REMEDIAL INVESTIGATION
WORK PLAN

PHASE II

SUBMITTED FOR:

RAILROAD DRIVE-IN CLEANERS

3180 LAWSON BLVD.
OCEANSIDE, NY 11752

PREPARED BY:

RICHARD D. GALLI, P.E., P.C.

52 BROADWAY
GREENLAWN, NY 11740

JULY, 1989

KENNETH L. BROOKS, P.E.

27/1/JH

TABLE OF CONTENTS

1.0 BACKGROUND

Railroad Drive-In Cleaners is a dry cleaning establishment operating at 3180 Lawson Blvd. in Oceanside, NY since 1966. The building was constructed in 1963.

On or about June 1988, personnel from OSI Oil Services removed a 550 gallon underground storage tank that had contained #2 fuel oil. This tank was located in the area behind the building as shown on the site plan. Soil from the excavation was moved onto a tarp at the request of NCDH and later placed into drums. This material will be sampled as part of this phase so that proper disposal may be arranged. The excavation was filled in with clean fill. The tank was dismantled by Gershow recycling and disposed of as scrap.

A site inspection conducted by the Nassau County Department of Health (NCDH) on July 6, 1988 indicated the presence of an unpermitted liquid discharge to the soil to the rear of the building. The discharge was discovered during the removal of an underground tank behind the building that had been used for storage of #2 fuel oil used for building heating purposes. Soil removed from around the tank was composited and sampled by Nassau County Dept. of Health personnel on July 6, 1988 as a matter of routine procedure. Results of this sampling later showed the presence of

tetrachloroethylene (2,600 parts per billion), xylenes (590 ppb) ethylbenzene (260 ppb) and toluene (95 ppb).

Inquiries indicate that no sanitary disposal systems or drywells are located on the premises. All discharges are sewered.

2.0 PHASE I RESULTS

Sampling conducted according to the approved Phase I work plan confirmed the presence of the solvents found by Nassau County Department of Health as well as smaller amounts of trichloroethylene. Tetrachloroethylene concentrations ranged form 10 to 1,100,000 ppb. Highest concentrations were found at the sampling locations lying to the South. The strongest concentrations, obtained at location B-4, indicated that the concentration increased with increasing sampling depth.

A copy of the lab report is attached as Appendix A. Phase I and Phase II sampling locations are shown in Drawing 2.

3.0 PHASE II OBJECTIVES

Having established the presence of contamination in Phase I, it will be the objective in Phase II to establish, in greater detail, the lateral and vertical extents of contamination. This definition of the problem is required before any cleanup plan may be approved.

The remaining program objectives include:

- Determination of the vertical and areal extent of soil contamination
- Evaluation of on-site and off-site impacts from soil contamination
- Determination of the extent of groundwater contamination (if required)
- Evaluation of on-site and off-site impacts from groundwater contamination (if required)
- Design and implementation of remedial plans (if required)

In order to accomplish the stated objectives, the phased approach will continue. It is anticipated that the next round of sampling will generate sufficient data in order to proceed to the next step, remediation.

4.0 PHASE II SOIL INVESTIGATION

The proposed Phase II investigation will be conducted by sampling in the same manner as the previous soil investigation using a hand auger, except that the area of study will be expanded. Sampling points will be located on a grid extending to the property lines to the East, South and West and for 10 feet from the excavation to the North. Proposed grid locations are shown in Drawing 2. Phase II sampling will be concentrated around the Phase I sample point labeled "B-4" since this location showed the highest concentrations, by far. Phase II activities are being proposed on the adjacent property to the South, the areal extent being limited by the concrete pad within the fence. Once the samples have been obtained they will be analyzed by HNU and/or lab analysis.

Upon recovery of each sample, a portion of the soil sample will be placed, using a stainless steel spatula, in a wide mouth glass jar, supplied by the laboratory. The jar will be covered with foil and capped tightly, maintaining a headspace in the jar. A subsample from each split spoon will be packed tightly into a 40 ml. VOA vial. The foil covered jars will be stored at ambient soil temperature, to avoid condensation buildup within the jar. Between fifteen and twenty (15-20) minutes from collection, the cap will be removed and the HNU probe will be gently pushed through the

foil cover to obtain a reading from the wide mouthed jars only.

The HNU readings will be recorded. HNU readings will determine which split spoon samples will be sent to the laboratory for analysis. Samples to be sent to the lab will include all those yeilding a high HNU reading and sufficient others to provide a calibration range for the HNU readings. The HNU readings will also be used to maintain the proper level of personnel protection as outlined in the Health and Safety Plan.

The specifications require that all procedures adhere to Standard Methods, NYSDEC and/or USEPA methods, where applicable. Quality assurance and quality control are written into each specification. New York State Department of Environmental Conservation field procedures will be followed during field investigations.

We propose to install hand augered borings to a minimum depth of approximately five feet or just above the water table. Sampling locations will be referenced in the report by grid location.

All borings will be conducted in the area where previous sampling and analysis conducted by NCDH indicated contamination. Samples will be obtained at depths of 0-2 feet and 4-6 feet or where HNU readings are highest. Sampling will continue until HNU readings show

non-detectable readings if such readings are reached before hitting groundwater. The depth at which samples will be collected will depend upon field conditions. If required, a sample will be collected at the depth at which HNU or Photovac tip readings indicate the highest levels of contaminants. Samples will be collected utilizing a decontaminated stainless steel auger and trowel, in accordance with NYSDEC and USEPA sampling protocol. Chain-of-custody procedures will be initiated in the field and maintained by the laboratory.

All soil samples collected will be submitted to NYTest Environmental or ECOTest Labs, (both NYSDEC technically acceptable laboratories), for volatile organic analysis by GC/MS, U.S. EPA method 8240. One blank sample will be collected from a decontaminated auger and will be included for volatile organic analysis (U.S. EPA method 624 for liquid sample) for Quality Assurance/Quality Control purposes.

The proposed sampling will be conducted in accordance with applicable sections of Appendixes A and B of the Phase I submission entitled "Procedures for Soil and Groundwater Sample Withdrawal, Preservation and Storage" and "QA/QC Specifications for Analysis of Groundwater and Soil Samples," respectively. These are incorporated by reference.

5.0 REPORT PREPARATION

Data collected in the field and in the laboratory will be evaluated, and submitted in report format. The main objectives of the report will be met as identified in Section 4. A tentative outline is given below. This may change as new information becomes available.

Report Outline

Executive Summary

1.0 Introduction
2.0 Scope of Work
3.0 Site's History
4.0 Nearby Industries
5.0 Field Investigations
6.0 Drilling of Borings
7.0 Soil Sampling
8.0 Laboratory Testing
9.0 Conclusions and Recommendations

Appendices

Should the conclusions and recommendations include a groundwater investigation study, the next phase will be initiated.

6.0 PHASE III - GROUNDWATER INVESTIGATION

If required, this phase will involve preparation of the following:

- Development of work plan
- Installation and sampling of groundwater monitoring wells
- Laboratory Analysis
- Remedial action alternatives in case of groundwater contamination.

The work plan submittal for Phase III is contingent upon the completion and results of Phase II.

7.0 PROJECT SCHEDULE

Upon NCDH review of the work plan and the QA/QC specifications, soil sampling will be performed within two weeks of approval. Laboratory analysis is expected to required four weeks. At the end of week 6, upon receipt of the laboratory data, a report will be prepared and submitted at week 8. The NCDH is assumed to take four weeks to review the report. Upon receiving NCDH comments, the next phase will commence, as appropriate.

APPENDIX A

PHASE I LAB DATA

TOTAL ANALYTICAL SERVICES FOR A SAFE ENVIRONMENT

nytest environmental inc.

CHAIN OF CUSTODY RECORD

PROJECT NO.

PROJECT NAME: Oceanside Rail Road Cleaners; 3180 Lawson Blvd.

CLIENT NAME: R. D. Galli P.E. P.C.

LAB.#

SAMPLE I.D. NO.	DATE	TIME	COMP	GRAB	SAMPLE LOCATION	NO. OF CONTAINERS	ANALYSIS: NITROGEN	OIL & GREASE	CYANIDE	PHENOL	VOLATILE	METALS	ORGANICS	BACTERIAL	TOC COD	OTHER	UNPRESERVED	REMARKS: ADDITIONAL REQUIREMENTS
B-1	4/12	~~9:20~~ ~~10:00~~	✓		9:20	2					✓							
B-1	4/12	~~9:40~~ ~~10:20~~	✓		9:40	2					✓							
B-2	4/12	10:00				2					✓							
B-2	4/12	10:20				2					✓							
B-3	4/12	11:00				2					✓							
B-3	4/12	11:20				2					✓							
B-4	4/12	10:45				2					✓							
B-4	4/12	11:05				2					✓							
FB	4/12	10:36				2					✓							
						22					✓							

Shipped Via:

Relinquished by (Signature): Thomas P. Fox	Date/Time: 4/12 | 12:45	Agent of: R.D. Galli P.E. P.C.	Rec'd. by (Signature):	Date/Time:	Agent of:
Printed Name: Thomas P. Fox			Printed Name:		
Relinquished by (Signature):	Date/Time:	Agent of:	Rec'd. by (Signature):	Date/Time:	Agent of:
Printed Name:			Printed Name:		
Relinquished by (Signature):	Date/Time:	Received for Laboratory by: (Signature)	Date/Time: 4/12 | 12:45	Remarks:
Printed Name:		Printed Name:		
Sampler (Signature):	Samplers Name (Print):			

ORGANICS ANALYSIS DATA SHEET

SAMPLE NUMBER: B

B-1
Shallow

Contractor: NYTEST ENVIRONMENTAL INC.
Lab Sample ID No: N9-4750
Sample Matrix: Soil
Data Release Authorized By: D. Sheely

Project No: 89-15663
Date Sample Received: 4/12/89

VOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 4/14/89
Conc/Dil Factor: 5
Percent Moisture Not Decanted: 9

CAS Number		ug/kg Dry Wt. Basis
74-87-3	Chloromethane	55.0 U
74-83-9	Bromomethane	55.0 U
75-01-4	Vinyl Chloride	55.0 U
75-00-3	Chloroethane	55.0 U
75-09-2	Methylene Chloride	27.0 U
67-64-1	Acetone	39.0 BJ
75-15-0	Carbon Disulfide	27.0 U
75-35-4	1,1-Dichloroethene	27.0 U
75-34-3	1,1-Dichloroethane	27.0 U
540-59-0	Total-1,2-Dichloroethene	27.0 U
67-66-3	Chloroform	27.0 U
107-06-2	1,2-Dichloroethane	27.0 U
78-93-3	2-Butanone	55.0 U
71-55-6	1,1,1-Trichloroethane	27.0 U
56-23-5	Carbon Tetrachloride	27.0 U
108-05-4	Vinyl Acetate	55.0 U
75-27-4	Bromodichloromethane	27.0 U

CAS Number		ug/kg Dry Wt. Basis
79-34-5	1,1,2,2-Tetrachloroethane	27.0 U
78-87-5	1,2-Dichloropropane	27.0 U
10061-02-6	Trans-1,3-Dichloropropene	27.0 U
79-01-6	Trichloroethene	16.0 J
124-48-1	Dibromochloromethane	27.0 U
79-00-5	1,1,2-Trichloroethane	27.0 U
71-43-2	Benzene	27.0 U
10061-01-5	cis-1,3-Dichloropropene	27.0 U
110-75-8	2-Chloroethylvinylether	55.0 U
75-25-2	Bromoform	27.0 U
591-78-6	2-Hexanone	55.0 U
108-10-1	4-Methyl-2-Pentanone	55.0 U
127-18-4	Tetrachloroethene	1500.0
108-88-3	Toluene	27.0 U
108-90-7	Chlorobenzene	27.0 U
100-41-4	Ethylbenzene	27.0 U
100-42-5	Styrene	27.0 U
	Total Xylenes	27.0 U
	Total Dichlorobenzene	165.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U), based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C This flag applies to pesticide parameters where the identification been confirmed by GC/MS Single component pesticides greater than o equal to 10 ug/l in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well a sample. It indicates possible/probable blank contamination and wa the data user to take appropriate action.

Other specific flags and footnotes may be required to properly def the results. If used, they must be fully described and such descr tion attached to the data summary report.

00007

ORGANICS ANALYSIS DATA SHEET

SAMPLE NUMBER: B-
B-1
Deep

Contractor: NYTEST ENVIRONMENTAL INC.
Lab Sample ID No: N9-4751
Sample Matrix: Soil
Data Release Authorized By: D. Sheely

Project No: 89-15663
Date Sample Received: 4/12/89

VOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 4/15/89
Conc/Dil Factor: 1
Percent Moisture Not Decanted: 19

CAS Number		ug/kg Dry Wt. Basis
74-87-3	Chloromethane	12.0 U
74-83-9	Bromomethane	12.0 U
75-01-4	Vinyl Chloride	12.0 U
75-00-3	Chloroethane	12.0 U
75-09-2	Methylene Chloride	10.0 B
67-64-1	Acetone	12.0 U
75-15-0	Carbon Disulfide	6.0 U
75-35-4	1,1-Dichloroethene	21.0
75-34-3	1,1-Dichloroethane	6.0 U
540-59-0	Total-1,2-Dichloroethene	6.0 U
67-66-3	Chloroform	6.0 U
107-06-2	1,2-Dichloroethane	6.0 U
78-93-3	2-Butanone	12.0 U
71-55-6	1,1,1-Trichloroethane	6.0 U
56-23-5	Carbon Tetrachloride	6.0 U
108-05-4	Vinyl Acetate	12.0 U
75-27-4	Bromodichloromethane	6.0 U

CAS Number		ug/kg Dry Wt. Basis
79-34-5	1,1,2,2-Tetrachloroethane	6.0 U
78-87-5	1,2-Dichloropropane	6.0 U
10061-02-6	Trans-1,3-Dichloropropene	6.0 U
79-01-6	Trichloroethene	43.0
124-48-1	Dibromochloromethane	6.0 U
79-00-5	1,1,2-Trichloroethane	6.0 U
71-43-2	Benzene	6.0 U
10061-01-5	cis-1,3-Dichloropropene	6.0 U
110-75-8	2-Chloroethylvinylether	12.0 U
75-25-2	Bromoform	6.0 U
591-78-6	2-Hexanone	12.0 U
108-10-1	4-Methyl-2-Pentanone	12.0 U
127-18-4	Tetrachloroethene	300.0
108-88-3	Toluene	6.0 U
108-90-7	Chlorobenzene	6.0 U
100-41-4	Ethylbenzene	6.0 U
100-42-5	Styrene	6.0 U
	Total Xylenes	6.0 U
	Total Dichlorobenzene	37.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U), based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C This flag applies to pesticide parameters where the identificatic been confirmed by GC/MS Single component pesticides greater than equal to 10 ug/l in the final extract should be confirmed by GC/M

B This flag is used when the analyte is found in the blank as well sample. It indicates possible/probable blank contamination and t the data user to take appropriate action.

Other specific flags and footnotes may be required to properly de the results. If used, they must be fully described and such desc tion attached to the data summary report.

00010

ORGANICS ANALYSIS DATA SHEET

SAMPLE NUMBER: B-
B-2
Shallow

Contractor: NYTEST ENVIRONMENTAL INC.
Lab Sample ID No: N9-4752
Sample Matrix: Soil
Data Release Authorized By: D. Sheeley

Project No: 89-15663
Date Sample Received: 4/12/89

VOLATILE COMPOUNDS

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 4/15/89 .
Conc/Dil Factor: 1
Percent Moisture Not Decanted: 8

CAS Number		ug/kg Dry Wt. Basis
74-87-3	Chloromethane	11.0 U
74-83-9	Bromomethane	11.0 U
75-01-4	Vinyl Chloride	11.0 U
75-00-3	Chloroethane	11.0 U
75-09-2	Methylene Chloride	8.0 B
67-64-1	Acetone	12.0 B
75-15-0	Carbon Disulfide	5.0 U
75-35-4	1,1-Dichloroethene	7.0
75-34-3	1,1-Dichloroethane	5.0 U
540-59-0	Total-1,2-Dichloroethene	5.0 U
67-66-3	Chloroform	5.0 U
107-06-2	1,2-Dichloroethane	5.0 U
78-93-3	2-Butanone	11.0 U
71-55-6	1,1,1-Trichloroethane	5.0 U
56-23-5	Carbon Tetrachloride	5.0 U
108-05-4	Vinyl Acetate	11.0 U
75-27-4	Bromodichloromethane	5.0 U

CAS Number		ug/kg Dry Wt. Basis
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
78-87-5	1,2-Dichloropropane	5.0 U
10061-02-6	Trans-1,3-Dichloropropene	5.0 U
79-01-6	Trichloroethene	23.0
124-48-1	Dibromochloromethane	5.0 U
79-00-5	1,1,2-Trichloroethane	5.0 U
71-43-2	Benzene	5.0 U
10061-01-5	cis-1,3-Dichloropropene	5.0 U
110-75-8	2-Chloroethylvinylether	11.0 U
75-25-2	Bromoform	5.0 U
591-78-6	2-Hexanone	11.0 U
108-10-1	4-Methyl-2-Pentanone	11.0 U
127-18-4	Tetrachloroethene	370.0
108-88-3	Toluene	5.0 U
108-90-7	Chlorobenzene	5.0 U
100-41-4	Ethylbenzene	5.0 U
100-42-5	Styrene	5.0 U
	Total Xylenes	5.0 U
	Total Dichlorobenzene	33.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U), based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C This flag applies to pesticide parameters where the identificatior been confirmed by GC/MS Single component pesticides greater than c equal to 10 ug/l in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well a sample. It indicates possible/probable blank contamination and we the data user to take appropriate action.

Other specific flags and footnotes may be required to properly def the results. If used, they must be fully described and such descr tion attached to the data summary report.

ORGANICS ANALYSIS DATA SHEET

SAMPLE NUMBER: B-

B-2

Deep

Contractor: NYTEST ENVIRONMENTAL INC.
Lab Sample ID No: N9-4753
Sample Matrix: Soil
Data Release Authorized By: O. Shealy

Project No: 89-15663
Date Sample Received: 4/12/89

VOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 4/15/89
Conc/Dil Factor: 1
Percent Moisture Not Decanted: 11

CAS Number		ug/kg Dry Wt. Basis
74-87-3	Chloromethane	11.0 U
74-83-9	Bromomethane	11.0 U
75-01-4	Vinyl Chloride	11.0 U
75-00-3	Chloroethane	11.0 U
75-09-2	Methylene Chloride	8.0 B
67-64-1	Acetone	13.0 B
75-15-0	Carbon Disulfide	6.0 U
75-35-4	1,1-Dichloroethene	6.0 U
75-34-3	1,1-Dichloroethane	6.0 U
540-59-0	Total-1,2-Dichloroethene	6.0 U
67-66-3	Chloroform	6.0 U
107-06-2	1,2-Dichloroethane	6.0 U
78-93-3	2-Butanone	11.0 U
71-55-6	1,1,1-Trichloroethane	6.0 U
56-23-5	Carbon Tetrachloride	6.0 U
108-05-4	Vinyl Acetate	11.0 U
75-27-4	Bromodichloromethane	6.0 U

CAS Number		ug/kg Dry Wt. Basis
79-34-5	1,1,2,2-Tetrachloroethane	6.0 U
78-87-5	1,2-Dichloropropane	6.0 U
10061-02-6	Trans-1,3-Dichloropropene	6.0 U
79-01-6	Trichloroethene	6.0 U
124-48-1	Dibromochloromethane	6.0 U
79-00-5	1,1,2-Trichloroethane	6.0 U
71-43-2	Benzene	6.0 U
10061-01-5	cis-1,3-Dichloropropene	6.0 U
110-75-8	2-Chloroethylvinylether	11.0 U
75-25-2	Bromoform	6.0 U
591-78-6	2-Hexanone	11.0 U
108-10-1	4-Methyl-2-Pentanone	11.0 U
127-18-4	Tetrachloroethene	10.0
108-88-3	Toluene	6.0 U
108-90-7	Chlorobenzene	6.0 U
100-41-4	Ethylbenzene	6.0 U
100-42-5	Styrene	6.0 U
	Total Xylenes	6.0 U
	Total Dichlorobenzene	11.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U), based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C This flag applies to pesticide parameters where the identification been confirmed by GC/MS Single component pesticides greater than o equal to 10 ug/l in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well a sample. It indicates possible/probable blank contamination and wa the data user to take appropriate action.

Other specific flags and footnotes may be required to properly def the results. If used, they must be fully described and such descr tion attached to the data summary report.

ORGANICS ANALYSIS DATA SHEET

SAMPLE NUMBER: B

D 3
Shallow

Contractor: NYTEST ENVIRONMENTAL INC.
Lab Sample ID No: N9-4754
Sample Matrix: Soil
Data Release Authorized By: DeShaley

Project No: 89-15663
Date Sample Received: 4/12/89

VOLATILE COMPOUNDS

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 4/17/89
Conc/Dil Factor: 625
Percent Moisture Not Decanted: 15

CAS Number		ug/kg Dry Wt. Basis
74-87-3	Chloromethane	7353.0 U
74-83-9	Bromomethane	7353.0 U
75-01-4	Vinyl Chloride	7353.0 U
75-00-3	Chloroethane	7353.0 U
75-09-2	Methylene Chloride	7100.0 B
67-64-1	Acetone	26000.0 B
75-15-0	Carbon Disulfide	3676.0 U
75-35-4	1,1-Dichloroethene	3676.0 U
75-34-3	1,1-Dichloroethane	3676.0 U
540-59-0	Total-1,2-Dichloroethene	3676.0 U
67-66-3	Chloroform	3676.0 U
107-06-2	1,2-Dichloroethane	3676.0 U
78-93-3	2-Butanone	7353.0 U
71-55-6	1,1,1-Trichloroethane	3676.0 U
56-23-5	Carbon Tetrachloride	3676.0 U
108-05-4	Vinyl Acetate	7353.0 U
75-27-4	Bromodichloromethane	3676.0 U

CAS Number		ug/kg Dry Wt. Basis
79-34-5	1,1,2,2-Tetrachloroethane	3676.0 U
78-87-5	1,2-Dichloropropane	3676.0 U
10061-02-6	Trans-1,3-Dichloropropene	3676.0 U
79-01-6	Trichloroethene	3676.0 U
124-48-1	Dibromochloromethane	3676.0 U
79-00-5	1,1,2-Trichloroethane	3676.0 U
71-43-2	Benzene	3676.0 U
10061-01-5	cis-1,3-Dichloropropene	3676.0 U
110-75-8	2-Chloroethylvinylether	7353.0 U
75-25-2	Bromoform	3676.0 U
591-78-6	2-Hexanone	7353.0 U
108-10-1	4-Methyl-2-Pentanone	7353.0 U
127-18-4	Tetrachloroethene	300000.0
108-88-3	Toluene	3676.0 U
108-90-7	Chlorobenzene	3676.0 U
100-41-4	Ethylbenzene	3676.0 U
100-42-5	Styrene	3676.0 U
	Total Xylenes	3676.0 U
	Total Dichlorobenzene	22059.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U), based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C This flag applies to pesticide parameters where the identification h been confirmed by GC/MS Single component pesticides greater than or equal to 10 ug/l in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as sample. It indicates possible/probable blank contamination and warn the data user to take appropriate action.

Other specific flags and footnotes may be required to properly defir the results. If used, they must be fully described and such descri tion attached to the data summary report.

ORGANICS ANALYSIS DATA SHEET

SAMPLE NUMBER: B-3

B-3
Deep

Contractor: NYTEST ENVIRONMENTAL INC.
Lab Sample ID No: N9-4755
Sample Matrix: Soil
Data Release Authorized By: D. Scheeley

Project No: 89-15663
Date Sample Received: 4/12/89

VOLATILE COMPOUNDS

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 4/17/89
Conc/Dil Factor: 2500
Percent Moisture Not Decanted: 13

CAS Number		ug/kg Dry Wt. Basis
74-87-3	Chloromethane	28736.0 U
74-83-9	Bromomethane	28736.0 U
75-01-4	Vinyl Chloride	28736.0 U
75-00-3	Chloroethane	28736.0 U
75-09-2	Methylene Chloride	29000.0 B
67-64-1	Acetone	110000.0 B
75-15-0	Carbon Disulfide	14368.0 U
75-35-4	1,1-Dichloroethene	14368.0 U
75-34-3	1,1-Dichloroethane	14368.0 U
540-59-0	Total-1,2-Dichloroethene	14368.0 U
67-66-3	Chloroform	14368.0 U
107-06-2	1,2-Dichloroethane	14368.0 U
78-93-3	2-Butanone	28736.0 U
71-55-6	1,1,1-Trichloroethane	14368.0 U
56-23-5	Carbon Tetrachloride	14368.0 U
108-05-4	Vinyl Acetate	28736.0 U
75-27-4	Bromodichloromethane	14368.0 U

CAS Number		ug/kg Dry Wt. Basis
79-34-5	1,1,2,2-Tetrachloroethane	14368.0 U
78-87-5	1,2-Dichloropropane	14368.0 U
10061-02-6	Trans-1,3-Dichloropropene	14368.0 U
79-01-6	Trichloroethene	14368.0 U
124-48-1	Dibromochloromethane	14368.0 U
79-00-5	1,1,2-Trichloroethane	14368.0 U
71-43-2	Benzene	14368.0 U
10061-01-5	cis-1,3-Dichloropropene	14368.0 U
110-75-8	2-Chloroethylvinylether	28736.0 U
75-25-2	Bromoform	14368.0 U
591-78-6	2-Hexanone	28736.0 U
108-10-1	4-Methyl-2-Pentanone	28736.0 U
127-18-4	Tetrachloroethene	350000.0
108-88-3	Toluene	14368.0 U
108-90-7	Chlorobenzene	14368.0 U
100-41-4	Ethylbenzene	14368.0 U
100-42-5	Styrene	14368.0 U
	Total Xylenes	14368.0 U
	Total Dichlorobenzene	86207.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U), based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C This flag applies to pesticide parameters where the identification been confirmed by GC/MS Single component pesticides greater than or equal to 10 ug/l in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as sample. It indicates possible/probable blank contamination and war the data user to take appropriate action.

Other specific flags and footnotes may be required to properly defi the results. If used, they must be fully described and such descri tion attached to the data summary report.

ORGANICS ANALYSIS DATA SHEET

SAMPLE NUMBER: B-4 Shallow

Contractor: NYTEST ENVIRONMENTAL INC.
Lab Sample ID No: N9-4756
Sample Matrix: Soil
Data Release Authorized By: D. Staley

Project No: 89-15663
Date Sample Received: 4/12/89

VOLATILE COMPOUNDS

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 4/17/89
Conc/Dil Factor: 6250
Percent Moisture Not Decanted: 33

CAS Number		ug/kg Dry Wt. Basis
74-87-3	Chloromethane	93284.0 U
74-83-9	Bromomethane	93284.0 U
75-01-4	Vinyl Chloride	93284.0 U
75-00-3	Chloroethane	93284.0 U
75-09-2	Methylene Chloride	76000.0 B
67-64-1	Acetone	460000.0 B
75-15-0	Carbon Disulfide	46642.0 U
75-35-4	1,1-Dichloroethene	46642.0 U
75-34-3	1,1-Dichloroethane	46642.0 U
540-59-0	Total-1,2-Dichloroethene	46642.0 U
67-66-3	Chloroform	46642.0 U
107-06-2	1,2-Dichloroethane	46642.0 U
78-93-3	2-Butanone	93284.0 U
71-55-6	1,1,1-Trichloroethane	46642.0 U
56-23-5	Carbon Tetrachloride	46642.0 U
108-05-4	Vinyl Acetate	93284.0 U
75-27-4	Bromodichloromethane	46642.0 U

CAS Number		ug/kg Dry Wt. Basis
79-34-5	1,1,2,2-Tetrachloroethane	46642.0 U
78-87-5	1,2-Dichloropropane	46642.0 U
10061-02-6	Trans-1,3-Dichloropropene	46642.0 U
79-01-6	Trichloroethene	46642.0 U
124-48-1	Dibromochloromethane	46642.0 U
79-00-5	1,1,2-Trichloroethane	46642.0 U
71-43-2	Benzene	46642.0 U
10061-01-5	cis-1,3-Dichloropropene	46642.0 U
110-75-8	2-Chloroethylvinylether	93284.0 U
75-25-2	Bromoform	46642.0 U
591-78-6	2-Hexanone	93284.0 U
108-10-1	4-Methyl-2-Pentanone	93284.0 U
127-18-4	Tetrachloroethene	490000.0
108-88-3	Toluene	46642.0 U
108-90-7	Chlorobenzene	46642.0 U
100-41-4	Ethylbenzene	46642.0 U
100-42-5	Styrene	46642.0 U
	Total Xylenes	46642.0 U
	Total Dichlorobenzene	279851.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U), based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C This flag applies to pesticide parameters where the identification been confirmed by GC/MS Single component pesticides greater than or equal to 10 ug/l in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well a sample. It indicates possible/probable blank contamination and wa the data user to take appropriate action.

Other specific flags and footnotes may be required to properly def the results. If used, they must be fully described and such descr tion attached to the data summary report.

ORGANICS ANALYSIS DATA SHEET

SAMPLE NUMBER: B-4

B-4
Deep

Contractor: NYTEST ENVIRONMENTAL INC.
Lab Sample ID No: NB-4757
Sample Matrix: Soil
Data Release Authorized By: D. Sheehy

Project No: 89-15663
Date Sample Received: 4/12/89

VOLATILE COMPOUNDS

Concentration: Low (Medium) (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 4/17/89
Conc/Dil Factor: 6250
Percent Moisture Not Decanted: 17

CAS Number		ug/kg Dry Wt. Basis
74-87-3	Chloromethane	75301.0 U
74-83-9	Bromomethane	75301.0 U
75-01-4	Vinyl Chloride	75301.0 U
75-00-3	Chloroethane	75301.0 U
75-09-2	Methylene Chloride	180000.0 B
67-64-1	Acetone	470000.0 B
75-15-0	Carbon Disulfide	37651.0 U
75-35-4	1,1-Dichloroethene	37651.0 U
75-34-3	1,1-Dichloroethane	37651.0 U
540-59-0	Total-1,2-Dichloroethene	37651.0 U
67-66-3	Chloroform	37651.0 U
107-06-2	1,2-Dichloroethane	37651.0 U
78-93-3	2-Butanone	75301.0 U
71-55-6	1,1,1-Trichloroethane	37651.0 U
56-23-5	Carbon Tetrachloride	37651.0 U
108-05-4	Vinyl Acetate	75301.0 U
75-27-4	Bromodichloromethane	37651.0 U

CAS Number		ug/kg Dry Wt. Basis
79-34-5	1,1,2,2-Tetrachloroethane	37651.0 U
78-87-5	1,2-Dichloropropane	37651.0 U
10061-02-6	Trans-1,3-Dichloropropene	37651.0 U
79-01-6	Trichloroethene	60000.0
124-48-1	Dibromochloromethane	37651.0 U
79-00-5	1,1,2-Trichloroethane	37651.0 U
71-43-2	Benzene	37651.0 U
10061-01-5	cis-1,3-Dichloropropene	37651.0 U
110-75-8	2-Chloroethylvinylether	75301.0 U
75-25-2	Bromoform	37651.0 U
591-78-6	2-Hexanone	75301.0 U
108-10-1	4-Methyl-2-Pentanone	75301.0 U
127-18-4	Tetrachloroethene	1100000.0
108-88-3	Toluene	210000.0
108-90-7	Chlorobenzene	37651.0 U
100-41-4	Ethylbenzene	42000.0
100-42-5	Styrene	37651.0 U
	Total Xylenes	140000.0
	Total Dichlorobenzene	225904.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U), based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C This flag applies to pesticide parameters where the identification l been confirmed by GC/MS Single component pesticides greater than or equal to 10 ug/l in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as sample. It indicates possible/probable blank contamination and warn the data user to take appropriate action.

Other specific flags and footnotes may be required to properly defir the results. If used, they must be fully described and such descri tion attached to the data summary report.

ORGANICS ANALYSIS DATA SHEET

SAMPLE NUMBER: FB 1(
Field Blank

Contractor: NYTEST ENVIRONMENTAL INC.
Lab Sample ID No: N9-4758
Sample Matrix: WATER
Data Release Authorized By: D. Staley

Project No: 89-15663
Date Sample Received: 4/12/89

VOLATILE COMPOUNDS

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: NA
Date Analyzed: 4/14/89 11:06
Conc/Dil Factor: 1 pH:
Percent Moisture (Not Decanted): NA

CAS Number		(ug/l) or ug/Kg (Circle One)
74-87-3	Chloromethane	10.0 U
74-83-9	Bromomethane	10.0 U
75-01-4	Vinyl Chloride	10.0 U
75-00-3	Chloroethane	10.0 U
75-09-2	Methylene Chloride	5.0 U
67-64-1	Acetone	10.0
75-15-0	Carbon Disulfide	5.0 U
75-35-4	1,1-Dichloroethene	5.0 U
75-34-3	1,1-Dichloroethane	5.0 U
540-59-0	Total-1,2-Dichloroethene	5.0 U
67-66-3	Chloroform	5.0 U
107-06-2	1,2-Dichloroethane	5.0 U
78-93-3	2-Butanone	10.0 U
71-55-6	1,1,1-Trichloroethane	5.0 U
56-23-5	Carbon Tetrachloride	5.0 U
108-05-4	Vinyl Acetate	10.0 U
75-27-4	Bromodichloromethane	5.0 U

CAS Number		(ug/l) or ug/Kg (Circle One)
79-34-5	1,1,2,2-Tetrachloroethane	5.0 U
78-87-5	1,2-Dichloropropane	5.0 U
10061-02-6	Trans-1,3-Dichloropropene	5.0 U
79-01-6	Trichloroethene	5.0 U
124-48-1	Dibromochloromethane	5.0 U
79-00-5	1,1,2-Trichloroethane	5.0 U
71-43-2	Benzene	5.0 U
10061-01-5	cis-1,3-Dichloropropene	5.0 U
110-75-8	2-Chloroethylvinylether	10.0 U
75-25-2	Bromoform	5.0 U
591-78-6	2-Hexanone	10.0 U
108-10-1	4-Methyl-2-Pentanone	10.0 U
127-18-4	Tetrachloroethene	5.0 U
108-88-3	Toluene	5.0 U
108-90-7	Chlorobenzene	5.0 U
100-41-4	Ethylbenzene	5.0 U
100-42-5	Styrene	5.0 U
	Total Xylenes	5.0 U
	Total Dichlorobenzene	30.0 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

VALUE If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U), based on necessary concentration dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read U-Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1 1 response is assumed or when the mass spectral data indicates the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J).

C This flag applies to pesticide parameters where the identification h been confirmed by GC/MS Single component pesticides greater than or equal to 10 ng/ul in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as sample. It indicates possible/probable blank contamination and warr the data user to take appropriate action.

Other specific flags and footnotes may be required to properly defir the results. If used, they must be fully described and such descrip tion attached to the data summary report.

00031