20.0%:

   i. Qualify all positive results for endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable (R).

   ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity (NJ).

c. Combined Breakdown: If the combined 4,4'-DDT and endrin breakdown is greater than 30.0%:

   i. Qualify all positive results for DDT and endrin with "J". If endrin was not detected, but endrin aldehyde and endrin ketone are positive, then qualify the quantitation limit for endrin as unusable (R). If DDT was not detected, but DDD and DDE are positive, then qualify the quantitation limit for DDT as unusable (R).

	YES	NO	N/A

ii. Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity (NJ). Qualify positive results for DDD and/or DDE as presumptively present at an approximated quantity (NJ).

7.9 Are the relative percent difference (RPD) values for all PEM analytes <25.0%? (Form VII-PEST-1) [✓] ___ ___

ACTION: If no, qualify all associated positive results generated during the analytical sequence "J" and sample quantitation limits "UJ".

NOTE: If the failing PEM is part of the initial calibration. all samples are potentially affected. If the offending standard is a verification calibration, the associated samples are those which followed the last in-control standard until the next passing standard.

7.10 Have all samples been injected within a 12 hr. period beginning with the injection of an Instrument Blank? [✓] ___ ___

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify accordingly.

7.11 Is Form VII - Pest-2 present and complete for each INDA and INDB Verification Calibration analyzed? [✓] ___ ___

ACTION: If no, take action specified in 3.2 above.

7.12 Are there any transcription/calculation errors between raw data and Form VII - Pest-2? ___ [✓] ___

ACTION: If large errors exists, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments. under "Conclusions".

	YES	NO	N/A

7.13 Do all standard retention times for each INDA and INDB Verification Calibration fall within the windows established by the initial calibration sequence? [✓] — —

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain peaks within an expanded window surrounding the expected retention times. If no peaks are found and the surrogates are visible, non-detects are valid. If peaks are present and cannot be identified through pattern recognition or using a revised RT window, qualify all positive results and non-detects as unusable (R).

7.14 Are RPD values for all verification calibration standard compounds < 25.0%? [✓] — —

ACTION: If the RPD is >25.0% for the compound being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard containing the analyte which failed the criteria. If the RPD is >90%, flag all non-detects for that analyte R (unusable).

8.0 Analytical Sequence Check (Form VIII-PEST)

8.1 Is Form VIII present and complete for each column and each period of analyses? [✓] — —

ACTION: If no, take action specified in 3.2 above.

8.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? (see CLP SOW p. D-39 & D-41/PEST) [✓] — —

ACTION: If no, use professional judgement to determine the severity of the effect on the data and qualify it accordingly. Generally, the effect is negligible unless the sequence was grossly altered or the calibration was also out of limits.

	YES	NO	N/A

9.0 Cleanup Efficiency Verification (Form IX)

9.1 Is Form IX - Pest-1 present and complete for each lot of Florisil Cartridges used? (Florisil Cleanup is required for all Pest/PCB extracts.) [✓] — —

ACTION: If no, take action specified in 3.2 above. If data suggests that florisil cleanup was not performed, make note in "Contract Problems/Non-Compliance".

9.2 Are all samples listed on the Pesticide Florisil Cartridge Check Form? [✓] — —

ACTION: If no, take action specified in 3.2 above.

9.3 If GPC Cleanup was performed, (mandatory for all soil sample extracts) is Form IX - Pest-2 present? [ ] — ✓

ACTION: If no, take action specified in 3.2 above.

ACTION: If GPC was not performed when required, make note in" Contract Problems/Non-Compliance" section of data assessment.

9.4 Are percent recoveries (% R) of the pesticide and surrogate compounds used to check the efficiency of the cleanup procedures within QC limits:

80-120% for florisil cartridge check? [✓] — —

80-110% for GPC calibration? [ ] — ✓

Qualify only the analyte(s) which fail the recovery criteria as follows:

ACTION: If % R are < 80%, qualify positive results "J" and quantitation limits "UJ". Non-detects should be qualified "R" if zero %R was obtained for pesticide compounds. Use professional judgement to qualify positive results if recoveries are greater than the upper limit.

YES NO N/A

NOTE: Sample data should be evaluated for potential interferences if recovery of 2,4,5-trichlorophenol was > 5% in the Florisil Cartridge Performance Check analysis. Make note in Contract Problems/ Non-Compliance section of reviewer narrative.

NOTE: The raw data of the GPC Calibration Check analysis is evaluated for pattern similarity with previously run Aroclor standards.

10.0 Pesticide/PCB Identification

10.1 Is Form X complete for every sample in which a pesticide or PCB was detected? [ ] ___ ✓

ACTION: If no, take action specified in 3.2 above.

10.2 Are there any transcription/calculation errors between raw data and Forms 6E, 6G, 7E, 7D, 8D, 9A, B, 10A. ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittal, make necessary corrections and note error under "Conclusions".

10.3 Are retention times (RT) of sample compounds within the established RT windows for both analyses? [✓] ___ ___

Was GC/MS confirmation provided when required (when compound concentration is > 10 ug/ml in final extract)? [ ] ___ ✓

Action: Use professional judgement to qualify positive results which were not confirmed by GC/MS. Qualify as unusable (R) all positive results which were not confirmed by second GC column analysis. Also qualify as unusable (R) all positive results not meeting RT window unless associated standard compounds are similarly biased. (see Functional Guidelines) The reviewer should use professional judgement to assign an appropriate quantitation limit.

YES NO N/A

10.4 Is the percent difference (% D) calculated for the positive sample results on the two GC columns < 25.0%? [ ] ___ ✓

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-50 %	J
50-90 %	JN
> 90 %	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

10.5 Check chromatograms for false negatives, especially the multiple peak compounds toxaphene and PCBs. Were there any false negatives? ___ [✓] ___

ACTION: Use professional judgement to decide if the compound should be reported. If the appropriate PCB standards were not analyzed, qualify the data unusable (R).

11.0 Compound Quantitation and Reported Detection Limits

11.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Were any errors found? ___ [✓] ___

NOTE: Single-peak pesticide results can be checked for rough agreement between quantitative results obtained on the two GC columns. The reviewer should use professional judgement to decide whethera much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity (NJ). This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

YES NO N/A

11.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, % moisture? [✓] ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "I" value on the original Form I and substituting it with data from the analysis of diluted sample. Specify which Form I is to be used, then draw a red "X" across the entire page of all Form I's that should not be used, including any in the summary package.

ACTION: Quantitation limits affected by large, off-scale peaks should be qualified as unusable (R). If the interference is on-scale, the reviewer can provide an approximated quantitation limit (UJ) for each affected compound.

12.0 Chromatogram Quality

12.1 Were baselines stable? [OK] ___ ___

12.2 Were any electropositive displacement (negative peaks) or unusual peaks seen? ✓ [ ] ___

ACTION: Address comments under System Performance of data assessment.

	YES	NO	N/A

13.0 Field Duplicates

13.1 Were any field duplicates submitted for PEST/PCB analysis? √1 — —

ACTION: Compare the reported results for field duplicates and calculate the relative percent difference.

ACTION: Any gross variation between field duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of field duplicates should be confirmed by contacting the sampler.

Organic Data Qualifiers

U - The compound was analyzed for but not detected at or above the quantitation limit indicated.

J - The compound was analyzed for and determined to be present in the sample because the mass spectrum of the compound meets the identification criteria of the method. The concentration reported is an estimated value, less than the practical quantitation limit for the sample.

B - The compound is also found in an associated blank.

V - The reported value is considered estimated due to variance from quality control criteria

S - The reported value is suspected to be due to laboratory contamination.

R - The reported value is unusable and rejected due to variance from quality control criteria.

D - The reported value is taken from the analysis of a diluted sample.

E - The reported value exceeds the calibration range of the instrument.

N - Indicates presumptive evidence for compound identification.

A - Indicates that the compound is an aldol condensation product.

C - Compound identification has been qualitatively confirmed by GC/MS.

P - Indicates that the percent difference between the results from the two analytical columns is greater than 25%.

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EXW-4

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: _____ SDG No.: NYACK1

Matrix: (soil/water) WATER Lab Sample ID: 2607811

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/28/95

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/11/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

NA @ 12-9

GMM
8FEB96

000009

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

EXW-5

Lab Name: NYTEST ENV INC   Contract: 9521637

Lab Code: NYTEST   Case No.: 26073   SAS No.: ______   SDG No.: NYACK1

Matrix: (soil/water) WATER   Lab Sample ID: 2607812

Sample wt/vol: 1000 (g/mL) ML   Lab File ID: ______

% Moisture: ______ decanted: (Y/N) ___   Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF ✓   Date Extracted: 12/28/95 ✓

Concentrated Extract Volume: 10000 (uL)   Date Analyzed: 01/12/96 ✓

Injection Volume: 1.00 (uL)   Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓   pH: 7.0   Sulfur Cleanup: (Y/N) N ✓

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND	Concentration	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

WH 1-12-91

CMN
8FEB96

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: _____ SDG No.: NYACK1

Matrix: (soil/water) WATER Lab Sample ID: 2607306

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF ✓ Date Extracted: 12/28/95 ✓

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓ pH: 7.0 Sulfur Cleanup: (Y/N) N ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U ✓
11104-28-2	Aroclor-1221	2.0	U ✓
11141-16-5	Aroclor-1232	1.0	U ✓
53469-21-9	Aroclor-1242	1.0	U ✓
12672-29-6	Aroclor-1248	1.0	U ✓
11097-69-1	Aroclor-1254	1.0	U ✓
11096-82-5	Aroclor-1260	1.0	U ✓

NA CLK 1-12-96.

CLM
8 FEB 96

000019

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: ______ SDG No.: NYACK1

Matrix: (soil/water) WATER Lab Sample ID: 2607307

Sample wt/vol: 1000 (g/mL) ML Lab File ID: ______

% Moisture: ______ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF ✓ Date Extracted: 12/28/95 ✓

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓ pH: 7.0 Sulfur Cleanup: (Y/N) N ✓

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

CAS NO.	COMPOUND		Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

V I-Q1 + 12-94

CMM
8FEB96

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1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-5B

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: _____ SDG No.: NYACK1

Matrix: (soil/water) WATER Lab Sample ID: 2607809

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF ✓ Date Extracted: 12/28/95 ✓

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/11/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓ pH: 7.0 Sulfur Cleanup: (Y/N) N ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U ✓
11104-28-2	Aroclor-1221	2.0	U ✓
11141-16-5	Aroclor-1232	1.0	U ✓
53469-21-9	Aroclor-1242	1.0	U ✓
12672-29-6	Aroclor-1248	1.0	U ✓
11097-69-1	Aroclor-1254	1.0	U ✓
11096-82-5	Aroclor-1260	1.0	U ✓

WA 01-12-96

GMM
8 FEB 96

000033

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-6

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: _____ SDG No.: NYACK1

Matrix: (soil/water) WATER Lab Sample ID: 2607810

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF ✓ Date Extracted: 12/28/95 ✓

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/11/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓ pH: 7.0 Sulfur Cleanup: (Y/N) N ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

WA 01-12-96

AM17
BFE096

000039

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-7

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: _____ SDG No.: NYACK1

Matrix: (soil/water) WATER Lab Sample ID: 2607305

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF Date Extracted: 12/28/95

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/96

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U
11104-28-2	Aroclor-1221	2.0	U
11141-16-5	Aroclor-1232	1.0	U
53469-21-9	Aroclor-1242	1.0	U
12672-29-6	Aroclor-1248	1.0	U
11097-69-1	Aroclor-1254	1.0	U
11096-82-5	Aroclor-1260	1.0	U

WHG 1-12-96

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-8

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: _____ SDG No.: NYACK1

Matrix: (soil/water) WATER Lab Sample ID: 2607304

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF ✓ Date Extracted: 12/28/95 ✓

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓ pH: 7.0 Sulfur Cleanup: (Y/N) N ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U ✓
11104-28-2	Aroclor-1221	2.0	U ✓
11141-16-5	Aroclor-1232	1.0	U ✓
53469-21-9	Aroclor-1242	1.0	U ✓
12672-29-6	Aroclor-1248	1.0	U ✓
11097-69-1	Aroclor-1254	1.0	U ✓
11096-82-5	Aroclor-1260	1.0	U ✓

WA 01-12-96

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-8S

Lab Name: NYTEST ENV INC   Contract: 9521637

Lab Code: NYTEST   Case No.: 26073   SAS No.: ______   SDG No.: NYACK1

Matrix: (soil/water) WATER   Lab Sample ID: 2607303

Sample wt/vol: 1000 (g/mL) ML   Lab File ID: ______

% Moisture: ______ decanted: (Y/N) ___   Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF ✓   Date Extracted: 12/28/95 ✓

Concentrated Extract Volume: 10000 (uL)   Date Analyzed: 01/04/96 ✓

Injection Volume: 1.00 (uL)   Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓   pH: 7.0   Sulfur Cleanup: (Y/N) N ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U ✓
11104-28-2	Aroclor-1221	2.0	U ✓
11141-16-5	Aroclor-1232	1.0	U ✓
53469-21-9	Aroclor-1242	1.0	U ✓
12672-29-6	Aroclor-1248	1.0	U ✓
11097-69-1	Aroclor-1254	1.0	U ✓
11096-82-5	Aroclor-1260	1.0	U ✓

WH 071-12-91

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MW-9B

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: _____ SDG No.: NYACK1

Matrix: (soil/water) WATER Lab Sample ID: 2607802

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF ✓ Date Extracted: 12/28/95 ✓

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓ pH: 7.0 Sulfur Cleanup: (Y/N) N ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L		Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~	
12674-11-2	Aroclor-1016	1.0	U ✓	
11104-28-2	Aroclor-1221	2.0	U ✓	
11141-16-5	Aroclor-1232	1.0	U ✓	
53469-21-9	Aroclor-1242	1.0	U ✓	
12672-29-6	Aroclor-1248	1.0	U ✓	
11097-69-1	Aroclor-1254	1.0	U ✓	
11096-82-5	Aroclor-1260	1.0	U ✓	

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PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

X-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: _____ SDG No.: NYACK1

Matrix: (soil/water) WATER Lab Sample ID: 2607801

Sample wt/vol: 1000 (g/mL) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N) ___ Date Received: 12/27/95

Extraction: (SepF/Cont/Sonc) SEPF ✓ Date Extracted: 12/28/95 ✓

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 01/04/96 ✓

Injection Volume: 1.00 (uL) Dilution Factor: 1.00 ✓

GPC Cleanup: (Y/N) N ✓ pH: 7.0 Sulfur Cleanup: (Y/N) N ✓

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
~~8001-35-2~~	~~Toxaphene~~	~~5.0~~	~~U~~
12674-11-2	Aroclor-1016	1.0	U ✓
11104-28-2	Aroclor-1221	2.0	U ✓
11141-16-5	Aroclor-1232	1.0	U ✓
53469-21-9	Aroclor-1242	1.0	U ✓
12672-29-6	Aroclor-1248	1.0	U ✓
11097-69-1	Aroclor-1254	1.0	U ✓
11096-82-5	Aroclor-1260	1.0	U ✓

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