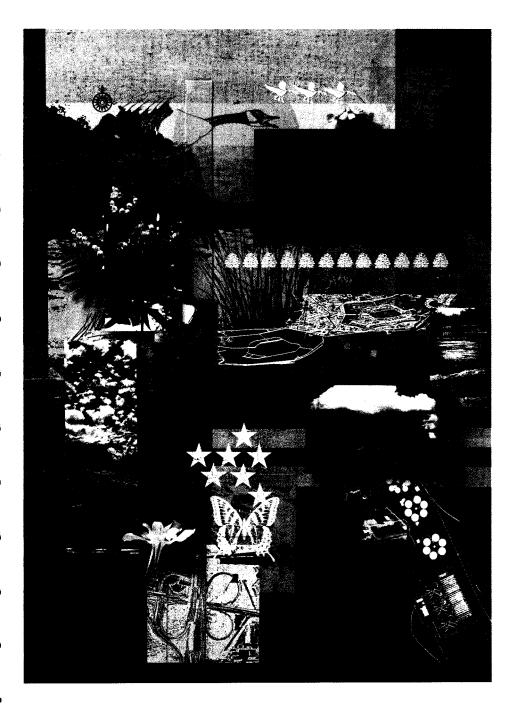
Quality * Integrity * Creativity * Responsiveness





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

$\label{eq:APPENDIX L} \textbf{Data Validation Reports}$

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.

	HA-4 (3-4')	X-1	RPD
Compound			
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%.

Reviewed By

Approved/By

RL FEB96

Date

2-26-96

Date

Volatile Organic Analytical Data - Shallow Soil

Orange & Rockland Utilities West Nyack, New York Sampling Date: November 14, 1995

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Toluene 11 U 11 U 11 U	3.J	12 U	12 U	8 3	120,000 D	160,000 D	5 3	13,000 JD
=		12 U	12 U	12 U	12 U	62 U	D 11	12 U
11 011 110 11		12 U	12 U	12 U	76,000 D	95,000 D	- - -	6,800 JD
Styrene 11 U 11 U 11 U	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	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).

Time å 0845 1 CLP 91-Ö 5 Ř (Yes) Comment CLP 56/5/// Date Environmental Samples Intact & Properly Preserved: **V**0Cs Tel Vocs Read 5°C Name RUST Contact: Ed Fahren KopF TCL Date Report Required: Norma Received by Laboratory. m_ NYTEST Comp. or Grab Laboratory Comments: **(** S aboratory Contact -ab Identification: 1CE 77 Preserv (518) 458-1313 # Sample Containers 402 1 402. nust Enviro nenta AIK Road Lowering Device Time RODS 11/14/85 1930 Rods Albany, N.Y. 12205 & ROCKLAND UTILITIES INC. 12 Metrc Date Trowel and HAND AUGER HAND AKCR Collection Vessel West Nyack New York Affiliation Rust Solr Sample Matrix 5012 Slaker 38301.300 ORANGE 0415 0360 2855 06430 0730 0135 1310 Ohol 105 580 841/11/11/08/11/11/18 1- AIA Keyin Time 1015 Name 11/14 1995 **Date** Site Location: Client Name: Project No.: Sampler: Relinquished by: Relinquished by: 3-4 <u>-</u>2 3-4, 3-4 Sample Identification 3-4, 'مٰ 3-4 1-2 ره -Received by: Received by: <u>-</u>2 dodol 5 1 コ l 3 1- ¥ HA-3 HA-2 HA-2 1 - 4H ١ ١ 1 44 × AH ₹ T HAH ¥

FORM50

Rust Environment and Infrastructure NYSDEC Data Validation Compliance Summary

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MOTHY J FA
4
Validator:

Date: 12/15/45 SDG: 25668

Protocol: 25668

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

Date: January 1992 Revision: 8

YES NO N/A

PART A: YOA 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".

Date: January 1992 Revision: 8

YES NO N/A

= 2.0 Holding Times

IN:

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 (Ø) days of collection. If uncertain about preservation, contact sampler to determine whether or not samples were preserved.

The holding time for soils is 10 days.

Table of Holding Time Violations

			(500	Traffic R	eport)
-Sample ID	Sample Matrix	Preserved?	Date Sampled	Date Lab Received	

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 exect data are unusable (R).

Date: January 1992 Revision: 8

YES NO N/A

	System Monitoring Compound (SMC) Recovery (Form IIl
3.0	•	
3.1	Are the VOA SMC Recovery Summaries (Form II for each of the following matrices:) present
	a. Low Water	
	b. Low Soil	
	c. Med Soil	
3.2	Are all the VOA samples listed on the appropriate Monitoring Compound Recovery Summary of the following matrices:	opriate y for each
	a. Low Water	<u>u</u> , — —
	b. Low Soil	14/ — —
	c. Med Soil	<u> </u>
	ACTION: Call lab for explanation/ resubmittals. If missing deliverables are unavailable, document effect in data assessment	. s.
-	Were outliers marked correctly with an asterisk?	<u> </u>
	ACTION: Circle all outliers in red.	
	Was one or more VOA system monitoring compound recovery outside of contract pecifications for any sample or method lank?	
	yes, were samples re-analyzed?	<u> </u>
		<u> </u>

Date: January 1992

Revision: 8

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).
- 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").
- 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 scovery Form (Form III) present?

Date: January 1992 Revision: 8

		YES NO N/A
4.2	Were matrix spikes analyzed frequency for each of the	
	a. Low Water	<u> </u>
	b. Low Soil	<u>ú</u> , _
	c. Med Soil	<u> </u>
ACTI	ON: If any matrix spike do the action specified :	
4.3	How many VOA spike recover: limits?	ies are outside QC
	Si. L	med Soils
•	out of 10	7 out of 10
4.4		
7.7	duplicate recoveries are or	
	Water	Soils
	<u></u> O out of 5	out of 5
	ACTION: No action is taken data alone. However professional judger results may be used with other QC criticathe need for qualitate.	r, using informed ment, the MS/MSD d in conjunction eria to determine
.0	Blanks (Form IV)	,
5.	s the Method Blank Summar resent?	y (Form IV)
5.2	vquency of Analysis: for VOA TCL compounds, has the hear analyzed for eather the samples of similar matroil, medium soil), where the samples of similar matroil, where the samples of similar matroil, where the samples of samples of similar matroil, where the samples of samples of similar matroil, where the samples of s	a reagent/method ch SDG or every ix (low water,)

Date: January 1992 Revision: 8

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 nositive results (TCL and/or TIC) for VOAs? hen applied as described below, the intaminant concentration in these blanks are ltiplied by the sample dilution factor and rected for % moisture when necessary.

6.2 my field/trip/rinse blanks have positive results (TCL and/or TIC)?

ACTION: i re a list of the samples associated with f the contaminated blanks. (Attach a

s. :e sheet.)

Date: January 1992

Revision: 8

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:

2-Butanone

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	Sample conc < CRQL & <10x blank value	Sample conc > CRQL 6 >10x blank value
VAILLE		

Methylene		
Chloride Flag Acetone with Toluene	Report CRQL & qualify "U"	No qualification is needed

Sample conc > CRQL Sample conc < CRQL & Sample conc > CRQL value & > 5x blank is < 5x blank value ·ut < 5x blank value

Contam-	ng sample result h a "U"	Report CRQL & qualify "U"	No qualification is needed	
inants				

tes qualified "U" for blank contamination are NOTE: A: considered as "hits" when qualifying for ation criteria. Ca.

Date: January 1992 Revision: 8

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?

Date: January 1992

Revision: 8

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. ?.)

<u>~</u> _

7.7 Have the appropriate number of significant figures (**w***) been reported? ***********************************		Date: Jo Revision		1992
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 (IV) 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? 1. Samples and/or fractions as appropriate (IV) Matrix spikes and matrix spike duplicates (Mass spectra not required)		Y.	ES NO	N/A
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present with required header information on each page, for each of the following: a. Samples and/or fractions as appropriate [1]/ 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? 1. Samples and/or fractions as appropriate [1]/ Matrix spikes and matrix spike duplicates (Mass spectra not required)	3.0	Target Compound List (TCL) Analytes		
b. Matrix spikes and matrix spike duplicates c. Blanks 111 — 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? 1. Samples and/or fractions as appropriate [14] Matrix spikes and matrix spike duplicates (Mass spectra not required)	8.1	present with required header information on		
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? 1. Samples and/or fractions as appropriate [1] Matrix spikes and matrix spike duplicates (Mass spectra not required)		a. Samples and/or fractions as appropriate	للك	
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? 1. Samples and/or fractions as appropriate [1] Matrix spikes and matrix spike duplicates (Mass spectra not required)			ग्प	,
mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following? 1. Samples and/or fractions as appropriate [1] Matrix spikes and matrix spike duplicates (Mass spectra not required)		c. Blanks	111	
Matrix spikes and matrix spike duplicates (Mass spectra not required)	8.2	mass spectra for the identified compounds, a data system printouts (Quant Reports) include	and the	•
duplicates (Mass spectra not required)		2. Samples and/or fractions as appropriate	ाप्	
c Blanks			14	
		c Blanks	177	

	Date: Jan Revision	nuary	1992
	YE	s no	N/A
8.3	Are the response factors shown in the Quant Report?	1	
8.4	Is chromatographic performance acceptable wirespect to:	th /	
	Baseline stability?	1	_
	Resolution?	t\X	_
	Peak shape?	4	
	Full-scale graph (attenuation)?	4	·
	Other:	्र	 .
	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?	17	
	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?	ų	
8.7	e all ions present in the standard mass actrum at a relative intensity greater n 10% also present in the sample mass atrum?	<u></u>	

Date: January 1992

Revision: 8

YES NO N/A

Do sample and standard relative ion intensities agree within 20%?

> ACTION: Use professional judgement to determine acceptability of data. 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 positivé compound identification.

Tentatively Identified Compounds (TIC) 9.0

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 :privollo:

Samples and/or fractions as appropriate

Blanks

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

W: Add "JN" qualifier if missing.

Date: January 1992 Revision: 8

YES NO N/A

9.3 Are any TCL compounds (from any fraction)
listed as TIC compounds (example: 1,2dimethylbenzene 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, (M/E 44), Siloxanes (M/E 73) Hexane, Aldol Condensation Products, Solvent Preservatives, and related by products - see Functional Guidelines for more guidance).

Date: January 1992 Revision: 8

YES NO N/A

10.0 <u>Compound Ouantitation and Reported Detection</u> 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 callsration?

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

Date: January 1992 Revision: 8

YES NO N/A

GC/MS Initial Calibration (Form VI) 12.0

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/1? Are there separate calibrations for low vater/med soils and low soil samples?

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

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

WCTION: 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

)?

Jess than maximum 7.RSD

ACTION: Circle all outliers in red.

12.4 Are the RRFs above the monumum RRFs?

Action: Circle all outliers in red.

Date: January 1992 Revision: 8

YES NO N/A

12.5 Are there any transcription/calculation errors in the reporting of average response factors (RRF) or tRSD? (Check at least 2 values, but if errors are found, check more.)

. 14 -

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 criteria?

ACTION: Circle all outliers in red.

STANDARD OPERATING PROCEDU	RI Date: January 1992 Revision: 8
	YES NO N/A
13.4 Do any volatile compounds have a RR	Is munumum RR
ACTION Circle all outliers in red	i.
13.5 Are there any transcription/calculators in the reporting of average factors (RRF) or idifference (ID) initial and continuing RRFs? (Check two values but if errors are found check more.)	petveen k at least
ACTION: Circle errors in red.	•
ACTION: If errors are large, call explanation/resubmittal, macessary corrections and errors under "Conclusions"	note
4.0 Internal Standard (Form VIII)	
14.1 Are the internal standard areas (1 of every sample and blank within the and lower limits (-50% to + 100%) continuing calibration?	for each
ACTION: List all the outliers bel	ow. DCR Report
Sample 4 Internal Std Area Low	er Limit Upper Limit
/Attach additional sheets	if necessary.)

Date: January 1992 Revision: 8

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.
 - 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 nondetects (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 10 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%.

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)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

74-87-3Chloromethane	11	ט
74-83-9Bromomethane	11.	ט
75-01-4Vinyl Chloride	11	וט
75-00-3Chloroethane	11	ט
75-09-2Methylene Chloride	13	UE
67-64-1Acetone	16	
75-15-0Carbon Disulfide	11	<u> </u>
75-35-41,1-Dichloroethene	111	บั
75-34-31,1-Dichloroethane	11	Ŭ
540-59-01,2-Dichloroethene (total)	11	ט
67-66-3Chloroform	11	Ū
107-06-21,2-Dichloroethane	11	บั
78-93-32-Butanone	11	υĺ
71-55-61,1,1-Trichloroethane	11	וט
56-23-5Carbon Tetrachloride	11	ט
75-27-4Bromodichloromethane	11	<u> </u>
78-87-51,2-Dichloropropane	11	שׁ
10061-01-5cis-1,3-Dichloropropene	11	וט
79-01-6Trichloroethene	11	ט
124-48-1Dibromochloromethane	11	שׁ
79-00-51,1,2-Trichloroethane	11	וט
71-43-2Benzene	11	ע
10061-02-6trans-1,3-Dichloropropene	11	ט
75-25-2Bromoform	11	U
108-10-14-Methyl-2-Pentanone	11	ע)
591-78-62-Hexanone	11	ע
127-18-4Tetrachloroethene	11	ן ט
79-34-51,1,2,2-Tetrachloroethane	11	U
108-88-3Toluene	11	וט
108-90-7Chlorobenzene	11	ן ט
100-41-4Ethylbenzene	11	ע
100-42-5Styrene	11	U
1330-20-7Xylene (total)	11	ַ

TJF 15 DEC 95 CMN 19 FED 96

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

117.1.1	
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

Number TICs found: 20

Data Analyzed: 11/17/95

GC Column:CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Aliquot Volume: ____ (uL)

Soil Extract Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	_
======================================			15	
1.	UNKNOWN SILOXANE			
2.	UNKNOWN SILOXANE	21.296	22	
3				
T.				
5				
6				
7				
8				
8				
9				
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⊥.				
2				
J.				
4.				
J.				
6				
7				
8.				
9				
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TJF 15 DEC 95 amn 19 FEB96 000011

NYSDEC SAMPLE NO.

Lab Name: NYTEST ENV INC Contract: 9521637

COMPOUND

CAS NO.

HA13-4

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)

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

74-87-3-----Chloromethane 11 74-83-9-----Bromomethane U 11 75-01-4-----Vinyl Chloride U 11 75-00-3-----Chloroethane 11 U 75-09-2-----Methylene Chloride BUB 13 67-64-1-----Acetone 39 75-15-0-----Carbon Disulfide Ū 11 75-35-4-----1,1-Dichloroethene U 11 75-34-3-----1,1-Dichloroethane U 11 540-59-0----1,2-Dichloroethene (total) U 11 67-66-3-----Chloroform U 11 107-06-2----1,2-Dichloroethane U 11 78-93-3-----2-Butanone 16 71-55-6----1,1,1-Trichloroethane Ū 11 56-23-5-----Carbon Tetrachloride U 11 U 75-27-4-----Bromodichloromethane 11 78-87-5-----1,2-Dichloropropane U 11 10061-01-5----cis-1,3-Dichloropropene U 11 79-01-6-----Trichloroethene 11 U 124-48-1-----Dibromochloromethane Ŭ 11 U 79-00-5-----1,1,2-Trichloroethane 11 71-43-2----Benzene U 11 U 10061-02-6----trans-1,3-Dichloropropene 11 U 75-25-2-----Bromoform 11 108-10-1-----4-Methyl-2-Pentanone U 11 U 591-78-6----2-Hexanone 11 U 127-18-4-----Tetrachloroethene 11 79-34-5----1,1,2,2-Tetrachloroethane U 11 U 108-88-3----Toluene 11 U 108-90-7-----Chlorobenzene 11 100-41-4-----Ethylbenzene 11 U 100-42-5----Styrene_ U 11 1330-20-7-----Xylene (total) 11

> TJF 15 DEC 95 LMM 19 FEB 96

000012

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC	SAMPLE	NO
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Lab	Name:	NYTEST	ENV	INC	Contract	:	9521637		HA13-4
						•	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1	l

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				
5.				
6. 7. 8.				
9.				
11.				
14.				
16.				
18.				
20.				
22.				
23.		•		
26.				
27. 28. 29.				
30.				

TJF 15 DEC.95 CIMP 19 FEB96 000013 Lab Name: NYTEST ENV INC

HA21-2 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)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

74-87-3Chlo	promethane	11	ט
74-83-9Bromomethane		11	<u></u> ט
75-01-4Viny		11	Ū
75-00-3Chlo	proethane	11	Ü
75-09-2Meth		12	l E
67-64-1Acet		22	ے ا
75-15-0Cark		11	U
75-35-41,1-		11	Ü
75-34-31,1-		11.	ט
	Dichloroethene (total)	11	Ū
67-66-3Chlo		11	Ü
107-06-21,2-		11	ū
78-93-32-Bi		7	J
71-55-61,1,		11	U
56-23-5Cark		11	U
75-27-4Bron		11	U
78-87-51,2-	Dichloropropane	11	υļ
10061-01-5cis-	1,3-Dichloropropene	11	ן ט
79-01-6Tric	chloroethene	11	ַ ע
124-48-1Dibi	romochloromethane	11	ש
79-00-51,1,	2-Trichloroethane	11	ן ט
71-43-2Benz		11	וט
10061-02-6trar	ns-1,3-Dichloropropene	11	יט
75-25-2Bron		11	יט
108-10-14-Me		11	וט
591-78-62-He		11	וט
127-18-4Teti		11	ט
	2,2-Tetrachloroethane	11	ט
108-88-3Toli		11	Ū
108-90-7Chlo		11	Ü
100-41-4Ethy		11	Ü
100-41-4Ethy		11	<u>ט</u>
		11	Ü
1330-20-7Xyle	ene (cocar)	11	
			l l

TJF 15 DEC 95 000014

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

TENTATIV	ELY IDENTIFIED COMPOUNDS	
Lab Name: NYTEST ENV INC	Contract: 9521637	HA21-2

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		======	========	1
	UNKNOWN SILOXANE	 17.178 	10	
2.	UNKNOWN SILOXANE	21.305	19	J
3				
4.				
5.		J		
6				
7.——				ll
7				l
8.				
9.				
.0.				
1.				
2				
3				
3				ll
4				
5.				
6.			-	
7.				
8.				
9.				
0.				
1.				
2				
3				
4.				
5.				
<i>c</i> ·		<u> </u>		
6				
7				
8				
9.				
0				
V				l i

TJF 15 DEC 95 CMN 19 FEB96 000015

HA23-4

0

Lab Name: NYTEST ENV INC Contract: 9521637

COMPOUND

CAS NO.

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)

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

12 74-87-3-----Chloromethane U 12 74-83-9-----Bromomethane U 12 75-01-4-----Vinyl Chloride 12 U 75-00-3-----Chloroethane اد 15 75-09-2-----Methylene Chloride 30 67-64-1-----Acetone Ū 75-15-0-----Carbon Disulfide 12 75-35-4-----1,1-Dichloroethene 12 U U 12 75-34-3-----1,1-Dichloroethane 12 U 540-59-0-----1,2-Dichloroethene (total)_ 12 U 67-66-3-----Chloroform 12 107-06-2-----1,2-Dichloroethane 13 78-93-3----2-Butanone 71-55-6-----1,1,1-Trichloroethane 12 U 12 56-23-5-----Carbon Tetrachloride 12 U 75-27-4-----Bromodichloromethane 12 U 78-87-5-----1,2-Dichloropropane_ U 12 10061-01-5----cis-1,3-Dichloropropene U 12 79-01-6-----Trichloroethene U 124-48-1-----Dibromochloromethane 12 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 U 108-10-1-----4-Methyl-2-Pentanone 12 U 12 591-78-6----2-Hexanone 12 U 127-18-4-----Tetrachloroethene U 79-34-5-----1,1,2,2-Tetrachloroethane 12 J 3 108-88-3-----Toluene 12 U 108-90-7-----Chlorobenzene U 12 100-41-4-----Ethylbenzene___ 12 U 100-42-5-----Styrene 1330-20-7-----Xylene (total)

> TJF 15 DEC 95 CMM 19 FEB96

000016

NYSDEC ASP 12/91

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

HA23-4	
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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)

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

Number TICs found: Z 🕏 RTEST. CONC. COMPOUND NAME CAS NUMBER 17.187UNKNOWN SILOXANE

9.__ 10.___ 11. 12. 13. 14.__ 15. 16. 17. 18.__ 19. 20.__ 21.__ 22.__ 23.____ 25. 26. 27.__ 28. 29. 30.

TJF 15 DEC 95 CMM 19 FEB96 000017

Lab Name: NYTEST ENV INC Contract: 9521637

HA31-2

Q

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

COMPOUND

CAS NO.

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

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

TJF 15DEC95 CMM 19 FED96

000018

TENTATIVELY IDENTIFIED COMPOUNDS HA31-2 Lab Name: NYTEST ENV INC Contract: 9521637

NYSDEC SAMPLE NO.

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

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

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

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

CONCENTRATION UNITS: Number TICs found: 0/ (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	
1				
1				
3				
3				
4.				
5				
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43.				l ——
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29				
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		.		

TJF 15 DEC 95 am 19 FEB9600019

NYSDEC SAMPLE NO.

HA33-4

Lab Name: NYTEST ENV INC

Contract: 9521637

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 Code: NYTEST

Lab File ID: M7195.D

Level: (low/med) LOW

Date Received: 11/15/95

% Moisture: not dec. 16

CAS NO.

Date Analyzed: 11/17/95

GC Column:CAP ID: 0.53 (mm)

COMPOUND

Dilution Factor: 1.0

Soil Extract Volume: ____(uL)

Soil Aliquot Volume: ____(uL)

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

74-87-3				
74-83-9	74-87-3	Chloromethane	12	ט
75-01-4			12	- 1
75-00-3			12	U
75-09-2			12	
67-64-1	75-09-2	Methylene Chloride	and the second s	-B \
75-15-0			26	
75-35-4				
12 U 15 15 15 15 15 15 15			12	
540-59-01,2-Dichloroethene (total) 12 U 67-66-3Chloroform 12 U 107-06-21,2-Dichloroethane 12 U 78-93-32-Butanone 9 J 71-55-61,1,1-Trichloroethane 12 U 56-23-5Carbon Tetrachloride 12 U 75-27-4Bromodichloromethane 12 U 78-87-51,2-Dichloropropane 12 U 10061-01-5cis-1,3-Dichloropropane 12 U 179-01-6Trichloroethane 12 U 79-01-6Trichloroethane 12 U 79-00-51,1,2-Trichloroethane 12 U 71-43-2Benzene 12 U 10061-02-6			12	
67-66-3	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1.2-Dichloroethene (total)	12	ע
107-06-21, 2-Dichloroethane 12 U 78-93-32-Butanone 9 J 71-55-61, 1, 1-Trichloroethane 12 U 56-23-5Carbon Tetrachloride 12 U 75-27-4Bromodichloromethane 12 U 78-87-51, 2-Dichloropropane 12 U 10061-01-5cis-1, 3-Dichloropropene 12 U 79-01-6Trichloroethene 12 U 124-48-1Dibromochloromethane 12 U 79-00-51, 1, 2-Trichloroethane 12 U 71-43-2Benzene 12 U 10061-02-6trans-1, 3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51, 1, 2, 2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-42-5			12	ט
78-93-32-Butanone 9 J 71-55-61,1,1-Trichloroethane 12 U 56-23-5Carbon Tetrachloride 12 U 75-27-4Bromodichloromethane 12 U 78-87-51,2-Dichloropropane 12 U 10061-01-5cis-1,3-Dichloropropene 12 U 79-01-6Trichloroethene 12 U 124-48-1Dibromochloromethane 12 U 79-00-51,1,2-Trichloroethane 12 U 71-43-2Benzene 12 U 10061-02-6trans-1,3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 127-18-4Tetrachloroethene 12 U 127-18-4Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-88-3	107-06-2	1.2-Dichloroethane	12	
71-55-6	78-93-3	2-Butanone	9	
56-23-5Carbon Tetrachloride 12 U 75-27-4Bromodichloromethane 12 U 78-87-51,2-Dichloropropane 12 U 10061-01-5cis-1,3-Dichloropropene 12 U 79-01-6Trichloroethene 12 U 124-48-1Dibromochloromethane 12 U 79-00-51,1,2-Trichloroethane 12 U 71-43-2Benzene 12 U 10061-02-6trans-1,3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Styrene 12 U			12	I
75-27-4	71 33 0 56-23-5	Carbon Tetrachloride	12	1
78-87-51, 2-Dichloropropane 12 U 10061-01-5cis-1, 3-Dichloropropene 12 U 79-01-6Trichloroethene 12 U 124-48-1Dibromochloromethane 12 U 79-00-51, 1, 2-Trichloroethane 12 U 71-43-2Benzene 12 U 10061-02-6trans-1, 3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51, 1, 2, 2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Styrene 12 U			12	
10061-01-5cis-1,3-Dichloropropene 12 U 79-01-6Trichloroethene 12 U 124-48-1Dibromochloromethane 12 U 79-00-51,1,2-Trichloroethane 12 U 71-43-2Benzene 12 U 10061-02-6trans-1,3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Styrene 12 U			12	I
79-01-6Trichloroethene 12 U 124-48-1Dibromochloromethane 12 U 79-00-51,1,2-Trichloroethane 12 U 71-43-2Benzene 12 U 10061-02-6trans-1,3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 100-41-4Ethylbenzene 12 U 100-42-5Styrene 12 U			12	U
124-48-1Dibromochloromethane 12 U 79-00-51,1,2-Trichloroethane 12 U 71-43-2Benzene 12 U 10061-02-6trans-1,3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Styrene 12 U	79-01-6	Trichloroethene	12	
79-00-51,1,2-Trichloroethane 12 U 71-43-2Benzene 12 U 10061-02-6trans-1,3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 12 U 100-42-5Styrene 12 U	124-48-1	Dibromochloromethane	12	
71-43-2Benzene 12 U 10061-02-6trans-1,3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Styrene 12 U			l	
10061-02-6trans-1,3-Dichloropropene 12 U 75-25-2Bromoform 12 U 108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 12 U 100-42-5Styrene 12 U			1	
75-25-2Bromoform 12 0 108-10-14-Methyl-2-Pentanone 12 0 591-78-62-Hexanone 12 0 127-18-4Tetrachloroethene 12 0 79-34-51,1,2,2-Tetrachloroethane 12 0 108-88-3Toluene 12 0 108-90-7Chlorobenzene 12 0 100-41-4Styrene 12 0	10061-02-6	trans-1,3-Dichloropropene		
108-10-14-Methyl-2-Pentanone 12 U 591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-5Toluene 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 12 U 100-42-5Styrene 12 U)	
591-78-62-Hexanone 12 U 127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 12 U 100-42-5Styrene 12 U	108-10-1	4-Methyl-2-Pentanone		
127-18-4Tetrachloroethene 12 U 79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 12 U 100-42-5Styrene 12 U	591-78-6	2-Hexanone	1	
79-34-51,1,2,2-Tetrachloroethane 12 U 108-88-3Toluene 12 U 108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 12 U 100-42-5Styrene 12 U	127-18-4	Tetrachloroethene	12	
108-88-3Toluene 12 0 108-90-7Chlorobenzene 12 0 100-41-4Ethylbenzene 12 0 100-42-5Styrene 12 0	79-34-5	1,1,2,2-Tetrachloroethane	l l	
108-90-7Chlorobenzene 12 U 100-41-4Ethylbenzene 12 U 100-42-5Styrene 12 U	108-88-3	Toluene	1 .	
100-41-4Ethylbenzene 12 U 12 U U U	108-90-7	Chlorobenzene	1	
100-42-5Styrene 12 0				
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	1000 100			

TJF 15DEC95 JMN 19 FED9600020 NYSDEC ASP 12/91

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

Number TICs found: 0/

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)

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.				
2				
4 5				
0.				
7.				
10.				
11				
13				
15. 16.				
1 17.				
19.				
21.				
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26.				
28.				
29.				

TJF 15 DEC. 95 (MM) 19 FEB 9600021

HA44-2 Umn 19 FE2391

Lab Name: NYTEST ENV INC

Matrix: (soil/water) SOIL

Contract: 9521637

SDG No.: OR1

Lab Code: NYTEST

Case No.: 25668 SAS No.:

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)

CONCENTRATION UNITS:

Q (uq/L or ug/Kg) UG/KG COMPOUND CAS NO.

		
74-87-3	12 12 12 12 12 12 12 12 12 12 12 12 12 1	U U U U U
1330-20-7Xylene (total)		
	. 1	.!!

TJF 15 DEC 95 MM) 19 FEB96

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Case No.: 25668 SAS No.:

Lab Name: NYTEST ENV INC

Contract: 9521637

SDG No.: OR1

NYSDEC SAMPLE NO.

HA44-2 UMA

Matrix: (soil/water) SOIL

Lab Sample ID: 2566807

Sample wt/vol:

Lab Code: NYTEST

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)

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

Number TICs found: \$2

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	
2.	INKNOWN INKNOWN INKNOWN SILOXANE	4.471 4.757 21.312	17 9	J J
4	ANGUM DILOMAND	21.312		
7				
.0				
3				
.6				
9				
22.				
24.				
28.				
29. 30.				

TJF 15 DEC95 (UM) 19 FEB96 000027

Lab Name: NYTEST ENV INC Contract: 9521637 HA43-4

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

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

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

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

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

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

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

CONCENTRATION UNITS:

CAS NO.	COMPOUND (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
	Chloroethane		12	U
75-09-2	Methylene Chloride		12	U
67-64-1		-	12	U
75-15-0	Carbon Disulfide		12	U
75-35-4	1,1-Dichloroethene		12	ַ
75-34-3	1,1-Dichloroethane		12	ַ
540-59-0	1,2-Dichloroethene (total)		12	U
67-66-3	Chloroform		12	ש
107-06-2	1,2-Dichloroethane		12	Ū
78-93-3	2-Butanone		12	ן ט
71-55-6	1,1,1-Trichloroethane		12	ַ
	Carbon Tetrachloride		12	ַ
75-27-4	Bromodichloromethane		12	U
	1,2-Dichloropropane		12	U
	cis-1,3-Dichloropropene		12	Ū
	Trichloroethene	-	12	U
	Dibromochloromethane		12	U
	1,1,2-Trichloroethane		12	U
71-43-2		20000 20	900	Ð
10061-02-6	trans-1,3-Dichloropropene		12	U
	Bromoform	_	12	U
	4-Methyl-2-Pentanone	_	12	Ŭ
	2-Hexanone	_	12	Ŭ
	Tetrachloroethene	_	12	Ŭ
	1,1,2,2-Tetrachloroethane	-	12	ū
	Toluene	120600 271		丑
	Chlorobenzene	_ _	12	Ŭ
100-41-4	Ethylbenzene	76000	12	#
100-42-5	Styrene		12	Ŭ
1330-20-7	Xylene (total)		000	- E-
(a) Afer a	- 1/2 D-17 - 17 - 17 - 17 - 17 - 17 - 17 - 17	_		

HE BENZENE, TOLUENEY, AND KILENE (TOTAL) RESULTS REPORTED HAVE BEEN TRANSFERRED FROM THE FORM I OF HA-4(3-4) DL, A 10X 000022 DILUTION OF GAMPLE HA-4 (3-4) FORM I VOA TIF 15 DEC 95 NYSDEC ASP 12/91

Um 17 FEB96

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

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)

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

Number TICs found: 10

COMPOUND NAME RTEST. CONC. 0 CAS NUMBER ------10.268 140 J UNKNOWN 180 UNKNOWN HYDROCARBON 10.681 J 2. UNKNOWN HYDROCARBON 10.921 65 J 3. UNKNOWN HYDROCARBON 11.285 260 J J UNKNOWN HYDROCARBON 11.602 250 250 J UNKNOWN HYDROCARBON 12.466 12.735 83 J 7. UNKNOWN J UNKNOWN HYDROCARBON 14.464 96 8. J UNKNOWN AROMATIC 16.453 160 9. 19.455 96 J UNKNOWN AROMATIC 10. 11. 12. 13. 15.____ 16. 18.___ 19. 20.__ 21.___ 22.__ 23.____ 25.____ 26. 27.____ 29. 30.

> TUF 15 DEC 95 am 19 FEB96 000023 NYSDEC ASP 12/91

NYSDEC SAMPLE NO. VOLATILE ORGANICS ANALYSIS DATA SHEET HA43-4DL Contract: 9521637 Lab Name: NYTEST ENV INC

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

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

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

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

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

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

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

CONCENTRATION UNITS: Q (ug/L or/ug/Kg) UG/KG ZOMPOUND. CAS NO.

	CAS NO.	4.2 3.7 3.7			
1-					
	74-87-3	Chloromethane	15000	Ū	
	74-83-9	Bromomethane	15000	ū	
	75-01-4	Vinyl Chloride	15000	Ū	
	75-00-3	Chloroethane	15000	Ū	
	75-09-2	Methylene Chloride	43000	BD	
ı	67-64-1	Acetone \/	15000	Ü	
	75-15-0	Carbon Disulide	15000		
	75-35-4	1,1-Dichloroethene	6000	JD.	
	75-34-3	1.1-Dichløroethane	15000	ָט	
	540-59-0	1,2-Dichloroethene (total)	15000	ַ	15000 U
	67-66-3	Chlorozorm	1700	JD	12000 0
1	107-06-2	1,2-Dichloroethane	15000	l .	
1	78-93-3	2-Butanone	15000	l .	
	71-55-6	1/1,1-Trichloroethane	15000		
	56-23-5	@arbon Tetrachloride \	15000	1	
-	75-27-4	/Bromodichloromethane	15000	t	
	78-87-5	-/1,2-Dichloropropane	15000	1	
1	10061-01-5	Zcis-1,3-Dichloropropene	15000	1	1
	79-01-6/-	Trichloroethene	5600		
	124-48-1-/	Dibromochloromethane	15000		
1	79-00-5/	1,1,2-Trichloroethane	15000		
ı	71-43-2	Benzene	20000		ľ
	10061/-02-6	trans-1,3-Dichloropropene	15000	1	
	75-25-2	Bromoform	15000 15000	i	
	108-10-1	4-Methyl-2-Pentanone	15000	1	
ĺ	5 91-78-6		15000	_	
	/127-18-4	Tetrachloroethene	15000	_	
Λ	79-34-5	1,1,2,2-Tetrachloroethane_	120000		
1	108-88-3	Toluene	6700		
- 1	108-90-7	Chlorobenzene	76000	· · · · · · · · · · · · · · · · · · ·	_1
- 1	100-41-4	Ethylbenzene	15000		
	100-42-5	Styrene	390000		9
1	1330-20-7	Xylene (total)	-	+	1
			_	-1	-1 \
				_	

THE BENZAL, TOLUENE, ETHYLDENZENE 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 DEC95 NYSDEC ASP 12/91

000102 CMN 19 FEB96

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

MED

HA43-4DL

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: (Now/med)

Date Received: 11/1/5/95

% Moisture: not dec. 20

Data Analyzed: 1/1/20/95

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 10.0

Soil Extract Volume

10000 (uL)

Soil Aliquot Volume: 100 (uL)

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

Number TICs found: 10

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	
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.	l /			
19.				
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21.				
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TJF 15DEC95 COM 19 FEB96

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NYSDEC SAMPLE NO.

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

COMPOUND

CAS NO.

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

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

	, . ,	, 119, 110, 110	~
74-87-3	Chloromethane	62	U
	Bromomethane	62	Ū
75-01-4	Vinyl Chloride	62	Ū
75-00-3	Chloroethane	62	Ū
	Methylene Chloride	62	ן ט
	Acetone	62	<u>ט</u>
	Carbon Disulfide	62	ָ ע
	1,1-Dichloroethene	62	Ü
	1,1-Dichloroethane	62	Ü
	1,2-Dichloroethene (total)	62	וט
	Chloroform	62	บี
	1,2-Dichloroethane	62	U U
	2-Butanone	62	ָ ט
	1,1,1-Trichloroethane	62	ŭ
	Carbon Tetrachloride	62	Ŭ
	Bromodichloromethane	62	Ü
	1,2-Dichloropropane	62	Ü
	cis-1,3-Dichloropropene	62	Ü
	Trichloroethene	62	Ü
	Dibromochloromethane	62	Ü
	1,1,2-Trichloroethane	62	Ü
	Benzene	17000 11000	-
	trans-1,3-Dichloropropene	62	<u>.</u>
	Bromoform	62	Ü
	4-Methyl-2-Pentanone	62	וט
	2-Hexanone	62	וט
	Tetrachloroethene	62	וט
	1,1,2,2-Tetrachloroethane	62	וט
	Toluene	160000 67000	<u>.</u>
	Chlorobenzene	62	Ü
	Ethylbenzene	950නය 62	ij
	Styrene	62	U U
	Xylene (total)	4900000 170000	玉
100-20-7	Myrene (cocar)		
		I	i i

IE BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE (TOTAL) RESULTS HAVE BEE TRANSFERRED FROM THE FORM I FOR HA-5 (X-1 DL, A 000034 IOX DILUTION OF A MEDIUM LEXEL EXTRACT OF SAMPLEYSDED ASP 12/91

TIF 15 DEC95

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 Aliquot Volume: (uL)

Soil Extract Volume: ____(uL)

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

Number TICs found: 10 √

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
		i	1	
1.	UNKNOWN HYDROCARBON	10.199		J
	UNKNOWN HYDROCARBON	10.650	1	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 J J J
7.	UNKNOWN HYDROCARBON	14.433	520	J
8.	UNKNOWN AROMATIC	16.441	1000	J
9.	UNKNOWN AROMATIC	19.444	570	J
10.	UNKNOWN APOMATIC	20.512	420	J
11				
12.			· · · · · · · · · · · · · · · · · · ·	
1 74.	l :	-		
16.				
17				
18.				
19.				
20				
21.				
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23				
24.				
25				
26.	•			
26.				
27				
20.				
29.				
30				
l			l	l

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NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NYTEST ENV INC Contract: 9521637 X-1DL

P79/89.D

Lab Code: NYTEST

Case No.: 25668 SAS No.:

SDG No.: OR1

Matrix: (soil/water) SOIL

Sample wt/vol:

4.0 (g/mL) G

Lab Sample ID: 256681/3

Lab File ID:

Level: (low/med)

Date Received: 1/15/95

% 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)

CAS NO.

Soil Miquot Volume: 100 (uL)

CONCENTRATION UNITS: (ug/L ox ug/Kg) UG/KG COMPOUND

		3,	, - 3, ,	~
		Chloromethane	15000	Ŭ
		Bromomethane	15000	ָט י
		Vinyl Chloride	15000	Ŭ
	75-00-3	Chloroethane	15000	Ŭ
	75-09-2	Methylene Chloride	41000	BD
Ì		Acetone X	15000	U
	75-15-0	Carbon Disylfide	15000	U
i		1,1-Dichløroethene	15000	U
		1,1-Dichloroethane	15000	U
		1,2-Dighloroethene (total)	15000	Ū
		Chloroform	15000	U
		1,2,Dichloroethane	15000	Ū
		2-Butanone	15000	Ū
		1,1,1-Trichloroethane	15000	Ū
		Carbon Tetrachloride	15000	Ü
		Bromodichloromethane	15000	Ū
		1,2-Dichloropropane	15000	Ū
		cis-1,3-Dichloropropene	15000	Ŭ
		Trichloroethene	15000	ับ
		Dibromochloromethane	15000	บ็
		1,1,2-Trichloroethane	15000	์ บ
		Benzene	17000	D
		trans-1,3-Dichloropropene	15000	U
		Bromoform	15000	Ū
		4-Methyl-2-Pentanone	15000	Ū
		2-Hexanone	15000	Ŭ
/		Tetrachloroethene	15000	Ū
	79-34-5	1,1,2,2-Tetrachloroethane	15000	\ ŭ
		Toluene	160000	B
		Chlorobenzene	15000	Ū
		·Ethylbenzene	95000	D
	1		15000	Ü
		Styrene	490000	<u> </u>
	1330-20-/	Xylene (total)	490000	<u> </u>
			.	l

THE BENZENE, TOLUENE, ETHYLBENZENE AND XYLENE (TOTAL) RESULTS HAVE DEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, UNDITED LOW LEVEL ANALYSIS OF SAMPLEON I VOA TIF 15 DEC 95 NYSDEC ASP

MM 19 FEB96

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

Sample wt yol:

4.0 (g/mL) G

Level: (low/med)

MED

% Moisture: not dec. 20

GC Column:CAP

ID: 0.53 (mm)

Soil Extract Volume:

10000 (uL)

Lab Sample ID: 2566813

Lab File ID: P7989.D

Date Received: 11/15/95

Data Analyzed: 11/20/95

Dilution Factor: 10.0

Soil Aliquot Volume: 100 (uL)

CONCENTRATION UNITS:

Number TICs found: 10 (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.	UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN AROMATIC UNKNOWN AROMATIC UNKNOWN AROMATIC	5.115 5.455 5.775 7.436 7.724 10.386 10.705 18.183 19.224 20.957	140000 95000 110000 100000 140000 190000 210000 85000	

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000037

NYSDEC SAMPLE NO.

HA51-2

SDG No.: OR1

Lab Name: NYTEST ENV INC Contract: 9521637

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

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 Aliquot Volume: (uL)

Soil Extract Volume: ____(uL)

CAS NO. COMPOUND

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG

74-87-3Chloromethane	11	U
74-83-9Bromomethane	11	U
75-01-4Vinyl Chloride	11	U
75-00-3Chloroethane	11	ַ
75-09-2Methylene Chloride	11 6	-JB ()
67-64-1Acetone	18	
75-15-0Carbon Disulfide	11	Ū
75-35-41,1-Dichloroethene	11	וט
75-34-31,1-Dichloroethane	11	ט
540-59-01,2-Dichloroethene (total)	11	וט
67-66-3Chloroform	11	וט
107-06-21,2-Dichloroethane	11	ט
78-93-32-Butanone	11	וט
71-55-61,1,1-Trichloroethane	11	ש
56-23-5Carbon Tetrachloride	11	ט
75-27-4Bromodichloromethane	11	ט
78-87-51,2-Dichloropropane	11	ש
10061-01-5cis-1,3-Dichloropropene	11	ש
79-01-6Trichloroethene	11	ש
124-48-1Dibromochloromethane	11	ַ ט
79-00-51,1,2-Trichloroethane	11	U
71-43-2Benzene	6	J
10061-02-6trans-1,3-Dichloropropene	11	ַ ע
75-25-2Bromoform	11	ַע
108-10-14-Methyl-2-Pentanone	11	U
591-78-62-Hexanone	11	U
127-18-4Tetrachloroethene	11	U
79-34-51,1,2,2-Tetrachloroethane	11	ַ
108-88-3Toluene	5	J
108-90-7Chlorobenzene	11	U
100-41-4Ethylbenzene	8	J
100-42-5Styrene	11	U
1330-20-7Xylene (total)	32	1
	·	

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NYSDEC ASP 12/91

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)

CONCENTRATION UNITS:

Number TICs found: 3 (ug/L or ug/Kg) UG/KG

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	1 ~ 1
_	UNKNOWN SILOXANE	== ====================================		
1.		17.169	10	J 1
3.	UNKNOWN AROMATIC	20.354	1	
3.	UNKNOWN SILOAANE	21.307	10	
4				
5				
, .				
/ •				
9				
10				
14.				
11.				
14. 15.				
15.				
16.				
17.		_		
18.				
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22.				
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24				
25				
26				
26.				
2 / .				
20.				
49.				
30.				
		1)

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000029

HA53-4 Contract: 9521637

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)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG (

		T			
74-87-3	Chloromethane		12	ט	
	Bromomethane		12	Ü	
	Vinyl Chloride		12	Ū	
	Chloroethane		12	וט	
	Methylene Chloride		12	וֹט	
67-64-1			12	Ū	
	Carbon Disulfide		12	Ū	
	1,1-Dichloroethene		12	U	
	1,1-Dichloroethane		12	Ŭ	
	1,2-Dichloroethene (total)		12	Ü	
	Chloroform		12	Ū	
	1,2-Dichloroethane		12	Ū	
	2-Butanone	•	12	Ū	
	1,1,1-Trichloroethane		12	Ū	
	Carbon Tetrachloride		12	Ū	
	Bromodichloromethane		12	U	
	1,2-Dichloropropane		12	וט	
10061-01-5	cis-1,3-Dichloropropene		12	ט	
79-01-6	Trichloroethene		12	U	
	Dibromochloromethane		12	ַ	
79-00-5	1,1,2-Trichloroethane		12	וט	
71-43-2	Benzene	19000	1800	Æ	S
10061-02-6	trans-1,3-Dichloropropene		12	ַ	
75-25-2			12	U	
108-10-1	4-Methyl-2-Pentanone		12	U	
591-78-6	2-Hexanone		12	U	
	Tetrachloroethene		12	U	
79-34-5	1,1,2,2-Tetrachloroethane		12	U	
108-88-3	Toluene	13000	9 700	₽	C
108-90-7	Chlorobenzene		12	U	
100-41-4	Ethylbenzene	U300	4300		$\sigma \iota$
100-42-5			12	Ū	_
	Xylene (total)	39000	16000	B	σ
		ə.	اكتيليك	<u> </u>	
			77000		

TRANSFERRED FROM THE FORM I FOR HA-5 (3-4') DL, A 10 X DILUTION OF A MEDIUM LEVEL EXTRACT OF SAMPLE HA-5 (3-4'). TIF 15 DECRISED ASP 12/91

amn 19 FEB96

1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Case No.: 25668 SAS No.:

NYSDEC SAMPLE NO.

HA53-4

Lab Name: NYTEST ENV INC

Lab Code: NYTEST

Contract: 9521637

SDG No.: OR1

Matrix: (soil/water) SOIL

Lab Sample ID: 2566810

Sample wt/vol:

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)

CONCENTRATION UNITS:

Number TICs found: 10 (ug/L or ug/Kg) UG/KG

5.0 (g/mL) G

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	
1. 2. 3. 4.	UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN	10.607 11.153 11.470 12.303	200 260 250	J J J
5. 6. 7. 8.	UNKNOWN HYDROCARBON UNKNOWN AROMATIC UNKNOWN AROMATIC	14.347 19.328 19.453	180 180 340 140	J J J
9. 10. 11.	UNKNOWN AROMATIC UNKNOWN AROMATIC UNKNOWN AROMATIC	20.414 21.539 22.116	400 160 140	J J J
12. 13. 14. 15.				
17.				
20. 21. 22.				
24. 25. 26.				
28.				
30			· .	

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HA53-4DL

Lab Name: NYTEST ENV INC

Contract: 9521637

Lab Code: NYTEST

Case No.: 25668 SAS No.:

SDG No.: OR1

Matrix: \(soil/water\) SOIL

MED

Lab File ID:

P7988.D

NYSDEC SAMPLE NO.

Sample wt/ $\sqrt{\chi}$ 01:

Level: (lowXmed)

4.0 (g/mL) G

Date Received: 11/15/95

Lab Sample ID: 256681/0

% Moisture: not dec. 14

Date Analyzed: 11/20/95

GC Column:CAP

ID: 0.53 (mm)

Dilution Factor: 10.0

Soil Extract Volume:

CAS NO.

10000 (uL)

Soil Aliquot Volume: 100 (uL)

Q

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

		J ,,	~
	74-87-3Chloromethane	14000	U
	74-83-9Bromomethane	14000	_
١	75-01-4Vinyl Chloride	i	1 1
Ì	75-00-3Chloroethane	14000	ال
	75-09-2Methylene Chloride	14000	· - 1
-	67-64-1Acetone	34000	BD
Ì	75-15-0Carbon Disulfide	14000	Ū
		14000	Ü
ı	75-35-41,1-Dichloroethene	14000	ū
	75-34-31,1-Dichloroethane	14000	Ū
1	540-59-01,2-Dichloroethene (total)	14000	וֹט
	67-66-3Chloroform	14000	ַ
	107-06-21,2-Dichloroethane	14000	U
ŀ	78-93-32-Bytanone	14000	ט
İ	71-55-61,1,1-Trichloroethane	14000	Ū
	56-23-5Carbon Tetrachloride	14000	1 1
i	75-27-4Bromodichloromethane	14000	l i
	78-87-5	14000	ע
	10061-01-5/cis-1,3-Dichloropropene	\ 14000	ט
	79-01-6Trichloroethene	\ 14000	ט
	124-48-1Dibromochloromethane	14000	ט
	79-00-5-/1,1,2-Trichloroethane	14000	U
	71-43-2/Benzene	1900	JD)
	10061-02-6trans-1,3-Dichloropropene	14000	U
	75-2 8 -2Bromoform	14000	ע
1	108/10-14-Methyl-2-Pentanone	14000	U
1	5 % 1-78-62-Hexanone	14000	U
-	127-18-4Tetrachloroethene	14000	ע /
Y	79-34-51,1,2,2-Tetrachloroethane	14000	U
1	108-88-3Toluene	13000	
١	108-90-7Chlorobenzene	14000	B
1	100-41-4Ethylbenzene	6800	JD
	100-42-5Styrene	14000	U
	1330-20-7Xylene (total)	39000	D
	•		
- 1			· '

TE BENZENE, TOLUENE, ETHILDENZENE AND WLENE (TOTAL) RESULTS HAYE BEE -TRANSFERRED FROMTO THE FORM I FOR THE ORIGINAL LOW-WOODO 2

UNDILUTED ANALYSIS OF SAMPLEFORM TOOKS-4).

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NYSDEC ASP 12/91

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

HA53-4DL

NYSDEC SAMPLE NO.

Lab Name: NYTEST ENV INC

Contract: 9521637

Lab Code: NYTEST

Sample wt/vol:

Case No.: 25668 SAS No.:

SDG No.: ORL

Matrix: (soil/water) SOIL

Lab File ID:

P7988.D

Level: (Now/med) MED

4.0 (g/mL) G

Date Received: 11/15/95

Lab Sample ID: 2566810

% 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 Miquot Volume: 100 (uL)

Number TICs found: 10

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2. 3. 4. 5. 6. 7. 8. 9.	UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN HYDROCARBON UNKNOWN AROMATIC UNKNOWN AROMATIC UNKNOWN AROMATIC UNKNOWN AROMATIC UNKNOWN AROMATIC UNKNOWN AROMATIC	5.108 10.389 10.698 11.523 13.535 18.176 18.300 19.218 20.760	9000 11000 8600 9100 9300 24000 10000 26000 8500	999999999
11. 12. 13. 14. 15. 16. 17. 18. 19.	ONANOWIN ARCMATIC	20.950	10000	JD
20. 21. 22. 23. 24. 25. 26. 27. 28.				
29. 30.				\geq

TJF 15 DEC 95 CMN 19 BEB96 000033

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:

	TCX DB-608	TCX <u>DB-1701</u>	DCB <u>DB-608</u>	DCB <u>DB-1701</u>
Sample ID				
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%.

Reviewed By

19 FEB96 Date

Approved By

Date

PCB Analytical Data - Surface Water

Orange & Rockland Utilities West Nyack, New York

Sampling Date: December 27, 1995

Sample ID	SW-1	SW-2	X-2	SW-3
Compound				
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.

JRU-WEST NYACK SDG: NYACK2

STANDARD OPERATING PROCEDURE

Date: January 1992 Revision: 8

YES NO N/A

PART C: PESTICIDE/PCB ANALYSIS

1.0	Traffic Reports and Laboratory Narrative
-----	--

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

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.

Date: January 1992 Revision: 6

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	<u>1,7</u>		
		b. Soil	1	-	
	3.2	Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices?			
		a. Low Water	1/1		
		b. Soil	1	_	·
	·	ACTION: Call lab for explanation/resubmittal If missing deliverables are unavaila document effect in data assessments.	s. ble,		
	3.3	Were outliers marked correctly with an asterisk?	Ŋ		
		ACTION: Circle all outliers in red.		•	
	2.4	Were surrogate recoveries of TCX or DCB . outside of the contract specification for any sample or blank? (60-150%)	_/		

3.5

3.6

4.1

4.2

4.0

Date: January 1992 Revision: 8

YES NO N/A

ACTION:	No qualification is done if surrogate are diluted out. If recovery for bot surrogates is below the contract limbut above 10%, flag all results for sample 'J". If recovery is < 10% for either surrogate, qualify positive results 'J" and flag non-detects "R" If recovery is above the contract ad limits for both surrogates qualify positive results 'J".	that that visory	
vindovs	rrogate retention times (RT) within t established during the initial 3-poi s of Individual Standard Mixture A?	int	
ACTION:	If the RT limits are not met, the analysis may be qualified unusable (for that sample on the basis of professional judgement.	R)	
Are thembetween	re any transcription/calculation errors 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.		
Matrix :	Spikes (Form III)		
	Matrix Spike/Matrix Spike Duplicate y Form (Form III) present?	<u> </u>	
frequence (1 MS/N)	trix spikes analyzed at the required by for each of the following matrices BD must be performed for every 20 sam lar matrix or concentration level)	o? oples	
a.	Low Water	<u> </u>	
h.	Seil	f 1	√

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

Date: January 1992 Revision: 8

YES NO N/A

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

Water

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 NiA 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)

Date: January 1992 Revision: 8

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 <u>not</u> 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.

Date: January 1992 Revision: 8

YES NO N/A

Samp	le conc > < 5x blan	CRQL k	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL 6 > 5x blank value
Flag with	sample r		Report CRQL & qualify "U"	No qualification is needed
	NOTE:	in the	ss blank contamination associated samples should be unusable (R).	exists, all data ould be
6.3	Are them	re field	d/rinse/equi pme nt blan ple?	us associated
ACTION:	that the	ere is :	samples, note in data a no associated field/ris ples taken from a drind sociated field blanks.	[] = [] - [] - [] - [] - [] - [] - [] -
	do not l	usae se	POCTACE TIME Decimes	
7.0	do not l		d GC Performance	
7.0	do not l Calibrat Are the	tion an follow Printo		and Data resent
	Calibrat Are the Systems for all	follow Printo sample	ing Gas Chromatograms outs for both columns p	and Data resent
	Calibrat Are the Systems for all	follow Printo sample peak r	ing Gas Chromatograms outs for both columns poss, blanks, MS/MSD?	- -
	Calibrate Are the Systems for all a. b.	follow Printo sample peak r perfor arocle	d GC Performance ing Gas Chromatograms buts for both columns posses, blanks, MS/MSD? resolution check mance evaluation mixtue or 1016/1260	
	Calibrate Are the Systems for all a. b.	follow Printo sample peak r perfor arocle	ing Gas Chromatograms outs for both columns poss, blanks, MS/MSD? resolution check mance evaluation mixtu	248, 1254 L
	Calibrat Are the Systems for all a. b.	follow Printo sample peak r perfor arocle	d GC Performance ing Gas Chromatograms outs for both columns posses, blanks, MS/MSD? resolution check mance evaluation mixtue or 1016/1260 ors 1221, 1232, 1242, 1	
7.0	Calibrat Are the Systems for all a. b. c. d.	follow Printo sample peak r perfor arocle arocle toxaph	d GC Performance ing Gas Chromatograms outs for both columns posses, blanks, MS/MSD? resolution check mance evaluation mixtue or 1016/1260 ors 1221, 1232, 1242, 1	1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 — 1 —

h. high points individual mixtures A & B 1/1

Date: January 1992 Revision: 8

YES NO N/A

i. instrument blanks

<u>~</u>

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.

Date: January 1992 Revision: 8

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.

Date: January. 1992 Revision: 8

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).

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YES NO N/A

	ii.	Qualify positive results for endrin ketone and endrin aldehyde as presumptively present at an approximated quantity (NJ). Qualify results for DDD and/or DDE as presumptively at an approximated quantity (NJ).	int positi	ve ent
7.9	Are the for all	relative percent difference (RPD) values PEH 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 PEN 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.		5 .
7.10	period :	l samples been injected within a 12 hr. beginning with the injection of an ent Blank?		
	ACTION:	If no, use professional judgement to determine the severity of the effect on the data and qualify accordingly.		
7.11	Is Form each IN analyze	VII - Pest-2 present and complete for DA and INDB Verification Calibration d?		
•	ACTION:	If no, take action specified in 3.2 above.		
7.12	Are the	re any transcription/calculation errors raw data and Form VII - Pest-2?	心	<u></u> -
	ACTION	If large errors exists, call lab for explanation/resubmittal, make any necessary corrections and document effect in data assessments. under "Conclusions".		

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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.

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.

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YES NO N/A

9.0	Cleanup Efficiency Verification (Form IX)		
9.	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".		
9.3	Are all samples listed on the Pesticide Florisity Cartridge Check Form?	·	_
	ACTION: If no, take action specified in 3.2 above.		
9.:	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.	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 < \$0%, qualify positive results "J" and quantitation limits "UJ". Non-detects should be qualified "R" if zero &R was obtained for		

limit.

pesticide compounds. Use professional judgement to qualify positive results if recoveries are greater than the upper

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YES NO N/A

r/ 1

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.
- - 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.

Date: January 1992 Revision: 8

YES NO N/A

10.4 Is the percent difference (% D) calculated for the positive sample results on the two GC columns < 25.08?

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

Ovalifier & Difference

25-50 \$ JM 50-90 \$ > 90 %

The lower of the two values is reported NOTE: 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).

Compound Quantitation and Reported Detection Limits 11.0

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

Single-peak pesticide results can be checked for rough agreement between quantitative results obtained on the two GC NOTE: columns. The reviewer should use professional judgement to decide whethers 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.

Date: January 1992 Revision: 8

YES NO N/A

11.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, a 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 "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?
- 12.2 Were any electropositive displacement (negative peaks) or unusual peaks seen?

ACTION: Address comments under System Performance of data assessment.

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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.

l			
1	SW-1		
1			

Lab Name: NYTEST ENV INC Cont	SW-1 ract: 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: <u>12/27/95</u>
Extraction: (SepF/Cont/Sonc) <u>SEPF</u>	Date Extracted: 12/28/95v
Concentrated Extract Volume: 10000 (u	L) Date Analyzed: <u>01/10/96</u>
Injection Volume: 1.00 (uL)	Dilution Factor:1.00/
GPC Cleanup: (Y/N) N / pH: 7.0	Sulfur Cleanup: (Y/N) N_
	ONCENTRATION UNITS: ug/L or ug/Kg) <u>UG/L</u> Q

8001-35-2----Toxaphene N1 94-12-94 5.0 U 1.0 | U 12674-11-2----Aroclor-1016 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

> ann IM FEB96

Matrix: (soil/water) WATER

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

					 SW-2
Lab	Name:	NYTEST ENV INC	Contract.	<u>9521637</u>	
Lab	Code:	NYTEST Case No.:	26080 SAS No.:	SDG	No.: NYACK2

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 \underline{N} PH: $\underline{7.0}$ Sulfur Cleanup: (Y/N) N \underline{N}

CONCENTRATION UNITS:

Lab Sample ID: 2608005

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

8001-35-3Toxaphene	5.0	 - NH @X+Q-Q
12674-11-2Aroclor-1016	1.0 U	
11104-28-2Aroclor-1221	2.0 U	
11141-16-5Aroclor-1232	1.0 U	
53469-21-9Aroclor-1242	1.0 U	
12672-29-6Aroclor-1248	1.0 U	
11097-69-1Aroclor-1254	1.0 U	
11096-82-5Aroclor-1260	1.0 U	

Cim?

EPA SAMPLE NO.

1	X-2	
1		

Lab Name: NYTEST ENV INC Contract	X-2 : <u>9521637 </u>
Lab Code: NYTEST Case No.: 26080 SAS No	.: SDG No.: NYACK2
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: 2608004
Sample wt/vol: 1000 (g/mL) ML	Lab File ID:
% Moisture: decanted: (Y/N)	Date Received: <u>12/27/95</u>
Extraction: (SepF/Cont/Sonc) <u>SEPF</u>	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 /

CONCENTRATION UNITS:

CAS	NO.	COMPOUND	(ug/L or ug/Kg)	UG/L	Q

		14 11 03 1 10 6
8001-35-3 Тохарhеле	<u> </u>	- NHANHZ-G
12674-11-2Aroclor-1016	1.0 U	
11104-28-2Aroclor-1221	2.0 U	
11141-16-5Aroclor-1232	1.0 U	
53469-21-9Aroclor-1242	1.0 U	
12672-29-6Aroclor-1248	1.0 U	1
11097-69-1Aroclor-1254	1.0 U	1
11096-82-5Aroclor-1260	1.0 U	1

1D
PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

ı		
1	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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

1.0001.25.2	5.0	NA 941-129
-0001-35-2	·	1
12674-11-2Aroclor-1016	1.0 U	
11104-28-2Aroclor-1221	2.0 U	
	1.0 U	I
11141-16-5Aroclor-1232	 '	
53469-21-9Aroclor-1242	1.0 U	
12672-29-6Aroclor-1248	1.0 U	
11097-69-1Aroclor-1254	1.0 0	
1	 '	1
11096-82-5Aroclor-1260	1.0 U	!
	1	

Cimil 14 FEB96

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 <u>PCB Identification</u> 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:

	TCX <u>DB-608</u>	TCX <u>DB-1701</u>	DCB <u>DB-608</u>	DCB <u>DB-1701</u>
Sample ID				
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%.

Reviewed By

4

Approved By

19 FEB96

Date

PCB Analytical Data - Sediment

Orange & Rockland Utilities West Nyack, New York Sampling Date: December 28, 1995

SED-4 SED-5 SED-6 SED-7 SED-7 <th< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th>A digital</th><th>F 4400</th><th>X CED</th><th>5-C-27</th><th></th></th<>							A digital	F 4400	X CED	5-C-27	
42 U 46 U 48 U 52 U 73 U 150 U 150 U 42 U 41 U 45 U 86 U 94 U 97 U 110 U 150 U 150 U 86 U 84 U 91 U 42 U 46 U 48 U 52 U 73 U 73 U 42 U 41 U 45 U 42 U 46 U 48 U 52 U 73 U 73 U 42 U 41 U 45 U 71 46 U 48 U 52 U 73 U 73 U 42 U 41 U 45 U 71 46 U 48 U 52 U 73 U 73 U 42 U 41 U 45 U 42 U 46 U 48 U 52 U 73 U 73 U 42 U 41 U 45 U	Sample ID	SED-1	SED-2	SED-3	SED-4	SED-5	SED-0	J-Gac			
42 U 46 U 48 U 52 U 73 U 73 U 42 U 41 U 45 U 86 U 94 U 97 U 110 U 150 U 150 U 86 U 84 U 91 U 42 U 46 U 48 U 52 U 73 U 73 U 42 U 41 U 45 U 42 U 46 U 48 U 52 U 73 U 73 U 42 U 41 U 45 U 71 46 U 48 U 52 U 73 U 73 U 42 U 41 U 45 U 42 U 46 U 48 U 52 U 73 U 73 U 42 U 41 U 45 U 42 U 46 U 48 U 52 U 73 U 73 U 42 U 41 U 45 U	Compound];		11 17	11 21	11 09
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0.74	0901-010-4	11 CF	1 46 []	48 U	25.0	/3 0	/3.0	2 7			
	Arocior-1200	27									

						4 4 4 4	0 P. 16	CED 17	CED-18
Sample ID	Sample ID SED-11	SED-12	X-3	SED-13	SED-14	SED-15	3ED-10	71-03C	
Compound							1.00	VII 63	V1 11V
	MI 37	20 117	11 22	70 UV	26 UV	24 UV	130 0	37 OV	• • • • • • • • • • • • • • • • • • •
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,,	04 IIV	VII 77	11 92	140 UV	110 01	AO 011	0 007	110 04	5
Aroclor-1221	* • • • • • • • • • • • • • • • • • • •	5)	•	71173	V11 73	130 11	VI 22	41 UV
A = 0.010 1737	46 ITV	38 UV	37 U	^O O/	20 00	> 0 + 5	0 001		
Arocioi-1222	2			7717	VI 75	54 IIV	130 11	52 UV	41 00
A =0010r 1242	46 IIV	38 UV	37.0	20.00	20.00) }	967		
A10001-1242		111	11 60	70 TTV	VI 1 95	54 UV	130 U	52 UV	41 00
Aroclor-1248	46 UV	38 04	2 2	2		; ;	11 000	721 63	NAG VY
	AK IIV	38 ITV	37 11	70 UV	26 UV	62 V	130 0	25.00	
Aroclor-1234	^	3	5		1111	7117	120 11	VII C5	41 IV
12. 10.00	AU OUOS	38 110	37 U	70 07	20 00	34 UV	130 0	32.01	
Aroclor-1700									

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.

ORU-WEST NYACK

STANDARD OPERATING PROCEDURE

Date: January 1992 Revision: 8

YES NO N/A

PART C: PESTICIDE/PCB ANALYSIS

1.0	Traffic Reports and Laboratory Narrative
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1.1 Are Traffic Report Forms present for all samples?

<u>r</u> – –

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.

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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
3.1	Are the PEST/PCB Surrogate Recovery Summaries (Form II) present for each of the following matrices?		•
		ட	 _
	a. Low Water	1/1	
	b. Soil	خسنبا	
3.2	Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices?		j
	a. Low Water	ب	 <u></u>
		<u>्र</u>	 -
	b. Soil	_	
	ACTION: Call lab for explanation/resubmittal If missing deliverables are unavails document effect in data assessments.	ble,	
3.	Were outliers marked correctly with an asterisk?	1/1	
	ACTION: Circle all outliers in red.		
:.	4 Were surrogate recoveries of TCX or DCB . outside of the contract specification for any sample or blank? (60-150%)		

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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
	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 11?

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

Matrix Spikes (Form III) 4.0

Is the Matrix Spike/Matrix Spike Duplicate Recovery form (form III) present?

1/1

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)

(mi) 17/FER96

a. Low Water

b. Soil

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

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YES NO N/A

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

Water

soil

(b) 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

D_ 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 IY)

- 5.1 Is the Method Blank Summary (Form IV) present? ${ ilde{[igvert]}}$ _
- 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)

Date: January 1992 Revision: 8

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?

OKZ

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.

. .

Date: January 1992 Revision: 8

YES NO N/A

Samp.	le conc > CRQL < 5x blank	Sample conc < CRQL & is < 5x blank value	6 7 32 33333
Flag	sample result	dagarra	No qualification is needed
		oss blank contamination associated samples sho fied as unusable (R).	exists, all data ould be
6.3	Are there fie with every sa	ld/rinse/equipment blan mple?	
ACTION:	that there is	samples, note in data no associated field/ri mples taken from a drin	king vater tap
	do not have a	ssociated field blanks.	
7.0	Calibration	and GC Performance	
7.0	Calibration a	and GC Performance owing Gas Chromatograms touts for both columns I	and Data present
7.0	Calibration a Are the following print for all sample	owing Gas Chromatograms touts for both columns in the columns in t	and Data
7.0	Calibration a Are the following for all sample a. peak	and GC Performance owing Gas Chromatograms touts for both columns I les, blanks, MS/MSD? resolution check	and Data present
7.0	Calibration a Are the folic Systems Print for all sampl a. peak b. perf	owing Gas Chromatograms touts for both columns [les, blanks, MS/MSD? resolution check ormance evaluation mixt	and Data present V1 — — ures V1 — —
7.0	Calibration a Are the folic Systems Print for all sampl a. peak b. perf	owing Gas Chromatograms touts for both columns [les, blanks, MS/MSD? resolution check ormance evaluation mixt	### And Data
7.0	Calibration a Are the following systems Print for all sample a. peak b. performance a. arocomological arocomo	owing Gas Chromatograms touts for both columns ples, blanks, MS/MSD? resolution check ormance evaluation mixture lor 1016/1260 clors 1221, 1232, 1242,	### And Data
7.0	Calibration a Are the following systems Print for all sample a. peak b. performance a. arocomological arocomo	owing Gas Chromatograms touts for both columns ples, blanks, MS/MSD? resolution check ormance evaluation mixto lor 1016/1260 clors 1221, 1232, 1242, sphene	### A & B ###
7.0	Calibration a Are the following for all sample a. peak b. performance aroc d. aroc e. toxa f. low	owing Gas Chromatograms touts for both columns plants, blanks, MS/MSD? resolution check ormance evaluation mixture lor 1016/1260 clors 1221, 1232, 1242,	and Data present Li — — 1248, 1254 Li — — 1248 A & B Li — — 13768 A & B Li — —

Date: January 1992 Revision: 8

YES NO N/A

i. instrument blanks

<u>u</u> _ _ _

<u>r/1</u>

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,

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.

Date: January 1992 Revision: 8

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)

<u>.</u>

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?

_ <u>~</u>

- 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 t 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.

Dete: January 1992 mevision: 8

YES NO N/A

- 2. If any t 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).

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YES NO N/A

	ii.	Qualify positive results for endrin ketone and endrin aldehyde as presumptively prese at an approximated quantity (MJ). Qualify results for DDD and/or DDE as presumptive at an approximated quantity (MJ).	positive
7.9	Are the for all	relative percent difference (RPD) values PEN 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	period	l samples been injected within a 12 hr. beginning with the injection of an ent Blank?	
	ACTION	If no, use professional judgement to determine the severity of the effect on the data and qualify accordingly.	
7.11	Is For	m VII - Pest-2 present and complete for	

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

each INDA and INDB Verification Calibration

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".

Date: January 1992 Revision: 8

YES NO N/A

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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.

Dete: January 1992 Revision: 8

YES NO N/A

. 0	Cleanup Efficiency Verification (Form IX)		
	Is Form IX - Pest-1 present and complete for each lot of Florisil Cartridges used? (Florisil Cleanup is required for all Pest/PCS 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	on any Besticide Florisil	_	
	ACTION: If no, take action specified in 3.2 above.		
9.3			-
	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?		. <u> </u>
	Qualify only the analyte(s) which fail the recove criteria as follows:	ry	

ACTION: If % R are < \$0%, 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.

Date: January 1992 Revision: 8

YES NO N/A

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NOTZ: Sample data should be evaluated for potential interferences if recovery of 2,4,5-trichlorophenol was > 5t 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.

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.

Date: January 1992 Revision: 8

YES NO N/A

10.4 Is the percent difference (% D) calculated for the positive sample results on the two GC columns (1)

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

as follows: a Difference

Qualifier

25-50 % JW

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 whethers such 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 quantity end concentration on the confirmation column. The estimated concentration on the confirmation column has interfered with the evaluation of the second column confirmation.

Date: January 1992 Revision: 8

YES NO N/A

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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 "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?

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

ACTION: Address comments under System Performance of data assessment.

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Date: January 1992 Revision: 8

YES NO N/A

13.0 Field Duplicates

13.1 Were any field duplicates submitted for PIST/PCB analysis?

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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%.

EPA SAMPLE NO.

Contract.	SED-1
Lab Name: NYTEST ENV INC Contract:	3321037
Lab Code: NYTEST Case No.: 26087 SAS No.:	SDG No.: NYACK3
Matrix: (soil/water) SOIL	Lab Sample ID: 2608720
Sample wt/vol: $30.0 \text{ (g/mL)} \text{ G}$	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:/
GPC Cleanup: (Y/N) Y / pH: 6.9	Sulfur Cleanup: $(Y/N) \frac{Y}{}$

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/KG COMPOUND CAS NO.

			-NR	0.
8001-35-2Toxaphene		10	T IV IK	UZ A
12674-11-2Aroclor-1016	42	ן ט		
11104-28-2Aroclor-1221	86	ן ט	1	
11141-16-5Aroclor-1232	42	U		
53469-21-9Aroclor-1242	42	U	1	
12672-29-6Aroclor-1248	42	U	-	
11097-69-1Aroclor-1254	71	1		
11096-82-5Aroclor-1260	42	ע		
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11104-28-2----Aroclor-1221

11141-16-5-----Aroclor-1232

53469-21-9-----Aroclor-1242

12872-29-6-----Aroclor-1248

11097-69-1-----Aroclor-1254

11096-82-5----Aroclor-1260

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1D PESTICIDE ORGANICS ANALYSIS DATA SHEET

Matrix: (soil/water) SOIL

EPA SAMPLE NO.

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							SED-2	
Lab	Name:	NYTEST	ENV	INC	Contract:	9521637		

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

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

Dilution Factor: ___1.00/ Injection Volume: 1.00 (uL)

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

1	1	1	${1}$
8001 35 3Toxaphene		- ↓	-
12674-11-2Aroclor-1016	46	ט	1
11104-28-2Aroclor-1221	94	U	1
11141-16-5Aroclor-1232	46	U	1
53469-21-9Aroclor-1242	46	U	l
12672-29-6Aroclor-1248	46	ן ט	
11097-69-1Aroclor-1254	46	U	-
11096-82-5Aroclor-1260	46	U	-
<u>,</u>	1	_	

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EPA SAMPLE NO. 1D PESTICIDE ORGANICS ANALYSIS DATA SHEET 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: 2008719RE Lab File IDy Sample wt/vol: <u>30.0</u> (g/mL) <u>G</u> _ desanted: (Y/N) N__ Date Received: 12/28/95 % Moisture: 29 Date Extracted: 01/19/96 /EXCEEDANCE Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 01/25/96 5000 (uL₄) Concentrated Extract Volume: Dilution Factor: ____1.00 Injection Volume: 1.00 (uL) Sulfur Cleanup: (Y/N) Y/ GPC Cleanup: (Y/N) Y CONCENTRATION UNITS: COMPOUND (ug/L or ug/Kg) UG/KG Q CAS NO. MA GILAG ט 🗸 12674-11/2-----Aroclor-1016 ע ען 11104-28-2----Aroclor-1221 94 46 111/1-16-5-----Aroclor-1232 5/3469-21-9-----Aroclor-1242 46 UV 46 12672-29-6-----Aroclor-1248 11097-69-1-----Aroclor-1254 46 DA |UV 11096-82-5-----Aroclor-1260_

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	LFA	SAMPLE	NO.
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		SED-3
Lab Name: NYTEST ENV INC Contract	:: <u>9521637</u>	
Lab Code: NYTEST Case No.: 26087 SAS No.	: SDG	No.: NYACK3
Matrix: (soil/water) <u>SOIL</u>	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	s: <u>1.00</u>
GPC Cleanup: $(Y/N) Y / pH: 7.0$	Sulfur Cleanup:	: (Y/N) <u>Y</u>
	ENTRATION UNITS: L or ug/Kg) <u>UG/K</u>	<u> </u>
1		
8001-35-2 Toxaphene		48 U NA 212694
12674-11-2Aroclor-1016	<u> </u>	48 U 769
11104-28-2Aroclor-1221		97 U
11141-16-5Aroclor-1232		48 U
53469-21-9Aroclor-1242		48 U
12672-29-6Aroclor-1248		48 U
11097-69-1Aroclor-1254		48 U
11096-82-5Aroclor-1260		48 U
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1D	EPA SAMPLE NO.
PESTICIDE ORGANICS ANALYSIS DATA SHE	ET
	SED-3RE
Lab Name: NYTEST ENV INC Contract:	9521637
Lab Code: NYTEST Case No.: 26087 SAS No.:	SDG No.: NYACK3
Matrix: (soil/water) <u>SOIL</u>	Lab Sample ID: 2608718RE
Sample wt/vol: 30.0 (g/mL) G	Lab File ID:
	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
/	VIRATION UNITS:
CAS NO. COMPOUND (ug/L	or ung/kg) ug/kg Q
0001-35-2Toxaphene 12674-11-2Aroclor-1016	250 III WH ON 1289
11104-28-2Aroclor-1221	97 10 / 1
11141-16-5Aroclor-1232	48 UV
53469-21-9Aroclor-1242	48
2672-29-6Aroclor-1248	48 U
11097-69-1Aroclor-1254	48 U V
11096-82-5Aroclor-1260	48 UV
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EPA SAMPLE NO.

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Lab	Name:	NYTEST	ENV	INC	Contract:	9521637	l	

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

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

Sample wt/vol: $30.0 mtext{ (g/mL) } mtext{G}$ 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: $(Y/N) \ \underline{Y}$ pH: $\underline{6.8}$ Sulfur Cleanup: $(Y/N) \ \underline{Y}$

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg)	UG/KG	Q

ļ	8001-35-2Toxaphene	270	₩-	-+
1	12674-11-2Aroclor-1016	52	U	1
-	11104-28-2Aroclor-1221	110	บ	
	11141-16-5Aroclor-1232	52	U	-
1	53469-21-9Aroclor-1242	52	U	
1	12672-29-6Aroclor-1248	52	U	į
	11097-69-1Aroclor-1254	52	U	1
İ	11096-82-5Aroclor-1260	52	ט	
-			1	- 1

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1D PESTICIDE ORGANICS ANALYSIS DATA SHEET	EPA SAMPLE NO.
Lab Name: NYTEST ENV INC Contract: 9521637	SED-4RE
Lab Code: NYTEST Case No.: 26087 SAS No.: SDC	G No.: NYACK3
Matrix: (soil/water) SOIL Lab Sample ID	: <u>2606717RE</u>
Sample wt/vol: 30.0 (g/mL) G Lab File ID:	/
% Moisture: 37 decanted: (Y/N) N Date Received	
	d: 01/19/96/EXCEEDANCE
Concentrated Extract Volume: (uL) Date Analyzed	
Injection Volume: 1.00 (uL) Dilution Fact	
GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanu	
CONCENTRATION UNITS CAS NO. COMPOUND (ug/L or ug/Kg) UG/	
8001-35-2/Toxaphene	270 0 NO OR F16-4
12674-11-2Aroclor-1016	110 UV
11141/16-5Aroclor-1232	52 XV
53469-21-9Aroclor-1242	52 U
22672-29-6Aroclor-1248	52 U V
11097-69-1Aroclor-1254	52 UV
11096-82-5Aroclor-1260	52 U V

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EPA SAMPLE NO.

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

			_
9001-35- 2Toxaphene	380	10-	-
12674-11-2Aroclor-1016	73	U	ĺ
11104-28-2Aroclor-1221	150	U	j
11141-16-5Aroclor-1232	73	Ū	Ì
53469-21-9Aroclor-1242	73	ט	ĺ
12672-29-6Aroclor-1248	73	U	ĺ
11097-69-1Aroclor-1254	73	U	ĺ
11096-82-5Aroclor-1260	73	U	ĺ
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1D PESTICIDE ORGANICS ANALYSIS DATA SHEET	EPA SAMPLE NO.
Lab Name: NYTEST ENV INC Contract: 9521637	SED-5RE
Lab Code: NYTEST Case No.: 26087 SAS No.: SDG N	O.: NYACKY
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:	
Extraction: (SepF/Cont/Sonc) SONC Date Extracted:	01/19/96 LXCEEDANCE
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) <u>Y</u>
CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG	Q
8 001-25-2 Toxaphene 	What Zage
12674-11-2Aroclor-1016	3 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
11104-28-2Aroclor-122115	0 10 0 1
· · · · · · · · · · · · · · · · · · ·	3 0
· /	3 UV
	3 UV
	3 U V
11096-82-5Aroclor-1260 7	3 UV
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COMPOUND

CAS NO.

EPA SAMPLE NO.

Lab Name: NYTEST ENV INC Contract	SED-6 : <u>9521637</u>
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: <u>12/28/95</u>
Extraction: (SepF/Cont/Sonc) SONC	Date Extracted: <u>12/29/95</u> /
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

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

8001-35-2Toxanhene			
1 Ortal priorite	380 -	10	\rightarrow
12674-11-2Aroclor-1016	73	ט	1
11104-28-2Aroclor-1221	150	U	İ
11141-16-5Aroclor-1232	73	U	i
53469-21-9Aroclor-1242	73	Ū	i
12672-29-6Aroclor-1248	73	ĺσ	i
11097-69-1Aroclor-1254	100	i	i
11096-82-5Aroclor-1260	73	ับ	i

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1D PESTICIDE ORGANICS ANALYSIS DATA SHEET	EPA SAMPLE NO.			
Lab Name: NYTEST ENV INC Contract: 95216	SED-6RE			
Lab Code: NYTEST Case No.: 26087 SAS No.:	SDG No.: NYACK3			
Matrix: (soil/water) <u>SOIL</u> Lab Sa	mple ID: <u>2608713RE</u>			
Sample wt/vol: 30.0 (g/mL) G Lab Fi	le ID:			
% Moisture: 55 decanted: (Y/N) N Date R	eceived: 12/28/95			
Extraction: (SepF/Cont/Sonc) SONC Date E	xtracted: 01/19/96 / EXCEEDANCE			
Concentrated Extract Volume: 5000 (uL) Date A	nalyzed: <u>01/25/96</u>			
Injection Volume: 1.00 (uL) Dilution Factor: 1.00				
GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur	Cleanup: (Y/N) Y			
CONCENTRATION CAS NO. COMPOUND (ug/L or ug/l				
6001-35-2Toxaphene	73 UV Wr 91/2699			
12674-11-2/Aroclor-1016	73 U \ 1 4 1 1 9 9 9			
11104-29-2Aroclor-1221	130 80			
11141 16-5Aroclor-1232	73 🗸			
53469-21-9Aroclor-1242	73 UV			
22672-29-6Aroclor-1248	73 UV			
11097-69-1Aroclor-1254	52 JP V			
11096-82-5Aroclor-1260	73 U			

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EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

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	SED-7	

Lab Name: NYTEST ENV INC Contract	SED-7 : 9521637
Lab Code: NYTEST Case No.: 26087 SAS No.	: SDG No.: NYACK3
Matrix: (soil/water) <u>SOIL</u>	Lab Sample ID: 2608712
Sample wt/vol: 30.0 (g/mL) G	Lab File ID:
% Moisture: 22 decanted: (Y/N) N	Date Received: <u>12/28/95</u>
Extraction: (SepF/Cont/Sonc) <u>SONC</u>	Date Extracted: <u>12/29/95</u> /
Concentrated Extract Volume:5000 (uL)	Date Analyzed: 01/24/96
Injection Volume: 1.00 (uL)	Dilution Factor: 1.00

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) <u>UG/KG</u>

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

8001-35-2 Toxaphone		 _ U	+ W7 W1766
12674-11-2Aroclor-1016	42	ט	10 1 07 / 74-45
11104-28-2Aroclor-1221	86	ប	
11141-16-5Aroclor-1232	42	U	İ
53469-21-9Aroclor-1242	42	U	
12672-29-6Aroclor-1248_	42	U	
11097-69-1Aroclor-1254	230		
11096-82-5Aroclor-1260		U	
			_

1D	EPA SAMPLE NO.
PESTICIDE ORGANICS ANALYSIS DATA SHEET	
	SED-7RE
Lab Name: NYTEST ENV INC Contract: 95216	37
Lab Code: NXTEST Case No.: 26087 SAS No.:	SDG No.: NYACK3
Matrix: (soil/water) <u>SOIL</u> Lab Sa	ample ID: <u>2606712RE</u>
Sample wt/vol: 30.0 (g/mL) G Lab F:	ile ID:
% Moisture: 22 decanted: (Y/N) N Date H	Received: <u>12/28/95</u>
Extraction: (SepF/Cont/Sonc) SONC Date I	Extracted: 01/19/96 VEXCELEDANCE
	Analyzed: <u>01/25/96</u>
Concentrated Extract volume:	mary 260. <u>01/25/25</u>
Injection Volume: 1.00 (uL)	ion Factor: 1.00
GPC Cleanup: (Y/N) Y pH: 7.0 Sulfu:	r Cleanup: (Y/N) <u>Y</u>
CONCENTRATIO	MI INITE.
CAS NO. COMPOUND (ug/L or ug	
CAS NO. COMPOSITS (49/2 02 49)	2
8801-35-2Toxaphene	220 0 Mar 26.9
12674-11-2Aroclor-1016	42 10 0
11104-28-2Aroclor-1221	86 UV
11142-16-5Aroclor-1232	42 UV
53469-21-9Aroclor-1242	42 U V
12672-29-6Aroclor-1248	42 U V
11097-69-1Aroclor-1254	27 JP V
11096-82-5Aroclor-1260	42 UV
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	EPA	SAMPLE	NO.
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i	SEI	D-8	

Lab Name: NYTEST ENV INC Contract	SED-8
Lab Code: NYTEST Case No.: 26087 SAS No.	: SDG No.: NYACK3
Matrix: (soil/water) <u>SOIL</u>	Lab Sample ID: 2608711
Sample wt/vol: $30.0 \text{ (g/mL)} \underline{G}$	Lab File ID:
% Moisture: 20 decanted: (Y/N) N	Date Received: <u>12/28/95</u>
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 J pH: 6.8	Sulfur Cleanup: (Y/N) Y/

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

8001 35-2 Toxophene		210	
12674-11-2Aroclor-1016		41	שו
11104-28-2Aroclor-1221		4 84	U
11141-16-5Aroclor-1232		41	σ
53469-21-9Aroclor-1242	i	41	ับ
12672-29-6Aroclor-1248		41	U
11097-69-1Aroclor-1254		41	U
11096-82-5Aroclor-1260		41	U
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1D PESTICIDE ORGANICS ANALYSIS DATA SHEET	EPA SAMPLE NO.
Lab Name: NYTEST ENV INC Contract:	SED-8RE
Lab Code: NYTEST Case No.: 26087 SAS No.:	SDG No.: NYACKS
Matrix: (soil/water) <u>SOIL</u>	ab Sample ID: 2608711RE
Sample wt/vol: $30.0 (g/mL) G$	ab File ID:
% Moisture: 20 decanted: (Y/N) N Da	
Extraction: (SepF/Cont/Sonc) SONC Da	extracted: 01/19/96 / EXCEEDANCE
Concentrated Extract Volume: 5000 (uL) Da	ate Analyzed: 01/25/96
Injection Volume: 1.00 (uL)	llution Factor:1.00
GPC Cleanup: (Y/N) Y pH: 6.8	ulfur Cleanup: (Y/N) <u>Y</u>
<i>,</i>	ration units: ug/kg) <u>ug/kg</u> Q
8 001-35-2 Toxaphone	
12674-11/2Aroclor-1016	41 UV WA CEPA E
11104_28-2Aroclor-1221	84 WV
111/1-16-5Aroclor-1232	41 UV
53469-21-9Aroclor-1242	41 UV
12672-29-6Aroclor-1248	41 [U]
11097-69-1Aroclor-1254	41 UV
11096-82-5Aroclor-1260	24 J \(\)
	GmO
	111 6-2091 -
	14 60076

Lab Name: NYTEST ENV INC Contract		ED-9
Lab Code: NYTEST Case No.: 26087 SAS No.	: SDG No.:	NYACK3
Matrix: (soil/water) SOIL	Lab Sample ID: 260	08710
Sample wt/vol: $30.0 \text{ (g/mL)} \text{ G}$	Lab File ID:	
% Moisture: 26 decanted: (Y/N) N	Date Received: 12/	<u>/28/95</u>
Extraction: (SepF/Cont/Sonc) <u>SONC</u>	Date Extracted: 12	<u>′29/95</u> √
Concentrated Extract Volume: 5000 (uL)	Date Analyzed: 01/	<u>′17/96</u> √
Injection Volume: 1.00 (uL)	Dilution Factor:	1.00/
GPC Cleanup: (Y/N) Y pH: 7.7	Sulfur Cleanup: (Y,	/N) <u>Y</u> /

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

8001-35-2Toxaphene	230 0 NY 4176 8
12674-11-2Aroclor-1016	45 U
11104-28-2Aroclor-1221	91 U
11141-16-5Aroclor-1232	45 U
53469-21-9Aroclor-1242	45 U
12672-29-6Aroclor-1248	45 U
11097-69-1Aroclor-1254	45 U
11096-82-5Aroclor-1260	45 Ŭ

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1D PESTICIDE ORGANICS ANALYSIS DATA SH	EPA SAMPLE NO.
Lab Name: NYTEST ENV INC Contract	SED-9RE : <u>9521637</u>
Lab Code: NYTEST Case No.: 26087 SAS No.	: SDG No.: <u>NYACK3</u>
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: <u>12/28/95</u>
Extraction: (SepF/Cont/Sonc) SQNC	Date Extracted: 01/19/96 / EXCLETANCE
Concentrated Extract Volume: 5000 (DL)	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
	INTRATION UNITS:
CAS NO. COMPOOND (ug/L	or ug/Kg) <u>UG/KG</u> Q
8 00 1-35-2Toxaphene	W/V G
12674-11-2Aroclor-1016	230 0 WY CO 174 g
11104-28/2Aroclor-1221	91 U V
11141-26-5Aroclor-1232	45 UV
53469-21-9Aroclor-1242	45 UV
12672-29-6Aroclor-1248	45 UV
11097-69-1Aroclor-1254	45 UV
11096-82-5Aroclor-1260	45 UV
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	11 Can 91
	1-11-10/4

EPA SAMPLE NO.

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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:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

		1
8001-35-2Toxaphene	350	 U
12674-11-2Aroclor-1016	69	ט
11104-28-2Aroclor-1221	140	ט
11141-16-5Aroclor-1232	69	U
53469-21-9Aroclor-1242	69	U
12672-29-6Aroclor-1248	69	U
11097-69-1Aroclor-1254	69	U
11096-82-5Aroclor-1260	69	U
		1

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1D PESTICIDE ORGANICS ANALYSIS DATA SHEET	EPA SAMPLE NO.
Lab Name: NYTEST ENV INC Contract: 9521637	SED-10RE
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	: <u>01/19/96</u>
Concentrated Extract Volume: 5000 (uL) Date Analyzed:	01/25/96
Injection Volume: 1.00 (uL) Dilution Facto	r: <u>1.00</u>
GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup	: (Y/N) <u>Y</u>
CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/K	
12674-11-2	350 U M US 26-43 140 U
	140 U
11141-16-8Aroclor-1232	69 U
53469-21-9Aroclor-1242 12672-29-6Aroclor-1248	69 U
11097-69-1Aroclor-1254	69 U
11096-82-5Aroclor-1260	69 U
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1U	EFA SAMPLE NO.
PESTICIDE ORGANICS ANALYSIS DATA SHEET	
	SED-11
Lab Name: NYTEST ENV INC Contract: 95	521637
Lab Code: NYTEST Case No.: 26087 SAS No.:	SDG No.: NYACK3
Material Company Com	
Matrix: (soil water) <u>SOIL</u> Lab	Sample ID: <u>2609/08</u>
20.0 (/ 1) 2	
Sample wt/vol: $30.0 \text{ (g/mL) } G$ Lake	o File ID:
% Moisture: 29 decanted: (Y/N) N Date	te Received: 12/28/95
7	
Extraction: (SepF/Cont/Sonc) SONC Date	te Extracted: 12/29/95
	, , , , , , , , , , , , , , , , , , , ,
Concentrated Extract Volume: 5000 (uL) Date	te Analyzed: 01/17/96
Injection Volume: 1.00 (uL)	lution Factor:1.00
and all annual (V/N) V	15 (3)
GPC Cleanup: (Y/N) Y pH: 6.8 Sul	lfur Cleanup: (Y/N) <u>Y</u>
condumn	AMTON IDITES
	ATION UNITS:
CAS NO. COMPOUND (ug/L ox	ug/Kg) <u>UG/KG</u> Q
1 2001 25 0 Francisco	240 11 11/14
8001 35 2 Toxaphene	
12674-11-2Aroclor-1016	\ 46 U " " \ 79
11104-28-2/Aroclor-1221	94 U
11141-16-5Aroclor-1232	X6 U
53469/21-9Aroclor-1242	46 U
126/2-29-6Aroclor-1248	46 V
/1097-69-1Aroclor-1254	46 U
11096-82-5Aroclor-1260	30 JP \\
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EPA SAMPLE NO.

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

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:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

9001-35-2 Toxaphene	240	-iv	WHAL
12674-11-2Aroclor-1016	46	עטן	NHAFTER
11104-28-2Aroclor-1221	94	υV	
11141-16-5Aroclor-1232	46	UV	
53469-21-9Aroclor-1242	46	ע ט	
12672-29-6Aroclor-1248	46	UV	
11097-69-1Aroclor-1254		UV	
11096-82-5Aroclor-1260	3000 2600	45 DV	

THE AROCLOR ISLO RESULT REPORTED HAS BEEN TRANSFERRED FROM THE FORM I FOR SED-11 REDL, A LOX DILUTION OF THE REEXTRACTION OF SAMPLE SED-11.

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10	EPA SAMPLE NO.
PESTICIDE ORGANICS ANALYSIS DATA SHE	EET
	SED-11REDL
Lab Name: NYTEST ENV INC Contract	9521637
Tab Call Marrier C. N. Access Co. C.	
Lab Code: NYTEST Case No.: 26087 SAS No.:	SDG No.: NYACK3
Matrix: (soil water) SOIL	Lab Sample ID: 2608708REDL
Merry (Sorry Acces) Sorr	Dab Sample ID: 2008/USREDD
Sample wt/vol: $30.0 \text{ (g/mL) } G$	Lab File ID
% Moisture: 29 decented: (Y/N) N	Date Received: <u>12/28/95</u>
_	
Extraction: (SepF/Cont/Sonc) SONC	Date Extracted: 01/19/96 FXCEEDANCE
Concentrated Extract Volume:5000 (uI)	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
GFC Cleanup: (1/N) 1 - DM: 0.8	Surfur Cleanup: (1/N) 1 -
CONCE	TRATION UNITS:
/	or ug/Kgl UG/KG Q
(43/2	22 43) 1131 <u>437 113</u>
9001 35 2	2400 UV WA U1-749
12674-12-2Aroclor-1016	460 UV 149
11104-28-2Aroclor-1221	940 0 /
11/41-16-5Aroclor-1232	 .
53469-21-9Aroclor-1242	460 UV
12672-29-6Aroclor-1248	460 UV
11097-69-1Aroclor-1254	460 UV
/ 11096-82-5Aroclor-1260	3000 DV

THE AROCLOR-1260 RESULT REPORTED HAS BEEN TRANSFERRED TO THE FORM I FOR SED-11 RE, THE ORIGINAL, UNDILUTED ANALYSIS OF THE REEXTRACTION OF SAMPLE SED-11.

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EPA SAMPLE NO.

SED-12	
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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: <u>30.0</u> (g/mL) <u>G</u> 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) \underline{Y} pH: $\underline{7.5}$ Sulfur Cleanup: (Y/N) \underline{Y}

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

8801-35-2Toxaphene	200 0 his 04.
12674-11-2Aroclor-1016	200 10 hut en - 24
11104-28-2Aroclor-1221	
11141-16-5Aroclor-1232	3 0 U R
53469-21-9Aroclor-1242	38 U A
12672-29-6Aroclor-1248	38 U 12
11097-69-1Aroclor-1254	38 U R
11096-82-5Aroclor-1260	38 UR

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11104-28-2----Aroclor-1221_

11141-16-5-----Aroclor-1232

53469-21-9-----Aroclor-1242_

12672-29-6-----Aroclor-1248

11097-69-1----Aroclor-1254

11096-82-5----Aroclor-1260

EPA SAMPLE NO.

Lab Name: NYTEST ENV INC Contract	SED-12RE : 9521637
Lab Code: NYTEST Case No.: 26087 SAS No.	: SDG No.: NYACK3
Matrix: (soil/water) <u>SOIL</u>	Lab Sample ID: 2608707RE
Sample wt/vol: 30.0 (g/mL) G	Lab File ID:
% Moisture: 13 decanted: (Y/N) N	
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: 7.5	Sulfur Cleanup: (Y/N) Y
	NTRATION UNITS: or ug/Kg) <u>UG/KG</u> Q
8001-35-2Toxaphene	38 UV WY W/-16-6
12674-11-2Aroclor-1016	38 UV 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

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EPA SAMPLE NO.

Lab Name: NYTEST ENV INC Contract: 9521637 X-3 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 CONCENTRATION UNITS: CONC	•	:
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) GPC Cleanup: (Y/N) Y PH: 7.1 Sulfur Cleanup: (Y/N) Y CONCENTRATION UNITS:	Lab Name: NYTEST ENV INC Cor	
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 CONCENTRATION UNITS:	Lab Code: NYTEST Case No.: 26087 SA	AS No.: SDG No.: NYACK3
% 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 CONCENTRATION UNITS:	Matrix: (soil/water) <u>SOIL</u>	Lab Sample ID: 2608721
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 CONCENTRATION UNITS:	Sample wt/vol: $30.0 \text{ (g/mL)} \text{ G}$	Lab File ID:
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 CONCENTRATION UNITS:	% Moisture: 12 decanted: (Y/N) N	Date Received: <u>12/28/95</u>
Injection Volume: 1.00 (uL) Dilution Factor: 1.00 GPC Cleanup: (Y/N) Y PH: 7.1 Sulfur Cleanup: (Y/N) Y CONCENTRATION UNITS:	Extraction: (SepF/Cont/Sonc) SONC	Date Extracted: 12/29/95
GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup: (Y/N) Y / CONCENTRATION UNITS:	Concentrated Extract Volume:5000	(uL) Date Analyzed: 01/24/96
CONCENTRATION UNITS:	Injection Volume: 1.00 (uL)	Dilution Factor: 1.00
	GPC Cleanup: (Y/N) Y pH: 7.1	Sulfur Cleanup: (Y/N) Y

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12674-11-2Aroclor-1016	37	ָ บ	WHOMARY
11104-28-2Aroclor-1221	76	ָ ע	
11141-16-5Aroclor-1232	37	U	Ì
53469-21-9Aroclor-1242	37	ט	İ
12672-29-6Aroclor-1248	37	U	
11097-69-1Aroclor-1254	37	ט	İ
11096-82-5Aroclor-1260		U	
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1D PESTICIDE ORGANICS ANALYSIS DATA SHEET	EPA SAMPLE NO.
Lab Name: NYTEST ENV INC Contract: 9521637	X-3RE
Lab Code: NYTEST Case No.: 26087 SAS No.: SDC	G No.: <u>NYAOK3</u>
Matrix: (soil/water) SOIL Lab Sample ID:	: <u>2608721RE</u>
Sample wt/vol: 30.0 (g/mL) G Lab File ID:	/
% Moisture: 12 decarted: (Y/N) N Date Received:	12/28/95
Extraction: (SepF/Cont/Sonc) SONC Date Extracted	1: 01/19/96/EXCLEDANCE
Concentrated Extract Volume: 5000 (uL) Date Analyzed:	01/25/96
Injection Volume: 1.00 (uL) Dilution Factor	or: <u>1.00</u>
GPC Cleanup: (Y/N) Y pH: 7.1 Sulfur Cleanup	o: (Y/N) <u>Y</u>
CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg UG/K	
8001 35-2- Toxaphene	190 111 - 1114 01
12674-11-2Aroclor-1016	111-90
11104-28-2Aroclor-1221	37 10 1
11141 16-5Aroclor-1232	76 U
53x69-21-9Aroclor-1242	37 UV
12672-29-6Aroclor-1248	37 UV
11097-69-1Aroclor-1254	37 U√ 37 U√
11096-82-5Aroclor-1260	37 UV 37 UV
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| 12672-29-6-----Aroclor-1248 | 11097-69-1-----Aroclor-1254 | 11096-82-5-----Aroclor-1260

Lab Name: NYTEST ENV INC Contract	SED-13 : 9521637
Lab Code: NYTEST Case No.: 26087 SAS No.	: SDG No.: NYACK3
Matrix: (soil/water) <u>SOIL</u>	Lab Sample ID: 2608706
Sample wt/vol: $30.0 \text{ (g/mL)} \text{ G}$	Lab File ID:
% Moisture: 53 decanted: (Y/N) N	Date Received: <u>12/28/95</u>
Extraction: (SepF/Cont/Sonc) <u>SONC</u>	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_
	NTRATION UNITS: or ug/Kg) <u>UG/KG</u> Q
8901 35 2 Toxaphene	360 4 10 2
12674-11-2Aroclor-1016	360 W M M/16
11104-28-2Aroclor-1221	140- U R
11141-16-5Aroclor-1232	70 10 2
53469-21-9Aroclor-1242	70 U 12

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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: $30.0 mtext{ (g/mL) } G$ Lab File ID:

% Moisture: 53 decanted: (Y/N) N Date Received: 12/28/95

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

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

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) \underline{Y} pH: $\underline{7.7}$ Sulfur Cleanup: (Y/N) \underline{Y}

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

·	1		
8001-35-2Toxaphene	360	10	MACHX
12674-11-2Aroclor-1016	70	עטן	1 101/2/72
11104-28-2Aroclor-1221	140	יע	i
11141-16-5Aroclor-1232	70	עטן	İ
53469-21-9Aroclor-1242	70	UV	i
12672-29-6Aroclor-1248	70	UV	İ
11097-69-1Aroclor-1254	70	VU	İ
11096-82-5Aroclor-1260	70	ע מן	1
	1	1	İ

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Lab Name: NYTEST ENV INC Contract	SED-14 : <u>9521637 </u>
Lab Code: NYTEST Case No.: 26087 SAS No.	: SDG No.: NYACK3
Matrix: (soil/water) <u>SOIL</u>	Lab Sample ID: 2608705
Sample wt/vol: 30.0 (g/mL) G	Lab File ID:
% Moisture: 41 decanted: (Y/N) N	Date Received: <u>12/28/95</u>
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: (V/N) V

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

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11104-28-2-----Aroclor-1221_

11141-16-5-----Aroclor-1232

53469-21-9-----Aroclor-1242_

12672-29-6-----Aroclor-1248

11097-69-1-----Aroclor-1254

11096-82-5----Aroclor-1260

EPA SAMPLE NO.

Lab Name: NYTEST ENV INC Contract:	SED-14RE
Lab Code: NYTEST Case No.: 26087 SAS No.:	SDG No.: NYACK3
Matrix: (soil/water) <u>SOIL</u>	Lab Sample ID: 2608705RE
Sample wt/vol: $30.0 \text{ (g/mL)} \text{ G}$	Lab File ID:
% Moisture: 41 decanted: (Y/N) N	
Extraction: (SepF/Cont/Sonc) SONC	Date Extracted: 01/19/96 / EXCEPDANCE
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
	TRATION UNITS: or ug/Kg) <u>UG/KG</u> Q
8001-25-2	298 U WH CM 1-76

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110 UV |

UV

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|U \

UV

56 UV

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56

Lab Name: NYTEST ENV INC Contrac	SED-15 SED-15
Lab Code: NYTEST Case No.: 26087 SAS No	.: SDG No.: NYACK3
Matrix: (soil/water) <u>SOIL</u>	Lab Sample ID: 2608704
Sample wt/vol: $30.0 \text{ (g/mL)} \text{G}$	Lab File ID:
% Moisture: 39 decanted: (Y/N) N	Date Received: 12/28/95
Extraction: (SepF/Cont/Sonc) SONC	Date Extracted: <u>12/29/95</u> ✓
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
	ENTRATION UNITS: L or ug/Kg) <u>UG/KG</u> Q
8 001-35-2 Toxaphene	280 II WA GALGA
12674-11-2Aroclor-1016	54 V R
11104-28-2Aroclor-1221	110 11 2
11141-16-5Aroclor-1232	51 U R
53469-21-9Aroclor-1242	54 12 12
12672-29-6Aroclor-1248	54 14 72
11097-69-1Aroclor-1254	62
11096-82-5Aroclor-1260	<u>54 U R</u>
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EPA SAMPLE NO.

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

Concentrated Extract Volume: _____5000 (uL) Date Analyzed: 01/25/96

Injection Volume: 1.00 (uL)

CAS NO.

COMPOUND

11096-82-5-----Aroclor-1260

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 Q

			
			1
8001 35 2 Toxaphene		280	10
12674-11-2Aroclor-1016	1	54	UV
11104-28-2Aroclor-1221		110	İυν
11141-16-5Aroclor-1232	<u> </u>	54	עטו
53469-21-9Aroclor-1242		54	UV
12672-29-6Aroclor-1248		54	עם ל
11097-69-1Aroclor-1254			100

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EPA SAMPLE NO.

Lab Name: NYTEST ENV INC Contr	SED-16 ract: <u>9521637</u>
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: <u>12/28/95</u>
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) \underline{Y} $pH: \underline{7.0}$ Sulfur Cleanup: (Y/N) \underline{Y}

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

		1	
8 001 35 2Toxaphene		+0	+ HH A . A
12674-11-2Aroclor-1016	130	įυ	- NH A + ZER
11104-28-2Aroclor-1221	260	Ū	i '
11141-16-5Aroclor-1232	130	Ū	
53469-21-9Aroclor-1242	130	U	[
12672-29-6Aroclor-1248_	130	Ū	İ
11097-69-1Aroclor-1254_	130	บ	
11096-82-5Aroclor-1260	130	ָט	
		i	

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1D PESTICIDE ORGANICS ANALYSIS DATA SHEET	EPA SAMPLE NO.
Lab Name: NYTEST ENV INC Contract: 9521637	SED-16RE
Lab Code: NYTEST Case No.: 26087 SAS No.: SDG	No.: NYACK3
Matrix: (soil water) SOIL Lab Sample ID:	2508703RE
Sample wt/vol: 30.0 (g/mL) G Lab File ID:	
% Moisture: 74 decanted: (Y/N) N Date Repeived:	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	:: <u>1.00</u>
GPC Cleanup: (Y/N) Y pH: 7.0 Sulfur Cleanup:	(Y/N) <u>Y</u>
CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or bg/Kg) UG/KG	<u>2</u> Q
8001-35-2 Toxaphene	30 UV NH a1744.6
10071 10 0	30 UV NA a174-E
1 11111	60 IUV
	30 UV
1 53460 01 0	30 0
1 10000 00 0	30 0
	.30 UV
11096-82-5Aroclor-12601	30 UV
	umi
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53469-21-9-----Aroclor-1242

| 11097-69-1----Aroclor-1254

12672-29-6-----Aroclor-1248

11096-82-5-----Aroclor-1260

EPA SAMPLE NO.

Lab Name: NYTEST ENV INC Contract	SED-17
Lab Code: NYTEST Case No.: 26087 SAS No.	SDG No.: NYACK3
Matrix: (soil/water) <u>SOIL</u>	Lab Sample ID: <u>2608702</u>
Sample wt/vol: 30.0 (g/mL) G	Lab File ID:
% Moisture: 37 decanted: (Y/N) N	Date Received: <u>12/28/95</u>
Extraction: (SepF/Cont/Sonc) SONC	Date Extracted: <u>12/29/95</u> /
Concentrated Extract Volume: 5000 (uL)	Date Analyzed: 01/17/96
Injection Volume: 1.00 (uL)	Dilution Factor: 1.00
GPC Cleanup: $(Y/N) \ \underline{Y}$ pH: $\underline{7.6}$	Sulfur Cleanup: (Y/N) Y
CONCE	NTRATION UNITS:
	or ug/Kg) <u>UG/KG</u> Q
8001-35-2 Texaphene	270 U WA 91. 1260
12674-11-2Aroclor-1016	52 UV 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
11104-28-2Aroclor-1221	110 UV
11141-16-5Aroclor-1232	52 UV

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52

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UV

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UV

UV

UV

1D PESTICIDE ORGANICS ANALYSIS DATA SHEE	EPA SAMPLE NO.
Lab Name: NYTEST ENV INC Contract:	SED-17RE
Lab Code: NYTEST Case No.: 26087 SAS No.:	SDG No.: NYACK3
Matrix: (soil/water) <u>SOIL</u>	ab Sample ID: <u>2608702RE</u>
Sample wt/vol: $30.0 \text{ (g/mL)} \text{ G}$	ab File ID:
% Moisture: 37 decanted: (Y/N) N Da	ate Received: 12/28/95
Extraction: (SepF/Cont/Sonc) SONC Date	ate Extracted: 01/19/96
Concentrated Extract Volume: 5000 (uL) Da	ate Analyzed: 01/25/96
Injection Volume: 1.00 (uL)	lution Factor: 1.00
GPC Cleanup: (Y/N) Y pH: 1.6 St	ulfur Cleanup: (Y/N) <u>Y</u>
	ATION UNITS: Ag/Kg) UG/KG Q
8001 35-2Тожарьере	270 II MA W/ 26 &
12674-11-2 Aroclor-1016	52 UV
11104-28/2Aroclor-1221	110 00
11141-16-5Aroclor-1232	52 UV
53489-21-9Aroclor-1242	52
12672-29-6Aroclor-1248	52 U \
11097-69-1Aroclor-1254	52 UV
11096-82-5Aroclor-1260	52 UV
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PESTICIDE ORGANICS ANALYSIS DATA SHEET

SED-	18	
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Lab	Name:	NYTEST	ENV	INC		Contract:	<u>9521637</u>
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Lab Code: NYTEST Case No.: 26087 SAS No.: SDG No.: NYACK3

COMPOUND

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:

Injection Volume: 1.00 (uL)

CAS NO.

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

9001-35-2Toxaphene	210 U N/A
12674-11-2Aroclor-1016	210 W NV Grace
11104-28-2Aroclor-1221	84 U R
11141-16-5Aroclor-1232	41 UR
53469-21-9Aroclor-1242	41 UR
12672-29-6Aroclor-1248	41 WR
11097-69-1Aroclor-1254	42 UR
11096-82-5Aroclor-1260	42 UR

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	OTCOSTIT CO	UNITED TO	DVIV	SUPPL

					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 FXCFEDANCE

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

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/KG Q

		1
8001-35-2Toxaphene	210	- U
12674-11-2Aroclor-1016	41	עט
11104-28-2Aroclor-1221	84	UV
11141-16-5Aroclor-1232	41	עטן
53469-21-9Aroclor-1242	41	ט ע
12672-29-6Aroclor-1248	41	ĮυV
11097-69-1Aroclor-1254	60	PVN
11096-82-5Aroclor-1260	41	υV
	<u> </u>	i

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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.

	MW-8S	X-1	RPD
Compound			
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%.

Reviewed By

Approv**e**ď By

FEBYC Date

Date

Volatile Organic Analytical Data - Groundwater Orange & Rockland Utilities West Nyack, New York

Sampling Dates: December 26 and 27, 1995

10 10 10 10 10 10 10 10	Sample ID	EXW-4	EXW-5	MW-1	MW-5	MW-5B	9-MW	MW-7	MW-8	WW-8S	X-1	MW-9B	TB-1	TB-2
10														
10 10 10 10 10 10 10 10	Chloromethane	10 U	10 U	Ω 01	D 01	10 U	N 01	10 O	U 01	U 01	U 01	10 U	10 U	O 01
10	Bromomethane	10 U	D 01	D 01	D 01	10 U	O 01	10 C	D 01	10 0	10 U	10 01	10 O	10 C
10	Vinyl Chloride	4 J	4.5	D 01	D 01	10 U	10 U	10 U	10 U	D 01	10 U	10 0	10 O	D 01
10 10 10 10 10 10 10 10	Chloroethane	D 01	D 01	10 C	D 01	D 01	10 U	D 01	10 U	10 U	10 U	10 U	D 01	10 U
fight 10 UV 11 SV 10 UV <th< th=""><th>Methylene Chloride</th><th>N 01</th><th>15 UV</th><th>70 OI</th><th>20 02</th><th>10 UV</th><th>NO 91</th><th>N 01</th><th>10 UV</th><th>N 01</th><th>10 UV</th><th>10 UV</th><th>12 BV</th><th>13 BV</th></th<>	Methylene Chloride	N 01	15 UV	70 OI	20 02	10 UV	NO 91	N 01	10 UV	N 01	10 UV	10 UV	12 BV	13 BV
the total coal) 10 UV 10	Acetone	VD 01	11 SV	N 01	N 01	N 01	AST 9	10 UV	10 UV	AD 01	10 UV	10 UV	10 UV	10 UV
2 J 10 U	Carbon Disulfide	70 OV	10 UV	10 CV	10 UV	10 UV	10 UV	10 UV	10 UV	VO 01	NO 01	10 UV	10 CV	NO 01
there (total) 139 10 10 10 10 10 10 3 J 10 10 10 10 10 10 10 10 10 10 10 10 10	1,1-Dichloroethene	2.3	10 U	10 U	D 01	10 U	57	10 U	Г 6	49	51	10 U	10 U	D 01
three (total) 130 13 10 U	1,1-Dichloroethane	2.3	D 01	10 U	10 U	10 U	3 J	D 01	10 U	7.3	7.3	10 U	D 01	D 01
thane	1,2-Dichloroethene (total)	130	13	10 O	10 O	2	180	10 U	160	120	120	87	10 O	10 0
10 U 10 U	Chloroform	10 U	D 01	D 01	91	10 U	10 O	10 U	10 U	10 U	10 U	10 U	10 O	10 O
10 UV 10 UV <th< th=""><th>1,2-Dichloroethane</th><th>10 U</th><th>D 01</th><th>D 01</th><th>D 01</th><th>D 01</th><th>10 O</th><th>10 U</th><th>10 U</th><th>D 01</th><th>10 O</th><th>D 01</th><th>10 O</th><th>10 O</th></th<>	1,2-Dichloroethane	10 U	D 01	D 01	D 01	D 01	10 O	10 U	10 U	D 01	10 O	D 01	10 O	10 O
8 J 10 U 1 J 10 U 2 J 150 10 U 10	2-Butanone	10 UV	NO 01	10 C	10 U	70 OZ	10 UV	10 C	10 U	D 01	10 U	D 01	10 O	10 OV
the containe 10	1,1,1-Trichloroethane	8.	D 01	1.7	10 U	2 J	150	10 U	4	310 D	310 D	2 J	O 01	10 O
romethane 10 U	Carbon Tetrachloride	D 01	D 01	10 CI	D 01	D 01	10 U	10 U	10 U	D 01	10 O	D 01	10 U	10 O
ropane 10 U <	Bromodichloromethane	10 U	D 01	D 01	3 J	D 01	D 01	10 U	10 U	D 01	10 U	D 01	10 O	10 O
10 U 10 U <th< th=""><th>1,2-Dichloropropane</th><th>D 01</th><th>∩ 01</th><th>D 01</th><th>D 01</th><th>D 01</th><th>10 U</th><th>10 U</th><th>10 U</th><th>D 01</th><th>10 U</th><th>10 U</th><th>10 O</th><th>10 O</th></th<>	1,2-Dichloropropane	D 01	∩ 01	D 01	D 01	D 01	10 U	10 U	10 U	D 01	10 U	10 U	10 O	10 O
ne 170 14 10 U	cis-1,3-Dichloropropene	10 C	D 01	D 01	D 01	D 01	10 C	10 O	10 U	10 U	10 O	10 U	10 O	10 0
romethane 10 U	Trichloroethene	170	7	D 01	O 01	35	360 D	2 J	310 D	961	200 D	350 D	O 01	10 U
10 U 10 U <th< th=""><th>Dibromochloromethane</th><th>10 C</th><th>10 O</th><th>D 01</th><th>10 O</th><th>D 01</th><th>D 01</th><th>10 C</th><th>D 01</th><th>D 01</th><th>D 01</th><th>D 01</th><th>10 U</th><th>10 U</th></th<>	Dibromochloromethane	10 C	10 O	D 01	10 O	D 01	D 01	10 C	D 01	D 01	D 01	D 01	10 U	10 U
IoU IOU <th>1,1,2-Trichloroethane</th> <th>D 01</th> <th>10 U</th> <th>D 01</th> <th>10 O</th> <th>D 01</th> <th>D 01</th> <th>10 U</th> <th>D 01</th> <th>D 01</th> <th>D 01</th> <th>10 C</th> <th>10 O</th> <th>D 01</th>	1,1,2-Trichloroethane	D 01	10 U	D 01	10 O	D 01	D 01	10 U	D 01	D 01	D 01	10 C	10 O	D 01
Idot 10 U <th< th=""><th>Benzene</th><th>10 U</th><th>D 01</th><th>D 01</th><th>10 O</th><th>10 U</th><th>D 01</th><th>10 O</th><th>D 01</th><th>10 O</th><th>D 01</th><th>10 O</th><th>10 U</th><th>10 U</th></th<>	Benzene	10 U	D 01	D 01	10 O	10 U	D 01	10 O	D 01	10 O	D 01	10 O	10 U	10 U
10 U 10 U <th< th=""><th>trans-1,3-Dichloropropene</th><th>10 U</th><th>D 01</th><th>D 01</th><th>10 U</th><th>D 01</th><th>D 01</th><th>10 U</th><th>10 O</th><th>D 01</th><th>10 U</th><th>D 01</th><th>10 U</th><th>10 C</th></th<>	trans-1,3-Dichloropropene	10 U	D 01	D 01	10 U	D 01	D 01	10 U	10 O	D 01	10 U	D 01	10 U	10 C
10 U 10 U <th< th=""><th>Bromoform</th><th>10 U</th><th>D 01</th><th>D 01</th><th>10 U</th><th>D 01</th><th>D 01</th><th>D 01</th><th>10 C</th><th>D 01</th><th>D 01</th><th>10 U</th><th>10 O</th><th>D 01</th></th<>	Bromoform	10 U	D 01	D 01	10 U	D 01	D 01	D 01	10 C	D 01	D 01	10 U	10 O	D 01
10 U 10 U <th< th=""><th>4-Methyl-2-Pentanone</th><th>10 CI</th><th>D 01</th><th>D 01</th><th>O 01</th><th>D 01</th><th>D 01</th><th>D 01</th><th>D 01</th><th>10 C</th><th>D 01</th><th>D 01</th><th>10 U</th><th>D 01</th></th<>	4-Methyl-2-Pentanone	10 CI	D 01	D 01	O 01	D 01	D 01	D 01	D 01	10 C	D 01	D 01	10 U	D 01
hence 4 J 10 U 10 U 10 U 10 U 3 J 4 J 10 UV 4 JV 3 JV 3 JV 3 JV 3 JV 3 JV 3 JV 3 J	2-Hexanone	10 U	D 01	D 01	D 01	D 01	10 CI	10 O	O 01	D 01	D 01	D 01	10 U	D 01
Horoethane 10 U 10 U 10 U 10 U 10 U 10 U 10 U 10	Tetrachloroethene		D 01	N 01	AD 01	3.5	4 5	70 OZ	4 JV	3 JV	3 JV	S JV	10 UV	10 U
10 U 10 U	1,1,2,2-Tetrachloroethane	10 C	D 01	10 O	D 01	D 01	D 01	10 C	D 01	10 O	10 O	D 01	∩ 01	D 01
10 10 10 10 10 10 10 10 10 10 10 10 10 1	Toluene	10 O	D 01	2 J	10 U	D 01	D 01	10 O	10 U	O 01	0 01	10 O	D 01	10 U
001 001 001 001 001 001 001 001 001 001	Chlorobenzene	D 01	D 01	D 01	D 01	D 01	10 O	D 01	10 O	10 O	O 01	10 O	D 01	D 01
001 001 001 001 001 001 001 001 001 001	Ethylbenzene	10 O	10 U	9.	10 n	D 01	D 01	10 U	O 01	10 U	O 01	10 O	10 U	10 O
	Styrene	10 O	10 C	D 01	D 01	D 01	O 01	D 01	10 U	10 O	10 O	10 U	10 01	10 U
10 10 10 10 10 10 10 10 10 10 10 10 10 1	Xylene (total)	10 U	10 U	28	10 U	10 U	O 01	0.01	10 O	10 O	10 O	10 U	10 O	10 O

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.

JKU-WEDI NJACK

-SDG: NJACKI

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?

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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?

1/1

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".

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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?

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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 preservation, contact sampler to determine whether or not samples were preserved.

The holding time for soils is 10 days.

Table of Holding Time Violations

Sample ID	Sample Matrix	Preserved?	Date	Traffic R Date Lab Received	Date
		· · · · · · · · · · · · · · · · · · ·			

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).

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YES NO N/A

3.0	System Monitoring Compound (SMC) Recovery ()	Form II	n n	
3.1	Are the VOA SMC Recovery Summaries (Form II) for each of the following matrices:) prese	ent	
	a. Low Water	$\sqrt{1}$		
	b. Low Soil	\Box		/
	c. Med Soil	ப		
3.2	Are all the VOA samples listed on the appropriate Monitoring Compound Recovery Summary of the following matrices:	priate for ea	ach	
	a. Low Water	1 √1		
	b. Low Soil	11		<u>\(\) \(\)</u>
	c. Med Soil	1		
	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?	<u>[/]</u>		
•	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?	_	П	
	If yes, were samples re-analyzed?	\Box		
	Were method blanks re-analyzed?	\Box		_

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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% :

- Flag all positive results as estimated ("J").
- 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√7 -

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

			Date: J Revisio		1992
			. ¥	ES NO	N/A
4.2			zed at the required ne following matrice		
	a. I	ow Water		1 √1	
	b. I	ow Soil		1	
	c. M	led Soil		17	
ACTI		of any matrix spike the action specific	e data are missing, ed in 3.2 above.	take	
4.3	How ma		veries are outside Q	С	
		Water	Soils		
		out of 10	N/A out of	10	
4.4			ix spike and matrix e outside QC limits?		
		<u>Water</u>	<u>Soils</u>		
			N/A out of	5	
	ACTION	data alone. Howe professional judgments may be a with other QC co	ken based on MS/MSD ever, using informed dgement, the MS/MSD used in conjunction riteria to determine alification of the		
5.0	Blanks	(Form IV)			
5.1	Is the	e Method Blank Sum nt?	mary (Form IV)	ार्रा	
5.2	of VOX	been analyzed for mples of similar moil, medium soil),	each SDG or every	<u>ı√ı</u>	

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> 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. 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?

r/1

Use professional judgement to ACTION:

determine the effect on the data.

6.0 Contamination

"Water blanks", "drill blanks", and distilled water NOTE: 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.

- 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.
- Do any field/trip/rinse blanks have positive 6.2 VOA results (TCL and/or TIC)?

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

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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).

but < 10x blank	Sample conc < CRQL & <10x blank value	Sample conc > CRQL & >10x blank value
value		

Methylene					
Chloride F Acetone v Toluene		result	Report CRQL qualify "U"	£	No qualification is needed
2-Butanone	•		•		

_	Sample conc < CRQL &	_ •
but < 5x blank	is < 5x blank value	value 2 > 5x blank value

Other	Flag sample result	Report CRQL &	No qualification
Contam-	with a "U"	qualify "U"	is needed
inante			

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration criteria.

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YES NO N/A

	· ·			
ACTION:	For TIC compounds, if the concentration in sample is less than five times the concentration the most contaminated associated blank, flasample data "R" (unusable).	ration i	n	
6.3	Are there field/rinse/equipment blanks associated with every sample?	₁ √₁	_	
ACTION:	For low level samples, note in data assessmenter is no associated field/rinse/equipme Exception: samples taken from a drinking wado not have associated field blanks.	ent blan	ik.	
7.0	GC/MS Instrument Performance Check (Form V)	L .		
7.1	Are the GC/MS Instrument Performance Check Forms (Form V) present for Bromofluorobenze (BFB)?	ene 1	_	
7.2	Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the BFB provided for each twelve hour shift?	<u>1√</u> 1		
7.3	Has an instrument performance compound been analyzed for every twelve hours of sample analysis per instrument?	<u>τ γ</u>	*********	

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YES NO N/A

		ACTION:	sample	analys:	me, instrument ID, is for which no /MS tuning data ar			
Di	ATE	TI	ME	- 1	INSTRUMENT	SAMPL	E NUMBERS	
_				• • •				_
_		_						
ACTIO	N:	data ge	nerated	provide l outsid nterval.	missing data, rej e an acceptable tw	ect ("R") a	.11	
7	. 4	Have th	e ion a	bundanc	es been normalized	I to		
		ACTION:	qualit	ss assig fy all a ole (R).	nment is in error, ssociated data as	,		
7	. 5	Have the	ne ion a	abundanc nt used?	e criteria been me	et for M		
		ACTION	abunda	all data ance cri ate shee	which do not meet teria (attach a et).	t ion		
		ACTION	met.	n abunda the Regi tified.	ance criteria are s ion II TPO must	n ot		
7	7.6	L		PIETE AI	ription/calculation and Form Vs? (Check cors are found, ch	,,	г, —	•

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	·				•	•	YES	NO	N/A	-
	7.7		e approp	riate nu een repo	mber of sign	nificant	<u>.√</u>	1		
		ACTION:	necessa	tion/rest Ty correc	exist, call ubmittal, mattions and dassessments.	ike locument	r			
	7.8	Are the compoun	spectra d accepta	of the rable?	mass calibra	tion	1\	1		_
		ACTION:	determin	ne whether be accept	l judgement er associate ted, qualifi	d data				
. 0		Target	Compound	List (To	CL) Analytes	L				
	8.1	present	with red	Analysis quired he	Data Sheet mader inform collowing:	s (Form	I VO	A) h		
		a. Sa	mples and	d/or frac	ctions as ap	propriat	:e <u>/</u>	1		
			trix spi) plicates	kes and m	matrix spike		11	1		_
		c. Bla	anks				1	1		_
•	8.2	mass spedata sy	ectra for stem prin	r the identouts (G	ed Ion Chromentified com Quant Report each of the	pounds, s) inclu	and ded	the		
		a. Sa	mples and	d/or frac	ctions as ap	propriat	:• <u>/</u>	1		_
		b. Mar du	trix spi) plicates	kes and m (Mass sp	matrix spike pectra not r	equired)	11	1		
		c. Bla	anks				1	1		
		ACȚION:	If any o	data are ed in 3.2	missing, ta 2 above.	ke actio	מס			

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	Y	ES NO	N/A	-
8.3	Are the response factors shown in the Quant Report?	1/1		
8.4	Is chromatographic performance acceptable was respect to:	ith		
	Baseline stability?	1/1		
	Resolution?	√7		
	Peak shape?	1/1		
	Full-scale graph (attenuation)?	$\overline{1}$		
	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?	<u></u>		
	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?	<u>[√]</u>		
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?	乊		

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YES NO N/A

8.8 Do sample and standard relative ion intensities agree within 20%?

<u>1√1</u>

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 <u>Tentatively Identified Compounds (TIC)</u>

- 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.

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YES NO N/A

9.3 Are any TCL compounds (from any fraction)
listed as TIC compounds (example: 1,2dimethylbenzene 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: CO₂ (M/E 44), Siloxanes (M/E 73) Hexane, Aldol Condensation Products, Solvent Preservatives, and related by products - see Functional Guidelines for more guidance).

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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.

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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?

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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?

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r/ 1	
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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).

Date: January 1992 Revision: 8

YES NO N/A

•	·
12.	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.
٠	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.

			Revision	on: 8		
			YE	S NO I	N/A	
13.4 Do any 1	volatile compo	unds have	a RRF <0.05?	फ -		
ACTION:	Circle all o	utliers :	in red.			
ACTION:	If the RRF < non-detects associated p	as unusal	alify associate ble (R) and "J" values.	đ		
errors factors initial	RRF) or *dif and continuin ues but if err	ng of av ference ng RRFs?	erage response (%D) between (Check at least		<u>₁√ı</u> —	
ACTION:	Circle errors	in red.				
ACTION:	If errors are explanation/necessary con errors under	resubmitt rrections	al, make any and note			
14.0 <u>Interna</u>	1 Standard (Fo	orm VIII)	-			
of ever and low	e internal star y sample and leer limits (-5) ning calibration	blank wit 0% to + 1	eas (Form VIII) thin the upper 100%) for each	īŲ		
ACTION:	List all the	outliers	s below.			
Sample # In	nternal Std	Area	Lower Limit	Upper	Limit	
					·	
					,	

(Attach additional sheets if necessary.)

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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.
 - 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?

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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?

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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.

Q

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)

CONCENTRATION UNITS:
CAS NO. COMPOUND (ug/L or ug/Kg) UG/L

74-87-3-----Chloromethane 10 U 74-83-9-----Bromomethane 10 וט 75-01-4-----Vinyl Chloride J 4 75-00-3-----Chloroethane 10 U 75-09-2-----Methylene Chloride 10 VIE 67-64-1-----Acetone 10 U 75-15-0-----Carbon Disulfide 10 U 75-35-4----1,1-Dichloroethene 2 J 75-34-3-----1,1-Dichloroethane 2 540-59-0----1,2-Dichloroethene (total) 130 67-66-3-----Chloroform Ū 10 107-06-2----1,2-Dichloroethane 10 U 78-93-3----2-Butanone U 10 71-55-6----1,1,1-Trichloroethane -7 J 56-23-5-----Carbon Tetrachloride 10 U 75-27-4-----Bromodichloromethane 10 U 78-87-5----1,2-Dichloropropane U 10 10061-01-5----cis-1,3-Dichloropropene 10 79-01-6-----Trichloroethene 170 124-48-1-----Dibromochloromethane $\overline{\mathtt{U}}$ 10 79-00-5-----1,1,2-Trichloroethane U 10 71-43-2----Benzene 10 U 10061-02-6----trans-1,3-Dichloropropene 10 U 75-25-2-----Bromoform 10 U $108-10-1-----4-Methyl-\overline{2-Pentanone}$ 10 U 591-78-6----2-Hexanone 10 U 127-18-4-----Tetrachloroethene J 79-34-5----1,1,2,2-Tetrachloroethane 10 U 108-88-3-----Toluene U 10 108-90-7-----Chlorobenzene 10 U U 100-41-4-----Ethylbenzene 10 100-42-5----Styrene 10 U 1330-20-7-----Xylene (total) 10

FORM I VOA

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1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

	XW-4	
r	-WM-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. _____

Number TICs found: 0 √

Data Analyzed: 12/28/95

GC Column: CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: ____(uL)

Soil Aliquot Volume: (uL)

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

1.	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
3. — 5. — 6. — 7. — 8. — 9. — 10. — 11. — 12. — 13. — 14. — 15. — 16. — 17. — 19. — 20. — 21. — 22. — 23. — 24. — 25. — 26. — 27. — 28. — 29. —	1				
3. — 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. —	2.				
5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19	3.				
6.	* • • • • • • • • • • • • • • • • • • •				
7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29.	J.				
8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29.	· ,				
9.	/·				
10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29.	0.			<u> </u>	
12.	10.				
13.					
14.	14.			-	
14					
16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29.	14.				
18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29.	15.				
18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29.	16				
19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29.					
20. 21. 22. 23. 24. 25. 26. 27. 28. 29.					
22. 23. 24. 25. 26. 27. 28. 29.	±2.				
22. 23. 24. 25. 26. 27. 28. 29.	21				
23. 24. 25. 26. 27. 28. 29.	22.				
24. 25. 26. 27. 28. 29.	23.				
26. 27. 28. 29.	24.				
27. 28. 29.	43.				
28	∠ 0. I				
29.	41.	di-			
29.	40.				
JU.	49.				
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EXW-5

Lab Name: NYTEST ENV INC Contract: 9521637

COMPOUND

CAS NO.

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)

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

!	1			1
74-87-3Chloromethane		10	ט	
74-83-9Bromomethane		10	ט	
75-01-4Vinyl Chloride		4	J	
75-00-3Chloroethane		10	Ū	
75-09-2Methylene Chloride		15	ى ل	
67-64-1Acetone		11	3	Ù
75-15-0Carbon Disulfide		10	Ū	
75-35-41,1-Dichloroethene		10	Ū	1
75-34-31,1-Dichloroethane		10	Ü	
540-59-01,2-Dichloroethene (to	otal)	13		
67-66-3Chloroform	—	10	Ū	
107-06-21,2-Dichloroethane		10	Ū	
78-93-32-Butanone		10	Ü	
71-55-61,1,1-Trichloroethane		10	Ü	
56-23-5Carbon Tetrachloride	 .	10	Ū	<u> </u>
75-27-4Bromodichloromethane		10	บ	
78-87-51,2-Dichloropropane		10	Ü	
10061-01-5cis-1,3-Dichloroproper		10	Ü	
79-01-6Trichloroethene		14	J	
124-48-1Dibromochloromethane		10	<u>U</u>	
79-00-51,1,2-Trichloroethane		10	Ŭ	
71-43-2Benzene		10	Ŭ	
10061-02-6trans-1,3-Dichloropro	pene	10	Ü	
75-25-2Bromoform		10	ַ	
108-10-14-Methyl-2-Pentanone		10	ט	
591-78-62-Hexanone		10	Ū	
127-18-4Tetrachloroethene		10	ប	
79-34-51,1,2,2-Tetrachloroet	nane	10	Ū	
108-88-3Toluene		10	U	
108-90-7Chlorobenzene		10	Ū	
100-41-4Ethylbenzene		10	Ū	
100-42-5Styrene		10	Ū	
1330-20-7Xylene (total)		10	Ū	
			_	
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NYSDEC SAMPLE NO.

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: 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.				 -
T.				
5				
6. 7.				
8				
10.				
1 11.				
12.				
14.				
1 +				
16. 17.				
1 10.				
19.				
41.				
22.				
24.				
25				
21.				
40.				
29. 30.				



Lab Name: NYTEST ENV INC Contract: 9521637

MW-1

Case No.: 26073 SAS No.:

SDG No.: NYACK

Matrix: (soil/water) WATER

Lab Sample ID: 2607306

Sample wt/vol:

Lab Code: NYTEST

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)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L

74-87-3Chloromethane	10	7.7
74-83-9Bromomethane	10	U U
75-01-4Vinyl Chloride	10	ט
75-00-3Chloroethane	10	Ü
75-09-2Methylene Chloride		
67-64-1Acetone	10 9	
75-15-0Carbon Disulfide	10	Ü
75-35-41,1-Dichloroethene	10	ū
75-34-31,1-Dichloroethene	10	Ü
540 50 0 1 2 Pinhlame	10	ū
540-59-01,2-Dichloroethene (total)	10	Ŭ
67-66-3Chloroform	10	U
107-06-21,2-Dichloroethane	10	ט
78-93-32-Butanone	10	ט
71-55-61,1,1-Trichloroethane	1	J
56-23-5Carbon Tetrachloride	10	ט
75-27-4Bromodichloromethane	10	ן די
78-87-51,2-Dichloropropane	10	ן ט
10061-01-5cis-1,3-Dichloropropene	10	U
79-01-6Trichloroethene	10	U
124-48-1Dibromochloromethane	10	ן ט
79-00-51,1,2-Trichloroethane	10	ט
71-43-2Benzene	10	U
10061-02-6trans-1,3-Dichloropropene	10	U
75-25-2Bromoform	10	U
108-10-14-Methyl-2-Pentanone	10	ַ
591-78-62-Hexanone	10	יט
127-18-4Tetrachloroethene	10	ט
79-34-51,1,2,2-Tetrachloroethane	10	U
108-88-3Toluene	2	J
108-90-7Chlorobenzene	10	ט
	9	J
100-41-4Ethylbenzene	7 1	
100-41-4Ethylbenzene 100-42-5Styrene	- 1	ן ט
100-41-4Ethylbenzene 100-42-5Styrene 1330-20-7Xylene (total)	10 28	

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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

		7	ENT	TIVELY	IDENTIFIED	COMPOUNT	os	
Tab	Mama	YEARTH CITE	TOTAL P	TYC	_			MW-1
Lab	Name:	NYTEST	EMA	INC	CC	ontract:	9521637	1

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)

CONCENTRATION UNITS:

Number TICs found: 9 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 2.	UNKNOWN UNKNOWN	3.763 3.784	7 9	J J
3. 4.	UNKNOWN HYDROCARBON UNKNOWN	5.145 5.486	6 8	J J
5. 6.	UNKNOWN UNKNOWN AROMATIC	6.899 18.182	9	J J
7.	UNKNOWN AROMATIC	18.894	7	J
8.	UNKNOWN AROMATIC UNKNOWN AROMATIC	19.213 21.070	18 7	J J
10				
11. 12.				
14.				
1 10.				
16. 17.				
19.				
21.				
44.				
23. 24.				
26.				
27				
29.				
30				

NYSDEC ASP 12/91

000042

Lab Name: NYTEST ENV INC Contract: 9521637

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

COMPOUND

CAS NO.

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

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

74-87-3-----Chloromethane 10 74-83-9-----Bromomethane 10 U 75-01-4-----Vinyl Chloride U 10 75-00-3-----Chloroethane U 10 75-09-2-----Methylene Chloride 10 9 U m 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 Ū 10 78-93-3-----2-Butanone U 10 71-55-6-----1,1,1-Trichloroethane U 10 56-23-5-----Carbon Tetrachloride U 10 J 75-27-4-----Bromodichloromethane 3 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 10 75-25-2-----Bromoform 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

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NYSDEC ASP 12/91

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100-42-5-----Styrene

1330-20-7-----Xylene (total)_

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

MW -5

Lab Name: NYTEST ENV INC Con	ntract:
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Lab Code: NYTEST Case No.: 26073 SAS No.:

9521637

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.

Number TICs found: 0/

Data Analyzed: 12/28/95

GC Column:CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Aliquot Volume: ____(uL)

Soil Extract Volume: ____(uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16.			
2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15.			
4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15.			
5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15.	 		
6. 7. 8. 9. 10. 11. 12. 13. 14. 15.			
7. 8. 9. 10. 11. 12. 13. 14. 15.	 		
8. 9. 10. 11. 12. 13. 14. 15. 16.			
9. 10. 11. 12. 13. 14. 15. 16.	 		
11. 12. 13. 14. 15. 16.	 		
11. 12. 13. 14. 15.			
12. 13. 14. 15. 16.	 		
13. 14. 15. 16.	 		
14. 15. 16.			
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1 10.			
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FEB 96 NYSDEC ASP 12/91

000058

NYSDEC SAMPLE NO.

MW-5B

Lab Name: NYTEST ENV INC Contract: 9521637

COMPOUND

CAS NO.

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

Date Received: 12/27/95 Level: (low/med) LOW

Date Analyzed: 12/28/95 % Moisture: not dec.

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

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

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

10 74-87-3-----Chloromethane υİ 10 74-83-9-----Bromomethane טו 10 75-01-4-----Vinyl Chloride U 10 75-00-3-----Chloroethane U 3 75-09-2-----Methylene Chloride 10 67-64-1-----Acetone 10 U 75-15-0-----Carbon Disulfide 10 U 10 U 75-35-4----1,1-Dichloroethene 10 U 75-34-3----1,1-Dichloroethane 24 540-59-0----1,2-Dichloroethene (total) Ū 10 67-66-3-----Chloroform U 107-06-2----1,2-Dichloroethane 10 עוט 10 78-93-3----2-Butanone J 2 71-55-6-----1,1,1-Trichloroethane_ 10 U 56-23-5-----Carbon Tetrachloride 10 U 75-27-4-----Bromodichloromethane U 10 78-87-5----1,2-Dichloropropane U 10 10061-01-5----cis-1,3-Dichloropropene 79-01-6-----Trichloroethene 35 Ū 124-48-1-----Dibromochloromethane 10 U 79-00-5-----1,1,2-Trichloroethane 10 U 10 71-43-2----Benzene U 10061-02-6----trans-1,3-Dichloropropene 10 U 10 75-25-2-----Bromoform U 108-10-1----4-Methyl-2-Pentanone 10 U 10 591-78-6----2-Hexanone J 3 127-18-4-----Tetrachloroethene U 79-34-5----1,1,2,2-Tetrachloroethane 10 U 10 108-88-3-----Toluene U 10 108-90-7-----Chlorobenzene U 10 100-41-4-----Ethylbenzene U 10 100-42-5-----Styrene 1330-20-7-----Xylene (total)

> $(\mathcal{L}_{\mathcal{M}})$ RFEB96 NYSDEC ASP 12/91

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

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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.

Number TICs found: 0 /

Data Analyzed: 12/28/95

GC Column:CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Aliquot Volume: (uL)

Soil Extract Volume: ____(uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1				
2.				
J				
4.		_		
5				
6				
7.		_		
J.				
10.				·
		_		
12.		_		
13.				
14.				-
16.				
±/.				
10.				
				
20.		_		
41.				
22.		_		
23.				
25.				
20.		_		
41.		-		
28.		_		
29		_		
30		_		

NYSDEC ASP 12/91

000064

VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NYTEST ENV INC Contract: 9521637

SDG No.: NYACK Case No.: 26073 SAS No.:

Matrix: (soil/water) WATER

Lab Sample ID: 2607810

Lab Code: NYTEST

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)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L CAS NO. COMPOUND

74-87-3	10 10 10 10 10 10 10 10 10 57 3 180 10 10 10 10 10 10 10 10 10 10 10 10 10	ממממממממממ
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TRICHLORDETHENE RESULT REPORTED HAS N TRANSFERRED FROM THE FORM I FOR E ANALYSIS OF MW-LD FORM FVORX DILUTION SAMPLE MW-6.

NYSDEC ASP 12/91

000070

Number TICs found: 0

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

1E

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)

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

RT EST. CONC. Q COMPOUND NAME CAS NUMBER 3._ 9.__ 10.__ 11.____ 12. 13. 15. 16. 18. ____ 19. 20.__ 21.__ 22.__ 23.____ 24.____ 25. 26. _ 27.__ 28.__ 29._____ 30.__

> OMN 8 FEB9L NYSDEC ASP 12/91 000071

MW-6DL Nab 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 N5970.D Sample wt/vol: 5.0 (g/mL) ML Lab File ID: Date Received: 12/27/95 Level: (low/med) LOW Date Analyzed 12/29/95 % Moisture: not dec. _____ Dilution Factor: 5.0 / GC Column:CAP ID: 0.53 (mm) Soil Extract Volume (uL) · Soil Aliquot Volume: ____(uL) CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L COMPOUND Q CAS NO. 50 74-87-3-----Chlokomethane U 50 74-83-9-----Bromomethane 50 U 75-01-4-----Vinyl Chloride 50 U 75-00-3-----Chloroethane UBDV 110 75-09-2-----Methylene Chloride U 50 67-64-1-----Acetone U 75-15-0-----Carbon Disulfide/ 50 75-35-4-----1,1-Dichloroethene 60 D 50 U 75-34-3-----1,1-Dichloroet/hane 540-59-0-----1,2-Dichloroethene (total) 230 D 50 U 67-66-3-----Chloroform U 50 107-06-2----1,2-Dichloroethane U 50 78-93-3-----2-Butanope 71-55-6------1,1,1-Trichloroethane 56-23-5-----Carbon Tetrachloride D 200 U 50 U 50 75-27-4-----Bromodichloromethane U 50 78-87-5-----1,2/Dichloropropane U 10061-01-5----cis-1,3-Dichloropropene 50 (360 79-01-6-----Trichloroethene D50 50 U U 50 50 U 50 U 50 U 108-10-1-/----4-Methyl-2-Pentanone_ Ŭ 591-78-6/----2-Hexanone 50 7 JD 127-18/4-----Tetrachloroethene U 60 79-34/5-----1,1,2,2-Tetrachloroethane_ U **5Q** 108-68-3-----Toluene U 50 109-90-7-----Chlorobenzene U 50 100-41-4-----Ethylbenzene U 50 100-42-5-----Styrene 50 1330-20-7-----Xylene (total)

THE TRICHLORDETHENE RESULT REPORTED HAS BEEN TRANSFERRY TO THE FORM I FOR THE ORIGINAL, UNDILUTED ANALYSIS OF

SAMPLE MW-6. ami

FORM I VOA

OFED94

NYSDEC ASP 12/91

000079

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Contract: 9521637

MW-6DL

NYSDEC SAMPLE NO.

Lab Code: NYTEST Case No.: 26073 SAS No.:

GC Column:CAP

SDG No.: NYACK

Matrix (soil/water) WATER

Level: (low/med) LOW

Lab Name: NYTEST ENV INC

Sample wt vol: 5.0 (g/mL) ML

% Moisture: not dec.

Lab File ID:

N59/10.D

Date Received: 1/2/27/95

Data Analyzed: 12/29/95

Lab Sample ID: 260781/0

Dilution Factor: 5.0

Soil Alaquot Volume: ____(uL)

Soil Extract Volume:

CONCENTRATION UNITS: (ug/L or /dg/Kg) UG/L Number TICs found: 0

ID: 0.53 (mm)

____(uL)

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1				
4.				
5. 6. 7.				
9				
10. 11. 12.				
14.				
15. 16. 17.				
18				
20.				
23. 24. 25.				
26.				
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8FEB96

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

MW-7

Lab Name: NYTEST ENV INC

COMPOUND

CAS NO.

Contract: 9521637

SDG No.: NYACK Lab Code: NYTEST Case No.: 26073 SAS No.:

Lab Sample ID: 2607305 Matrix: (soil/water) WATER

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8601.D

Date Received: 12/27/94 Level: (low/med) LOW

Date Analyzed: 12/28/95/ % Moisture: not dec. _____

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

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

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

74-87-3-----Chloromethane 10 U 10 74-83-9-----Bromomethane U 10 75-01-4------Vinyl Chloride U 10 75-00-3-----Chloroethane 9 U -23 i 75-09-2-----Methylene Chloride___ ios 10 U 67-64-1-----Acetone 75-15-0-----Carbon Disulfide 10 U 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) U 10 67-66-3-----Chloroform U 10 107-06-2----1,2-Dichloroethane U 10 78-93-3----2-Butanone U 71-55-6-----1,1,1-Trichloroethane 10 U 10 56-23-5-----Carbon Tetrachloride U 10 75-27-4-----Bromodichloromethane U 10 78-87-5----1,2-Dichloropropane U 10061-01-5----cis-1,3-Dichloropropene 10 J 79-01-6----Trichloroethene U 10 124-48-1-----Dibromochloromethane U 10 79-00-5-----1,1,2-Trichloroethane_ U 10 71-43-2----Benzene U 10061-02-6----trans-1,3-Dichloropropene 10 U 10 75-25-2-----Bromoform U 108-10-1-----4-Methyl-2-Pentanone 10 U 10 591-78-6----2-Hexanone עוט 127-18-4-----Tetrachloroethene 10 79-34-5-----1,1,2,2-Tetrachloroethane 10 U 10 U 108-88-3-----Toluene U 10 108-90-7-----Chlorobenzene U 10 100-41-4-----Ethylbenzene U 10 100-42-5----Styrene 1330-20-7-----Xylene (total)

> (MU) 7 FE096

1E

NYSDEC SAMPLE NO.

VOLATILE	ORGAN	IICS	ANALYS	[S	DATA	SHEE	T
TENTAT:	[VELY	IDE	TIFIED	CC	MPOUN	NDS	

Lab Name: NYTEST ENV INC Contract: 9521637

Case No.: 26073 SAS No.:

SDG No.: NYACK

Matrix: (soil/water) WATER

Lab Sample ID: 2607305

Sample wt/vol: 5.0

Lab Code: NYTEST

(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)

CONCENTRATION UNITS:

Number TICs found: 0/ (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	
1				
J - J				
4. 5				
7.				
9.				
11.				
13.	-			
14.				
17.				
19.				
20				
23.				
25.				
27.				
28.				
30				

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)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

74-87-3Chloromethane	10 U 10 U 10 U
75-01-4Vinyl Chloride 75-00-3Chloroethane	10 U
75-09-2Methylene Chloride 67-64-1Acetone	10 り U 那 V
75-15-0Carbon Disulfide	10 U V 9 J
75-35-41,1-Dichloroethene	10 ט
540-59-01,2-Dichloroethene (total) 67-66-3Chloroform	160 10 U
107-06-21,2-Dichloroethane	10 U
78-93-32-Butanone 71-55-61,1,1-Trichloroethane	44
56-23-5Carbon Tetrachloride	10 U
78-87-51,2-Dichloropropane 10061-01-5cis-1,3-Dichloropropene	10 U
79-01-6Trichloroethene	コ(め 270 D 日
124-48-1Dibromochloromethane	10 U 10 U
71-43-2Benzene 10061-02-6trans-1,3-Dichloropropene	10 U
75-25-2Bromoform	10 U
108-10-14-Methyl-2-Pentanone 591-78-62-Hexanone	10 U
127-18-4Tetrachloroethene 79-34-51,1,2,2-Tetrachloroethane	4 J V
108-88-3Toluene 108-90-7Chlorobenzene	10 U
100-41-4Ethylbenzene	10 U
100-42-5Styrene 1330-20-7Xylene (total)	10 U
4-1	

TRICHLORDETHENE RESULT REPORTED HAS BEEN TRANSFERRED ROM THE FORM I FOR MW-8DL, A 5X DILUTION OF SAMPLE MW-8.

FORM I VOA

UMA N 7 FED96

NYSDEC ASP 12/91 000091

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

name:	MITEDI	ETTA A	TIAC

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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2.				
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4. 5.				
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11.				
14.				
13.			·	
14.				
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41.				
22.				
23. 24.				
25.				
1 26.				
4 41.				
28.				
30				
1		l	I	I

6 FEB94

VOLATILE ORGANICS ANALYSIS DATA SHEET 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: Lab File ID: P8621.D 5.0 (g/mL) ML Date Received: 12/27/94 Level: (low\med) LOW Date Analyzed:/12/29/95/ % Moisture: not dec. Dilution Factor: 5.0/ GC Column:CAP ID: 0.53 (mm) Soil Extract Volume: ____(uL) Soil Aliquot Volume: ____(uL) CONCENTRATION UNITS:

CAS NO.	сомьолир	(ug/L or ug/	Kg) UG/L		Q
74 07 2	Chloromethane			50	U
	Bromomethane			50	Ü
	Vinyl Chlorid			50	Ü
	Chloroethane	=		50	Ü
				86 1	
	Methylene Chi			50	ים כי וט
67-64-1				50	Ü
	Carbon Disulf			38	ъ
	1,1-Dichloroe			50	טט
	1,1-Dichloroe				ם
	1,2-Dichloro	thene (total)		200	ט
	·Chloroform			50	
	1,2-Dichloroe	thane		50	ָּ <u>ט</u>
	2-Butanope			50	ַ
71-55-6	1,1,1-Tyrichlo	roethane		43	JD
56-23-5	Carbon/Tetrac	hloride		50	ט
	Bromodichloro			50	ט
	1,2/Dichlorop		\	50	ט
	cig-1,3-Dichl			50	
79-01-6	Trichloroethe	ne		(310)	
124-48-1	Dibromochloro	methane		50	Ū
79-00-5	/-1,1,2-Trichlo	roethane		50	ַ
	/Benzene			26	JD
10061-02-6	/trans-1,3-Dic	hloropropene	\	50	ט
	Bromoform		·	∖ 50	บ
108-10-1-/	4-Methyl- 2-P e	ntanone		\50	ן ט
591-78-6/	2-Hexanone			50	ע
127-18-4	Tetrachloroet	hene		50	U
79-34/5	1,1,2,2-Tetra	chloroethane		50	ับ
108-88-3	Toluene			24	$/ \varpi$
108-90-7	Chlorobenzene			25	ŹΦ
100-41-4	Ethylbenzene_	······································		50	JŲ.
100-42-5	Styrene			50	ט
	Xylene (total	<u> </u>		50	ַ
1330-20-7	Ayrene (cocar	·		}	

IE TRICHLOROETHENE RESULT REPORTED HAS BEEN TRANSFERRE TO THE FORM I FOR THE DRIGINAL, UNDILUTED ANALYSIS OF

SAMPLE MW-8. CLMN

FORM I VOA

NYSDEC ASP 12/91

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab	Name:	NYTEST	ENV	INC	Contract:	9521637

Contract: 9521637

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Date Received: 1/2/27/94

Data Analyzed: 12/29/95

Dilution Factor: 5.0

Lab Sample ID: 2607394

NYSDEC SAMPLE NO.

MW-8DL

Matrix: (soil/water) WATER

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P86/21.D

Level: (low/med) LOW

% Moisture: not dec. _____

GC Column:CAP

Soil Extract Volume: ____(uL)

Number TICs found: 0

ID: 0.53 (mm)

Soil Aliquot Volume: (uL)

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

COMPOUND NAME RT EST. CONC. Q CAS NUMBER _____ 10. 11. 12._ 13. 15. 16. 17. 18. 22. 23. 24._ 25.__ 26._ 27. 28. 29/ 36.

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1A VOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: NYTEST ENV INC Contract: 9521637

MW-8S

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)

CONCENTRATION UNITS:

CAS NO.	COMPOUND	(ug/L or ug/Kg) UG/L	Q

1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
74-87-3	10 U 10 U 10 U 10 U 10 U 10 U	j J
75-15-0	10 U V 49 J 120 U 10 U	1
78-93-32-Butanone 71-55-61,1,1-Trichloroethane 56-23-5Carbon Tetrachloride 75-27-4Bromodichloromethane 78-87-51,2-Dichloropropane	10 U 310 310 D B 10 U 10 U 10 U 10 U	
10061-01-5cis-1,3-Dichloropropene	190 10 U 10 U 10 U 10 U	
75-25-2Bromoform 108-10-14-Methyl-2-Pentanone 591-78-62-Hexanone 127-18-4Tetrachloroethene 79-34-51,1,2,2-Tetrachloroethane 108-88-3Toluene	10 U 10 U 10 U 3 J 10 U	J
108-90-7Chlorobenzene 100-41-4Ethylbenzene 100-42-5Styrene 1330-20-7Xylene (total)	10 U 10 U 10 U 10 U	

THE 1,1,1 - TRICHLORDETHANE RESULTS REPORTED HAS BEEN TRANSFERRE -FROM THE FORM I FOR MW-85 DL, A 5X DILUTION OF SAMPLE MW-8

FORM I VOA

NYSDEC ASP 12/91 000107

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC	SAMPLE	NO
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MW-8S	
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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. _____

Number TICs found: 0 /

Data Analyzed: 12/28/95

GC Column:CAP

ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Aliquot Volume: ____(uL)

Soil Extract Volume: ____(uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	
1.			
2. 3.			
4. 5.			
6. 7.			
8.			
9.			
12.			
13.			
15.			
⊥/.			
18.			
20			
22.			
25.			
26.			
28. 29.			
30.			

6 FEB96

Soil Aliquot Volume: ____(uL)

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7 FEB96

	CAS NO.	COMPOUND	CONCENTRATION U		Q
	74-87-3 74-83-9	-Bromomethane		50 50	עט
	75-00-3	-Methylene Chloric	de	50 50 76 50	7 GE 7
3	75-15-0 75-35-4 75-34-3	-Carbon DisuNide -1,1-Dichloroether -1,1-Dichloroethar	ne	50 56 50	ם
	67-66-3 107-06-2 78-93-3	-1,2-Dichloroethan -2-Butanone	ne	140 50 50 50	ם ע מ ע
	56-23-5 75-27-4	-1,1,1-Trichloroe -Carbon Tetrachlorometlorometlorometloropropa	ride hane	310 50 50 50	a a a b
,	10061-01-5 79-01-6 124-48-1	-cis-1,3-Dichloro -Trichloroethene -Dibromochloromet	propene	50 190 50	D D U
	71-43-2/	-1,1,2-Trichloroe -Benzene -trans-1,3-Dichloroe -Bromoform	,	50 50 50 50	0 0
	108-10-1/ 591-78-6 127-18-4	-4-Methyl-2-Penta -2-Hexanone -Tetrachloroethen	e	50 50 50 60	ט ט ט
•	108-88-3 108-90-7 100-41-4	Chlorobenzene	oroechane	50 50 50	מממ
. /		Xylene (total)		50 50	Q G
TRANSFE	TRICHLOROR TO	THANE RESULTINE FORM I	T REPORTE	ORIGIN	DELN'

UNDILUTED ANAWSIS OF FORM I VOA SAMPLE MW-85. NYSDEC ASP 12/91

Soil Extract Volume: ____(uL)

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Contract: 9521637

MW-8SDL

NYSDEC SAMPLE NO.

Lab Code: NYTEST Case No.: 26073 SAS No.:

SDG No.: NYACK

Matrix: \(soil/water\) WATER

Lab Name: NYTEST ENV INC

Lab Sample ID: 2607393

Sample wt/ $\sqrt[4]{q}$: 5.0 (g/mL) ML

Lab File ID: P86/22.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				
2. 3.				
5.				
6. 7.		-		
0.				
9.				
12.				
13		-		
15.				
16. 17.				
18.				
21.				
22.		-		
24.				
26.				
27.				$\overline{}$
28. 29. 30.				$\overline{}$
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			(FWI)	

FORM I VOA-TIC

NYSDEC ASP 12/91

000116

X-1

Lab Name: NYTEST ENV INC Contract: 9521637

COMPOUND

Lab Code: NYTEST

CAS NO.

Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607302

Sample wt/vol: 5.0 (q/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)

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

74-87-3-----Chloromethane 10 U 10 U 74-83-9-----Bromomethane 10 U 75-01-4-----Vinyl Chloride U 10 75-00-3-----Chloroethane 10 U BW 75-09-2----Methylene Chloride 10 UV 67-64-1-----Acetone 10 75-15-0-----Carbon Disulfide ロマ 75-35-4----1,1-Dichloroethene 51 J 75-34-3-----1,1-Dichloroethane 540-59-0-----1,2-Dichloroethene (total) 120 บิ 67-66-3-----Chloroform 10 107-06-2----1,2-Dichloroethane 10 U 10 U 78-93-3-----2-Butanone 71-55-6-----1,1,1-Trichloroethane 310 340 丑 U 10 56-23-5-----Carbon Tetrachloride U 10 75-27-4-----Bromodichloromethane U 10 78-87-5----1,2-Dichloropropane U 10 10061-01-5----cis-1,3-Dichloropropene_ 200 210 D B 79-01-6-----Trichloroethene 10 U 124-48-1-----Dibromochloromethane U 10 79-00-5-----1,1,2-Trichloroethane_ 10 U 71-43-2-----Benzene U 10 10061-02-6----trans-1,3-Dichloropropene 10 U 75-25-2-----Bromoform 108-10-1-----4-Methyl-2-Pentanone U 10 10 U 591-78-6----2-Hexanone JV 127-18-4-----Tetrachloroethene 3 U 10 79-34-5-----1,1,2,2-Tetrachloroethane U 10 108-88-3-----Toluene U 10 108-90-7-----Chlorobenzene U 10 100-41-4-----Ethylbenzene U 10 100-42-5-----Styrene 1330-20-7-----Xylene (total) 10 U

THE 1,1,1-TRICHLORDETHANE AND TRICHLORDETHENE RESULTS REPORTE -HAVE BEEN TRANSFERRED FROM THE FORM I FOR X-1DL, A 5X DILUTI

OF SAMPLEX-1. (LMN) 6 FEB96

FORM I VOA

NYSDEC ASP 12/91 000145

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC S	SAMPLE	NO.
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Lab Name: N	IYTEST EN	V INC	Contract:	9521637
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Case No.: 26073 SAS No.: SDG No.: NYACK Lab Code: NYTEST

Matrix: (soil/water) WATER Lab Sample ID: 2607302

(g/mL) ML Lab File ID: P8598.D Sample wt/vol: 5.0

Date Received: 12/27/94 Level: (low/med) LOW

Data Analyzed: 12/28/95 % Moisture: not dec. _____

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

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

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L Number TICs found: 0 ✓

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1				
3				
6.				
8.				
10.				
12.				
13. 14. 15.	•			
17.				
19.				
20				
22. 23. 24.				
26.				
27				
29				

6FEB96

NYSDEC SAMPLE NO. VOLATILE ORGANICS ANALYSIS DATA SHEET X-1DL Lab Name: NYTEST ENV INC Contract: 9521637 SDG No.: NYACK Lab Code: NYTEST Case No.: 26073 SAS No.: Lab Sample ID: 260730/2 Matrix: \(soil/water\) WATER Lab File ID: P8623.D Sample wt/vol: 5.0 (g/mL) ML Date Received: 1/2/27/94 Level: (low/med) LOW Date Analyzed 12/29/95 % Moisture: not dec. Dilution Factor: 5.0 GC Column:CAP ID: 0.53 (mm) Soil Aliquot Volume: (uL) Soil Extract Volume: ___(uL) CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L Q COMPOUND CAS NO. 50 עוט 74-87-3-----Chloromethane 74-83-9-----Bromomethane 50 U 50 U 75-01-4-----Vinyl Chloride 50 U 75-00-3-----Chloroethane ∪ æb∨ 75 75-09-2-----Methylene Chloride 50 U 67-64-1-----Acetone 50 U 75-15-0-----Carbon Disulfide 55 D 75-35-4-----1,1-Dichloroethene JDΙ 75-34-3-----1,1-Dichloroethane D 140 540-59-0-----1,2-Dichloroethene (total)_ U 67-66-3-----Chloroform 50 ロン 107-06-2----1,2-Dichloroethane 50 U 50 78-93-3----2-Butanone (310)DD 71-55-6-----1,1,1-Trichloroethane 56-23-5-----Carbon/Tetrachloride U 50 U 50 75-27-4-----Bromodichloromethane U 50 78-87-5-----1,2/Dichloropropane U 50 10061-01-5----cis-1,3-Dichloropropene **(200** D 79-01-6-----Trichloroethene U 124-48-1----Dibromochloromethane 50 U 50 U 50 U 50 U 50 75-25-2-----Bromoform U 50 108-10-1-/----4-Methyl-2-Pentanone U 50 591-78-6/----2-Hexanone U 50 127-18/4-----Tetrachloroethene U 79-34/5-----1,1,2,2-Tetrachloroethane 20 U 5Ò 108-88-3-----Toluene 50 U 108-90-7-----Chlorobenzene U 50 100-41-4----Ethylbenzene 50 100-42-5-----Styrene 50 1330-20-7-----Xylene (total)_ = 1,1,1. TRICHLORDETHANE AND TRICHLORDETHENE RESULTS REPORTED HAVE DEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, UNDILUTED FORM I VOA ANALYSIS OF NYSDEC ASP 12/91

000153

SAMPLE X-1. (M) SFEB96

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

X-	1	DI

Lab Name: NYTEST ENV INC

Contract: 9521637

NYSDEC SAMPLE NO.

Lab Code: NYTEST Case No.: 26073 SAS No.:

SDG No.: NYACK

Matrix:\(soil/water) WATER

Lab Sample ID: 260730%

Sample wt/vol: 5.0 (g/mL) ML

Lab File ID: P862/3.D

Level: (low/med) LOW

Date Received: 1/2/27/94

% Moisture: not dec.

Data Analyzed/ 12/29/95

GC Column:CAP

ID: 0.53 (mm)

Dilution Factor: 5.0

Soil Aliquot Volume: ____(uL)

Soil Extract Volume: ___(uL)

Number TICs found: 0

CONCENTRATION UNITS:

(ug/L or yg/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

SDG No.: NYACK

MW-9B

Lab Name: NYTEST ENV INC Contract: 9521637

Matrix: (soil/water) WATER

Lab Sample ID: 2607301

Sample wt/vol: 5.0 (g/mL) ML

Lab Code: NYTEST

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)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L

Case No.: 26073 SAS No.:

74-87-3				
1 1330-20-/Xylene (total)	74-83-9	10 10 10 10 10 10 10 10 10 10 10 10 10 1		77
			1	

'É TRICHLORDIETHENE RESULT REPORTED HAS BEEN TRANSFERRED FROM THE FORM I FOR MW-9BDL, A 5X DILUTION OF SAMPLE MW-9B.

NYSDEC ASP 12/91

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NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Contract: 9521637 Lab Name: NYTEST ENV INC

MW- 9B

Lab Co	de:	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)

CONCENTRATION UNITS:

Number TICs found: 0 ✓ (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	
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0.	-	_		
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19.		_		
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23.				
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29.				
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THE TRICHLORDETHENE RESULTS REPORTED HAS BEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL, UNDILUTE ANALYSIS OF SAMPLE FORM I VOA MW-9B. (MM) NYSDEC ASP 12/91

3 FEB9 200129

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: NYTEST ENV INC Contract: 9521637

MW-9BDL

Lab Code: NYTEST Case No.: 26073 SAS No.:

SDG No.: NYACK

NYSDEC SAMPLE NO.

Matrix: \(soil/water\) WATER

Sample wt/ v_{Ql} : 5.0 (g/mL) ML

Level: (low\med) LOW

% Moisture: not dec.

GC Column:CAP

ID: 0.53 (mm)

Soil Extract Volume: ____(uL)

Number TICs found: 0

Lab Sample ID: 2607301/

Lab File ID: P8624.D

Date Received: 1/2/27/94

Data Analyzed: 12/29/95

Dilution Factor: 5.0

Soil Aliquot Volume: (uL)

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

CAS NUMBER	COMPOUND NAME		EST. CONC.	Q
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6.				
27.				<u> </u>
28/				17
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NYSDEC ASP 12/91

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FORM I VOA-TIC

TB-1

Lab Name: NYTEST ENV INC Contract: 9521637

Lab Code: NYTEST

Case No.: 26073 SAS No.: SDG No.: NYACK

Lab Sample ID: 2607310 Matrix: (soil/water) WATER

Sample wt/vol: 5.0 (g/mL) ML Lab File ID: P8596.D

Date Received: 12/27/94 Level: (low/med) LOW

Date Analyzed: 12/28/95/ % Moisture: not dec. _____

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

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

CONCENTRATION UNITS:

COMPOUND (ug/L or ug/Kg) UG/L CAS NO.

74-87-3Chloromethane	10	ט
74-83-9Bromomethane	10	υ
75-01-4Vinyl Chloride	10	ַ
75-00-3Chloroethane	10	ט
75-09-2Methylene Chloride	12	в∨
67-64-1Acetone	10	עוט
75-15-0Carbon Disulfide	10	עע
75-35-41,1-Dichloroethene	10	ט
75-34-31,1-Dichloroethane	10	וט
540-59-01,2-Dichloroethene (total)	10	Ŭ
	10	Ŭ
67-66-3Chloroform	10	ŭ
107-06-21,2-Dichloroethane	10	Ü
78-93-32-Butanone		Ü
71-55-61,1,1-Trichloroethane	10	1
56-23-5Carbon Tetrachloride	10	U
75-27-4Bromodichloromethane	10	U
78-87-51,2-Dichloropropane	10	U
10061-01-5cis-1,3-Dichloropropene	10	ַ
79-01-6Trichloroethene	10	ן ט
124-48-1Dibromochloromethane	10	ען
79-00-51,1,2-Trichloroethane	10	ש
71-43-2Benzene	10	U
10061-02-6trans-1,3-Dichloropropene	10	ן ט
75-25-2Bromoform	10	ט
108-10-14-Methyl-2-Pentanone	10	U
591-78-62-Hexanone	10	U
127-18-4Tetrachloroethene	10	עט
79-34-51,1,2,2-Tetrachloroethane	10	ש
108-88-3Toluene	10	ן ט
108-90-7Chlorobenzene	10	ט
100-41-4Ethylbenzene	10	ט
	10	וט
100-42-5Styrene	10	l ül
1330-20-7Xylene (total)		
		l1

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NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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

Date Received: 12/27/94 Level: (low/med) LOW

Data Analyzed: 12/28/95 % Moisture: not dec. _____

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

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

CONCENTRATION UNITS:

Number TICs found: 0 ✓ (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT		
1.				
2.				
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0.				
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8. 9.				
1 10.				
11.				
12				
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13.				
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l ±/•				
18.				
] 20.				
1 41.				
44.				
23.				
1 25.				
1 26.				
41.				
28.				
30				
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VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

Q

Lab Name: NYTEST ENV INC Contract: 9521637

COMPOUND

CAS NO.

Lab Code: NYTEST Case No.: 26073 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2607813

Lab File ID: N5956.D Sample wt/vol: 5.0 (g/mL) ML

Date Received: 12/27/95 Level: (low/med) LOW

Date Analyzed: 12/28/95/ % Moisture: not dec.

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

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

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

74-87-3Chloromethane	10	U
74-83-9Bromomethane	10	וט
75-01-4Vinyl Chloride	10	וט
75-00-3Chloroethane	10	ש
75-09-2Methylene Chloride	13	в∨
67-64-1Acetone	10	עוע י
75-15-0Carbon Disulfide	10	עט
75-35-41,1-Dichloroethene	10	ט
75-34-31,1-Dichloroethane	10	ט
540-59-01,2-Dichloroethene (total)	10	וט
67-66-3Chloroform	10	וֹט
107-06-21,2-Dichloroethane	10	וט
78-93-32-Butanone	10	ŪV
71-55-61,1,1-Trichloroethane	10	Ü
56-23-5Carbon Tetrachloride	10	Ū
75-27-4Bromodichloromethane	10	ان
78-87-51,2-Dichloropropane	10	<u>ט</u>
	10	Ü
10061-01-5cis-1,3-Dichloropropene	10	Ü
79-01-6Trichloroethene	10	ŭ
124-48-1Dibromochloromethane	10	Ü
79-00-51,1,2-Trichloroethane	10	Ü
71-43-2Benzene	10	υ
10061-02-6trans-1,3-Dichloropropene	10	ŭ
75-25-2Bromoform	10	ŭ
108-10-14-Methyl-2-Pentanone	10	Ü
591-78-62-Hexanone	10	Ü
127-18-4Tetrachloroethene	10	Ü
79-34-51,1,2,2-Tetrachloroethane	10	Ü
108-88-3Toluene	10	Ū
108-90-7Chlorobenzene	Programme and the second secon	ָ ָ ט
100-41-4Ethylbenzene	10	Ü
100-42-5Styrene	10	U
1330-20-7Xylene (total)	10	'
i	1	i l

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VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED

Case No.: 26073 SAS No.:

NYSDEC	SAMPLE	NO
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COMPOUNDS	1
	TB-2
ntract: 9521637	

Lab Name: NYTEST ENV INC

SDG No.: NYACK

Matrix: (soil/water) WATER

Lab Sample ID: 2607813

Sample wt/vol: 5.0 (g/mL) ML

Lab Code: NYTEST

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 Aliquot Volume: ____(uL)

Soil Extract 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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1. 2.				
3.				
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] 3.				
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0.				
9.		_		
10		_		
11.				
12.		-		
13.		-		
15		-		
16.				
 				
1 10.		_		
1 1 2 2 2 1				
40.		_		
21.		_		
22.		_		
23		_		
24.				
25		-		
26. 27.		-		
28.				
29				
30				

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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 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%.

Approved By

19 FEB96

Date

Date

Volatile Organic Analytical Data - Groundwater

Orange & Rockland Utilities West Nyack, New York

Sampling Date: January 12, 1996

Sample ID	EXW-1	MW-2	MW-3	MW-4	TB-1
Compound					
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 Ј	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.

CRU-WEST NYACKY

STANDARD OPERATING PROCEDURE

Date: January 1992

Revision: 8

YES NO N/A

PART A: VOX ANALYSES

1.0 Traffic Reports and Laboratory Narrative

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?

1/1

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".

Date: January 1992 Revision: 8

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?

1/

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 preservation, contact sampler to determine whether or not samples were preserved.

The holding time for soils is 10 days.

Table of Holding Time Violations

Sample ID	Sample Matrix	Preserved?	Date	Traffic R Date Lab Received	Date
					

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).

Date: January 1992 Revision: 8

YES NO N/A

3.0	System Monitoring Compound (SMC) Recovery (1	Form II	7			
3.1	Are the VOA SMC Recovery Summaries (Form II) present for each of the following matrices:					
	a. Low Water	1/1				
	b. Low Soil	11		_/_		
	c. Med Soil	\Box				
3.2	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	1/7				
	b. Low Soil	1				
	c. Med Soil	17				
	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?	1.1	_	_/_		
•	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?		ιΛ			
	If yes, were samples re-analyzed?					
	Were method blanks re-analyzed?		_			

Date: January 1992

Revision: 8

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%:

- Flag all positive results as estimated ("J").
- 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?

ιΛJ

Date: January 1992 Revision: 8 YES NO N/A Were matrix spikes analyzed at the required frequency for each of the following matrices: Low Water b. Low Soil c. Med Soil If any matrix spike data are missing, take ACTION: the action specified in 3.2 above. How many VOA spike recoveries are outside QC limits? Soils Water N/A out of 10 ___out of 10 How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits? Soils Water N/A out of 5 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. Blanks (Form IV) 5.0 Is the Method Blank Summary (Form IV) 1/1 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

1/1

20 samples of similar matrix (low water, low soil, medium soil), whichever is more

frequent?

Date: January 1992 Revision: 8

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.

- On 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.)

Date: January 1992

Revision: 8

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 Sample conc < CRQL Sample conc > CRQL but < 10x blank & <10x blank value & >10x blank value value

Methylene Chloride Flag sample result Report CRQL & Acetone with a "U;

qualify "U"

No qualification is needed

Toluene 2-Butanone

> Sample conc > CRQL Sample conc < CRQL & Sample conc > CRQL value & > 5x blank but < 5x blank is < 5x blank value value

Flag sample result Report CRQL & Other qualify "U" with a "U" ContamNo qualification is needed

inants

Analytes qualified "U" for blank contamination are NOTE: still considered as "hits" when qualifying for

calibration criteria.

Date: January 1992 Revision: 8

YES NO N/A

ACTION:	For TIC compounds, if the concentration in the sample is less than five times the concentration the most contaminated associated blank, flag sample data "R" (unusable).	cion i	n	
6.3	Are there field/rinse/equipment blanks associated with every sample?	1/1		
ACTION:	For low level samples, note in data assessmenthere is no associated field/rinse/equipment Exception: samples taken from a drinking wat do not have associated field blanks.	f brau	κ.	
7.0	GC/MS Instrument Performance Check (Form V)			
7.1	Are the GC/MS Instrument Performance Check Forms (Form V) present for Bromofluorobenzen (BFB)?	• [_		
7.2	Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the BFB provided for each twelve hour shift?	乊		
7.3	Has an instrument performance compound been analyzed for every twelve hours of sample analysis per instrument?	Ų		

Date: January 1992 Revision: 8

YES NO N/A

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

DATE	TIM	E	• .	INSTRUMENT	SAMPL	e numb	ERS
			•				
ACTION:	If lab c data gen calibrat	erated	outsi	e missing data, rejected an acceptable twei	ct ("R") a lve hour	11	
7.4	Have the m/z 95?	ion a	bundan	ces been normalized	ro 🔽		
	ACTION:	qualif	s assi y all ole (R)	gnment is in error, associated data as			
7.5	Have the	ion a	bundan nt used	ce criteria been met	for /		_
	ACTION:	abunda	all dat ance cr ate she	a which do not meet iteria (attach a et).	ion		
	ACTION:	met.	n abund the Reg tified.	lance criteria are no gion II TPO must	t		
7.6				cription/calculation and Form Vs? (Check crors are found, chec		ा रं	

Date: January 1992 Revision: 8

	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.	
. 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.	

Date: January 1992 Revision: 8

	Y	ES NO	N/A	-
8.3	Are the response factors shown in the Quant Report?	17		
8.4	Is chromatographic performance acceptable wrespect to:	ith		
	Baseline stability?	1/1		
	Resolution?	t √1		
	Peak shape?	1/1	_	
	Full-scale graph (attenuation)?	<u> </u>		
	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?	īγ		
	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?	<u></u>		
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?	i √j		

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YES NO N/A

8.8 Do sample and standard relative ion intensities agree within 20%?

元 -

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 <u>Tentatively Identified Compounds (TIC)</u>

- 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.

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YES NO N/A

9.3 Are any TCL compounds (from any fraction)
listed as TIC compounds (example: 1,2dimethylbenzene 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 201?

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, (M/E 44), Siloxanes (M/E 73) Hexane, Aldol Condensation Products, Solvent Preservatives, and related by products - see Functional Guidelines for more guidance).

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YES NO N/A

- 10.0 <u>Compound Quantitation and Reported Detection</u>
 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?

元 — —

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

Date: January 1992

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YES NO N/A

12.0 GC/MS Initial Calibration (Form VI)	12.0	GC/MS	Initia	l Caliba	ration	(Form	VT
--	------	-------	--------	----------	--------	-------	----

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/1? Are there separate calibrations for low water/med soils and low soil samples?

1/1

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?

1 √1	 _

Circle all outliers in red. Action:

If any RRF are < 0.05, qualify associated Action: non-detects (R) and flag associated positive

data as estimated (J).

Date: January 1992 Revision: 8

	YES NO N/A
12.	Are there any transcription/calculation errors in the reporting of average response factors (RRF) or tRSD? (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.
٠	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.

Date: January 1992 Revision: 8

				KealPlou	· •
				YE	S NO N/A
13.4	Do any v	olatile compo	ounds have	a RRF <0.05?	<u>_</u>
	ACTION:	Circle all c	outliers :	in red.	
	ACTION:	If the RRF < non-detects associated p	as unusa	alify associate ble (R) and "J" values.	d
13.5	factors initial	(RRF) or %di: and continui: aes but if er:	ing of av fference ng RRFs?	erage response (%D) between (Check at least	<u> </u>
	ACTION:	Circle error	s in red.		
	ACTION:	If errors ar explanation/necessary coerrors under	resubmitt	and note	
14.0	Interna	1 Standard (F	'orm VIII	L	,
14.3	of ever		01 to +	eas (Form VIII) thin the upper 100%) for each	<u>τγ</u> — –
	ACTION:	List all the	outlier	s below.	
Sam	ple # I	nternal Std	Area	Lower Limit	Upper Limit
			-		

(Attach additional sheets if necessary.)

Date: January 1992

Revision: 8

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.
 - 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?

r /

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?

<u>. 1</u>

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%.

VOLATILE ORGANICS ANALYSIS DATA SHEET

NYSDEC SAMPLE NO.

EXW-1

Lab Name: NYTEST ENV INC Contract: 9622158

Lab Code: NYTEST

CAS NO.

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

COMPOUND

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

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

10 U 74-87-3-----Chloromethane U 74-83-9-----Bromomethane 10 75-01-4-----Vinyl Chloride 10 U 75-00-3-----Chloroethane 10 U 75-09-2-----Methylene Chloride 14 \ ₽. 10 U 67-64-1-----Acetone 75-15-0-----Carbon Disulfide U 10 U 10 75-35-4----1,1-Dichloroethene U 75-34-3-----1,1-Dichloroethane 10 U 540-59-0----1,2-Dichloroethene (total) 10 U 67-66-3-----Chloroform 10 U 10 107-06-2----1,2-Dichloroethane_ U 78-93-3----2-Butanone 10 71-55-6----1,1,1-Trichloroethane 10 U 56-23-5-----Carbon Tetrachloride 10 U 75-27-4-----Bromodichloromethane 10 U 10 U 78-87-5----1,2-Dichloropropane U 10061-01-5----cis-1,3-Dichloropropene 10 U 10 79-01-6-----Trichloroethene U 124-48-1-----Dibromochloromethane 10 79-00-5-----1,1,2-Trichloroethane U 10 U 10 71-43-2----Benzene 10061-02-6----trans-1,3-Dichloropropene U 10 U 10 75-25-2----Bromoform U 10 108-10-1----4-Methyl-2-Pentanone U 10 591-78-6----2-Hexanone 10 U 127-18-4-----Tetrachloroethene U 79-34-5----1,1,2,2-Tetrachloroethane 10 10 U 108-88-3-----Toluene U 10 108-90-7-----Chlorobenzene U 10 100-41-4-----Ethylbenzene U 10 100-42-5----Styrene_ 1330-20-7-----Xylene (total) (mi) 17 FEB96

NYSDEC ASP 12/91

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Contract: 9622158 Lab Name: NYTEST ENV INC

EXW-1

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)

CONCENTRATION UNITS:

Number TICs found: 1 / (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	1
1.	UNKNOWN	8.819	36	J
3				
4.				
5				
6				
0.				
1 9.				
10.				
12.				
13.				
1 15.				
16. 17.				
18.				
19. 20.				
21.				
22				
24.				
25.				
26. 27.				
20.				
29. 30.				

imi 17 FEB96

VOLATILE ORGANICS ANALYSIS DATA SHEET

							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)

CONCENTRATION UNITS:

CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q

	A				- 1
74-87-3	Chloromethane	ات	16	IJ	
	Bromomethane		10	Ţ	Ī
75-01-4	Vinyl Chloride		4	,	
	Chloroethane		7		
75-09-2	Methylene Chloride		12	U	} ^
	Acetone	ΙØ	6-	نہ ل	5
	Carbon Disulfide	10	2	U t	F
	1,1-Dichloroethene		24		
	1,1-Dichloroethane		23		-
540-59-0	1,2-Dichloroethene (total)_		12		-
	Chloroform		10	Ţ	ĴΪ
	1,2-Dichloroethane		10	, τ	J
	2-Butanone	10	-21	J	
	1,1,1-Trichloroethane	·	58		-
56.23-5	Carbon Tetrachloride		10	Ţ	ΞÌ
	Bromodichloromethane		10	τ	- 1
	1,2-Dichloropropane		10		J
	cis-1,3-Dichloropropene		10	_	7
	Trichloroethene		18	,	
			10	Ţ	7
	Dibromochloromethane		3		7
		1200	620		3
	Benzene trans-1,3-Dichloropropene	1200	10		5
			10		ار
75-25-2	Bromoform 4-Methyl-2-Pentanone		10		J
			10		ال
591-78-6	2-Hexanone		10	ļ.	7
127-18-4	Tetrachloroethene		10	·	J
	1,1,2,2-Tetrachloroethane		160	`	_
	Toluene		10		ī
	Chlorobenzene		100	,	ر
	Ethylbenzene		100	ļ -	<u> </u>
100-42-5	Styrene] '	ا ′
1330-20-7-	Xylene (total)		310		-
				l	_

THE BENZENE REDULT REPORTED HAS BEEN TRANSFERRED FROM MW-2DL, IN 10 X DILUTION OF SAMPLE MW-2. (LM)

EORM I VOA

NYSDEC ASP 12/91

1E VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

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NYSDEC SAMPLE NO.

Contract: 9622158 Lab Name: NYTEST ENV INC

MW-2

Lab Code: NYTEST Case No.: 26151 SAS No.: SDG No.: NYACK

Matrix: (soil/water) WATER Lab Sample ID: 2615101

Lab File ID: N6148.D Sample wt/vol: 5.0 (g/mL) ML

Date Received: 01/12/96 Level: (low/med) LOW

Data Analyzed: 01/15/96 % Moisture: not dec.

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

Soil Aliquot Volume: ___(uL) Soil Extract Volume: ____(uL)

CONCENTRATION UNITS: Number TICs found: 10 (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	
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.	UNKNOWN UNKNOW			=====
26. 27. 28. 29.				

NYSDEC SAMPLE NO.

MW-2DL

Contract: 9622158 Lab Name: NYTEST ENV INC

Lab Code: NYTEST Case No.: 26151 SAS No.:

SDG No.: NYACK

Matrix: (soil/water) WATER

Lab Sample ID: 261510/1

Sample wt/vol:

N61/56.D Lab File ID:

Level: (Now/med) LOW Date Received: 1/12/96

% Moisture: not dec.

Date Analyzed: 01/16/96

GC Column:CAP

ID: 0.53 (mm)

____(uL)

5.0 (g/mL) ML

Dilution Factor: 10.0

Soil Extract Volume

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or/ug/Kg) UG/L COMPOUND CAS NO. 100 U 74-87-3-----Chloromethane 100 U 74-83-9-----Bromomethane 75-01-4-----Vinyl Chloride 14 JD 75-00-3-----Chloroethane 100 U 150 U BD V 75-09-2-----Methylene Shloride 1000 .66 U JBD 67-64-1-----Acetone 100 U 75-15-0-----Carbon Disulfade JD 75-35-4-----1,1-Dichlorøethene 18 JD 75-34-3-----1,1-Dichloroethane 34 540-59-0-----1,2-Dichloroethene (total) U 100 67-66-3-----Chloroførm 100 U 107-06-2-----1,2-Dichloroethane 100 U 100 U 78-93-3-----2-Buzanone JD 71-55-6----1,1,1-Trichloroethane 52 U 100 56-23-5-----Carbon Tetrachloride U 100 100 U 100 U 79-01-6-----Trichloroethene JD 17 124-48-1--/----Dibromochloromethane U 100 100_ U 1200 D Ū 10061-\$2-6----trans-1,3-Dichloropropene 100 100 U 75-25/2-----Bromoform 100 U 108/10-1----4-Methyl-2-Pentanone **200**0 U 59/1-78-6-----2-Hexanone U 100 1/27-18-4-----Tetrachloroethene U 100 79-34-5-----1,1,2,2-Tetrachloroethane_ D 330 108-88-3-----Toluene 100 U 108-90-7-----Chlorobenzene 230 100-41-4-----Ethylbenzene 100 100-42-5-----Styrene_ 680 1330-20-7-----Xylene (total)

THE BENZENE REGULT REPORTED HAS BEEN TRANSFERRED TO THE FORM I FOR THE ORIGINAL UNDILUTED ANALYSIS OF MW-2. WMA

FORM I VOA

17 FEB96

NYSDEC ASP 12/91

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Contract: 9622158

NYSDEC SAMPLE NO.

Lab Code: NYTEST Case No.: 26151 SAS No.:

SDG No.: NYAQK

N6256.D

Matrix: (soil/water) WATER

Lab Name: NYTEST ENV INC

Sample wb/vol: 5.0 (g/mL) ML

Level: (low/med) LOW

Number TICs found: 7

% Moisture: not dec.

GC Column:CAP

ID: 0.53 (mm)

Soil Extract Volume: (uL)

Lab Sample ID: 26151/01

Lab File ID:

Date Received: 01/12/96

Data Analyzed: 01/16/96

Dilution Factor: 10.0

Soil Aliquot Volume: ____(uL)

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

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q =====
1. 2. 3. 4. 5. 6. 7.	UNKNOWN UNKNOWN UNKNOWN UNKNOWN UNKNOWN AROMATIC UNKNOWN AROMATIC UNKNOWN AROMATIC	6.670 7.587 8.813 10.349 21.876 22.919 24.878	77 85 140 120 69 110 99	
9. 10. 11. 12. 13. 14.				
16. 17. 18. 19. 20. 21. 22.				
23. 24. 25. 26. 27.				
36				

nrú 17 FEB96

VOLATILE ORGANICS ANALYSIS DATA SHEET

MW-3Lab Name: NYTEST ENV INC Contract: 9622158

SDG No.: NYACK Case No.: 26151 SAS No.: Lab Code: NYTEST

Lab Sample ID: 2615102 Matrix: (soil/water) WATER

Lab File ID: N6147.D 5.0 (g/mL) ML Sample wt/vol:

Date Received: 01/12/96 Level: (low/med) LOW

Date Analyzed: 01/15/96√ % Moisture: not dec. _____

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

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

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L CAS NO. COMPOUND

74-87-3Chloromethane	וס ט
74-83-9Bromomethane	10 U
75-01-4Vinyl Chloride	10 U
75-00-3Chloroethane	— 5 J
75-09-2Methylene Chloride	- W 9 1) - HB V
67-64-1Acetone	10 0
75-15-0Carbon Disulfide	— 10 U
75-15-0Calboil Disulline	- GOO 580 D E
75-35-41,1-Dichloroethene	$ \begin{vmatrix} 650 & 360 \\ 28 & 2 \end{vmatrix}$
75-34-31,1-Dichloroethane	<u> </u>
540-59-01,2-Dichloroethene (total)	$ \begin{vmatrix} 220 \\ 10 \end{vmatrix} - \boxed{U}$
67-66-3Chloroform	
107-06-21,2-Dichloroethane	
78-93-32-Butanone	10 UV
71-55-61,1,1-Trichloroethane	1700 1400 D B
56-23-5Carbon Tetrachloride	10 0
75-27-4Bromodichloromethane	10 U
78-87-51,2-Dichloropropane	10 U
10061-01-5cis-1,3-Dichloropropene	10 U
79-01-6Trichloroethene	一
124-48-1Dibromochloromethane	10 0
79-00-51,1,2-Trichloroethane	10 U
71-43-2Benzene	14
10061-02-6trans-1,3-Dichloropropene_	10 U
75-25-2Bromoform	10 U
108-10-14-Methyl-2-Pentanone	10 U
591-78-62-Hexanone	10 U
127-18-4Tetrachloroethene	5 J
79-34-51,1,2,2-Tetrachloroethane_	10 U
108-88-3Toluene	10 U
108-90-7Chlorobenzene	10 U
100 41 4 - Ethylhenzene	10 U
100-41-4Ethylbenzene	10 U
100-42-5Styrene	
1330-20-7Xylene (total)	
	DECH COUNTRY BIS

THE 1,1-DICHLORDEMENE, 1,1,1-TRICHLORDETHAND AND TRICHLORDETHEND RESULTS - REPORTED HAVE BEEN TRANSFERRED FROM THE FORM I FOR MW-3DL, A 16 X DILLTION OF SAMPLE MW-3 LUTTO 17 FEBAL

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Contract: 9622158 Lab Name: NYTEST ENV INC

MW-3

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)

CONCENTRATION UNITS:

Number TICs found: 0 ✓ (ug/L or ug/Kg) UG/L

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	
1				
2.				
3.				
4.				
5				
0.				
7				
0.				
9				
10.				
11.				
13.				
14				
15.				
16.				
1/.				
10.				
1 19.				
20.				
21.				
22.				
23.				
25.				
26.				
27.				
20.				
29				
30				
		l		

17 FEB96

NYSDEC ASP 12/91

NYSDEC SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET MW-3DL Lab Name: NYTEST ENV INC Contract: 9622158 Case No.: 26151 SAS No.: SDG No.: NYACK Lab Code: NYTEST Matrix: (soil/water) WATER Lab Sample ID: 261510/2 Lab File ID: N6185.D 5.0 (q/mL) MLSample wt/vol: Date Received: 01/12/96 (low/med)LOW Level: Date Analyzed: 01/16/96 % Moisture: not dec. Dilution Factor: 10.0/ ID: 0.53 (mm) GC Column:CAP Soil Aliquot Volume: ____(uL) Soil Extract Volume (uL) CONCENTRATION UNITS: (ug/L or /ug/Kg) UG/L CAS NO. COMPOUND 100 IJ 74-87-3-----Chloremethane 100 U 74-83-9-----Bromomethane 100 U 75-01-4-----Vinyl Chloride 100 U 75-00-3-----Chloroethane 120 U BD 75-09-2-----Methylene Chloride 100 43 ()JBD 67-64-1-----Acetone 100 U 75-15-0-----Carbon Disulf Kde D (650 75-35-4-----1,1-Dichlorgethene 28 JD 75-34-3-----1,1-Dichloroethane 240 D 540-59-0-----1,2-Dichløroethene (total) 100 U 67-66-3-----Chloroform 100 U 107-06-2-----1,2-Dighloroethane U 100 78-93-3----2-But anone \overline{D} 71-55-6-----1,1/1-Trichloroethane (1900)Ū 100 56-23-5-----Carbon Tetrachloride_ U 100 75-27-4-----Bromodichloromethane 100 U 10061-01-5-----cis-1,3-Dichloropropene_79-01-6------Trichloroethene_124-48-1-----Dibromochloromethane____ U 100 D' (430)Ū 100 U 100 79-00-5-------1,1,2-Trichloroethane JD 19 71-43-2-/----Benzene 100 U 10061-02-6----trans-1,3-Dichloropropene 100 U 75-25-2-----Bromoform 100 U 108-**1**0-1-----4-Methyl-2-Pentanone U 1,00 591/-78-6----2-Hexanone U 100 127-18-4-----Tetrachloroethene U 100 79-34-5-----1,1,2,2-Tetrachloroethane U 100 108-88-3-----Toluene U 100 108-90-7-----Chlorobenzene 100 100-41-4-----Ethylbenzene 100 U 100-42-5-----Styrene 100 1330-20-7-----Xylene (total)

THE 1.1 - DICHLORDETHENE, 1.1.1 - TRICHLORDETHAND AND TRICHLORDETHENE RESULTS REPURTED THAVE BEEN TRANSFERRED TO THE FORM I FOR THE URIGINAL, UNDILUTED ANALYSIS OF

JAMPLE MW-3 (D)

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FORM I VOA

000072 NYSDEC ASP 12/91

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS NYSDEC SAMPLE NO.

MW-3DL	
	/

•	Dab	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 Xvol: 5.0 (g/mL) ML Lab File ID: N61/55.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)

CONCENTRATION UNITS:
Number TICs found: 0 (ug/L or ug/Kg) UG/L

		/		
CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q =====
1				
3				
5				
6 7				
8. 9.				
1 10.				
11.				
13				
15. 16.				
18.				
20.				
21.				
24.				
25.				
27.				
29.				
/		.1		11

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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)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L CAS NO. COMPOUND

74-87-3Chloromethane	10	U
74-83-9Bromomethane	36	
75-01-4Vinyl Chloride		<u>U</u>
75-00-3Chloroethane	10	
75-09-2Methylene Chloride	iØ	Λ al
67-64-1Acetone	ιØ 5	U J
75-15-0Carbon Disulfide	2	J
75-35-41,1-Dichloroethene	10	
75-34-31,1-Dichloroethane	19	
540-59-01,2-Dichloroethene (total)	110	
67-66-3Chloroform	10	Ū
107-06-21,2-Dichloroethane	10	ן ט
78-93-32-Butanone	10	וט ו
71-55-61,1,1-Trichloroethane	15	
56-23-5Carbon Tetrachloride	10	Ū
75-27-4Bromodichloromethane	10	ן ט
78-87-51,2-Dichloropropane	10	ا ت
10061-01-5cis-1,3-Dichloropropene	10	ן ט
79-01-6Trichloroethene	70	_
	10	U
124-48-1Dibromochloromethane	10	ال ا
79-00-51,1,2-Trichloroethane	42	
71-43-2Benzene	10	<u> </u>
10061-02-6trans-1,3-Dichloropropene	10	Ü
75-25-2Bromoform	10	Ü
108-10-14-Methyl-2-Pentanone	10	ال
591-78-62-Hexanone	10	ן ט
127-18-4Tetrachloroethene	10	Ü
79-34-51,1,2,2-Tetrachloroethane	. \	ال ا
108-88-3Toluene	2	ט
108-90-7Chlorobenzene	10	J
100-41-4Ethylbenzene	2	1 - 1
100-42-5Styrene	10	Ū
1330-20-7Xylene (total)	10	ע
•		

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1E

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

NYSDEC SAMPLE NO.

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.

Number TICs found: 5

Data Analyzed: 01/15/96

GC Column:CAP ID: 0.53 (mm)

Dilution Factor: 1.0

Soil Extract Volume: (uL)

Soil Aliquot Volume: (uL)

CONCENTRATION UNITS:

(ug/L or ug/Kg) UG/L

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

NYSDEC SAMPLE NO.

Lab Name: NYTEST ENV INC Contract: 9622158

CAS NO. COMPOUND

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)

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

		,
74-87-3Chloromethane	10	ט
74-83-9Bromomethane	10	ŭ
75-01-4Vinyl Chloride	10	Ŭ
75-00-3Chloroethane	10	וֹט
75-09-2Methylene Chloride	12	·B
67-64-1Acetone	13	٦) '
75-15-0Carbon Disulfide	10	<u>U</u>
75-35-41,1-Dichloroethene	10	บี
75-34-31,1-Dichloroethane	10	ŭ
540-59-01,2-Dichloroethene (total)	10	บ
67-66-3Chloroform	10	<u>ט</u>
107-06-21,2-Dichloroethane	10	Ü
	10	الق
78-93-32-Butanone	10	Ü
71-55-61,1,1-Trichloroethane	10	וט
56-23-5Carbon Tetrachloride		Ü
75-27-4Bromodichloromethane	10	וט
78-87-51,2-Dichloropropane	10	i .
10061-01-5cis-1,3-Dichloropropene	10	U
79-01-6Trichloroethene	10	Ū
124-48-1Dibromochloromethane	10	U
79-00-51,1,2-Trichloroethane	10	U
71-43-2Benzene	10	U
10061-02-6trans-1,3-Dichloropropene	10	U
75-25-2Bromoform	10	Ū
108-10-14-Methyl-2-Pentanone	10	U
591-78-62-Hexanone	10	U
127-18-4Tetrachloroethene	10	u
79-34-51,1,2,2-Tetrachloroethane	10	U
108-88-3Toluene	10	U
108-90-7Chlorobenzene	10	U
100-41-4Ethylbenzene	10	U
100-42-5Styrene	10	ע
1330-20-7Xylene (total)	10	U
-		

NYSDEC ASP 12/91

Number TICs found: 0 /

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

Contract: 9622158 Lab Name: NYTEST ENV INC

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

Date Received: 01/12/96 Level: (low/med) LOW

Data Analyzed: 01/15/96 % Moisture: not dec. _____

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

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

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

RTEST. CONC. COMPOUND NAME CAS NUMBER 9. 10. 11. _____ 13. 15.____ 19. 20. 21.____ 27. 28.____ 29. _____

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NYSDEC SAMPLE NO.

TB-1

NYSDEC ASP 12/91

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:

	TCX DB-608	TCX DB-1701	DCB DB-608	DCB DB-1701
Sample ID	<u> </u>		22 VVX	
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%.

Reviewed By

Approved By

Date

Daic

Date

PCB Analytical Data - Groundwater

Orange & Rockland Utilities West Nyack, New York

Sampling Date: January 12, 1996

Sample ID	EXW-1	MW-2	MW-3	MW-4
Compound				
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.

-DG: NJACKY

STANDARD OPERATING PROCEDURE

Date: January 1992 Revision: 8

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
		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.

Date: January 1992 Revision: 6

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	€ 7		
		b. Soil	H		_
	3.2	Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices?	,		
		a. Low Water	ार्ग .		
		b. Soil	\Box		·
		ACTION: Call lab for explanation/resubmittals If missing deliverables are unavailable document effect in data assessments.	ole,		
	3.3	Were outliers marked correctly with an asterisk?	. √3	- سیعی	
		ACTION: Circle all outliers in red.		•	
	:.4	Were surrogate recoveries of TCX or DCB. outside of the contract specification for any sample or blank? (60-150%)	_/		

Date: January 1992 Revision: 8

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.

Date: January 1992 Revision: 8

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? $\frac{f}{f}$
- 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?

1/1

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)

Date: January 1992 Revision: 8

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 <u>not</u> 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.

- 41 .

Date: January 1992 Revision: 8

YES NO N/A

Samp but	le conc > CRQL < 5x blank	Sample conc < CRQL & is < 5x blank value	a y sk bleik velet
Flag with	sample result a "U";	Report CRQL 4 qualify "U"	No qualification is needed
	in the	ss blank contamination associated samples shied as unusable (R).	exists, all data ould be
6.3	Are there fiel with every sam	d/rinse/equipment blan ple?	ks associated
ACTION:	that there is	samples, note in data no associated field/ri mples taken from a drift	king water tap
	do not have as	sociated field blanks.	•
7.0	do not have as	ssociated field blanks. ad GC Performance	•
7.0	calibration and Are the follow	180C18488 ITATE DISING.	and Data
	Calibration and Are the follow Systems Prints for all sample	and GC Performance wing Gas Chromatograms outs for both columns !	and Data
	Calibration and Are the follow Systems Prints for all sample a. peak	wing Gas Chromatograms outs for both columns 1 es, blanks, MS/MSD?	and Data present
	Calibration and Are the follow Systems Prints for all sample a. peak to b. performance of the calibration and the calibration and the calibration and the calibration and the calibration and the calibration and the calibration and the calibration and the calibration and the calibration and the calibration and the calibration and the calibration and the calibration are calibration and the calibration are calibration and the calibration are callbration and the calibration are callbration and the calibration are callbration are callbration and the calibration are callbration are callbration and the callbration are callbration and the callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration are callbration and callbration are callbration and callbration are callbration are callbration and callbration are callbration and callbration are callbration are callbration and callbration are callbration and callbration are callbration and callbration are callbration are callbration are callbration are callbration and callbration are callbration are callbration and callbration are callbration are callbration and callbration are	wing Gas Chromatograms outs for both columns 1 es, blanks, MS/MSD? resolution check	and Data present
	Calibration and Are the follow Systems Prints for all sample a. peak in the performance of the control of the performance of th	wing Gas Chromatograms outs for both columns ; es, blanks, MS/MSD? resolution check rmance evaluation mixt	and Data present Li — ures Li —
	Calibration and Are the follow Systems Prints for all sample a. peak in the performance of the control of the c	wing Gas Chromatograms outs for both columns pes, blanks, MS/MSD? resolution check rmance evaluation mixtor 1016/1260 ors 1221, 1232, 1242,	and Data present Li — ures Li —
	Calibration and Are the follow Systems Prints for all sample a. peak : b. perform c. arock d. arock e. toxap	wing Gas Chromatograms outs for both columns is blanks, MS/MSD? resolution check rmance evaluation mixture or 1016/1260 ors 1221, 1232, 1242, whene	and Data present if — ures if — 1248, 1254 if —
	Calibration and Are the follow Systems Prints for all sample a. peak : b. perform c. arock d. arock d. arock for all sample f. low p	wing Gas Chromatograms outs for both columns pes, blanks, MS/MSD? resolution check rmance evaluation mixtor 1016/1260 ors 1221, 1232, 1242,	and Data present Li — Li — 1248, 1254 Li — Li — Ares A 6 8 Li —

Date: January 1992 Revision: 8

YES NO N/A

i. instrument blanks

元 — —

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

7.2 Are Forms VI - PIST 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).

<u>1</u>

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.

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Date: January 1992 Revision: \$

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)

<u>~</u> _ _

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)

一 点

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.

Date: January 1992 Revision: 8

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).

Date: January 1992 Revision: 8

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 PEN analytes <25.087 (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".

Date: January 1992 Revision: 8

YES NO N/A

1/1

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

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)

as unusable (R).

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 judgment 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.

Date: January 1992 Revision: 8

YES NO N/A

9.0		Cleanup Efficiency Verification (FOTE 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?	 <u> </u>
		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?	 · <u>/</u>
		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

pesticide compounds. Use professional

judgement to qualify positive results if recoveries are greater than the upper

"R" if zero tR was obtained for

limit.

Date: January 1992 Revision: 8

YES NO N/A

NOTZ: 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.

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.

Date: January 1992 Revision: 8

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 % JN 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 whethers much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is interfering compound. If an interfering compound and 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.

Date: January 1992 Revision: 8

YES NO N/A

11.2 Are the CRQLs adjusted to reflect sample dilutions and, for soils, a 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.

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Date: January 1992 Revision: 8

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.

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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

| 11097-69-1----Aroclor-1254

11096-82-5-----Aroclor-1260__

EPA SAMPLE NO.

Lab Name: NYTEST ENV INC Contract	EXW-1
Lab Code: NYTEST Case No.: 26151 SAS No.	.: SDG No.: <u>NYACK4</u>
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: <u>2615104</u>
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_/
	ENTRATION UNITS: Lor ug/Kg) <u>UG/L</u> Q
2001-25-2 Texaphene	3.00 NX 9X+24-q
12674-11-2Aroclor-1016	1.0 0
11104-28-2Aroclor-1221	
11141-16-5Aroclor-1232	· · · · · · · · · · · · · · · · · · ·
53469-21-9Aroclor-1242	
12672-29-6Aroclor-1248	1.0 0 🗸

LMN 17 FEB96

1.0 U V | 1.0 U V |

EPA SAMPLE NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

COMPOUND

CAS NO.

Contract TVC	MW-2
Lab Name: NYTEST ENV INC Contract	.: 3322136
Lab Code: NYTEST Case No.: 26151 SAS No.	SDG No.: NYACK4
Matrix: (soil/water) <u>WATER</u>	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 /
CONCE	ENTRATION UNITS:

-0001-35-2 Toxaphene	=+ 5.0 10 + N/ Q/ 12/ 2
12674-11-2Aroclor-1016	5.0 U WA 9/ 124-96
11104-28-2Aroclor-1221	2.0 U \
11141-16-5Aroclor-1232	1.0 U \/
53469-21-9Aroclor-1242	1.0 U 🗸
12672-29-6Aroclor-1248	1.0 0 0
11097-69-1Aroclor-1254	1.0 V OU 724-96
11096-82-5Aroclor-1260	1.0 U V

(ug/L or ug/Kg) UG/L

Limn 17 FEBIL

Q

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

12672-29-6-----Aroclor-1248_

11096-82-5-----Aroclor-1260_

| 11097-69-1-----Aroclor-1254

EPA	SAMPLE	NO.

	M ₩ -3
Lab Name: NYTEST ENV INC Contract	:: <u>9522158</u>
Lab Code: NYTEST Case No.: 26151 SAS No.	: SDG No.: NYACK4
Matrix: (soil/water) <u>WATER</u>	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) <u>SEPF</u>	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/
CONCE	ENTRATION UNITS:
CAS NO. COMPOUND (ug/I	
	1.0 U WA 1-24-46
8001 55 2 Tonaphane	5.014 (C) 1-74-46
12674-11-2Aroclor-1016	1.0 U
11104-28-2Aroclor-1221	2.0 U
11141-16-5Aroclor-1232	[1.0 U
53469-21-9Aroclor-1242	1.0 U

(LMM) 17 FE2396

1.0 U

0.40 J

1.0 U

EPA SAMPLE NO.

Lab Name: NYTEST ENV INC Contract	MW-4 : <u>9522158 </u>	
Lab Code: NYTEST Case No.: 26151 SAS No.	SDG No.: NYACK4	
Matrix: (soil/water) <u>WATER</u>	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) <u>SEPF</u>	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 /	
	ENTRATION UNITS: Lor ug/Kg) <u>UG/L</u> Q	
8001_35_2 Toxaphene		·NA OLFA4-a
12674-11-2Aroclor-1016	1.0 U	
11104-28-2Aroclor-1221		
11141-16-5Aroclor-1232	·	
53469-21-9Aroclor-1242		
12672-29-6Aroclor-1248	1.0 U	
11097-69-1Aroclor-1254	1.0 U	
11096-82-5Aroclor-1260	1.0 U	

000031

LIMM 17 FEDITU

PCB Data Validation Summary Orange & Rockland Utilities, Inc. West Nyack, New York

Analytical Laboratory: NYTEST Environmentar, 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, he wever, 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%.

C:\WPWIN60\WPDOCS\LIBRARY\ORU\NY1PCB.WPD

RUST ENVIRONMENT & INFRASTRUCTURE

2/9/96

PCB Analytical Data - Groundwater

Orange & Rockland Utilities West Nyack, New York Sampling Dates: December 26 and 27, 1995

Samula ID	Sample ID EXW.4 EXW.5	_	MW.1	MW.5	MW.5R	y-MM	WW.7	MW.8	28-WW	X.1	MW.0R
Compound						,			3		
Aroclor-1016	1 00	1 U	1 00	1 U	NO I	1 U	1 U	70 I	AN I	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 00	1 U	1 00	1 U	1 UV	1 C	1 C	1 50	1 07	1 00	1 UV
Aroclor-1242	1 00	. 1 U	201	1 U	1 00	1 U	1 U	1 UV	1 00	1 00	1 UV
Aroclor-1248	1 UV	1 C	1 50	1 U	1 UV	1 U	חם	1 00	1 00	1 UV	1 00
Aroclor-1254	1 UV	1 C	20.1	1 U	1 00	1 0	1 U	1 00	70 1	1 00	1 00
Aroclor-1260	1 UV	1 U	1 UV	1 U	1 UV	1 U	1 U	1 00	1 UV	1 UV	1 00

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.

JRU-WEST_NJACK -SDG: NJACKI

STANDARD OPERATING PROCEDURE

Date: January 1992 Revision: 8

YES NO N/A

PCDO ONLY

1.0 Traffic Reports and Laboratory Narrative

1.1 Are Traffic Report Forms present for all samples?

兩 — —

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

1.2 Do the Traffic Reports or SDG Marrative 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.

Date: January 1992 Revision: 8

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 judgment 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)			5
	3.1	Are the PEST/PCB Surrogate Recovery Summaries (Form II) present for each of the following matrices?	,		•
		a. Low Water	<u>~</u> 1	_	
		b. Soil	\Box	_	
	3.2	Are all the PEST/PCB samples listed on the appropriate Surrogate Recovery Summary for each of the following matrices?	,		
		a. Low Water	ा√रे .		_
		b. Soil	\Box	_	
		ACTION: Call lab for explanation/resubmittals If missing deliverables are unavailable document effect in data assessments.	ole,		
	3.3	Were outliers marked correctly with an asterisk?	€\J		
		ACTION: Circle all outliers in red.	-		
	:.4	Were surrogate recoveries of TCX or DCB . outside of the contract specification for any sample or blank? (60-150%)	_/		

3.5

3.6

4.1

4.2

4.0

Date: January 1992 Revision: 8

YES NO N/A

ACTION: No qualification is done are diluted out. If recessurrogates is below the but above 10%, flag all sample 'J". If recovery either surrogate, qualificated the surrogate is above the limits for both surrogate values "J".	contract limit, results for that is < 10% for y positive n-detects "R".
Were surrogate retention times (windows established during the i analysis of Individual Standard	nitial 3-point
ACTION: If the RT limits are not analysis may be qualified for that sample on the beautiful professional judgement.	d unusable (R)
Are there any transcription/calc between raw data and Form II?	ulation errors
ACTION: If large errors exist, c explanation/resubmittal. necessary corrections an effect in data assessmen	Make any document.
Matrix Spikes (Form III)	
Is the Matrix Spike/Matrix Spike Recovery Form (Form III) present	Duplicate
Were matrix spikes analyzed at t frequency for each of the follow (1 MS/MSD must be performed for of similar matrix or concentrati	ing matrices?
a. Low Water	<u> </u>
b. Soil	<u>u </u>
ACTION: If any matrix spike data take the action specifie	are missing, d in 3.2 above.

Date: January 1992 Revision: 8

YES NO N/A

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

Water

Soil

Out of 12

NA 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

NA 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?

1

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)

Date: January 1992 Revision: 8

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?

<u>r</u> _ -

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

6.0 <u>Contamination</u>

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 a 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.

4.6

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YES NO N/A

Samp.	le conc > CR(< 5x blank	IL Sample conc < CRQL & is < 5x blank value	6 > 5% Blank Value
Flag with	sample result	qualify "U"	No qualification is needed
	in	gross blank contamination the associated samples sh lified as unusable (R).	exists, all data bould be
6.3	Are there for with every	ield/rinse/equipment blan sample?	iks associated
ACTION:	**** * *	el samples, note in data is no associated field/risamples taken from a drift	Tureledathweile region.
	do not have	associated field blanks.	
7.0	do not have	associated field blanks.	•
	Calibration Are the fol	associated field blanks.	and Data
	Calibration Are the fol Systems Pri for all sam	associated field blanks, and GC Performance lowing Gas Chromatograms ntouts for both columns [and Data
	Calibration Are the fol Systems Pri for all sam a. pea	associated field blanks. and GC Performance lowing Gas Chromatograms ntouts for both columns papers, blanks, MS/MSD?	and Data present
-	Calibration Are the fol Systems Pri for all sam a. pea b. per	and GC Performance lowing Gas Chromatograms ntouts for both columns ples, blanks, MS/MSD? k resolution check	and Data present
-	Calibration Are the fol Systems Pri for all sam a. pea b. per	and GC Performance lowing Gas Chromatograms intouts for both columns papers, blanks, MS/MSD? ik resolution check formance evaluation mixto	and Data present Li
-	Calibration Are the fol Systems Pri for all sam a. pea b. per c. arc d. arc	and GC Performance lowing Gas Chromatograms intouts for both columns papers, blanks, MS/MSD? ak resolution check formance evaluation mixtocolor 1016/1260 sclors 1221, 1232, 1242, kaphene	and Data present
-	Calibration Are the follows Prifor all sam a. pea b. per c. arc d. arc	and GC Performance lowing Gas Chromatograms intouts for both columns papers, blanks, MS/MSD? ak resolution check formance evaluation mixtocolor 1016/1260 sclors 1221, 1232, 1242, kaphene	and Data present Li ures
	calibration Are the fol Systems Pri for all sam a. pea b. per c. arc d. arc f. low g. med	and GC Performance lowing Gas Chromatograms intouts for both columns papers, blanks, MS/MSD? ak resolution check formance evaluation mixto eclor 1016/1260 eclors 1221, 1232, 1242,	and Data present Li — — ures Li — — 1248, 1254 Li — — res A & B 🖄 — —

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	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

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.

individual pattern.

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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

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?

元 — —

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

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

4

- for 4,4' - DDT?

- for endrin?

— 1,1 —

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.

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YES NO N/A

- 2. If any t 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).

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YES NO N/A

	ii.	Qualify positive results for endrin ket and endrin aldehyde as presumptively pr at an approximated quantity (NJ). Quali results for DDD and/or DDE as presumpti at an approximated quantity (NJ).	resent .fy posi	tive esent
7.9	Are the for all	relative percent difference (RPD) values PEM analytes <25.0%? (Form VII-PEST-1) [<u>ہ</u> ۔	
	ACTION:	If no, qualify all associated positive results generated during the analytical sequence "J" and sample quantitation limits "UJ".		
	NOTE:	If the failing PEN 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	period !	l samples been injected within a 12 hr. beginning with the injection of an ent 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 each IN analyze	VII - Pest-2 present and complete for DA and INDB Verification Calibration d?	<u> </u>	
	ACTION:	If no, take action specified in 3.2 abov	••	
7.12	Are the	re any transcription/calculation errors 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".

Date: January 1992 Revision: 8

YES NO N/A

1/1

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

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)

as unusable (R).

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 judgment 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.

Date: January 1992 Revision: 8

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?		1
		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 recover criteria as follows:	Y	

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.

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YES NO N/A

NOTZ: 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.

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.

Date: January 1992 Revision: 8

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:

3 Difference Qualifier

25-50 % JN 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 whethers 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.

Date: January 1992 Revision: 8

YES NO N/A

1014

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 "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?

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

ACTION: Address comments under System
Performance of data assessment.

Date: January 1992 Revision: 8

YES NO N/A

13.0 Field Duplicates

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

1/1

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 aidol 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%.

Lab Name: NYTEST ENV INC Contract	EXW-4 t: <u>9521637</u>
Lab Code: NYTEST Case No.: 26073 SAS No	.: SDG No.: NYACK1
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: 2607811
Sample wt/vol: 1000 (g/mL) ML	Lab File ID:
% Moisture: decanted: (Y/N)	Date Received: <u>12/27/95</u>
Extraction: (SepF/Cont/Sonc) SEPF /	Date Extracted: <u>12/28/95</u> /
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_
	ENTRATION UNITS: Lor ug/Kg) <u>UG/L</u> Q
8001-35-2Toxaphene	
12674-11-2Aroclor-1016	5.010 NH CO+12-9
11104-28-2Aroclor-1221	1.0 UV
11141-16-5Aroclor-1232	2.0 U V
53469-21-9Aroclor-1242	1.0 UV
12672-29-6Aroclor-1248	1.0 U V
11097-69-1Aroclor-1254	1.0 UV
11096-82-5Aroclor-1260	1.0 UV
11030-02-3-001-1260	1.0 UV
	(100)
	6. C=101
	016076

000009

Lab Name: NYTEST ENV INC Contrac	EXW-5 t: <u>∂521637</u>
Lab Code: NYTEST Case No.: 26073 SAS No	.: SDG No.: NYACK1
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: 2607812
Sample wt/vol: 1000 (g/mL) ML	Lab File ID:
% Moisture: decanted: (Y/N)	Date Received: <u>12/27/95</u>
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 /
CONCE	ENTRATION UNITS: Lorug/Kg) <u>UG/L</u> Q
8001-35-2Toxaphene	5.010 1010
12674-11-2Aroclor-1016	10 11 112-0
11104-28-2Aroclor-1221	1.00
11141-16-5Aroclor-1232	2.0 U
53469-21-9Aroclor-1242	· · · · · · · · · · · · · · · · · · ·
12672-29-6Aroclor-1248	1.0 U
11097-69-1Aroclor-1254	1.0 U
11096-82-5Aroclor-1260	
	1.0 U
	$\ell(m)$
	U!!!!
	8 Fi 7791.

11096-82-5-----Aroclor-1260

Lab Name: NYTEST ENV INC Contract	MW-1 : 9521637
Lab Code: NYTEST Case No.: 26073 SAS No.	: SDG No.: NYACK1
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: <u>2607306</u>
Sample wt/vol: 1000 (g/mL) ML	Lab File ID:
% Moisture: decanted: (Y/N)	Date Received: <u>12/27/95</u>
Extraction: (SepF/Cont/Sonc) SEPF V	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 /
	NTRATION UNITS: or ug/Kg) <u>UG/L</u> Q
	5.0 U N/A C/K 612.0
12674-11-2Aroclor-1016	
11104-28-2Aroclor-1221	2.0 U V
11141-16-5Aroclor-1232	1.0 U √
53469-21-9Aroclor-1242	1.0 U 🗸
12672-29-6Aroclor-1248	1.0 U √
11097-69-1Aroclor-1254	1.0 U √

1.0 0 7

Lab Name: NYTEST ENV INC Contract	MW-5
Lab Code: NYTEST Case No.: 26073 SAS No.	
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: <u>2607307</u>
Sample wt/vol: 1000 (g/mL) ML	Lab File ID:
% Moisture: decanted: (Y/N)	Date Received: <u>12/27/95</u>
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	Sullur Cleanup: (Y/N) N
73.7 37.0	NTRATION UNITS: or ug/Kg) <u>UG/L</u> Q

12674-11-2 Amarlas 1016	== VIQ + Q Q
12674-11-2Aroclor-1016	1.0 U
11104-28-2Aroclor-1221 11141-16-5Aroclor-1232	2.0 U
53469-21-9Aroclor-1242	
12672-29-6Aroclor-1248	1.0 U
11097-69-1Aroclor-1254	1.0 U
11096-82-5Aroclor-1260	
A100101-1200	1.0 U
	amn
	8 FE096

000026

Lab Name: NYTEST ENV INC Contract	MW-5B : 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: <u>12/27/95</u>
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 /
	ENTRATION UNITS: Lor ug/Kg) <u>UG/L</u> Q
-0001-35-2 Toxaphene	
12674-11-2Aroclor-1016	5.0 U WA OU-D-90
11104-28-2Aroclor-1221	1.0 0 V 2.0 U V
11141-16-5Aroclor-1232	1.0 U 🗸
53469-21-9Aroclor-1242	1.0 U V
12672-29-6Aroclor-1248	1.0 U V
11097-69-1Aroclor-1254	1.0 UV
11096-82-5Aroclor-1260	1.0 0 0
	CmO
	8 FEB96

T.A. Maria	M W - 6
Lab Name: NYTEST ENV INC Contract	: 9521637
Lab Code: NYTEST Case No.: 26073 SAS No	SDG No.: NYACK1
Matrix: (soil/water) <u>WATER</u>	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 /
	ENTRATION UNITS: Or ug/Kg) UG/L Q
-0001-35-2 Toxaphene	- W. W. Chelling
12674-11-2Aroclor-1016	5:0 U W OU 1-17-4
11104-28-2Aroclor-1221	2.0 U
11141-16-5Aroclor-1232	
53469-21-9Aroclor-1242	
12672-29-6Aroclor-1248	1.0 U
11097-69-1Aroclor-1254	1.0 U
11096-82-5Aroclor-1260	1.0 U
	amo
	9 (2)
	076076

000039

COMPOUND

CAS NO.

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: NYTEST ENV INC Contract	MW-7 : 9521637
Lab Code: NYTEST Case No.: 26073 SAS No.	: SDG No.: NYACK1
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: 2607305
Sample wt/vol: 1000 (g/mL) ML	Lab File ID:
% Moisture: decanted: (Y/N)	Date Received: <u>12/27/95</u>
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: (V/N) N /

CONCENTRATION UNITS:

(ug/L or ug/Kg) <u>UG/L</u> Q

WH41-12-90

Cimn 8 Fiz 396

Lab Name: NYTEST ENV INC Contract	MW-8 : 9521637	
Lab Code: NYTEST Case No.: 26073 SAS No.	: SDG No.: NYACK1	
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: 2607304	
Sample wt/vol: 1000 (g/mL) ML	Lab File ID:	
% Moisture: decanted: (Y/N)	Date Received: <u>12/27/95</u>	
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: CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q		
-8001-35-2Toxaphene		
12674-11-2Aroclor-1016	3.0 U WA ax 1/2-90	
11104-28-2Aroclor-1221	2.0 U V	
11141-16-5Aroclor-1232	1.0 UV	
53469-21-9Aroclor-1242	1.0 UV	
12672-29-6Aroclor-1248	1.0 UV	
11097-69-1Aroclor-1254	1.0 UV	
11096-82-5Aroclor-1260	1.0 U	
	GmO	
	& Fernal	
	014016	

Lab Name: NYTEST ENV INC Contract	MW-8	S		
Lab Code: NYTEST Case No.: 26073 SAS No	.: SDG No.: <u>N</u>	YACK1		
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: 26073	03		
Sample wt/vol: 1000 (g/mL) ML	Lab File ID:			
% Moisture: decanted: (Y/N)	Date Received: 12/27	<u>/95</u>		
Extraction: (SepF/Cont/Sonc) SEPF ✓	Date Extracted: 12/28	<u>/95</u> /		
Concentrated Extract Volume: 10000 (uL)	Date Analyzed: 01/04/	<u>/96</u>		
Injection Volume: 1.00 (uL)	Dilution Factor: 1	.00 1		
GPC Cleanup: (Y/N) N PH: 7.0	Sulfur Cleanup: (Y/N)	N /		
CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q				
 8001-35-2 				
12674-11-2Aroclor-1016	1.0 U			
11104-28-2Aroclor-1221	2.0 U			
11141-16-5Aroclor-1232	2.0 U	•		
53469-21-9Aroclor-1242	1.0 U			
12672-29-6Aroclor-1248		· ·		
11097-69-1Aroclor-1254	1.0 U	'		
11096-82-5Aroclor-1260	1.0 U\	·		
	(ii)	II [
	SFE	7910		

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: NYTEST ENV INC Contract	MW-9B		
Lab Code: NYTEST Case No.: 26073 SAS No	.: SDG No.: <u>NYACK1</u>		
Matrix: (soil/water) <u>WATER</u>	Lab Sample ID: <u>2607802</u>		
Sample wt/vol: 1000 (g/mL) ML	Lab File ID:		
% Moisture: decanted: (Y/N)	Date Received: <u>12/27/95</u>		
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: CAS NO. COMPOUND (ug/L or ug/Kg) $\underline{\text{UG/L}}$ Q			
8001-35-2Toxaphene	50 W N/A a1-12-49		
12674-11-2Aroclor-1016	1.0 UV		
11104-28-2Aroclor-1221	2.0 UV		
11141-16-5Aroclor-1232	1.0 U		
53469-21-9Aroclor-1242	1.0 U 🗸		
12672-29-6Aroclor-1248	1.0 UV		
11097-69-1Aroclor 1254	1.0 U V		
11096-82-5Aroclor-1260	1.0 UV		
	Cimn		
	8FED96		

PESTICIDE ORGANICS ANALYSIS DATA SHEET

Lab Name: NYTEST ENV INC Contract	X-1 t: <u>9521637</u>		
Lab Code: NYTEST Case No.: 26073 SAS No	.: SDG No.: NYACK1		
Matrix: (soil/water) <u>WATER</u>	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_		
CONCENTRATION UNITS: CAS NO. COMPOUND (ug/L or ug/Kg) UG/L Q			
	5.0 U 1/10 CH L D Co		
12674-11-2Aroclor-1016_	1.0 UV WAGH-17-GA		
11104-28-2Aroclor-1221	2.0 U ∨		
11141-16-5Aroclor-1232	1.0 UV		
53469-21-9Aroclor-1242	1.0 UV		
12672-29-6Aroclor-1248	1.0 UV		
11097-69-1Aroclor-1254	1.0 UV		
11096-82-5Aroclor-1260	1.0 U V		
	(imi)		
	8 FE 396		