

**REMEDIAL INVESTIGATION/FEASIBILITY STUDY
APPENDICES G-L
VOLNEY LANDFILL, TOWN OF VOLNEY,
OSWEGO COUNTY, NEW YORK**



Prepared for :

**NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

50 Wolf Road, Albany, New York 12233

Henry G. Williams, Commissioner

DIVISION OF SOLID AND HAZARDOUS WASTE

Norman H. Nosenchuck, P.E. - Director.

URS Company, Inc.
570 Delaware Avenue
Buffalo, New York 14202

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APPENDICES

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APPENDIX G

Environmental Sampling Report

1.0 SAMPLING OF MONITORING WELLS AND SURFACE POINTS

The sampling of groundwater wells, surface points, and leachate breakout at the Volney Landfill originally took place during a one month period beginning on February 18, 1986. However, the holding times for the analyses were exceeded and the results declared invalid. A resampling was performed during the period of July 21 through July 30, 1986. During this period, samples were collected from twenty-eight groundwater monitoring wells, seven surface points, and a leachate breakout point.

A complete set of samples was collected from all wells except seven, (VBW-2, VBW-4S, VBW-9S, VBW-9D, VBW-10S, VBW-11, and VBW-12). At three of these wells, VBW-9S, VBW-9D, and VBW-10S, no water was present when the well was measured prior to evacuation. These wells were declared dry and no sample was obtained from any of them. Wells VBW-2, VBW-4S, VBW-11, and VBW-12 proved to be low volume, slowly recharging wells. Because of this volume/recharge situation, it would have taken many days to obtain complete sets of samples from these wells. Therefore, it was decided to perform a reduced set of analyses at these wells.

Difficulties arose during the evacuation and sampling of Well VBW-10BR. During evacuation, the P.V.C. bottom filling bailer repeatedly got stuck at a depth of approximately ninety feet. A portion of the foot valve and bottom of the bailer broke off while dislodging the bailer from the well. A P.V.C. bottom filling bailer from another well was cleaned with a soap and water wash, hexane rinse, acetone rinse, followed by a deionized water rinse and utilized to complete the evacuation of Well VBW-10BR. Only 2.3 times the volume of standing water was removed from this well because it was decided not to continue attempting to lower the bailer below ninety feet where it was getting stuck. The well was not evacuated further the following day because recovery was slow and VBW-10BR was the last well to be evacuated and sampled on the site. At the time of sampling VBW-10BR, anomolous pH,

(pH = 12.24) and specific conductance values, (SC = 7200 umhos/cm) were recorded. The anomolous field measurements and the very slow recharge rate indicate a possible problem of grout seeping into fractures, partially sealing off the well from the formation.

After evacuating 148 gallons from Well VBW-3BR, the bailer was lost at the bottom of the well. Seventeen additional gallons were evacuated from the well the following day prior to sample collection, making 165 gallons the total volume evacuated from VBW-3BR.

Surface samples for both sediment and water analysis were collected on July 21, 1986. Five samples were collected on Bell Creek (VSS-1, VSS-2, VSS-3, VSS-4 and VSS-5) upstream and downstream along the west side of the site. The other two surface points (VSS-6 and VSS-7) were collected from the headwaters of Black Creek as they drained away from the landfill north and east of the site.

It was originally anticipated that three samples would be collected from leachate breakouts around the site. Only one leachate breakout could be found; the other two points were dry. This leachate breakout, (VLCH-1) is located approximately one hundred feet northeast of Well VBW-6 in a swampy area north of the landfill but south of Bell Creek. A complete set of samples, (water only) was collected at VLCH-1 on July 30, 1986.

1.1 Field Methods

Two methods were used to evacuate wells prior to the collection of samples. A suction lift pump was used for all wells in which water levels were less than 25 feet below the top of casing. Two pumps were used, a battery powered ISCO Portable Peristaltic Pump and a gasoline powered Fuji Robins Centrifugal Pump. In each case, dedicated, new, clean, polyethylene tubing was used for each well to avoid cross-contamination of wells. The ISCO pump removed water at a rate of

approximately one gallon per minute, while the Fuji Robins had a pumping rate of three to five gallons per minute.

Bailers were used at all bedrock wells and VBW-10D, since these water levels were below suction-lift depths. In these cases, a precleaned, dedicated, P.V.C. bottom filling bailer was used to evacuate water prior to sampling. Clean, new, dedicated, nylon rope was used on each bailer. After this purging of the well was completed, the rope was discarded and the bailer was stored in the well above the water, suspended from a hook in the cap. All wells have protective casings with lockable caps. Wells were unlocked and opened only when performing work at the well.

Prior to sampling, it was desired to evacuate each well to dryness, or if the recharge rate was sufficient, to remove three times the volume of standing water. Some of the overburden wells at the Volney Landfill site went to dryness during the evacuation phase. In all other cases, at least three times the volume was removed. At several wells, additional volumes were removed in an attempt to clear up some of the more turbid wells. In most cases, evacuating additional volumes was successful in decreasing the degree of turbidity to a steady level. Prior to evacuation, water levels below the top of casing were measured to the nearest quarter inch using an electronic detector. The tip of the sensor was cleaned with soap and water, acetone rinsed, followed by a deionized water rinse between well measurements. Well evacuation information is presented in Table I.

All samples from the groundwater monitoring wells were collected within twenty-four hours after evacuation. Samples were collected using a one-inch by two foot stainless steel bailer. Each bailer was precleaned prior to sampling by a soap and water wash, hexane rinse, acetone rinse, followed by a deionized water rinse. Each bailer was attached to a polypropylene "leader" of three or four feet which was tied to new, clean, dedicated, nylon rope.

Samples were collected into precleaned bottles supplied as "priority-pollutant" sample kits for each well. These kits were prepared by NYTEST Environmental, Inc. All preservatives were added prior to sampling. Since dissolved metals analysis was requested for groundwater samples, a separate sample was collected into a clean one quart container from which a metals sample was filtered and measurements for pH, specific conductance, and temperature were made. Following filtration, the sample aliquot for metals was then placed into the bottle which contained nitric acid as a preservative.

All filtration and field measurements as well as packing procedures were conducted at the Fulton Terminals site field trailer. Chain of custody was initiated and samples were shipped via overnight express (Burlington Northern Air Freight, Inc.) to the NYTEST Environmental, Inc. laboratory located in Westbury, New York.

1.2 Field Measurements

As previously mentioned, prior to evacuation, the water level below the top of casing was measured using a Slope Indicator Model 51453 water level detector. Readings were measured and recorded to the nearest quarter inch. The sensor tip was cleaned as previously described between well measurements.

pH was measured using an Extech portable pH, millivolt, and temperature meter. The meter was adjusted for slope with pH buffers of 7.00 and 10.00 once a day and standardized to pH 7.00 buffer prior to each use.

Specific conductance was measured using an Extech Compact Conductivity Meter with automatic temperature compensation. Once a day the meter was calibrated with a standard KCl solution to read 447 umhos/cm.

Temperature was measured using an Extech portable pH, millivolt, and temperature meter. This measurement was used to manually adjust the temperature compensation on the pH meter.

Field measurements are presented in Table II.

1.3 SURFACE WATER SAMPLING

Surface water samples were collected at seven locations on July 21, 1986. Appropriate sample containers were submerged just below the water surface with the opening facing upstream, at a point of highest velocity, greatest turbulence, and center of flow. Sample containers into which preservatives were added by the laboratory prior to sample collection were not lowered into the stream. These containers were filled by pouring sample aliquots previously collected in bottles containing no preservatives.

1.4 Sediment Sampling

At each of the surface locations, in addition to the water sample, a soil/sediment sample was collected with a hand trowel which was cleaned between locations. Each sample was collected into a one quart glass jar and one 40 ml VOA vial for subsequent analysis. All surface sediments were collected on July 21, 1986.

1.5 Leachate Sampling

It was originally anticipated to collect three samples from leachate breakouts around the site. Only one leachate breakout, VLCH-1 was collected; the other two points were dry. VLCH-1 originated from a large puddle of liquid percolating out of the ground and flowing offsite. This liquid formed a stream from which grab samples were collected by lowering sample containers into the stream, at a point of highest velocity, greatest turbulence, and center of flow. A complete set of samples was collected from VLCH-1 on July 30, 1986.

TABLE I

VOLNEY LANDFILL
WELL EVACUATION INFORMATION

Well	Date	Size/Type Casing	Water Level (Feet Below Top of Casing)	Well Depth (Feet Below Top of Casing)	Volume of Standing Water (Gals.)	Volume of Water Purged (Gals.)	Method of Purging	Recharge Rate*
VBW-1	7/28/86	2" SS	23'-3"	29'	0.98	6.0	Pump	1
VBW-2	7/24/86	2" SS	8'-1½"	11'	0.50	0.50	Pump	3
VBW-3S	7/28/86	2" SS	8'-7-3/4"	19.5	1.5	9.0	Pump	1
VBW-3I	7/28/86	2" SS	8'-10"	30'	3.6	12.0	Pump	2
VBW-3D	7/28/86	2" SS	8'-6"	48'	6.7	21.0	Pump	2
VBW-3BR	7/28-29/86	4" SS	9'-10"	92'	54.1	165	Bailer	2
VBW-4S	7/22/86	2" SS	13'-5½"	14'	0.08	0.10	Pump	3
VBW-4D	7/22/86	2" SS	15'-½"	25'	1.6	5.0	Pump	1
VBW-5	7/22/86	2" SS	7'-10½"	14'	1.1	1.2	Pump	2
VBW-6	7/22/86	2" SS	6'-7½"	19'	2.1	7.0	Pump	1
VBW-7S	7/22/86	2" SS	7'-4"	18'	1.8	2.0	Pump	1
VBW-7D	7/22/86	2" SS	6'-2"	32'	4.0	12.0	Pump	1
VBW-8S	7/21/86	2" SS	12'-7"	20'	1.2	5.0	Pump	1

* Recharge Rates

1. Rapid - Recharges continuously
2. Moderate - Recharges within several hours
3. Slow - Recharges after 24 hours

TABLE I (Continued)

VOLNEY LANDFILL
WELL EVACUATION INFORMATION

Well	Date	Size/Type Casing	Water Level (Feet Below Top of Casing)	Well Depth (Feet Below Top of Casing)	Volume of Standing Water (Gals.)	Volume of Water Purged (Gals.)	Method of Purging	Recharge Rate*
VBW-8D	7/21/86	2" SS	12'-11"	37'	4.1	19.0	Pump	1
VBW-8BR	7/21/86	4" SS	13'- $\frac{1}{4}$ "	56'6"	28.7	65.0	Bailer	2
VBW-9S	7/28/86	2" SS	Dry	20'6"	No	Sample	---	---
VBW-9D	7/28/86	2" SS	Dry	27'4"	No	Sample	---	---
VBW-10S	7/28/86	2" SS	Dry	19'3"	No	Sample	---	---
VBW-10D	7/28/86	2" SS	42'-10"	60'	2.9	7.0	Bailer	1
VBW-10BR	7/29/86	4" SS	62'-5"	102'	26.1	60.0	Bailer	3
VBW-11	7/28/86	2" SS	23'-8"	27'	0.56	1.5	Pump	2
VBW-12	7/24/86	2" SS	14'-11"	17'	0.35	1.0	Pump	2
VBW-13	7/24/86	2" SS	7'-2 $\frac{1}{4}$ "	12'	0.82	1.5	Pump	2
VBW-14	7/22/86	2" SS	9'-6 $\frac{1}{2}$ "	15'	0.94	3.0	Pump	2
VBW-15	7/22/86	2" SS	9'-9-3/4"	17'	1.2	4.0	Pump	1
VBW-16	7/24/86	2" SS	7'-1 $\frac{1}{2}$ "	18'-6"	1.9	7.0	Pump	2

* Recharge Rates

1. Rapid - Recharges continuously
2. Moderate - Recharges within several hours
3. Slow - Recharges after 24 hours

TABLE I (Continued)

VOLNEY LANDFILL
WELL EVACUATION INFORMATION

Well	Date	Size/Type Casing	Water Level (Feet Below Top of Casing)	Well Depth (Feet Below Top of Casing)	Volume of Standing Water (Gals.)	Volume of Water Purged (Gals.)	Method of Purging	Recharge Rate*
VBW-17	7/22/86	2" SS	10' - 5½"	18'	1.4	1.8	Pump	1
VBW-17A	7/22/86	2" SS	5' - 2½"	17'	2.0	3.0	Pump	1

* Recharge Rates

1. Rapid - Recharges continuously
2. Moderate - Recharges within several hours
3. Slow - Recharges after 24 hours

TABLE II

VOLNEY LANDFILL
FIELD MEASUREMENTS

Well	Date	Method of Sampling	pH (Standard Units)	Specific Conductance (umhos/cm)	Temperature (°C)
VBW-1	7/29/86	Bailer	6.52	1200	15.3
VBW-2	7/25/86	Bailer	7.15	1880	26.6
VBW-3S	7/29/86	Bailer	7.28	230	17.8
VBW-3I	7/29/86	Bailer	7.79	250	15.7
VBW-3D	7/29/86	Bailer	8.93	300	14.5
VBW-3BR	7/29/86	Bailer	8.57	460	14.0
VBW-4S	7/23/86	Bailer	Insufficient Volume		
VBW-4D	7/23/86	Bailer	7.09	1030	16.2
VBW-5	7/22/86	Bailer	7.81	410	16.5
VBW-6	7/23/86	Bailer	7.01	650	19.4
VBW-7S	7/23/86	Bailer	7.00	1130	17.6
VBW-7D	7/23/86	Bailer	7.69	320	18.2
VBW-8S	7/22/86	Bailer	6.31	1840	16.6
VBW-8D	7/22/86	Bailer	7.07	1050	15.9
VBW-8BR	7/22/86	Bailer	7.42	670	17.5
VBW-9S	7/28/86	Dry	No Sample		

TABLE II (Continued)

VOLNEY LANDFILL
FIELD MEASUREMENTS

Well	Date	Method of Sampling	pH (Standard Units)	Specific Conductance (umhos/cm)	Temperature (°C)
VBW-9D	7/28/86	Dry	No Sample	No Sample	
VBW-10S	7/28/86	Dry	No Sample	No Sample	---
VRW-10D	7/29/86	Bailer	7.10	790	15.9
VBW-10BR	7/30/86	Bailer	12.24	7200	18.6
VBW-11	7/29/86	Bailer	Insufficient volume		
VBW-12	7/25/86	Bailer	6.63	1440	24.9
VBW-13	7/25/86	Bailer	7.51	500	20.9
VBW-14	7/23/86	Bailer	6.75	300	18.4
VBW-15	7/23/86	Bailer	7.06	620	20.7
VBW-16	7/25/86	Bailer	7.38	530	20.5
VBW-17	7/23/86	Bailer	7.76	310	17.1
VBW-17A	7/23/86	Bailer	7.47	530	18.5
VSS-1	7/21/86	Grab	7.02	420	26.7
VSS-2	7/21/86	Grab	7.22	250	18.6
VSS-3	7/21/86	Grab	7.53	490	22.1
VSS-4	7/21/86	Grab	7.47	390	19.1

TABLE II (Continued)

VOLNEY LANDFILL
FIELD MEASUREMENTS

Well	Date	Method of Sampling	pH (Standard Units)	Specific Conductance (umhos/cm)	Temperature (°C)
VSS-5	7/21/86	Grab	7.74	430	20.9
VSS-6	7/21/86	Grab	7.46	310	22.5
VSS-7	7/21/86	Grab	7.00	360	22.2
VLCH-1	7/30/86	Grab	8.01	220	23.9

Appendix H

Groundwater Analytical Results and Laboratory/Trip Blank Data

Sample Number

VRW-1

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.Case No URS-VLab Sample ID No >V0211QC Report No 1Sample Matrix WaterContract No ES-11532Data Release Authorized By [Signature]Date Sample Received 7/30/86

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 8/2/86Date Analyzed 8/2/86Conc./Dil Factor 0.200 pH _____

Percent Moisture (Not Decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	1.35
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethane	0.395
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

- V** 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 $10 \mu\text{g/l}$ based on necessary concentration/dilution action. (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 allowable 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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero to $10 \mu\text{g/l}$. If limit of detection is $10 \mu\text{g/l}$ and a concentration is

- C** This flag applies to organic parameters where the identification has been confirmed by GC/MS. Single component results $> 200 \text{ ng/l}$ in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the effluent or in a sample. It is not possible to provide a more precise value and means the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required. The results if used may be useful for compliance and other purposes. Attach to the data summary report.

000042

Laboratory Name Nytest Environmental Inc.

Case No. URS-V

Sample Number
VBW 1

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 8/1/86
 Date Analyzed 8/8/86
 Conc/Dil Factor: 2.0
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	70 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(2-Chloroethoxy)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	4-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
808-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	15
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	15
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,3-Dichlorobenzidine	20 u
56-55-3	Benzo(a)Anthracene	10 u
117-81-7	bis(2-Ethylhexyl)Phthalate	59
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	0.25
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VBW-1

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared July 30, 1986

Separatory Funnel Extraction Yes

Date Analyzed August 4, 1986

Continuous Liquid - Liquid Extraction Yes

Conc/Dil Factor 1

Percent Moisture (decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

000044

Laboratory Name NYTEST Env. Lnc
 Case No URS-V

Sample Number
VBW1

Organics Analysis Data Sheet
 (Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.				
2. 954672	Octamethyl Cyclotetrasiloxane	BNA	8.63	50 J
3.				
4.				
6. 540976	Dodecamethylcyclohexasiloxane	BNA	16.45	28 J
8. -	Unknown amide	BNA	31.72	5 J
7. -	Unknown amide	BNA	37.44	12 J
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Laboratory Name WYKESVILLE LIMS INC.

Case No. URS-V

Sample Number
VBW-1

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	C ₆ -Cycloalkane	VOA	16.15	35
2.	Phenol + unknown alcohol	VOA	20.16	45
3. 100297	1,1-Dioxane	VOA	12.37	95
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000046

VBW - 1
Sample No.

Y-30-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL (AST NO) _____

SCW NO _____

LAB SAMPLE ID NO. VBW - 1 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____

Matrix: Water Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>3300</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>[2] F</u>	15. Mercury	<u>.13U</u>
4. Barium	<u>NR</u>	16. Nickel	<u>75</u>
5. Beryllium	<u>3U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>3U</u>	18. Selenium	<u>2U</u>
7. Calcium	<u>172300</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>[7] F</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>9</u>	24. Zinc	<u>31</u>
Cyanide	<u>10U</u>	Percent Solids (%)	_____
PHENOLS	<u>7</u>		

IOP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC - 240
TOTAL Hardness 569

000035

Sample Number

VBW-2

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.Case No URSLab Sample ID No 2V0206QC Report No 1Sample Matrix WaterContract No ES-11532Data Release Authorized By afshahDate Sample Received 7/28/86

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 8/2/86Date Analyzed 8/2/86Conc./Dil Factor 0.200 pH _____

Percent Moisture (Not Decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	7.3 BT
75-09-2	Methylene Chloride	8.2 BT
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	0.53 BT
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	1.2 BT
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	11
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	1.4 BT
100-42-5	Styrene	5 u
	Total Xylenes	15

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.

- V** 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 or g. 10U based on necessary concentration dilution action. (This is not necessary if the instrument detection limit). The footnote should read: U. Compound was analyzed for but not detected. The number is the minimum obtainable 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 most spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than 10% of the limit of detection is 10 ug/l and a concentration of 10 ug/l.

- C**: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component results > 2.0 ng/l in the final extract should be confirmed by GC/MS.
- B**: This flag is used when the analyte is found in the matrix and is a sample. It may also possible greater than 10% of the detection limit in the data set or the appropriate action.
- Other**: Other specific flags and footnotes may be required to explain the results. If used they must be fully described and attached to the data summary report.

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-2

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared July 29, 1986

Separatory Funnel Extraction Yes

Date Analyzed August 1, 1986

Continuous Liquid - Liquid Extraction Yes

Conc/Dil Factor _____

Percent Moisture (decanted) _____

CAS Number		<u>(ug/for ug/Kg)</u> (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 1.0

000105

Laboratory Name WVU/ESI EMA LVV
Case No URS-V

Sample Number
VBW-2

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 109999	Tetrahydrofuran	VOA	11.57	7F
2.	Unknown	VOA	22.60	2F
3.	Unknown	VOA	31.74	3F
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VBW2
Sample No.

9-28-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL (AST. NO.) _____

SCW NO. _____

LAB SAMPLE ID NO. VBW2 9-28-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____

Matrix: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum <u>NR</u>	13. Magnesium <u>NR</u>
2. Antimony <u>NR</u>	14. Manganese <u>NR</u>
3. Arsenic <u>NR</u>	15. Mercury <u>NR</u>
4. Barium <u>NR</u>	16. Nickel <u>NR</u>
5. Beryllium <u>NR</u>	17. Potassium <u>NR</u>
6. Cadmium <u>NR</u>	18. Selenium <u>NR</u>
7. Calcium <u>NR</u>	19. Silver <u>NR</u>
8. Chromium <u>NR</u>	20. Sodium <u>NR</u>
9. Cobalt <u>NR</u>	21. Thallium <u>NR</u>
10. Copper <u>NR</u>	22. Tin <u>NR</u>
11. Iron <u>NR</u>	23. Vanadium <u>NR</u>
12. Lead <u>NR</u>	24. Zinc _____
Cyanide <u>LOU</u>	Percent Solids (H) _____

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

000031

Comments: TDC 52

Sample Number

VBW-75

Organics Analysis Data Sheet
(Page 1)

Laboratory Name Nytest Environmental Inc.

Case No URS-V

Lab Sample ID No 2V0212

QC Report No 1

Sample Matrix Water

Contract No ES-11532

Date Release Authorized By [Signature]

Date Sample Received 7/30/86

Volatile Compounds

Concentration Low Medium (Circle One)

Date Extracted/Prepared 8/2/86

Date Analyzed 8/2/86

Conc./Dil Factor 0.200 pH _____

Percent Moisture (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	6.1
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

- V 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 or g/100 based on necessary concentration dilution action. (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 obtainable detection limit for the sample.
- J: Indicates an estimated value. This flag is used either when estimating a concentration for semiquantitatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than 10% of the 10A if limit of detection is 10 ug/l and a concentration of 10 ug/l is reported.

- C: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides should be confirmed by GC/MS.
- B: This flag is used when the analyte is found in the matrix of the sample. It indicates possible probable beam contamination and warns the data user to take appropriate action.
- Other: Other specific flags and footnotes may be required to explain the results. If used the justification, description and location should be attached to the data summary report.

Laboratory Name Nytest Environmental Inc.

Case No. URS-V

Sample Number
VBW 35

Organics Analysis Data Sheet
(Page 2)

Semivolatiles Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared 8/1/82
 Date Analyzed 8/18/82
 Conc/Dil Factor: 2.0
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(-2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	70 u
541-73-1	1, 3-Dichlorobenzene	10 u
106-46-7	1, 4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1, 2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2, 4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(-2-Chloroethoxy)Methane	10 u
120-83-2	2, 4-Dichlorophenol	10 u
120-82-1	1, 2, 4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	4-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2, 4, 6-Trichlorophenol	10 u
95-95-4	2, 4, 5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	35
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2, 4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2, 4-Dinitrotoluene	10 u
608-20-2	2, 6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	45
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4, 6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	104
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	15
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3, 3'-Dichlorobenzidine	20 u
56-55-3	Benzofluoranthene	10 u
117-81-7	bis(2-Ethylhexyl)Phthalate	19
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	22
205-99-2	Benzofluoranthene	10 u
207-08-9	Benzofluoranthene	10 u
50-32-8	Benzofluoranthene	10 u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	10 u
53-70-3	Dibenzofluoranthene	10 u
191-24-2	Benzofluoranthene	10 u

(1)-Cannot be separated from diphenylamine

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VBW-3S

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared 8/1/86

Separatory Funnel Extraction Yes

Date Analyzed August 4, 1986

Continuous Liquid - Liquid Extraction Yes

Conc/Dil Factor _____

Percent Moisture (decanted) _____

CAS Number		<u>(ug/l or ug/Kg)</u> (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW 3S

Organics Analysis Data Sheet
 (Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 7163291	2 Methyl Pentane	BNA	3.21	350J
2. 71432	Benzene	BNA	3.27	93J
3. —	C ₁₁ -Aromatic Hydrocarbon	BNA	21.38	79J
4. —	Unknown amide	BTA	37.41	9J
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VBW 35
Sample No.

7-30-86

LABORATORY ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENT (CASE NO) _____

SUB NO) _____

LAB SAMPLE ID NO) VBW 35 7-30-86 (C) REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____

Matrix: Water Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>5730</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>2U</u>	15. Mercury	<u>0.13U</u>
4. Barium	<u>NR</u>	16. Nickel	<u>15U</u>
5. Beryllium	<u>3U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>3U</u>	18. Selenium	<u>10</u>
7. Calcium	<u>25760</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>2U</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>1U</u>	24. Zinc	<u>23</u>

Cyanide 10U
PHENOLS 7

Percent Solids (%) _____

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOL 74

TOTAL Hardness 88

000036

Sample Number

VBW-3I

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Lab Sample ID No: 2V0213

QC Report No: 1

Sample Matrix: Water

Contract No: ES-11532

Date Release Authorized By: [Signature]

Date Sample Received: 7/30/86

Volatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 8/2/86

Date Analyzed: 8/2/86

Conc./Oil Factor: 0.200 pH: _____

Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	7.0
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	0.55 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	5 u
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylmethyl ether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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 Use of 10 (unless on necessary concentration dilution action). 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 allowable 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 indicated 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. 10u) if limit of detection is 10 ug/l and a concentration of 2 ug/l was estimated.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides are reported as ug/l in the final report should be confirmed by GC/MS.

B This flag is used when the analyte is found in the matrix at the same sample. It is not possible to determine from the data whether the results are due to the matrix or the analyte.

Other Other specific flags and footnotes may be required to explain the results. If used they must be fully described and attached to the data summary report.

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW-3F

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 8/1/86
 Date Analyzed 8/9/86
 Conc/Dil Factor: 0.200
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	40 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	1.35
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,3'-Dichlorobenzidine	20 u
56-55-3	Benzo(a)Anthracene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	35
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	0.78
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

000159

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VBW-3I

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)
Date Extracted/Prepared: July 30, 1986
Date Analyzed Aug 4, 1986
Conc/Dil Factor _____
Percent Moisture (decanted) _____

GPC Cleanup Yes No
Separatory Funnel Extraction Yes
Continuous Liquid-Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_t 10,000 V_i 4.0

Laboratory Name NYTEST ENV. INC.
Case No URS-V

Sample Number
VBW 3I

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown Siloxane	BNA	16.41	12J
2.	Unknown Diene	BNA	28.08	61J
3.	Unknown Siloxane	BNA	28.39	11J
4.	Unknown Amide	BNA	37.25	21J
5.				
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V.B.U 3 I

7 30 86

INSTRUMENTAL ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

ROW NO. _____

LAB SAMPLE ID NO. V.B.U-3I 7-30-86 OR REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>8260</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>2U</u>	15. Mercury	<u>13U</u>
4. Barium	<u>NR</u>	16. Nickel	<u>[21]P</u>
5. Beryllium	<u>[4]P</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>3U</u>	18. Selenium	<u>13</u>
7. Calcium	<u>31370</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>2U</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>1U</u>	24. Zinc	<u>[15]P</u>
Cyanide	<u>10U</u>	Percent Solids (H)	_____
<u>14ENALS</u>	<u>2U</u>		

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TDC - 17
TOTAL HARDNESS 112

000037

Sample Number

VBW-3D

Organics Analysis Data Sheet
(Page 1)Laboratory Name Nytest Environmental Inc.Case No 85-11532Lab Sample ID No 2V0214QC Report No 1Sample Matrix WaterContract No 85-11532Data Release Authorized By JshahDate Sample Received 7/30/86

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 8/2/86Date Analyzed 8/2/86Conc./Dil Factor 0.200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	1.87
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

Data Reporting Conventions

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

- V** 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 or g. 10UG based on necessary concentration dilution action (if it is not necessary, 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 semivolatile compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero or g. 10UG. If limit of detection is 10 ug/l and a
- C**: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component (not 2-3-2) ng/l in the final extract should be confirmed by GC/MS.
- B**: This flag is used when the analyte is found in the extract but the sample is not a possible probable brominated compound. The footnote should read B. Data user to take appropriate action.
- Other**: Other specific flags and footnotes may be required. The footnote should read Other. Use for fully identified and confirmed results. Attach to the data summary report.

000185

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW3D

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 8/11/86

Date Analyzed 8/19/86

Conc/Dil Factor: 2,000

Percent Moisture (Decarated) _____

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number ug/l or ug/Kg
(Circle One)

108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno.	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	4-Chloro-3-Methylphenol	10 u
91-57-8	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number ug/l or ug/Kg
(Circle One)

83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	380
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-3	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	325
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,3-Dichlorobenzidine	20 u
56-55-3	Benzofluoranthene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	58
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	1.15
205-99-2	Benzofluoranthene	10 u
207-08-9	Benzofluoranthene	10 u
50-32-8	Benzofluoranthene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Obenzo(h,i)Anthracene	1.15
191-24-2	Benzofluoranthene	10 u

(1) Cannot be separated from diphenylamine

000186

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VBW-3D

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared July 30, 1986

Separatory Funnel Extraction Yes

Date Analyzed August 4, 1986

Continuous Liquid - Liquid Extraction Yes

Conc/Dil Factor _____

Percent Moisture (decanted) _____

CAS Number		<u>ug/l</u> or ug / Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

000187

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW 3D

Organics Analysis Data Sheet
 (Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 71432	Benzene	BNA	5.18	121J
2.	Benzene + C ₆ -C ₁₀ alkane	BNA	3.27	626J
3.	Unknown diene	BNA	27.95	145J
4.	Unknown amide	BNA	37.18	89J
5.	Phenol	VOR	26.62	3J
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
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30.				

VBW-3D
7-30-86

INSTRUMENTAL ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL (LAB NO) _____
JOB NO: _____
LAB SAMPLE ID NO: VBW-3D 9-30-86 (X) REPORT NO: _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>19610</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>2U</u>	15. Mercury	<u>0.2</u>
4. Barium	<u>NR</u>	16. Nickel	<u>15U</u>
5. Beryllium	<u>3U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>3U</u>	18. Selenium	<u>12</u>
7. Calcium	<u>10430</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>2U</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>1U</u>	24. Zinc	<u>1197P</u>
Cyanide	<u>10U</u>	Percent Solids (%)	_____
PHENOLS	<u>5</u>		

ICP Interelement and background corrections applied? Yes _____ No _____
If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 18
TOTAL Hardness 107

000038

Organics Analysis Data Sheet
(Page 1)

Laboratory Name Nytest Environmental Inc.
 Lab Sample ID No >V0215
 Sample Matrix Water
 Data Release Authorized By fshah

Case No URS-V
 QC Report No 1
 Contract No ES-11532
 Date Sample Received 7/30/86

Volatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared 8/2/86
 Date Analyzed 8/2/86
 Conc./Dil Factor 0.20 pH _____
 Percent Moisture (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	81
67-64-1	Acetone	12
75-15-0	Carbon Disulfide	5 u
75-35-4	1,1-Dichloroethene	5 u
75-34-3	1,1-Dichloroethane	5 u
156-60-5	Trans-1,2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1,2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1,1,1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

- V** 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 or g/100 based on necessary concentration/dilution action (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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than 10% of the limit of detection is 10 ug/l and a concentration of 10 ug/l.
- C**: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single compound results > 200 ng/l in the final extract should be confirmed by GC/MS.
- B**: This flag is used when the analyte is found in the data but not in the sample. It indicates possible problems with the data and warns the data user of the appropriate action.
- Other**: Other specific flags and footnotes may be required to explain the results. Use this flag for such descriptions and attach the flag to the data summary report.

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW-3BR

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 8/1/86

Date Analyzed 8/9/86

Conc/Dil Factor: 2.0

Percent Moisture (Decanted) _____

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-8	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno:	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(2-Chloroethoxy)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
69-50-7	3-Chloro-2-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	2.75
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	0.375
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	1.45
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,3-Dichlorobenzidine	20 u
58-55-3	Benzo(a)Anthracene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	38
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	0.685
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

000076

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VBW-3BR

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared July 30, 1986

Separatory Funnel Extraction Yes

Date Analyzed August 4, 1986

Continuous Liquid - Liquid Extraction Yes

Conc/Dil Factor _____

Percent Moisture (decanted) _____

CAS Number		<u>ug</u> /or <u>ug</u> /Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

1,000 or W_s _____ V_t 10,000

Laboratory Name NYTEST ENV. INC.

Case No URS 85-11532

Sample Number
VBW-3BR

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 71432	Benzene	BVA	3.22	91J
2.	Unknown Siloxane	BVA	16.40	12J
3.	Unknown Aromatic Comp.	BVA	21.27	81J
4.	Unknown Amide	BVA	37.19	88J
5.				
6.				
7.				
8.				
9.				
10.				
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30.				

YBW-3BR
7-30-86

INSTRUMENT ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL (AST NO) _____
SCW NO. _____
LAB SAMPLE ID NO. YBW-3BR 7-30-86 OR REPORT NO. _____

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water ✓ Soil _____ Sludge _____ Other _____

(u/L) or mg/kg dry weight (Circle One)

- | | |
|----------------------------------|------------------------------------|
| 1. <u>Aluminum</u> <u>NR</u> | 13. <u>Magnesium</u> <u>[630]P</u> |
| 2. <u>Antimony</u> <u>50U</u> | 14. <u>Manganese</u> <u>NR</u> |
| 3. <u>Arsenic</u> <u>85</u> | 15. <u>Mercury</u> <u>0.13U</u> |
| 4. <u>Barium</u> <u>NR</u> | 16. <u>Nickel</u> <u>[22]P</u> |
| 5. <u>Beryllium</u> <u>3U</u> | 17. <u>Potassium</u> <u>NR</u> |
| 6. <u>Cadmium</u> <u>3U</u> | 18. <u>Selenium</u> <u>11</u> |
| 7. <u>Calcium</u> <u>[2630]P</u> | 19. <u>Silver</u> <u>5U</u> |
| 8. <u>Chromium</u> <u>9U</u> | 20. <u>Sodium</u> <u>NR</u> |
| 9. <u>Cobalt</u> <u>NR</u> | 21. <u>Thallium</u> <u>2U</u> |
| 10. <u>Copper</u> <u>10U</u> | 22. <u>Tin</u> <u>NR</u> |
| 11. <u>Iron</u> <u>NR</u> | 23. <u>Vanadium</u> <u>NR</u> |
| 12. <u>Lead</u> <u>1U</u> | 24. <u>Zinc</u> <u>[4]P</u> |
| <u>Cyanide</u> <u>10U</u> | <u>Percent Solids (H)</u> |
| <u>PHENOLS</u> <u>2U</u> | |

ICP Interelement and background corrections applied? Yes _____ No _____
If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 33
TOTAL HARDNESS 9

000039

Sample Number

VBW-45

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.Case No. URS-VLab Sample ID No. >V0131QC Report No. 1Sample Matrix WaterContract No. 85-11532

Data Release Authorized By: _____

Date Sample Received 7/24/86

Volatile Compounds

Concentration (Low) Medium (Circle One)Date Extracted/Prepared 7/28/86Date Analyzed 7/28/86Conc./Dil Factor 0.200 pH _____

Percent Moisture (Not Decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	2.5 J
75-09-2	Methylene Chloride	2.4 J
67-64-1	Acetone	8.1 J
75-15-0	Carbon Disulfide	5 u
75-35-4	1,1-Dichloroethene	5 u
75-34-3	1,1-Dichloroethane	5 u
156-60-5	Trans-1,2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1,2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1,1,1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	5 u
10061-02-6	Trans-1,3-Dichloropropene	5 u
79-01-6	Trichloroethene	5 u
124-48-1	Dibromochloromethane	5 u
79-00-5	1,1,2-Trichloroethane	5 u
71-43-2	Benzene	2.2 J
10061-01-5	cis-1,3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1,1,2,2-Tetrachloroethane	5 u
108-88-3	Toluene	0.45 J
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

- V** 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 or g. 10 (based on necessary concentration/dilution action. (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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero or g. 10. If limit of detection is 10 ug/l and a
- C** This flag applies to specific parameters where the identification has been confirmed by GC/MS. Single component results are 200 ng/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the data but not in the sample. It is not possible to provide blank confirmation and means the data user in case appropriate action.
- Other** Other specific flags and footnotes may be included in the results if used. They must be fully described and attached to the data summary report.

Laboratory Name MYEST ENVIRONMENTAL INC.

Case No URS-V

Sample Number
VBW-45

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/hr or ug/kg)
1.	Unknown	VOA	3.26	7J
2. 60297	1,1-Dichloroethane	VOA	11.90	19J
3.	C ₆ -Cycloalkane	VOA	15.18	6J
4.	Unknown alkene	VOA	17.11	4J
5.	Unknown alkene	VOA	19.04	5J
6.	C ₆ -Cycloalkane	VOA	15.85	2J
7.	C ₆ -Cycloalkane	VOA	16.44	4J
8.	Unknown	VOA	26.18	2J
9. 10999	Tetrahydrofuran	VOA	10.98	3J
10. 110827	Cyclohexane	VOA	14.42	1J
11.	Unknown alcohol	VOA	19.71	2J
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
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26.				
27.				
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29.				
30.				

Sample Number
VBW-40

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc. Case No: 85-11532
 Lab Sample ID No: 2V0132 QC Report No: 1
 Sample Matrix: Water Contract No: 85-11532
 Data Release Authorized By: [Signature] Date Sample Received: 7/24/86

Volatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 7/28/86
 Date Analyzed: 7/29/86
 Conc./Dil Factor: 200 pH: _____
 Percent Moisture (Not Decanted): _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	2.383
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethane	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

- V** 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 or g/100 based on necessary concentration/dilution action (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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero to g/100. If limit of detection is 10 ug/l and a
- C**: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides > 200 ng/l in the final extract should be confirmed by GC/MS.
- B**: This flag is used when the analyte is found in the extract but the sample is not as possible. Probable blank results may occur. Warn the data user to take appropriate action.
- Other**: Other specific flags and footnotes may be required. If used they must be fully described and attached to the data summary report.

000238

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW-4D

Organics Analysis Data Sheet (Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared 7/27/86
Date Analyzed 8/3/86
Conc/Dil Factor: 2.0
Percent Moisture (Decanted) _____

GPC Cleanup Yes No
Separatory Funnel Extraction Yes
Continuous Liquid-Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-8	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-6	Isophthalene	10 u
89-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-3-Methylphenol	10 u
81-57-6	2-Methylisophthalate	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
68-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-88-7	2-Chloroisophthalate	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorobenzyl phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (I)	10 u
101-55-3	4-Bromophenyl phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	4.7
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-58-7	Butylbenzylphthalate	10 u
91-94-7	1,3-Dichlorobenzene	20 u
56-55-3	Benzo(a)Anthracene	10 u
112-81-7	bis(2-Ethylhexyl)Phthalate	50
218-01-9	Chrysene	10 u
117-84-0	Octyl Octyl Phthalate	50
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-74-2	Benzo(g,h,i)Perylene	10 u

††† Cannot be separated from diphenylamine

000239

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-4D

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared July 24, 1986
 Date Analyzed July 31, 1986
 Conc/Dil Factor 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		<u>ug/g</u> for ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NYIEST ENVI JINC

Case No URS-V

Sample Number
VBW-4D

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. <u>60297</u>	<u>1,1-Dichloroethane</u>	<u>VOA</u>	<u>11.88</u>	<u>4F</u>
2.	<u>Unknown</u>	<u>VOA</u>	<u>26.32</u>	<u>3F</u>
3.				
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000241

Laboratory Name NYTEST ENV. INC.

Case No _____

Sample Number
VBW-4D

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l) or (ug/kg)
1. <u>219164498</u>	<u>1,13 Tetradecadiene</u>	<u>BNA</u>	<u>28.75</u>	<u>160F</u>
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VBW-4D
Sample No.

7/24/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL CASE NO. _____
 SOI NO. _____
 LAB SAMPLE ID NO. VBW-4D 7-24-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
 Matrix: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	NR	13. Magnesium	69400
2. Antimony	50U	14. Manganese	NR
3. Arsenic	2U	15. Mercury	0.13 U
4. Barium	NR	16. Nickel	61
5. Beryllium	5	17. Potassium	NR
6. Cadmium	3U	18. Selenium	12
7. Calcium	34500	19. Silver	5U
8. Chromium	9U	20. Sodium	NR
9. Cobalt	NR	21. Thallium	2U
10. Copper	10U	22. Tin	NR
11. Iron	NR	23. Vanadium	NR
12. Lead	1U	24. Zinc	32
Cyanide	10U	Percent Solids (1)	
PHENDL	13		

ICP Interelement and background corrections applied? Yes _____ No _____
 If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to MYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Toc 56
Total Hardness 372

000041

Sample Number

VBW-5

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.Case No 85-11532Lab Sample ID No: 2K0109QC Report No 1Sample Matrix WaterContract No 85-11532Data Release Authorized By: F. ShahDate Sample Received 7/23/86

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 7/27/86Date Analyzed 7/27/86Conc./Dil Factor 0.200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	4.5 F
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	0.72 F
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

- V** 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 action. (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 obtainable 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 indicated 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). If limit of detection is 10 ug/l and a concentration of 5 ug/l is reported, the result should be 5J.
- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides > 200 ng/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the matrix at the same sample. It indicates possible problem blank contamination and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required to explain the results. If used, they must be fully described and attached to the data summary report.

000263

Laboratory Name: Nytest Environmental Inc.

Case No: URS-Y

Sample Number
VBW-5

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 7/24/86

Date Analyzed 8/1/86

Conc/Dil Factor: 2.0

Percent Moisture (Decanted) _____

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number	Compound	ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno.	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isobutylene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Boric Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chlorophenol	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylphenol	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chlorophthalene	10 u
68-74-4	2-Nitroanisole	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
89-09-2	3-Nitroanisole	50 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (I)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Bis(benzyl)phthalate	10 u
91-94-1	3,3'-Dichlorobenzidine	20 u
58-55-3	Benzofluoranthene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	80 u
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octylphthalate	25 u
205-99-2	Benzo(b)fluoranthene	10 u
207-08-9	Benzo(k)fluoranthene	10 u
50-32-8	Benzo(a)pyrene	10 u
193-39-5	Indeno(1,2,3-cd)pyrene	10 u
53-70-3	Dibenz(a,h)anthracene	10 u
191-24-2	Benzo(g,h,i)perylene	10 u

(1) Cannot be separated from diphenylamine

000264

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-5

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One) GPC Cleanup Yes No
 Date Extracted/Prepared: July 28, 1980 Separatory Funnel Extraction Yes
 Date Analyzed August 1, 1980 Continuous Liquid - Liquid Extraction Yes
 Conc/Dil Factor: _____
 Percent Moisture (decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5 u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NYTEST ENV INC.

Case No URS-V

Sample Number
VRW-5

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	C ₆ Cycloalkane	VOA	16.01	10J
2.	Unknown alcohol	VOA	26.27	2J
3.				
4.	Tetradecadiene	BNA	26.70	76J
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VBW-5
Sample No.

9-23-86

INDICANTIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL

CASE NO. _____

SOW NO. _____

LAB SAMPLE ID NO. VBW-5 9-23-86

QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

(u/L or mg/kg dry weight (Circle One)

- | | |
|-------------------------|----------------------------|
| 1. Aluminum <u>NR</u> | 13. Magnesium <u>16340</u> |
| 2. Antimony <u>50U</u> | 14. Manganese <u>NR</u> |
| 3. Arsenic <u>2U</u> | 15. Mercury <u>-13U</u> |
| 4. Barium <u>NR</u> | 16. Nickel <u>15U</u> |
| 5. Beryllium <u>3U</u> | 17. Potassium <u>NR</u> |
| 6. Cadmium <u>3U</u> | 18. Selenium <u>2U</u> |
| 7. Calcium <u>64300</u> | 19. Silver <u>5U</u> |
| 8. Chromium <u>9U</u> | 20. Sodium <u>NR</u> |
| 9. Cobalt <u>NR</u> | 21. Thallium <u>[27F</u> |
| 10. Copper <u>[15TP</u> | 22. Tin <u>NR</u> |
| 11. Iron <u>NR</u> | 23. Vanadium <u>NR</u> |
| 12. Lead <u>1U</u> | 24. Zinc <u>61</u> |
| Cyanide <u>10U</u> | Percent Solids (V) _____ |

PHEMBS 2U

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 160
TOTAL Hardness 228

000024

VBW-6
Sample No.

7-23-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SCW NO. _____

LAB SAMPLE ID NO. VBW-6 7-23-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

ug/l or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>31500</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>2U</u>	15. Mercury	<u>3</u>
4. Barium	<u>NR</u>	16. Nickel	<u>15U</u>
5. Beryllium	<u>3U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>2U</u>	18. Selenium	<u>2U</u>
7. _____	<u>_____</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>[47F</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>11</u>	24. Zinc	<u>72</u>
Cyanide	<u>10U</u>	Percent Solids (%)	_____

~~PHENOLS~~

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 47
TOTAL Hardness 437

000025

Sample Number

VBW-6

Organics Analysis Data Sheet
(Page 1)Laboratory Name Nytest Environmental Inc.Case No URS-1Lab Sample ID No >V0120QC Report No 1Sample Matrix WaterContract No 85-11532Data Release Authorized By pkahDate Sample Received 7/23/86

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 7/28/86Date Analyzed 7/28/86Conc./Dil Factor 0.200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	4.5 B J
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	4.0 J
67-66-3	Chloroform	3.0 J
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	1.6 J
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	3.4 J
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

V 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 action (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 indicated 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. 10U) if limit of detection is 10 ug/l and a concentration of 10 ug/l is reported.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides > 200 ng/l in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the plate as a result of a sample. It indicates possible problems (e.g. contamination) and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to explain the results. If used they must be fully described and attached to the data summary report.

00029

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW-6

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared 7/24/86

Separatory Funnel Extraction Yes

Date Analyzed 8/1/86

Continuous Liquid-Liquid Extraction Yes

Conc./Dil Factor: 2

Percent Moisture (Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	brl-2-Chloroethyl Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl) Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-8	1,3-Dichlorobenzene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-7	brl-2-Chloroethyl Methyl Ether	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
81-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	2-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylphenol	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chlorophthalene	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-58-7	Butylbenzylphthalate	10 u
91-94-1	1,3-Dichlorobenzene	20 u
58-55-3	Benzo(a)Anthracene	10 u
112-81-7	bis(2-Ethylhexyl)Phthalate	43
218-01-9	Chrysene	10 u
117-84-0	Octylphenylphthalate	10 u
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-22-8	Benzo(a)Phenanthrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

000292

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-6

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared July 24, 1986
 Date Analyzed July 31, 1986
 Conc/Dil Factor 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>ug/g</u> or <u>ug/Kg</u> (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NYTEST ENV INC.

Case No URS-V

Sample Number

VBW-6

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (pg/l or ug/kg)
1.	Unknown	VOA	5.19	4J
2.	Unknown	VOA	3.64	4J
3.	1,1-Dichloroethane	VOA	12.07	6J
4.	C ₆ -Cycloalkane	VOA	14.68	3J
6.	C ₆ -Cycloalkane	VOA	16.02	16J
6.	Unknown	VOA	17.7	2J
7.	Unknown ether	VOA	19.94	1J
8.	Unknown alcohol	VOA	26.35	4J
9.	Unknown	VOA	26.77	3J
10.	Unknown	VOA	27.53	1J
11.				
12.	Tetra decadiene	BNA	25.99	22J
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000294

Sample Number

VBW-7S

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.Case No: URS-VLab Sample ID No: 70143QC Report No: 1Sample Matrix: WaterContract No: 85-11532Data Release Authorized By: [Signature]Date Sample Received: 7/24/86

Volatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 7/29/86Date Analyzed: 7/29/86Conc./Dil Factor: 0.200 pH: _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	287
75-09-2	Methylene Chloride	5.28
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	277
156-60-5	Trans-1, 2-Dichloroethane	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	5 u
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylmylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	0.937
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 u

Data Reporting Quotients

For reporting results to EPA the following results quotients 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 or g/100 based on necessary concentration dilution action (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 obtainable detection limit for the sample.

J Indicates an estimated value. This flag is used either when estimating a concentration for semivolatile compounds where a 1 l response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides > 2.0 ng/u in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the extract but not in the sample. It indicates possible problem with the sample and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to explain the results. If used this must be fully explained and attached to the data summary report.

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW75

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 7/27/86
 Date Analyzed 8/2/86
 Conc/Dil Factor: 20
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophthalene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-2-Methylphenol	10 u
91-57-8	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	10 u
7005-72-3	4-Chlorobenzyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (I)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	63
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,5-Dichlorobenzidine	20 u
58-55-3	Benzo(a)Anthracene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	10 u
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octylphthalate	10 u
206-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Fluoranthene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-75

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared: July 24, 1986
 Date Analyzed: July 31, 1986
 Conc/Dil Factor: 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VBW-75

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown	VOA	3.24	28
2. 75434	Dichlorofluorouretane	VOA	6.85	48
3. 60298	1,1-Oxybisethane	VOA	11.90	98
4.	C ₆ -cycloalkane	VOA	15.59	68
6.	Unknown alcohol	VOA	25.92	48
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
16.				
16.				
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25.				
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27.				
28.				
29.				
30.				

000330

Laboratory Name NYTEST ENVU, INC
Case No URS-V

Sample Number
VBW-75

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown hydrocarbon	BNA	25.73	136J
2.				
3.				
4.				
6.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
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14.				
15.				
16.				
17.				
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23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

VBW-7S

Sample No.

7/24/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL

CASE NO.

SCH NO.

LAB SAMPLE ID NO. VBW-7S 7-2486

QC REPORT NO.

Elements Identified and Measured

Concentration:

Low

Medium

MATRIX: Water

Soil

Sludge

Other

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	NR	13. Magnesium	43800
2. Antimony	50U	14. Manganese	NR
3. Arsenic	2U	15. Mercury	0.13U
4. Barium	NR	16. Nickel	71
5. Beryllium	[4]P	17. Potassium	NR
6. Cadmium	3U	18. Selenium	.6
7. Calcium	273500	19. Silver	5U
8. Chromium	9U	20. Sodium	NR
9. Cobalt	NR	21. Thallium	[2]F
10. Copper	10U	22. Tin	NR
11. Iron	NR	23. Vanadium	NR
12. Lead	1U	24. Zinc	29
Cyanide	10U		
PHENOLS	5		

Percent Solids (%)

ICP Interelement and background corrections applied? Yes No

If yes, corrections applied before or after generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

TOC 74

Total Hardness 863

000042

Sample Number

VBW-7D

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.Case No: URS-VLab Sample ID No: 7V0133

QC Report No: _____

Sample Matrix: WaterContract No: 85-11532Data Release Authorized By: [Signature]

Date Sample Received: _____

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared: 7/29/86Date Analyzed: 7/29/86Conc./Dil Factor: 0.200 pH: _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	2.285
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethane	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	5 u
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	0.5585
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

V 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 or g/100 based on necessary concentration dilution action. (This is not necessary if the instrument detection limit is the footnote should read U. Compound was analyzed for but not detected. The number is the minimum obtainable 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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero to g/100. If limit of detection is 10 ug/l and a concentration of 5 ug/l is reported, the result should be 5 J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides less than 200 ng/L in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the data but not in the sample. It indicates possible problem blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to explain the results. If used they must be fully described and attached to the data summary report.

000358

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW-7D

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 7/27/86
 Date Analyzed 8/3/86
 Conc/Dil Factor: 2.0
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylisopropylaldehyde	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chloroisophthalaldehyde	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,5-Dichlorobenzidine	200 u
56-55-3	Benzo(a)Anthracene	10 u
187-81-7	bis(2-Ethylhexyl)Phthalate	286
218-01-9	Chylene	10 u
117-84-0	Di-n-Octylphthalate	10 u
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-22-8	Benzo(a)Fluoranthene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Obenzo,hAnthracene	10 u
191-74-2	Benzo(g,h)Perylene	10 u

(1) Cannot be separated from diphenylamine

000359

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-7D

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)
 Date Extracted/Prepared July 24, 1986
 Date Analyzed July 31, 1986
 Conc/Dil Factor 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5 u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 40

Laboratory Name NYTEST ENV INC.

Case No URS-V

Sample Number
VBW-7D

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l) or ug/kg
1.	Unknown	VGA	26.39	2J
2.				
3.	Tetradecadiene	BVA	25.74	57J
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.				

VBW-7D
Sample no.

7-24-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL

CASE NO. _____

SOW NO. _____

LAB SAMPLE ID NO. VBW-7D 7-24-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____

MATRIX: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. <u>Aluminum</u>	<u>NR</u>	13. <u>Magnesium</u>	<u>2140</u>
2. <u>Antimony</u>	<u>50U</u>	14. <u>Manganese</u>	<u>NR</u>
3. <u>Arsenic</u>	<u>2U</u>	15. <u>Mercury</u>	<u>0.13U</u>
4. <u>Barium</u>	<u>NR</u>	16. <u>Nickel</u>	<u>15U</u>
5. <u>Beryllium</u>	<u>5</u>	17. <u>Potassium</u>	<u>NR</u>
6. <u>Cadmium</u>	<u>3U</u>	18. <u>Selenium</u>	<u>16</u>
7. <u>Calcium</u>	<u>27320</u>	19. <u>Silver</u>	<u>5U</u>
8. <u>Chromium</u>	<u>9U</u>	20. <u>Sodium</u>	<u>NR</u>
9. <u>Cobalt</u>	<u>NR</u>	21. <u>Thallium</u>	<u>2U</u>
10. <u>Copper</u>	<u>10U</u>	22. <u>Tin</u>	<u>NR</u>
11. <u>Iron</u>	<u>NR</u>	23. <u>Vanadium</u>	<u>NR</u>
12. <u>Lead</u>	<u>[3]F</u>	24. <u>Zinc</u>	<u>[12]P</u>
<u>Cyanide</u>	<u>10U</u>	<u>Percent Solids (1)</u>	
<u>PHENOLS</u>	<u>2U</u>		

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 14
Total Hardness 156

000043

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: 7V0121
 Sample Matrix: Water
 Data Release Authorized By: [Signature]

Case No: 85-11532
 QC Report No: 1
 Contract No: 85-11532
 Date Sample Received: 7/23/86

Volatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 7/28/86
 Date Analyzed: 7/28/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	5.8 5
75-00-3	Chloroethane	20.0
75-09-2	Methylene Chloride	4.0 5
67-64-1	Acetone	5 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	10.2
156-60-5	Trans-1, 2-Dichloroethane	4.0 5
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	1.3 5
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	3.5 5
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

- V** 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 or g/100 based on necessary concentration/dilution action. (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 detectable 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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero to g/100. If limit of detection is 10 ug/l and a concentration of 5 is reported...

- C**: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides 200 ng/l in the final extract should be confirmed by GC/MS.
- B**: This flag is used when the analyte is found in the matrix of the sample. It indicates possible probable blank contamination and warns the data user to take appropriate action.
- Other**: Other specific flags and footnotes may be required to explain the results. If used they must be fully described and attached to the data summary report.

Laboratory Name: Nytest Environmental Inc.
 Case No: URS-V

Sample Number
VBW-85

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 7/24/86
 Date Analyzed: 8/7/86
 Conc/Dil Factor: 20
 Percent Moisture (Decanted): _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-4	Isophthalic Acid	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzic Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-2-Methylphenol	10 u
91-67-6	2-Methyl-3-nitrophenol	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-88-7	2-Chlorophthalic Acid	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
89-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorobenzyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (I)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-3	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	20
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-58-7	Butylbenzylphthalate	10 u
91-94-1	3,3'-Dichlorobenzidine	20 u
56-55-3	Benzofluoranthene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	20 u
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octylphthalate	40
205-99-2	Benzo(b)fluoranthene	10 u
207-08-9	Benzo(k)fluoranthene	10 u
50-32-8	Benzo(a)phenanthrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)anthracene	10 u
191-24-2	Benzo(g,h,i)perylene	10 u

(1) Cannot be separated from ditherylene

000381

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-85

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared: July 26, 1986

Separatory Funnel Extraction Yes

Date Analyzed: August 1, 1986

Continuous Liquid - Liquid Extraction Yes

Conc/Dil Factor: 1

Percent Moisture (decanted) _____

CAS Number		<u>ug</u> /Por ug / Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NYTEST ENVIRONMENTAL INC.

Case No URS-V

Sample Number
VBW-85

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. <u>75-434</u>	<u>Dichlorofluoromethane</u>	<u>VOA</u>	<u>16.94</u>	<u>7J</u>
2. <u>60299</u>	<u>1,1 - Oxybis ethane</u>	<u>VOA</u>	<u>12.07</u>	<u>13J</u>
3. <u>110827</u>	<u>Cyclohexane</u>	<u>VOA</u>	<u>14.50</u>	<u>3J</u>
4. _____	<u>Unknown alcohol</u>	<u>VOA</u>	<u>26.34</u>	<u>5J</u>
5. _____				
6. <u>71432</u>	<u>Benzene</u>	<u>BNA</u>	<u>3.53</u>	<u>116J</u>
7. _____				
8. <u>115968</u>	<u>2-Chloro phosphate ethanol</u>	<u>BNA</u>	<u>20.60</u>	<u>8J</u>
9. _____				
10. <u>143282</u>	<u>9-Octadecan-1-ol</u>	<u>BNA</u>	<u>24.04</u>	<u>125J</u>
11. _____				
12. _____	<u>Unknown siloxane</u>	<u>BNA</u>	<u>27.50</u>	<u>17J</u>
13. _____				
14. _____	<u>Unknown amide</u>	<u>BNA</u>	<u>33.01</u>	<u>26J</u>
15. _____				
16. _____				
17. _____				
18. _____				
19. _____				
20. _____				
21. _____				
22. _____				
23. _____				
24. _____				
25. _____				
26. _____				
27. _____				
28. _____				
29. _____				
30. _____				

000383

VBW-85
Sample No

7-23-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SCW NO. _____

LAB SAMPLE ID NO. VBW-85 7-23-86 OC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>47000</u>
2. Antimony	<u>50 U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>2 U</u>	15. Mercury	<u>.2</u>
4. Barium	<u>NR</u>	16. Nickel	<u>[22] P</u>
5. Bismuth	<u>NR</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>2 U</u>	18. Selenium	<u>2 U</u>
7. Calcium	<u>132000</u>	19. Silver	<u>5 U</u>
8. Chromium	<u>9 U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>10</u>
10. Copper	<u>10 U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>5</u>	24. Zinc	<u>9 U</u>
Cyanide	<u>10 U</u>	Percent Solids (%)	_____
PHENOLS	10		

ICP Interlement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 150

TOTAL Hardness 524

000026

Sample Number

VBW-8D

Organics Analysis Data Sheet
(Page 1)

Laboratory Name Nytest Environmental Inc.

Case No URS-V

Lab Sample ID No 210122

QC Report No 1

Sample Matrix Water

Contract No 85-11532

Data Release Authorized By [Signature]

Date Sample Received 7/23/85

Volatile Compounds

Concentration Low Medium (Circle One)

Date Extracted/Prepared 7/28/86

Date Analyzed 7/28/86

Conc./Dil Factor 0.200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/lbr ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	4.9 BJ
67-64-1	Acetone	66
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/lbr ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	5 u
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	62 J
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	39 J
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	34 J
100-42-5	Styrene	28 J
	Total Xylenes	0.55 J

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. 10 U based on necessary concentration/dilution action. (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 indicated 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. 10 u, if limit of detection is 10 ug/l and a
- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides (e.g. 2,4-D) ng/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the matrix of the sample. It indicates possible problem with the analysis and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required to explain the results. These may include but are not limited to: results attached to the data summary report.

000420

Laboratory Name Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW-8D

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared 7/24/86
Date Analyzed 8/3/86
Conc/Dil Factor: 20
Percent Moisture (Decanted) _____

GPC Cleanup Yes No
Separatory Funnel Extraction Yes
Continuous Liquid-Liquid Extraction Yes

CAS Number	Compound	ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophthalene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chlorophenol	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-2-Methylphenol	10 u
91-57-6	2-Methyl-4-nitrophenol	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chlorophthalene	10 u
88-74-4	2-Nitrobenzidine	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzophthalate	10 u
91-94-1	1,3-Dichlorobenzidine	200 u
56-55-3	Benzo(a)Anthracene	10 u
112-81-7	bis(2-Ethylhexyl)Phthalate	37
218-01-9	Chrysen	10 u
117-84-0	Octyl Phthalate	15
205-99-2	Benzob(Fluoranthene)	10 u
207-08-9	Benzof(Fluoranthene)	10 u
50-32-8	Benzo(b)Phenanthrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

000421

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VBW-8D

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared: July 23, 1986

Separatory Funnel Extraction Yes

Date Analyzed: August 1, 1986

Continuous Liquid - Liquid Extraction Yes

Conc/Dil Factor: 1

Percent Moisture (decanted) _____

CAS Number		<u>ug/l</u> or <u>ug / Kg</u> (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5 u
53494-70-5	Endrin Ketone	0.10 u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 40

Laboratory Name NYTEST ENV INC.

Case No URS-V

Sample Number
VBW-8D

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. <u>60297</u>	<u>1,1 -Oxybisethane</u>	<u>VOA</u>	<u>11.98</u>	<u>2J</u>
2. <u>1066406</u>	<u>Trimethyl Silanol</u>	<u>VOA</u>	<u>14.75</u>	<u>10J</u>
3. <u>123864</u>	<u>Butyl acetate</u>	<u>VOA</u>	<u>23.82</u>	<u>4J</u>
4. _____	<u>Phenol</u>	<u>VOA</u>	<u>26.43</u>	<u>1J</u>
5. <u>629209</u>	<u>1,3,5,7 Cyclooctatetraene</u>	<u>VOA</u>	<u>30.90</u>	<u>4J</u>
6. _____	_____	_____	_____	_____
7. _____	<u>Tetradecadiene</u>	<u>BNA</u>	<u>25.72</u>	<u>37J</u>
8. _____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____
16. _____	_____	_____	_____	_____
17. _____	_____	_____	_____	_____
18. _____	_____	_____	_____	_____
19. _____	_____	_____	_____	_____
20. _____	_____	_____	_____	_____
21. _____	_____	_____	_____	_____
22. _____	_____	_____	_____	_____
23. _____	_____	_____	_____	_____
24. _____	_____	_____	_____	_____
25. _____	_____	_____	_____	_____
26. _____	_____	_____	_____	_____
27. _____	_____	_____	_____	_____
28. _____	_____	_____	_____	_____
29. _____	_____	_____	_____	_____
30. _____	_____	_____	_____	_____

000423

VBW - 8D
Sample No.

7-23-86

INDICANT ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SCW NO. _____

LAB SAMPLE ID NO. VBW - 8D 7-23-86 OR REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>55300</u>
2. Antimony	<u>20U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>147F</u>	15. Mercury	<u>013U</u>
4. Barium	<u>NR</u>	16. Nickel	<u>15U</u>
5. Beryllium	<u>3U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>3U</u>	18. Selenium	<u>2U</u>
7. Calcium	<u>106500</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>12</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>7</u>	24. Zinc	<u>29</u>
Cyanide	<u>10U</u>	Percent Solids (%)	_____

ICP Inter-element and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 54
TOTAL Hardness 494

000027

Sample Number

VBW-8BR

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.Case No 85-11532Lab Sample ID No: >V0123QC Report No 1Sample Matrix WaterContract No 85-11532Data Release Authorized By: [Signature]Date Sample Received 7/23/86

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 7/28/86Date Analyzed 7/28/86Conc./Dil Factor 0.200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	3.5BJ
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethane	5 u
67-66-3	Chloroform	5u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

Data Reporting Guidelines

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 or g/100 based on necessary concentration dilution action (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 semivolatile compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero to a 10% if limit of detection is 10 ug/l and a
- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides > 2.0 ug/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the matrix or in the sample. It is not clear whether the analyte is from the sample or from the matrix. Use in case appropriate action.
- Other** Other specific flags and footnotes may be required for the results. If used they must be fully described and attached to the data summary report.

000452

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW-8BR

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 7/24/86

Date Analyzed 8/3/86

Conc/Dil Factor: 20

Percent Moisture (Decanted) _____

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-3	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-2-Methylphenol	10 u
91-57-6	2-Methylisophthalate	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	10 u
91-58-7	2-Chloroisophthalate	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	10 u
7005-72-3	4-Chlorobenzyl phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	1,3-Dichlorobenzene	20 u
56-55-3	Benzofluoranthene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	SI
218-01-9	Chrysene	10 u
137-84-0	Di-n-Octylphthalate	10 u
205-99-2	Benzofluoranthene	10 u
207-08-9	Benzofluoranthene	10 u
50-32-8	Benzofluoranthene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzofluoranthene	10 u

(1) Cannot be separated from diphenylamine

000453

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-8BR

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared: July 28, 1986
 Date Analyzed: August 1, 1986
 Conc/Dil Factor: 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		<u>ug/l</u> or <u>ug/Kg</u> (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5 u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 10

Laboratory Name NYTEST ENV. INC.
Case No URS-V

Sample Number
VBW-8BR

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Tetradecadiene	BNA	25.74	1298
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.				

V.B.W. - 8 B R
Sample No.

7-23-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SCW NO. _____

LAB SAMPLE ID NO. V.B.W. - 8 B R 7-23860C REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____
(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>30100</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>12</u>	15. Mercury	<u>.13U</u>
4. Barium	<u>NR</u>	16. Nickel	<u>15U</u>
5. Beryllium	<u>3U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>247P</u>	18. Selenium	<u>2U</u>
7. Calcium	<u>39910</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>137F</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>8</u>	24. Zinc	<u>39</u>
Cyanide	<u>10U</u>	Percent Solids (N)	_____

~~PHENOLS: 2 U~~

ICP Interlement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 15
TOTAL Hardness 224

000028

Sample Number
VBW-100

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: > V0221
 Sample Matrix: Water
 Data Release Authorized By: [Signature]

Case No: URS-V
 QC Report No: 1
 Contract No: 85-11532
 Date Sample Received: 7/24/86

Volatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared: 8/2/86
 Date Analyzed: 8/2/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture (Not Decanted): _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	5 u
67-64-1	Acetone	5.1 J
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	5 u
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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 or g. 10U based on necessary concentration/dilution action. (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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than the minimum attainable detection limit of 10 ug/l and a
- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides > 200 ng/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the extract but not in the sample. It indicates possible laboratory contamination and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required to explain the results. If used they must be fully described and attached to the data summary report.

000474

Laboratory Name: Nytest Environmental Inc.
 Case No: WRS-V

Sample Number
VBW-10D

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 8/1/86
 Date Analyzed: 8/9/86
 Conc/Dil Factor: 2.0
 Percent Moisture (Decanted): _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	brs(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophrone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-2-Methylphenol	10 u
91-57-6	2-Methylphenol	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chlorophthalene	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	238
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,3-Dichlorobutadiene	200 u
56-55-3	Benzo(a)Anthracene	10 u
117-81-7	bis(2-Ethylhexyl)Phthalate	80
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	206
205-99-2	Benzo(b)Fluoranthene	10 u
207-06-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine. 000475

Laboratory Name: NYTEST ENV. INC.
 Case No: URS-V

Sample Number
VBW-100

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared: July 30, 1986
 Date Analyzed: August 4, 1986
 Conc/Dil Factor: 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

000476

Laboratory Name NYTEST ENV. INC.
Case No URS-V

Sample Number
VBW-10D

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration ($\mu\text{g}/\text{l}$ or $\mu\text{g}/\text{kg}$)
1.	Unknown	BNA	11.45	15 J
2.	Unknown	BNA	12.37	19 J
3.	Unknown Diene	BNA	28.04	15 J
4.	Unknown Amide	BNA	37.17	66 J
6.	Unknown siloxane	BNA	16.36	13 J
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.				

V B W - 100
Sample No.

7-30-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL LAB NO. _____

SYN NO. _____

LAB SAMPLE ID NO. V B W - 100 7-30-86 REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>41300</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>2U</u>	15. Mercury	<u>0.3</u>
4. Barium	<u>NR</u>	16. Nickel	<u>15U</u>
5. Beryllium	<u>3U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>5</u>	18. Selenium	<u>5.37F</u>
7. Calcium	<u>77100</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium-	<u>5.27F</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>1U</u>	24. Zinc	<u>21</u>
Cyanide	<u>10U</u>	Percent Solids (H)	_____
PHENOLS	<u>9</u>		

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 36

TOTAL HARDNESS 363

000040

Sample Number
VBW-10BR

Organics Analysis Data Sheet
(Page 1)

Laboratory Name Nytest Environmental Inc. Case No _____
 Lab Sample ID No 7 V0232 QC Report No 1
 Sample Matrix Water Contract No 85-11532
 Data Release Authorized By [Signature] Date Sample Received 7/31/86

Volatile Compounds

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared 8/3/86
 Date Analyzed 8/3/86
 Conc./Dil Factor 0.200 pH _____
 Percent Moisture (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	113 BF
67-64-1	Acetone	2767
75-15-0	Carbon Disulfide	5 u
75-35-4	1,1-Dichloroethane	5 u
75-34-3	1,1-Dichloroethane	5 u
156-60-5	Trans-1,2-Dichloroethane	5 u
67-66-3	Chloroform	5 u
107-06-2	1,2-Dichloroethane	5 u
78-93-3	2-Butanone	5 u
71-55-8	1,1,1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	5 u
10061-02-6	Trans-1,3-Dichloropropene	5 u
79-01-6	Trichloroethene	5 u
124-48-1	Dibromochloromethane	5 u
79-00-5	1,1,2-Trichloroethane	5 u
71-43-2	Benzene	0.52 J
10061-01-5	cis-1,3-Dichloropropene	5 u
110-75-8	2-Chloroethylmethyl ether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	5 u
108-10-1	2-Hexanone	5.5
127-18-4	Tetrachloroethene	5 u
79-34-5	1,1,2,2-Tetrachloroethane	5 u
108-88-3	Toluene	1.7 J
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	1.4 J
100-42-5	Styrene	5 u
	Total Xylenes	1.4

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.

- V** 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 action (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 semivolatile identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the detection criteria but the result is less than the specified detection limit but greater than zero (e.g. 10J). If limit of detection is 10 ug/l and a
- C**: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component results > 200 ng/l in the final extract should be confirmed by GC/MS.
- B**: This flag is used when the analyte is found in the extract but not in the sample. It indicates possible problems with the analysis and warns the data user of the appropriate action.
- Other**: Other specific flags and footnotes may be used to explain the results. If used they must be fully described and only those attached to the data column(s) relevant.

Laboratory Name Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW-10BR

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared 8/11/86
Date Analyzed 8/19/86
Conc/Dil Factor: 2100
Percent Moisture (Decanted) _____

GPC Cleanup Yes No
Separatory Funnel Extraction Yes
Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	33
111-44-4	brs(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	40 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	12
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	15
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	26
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophthalic Acid	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzic Acid	43
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-3-Methylphenol	10 u
91-57-8	2-Methyl-3-nitrophenol	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chlorophthalic Acid	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	0.45 J
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-3	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	15
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-58-7	Butylbenzylphthalate	10 u
91-94-1	3,3'-Dichlorobenzidine	20 u
56-55-3	Benzofluoranthene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	44
218-019	Chrysenes	10 u
117-84-0	Di-n-Octyl Phthalate	25
205-99-2	Benzofluoranthene	45
207-08-9	Benzofluoranthene	10 u
50-32-8	Benzofluoranthene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	35
53-70-3	Dibenz(a,h)Anthracene	15
191-24-2	Benzofluoranthene	10 u

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VBW-10BR

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared July 31, 1986

Separatory Funnel Extraction Yes

Date Analyzed August 4, 1986

Continuous Liquid - Liquid Extraction Yes

Conc/Dil Factor 1

Percent Moisture (decanted) _____

CAS Number		<u>ug/l</u> or <u>ug/Kg</u> (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VBW-10BR.

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 763291	2-methyl-1-pentene	BNA	332	9 J
2. 71-43-2	Benzene	BNA	3.38	32 J
3. —	—	—	—	—
4. —	Unknown aliphatic acid	BNA	10.75	11
5. —	Unknown methyl ester	BNA	11.33	9
6. 124072	Octanoic Acid	BNA	13.89	208
7. —	Unknown aliphatic acid	BNA	15.57	102
8. —	Unknown	BNA	23.72	47
9. —	—	—	—	—
10. 4229918	2-Propyl furan	VOA	15.69	8 J
11. —	—	—	—	—
12. —	C ₆ -cycloalkane	"	16.70	8 J
13. —	—	—	—	—
14. —	unknown alcohol	"	34.18	20 J
15. —	—	—	—	—
16. —	—	—	—	—
17. —	—	—	—	—
18. —	—	—	—	—
19. —	—	—	—	—
20. —	—	—	—	—
21. —	—	—	—	—
22. —	—	—	—	—
23. —	—	—	—	—
24. —	—	—	—	—
25. —	—	—	—	—
26. —	—	—	—	—
27. —	—	—	—	—
28. —	—	—	—	—
29. —	—	—	—	—
30. —	—	—	—	—

V B U - 10 BR

7-31-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL (CASE NO) _____

SOW NO _____

LAB SAMPLE ID NO V B U 10 BR 7-31-86 REPORT NO. _____

Elements Identified and Measured

Concentration: Low • Medium _____
Matrix: Water ✓ Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>50 U</u>
2. Antimony	<u>50 U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>2 U</u>	15. Mercury	<u>.134</u>
4. Barium	<u>NR</u>	16. Nickel	<u>154</u>
5. Beryllium	<u>3 U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>5</u>	18. Selenium	<u>[3] F</u>
7. Calcium	<u>330700</u>	19. Silver	<u>54</u>
8. Chromium	<u>94</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>[3] F</u>
10. Copper	<u>29</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>9</u>	24. Zinc	<u>[10] P</u>
Cyanide	<u>10 U</u>	Percent Solids (%)	_____
PHENOLS	<u>130</u>		

ICP Interlement and background corrections applied? Yes _____ No _____
If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 83
TOTAL Hardness 826

000034

Sample Number

VBW-11

Organics Analysis Data Sheet (Page 1)

Laboratory Name Nytest Environmental Inc.Case No URS-VLab Sample ID No 5V0222

QC Report No _____

Sample Matrix WaterContract No 85-11532Data Release Authorized By [Signature]Date Sample Received 7/24/86

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 8/2/86Date Analyzed 8/2/86Conc./Dil Factor 0.200 pH _____

Percent Moisture (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	5 u
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethane	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	5 u
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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 action). 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 semiquantitatively identified compounds where a 1:1 response is assumed or when the most spectral data indicated 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. 10U). If limit of detection is 10 ug/l and a

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides are 2:10 ng/l in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the sample but not in the sample. It indicates possible problem during analysis. Analyze the data user to take appropriate action.

Other Other specific flags and footnotes may be required. All other results must be described and attached to the data summary report.

000551

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VBW-11

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No Compounds Found	VOA		
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.				

000552

Sample Number

VBW-12

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.Case No: URS-VLab Sample ID No: 7V0203QC Report No: 1Sample Matrix: WaterContract No: ES-11532Data Release Authorized By: KekahDate Sample Received: 7/28/86

Volatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 8/1/86Date Analyzed: 8/1/86Conc./Dil Factor: 0.200 pH: _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	82B
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	0.63 BF
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	0.93 BF
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	0.62 BF
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

V 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 or g. 10UG/60B2 on necessary concentration/dilution action. (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 when estimating a concentration for semivolatile compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than 10% of the detection limit. If the detection limit is 10 ug/l and a concentration of 1 ug/l is reported, the result should be 10UG/60B2.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides 2:10 ng/l in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the matrix of the sample. It is not possible to determine the concentration of the analyte in the sample without the appropriate action.

Other Other specific flags and footnotes may be used to describe the results if used they must be fully explained and attached to the data summary report.

000558

Laboratory Name Nytest Environmental Inc.
 Case No: URS-V

Sample Number
VBW-12

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 7/27/86
 Date Analyzed 8/9/86
 Conc/Dil Factor: 2.0
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylphthalate	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
81-58-7	2-Chloronaphthalene	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	0.68 J
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	2.2 J
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,3-Dichlorobutadiene	20 u
56-55-3	Benzo(a)Anthracene	10 u
112-81-7	bis(2-Ethylhexyl)Phthalate	178
218-01-9	Chrysenes	10 u
117-84-0	Di-n-Octyl Phthalate	0.09 J
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1)-Cannot be separated from diphenylamine

000559

Laboratory Name WYEST ENV LLC

Case No URS-V

Sample Number
VPW-12

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown	VOA	5.35	1J
2.	Unknown	VOA	16.53	2J
3.	Unknown	VOA	27.45	2J
4.				
5.	71432 Benzene	BNA	3.22	103J
6.				
7.	Unknown diene	BNA	29.99	31J
8.				
9.	Unknown amide	BNA	37.22	19J
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000560

VBW 12

7-28-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL (SITE NO) _____

SCW NO _____

LAB SAMPLE ID NO. VBW 12 7-28-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: low Medium _____

MATRIX: Water Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. <u>Aluminum</u> <u>NR</u>	13. <u>Magnesium</u> <u>NR</u>
2. <u>Antimony</u> <u>NR</u>	14. <u>Manganese</u> <u>NR</u>
3. <u>Arsenic</u> <u>NR</u>	15. <u>Mercury</u> <u>NR</u>
4. <u>Barium</u> <u>NR</u>	16. <u>Nickel</u> <u>NR</u>
5. <u>Beryllium</u> <u>NR</u>	17. <u>Potassium</u> <u>NR</u>
6. <u>Cadmium</u> <u>NR</u>	18. <u>Selenium</u> <u>NR</u>
7. <u>Calcium</u> <u>NR</u>	19. <u>Silver</u> <u>NR</u>
8. <u>Chromium</u> <u>NR</u>	20. <u>Sodium</u> <u>NR</u>
9. <u>Cobalt</u> <u>NR</u>	21. <u>Thallium-</u> <u>NR</u>
10. <u>Copper</u> <u>NR</u>	22. <u>Tin</u> <u>NR</u>
11. <u>Iron</u> <u>NR</u>	23. <u>Vanadium</u> <u>NR</u>
12. <u>Lead</u> <u>NR</u>	24. <u>Zinc</u> <u>NR</u>
<u>Cyanide</u> <u>LOD</u>	<u>Percent Solids (%)</u> _____

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 28

000032

Sample Number

YBW-13

Organics Analysis Data Sheet
(Page 1)

Laboratory Name Nytest Environmental Inc.

Case No URS-V

Lab Sample ID No 2Y0204

QC Report No 1

Sample Matrix Water

Contract No ES-11532

Date Release Authorized By [Signature]

Date Sample Received 7/28/86

Volatile Compounds

Concentration Low Medium (Circle One)

Date Extracted/Prepared 8/1/86

Date Analyzed 8/2/86

Conc./Dil Factor 0.200 pH _____

Percent Moisture (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	54
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	0.67 B
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	0.88 B
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

- V** 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 or g/100ug based on necessary concentration dilution action (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 when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero to g/100g. If limit of detection is 10 ug/l and a...

- C**: This flag applies to pesticide parameters where the identity of the been confirmed by GC/MS. Single component must be 2.0 ng/l in the final extract should be confirmed by GC/MS.
- B**: This flag is used when the analyte is found in the matrix of the sample. It indicates possible probable false positive results. Warns the data user of the appropriate action.
- Other**: Other specific flags and footnotes may be required to explain the results. Please refer to the full description and definitions attached to the data summary report.

000084

Laboratory Name Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW-13

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 7/27/86

Date Analyzed 8/9/86

Conc/Dil Factor: 2.0

Percent Moisture (Decanted) _____

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno.	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophthalene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Boric Acid	50 u
111-91-3	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	0.35
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,3'-Dichlorobenzidine	20 u
59-55-3	Benzo(a)Anthracene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	118
218-01-9	Chrysene	10 u
117-84-0	Dibutylphthalate	0.25
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

000585

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-13

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One) GPC Cleanup Yes No
 Date Extracted/Prepared _____ Separatory Funnel Extraction Yes
 Date Analyzed _____ Continuous Liquid-Liquid Extraction Yes
 Conc/Dil Factor _____
 Percent Moisture (decanted) _____

CAS Number		<u>ug</u> /for ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name WYLEDI ENA LLC

Case No URS-V

Sample Number
VBW-13

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Propane	VOA	5.35	6J
2.	Unknown	VOA	6.53	2J
3.	Unknown	VOA	11.49	1J
4.	Unknown	VOA	27.45	1J
6.				
6.	71432 Benzene	BNA	3.22	63J
7.				
8.	556672 Octamethylcyclotetra siloxane	BNA	9.60	21J
9.				
10.	Unknown chlorinated comp	BNA	23.91	21J
11.				
12.	Unknown siloxane	BNA	25.04	17J
13.				
14.	Unknown methyl ester	BNA	25.94	15J
16.				
16.	" " "	BNA	28.48	15J
17.				
18.	Unknown amide	BNA	37.36	9J
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000587

VBW-13
Sample No.

7-28-86

INORGANIC ANALYSIS (DATA SHEET)

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SCH. NO. _____

LAB SAMPLE ID NO. VBW-13 7-28-86 OR REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____

Matrix: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>NR</u>
2. Antimony	<u>50 U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>2 U</u>	15. Mercury	<u>0.13 U</u>
4. Barium	<u>NR</u>	16. Nickel	<u>[38] P</u>
5. Beryllium	<u>3 U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>3 U</u>	18. Selenium	<u>9</u>
7. Calcium	<u>NR</u>	19. Silver	<u>5 U</u>
8. Chromium	<u>9 U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>[3] F</u>
10. Copper	<u>10 U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>1 U</u>	24. Zinc	<u>2 U</u>
Cyanide	<u>10 U</u>	Percent Solids (1)	_____

ICP Inter-element and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 3.5

000029

Sample Number

VBW-14

Organics Analysis Data Sheet
(Page 1)Laboratory Name Nytest Environmental Inc.Case No URS-VLab Sample ID No 2V0144QC Report No 1Sample Matrix WaterContract No 85-11532Data Release Authorized By ShahDate Sample Received 7/24/86

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 7/29/86Date Analyzed 7/29/86Conc./Dil Factor 0.800 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	318
67-64-1	Acetone	205
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	5 u
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	0.6785
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 u

Data Reporting Quotients

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

V 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 or g. 10 ug/l or ug/l as necessary concentration dilution action (this is not necessarily the instrument detection limit). The footnote should read U. The 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 somewhat degraded compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the return is less than the specified detection limit and greater than 10% of the minimum detection limit of 10 ug/l and a

C This flag applies to pesticide parameters where the identification has been confirmed by GC MS. Single component pesticides should be confirmed by GC MS in the final extract should be confirmed by GC MS.

B This flag is used when the analyte is found in the extract but not in the sample. It is used to alert the analyst to possible problems with the data and to take appropriate action.

Other Other specific flags and footnotes may be required. The results should be carefully described and attached to the data summary report.

000621

Laboratory Name Nytest Environmental Inc.

Case No: URS-C

Sample Number
VBW-14

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared 7/27/86
Date Analyzed: 8/2/86
Conc/Dil Factor: 2.0
Percent Moisture (Decanted) _____

GPC Cleanup Yes No
Separatory Funnel Extraction Yes
Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-8	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzic Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-2-Methylphenol	10 u
91-57-8	2-Methylphthalate	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chlorophthalate	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug *Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,5-Dichlorobenzidine	20 u
56-55-3	Benzofluoranthene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	134
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	23
205-99-2	Benzofluoranthene	10 u
207-08-9	Benzofluoranthene	10 u
50-32-8	Benzofluoranthene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benz(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

000622

Laboratory Name NYTEST ENV. INC.
 Case No. URS-V

Sample Number
VBW-14

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared: July 24, 1986

Separatory Funnel Extraction Yes

Date Analyzed: July 31, 1986

Continuous Liquid-Liquid Extraction Yes

Conc/Dil Factor: 1

Percent Moisture (decanted) _____

CAS Number		<u>ug/Kg</u> (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NYTESI ENA JWC

Case No URS-V

Sample Number
VBW-14

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l) or ug/kg
1.	Unknown alkane	WFA	23.23	10J
2.				
3.	Tetradecadiene	BNA	25.73	42J
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.				

000624

VBW-14
Sample No.

7-24-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL

CASE NO. _____

SOL. NO. _____

LAB SAMPLE ID NO. VBW-14 7-24-86

QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____

Matrix: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. <u>Aluminum</u>	<u>NR</u>	13. <u>Magnesium</u>	<u>9970</u>
2. <u>Antimony</u>	<u>50U</u>	14. <u>Manganese</u>	<u>NR</u>
3. <u>Arsenic</u>	<u>2U</u>	15. <u>Mercury</u>	<u>0.13 U</u>
4. <u>Barium</u>	<u>NR</u>	16. <u>Nickel</u>	<u>15U</u>
5. <u>Beryllium</u>	<u>5</u>	17. <u>Potassium</u>	<u>NR</u>
6. <u>Cadmium</u>	<u>3U</u>	18. <u>Selenium</u>	<u>2U</u>
7. <u>Calcium</u>	<u>30970</u>	19. <u>Silver</u>	<u>5U</u>
8. <u>Chromium</u>	<u>9U</u>	20. <u>Sodium</u>	<u>NR</u>
9. <u>Cobalt</u>	<u>NR</u>	21. <u>Thallium</u>	<u>2U</u>
10. <u>Copper</u>	<u>10U</u>	22. <u>Tin</u>	<u>NR</u>
11. <u>Iron</u>	<u>NR</u>	23. <u>Vanadium</u>	<u>NR</u>
12. <u>Lead</u>	<u>1U</u>	24. <u>Zinc</u>	<u>29</u>
<u>Cyanide</u>	<u>10U</u>		
<u>PHENOLS</u>	<u>2U</u>		

Percent Solids (1)

ICP Inter-element and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Toc 49
Total Hardness 118

000046

Sample Number

VBW-F5

Organics Analysis Data Sheet
(Page 1)

Laboratory Name Nytest Environmental Inc.
 Lab Sample ID No 210134
 Sample Matrix Water
 Data Release Authorized By J. Shah

Case No URS-V
 QC Report No 1
 Contract No 85-11532
 Date Sample Received 7/24/86

Volatile Compounds

Concentration Low Medium (Circle One)

Date Extracted/Prepared 7/29/86

Date Analyzed 7/29/86

Conc./Dil Factor 0.200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	3.17
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

- V 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 or g 10 (based on necessary concentration/dilution action if this is not necessary, 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 ionization identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero to g 10. If limit of detection is 10 ug/l and a

- C: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component results > 2.0 ng/l in the final extract should be confirmed by GC/MS.
- B: This flag is used when the analyte is found in the matrix as well as the sample. It indicates possible probable blank contamination and warns the data user to take appropriate action.
- Other: Other specific flags and footnotes may be required. If used, the results should be clearly identified and explained in the data summary report.

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW-15

Organics Analysis Data Sheet
(Page 2)

Semivolatiles Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 7/27/86

Date Analyzed 8/7/86

Conc/Dil Factor: 2.0

Percent Moisture (Decanted) _____

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78159-10-5	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	4-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,3-Dichlorobenzidine	20 u
56-55-3	Benzo(a)Anthracene	10 u
122-81-7	bis(2-Ethylhexyl)Phthalate	29 u
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	10 u
205-99-2	Benzob(f)Fluoranthene	10 u
207-08-9	Benzok(f)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

000645

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-15

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared: July 24, 1980
 Date Analyzed July 31, 1980
 Conc/Dil Factor: 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>ug/g</u> or <u>ug/Kg</u> (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NYTEST ENV Inc
 Case No URS-V

Sample Number
VBW15

Organics Analysis Data Sheet.
 (Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. -	C ₆ - Cycloalkane	BNA	3.25	641 J
2. 71432	Benzene	BNA	3.31	135 J
3.				
4. -	Unknown alkene	VOA	16.18	2 J
5.	Unknown	VOA	26.26	1 J
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
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23.				
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25.				
26.				
27.				
28.				
29.				
30.				

VBW-15
Sample No.

7124/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL

CASE NO. _____

SOI NO. _____

LAB SAMPLE ID NO. VBW-15 7-24-86

QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____

Matrix: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	NR	13. Magnesium	28100
2. Antimony	50U	14. Manganese	NR
3. Arsenic	2U	15. Mercury	0.13U
4. Barium	NR	16. Nickel	15U
5. Beryllium	3U	17. Potassium	NR
6. Cadmium	3U	18. Selenium	[3]F
7. Calcium	197000	19. Silver	5U
8. Chromium	9U	20. Sodium	NR
9. Cobalt	NR	21. Thallium	2U
10. Copper	10U	22. Tin	NR
11. Iron	NR	23. Vanadium	NR
12. Lead	[4]F	24. Zinc	24
Cyanide	10U	Percent Solids (1)	
PHENOLS	2U		

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDOC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 89
Total Hardness 608

000047

Sample Number
VBW-16

Organics Analysis Data Sheet
(Page 1)

Laboratory Name Nytest Environmental Inc.
 Lab Sample ID No 2V0205
 Sample Matrix Water
 Data Release Authorized By [Signature]

Case No URS-V
 QC Report No 1
 Contract No ES-11532
 Date Sample Received 7/28/86

Volatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared 8/2/86
 Date Analyzed 8/2/86
 Conc./Dil Factor 0.200 pH _____
 Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/lbr ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	875 B
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/lbr ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	0.69 B
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylmethyl ether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

- V** 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 or g/100 based on necessary concentration dilution action. (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 detectable 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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than one to g/100. If limit of detection is 10 ug/l and a concentration is 5 ug/l, report 5 ug/l J.
- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides with 2:1 mg/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the extract but not in the sample. It indicates possible probable contamination and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required. If used, the results should be used only as a guide and not as a basis for action. Attach to the data summary report.

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW 16

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 7/27/86

Date Analyzed: 8/9/86

Conc/Dil Factor: 2.0

Percent Moisture (Decanted): _____

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(2-Chloroethoxy)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	4-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	20
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	15
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,3'-Dichlorobenzidine	20 u
56-55-3	Benzo(a)Anthracene	10 u
117-81-7	bis(2-Ethylhexyl)Phthalate	45
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	10 u
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-16

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared July 29, 1986

Separatory Funnel Extraction Yes

Date Analyzed August 1, 1986

Continuous Liquid-Liquid Extraction Yes

Conc/Dil Factor 1

Percent Moisture (decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NY/EST ENV JWC

Case No URS-V

Sample Number

VBW-16

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown chlorinated comp	VOA	14.68	2 J
2.	Unknown	VOA	27.53	1 J
3.				
4.	71432 Benzene	BNA	3.26	66 J
5.	540976 Dodecamethylcyclohexasiloxane	BNA	16.51	11 J
6.				
7.	Unknown amide	BNA	37.41	9 J
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
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28.				
29.				
30.				

000671

VBW-16
7-28-86

INSTRUMENT ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL (CASE NO.) _____
SCW NO. _____
LAB SAMPLE ID NO. VBW-16 X-28-86 OR REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

(u/L or mg/kg dry weight) (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>NR</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>2U</u>	15. Mercury	<u>-13U</u>
4. Barium	<u>NR</u>	16. Nickel	<u>[22] P</u>
5. Beryllium	<u>3U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>3U</u>	18. Selenium	<u>2U</u>
7. Calcium	<u>NR</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>2U</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>1U</u>	24. Zinc	<u>[4] P</u>
Cyanide	<u>10U</u>	Percent Solids (%)	_____
PHENOLS	<u>17</u>		

ICP Interelement and background corrections applied? Yes _____ No _____
If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 37

Sample Number

VBW-17

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.Case No: URS-VLab Sample ID No: 2V0135

QC Report No: _____

Sample Matrix: WaterContract No: 85-11532Data Release Authorized By: Jshah

Date Sample Received: _____

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 7/29/86Date Analyzed 7/29/86

Conc./Dil Factor _____ pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	2.9 5
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		ug/L or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	5 u
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylmethyl ether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
106-88-3	Toluene	0.89 5
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 u

Data Reporting Guidelines

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 consistent.

V 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 $10 \mu\text{g/L}$ or $10 \mu\text{g/Kg}$ or necessary concentration dilution action (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 allowable detection limit for the sample.

J Indicates an estimated value. This flag is used when estimating a concentration for compounds identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than the minimum allowable detection limit.

C This flag applies to pesticide parameters where the detection limit has been confirmed by GC/MS. Sample components with a detection limit of $10 \mu\text{g/L}$ in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the sample but the sample is not a possible problem source. The footnote should read: B. Analyte found in sample but not a possible problem source. This flag is used to indicate the data user to take appropriate action.

Other Other specific flags and footnotes may be required. The results should be used for the maximum detection limit and the results should be attached to the data summary report.

000696

Laboratory Name: Nytest Environmental Inc.
 Case No: URS-V

Sample Number
VBW-14

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 7/27/86
 Date Analyzed 8/03/86
 Conc/Dil Factor: 2.0
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isobutylene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-5	bis(2-Chloroethyl)Amine	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chlorophenol	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	2-Chloro-3-Methylphenol	10 u
91-57-6	2-Methyl-3-nitrophenol	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chlorophthalate	10 u
68-74-4	2-Nitroanisole	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroanisole	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dimethoxyphenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroanisole	50 u
534-52-1	4,6-Dimero-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	45
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-3	1,3-Dichlorobenzene	20 u
58-55-3	Benzofluoranthene	10 u
112-81-7	bis(2-Ethylhexyl)Phthalate	100
218-01-9	Chrysene	10 u
117-84-0	Dibenzophthalate	25
205-99-2	Benzofluoranthene	10 u
207-08-9	Benzofluoranthene	10 u
50-22-8	Benzofluoranthene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzofluoranthene	10 u

(1) Cannot be separated from diphenylamine

000697

Laboratory Name NYTEST ENV. INC.
 Case No. URS-V

Sample Number
VBW-17

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared July 24, 1986

Separatory Funnel Extraction Yes

Date Analyzed July 31, 1986

Continuous Liquid-Liquid Extraction Yes

Conc/Dil Factor 1

Percent Moisture (decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5 u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NYTEST ENV INC.
Case No URS-V

Sample Number
VBW-17

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown	VOA	26.28	3J
2.				
3.	Tetradecadiene	BNA	25.74	297 J
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.				

VBW 17
Sample No.

7124/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL

CASE NO. _____

SOW NO. _____

LAB SAMPLE ID NO. VBW 17 7-24-86

QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____

MATRIX: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. <u>Aluminum</u>	<u>NR</u>	13. <u>Magnesium</u>	<u>23540</u>
2. <u>Antimony</u>	<u>50U</u>	14. <u>Manganese</u>	<u>NR</u>
3. <u>Arsenic</u>	<u>2U</u>	15. <u>Mercury</u>	<u>0.13U</u>
4. <u>Barium</u>	<u>NR</u>	16. <u>Nickel</u>	<u>15U</u>
5. <u>Beryllium</u>	<u>5</u>	17. <u>Potassium</u>	<u>NR</u>
6. <u>Cadmium</u>	<u>3U</u>	18. <u>Selenium</u>	<u>8</u>
7. <u>Calcium</u>	<u>27290</u>	19. <u>Silver</u>	<u>5U</u>
8. <u>Chromium</u>	<u>9U</u>	20. <u>Sodium</u>	<u>NR</u>
9. <u>Cobalt</u>	<u>NR</u>	21. <u>Thallium</u>	<u>2U</u>
10. <u>Copper</u>	<u>10U</u>	22. <u>Tin</u>	<u>NR</u>
11. <u>Iron</u>	<u>NR</u>	23. <u>Vanadium</u>	<u>NR</u>
12. <u>Lead</u>	<u>1U</u>	24. <u>Zinc</u>	<u>[6]P</u>
<u>Cyanide</u>	<u>10U</u>		
<u>P4ENALS</u>	<u>2U</u>		

Percent Solids (1)

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 51

Total Hardness 165

000044

Sample Number

VBW-19A

Organics Analysis Data Sheet
(Page 1)

Laboratory Name Nytest Environmental Inc.

Case No URS-V

Lab Sample ID No 2V01360

QC Report No 1

Sample Matrix Water

Contract No 85-11532

Date Release Authorized By [Signature]

Date Sample Received 7/24/86

Volatile Compounds

Concentration Low Medium (Circle One)

Date Extracted/Prepared 7/29/86

Date Analyzed 7/29/86

Conc./Dil Factor 0-200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	3.78
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

State Reporting Guidelines

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.

- V 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 detector limit for the sample with the U or 10 times the necessary concentration dilution action if this is not necessary on the instrument detection limit. The footnote should read U. Compound was analyzed for but not detected. The number is the minimum analytical detection limit for the sample.
- J: Indicates an estimated value. This flag is used when estimating a concentration for compounds identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than 10% of the minimum detector limit.

- C: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides containing 100% of the total extract should be confirmed by GC/MS.
- B: This flag is used when the analyte is found in the matrix and the sample. It indicates possible problems from contamination and warns the data user to take appropriate action.
- Other: Other specific flags and footnotes may be required. The results should be clearly described and attached to the data summary report.

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VBW-17A

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 7/27/86
 Date Analyzed 8/3/86
 Conc/Dil Factor: 2.0
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-8	Isobutylene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzic Acid	50 u
111-91-2	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chlorophenol	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-2-Methylphenol	10 u
91-67-6	2-Methyl-5-nitrophenol	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-59-7	2-Chlorophthalate	10 u
68-74-4	2-Nitrophenol	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
89-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorobenzyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dimero-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-3	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Benzylbenzophthalate	10 u
91-94-1	3,5-Dichlorobenzophthalate	20 u
59-55-3	Benzofluoranthene	10 u
187-91-7	bis(2-Ethoxyethyl)Phthalate	134
218-01-9	Chrysenes	10 u
117-84-0	Diphenylphthalate	147
205-99-2	Benzofluoranthene	10 u
207-08-9	Benzofluoranthene	10 u
50-22-8	Benzofluoranthene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-9	Dibenz(a,h)Anthracene	10 u
191-24-2	Benz(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

000722

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VBW-17A

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)
 Date Extracted/Prepared: July 24, 1986
 Date Analyzed: July 31, 1986
 Conc/Dil Factor: 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5 u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NYTEST ENV INC.
 Case No URS-V

Sample Number
VBW-17A

Organics Analysis Data Sheet
 (Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	C ₆ - Cycloalkane	VOA	16.64	1 J
2.	C ₆ - Cycloalkane	VOA	16.81	1 J
3.				
4.	Tetradecadiene	BNA	25.74	8 J
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
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23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

000724

VBW 17A
Sample No.

7/24/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL

CASE NO. _____

SOW NO. _____

LAB SAMPLE ID NO. VBW-17A 7-24-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____

MATRIX: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	NR	13. Magnesium	23400
2. Antimony	50U	14. Manganese	NR
3. Arsenic	[2]F	15. Mercury	0.13U
4. Barium	NR	16. Nickel	15U
5. Beryllium	5	17. Potassium	NR
6. Cadmium	3U	18. Selenium	2U
7. Calcium	47590	19. Silver	5U
8. Chromium	9U	20. Sodium	NR
9. Cobalt	NR	21. Thallium	2U
10. Copper	10U	22. Tin	NR
11. Iron	NR	23. Vanadium	NR
12. Lead	1U	24. Zinc	[17]P
Cyanide	10U	Percent Solids (1)	
PHENOLS	2U		

ICP Inter-element and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC - 120

Total Hardness - 215

000045

SUBJECT: LABORATORY & TRIP BLANKS

	LABORATORY		BLANKS		1# Trip	2# Trip
	15	10	50	20		
HSL Volatiles					69	
5. Methylene Chloride	4.8	7.1	2.9	3-1	1.5	0.57
6. Acetone	3.9					6.3
8. 1,1-Dichloroethene					0.60	
9. 1,1-Dichloroethane			1.0		1.4	1.2
10. Trans-1,2-Dichloroethene					0.23	
11. Chloroform		4.6				
14. 1,1,1-Trichloroethane		1.6	0.95	1.5	1.8	2.3
15. Carbon Tetrachloride					0.64	
21. Trichloroethene	0.56	2.9	0.66	1.3	1.0	1.4
30. Tetrachloroethene			0.82	1.2	1.5	1.6
31. Toluene			0.72			
Total Additional Peaks	9	7	8	∅	1	3

(Avg Additional Peaks = 8PPb vs Avg = 12 PPb for detections)

BY AMM DATE 4/27/87

URS COMPANY, INC.
CONSULTING ENGINEERS

SHEET NO. 1 OF 2

CHKD. BY _____ DATE _____

JOB NO. 35102

SUBJECT: LABORATORY & TRIP BLANKS

Blank Sample #

Blank - 015

Blank - 01

Blank - 02

Blank - 03

Blank - 04

Volney Sample #

Sediment Samples

VSS-1

VSS-2

VSS-3

VSS-4

VSS-5

VSS-6

VSS-7

Surface Water Samples

VSS-1

VSS-2

VSS-3

VSS-4

VSS-5

VSS-6

VSS-7

VBW-5

VBW-6

VBW-8S

VBW-8D

VBW-8Br

VBW-7S

VBW-14

BY AMM DATE 1/27/87

URS COMPANY, INC.
CONSULTING ENGINEERS

SHEET NO. 2 OF 2

CHKD. BY _____ DATE _____

JOB NO. 35102

SUBJECT: LABORATORY & TRIP BLANKS

Blank - 05

VBW-4S
VBW-4D
VBW-7D
VBW-15
VBW-17
VBW-17A

Blank - 06

VBW-10D
VBW-11
Trip Blank (#1)

Blank - 07

VBW-1
VBW-3S
VBW-3D
VBW-3Br
VBW-3I

Blank - 08

VBW-12
VBW-13
VBW-16
VBW-02

Blank - 09

VBW-10Br
VLCH-1
Field Blank =
(Trip Blank #2)

Sample Number
Blank-015

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: 7YAO27
 Sample Matrix: Water
 Data Release Authorized By: [Signature]

Case No: URS-V
 QC Report No: _____
 Contract No: 85-11532
 Date Sample Received: _____

Volatile Compounds

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared: 7/26/86
 Date Analyzed: 7/25/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	4.85
67-64-1	Acetone	3.95
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethane	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	0.56 J
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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 action (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 when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated 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. 10U). If limit of detection is 10 ug/l and a concentration of 5 ug/l is reported, the result should be 5J.

- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides > 200 ng/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the blank or in a sample. It indicates possible probable blank contamination and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required. If used, the results must be fully described and attached to the data summary report.

001790

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
Blank-015

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 79209	Methyl acetate	VOA	8.79	1 J
2. 141786	Ethyl acetate	VOA	13.49	5 J
3.	Unknown	VOA	18.27	1 J
4.	Unknown	VOA	25.32	2 J
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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Sample Number
Blank-01

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: >V0092
 Sample Matrix: Water
 Data Release Authorized By: [Signature]

Case No: URS-V
 QC Report No: _____
 Contract No: 85-11532
 Date Sample Received: _____

Volatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 7/26/86
 Date Analyzed: 7/26/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	7.1
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethane	5 u
67-66-3	Chloroform	4.6 J
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	1.6 J
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	2.9 J
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

- V 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 action. (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 indicated 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., 10U). If limit of detection is 10 ug/l and a concentration of 7.5 ug/l is reported, the result is 7.5 J.

- C: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component (with 3 or 2:1) ng. u/l in the final extract should be confirmed by GC/MS.
- B: This flag is used when the analyte is found in the plate, as per the sample. It indicates possible problems (plate contamination) and warns the data user to take appropriate action.
- Other: Other specific flags and footnotes may be included in the results. If used they must be fully described and attached to the data summary report.

Laboratory Name MYTEST ENVU, INC.
Case No URS-V

Sample Number
Blank-01

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. —	Unknown	VOA	25.34	3J
2. —	Phenol	VOA	26.10	4J
3.				
4.				
5.				
6.				
7.				
8.				
9.				
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Sample Number
Blank-02

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: 2V0108
 Sample Matrix: Water
 Data Release Authorized By: [Signature]

Case No: URS-V
 QC Report No: 1
 Contract No: 85-11532
 Date Sample Received: _____

Volatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 7/27/86
 Date Analyzed: 7/27/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	4.3 5
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	0.9 1.5
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	0.6 1.5
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	0.5 1.5
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

- V** 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. 10ug/l based on necessary concentration/dilution action (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 indicated 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. 10u). If limit of detection is 10 ug/l and a concentration is 5 ug/l.
- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides > 200 ng/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the matrix of the sample. It indicates possible probable plant contamination and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required to describe the results if used they must be fully described and attached to the data summary report.

Laboratory Name NYTEST ENVIRONMENTAL INC.
Case No WRS-V

Sample Number
Blank-02

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	unknown cycloalkane	VOA	16.44	LOD
2.				
3.				
4.				
5.				
6.				
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001819

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.Case No URS-VLab Sample ID No 7Y0119

QC Report No _____

Sample Matrix WaterContract No 85-11532Data Release Authorized By: Jshah

Date Sample Received _____

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 7/28/86Date Analyzed 7/28/86Conc./Dil Factor 0.200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	49J
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butenone	10 u
71-55-6	1, 1, 1-Trichloroethane	5u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

V 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 action. (This is not necessary if 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 indicated 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). If limit of detection is 10 ug/l and a concentration of 5 ug/l is reported, the result should be 5J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides > 2 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 sample. It indicates possible probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to explain the results. If used they must be fully described and attached to the data summary report.

Laboratory Name NYTEST ENV INC.

Case No URS-V

Sample Number
Blank-03

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	C ₆ - Cycloalkane	VDA	16.10	6.7
2.	C ₆ - Cycloalkane	VDA	16.60	7.7
3.	Phenol + unknown alcohol	VDA	26.43	3.7
4.				
5.				
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28.				
29.				
30.				

001831

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
Blank-3

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)
 Date Extracted/Prepared July 21, 1986
 Date Analyzed July 22, 1986
 Conc/Dil Factor 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 30

001963

Sample Number
Blank-04

Organics Analysis Data Sheet
(Page 1)

Laboratory Name Nytest Environmental Inc.
 Lab Sample ID No >V0151
 Sample Matrix Water
 Data Release Authorized By [Signature]

Case No URS-V
 QC Report No 1
 Contract No 85-11532
 Date Sample Received _____

Volatile Compounds

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared 7/29/86
 Date Analyzed 7/29/86
 Conc./Dil Factor 0-200 pH _____
 Percent Moisture (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	SS
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethane	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	5 u
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	0.725
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

- V** 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 or g/100 based on necessary concentration/dilution action (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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero to g/100. If limit of detection is 10 ug/l and a concentration is 5 ug/l.
- C**: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides > 200 ng/l in the final extract should be confirmed by GC/MS.
- B**: This flag is used when the analyte is found in the blank or in a sample. It indicates possible product blank contamination and warns the data user to take appropriate action.
- Other**: Other specific flags and footnotes may be included. If used, the results should be clearly and fully described and attached to the data summary report.

001855

Laboratory Name NYL EST ENVI JWC

Case No URS-V

Sample Number

Blank-04

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 74-98-6	Propane	VOA	3.67	33
2. -	Unknown	VOA	15.76	55
3. -	C ₆ -cycloalkane	VOA	16.26	105
4. -	Unknown alcohol	VOA	25.93	23
6.				
6.				
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001856

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
Blank #4

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One) GPC Cleanup Yes No
 Date Extracted/Prepared: July 23, 1986 Separatory Funnel Extraction Yes
 Date Analyzed: July 23, 1986 Continuous Liquid - Liquid Extraction Yes
 Conc/Dil Factor: 1
 Percent Moisture (decanted) _____

CAS Number		<u>ug</u> /l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin-Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 5.0

001970

Sample Number
Blank ~~05~~ 05

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: 710130
 Sample Matrix: Water
 Data Release Authorized By: [Signature]

Case No: URS-V
 QC Report No: 1
 Contract No: 85-11532
 Date Sample Received: _____

Volatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 7/28/86
 Date Analyzed: 7/28/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	29 J
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	95 J
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	0.66 J
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	0.82 J
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	0.66 J
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 u

Data Reporting Quantities

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

- V** 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 or g/100 based on necessary concentration/dilution action (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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero to g/100. If limit of detection is 10 ug/l and a
- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component results may be confirmed by GC/MS in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the extract but the sample is not a pesticide. Probable pesticide contamination and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required. If used they must be fully described and attached to the data summary report.

001841

Laboratory Name NYTEST ENV INC.
Case No URS-V

Sample Number
Blank 05

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown alcohol	VOA	25.95	4J
2.	C ₆ -Cycloalkane	VOA	15.45	4J
3.				
4.				
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001842

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
Blank # 5

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One) GPC Cleanup Yes No
 Date Extracted/Prepared: July 24, 1986 Separatory Funnel Extraction Yes
 Date Analyzed: July 30, 1986 Continuous Liquid - Liquid Extraction Yes
 Conc/Dil Factor: 1
 Percent Moisture (decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1000 or W_s _____ V_i 10,000 V_t 4.0

Sample Number

Blank-06

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.Case No URS-VLab Sample ID No 770219QC Report No 1Sample Matrix WaterContract No 85-11532Data Release Authorized By: Ashah

Date Sample Received _____

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 8/2/86Date Analyzed 8/2/86Conc./Dil Factor 0.200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	3.15
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	1.05
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	1.55
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	1.35
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	1.25
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

V 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 or g/100 based on necessary concentration dilution action. 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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero to a 10% of limit of detection is 10 ug/l and a

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component (1:1) 3+3:1:1 ng u/l in the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the extract as per 1:1 sample. It is as possible probably blank contamination and warns the data user to use appropriate action.

Other Other specific flags and footnotes may be required to explain the results. If used the user must fully describe the conditions. Attach to the data summary report.

001893

Laboratory Name NYCSD ELM NYC

Case No URS-V

Sample Number
Blank 076

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No Compounds Found	VOR		
2.				
3.				
4.				
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001894

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
Blank # 6

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One) GPC Cleanup Yes No
 Date Extracted/Prepared: July 28, 1986 Separatory Funnel Extraction Yes
 Date Analyzed: July 30, 1986 Continuous Liquid - Liquid Extraction Yes
 Conc/Dil Factor: 1
 Percent Moisture (decanted) _____

CAS Number		<u>(ug/l)</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Sample Number

Blank-07

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: 7V0210
 Sample Matrix: Water
 Date Release Authorized By: [Signature]

Case No: URS-V
 QC Report No: 1
 Contract No: ES-11532
 Date Sample Received: _____

Volatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 8/2/86Date Analyzed: 8/2/86Conc./Dil Factor: 0.200 pH: _____

Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	5 u
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethane	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

Data Reporting Quotients

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

V 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 or 10 (based on necessary concentration dilution action) (this is not necessary if 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 semivolatile compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than half the minimum detection limit. If limit of detection is 10 ug/l and a

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides should be confirmed by GC/MS. ng/l in the final report should be confirmed by GC/MS.

B This flag is used when the analyte is found in the data but not in the sample. It indicates possible probable false positive results and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to explain the results if used. Justification should be provided and attached to the data summary report.

Laboratory Name NYTEST ENV INC.

Case No URS-V

Sample Number
Blank-07

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown chlorinated comp.	VOA	14.51	6J
2.	Phenol + Unknown alcohol	VOA	26.78	4J
3.				
4.				
6.				
6.				
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001885

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
Blank # 7

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared: July 26, 1986
 Date Analyzed: July 31, 1986
 Conc/Dil Factor: 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Sample Number
Blank-08

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: > V0198
 Sample Matrix: Water
 Date Release Authorized By: fshah

Case No: URS-V
 QC Report No: 1
 Contract No: ES-11532
 Date Sample Received: _____

Volatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: 8/1/86
 Date Analyzed: 8/1/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/L or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	1.5 J
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	0.60
75-34-3	1, 1-Dichloroethane	1.4 J
156-60-5	Trans-1, 2-Dichloroethene	0.23 J
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	1.8 J
56-23-5	Carbon Tetrachloride	0.64 J
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/L or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	1.0 J
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	1.5 J
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

- V** 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 or g/100 based on necessary concentration dilution action (this is not necessary on 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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than the minimum detection limit of 10 ug/l and a minimum detection limit of 10 ug/l.
- C** This flag applies to peak deconvolutions where the identification has been confirmed by GC/MS. Single component peak deconvolution in the final report should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the matrix and the sample is not a possible problem from contamination and means the data user or user appropriate action.
- Other** Other specific flags and footnotes may be required to explain the results. If used they must be fully described and attached to the data summary report.

001868

Laboratory Name WYLEDI ENVIRONMENTAL
Case No URS-V

Sample Number
Blank-08

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	<u>C₆ - Cycloalkane</u>	<u>VOA</u>	<u>17.43</u>	<u>15</u>
2.				
3.				
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001869

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
Blank #8

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared: July 28, 1986
 Date Analyzed Aug. 1, 1986
 Conc/Dil Factor 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>(ug/l)</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5 u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Sample Number
Blank-09

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: > V0231
 Sample Matrix: Water
 Date Release Authorized By: [Signature]

Case No: 85-11532
 QC Report No: 1
 Contract No: 85-11532
 Date Sample Received: _____

Volatile Compounds

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared: 8/3/86
 Date Analyzed: 8/3/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture (Not Decanted): _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	0.573
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1,1-Dichloroethene	5 u
75-34-3	1,1-Dichloroethane	5 u
156-60-5	Trans-1,2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1,2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-8	1,1,1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

- U** 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 or g/l (based on necessary concentration dilution action). 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 estimate 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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than...
- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component results are 2% ng/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the matrix and not in the sample. It indicates possible problems from matrix effects and means the data user should take appropriate action.
- Other** Other specific flags and footnotes may be used and should be attached to the data summary report.

001906

Laboratory Name MTESI ENM UVI

Case No URS-V

Sample Number
Blank-09

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	C ₆ - Cycloalkane	VOA	15.39	5F
2.	C ₆ - Cycloalkane	VOA	16.03	4F
3.	Unknown alcohol	VOA	26.45	2F
4.				
6.				
6.				
7.				
8.				
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001907

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
Blank #9

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared: July 28, 1986

Separatory Funnel Extraction Yes

Date Analyzed Aug 1, 1986

Continuous Liquid - Liquid Extraction Yes

Conc/Dil Factor: 1

Percent Moisture (decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

001991

Inorganic Form 111

Q.C. Report No. _____

BLANKS

LAB NAME NYTEST ENVIRONMENTAL

CASE NO. _____

DATE _____

UNITS Mg/L

Matrix Water

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value				Preparation Blank	
		1	2	3	4	1	2
Metals:							
1. Aluminum	NR						
2. Antimony	50U	50U	50U			50U	
3. Arsenic	2U	2U	2U			2U	
4. Barium	NR						
5. Beryllium	3U	3U	3U			3U	
6. Cadmium	3U	3U	3U			3U	
7. Calcium	NR						
8. Chromium	9U	9U	9U			9U	
9. Cobalt	NR						
10. Copper	10U	10U	10U			10U	
11. Iron	NR						
12. Lead	1U	1U	1U			1U	
13. Magnesium	NR						
14. Manganese	NR						
15. Mercury	.13U	.13U	.13U			.13U	
16. Nickel	15U	15U	15U			15U	
17. Potassium	NR						
18. Selenium	2U	2U	2U			2U	
19. Silver	5U	5U	5U			5U	
20. Sodium	NR						
21. Thallium	2U	2U	2U			2U	
22. Tin	NR						
23. Vanadium	NR						
24. Zinc	2U	2U	2U			2U	
Other _____							
Cyanide	10U	10U	10U			10U	

000049

Sample Number
Trip Blank #1

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: 7V0223
 Sample Matrix: Water
 Date Release Authorized By: [Signature]

Case No: URS-V
 QC Report No: 1
 Contract No: RS-11532
 Date Sample Received: 7/24/85

Volatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared: 8/2/86
 Date Analyzed: 8/2/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/lbr ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	18 B
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1,1-Dichloroethane	5 u
75-34-3	1,1-Dichloroethane	1.25
156-60-5	Trans-1,2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1,2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1,1,1-Trichloroethane	2.35
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/lbr ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	5 u
10061-02-6	Trans-1,3-Dichloropropene	5 u
79-01-6	Trichloroethene	1.45
124-48-1	Dibromochloromethane	5 u
79-00-5	1,1,2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1,3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	1.65
79-34-5	1,1,2,2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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 or g/100 based on necessary concentration dilution factor (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 indicated 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) if limit of detection is 10 ug/l and a

- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component results are reported in ug/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the matrix or the sample is not pure. Possible products from matrix or sample may mask the data. User to take appropriate action.
- Other** Other specific flags and footnotes may be required. The results should include the location of the flag and be attached to the data summary report.

002090

Laboratory Name MYEST ENV INC.

Case No URS-V

Sample Number
Trip Blank #1

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown	VOA	6.45	25
2.	Unknown	VOA	27.38	15
3.				
4.				
5.				
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7.				
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002091

Sample Number
Trip Field Blank #2

Organics Analysis Data Sheet
 (Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: 2V0234
 Sample Matrix: Water
 Data Release Authorized By: [Signature]

Case No: URS-V
 QC Report No: 1
 Contract No: 85-11532
 Date Sample Received: 7/31/86

Volatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared: 8/3/86
 Date Analyzed: 8/3/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	4.17
67-64-1	Acetone	10.32
75-15-0	Carbon Disulfide	5 u
75-35-4	1,1-Dichloroethene	5 u
75-34-3	1,1-Dichloroethane	4.05
156-60-5	Trans-1,2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1,2-Dichloroethane	5 u
78-93-3	2-Butenone	10 u
71-55-6	1,1,1-Trichloroethane	1.55
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	5 u
10061-02-6	Trans-1,3-Dichloropropene	5 u
79-01-6	Trichloroethene	114
124-48-1	Dibromochloromethane	5 u
79-00-5	1,1,2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1,3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	13.5
79-34-5	1,1,2,2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 u

Data Reporting Outliers

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.

- V** 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 or g/100 based on necessary concentration dilution action. If this is not necessary the instrument detection limit. The footnote should read U. Compound was analyzed for but not detected. The number is the minimum obtainable detection limit for the sample.
- J** Indicates an estimated value. This flag is used either when estimating a concentration for semivolatile compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than 10% of the 10 ug/l limit of detection is 10 ug/l and a

- C** This flag applies to pesticide parameters where the analytical method has been confirmed by GC/MS. Single component results > 2.0 ug/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the extract but not in the sample. It indicates possible problems during extraction and means the data user should take appropriate action.
- Other** Other specific flags and footnotes may be required. The results should be clearly explained and attached to the data summary report.

002076

Laboratory Name NYTEST ENV INC.

Case No URS-V

Sample Number
Field Blank #2

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	C ₆ -Cycloalkane	VOA	16.78	25
2.				
3.				
4.				
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002077

Laboratory Name: Nytest Environmental Inc.

Case No: URS-Y

Sample Number
Blank-01

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 7/24/80

Date Analyzed: 8/23/80

Conc/Dil Factor: 200

Percent Moisture (Decanted) _____

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	7.73
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	1,2-Dichlorobenzene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
311-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
81-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	2-Chloro-3-Methylphenol	10 u
81-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
68-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
81-58-7	2-Chloronaphthalene	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-98-8	Acenaphthylene	10 u
89-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Dimethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorobenzene	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Bisbenzophthalate	10 u
91-945-7	1,3-Dichlorobenzene	20 u
56-55-3	Benzo(a)Anthracene	10 u
117-81-7	bis(2-Ethylhexyl)Phthalate	10 u
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octylphthalate	10 u
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-74-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine
001917

Laboratory Name NUTEST Env Linc

Case No _____

Sample Number
Blank 01
>Bx004

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.				
2. <u>71-43-2</u>	<u>Benzene</u>	<u>BWA</u>	<u>398</u>	<u>1000J</u>
3.				
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Laboratory Name Nytest Environmental Inc.
 Case No: URS-V

Sample Number
Blank-02

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 7/27/86
 Date Analyzed 8/23/86
 Conc/Dil Factor: 2.00
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
108-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	6.03
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
7815916	Isophthalate	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chlorophenol	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	4-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylisophthalate	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-88-7	2-Chloroisophthalate	10 u
68-74-4	2-Nitrothiophene	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzophthalate	10 u
91-94-5	3,5-Dichlorophthalate	20 u
58-55-3	Benzo(a)Anthracene	10 u
127-81-7	Di(2-Ethylhexyl)Phthalate	10 u
218-01-9	Chrysene	10 u
117-84-0	Di(2-Octyl)Phthalate	10 u
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Phenanthrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

001927

Laboratory Name NYLES1 ENV1 JWC

Case No URS-V

Sample Number
Blank-02

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration <u>ug/l</u> or ug/kg
1.				
2. <u>71-43-2</u>	<u>Benzene</u>	<u>BNA</u>	<u>3.95</u>	<u>948 F</u>
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001928

Laboratory Name: Nytest Environmental Inc.
 Case No: URS-V

Sample Number
Blank # 03

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 8/1/86
 Date Analyzed 8/23/86
 Conc/Dil Factor: 2000
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number	Compound	ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	6.75
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isobutylene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
311-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	4-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
68-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-88-7	2-Chlorophthalate	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenyl ether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenyl ether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,5-Dichlorobenzidine	20 u
58-55-3	Benzo(a)Anthracene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	10 u
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octylphthalate	10 u
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Phenanthrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Benzo(g,h)Anthracene	10 u
191-24-2	Benzo(b)h)Perylene	10 u

(1) Cannot be separated from diphenylamine 001936

Laboratory Name MYTEST ENV INC

Case No URS-V

Sample Number
Blank-03

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.				
2. <u>71-43-2</u>	<u>Benzene</u>	<u>BNA</u>	<u>3.95</u>	<u>11763</u>
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001937

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
Blank 05

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 8/23/86

Date Analyzed 8/23/86

Conc/Dil Factor: 2,000

Percent Moisture (Decanted)

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number (Circle One)

108-95-2	Phenol	10 u
111-44-4	br(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	40 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	645
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78159187	Isobutylene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
311-9197	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-9	3-Chloro-2-Methylphenol	10 u
91-57-6	2-Methylphenol	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
68-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-88-7	2-Chlorophthalate	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
206-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number (Circle One)

83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (I)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Perchlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-941787	3,3'-Dichlorobenzidine	20 u
56-55-3	Benzo(a)Anthracene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	10 u
218-0139	Chrysene	10 u
117-84-0	Diphenylphthalate	10 u
206-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

001954

Laboratory Name NYTEST ENVIRONMENTAL

Case No URS-V

Sample Number
Blank-05

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration ug/l or ug/kg
1.				
2. <u>71-43-2</u>	<u>Benzene</u>	<u>BNA</u>	<u>3.94</u>	<u>1.3805</u>
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Laboratory Name: Nytest Environmental Inc.
 Case No: URS-V

Sample Number
Blank-04-Soil

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 7/22/86
 Date Analyzed: 8/23/86
 Conc/Dil Factor: 2.005
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	330 u
111-44-4	bis(2-Chloroethyl)Ether	330 u
95-57-8	2-Chlorophenol	330 u
541-73-1	1,3-Dichlorobenzene	330 u
106-46-7	1,4-Dichlorobenzene	330 u
100-51-6	Benzyl Alcohol	1187
95-50-1	1,2-Dichlorobenzene	330 u
95-48-7	2-Methylphenol	330 u
39638-32-9	bis(2-chloroisopropyl)Ether	330 u
106-44-5	4-Methylpheno	330 u
621-64-7	N-Nitroso-Di-n-Propylamine	330 u
67-72-1	Hexachloroethane	330 u
98-95-3	Nitrobenzene	330 u
78-59-1	Isophorone	330 u
88-75-5	2-Nitrophenol	330 u
105-67-9	2,4-Dimethylphenol	330 u
65-85-0	Benzoic Acid	1600 u
111-91-1	bis(2-Chloroethoxy)Methane	330 u
120-83-2	2,4-Dichlorophenol	330 u
120-82-1	1,2,4-Trichlorobenzene	330 u
91-20-3	Naphthalene	330 u
106-47-8	4-Chloroaniline	330 u
87-68-3	Hexachlorobutadiene	330 u
59-50-7	4-Chloro-3-Methylphenol	330 u
91-57-6	2-Methylnaphthalene	330 u
77-47-4	Hexachlorocyclopentadiene	330 u
88-06-2	2,4,6-Trichlorophenol	330 u
95-95-4	2,4,5-Trichlorophenol	1600 u
91-58-7	2-Chloronaphthalene	330 u
88-74-4	2-Nitroaniline	1600 u
131-11-3	Dimethyl Phthalate	330 u
208-96-8	Acenaphthylene	330 u
99-09-2	3-Nitroaniline	1600 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	330 u
51-28-5	2,4-Dinitrophenol	1600 u
100-02-7	4-Nitrophenol	1600 u
132-64-9	Dibenzofuran	330 u
121-14-2	2,4-Dinitrotoluene	330 u
606-20-2	2,6-Dinitrotoluene	330 u
84-66-2	Diethylphthalate	330 u
7005-72-3	4-Chlorophenyl-phenylether	330 u
86-73-7	Fluorene	330 u
100-01-6	4-Nitroaniline	1600 u
534-52-1	4,6-Dinitro-2-Methylphenol	1600 u
86-30-6	N-Nitrosodiphenylamine (1)	330 u
101-55-3	4-Bromophenyl-phenylether	330 u
118-74-1	Hexachlorobenzene	330 u
87-86-5	Pentachlorophenol	1600 u
85-01-8	Phenanthrene	330 u
120-12-7	Anthracene	330 u
84-74-2	Di-n-Butylphthalate	330 u
206-44-0	Fluoranthene	330 u
129-00-0	Pyrene	330 u
85-68-7	Butylbenzylphthalate	330 u
91-94-1	3,3'-Dichlorobenzidine	660 u
56-55-3	Benzo(a)Anthracene	330 u
117-81-7	bis(2-Ethylhexyl)Phthalate	330 u
218-01-9	Chrysene	330 u
117-84-0	Di-n-Octyl Phthalate	330 u
205-99-2	Benzo(b)Fluoranthene	330 u
207-08-9	Benzo(k)Fluoranthene	330 u
50-32-8	Benzo(a)Pyrene	330 u
193-39-5	Indeno(1,2,3-cd)Pyrene	330 u
53-70-3	Dibenz(a,h)Anthracene	330 u
191-24-2	Benzo(g,h,i)Perylene	330 u

(1) Cannot be separated from diphenylamine

Laboratory Name MYTEST ENV INC
Case No URS-V

Sample Number
Blank-04-Soil

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
2.71-43-2	Benzene	BNA	3.95	19,905
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001946

APPENDIX I

Surface Water/Leachate Analytical Data

Organics Analysis Data Sheet
(Page 1)

Laboratory Name Nytest Environmental Inc.
 Lab Sample ID No >V0095
 Sample Matrix Water
 Date Release Authorized By _____

Case No URS-V
 QC Report No _____
 Contract No 85-11532
 Date Sample Received 7/22/86

Volatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared 7/20/86
 Date Analyzed 7/20/86
 Conc./Dil Factor 0.200 pH _____
 Percent Moisture: (Not Decanted) _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	5 u
67-64-1	Acetone	2.4 J
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
106-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

Data Reporting Quarters

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

- 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. Reports the minimum detection limit for the sample with the size of 10U based on necessary concentration dilution action if it is not necessary on 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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero or 10U. If limit of detection is 10 ug/l and a concentration of 3 ug/l is calculated report as JJ.
- C** This flag applies to GC/MS data where the identification has been confirmed by GC/MS. Single component results are 2:10 ng u/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the sample but the sample is not a standard. Probable blank results are reported and warn the data user in case appropriate action.
- Other** Other specific flags and footnotes may be required to explain the results. These may be fully described and attached to the data summary report.

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VSS-1

Organics Analysis Data Sheet
(Page 2)

Semivolatiles Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 7/24/86

Date Analyzed 8/8/86

Conc/Dil Factor: 20

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

Percent Moisture (Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	0.99 J
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-0	Isophorbene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzic Acid	5.8 J
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	0.39 J
106-47-8	4-Chlorobenzene	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	2,3-Dichloro-3-Methylphenol	10 u
91-57-6	2,4-Dichlorophenol	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	10 u
91-58-7	2-Chlorophthalene	10 u
88-74-4	2-Nitrobenzene	10 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	10 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	0.51 J
7005-72-3	4-Chlorobenzyl phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dimethoxy-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (I)	10 u
101-55-3	4-Bromophenyl phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	0.77 J
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzophthalate	10 u
91-24-1	3,3'-Dichlorodiphenylmethane	10 u
58-55-3	Benz(a)Anthracene	10 u
127-81-7	bis(2-Ethylhexyl)Phthalate	86
218-01-9	Chrysene	10 u
117-84-0	Octylphthalate	0.18 J
206-99-2	Benzofluoranthene	10 u
207-08-9	Benzofluoranthene	10 u
50-22-8	Benzofluoranthene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
59-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benz(g,h)Perylene	10 u

(1) Cannot be separated from diphenylamine

000746

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VSS-1

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared: July 23, 1986

Separatory Funnel Extraction Yes

Date Analyzed: July 23, 24, 1986

Continuous Liquid - Liquid Extraction Yes

Conc/Dil Factor: 1

Percent Moisture (decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 5.0

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VSS-1

Organics Analysis Data Sheet
 (Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. <u>71-43-2</u>	<u>Benzene</u>	<u>BNA</u>	<u>3.24</u>	<u>912 J</u>
2. <u>-</u>	<u>Unknown</u>	<u>BNA</u>	<u>29.08</u>	<u>166 J</u>
3. <u>-</u>	<u>Unknown</u>	<u>BNA</u>	<u>31.57</u>	<u>77 J</u>
4. <u>-</u>	<u>Unknown alkane</u>	<u>BNA</u>	<u>32.94</u>	<u>30 J</u>
5. <u>-</u>				
6. <u>418-745</u>	<u>Trimethylcyclopropane</u>	<u>VOA</u>	<u>16.27</u>	<u>14 J</u>
7. <u>-</u>				
8. <u>-</u>				
9. <u>-</u>				
10. <u>-</u>				
11. <u>-</u>				
12. <u>-</u>				
13. <u>-</u>				
14. <u>-</u>				
15. <u>-</u>				
16. <u>-</u>				
17. <u>-</u>				
18. <u>-</u>				
19. <u>-</u>				
20. <u>-</u>				
21. <u>-</u>				
22. <u>-</u>				
23. <u>-</u>				
24. <u>-</u>				
25. <u>-</u>				
26. <u>-</u>				
27. <u>-</u>				
28. <u>-</u>				
29. <u>-</u>				
30. <u>-</u>				

VSS-1 water
Sample No.

7-22-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SCW NO. _____

LAB SAMPLE ID NO. VSS-1 water 7-22-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

- | | | | |
|--------------|--------------|--------------------|-------------|
| 1. Aluminum | <u>NR</u> | 13. Magnesium | <u>9970</u> |
| 2. Antimony | <u>50U</u> | 14. Manganese | <u>NR</u> |
| 3. Arsenic | <u>37</u> | 15. Mercury | <u>.13U</u> |
| 4. Barium | <u>NR</u> | 16. Nickel | <u>15U</u> |
| 5. Beryllium | <u>5</u> | 17. Potassium | <u>NR</u> |
| 6. Cadmium | <u>137P</u> | 18. Selenium | <u>127F</u> |
| 7. Calcium | <u>93700</u> | 19. Silver | <u>5U</u> |
| 8. Chromium | <u>9U</u> | 20. Sodium | <u>NR</u> |
| 9. Cobalt | <u>NR</u> | 21. Thallium | <u>20</u> |
| 10. Copper | <u>1157P</u> | 22. Tin | <u>NR</u> |
| 11. Iron | <u>NR</u> | 23. Vanadium | <u>NR</u> |
| 12. Lead | <u>79</u> | 24. Zinc | <u>385</u> |
| Cyanide | <u>10U</u> | Percent Solids (N) | _____ |

PHENOLS 11

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 140

TOTAL HARDNESS 269

000010

Sample Number

VSS-2

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: 2Y0096
 Sample Matrix: Water
 Data Release Authorized By: [Signature]

Case No: URS-V
 QC Report No: _____
 Contract No: 85-11532
 Date Sample Received: _____

Volatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared: 7/26/86
 Date Analyzed: 7/26/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture (Not Decanted): _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	0.338
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	1.285
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 u

Data Reporting Conventions

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.

- V** 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 or g/100 based on necessary concentration/dilution action (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 indicated 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. 10.0). If limit of detection is 10 ug/l and a concentration of 10.0 is reported, the result is estimated.
- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component results > 2.0 ng/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the matrix at the same sample. It indicates possible probable blank contamination and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required to explain the results. If used, they must be fully described and attached to the data summary report.

Laboratory Name Nytest Environmental Inc.

Case No. URS-V

Sample Number
VSSZ

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 7/24/86
 Date Analyzed 8/21/86
 Conc/Dil Factor 2.0
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1, 3-Dichlorobenzene	10 u
106-46-7	1, 4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1, 2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno:	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2, 4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(2-Chloroethoxy)Methane	10 u
120-83-2	2, 4-Dichlorophenol	10 u
120-82-1	1, 2, 4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	4-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2, 4, 6-Trichlorophenol	10 u
95-95-4	2, 4, 5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2, 4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2, 4-Dinitrotoluene	10 u
606-20-2	2, 6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4, 6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3, 3-Dichlorobenzidine	20 u
56-55-3	Benzo(a)Anthracene	10 u
117-81-7	bis(2-Ethylhexyl)Phthalate	50 u
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	10 u
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
181-24-2	Benzo(g,h,i)Perylene	10 u

(1)-Cannot be separated from diphenylamine

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VSS-2

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)
 Date Extracted/Prepared: July 23, 1986
 Date Analyzed: July 23, 1986
 Conc/Dil Factor: 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 50

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VSS-2

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No Compounds Found	VOA		
2.	No compounds Found	BNA		
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
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28.				
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30.				

000812

VSS-2 water
Sample No.

7-22-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SOW NO. _____

LAB SAMPLE ID NO. VSS-2 (water) 7-22-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low ✓ Medium _____
Matrix: Water ✓ Soil _____ Sludge _____ Other _____

g/l or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>9170</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>[6]F</u>	15. Mercury	<u>.2</u>
4. Barium	<u>NR</u>	16. Nickel	<u>15U</u>
5. Beryllium	<u>[3]P</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>3U</u>	18. Selenium	<u>2U</u>
7. Calcium	<u>41070</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>2U</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>[17]F</u>	24. Zinc	<u>[6]P</u>
Cyanide	<u>10U</u>	Percent Solids (%)	_____

PHENOLS 16

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 27
TOTAL Hardness 140

000011

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: >V0097
 Sample Matrix: Water
 Data Release Authorized By: fshah

Case No: URS-V
 QC Report No: _____
 Contract No: 85-11532
 Date Sample Received: 7-22-86

Volatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared: 7/26/86
 Date Analyzed: 7/26/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture (Not Decanted): _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	0.60BS
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethane	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethane	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number	Compound	ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	1.4BS
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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 or g/100 based on necessary concentration/dilution action. (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 obtainable 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 indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero or g/100. If limit of detection is 10 ug/l and a concentration of 5 ug/l is reported, the result should be 5J.
- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides > 200 ng/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the matrix of the sample. It indicates possible problem blank contamination and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required. All such flags and footnotes must be fully described and attached to the data summary report.

Laboratory Name Nytest Environmental Inc.

Case No. URS-V

Sample Number
VSS-3

Organics Analysis Data Sheet

(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared 7/24/86

Separatory Funnel Extraction Yes

Date Analyzed 8/8/86

Continuous Liquid-Liquid Extraction Yes

Conc/Dil Factor 2.0

Percent Moisture (Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno.	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzic Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chlorophenol	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-2-Methylphenol	10 u
91-57-6	2-Methylisophthalate	0.12
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chlorophthalate	10 u
68-74-4	2-Nitrobenzine	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	0.64
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,5-Dichlorobenzidine	200 u
56-55-3	Benzofluoranthene	10 u
14781-7-3	bis(2-Ethylhexyl)Phthalate	98
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octylphthalate	0.24
205-99-2	Benzofluoranthene	10 u
207-08-9	Benzofluoranthene	10 u
50-32-8	Benzofluoranthene	10 u
193-39-5	Indeno[1,2,3-cd]Pyrene	10 u
53-70-3	Dibenz[a,h]Anthracene	10 u
191-24-2	Benzofluoranthene	10 u

(1) Cannot be separated from diphenylamine

000870

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VSS-3

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)
 Date Extracted/Prepared: July 23, 1986
 Date Analyzed July 23, 1986
 Conc/Dil Factor 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 10,000 or W_s _____ V_i 1,000 V_t 50

Laboratory Name NYTEST ENV. INC

Case No URS-V

Sample Number
VSS-3

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Tetradecadiene	BNA	27.67	133 J
2.				
3.	unknown alkene	"	27.89	13 J
4.				
6.	unknown siloxane	"	28.45	10 J
8.				
7.	unknown	"	29.06	52 J
8.				
9.	unknown alkene	"	29.30	14 J
10.				
11.	unknown	"	31.53	50 J
12.				
13.	unknown alkane	"	31.67	15 J
14.				
15.	unknown alkene	"	31.80	9 J
16.				
17.	unknown alkane	"	32.93	14 J
18.				
19.	unknown alkane	"	34.19	16 J
20.				
21.	unknown alkane	"	35.53	8 J
22.				
23.	unknown amide	"	37.08	18 J
24.				
25.				
26.				
27.				
28.				
29.				
30.				

VSS-3 (water)
Sample No.

7-22-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SOW NO. _____

LAB SAMPLE ID NO. VSS-3 water 7-22-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum <u>NR</u>	13. Magnesium <u>13200</u>
2. Antimony <u>50U</u>	14. Manganese <u>NR</u>
3. Arsenic <u>[3]F</u>	15. Mercury <u>13U</u>
4. Barium <u>NR</u>	16. Nickel <u>15U</u>
5. Beryllium <u>[3]P</u>	17. Potassium <u>NR</u>
6. Cadmium <u>3U</u>	18. Selenium <u>[3]F</u>
7. Calcium <u>111700</u>	19. Silver <u>5U</u>
8. Chromium <u>9U</u>	20. Sodium <u>NR</u>
9. Cobalt <u>NR</u>	21. Thallium <u>15</u>
10. Copper <u>10U</u>	22. Tin <u>NR</u>
11. Iron <u>NR</u>	23. Vanadium <u>NR</u>
12. Lead <u>[4]F</u>	24. Zinc <u>30</u>
Cyanide <u>10U</u>	Percent Solids (N) _____
<u>PHENOLS 6</u>	

ICP Interement and background corrections applied? Yes _____ No _____
If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 54

TOTAL Hardness 333

000012

Sample Number

VSS-4

Organics Analysis Data Sheet
(Page 1)Laboratory Name Nytest Environmental Inc.Case No URS-VLab Sample ID No >V0098

QC Report No _____

Sample Matrix WaterContract No 85-11532Data Release Authorized By fehahDate Sample Received 7/22/86

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 7/26/86Date Analyzed 7/26/86Conc./Dil Factor 0.200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	3.65
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	5 u
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	1.585
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

V 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 or g/100 based on necessary concentration/dilution action (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 obtainable detection limit for the sample.

J Indicates an estimated value. This flag is used only when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero to g/100. If limit of detection is 10 ug/l and a concentration of 5 ug/l is reported, the result should be 5 J.

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component results greater than 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 data but not in the sample. It indicates possible probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to explain the results. If used, they must be fully described and attached to the data summary report.

000941

Laboratory Name Nytest Environmental Inc.

Case No _____

Sample Number
VSS-4

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared 7/21/86
 Date Analyzed 8/8/86
 Conc/Dil Factor 20
 Percent Moisture (Decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1, 3-Dichlorobenzene	10 u
106-46-7	1, 4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1, 2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2, 4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(2-Chloroethoxy)Methane	10 u
120-83-2	2, 4-Dichlorophenol	10 u
120-82-1	1, 2, 4-Trichlorobenzene	10 u
91-20-3	Naphthalene	0.4 J
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	4-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	0.13 J
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2, 4, 6-Trichlorophenol	10 u
95-95-4	2, 4, 5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2, 4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	0.080 J
121-14-2	2, 4-Dinitrotoluene	10 u
608-20-2	2, 6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	0.76 J
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4, 6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	1.1 J
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3, 3'-Dichlorobenzidine	20 u
56-55-3	Benzo(a)Anthracene	10 u
117-81-7	bis(2-Ethylhexyl)Phthalate	68
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	0.40 J
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

000942

Laboratory Name NYTEST ENV. INC.
 Case No. URS-V

Sample Number
VSS-4

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared: July 23, 1986
 Date Analyzed July 23-24, 1986
 Conc/Dil Factor: 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_t 10,000 V_i 50

000943

Laboratory Name NYTEST ENV. INC

Case No URS-V

Sample Number
VSS-4

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown	VOA	6.30	7J
2.	Unknown triene	VOA	26.20	4J
3.				
4.	Tetradecadiene	BNA	27.72	125J
5.				
6.	Unknown	"	29.13	91J
7.				
8.	Unknown alkane	"	29.27	9J
9.	Unknown alkene	"	29.37	26J
10.				
11.	Unknown	"	30.34	8J
12.	Unknown alkane	"	30.48	19J
13.				
14.	Unknown	"	31.59	98J
15.	Unknown alkane	"	31.72	33J
16.				
17.	Unknown alkene	"	31.84	23J
18.	Unknown alkane	"	32.97	32J
19.				
20.	Unknown alkane	"	34.23	34J
21.	Unknown siloxane	"	36.03	9J
22.				
23.	Unknown amide	"	37.12	35J
24.	Unknown siloxane	"	38.40	14J
25.				
26.	Unknown siloxane	"	45.24	11J
27.				
28.				
29.				
30.				

000944

VSS-4 water
(Sample No.)

7-22-86

INSTRUMENTAL ANALYSIS DATA SHEET

LAB NAME NYSDEC ENVIRONMENTAL CASE NO. _____

SCW NO. _____

LAB SAMPLE ID NO. VSS-4 water 7-22-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

(g/l) or mg/kg dry weight (Circle One)

- | | |
|-------------------------|----------------------------|
| 1. Aluminum <u>NR</u> | 13. Magnesium <u>22310</u> |
| 2. Antimony <u>50U</u> | 14. Manganese <u>NR</u> |
| 3. Arsenic <u>[3]F</u> | 15. Mercury <u>.4</u> |
| 4. Barium <u>NR</u> | 16. Nickel <u>20U</u> |
| 5. Beryllium <u>3U</u> | 17. Potassium <u>NR</u> |
| 6. Cadmium <u>3U</u> | 18. Selenium <u>2U</u> |
| 7. Calcium <u>68200</u> | 19. Silver <u>5U</u> |
| 8. Chromium <u>9U</u> | 20. Sodium <u>NR</u> |
| 9. Cobalt <u>NR</u> | 21. Thallium <u>15</u> |
| 10. Copper <u>10U</u> | 22. Tin <u>NR</u> |
| 11. Iron <u>NR</u> | 23. Vanadium <u>NR</u> |
| 12. Lead <u>[2]F</u> | 24. Zinc <u>[6]P</u> |
| Cyanide <u>10U</u> | Percent Solids (1) |
| <u>PHENOLS</u> <u>5</u> | |

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TDC 31
TOTAL Hardness 268

000013

Sample Number

VSS-5

Organics Analysis Data Sheet
(Page 1)Laboratory Name: Nytest Environmental Inc.

Case No. _____

Lab Sample ID No: >V0099

QC Report No. _____

Sample Matrix: WaterContract No. 85-11532Data Release Authorized By: fshahDate Sample Received: 7/22/86

Volatile Compounds

Concentration: Low Medium (Circle One)Date Extracted/Prepared: 7/26/86Date Analyzed: 7/26/86Conc./Dil Factor: 0.200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	0.45 J
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1,1-Dichloroethene	5 u
75-34-3	1,1-Dichloroethane	5 u
156-60-5	Trans-1,2-Dichloroethene	5 u
67-66-3	Chloroform	0.37 J
107-06-2	1,2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1,1,1-Trichloroethane	5 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		ug/l or ug/Kg (Circle One)
78-87-5	1,2-Dichloropropane	5 u
10061-02-6	Trans-1,3-Dichloropropene	5 u
79-01-6	Trichloroethene	0.85 B
124-48-1	Dibromochloromethane	5 u
79-08-5	1,1,2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1,3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1,1,2,2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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 action. (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 indicated 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. 10U). If limit of detection is 10 ug/l and a concentration of 10 ug/l is reported, the result should be 10U.
- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component peak 2-3-2-10 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 or in the sample. It indicates possible probable blank contamination and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required to describe the results. If used they must be fully described and attached to the data summary report.

001020

Laboratory Name Nytest Environmental Inc.

Case No URS-V

Sample Number
VSS5

7B0156

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration Low Medium (Circle One)

Date Extracted/Prepared 7/24/86

Date Analyzed 8/21/86

Conc/Dil Factor 2.0

Percent Moisture (Decanted) _____

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	70 u
541-73-1	1, 3-Dichlorobenzene	10 u
106-46-7	1, 4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1, 2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2, 4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(2-Chloroethoxy)Methane	10 u
120-83-2	2, 4-Dichlorophenol	10 u
120-82-1	1, 2, 4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	4-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2, 4, 6-Trichlorophenol	10 u
95-95-4	2, 4, 5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2, 4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2, 4-Dinitrotoluene	10 u
606-20-2	2, 6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4, 6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3, 3'-Dichlorobenzidine	20 u
56-55-3	Benzo(a)Anthracene	10 u
117-81-7	bis(2-Ethylhexyl)Phthalate	10 u
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	10 u
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	10 u
53-70-3	Dibenzo(h,i)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1) Cannot be separated from diphenylamine

001021

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VSS-5

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared July 23, 1986

Separatory Funnel Extraction Yes

Date Analyzed July 23, 24, 1986

Continuous Liquid-Liquid Extraction Yes

Conc/Dil Factor 1

Percent Moisture (decanted) _____

CAS Number		<u>ug/l</u> or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

001022

V_s 1,000 or W_s _____ V_i 10,000 V_t 5.0

Laboratory Name NYTEST ENV. INC
 Case No URS-V

Sample Number
V355
>B01570

Organics Analysis Data Sheet
 (Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 540976	Cyclohexasiloxane, dodecymethy	BNA	15.60	12
2.	Unknown siloxane	BNA	18.67	59
3.	Unknown siloxane	BNA	21.34	48
4.	Unknown siloxane	BNA	23.67	8
5.	Unknown siloxane	BNA	25.74	6
6.	Tetradecadiene	BNA	26.91	53
7.	Unknown	BNA	28.32	6
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VSS-5 water
Sample No.

7-22-86

INDICATIVE ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL CASE NO. _____

SCW NO. _____

LAB SAMPLE ID NO. VSS-5 water 7-22-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>24280</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>[7]F</u>	15. Mercury	<u>.2</u>
4. Barium	<u>NR</u>	16. Nickel	<u>15U</u>
5. Beryllium	<u>[4]P</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>3U</u>	18. Selenium	<u>2U</u>
7. Calcium	<u>73100</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>14</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>[3]F</u>	24. Zinc	<u>[8]P</u>
Cyanide	<u>10U</u>	Percent Solids (1)	_____
PHENOLS	<u>12</u>		

ICP Interement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 28
TOTAL Hardness 283

000014

VSS-6

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: Nytest Environmental Inc.
 Lab Sample ID No: >V000
 Sample Matrix: Water
 Data Release Authorized By: [Signature]

Case No: URS-V
 QC Report No: _____
 Contract No: 85-11532
 Date Sample Received: 7/22/86

Volatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared: 7/20/86
 Date Analyzed: 7/20/86
 Conc./Dil Factor: 0.200 pH: _____
 Percent Moisture (Not Decanted): _____

CAS Number	Compound	ug/l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	5 u
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	0.487
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	0.8583
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

- V - 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.S. g/100L based on necessary concentration/dilution action. (This is not necessarily the instrument detection limit). The footnote should read: "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 indicated 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. 10L). If limit of detection is 10 ug/l and a concentration is 10 ug/l, report 10 ug/l.

- C - This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides less than 10 ng/l in the final extract should be confirmed by GC/MS.
- B - This flag is used when the analyte is found in the extract of a sample. It indicates possible problems with the data and warns the data user to take appropriate action.
- Other - Other specific flags and footnotes may be included in the results. If used, they must be fully described and attached to the data summary report.

Laboratory Name Nytest Environmental Inc.

Case No: URS-V

Sample Number
VSS-6

Organics Analysis Data Sheet

(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared 7/24/86

Separatory Funnel Extraction Yes

Date Analyzed 8/8/86

Continuous Liquid-Liquid Extraction Yes

Conc/Dil Factor: 2.0

Percent Moisture (Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno:	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isobutylene	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	0.4 J
906-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-2-Methylphenol	10 u
81-57-6	2-Methyl-3-nitrophenol	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	10 u
81-58-7	2-Chloronaphthalene	10 u
68-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
89-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	0.08 J
121-14-2	2,4-Dinitrotoluene	10 u
608-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	0.66 J
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-3	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	0.30 J
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	0.95 J
206-44-0	Fluoranthene	0.18 J
129-00-0	Pyrene	10 u
85-68-7	Butybenzophthalate	10 u
91-94-1	3,3'-Dichlorobenzidine	20 u
58-55-3	Benzofluoranthene	10 u
182-81-7	bis(2-Ethylhexyl)Phthalate	12 J
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octylphthalate	0.53 J
205-89-2	Benzo(b)fluoranthene	10 u
207-08-9	Benzo(k)fluoranthene	10 u
50-32-8	Benzo(a)pyrene	10 u
193-39-5	Indeno(1,2,3-cd)pyrene	10 u
53-70-3	Dibenz(a,h)anthracene	10 u
181-24-2	Benzo(g,h,i)perylene	10 u

(1) - Cannot be separated from diphenylamine

001082

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VSS-6

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared: July 23, 1986
 Date Analyzed July 23, 24, 1986
 Conc/Dil Factor _____
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>(ug/l) or ug/Kg</u> (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 0,000 V_t 50

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VSS-6

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. <u>71432</u>	<u>Benzene</u>	<u>BNA</u>	<u>3.2</u>	<u>942 J</u>
2.	<u>Tetradecane</u>	<u>BNA</u>	<u>27.66</u>	<u>64 J</u>
3.	<u>Unknown</u>	<u>BNA</u>	<u>29.04</u>	<u>58 J</u>
4.	<u>Unknown</u>	<u>BNA</u>	<u>31.53</u>	<u>48 J</u>
6.	<u>Unknown alkane</u>	<u>BNA</u>	<u>34.2</u>	<u>27 J</u>
6.	<u>Unknown amide</u>	<u>BNA</u>	<u>37.09</u>	<u>24 J</u>
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VSS-6 water
Sample No.

7-22-86

INDICATIVE ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SOIL NO. _____

LAB SAMPLE ID NO. VSS-6 water 7-22-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>12700</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>L71F</u>	15. Mercury	<u>-13U</u>
4. Barium	<u>NR</u>	16. Nickel	<u>15U</u>
5. Beryllium	<u>3U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>3U</u>	18. Selenium	<u>L27F</u>
7. Calcium	<u>49470</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>2U</u>
10. Copper	<u>10U</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>L37F</u>	24. Zinc	<u>24</u>
Cyanide	<u>10U</u>	Percent Solids (%)	_____

PHENOLS 2U

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 26
TOTAL HARDNESS 176

000015

Sample Number

VSS-7

Organics Analysis Data Sheet
(Page 1)Laboratory Name Nytest Environmental Inc.Case No URS-VLab Sample ID No 2V0103

QC Report No _____

Sample Matrix WaterContract No 85-11532Data Release Authorized By fshahDate Sample Received 7/17/86

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 7/27/86Date Analyzed 7/27/86Conc./Dil Factor 0.200 pH _____

Percent Moisture: (Not Decanted) _____

CAS Number		<u>ug</u> /l or ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	<u>2.63</u>
67-64-1	Acetone	10 u
75-15-0	Carbon Disulfide	5 u
75-35-4	1, 1-Dichloroethene	5 u
75-34-3	1, 1-Dichloroethane	5 u
156-60-5	Trans-1, 2-Dichloroethene	5 u
67-66-3	Chloroform	<u>8 u</u>
107-06-2	1, 2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1, 1, 1-Trichloroethane	<u>343</u>
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

CAS Number		<u>ug</u> /l or ug/Kg (Circle One)
78-87-5	1, 2-Dichloropropane	5 u
10061-02-6	Trans-1, 3-Dichloropropene	5 u
79-01-6	Trichloroethene	<u>1.33</u>
124-48-1	Dibromochloromethane	5 u
79-00-5	1, 1, 2-Trichloroethane	5 u
71-43-2	Benzene	5 u
10061-01-5	cis-1, 3-Dichloropropene	5 u
110-75-8	2-Chloroethylvinylether	10 u
75-25-2	Bromoform	5 u
591-78-6	4-Methyl-2-Pentanone	10 u
108-10-1	2-Hexanone	10 u
127-18-4	Tetrachloroethene	5 u
79-34-5	1, 1, 2, 2-Tetrachloroethane	5 u
108-88-3	Toluene	5 u
108-90-7	Chlorobenzene	5 u
100-41-4	Ethylbenzene	5 u
100-42-5	Styrene	5 u
	Total Xylenes	5 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.

- V** 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 or g/100 based on necessary concentration/dilution factor (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 indicated 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. 10U) if limit of detection is 10 ug/l and a concentration of 10 ug/l is reported.

- C** This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component results > 2 ug/l in the final extract should be confirmed by GC/MS.
- B** This flag is used when the analyte is found in the matrix of the sample. It indicates possible probable false positive results and warns the data user to take appropriate action.
- Other** Other specific flags and footnotes may be required. If used, the results should be clearly identified and attached to the data summary report.

001144

Laboratory Name Nytest Environmental Inc.

Case No: URS-V

Sample Number
VSS 7

>B0155

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared 7/24/86

Date Analyzed 8/21/86

Conc/Dil Factor: 2.0

Percent Moisture (Decanted) _____

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	10 u
541-73-1	1, 3-Dichlorobenzene	10 u
106-46-7	1, 4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1, 2-Dichlorobenzene	10 u
95-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylpheno	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-1	Isophorone	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2, 4-Dimethylphenol	10 u
65-85-0	Benzoic Acid	50 u
111-91-1	bis(2-Chloroethoxy)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1, 2, 4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chloroaniline	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	4-Chloro-3-Methylphenol	10 u
91-57-6	2-Methylnaphthalene	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2, 4, 6-Trichlorophenol	10 u
95-95-4	2, 4, 5-Trichlorophenol	50 u
91-58-7	2-Chloronaphthalene	10 u
88-74-4	2-Nitroaniline	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2, 4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2, 4-Dinitrotoluene	10 u
608-20-2	2, 6-Dinitrotoluene	10 u
84-66-2	Diethylphthalate	10 u
7005-72-3	4-Chlorophenyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4, 6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (1)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	50 u
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-68-7	Butylbenzylphthalate	10 u
91-94-1	3,3-Dichlorobenzidine	20 u
56-55-3	Benzo(a)Anthracene	10 u
117-81-7	bis(2-Ethylhexyl)Phthalate	10 u
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octyl Phthalate	10 u
205-99-2	Benzo(b)Fluoranthene	10 u
207-08-9	Benzo(k)Fluoranthene	10 u
50-32-8	Benzo(a)Pyrene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenzo(h,i)Anthracene	10 u
191-24-2	Benzo(g,h,i)Perylene	10 u

(1)-Cannot be separated from diphenylamine

001145

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VSS-7

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared: July 23, 1986
 Date Analyzed July 23, 1986
 Conc/Dil Factor 1
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>ug/l</u> or ug / Kg (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5 u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 5.0

Laboratory Name NYTEST ENV. LNC
Case No VRS-V 8511532

Sample Number
V557
>B0155

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown	BNA	6.14	11 J
2. 928949	2-Hexen-1-ol	BNA	6.49	8 J
3.	Unknown siloxane	BNA	18.67	23 J
4.	Tetradecadione	BNA	26.90	70 J
5.	Unknown	BNA	28.34	10 J
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7.				
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30.				

VSS-Y Water
Sample No.

7-22-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME: NYTEST ENVIRONMENTAL

CASE NO. _____

SCW NO. _____

LAB SAMPLE ID NO. VSS-Y Water 7-22-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: (low) Medium _____
Matrix: Water Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. <u>Aluminum</u> <u>NR</u>	13. <u>Magnesium</u> <u>15230</u>
2. <u>Antimony</u> <u>50U</u>	14. <u>Manganese</u> <u>NR</u>
3. <u>Arsenic</u> <u>197F</u>	15. <u>Mercury</u> <u>0.13U</u>
4. <u>Barium</u> <u>NR</u>	16. <u>Nickel</u> <u>15U</u>
5. <u>Beryllium</u> <u>3U</u>	17. <u>Potassium</u> <u>NR</u>
6. <u>Cadmium</u> <u>3U</u>	18. <u>Selenium</u> <u>2U</u>
7. <u>Calcium</u> <u>68500</u>	19. <u>Silver</u> <u>5U</u>
8. <u>Chromium</u> <u>9U</u>	20. <u>Sodium</u> <u>NR</u>
9. <u>Cobalt</u> <u>NR</u>	21. <u>Thallium</u> <u>2U</u>
10. <u>Copper</u> <u>10U</u>	22. <u>Tin</u> <u>NR</u>
11. <u>Iron</u> <u>NR</u>	23. <u>Vanadium</u> <u>NR</u>
12. <u>Lead</u> <u>1U</u>	24. <u>Zinc</u> <u>2U</u>
<u>Cyanide</u> <u>10U</u>	<u>Percent Solids (%)</u>
<u>PHEWOLS</u> <u>2U</u>	

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 23

TOTAL Hardness 234

000016

Sample Number

VLCH-1

Organics Analysis Data Sheet
(Page 1)Laboratory Name Mytest Environmental Inc.Case No URS-VLab Sample ID No 7V0233QC Report No 1Sample Matrix WaterContract No 85-11532Data Release Authorized By fshahDate Sample Received 7/31/86

Volatile Compounds

Concentration Low Medium (Circle One)Date Extracted/Prepared 8/3/86Date Analyzed 8/3/86Conc./Dil Factor 0.200 pH _____

Percent Moisture (Not Decanted) _____

CAS Number		ug/lbr ug/Kg (Circle One)
74-87-3	Chloromethane	10 u
74-83-9	Bromomethane	10 u
75-01-4	Vinyl Chloride	10 u
75-00-3	Chloroethane	10 u
75-09-2	Methylene Chloride	0.28 5u
67-64-1	Acetone	69
75-15-0	Carbon Disulfide	5 u
75-35-4	1,1-Dichloroethane	5 u
75-34-3	1,1-Dichloroethane	5 u
156-60-5	Trans-1,2-Dichloroethane	5 u
67-66-3	Chloroform	5 u
107-06-2	1,2-Dichloroethane	5 u
78-93-3	2-Butanone	10 u
71-55-6	1,1,1-Trichloroethane	10 u
56-23-5	Carbon Tetrachloride	5 u
108-05-4	Vinyl Acetate	10 u
75-27-4	Bromodichloromethane	5 u

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

Data Reporting Guidelines

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.

V 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 or g. 100ug/L or g/L on necessary concentration dilution action (this is not necessary if the instrument detection limit). The footnote should read U. Compound was analyzed for but not detected. The number is the minimum allowable detection limit for the sample.

J Indicates an estimated value. This flag is used when estimating a concentration for semivolatile compounds where a 1:1 response is assumed or when the most interval data indicated 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. 10u) if limit of detection is 10 ug/l and a concentration of 5

C This flag applies to pesticide determinations where the detection limit has been confirmed by GC/MS. Single component results less than 200 ng/l in the impurities should be confirmed by GC/MS.

B This flag is used when the analyte is found in the matrix of the sample. It is not an allowable problem data (P) result. It is not a matrix data user or site operator action.

Other Other specific flags and footnotes may be used to explain the results if used they must be fully explained and attached to the data summary report.

Laboratory Name: Nytest Environmental Inc.

Case No: URS-V

Sample Number
VLCH-1

Organics Analysis Data Sheet
(Page 2)

Semivolatiles Compounds

Concentration: Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared 8/1/86

Separatory Funnel Extraction Yes

Date Analyzed 8/8/86

Continuous Liquid-Liquid Extraction Yes

Conc/Dil Factor: 2.0

Percent Moisture (Decanted) _____

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	10 u
111-44-4	bis(2-Chloroethyl)Ether	10 u
95-57-8	2-Chlorophenol	0.67J
541-73-1	1,3-Dichlorobenzene	10 u
106-46-7	1,4-Dichlorobenzene	10 u
100-51-6	Benzyl Alcohol	10 u
95-50-1	1,2-Dichlorobenzene	10 u
85-48-7	2-Methylphenol	10 u
39638-32-9	bis(2-chloroisopropyl)Ether	10 u
106-44-5	4-Methylphenol	10 u
621-64-7	N-Nitroso-Di-n-Propylamine	10 u
67-72-1	Hexachloroethane	10 u
98-95-3	Nitrobenzene	10 u
78-59-0	Isophthalic Acid	10 u
88-75-5	2-Nitrophenol	10 u
105-67-9	2,4-Dimethylphenol	10 u
65-85-0	Benzic Acid	50 u
111-91-7	bis(2-Chloroethyl)Methane	10 u
120-83-2	2,4-Dichlorophenol	10 u
120-82-1	1,2,4-Trichlorobenzene	10 u
91-20-3	Naphthalene	10 u
106-47-8	4-Chlorophenol	10 u
87-68-3	Hexachlorobutadiene	10 u
59-50-7	3-Chloro-2-Methylphenol	0.55J
91-57-6	2-Methylisophthalic Acid	10 u
77-47-4	Hexachlorocyclopentadiene	10 u
88-06-2	2,4,6-Trichlorophenol	10 u
95-95-4	2,4,5-Trichlorophenol	50 u
91-58-7	2-Chloroisophthalic Acid	10 u
88-74-4	2-Nitrobenzidine	50 u
131-11-3	Dimethyl Phthalate	10 u
208-96-8	Acenaphthylene	10 u
99-09-2	3-Nitroaniline	50 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	10 u
51-28-5	2,4-Dinitrophenol	50 u
100-02-7	4-Nitrophenol	50 u
132-64-9	Dibenzofuran	10 u
121-14-2	2,4-Dinitrotoluene	10 u
606-20-2	2,6-Dinitrotoluene	10 u
84-86-2	Diethylphthalate	10 u
7005-72-3	4-Chlorobenzyl-phenylether	10 u
86-73-7	Fluorene	10 u
100-01-6	4-Nitroaniline	50 u
534-52-1	4,6-Dinitro-2-Methylphenol	50 u
86-30-6	N-Nitrosodiphenylamine (I)	10 u
101-55-3	4-Bromophenyl-phenylether	10 u
118-74-1	Hexachlorobenzene	10 u
87-86-5	Pentachlorophenol	0.52J
85-01-8	Phenanthrene	10 u
120-12-7	Anthracene	10 u
84-74-2	Di-n-Butylphthalate	10 u
206-44-0	Fluoranthene	10 u
129-00-0	Pyrene	10 u
85-58-7	Butylbenzylphthalate	10 u
91-94-1	3,5-Dichlorobenzoic Acid	20 u
56-55-3	Benzofluoranthene	10 u
112-81-7	bis(2-Ethylhexyl)Phthalate	17
218-01-9	Chrysene	10 u
117-84-0	Di-n-Octylphthalate	0.12J
205-99-2	Benzofluoranthene	10 u
207-08-9	Benzofluoranthene	10 u
50-22-8	Benzofluoranthene	10 u
193-39-5	Indeno(1,2,3-cd)Pyrene	10 u
53-70-3	Dibenz(a,h)Anthracene	10 u
191-24-2	Benz(g,h,i)Perylene	10 u

001207

Laboratory Name NYTEST ENV. INC.
 Case No URS-V

Sample Number
VLCH-1

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared July 31, 1986
 Date Analyzed Aug 4, 1986
 Conc/Dil Factor _____
 Percent Moisture (decanted) _____

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		<u>ug/l</u> or <u>ug/Kg</u> (Circle One)
319-84-6	Alpha-BHC	0.05u
319-85-7	Beta-BHC	0.05u
319-86-8	Delta-BHC	0.05u
58-89-9	Gamma-BHC (Lindane)	0.05u
76-44-8	Heptachlor	0.05u
309-00-2	Aldrin	0.05u
1024-57-3	Heptachlor Epoxide	0.05u
959-98-8	Endosulfan I	0.05u
60-57-1	Dieldrin	0.10u
72-55-9	4,4'-DDE	0.10u
72-20-8	Endrin	0.10u
33213-65-9	Endosulfan II	0.10u
72-54-8	4,4'-DDD	0.10u
1031-07-8	Endosulfan Sulfate	0.10u
50-29-3	4,4'-DDT	0.10u
72-43-5	Methoxychlor	0.5 u
53494-70-5	Endrin Ketone	0.10u
57-74-9	Chlordane	0.5u
8001-35-2	Toxaphene	1.0u
12674-11-2	Aroclor-1016	0.5u
11104-28-2	Aroclor-1221	0.5u
11141-16-5	Aroclor-1232	0.5u
53469-21-9	Aroclor-1242	0.5u
12672-29-6	Aroclor-1248	0.5u
11097-69-1	Aroclor-1254	1.0u
11096-82-5	Aroclor-1260	1.0u

V_i = Volume of extract injected (ul)
 V_s = Volume of water extracted (ml)
 W_s = Weight of sample extracted (g)
 V_t = Volume of total extract (ul)

V_s 1,000 or W_s _____ V_i 10,000 V_t 4.0

Laboratory Name NY/EST ENM JUK

Case No URS-V

Sample Number
VLSH-1

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	1,1,2-Trichloroethane	VOA	14.68	2 J
2.	C ₆ -cycloalkane	VOA	16.86	2 J
3.	C ₆ -alkene	VOA	17.12	2 J
4.	Phenol	VOA	26.61	2 J
6.	Unknown alkene	VOA	34.09	2 J
7.	763291 2-Methyl-1-pentene	BNA	3.21	275 J
9.	71432 Benzene	"	3.25	77 J
11.	unknown	"	9.53	19 J
12.				
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VLCH 1
Sample No.

7-31-86

INDEPENDENT ANALYSIS DATA SHEET

LAB NAME NYTES ENVIRONMENTAL (CASE NO) _____

SOB NO _____

LAB SAMPLE ID NO. VLCH 1 7-31-86 (X) REPORT NO. _____

Elements Identified and Measured

Concentration: Low / Medium _____
Matrix: Water / Soil _____ Sludge _____ Other _____

(u/l) or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>9400</u>
2. Antimony	<u>50U</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>2U</u>	15. Mercury	<u>0.13U</u>
4. Barium	<u>NR</u>	16. Nickel	<u>15U</u>
5. Beryllium	<u>3U</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>3U</u>	18. Selenium	<u>15</u>
7. Calcium	<u>35610</u>	19. Silver	<u>5U</u>
8. Chromium	<u>9U</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>[2]F</u>
10. Copper	<u>[10]P</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>9</u>	24. Zinc	<u>[4]P</u>
Cyanide	<u>10U</u>	Percent Solids (%)	_____
PHENOLS	<u>2U</u>		

ICP Interelement and background corrections applied? Yes _____ No _____
If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: TOC 11
TOTAL Hardness 128

000033

APPENDIX J
Sediment Analytical Data

VSS-1-Soil

Organics Analysis Data Sheet (Page 1)

Laboratory Name Nytest Environmental Inc.

Case No URS-V

Lab Sample ID No >VA028

QC Report No

Sample Matrix Soil

Contract No 85-11532

Data Release Authorized By [Signature]

Date Sample Received 7/22/86

Volatile Compounds

Concentration Low Medium (Circle One)

Date Extracted/Prepared 7/25/86

Date Analyzed 7/25/86

Conc./Dil Factor 0.200 pH

Percent Moisture (Not Decanted)

Table with 3 columns: CAS Number, Compound Name, and Concentration (ug/l or ug/Kg). Includes compounds like Chloromethane, Bromomethane, Vinyl Chloride, etc.

Table with 3 columns: CAS Number, Compound Name, and Concentration (ug/l or ug/Kg). Includes compounds like 1,2-Dichloropropane, Trans-1,3-Dichloropropene, etc.

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 or G.
J: Indicates an estimated value. This flag is used either when estimating a concentration for relatively hazardous compounds...

- C: This flag applies to parameter parameters where the identification has been confirmed by GC/MS. Single component results > 2.0 ng/l in the final extract should be confirmed by GC/MS.
B: This flag is used when the analyte is found in the extract but not in the sample.
Other: Other specific flags and footnotes may be required...

000778

Laboratory Name Nytest Environmental Inc.

Case No URS-V

Sample Number
VSS-1-Soil

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared 7/22/86
Date Analyzed 8/10/86
Conc/Dil Factor: 33.0
Percent Moisture (Decanted) 29.3

GPC Cleanup Yes No
Separatory Funnel Extraction Yes
Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	330 u
111-44-4	bis(2-Chloroethyl)Ether	330 u
95-57-8	2-Chlorophenol	330 u
541-73-1	1,3-Dichlorobenzene	330 u
106-46-7	1,4-Dichlorobenzene	330 u
100-51-6	Benzyl Alcohol	330 u
95-50-1	1,2-Dichlorobenzene	330 u
95-48-7	2-Methylphenol	330 u
39638-32-9	bis(2-chloroisopropyl)Ether	330 u
106-44-5	4-Methylphenol	330 u
621-64-7	N-Nitroso-Di-n-Propylamine	330 u
67-72-1	Hexachloroethane	330 u
98-95-3	Nitrobenzene	330 u
78-59-1	Isophorone	330 u
88-75-5	2-Nitrophenol	330 u
105-67-9	2,4-Dimethylphenol	330 u
65-85-0	Benzic Acid	1600 u
111-91-1	bis(2-Chloroethoxy)Methane	330 u
120-83-2	2,4-Dichlorophenol	330 u
120-82-1	1,2,4-Trichlorobenzene	330 u
91-20-3	Naphthalene	330 u
106-47-8	4-Chloroaniline	330 u
87-68-3	Hexachlorobutadiene	330 u
59-50-7	4-Chloro-3-Methylphenol	330 u
91-57-6	2-Methylnaphthalene	330 u
77-47-4	Hexachlorocyclopentadiene	330 u
88-06-2	2,4,6-Trichlorophenol	330 u
95-95-4	2,4,5-Trichlorophenol	1600 u
91-58-7	2-Chloronaphthalene	330 u
88-74-4	2-Nitroaniline	1600 u
131-11-3	Dimethyl Phthalate	330 u
208-96-8	Acenaphthylene	330 u
99-09-2	3-Nitroaniline	1600 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	330 u
51-28-5	2,4-Dinitrophenol	1600 u
100-02-7	4-Nitrophenol	1600 u
132-64-9	Dibenzofuran	330 u
121-14-2	2,4-Dinitrotoluene	330 u
606-20-2	2,6-Dinitrotoluene	330 u
84-66-2	Diethylphthalate	330 u
7005-72-3	4-Chlorophenyl-phenylether	330 u
86-73-7	Fluorene	330 u
100-01-6	4-Nitroaniline	1600 u
534-52-1	4,6-Dinitro-2-Methylphenol	1600 u
86-30-6	N-Nitrosodiphenylamine (1)	330 u
101-55-3	4-Bromophenyl-phenylether	330 u
118-74-1	Hexachlorobenzene	330 u
87-86-5	Pentachlorophenol	1600 u
85-01-8	Phenanthrene	330 u
120-12-7	Anthracene	330 u
84-74-2	Di-n-Butylphthalate	330 u
206-44-0	Fluoranthene	330 u
129-00-0	Pyrene	330 u
85-68-7	Butylbenzylphthalate	330 u
91-94-1	3,3'-Dichlorobenzidine	660 u
56-55-3	Benzo(a)Anthracene	330 u
117-81-7	bis(2-Ethylhexyl)Phthalate	660 u
218-01-9	Chrysene	330 u
117-84-0	Di-n-Octyl Phthalate	330 u
205-99-2	Benzo(b)Fluoranthene	330 u
207-08-9	Benzo(k)Fluoranthene	330 u
50-32-8	Benzo(a)Pyrene	330 u
193-39-5	Indeno(1,2,3-cd)Pyrene	330 u
53-70-3	Dibenz(a,h)Anthracene	330 u
191-24-2	Benzo(g,h,i)Perylene	330 u

(1) Cannot be separated from diphenylamine

Laboratory Name NYTEST ENV. INC
 Case No URS-V

Sample Number
VSS-1-Soil

Organics Analysis Data Sheet
 (Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Unknown siloxane	VDA	26.16	5J
2.	Unknown siloxane	VDA	27.84	25J
3.				
4.	Unknown alkane	BNA	35.48	4,391 J
6.				
6.	Unknown	BNA	37.78	7,341 J
7.				
8.	Unknown alkane	BNA	38.77	8,304 J
9.				
10.				
11.				
12.				
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30.				

000781

VSS 1 SOIL
Sample No.

7-22-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SOIL NO. _____

LAB SAMPLE ID NO. VSS 1 SOIL 7-22-86 OR REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium

Matrix: Water _____ Soil Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

- | | | | |
|--------------|---------------|--------------------|---------------|
| 1. Aluminum | <u>NR</u> | 13. Magnesium | <u>NR</u> |
| 2. Antimony | <u>0.054</u> | 14. Manganese | <u>NR</u> |
| 3. Arsenic | <u>1.55</u> | 15. Mercury | <u>0.113</u> |
| 4. Barium | <u>NR</u> | 16. Nickel | <u>0.0154</u> |
| 5. Beryllium | <u>3.67</u> | 17. Potassium | <u>NR</u> |
| 6. Cadmium | <u>0.0034</u> | 18. Selenium | <u>.0024</u> |
| 7. Calcium | <u>NR</u> | 19. Silver | <u>1.98</u> |
| 8. Chromium | <u>2.54</u> | 20. Sodium | <u>NR</u> |
| 9. Cobalt | <u>NR</u> | 21. Thallium | <u>0.0024</u> |
| 10. Copper | <u>4.10</u> | 22. Tin | <u>NR</u> |
| 11. Iron | <u>NR</u> | 23. Vanadium | <u>NR</u> |
| 12. Lead | <u>2.12</u> | 24. Zinc | <u>6.08</u> |
| Cyanide | <u>0.52</u> | Percent Solids (1) | <u>70.71</u> |
| PHENOLS | <u>0.404</u> | | |

ICP Interlement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

000017

VSS-2-Soil

Organics Analysis Data Sheet (Page 1)

Laboratory Name Nystest Environmental Inc.
Lab Sample ID No > VAO29
Sample Matrix Soil
Data Release Authorized By [Signature]

Case No URS-V
QC Report No
Contract No 85-11532
Date Sample Received 7/22/86

Volatile Compounds

Concentration Low Medium (Circle One)
Date Extracted/Prepared 7/25/86
Date Analyzed 7/25/86
Conc./Dil Factor 0.200 pH
Percent Moisture (Not Decanted)

Table with 3 columns: CAS Number, Name, and ug/l or ug/Kg (Circle One). Rows include Chloromethane, Bromomethane, Vinyl Chloride, Chloroethane, Methylene Chloride, Acetone, Carbon Disulfide, 1,1-Dichloroethene, Trans-1,2-Dichloroethene, Chloroform, 1,2-Dichloroethane, 2-Butanone, 1,1,1-Trichloroethane, Carbon Tetrachloride, Vinyl Acetate, and Bromodichloromethane.

Table with 3 columns: CAS Number, Name, and ug/l or ug/Kg (Circle One). Rows include 1,2-Dichloropropane, Trans-1,3-Dichloropropene, Trichloroethene, Dibromochloromethane, 1,1,2-Trichloroethane, Benzene, cis-1,3-Dichloropropene, 2-Chloroethylvinylether, Bromoform, 4-Methyl-2-Pentanone, 2-Hexanone, Tetrachloroethene, 1,1,2,2-Tetrachloroethane, Toluene, Chlorobenzene, Ethylbenzene, Styrene, and Total Xylenes.

Data Reporting Outliers

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.

- List of reporting qualifiers: Value (if result is a value greater than or equal to the detection limit report the value), U (indicates compound was analyzed for but not detected), J (indicates an estimated value), C (this flag applies to pesticide parameters), B (this flag is used when the analyte is found in the sample), and Other (Other specific flags and footnotes must be included).

Laboratory Name Nytest Environmental Inc.

Case No URS-V

Sample Number
VSS-2-Soil

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 7/22/86
 Date Analyzed 8/10/86
 Conc/Dil Factor: 33.0
 Percent Moisture (Decanted) 38.2

GPC Cleanup: Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	330 u
111-44-4	bis(2-Chloroethyl)Ether	330 u
95-57-8	2-Chlorophenol	330 u
541-73-1	1,3-Dichlorobenzene	330 u
106-46-7	1,4-Dichlorobenzene	330 u
100-51-6	Benzyl Alcohol	330 u
95-50-1	1,2-Dichlorobenzene	330 u
95-48-7	2-Methylphenol	330 u
39638-32-9	bis(2-chloroisopropyl)Ether	330 u
106-44-5	4-Methylpheno	330 u
621-64-7	N-Nitroso-Di-n-Propylamine	330 u
67-72-1	Hexachloroethane	330 u
98-95-3	Nitrobenzene	330 u
78-59-1	Isophorone	330 u
88-75-5	2-Nitrophenol	330 u
105-67-9	2,4-Dimethylphenol	330 u
65-85-0	Benzoic Acid	1600 u
111-91-1	bis(2-Chloroethoxy)Methane	330 u
120-83-2	2,4-Dichlorophenol	330 u
120-82-1	1,2,4-Trichlorobenzene	330 u
91-20-3	Naphthalene	330 u
106-47-8	4-Chloroaniline	330 u
87-68-3	Hexachlorobutadiene	330 u
59-50-7	4-Chloro-3-Methylphenol	330 u
91-57-6	2-Methylnaphthalene	330 u
77-47-4	Hexachlorocyclopentadiene	330 u
68-06-2	2,4,6-Trichlorophenol	330 u
95-95-4	2,4,5-Trichlorophenol	1600 u
91-58-7	2-Chloronaphthalene	330 u
88-74-4	2-Nitroaniline	1600 u
131-11-3	Dimethyl Phthalate	330 u
208-96-8	Acenaphthylene	330 u
99-09-2	3-Nitroaniline	1600 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	330 u
51-28-5	2,4-Dinitrophenol	1600 u
100-02-7	4-Nitrophenol	1600 u
132-64-9	Dibenzofuran	330 u
121-14-2	2,4-Dinitrotoluene	330 u
606-20-2	2,6-Dinitrotoluene	330 u
84-66-2	Diethylphthalate	330 u
7005-72-3	4-Chlorophenyl-phenylether	330 u
86-73-7	Fluorene	330 u
100-01-6	4-Nitroaniline	1600 u
534-52-1	4,6-Dinitro-2-Methylphenol	1600 u
86-30-6	N-Nitrosodiphenylamine (1)	330 u
101-55-3	4-Bromophenyl-phenylether	330 u
118-74-1	Hexachlorobenzene	330 u
87-86-5	Pentachlorophenol	1600 u
85-01-8	Phenanthrene	330 u
120-12-7	Anthracene	330 u
84-74-2	Di-n-Butylphthalate	330 u
206-44-0	Fluoranthene	330 u
129-00-0	Pyrene	330 u
85-68-7	Butylbenzylphthalate	330 u
91-94-1	3,3'-Dichlorobenzidine	660 u
56-55-3	Benzofluoranthene	330 u
117-81-7	bis(2-Ethylhexyl)Phthalate	940
218-01-9	Chrysene	330 u
117-84-0	Di-n-Octyl Phthalate	330 u
205-99-2	Benzofluoranthene	330 u
207-08-9	Benzofluoranthene	330 u
50-32-8	Benzo(a)Pyrene	330 u
193-39-5	Indeno(1,2,3-cd)Pyrene	330 u
53-70-3	Dibenz(a,h)Anthracene	330 u
191-24-2	Benzo(g,h,i)Perylene	330 u

(1) Cannot be separated from diphenylamine

000833

Laboratory Name NYTEST ENV. INC.
 Case No WRJ-V

Sample Number
VSS-2-Saib

Organics Analysis Data Sheet
 (Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared: July 22, 1986
 Date Analyzed: July 27, 1986
 Conc/Dil Factor: 1
 Percent Moisture (decanted) 38

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid - Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	8.0u
319-85-7	Beta-BHC	8.0u
319-86-8	Delta-BHC	8.0u
58-89-9	Gamma-BHC (Lindane)	8.0u
76-44-8	Heptachlor	8.0u
309-00-2	Aldrin	8.0u
1024-57-3	Heptachlor Epoxide	8.0u
959-98-8	Endosulfan I	8.0u
60-57-1	Dieldrin	16.0u
72-55-9	4,4'-DDE	16.0u
72-20-8	Endrin	16.0u
33213-65-9	Endosulfan II	16.0u
72-54-8	4,4'-DDD	16.0u
1031-07-8	Endosulfan Sulfate	16.0u
50-29-3	4,4'-DDT	16.0u
72-43-5	Methoxychlor	16.0u
53494-70-5	Endrin Ketone	80.0u
57-74-9	Chlordane	80.0u
8001-35-2	Toxaphene	160.0u
12674-11-2	Aroclor-1016	80.0u
11104-28-2	Aroclor-1221	80.0u
11141-16-5	Aroclor-1232	80.0u
53469-21-9	Aroclor-1242	80.0u
12672-29-6	Aroclor-1248	80.0u
11097-69-1	Aroclor-1254	160.0u
11096-82-5	Aroclor-1260	160.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30 V_i 1,000 V_t 4.0

000834

Laboratory Name NYTEST ENV INC.
 Case No URS-V

Sample Number
VSS-2-Soil

Organics Analysis Data Sheet
 (Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 79209	Methyl acetate	VOA	8.87	3J
2. 141786	Ethyl acetate	VOA	13.49	6J
3.				
4. 763291	2-Methyl-1-pentene	BNA	3.24	25,906J
5.				
6. 71432	Benzene	BNA	3.30	40,377J
7.				
8.	unknown alkane	BNA	38.74	21,432J
9.				
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000835

VSS-2 Soil
Sample No.

9-22-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SOW NO. _____

LAB SAMPLE ID NO. VSS SOIL 9-22-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____
Matrix: Water _____ Soil _____ Sludge _____ Other _____

ug/L or (mg/kg) dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>NR</u>
2. Antimony	<u>0.054</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>2-26</u>	15. Mercury	<u>0.064</u>
4. Barium	<u>NR</u>	16. Nickel	<u>0.154</u>
5. Beryllium	<u>3.09</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>.0034</u>	18. Selenium	<u>.0020</u>
7. Calcium	<u>NR</u>	19. Silver	<u>1.13</u>
8. Chromium	<u>7.11</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>.0024</u>
10. Copper	<u>12.8</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>10.19</u>	24. Zinc	<u>35.1</u>
Cyanide	<u>0.04</u>	Percent Solids (1)	<u>61.82</u>
<u>PHENOLS</u>	<u>0.853</u>		

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

000018

VSS-3-soil

Organics Analysis Data Sheet (Page 1)

Laboratory Name Nystest Environmental Inc.
Lab Sample ID No > VAO30
Sample Matrix Soil
Data Release Authorized By [Signature]

Case No URS-V
QC Report No
Contract No 85-11532
Date Sample Received 7/22/86

Volatile Compounds

Concentration (Low) Medium (Circle One)
Date Extracted/Prepared 7/25/86
Date Analyzed 7/25/86
Conc./Oil Factor 0.200 pH
Percent Moisture (Not Decanted)

Table with 3 columns: CAS Number, Name, ug/l or ug/Kg (Circle One). Rows include Chloromethane, Bromomethane, Vinyl Chloride, Chloroethane, Methylene Chloride, Acetone, Carbon Disulfide, 1,1-Dichloroethene, Trans-1,2-Dichloroethene, Chloroform, 1,2-Dichloroethane, 2-Butanone, 1,1,1-Trichloroethane, Carbon Tetrachloride, Vinyl Acetate, Bromodichloromethane.

Table with 3 columns: CAS Number, Name, ug/l or ug/Kg (Circle One). Rows include 1,2-Dichloropropane, Trans-1,3-Dichloropropene, Trichloroethene, Dibromochloromethane, 1,1,2-Trichloroethane, Benzene, cis-1,3-Dichloropropene, 2-Chloroethylvinylether, Bromoform, 4-Methyl-2-Pentanone, 2-Hexanone, Tetrachloroethene, 1,1,2,2-Tetrachloroethane, Toluene, Chlorobenzene, Ethylbenzene, Styrene, Total Xylenes.

* Calculated on dry weight.

Data Reporting Outliers

NOTE: 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 or g/100 ug based on necessary concentration dilution action.
J: Indicates an estimated value. This flag is used either when estimating a concentration for a compound, identified compounds where a 1:1 response is assumed, or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero.
C: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS.
B: This flag is used when the analyte is found in the sample but the data user or state deems appropriate action.
Other: Other specific flags and footnotes must be included in the results filed and clearly identified and attached to the data summary report.

Laboratory Name Nytest Environmental Inc.

Case No URS-V

Sample Number
VSS-3-Soil

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared 7/22/86
Date Analyzed 8/10/86
Conc/Dil Factor: 33.00
Percent Moisture (Decanted) 20.7

GPC Cleanup Yes No
Separatory Funnel Extraction Yes
Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	330 u
111-44-4	bis(2-Chloroethyl)Ether	330 u
95-57-8	2-Chlorophenol	330 u
541-73-1	1,3-Dichlorobenzene	330 u
106-46-7	1,4-Dichlorobenzene	330 u
100-51-6	Benzyl Alcohol	330 u
95-50-1	1,2-Dichlorobenzene	330 u
95-48-7	2-Methylphenol	330 u
39638-32-9	bis(2-chloroisopropyl)Ether	330 u
106-44-5	4-Methylphenol	330 u
621-64-7	N-Nitroso-Di-n-Propylamine	330 u
67-72-1	Hexachloroethane	330 u
98-95-3	Nitrobenzene	330 u
78-59-1	Isophorone	330 u
88-75-5	2-Nitrophenol	330 u
105-67-9	2,4-Dimethylphenol	330 u
65-85-0	Benzoic Acid	1600 u
111-91-1	bis(2-Chloroethoxy)Methane	330 u
120-83-2	2,4-Dichlorophenol	330 u
120-82-1	1,2,4-Trichlorobenzene	330 u
91-20-3	Naphthalene	330 u
106-47-8	4-Chloroaniline	330 u
87-68-3	Hexachlorobutadiene	330 u
59-50-7	4-Chloro-3-Methylphenol	330 u
91-57-6	2-Methylnaphthalene	330 u
77-47-4	Hexachlorocyclopentadiene	330 u
88-06-2	2,4,6-Trichlorophenol	330 u
95-95-4	2,4,5-Trichlorophenol	1600 u
91-58-7	2-Chloronaphthalene	330 u
88-74-4	2-Nitroaniline	1600 u
131-11-3	Dimethyl Phthalate	330 u
208-96-8	Acenaphthylene	330 u
99-09-2	3-Nitroaniline	1600 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	330 u
51-28-5	2,4-Dinitrophenol	1600 u
100-02-7	4-Nitrophenol	1600 u
132-64-9	Dibenzofuran	330 u
121-14-2	2,4-Dinitrotoluene	330 u
606-20-2	2,6-Dinitrotoluene	330 u
84-66-2	Diethylphthalate	330 u
7005-72-3	4-Chlorophenyl-phenylether	330 u
86-73-7	Fluorene	330 u
100-01-6	4-Nitroaniline	1600 u
534-52-1	4,6-Dinitro-2-Methylphenol	1600 u
86-30-6	N-Nitrosodiphenylamine (1)	330 u
101-55-3	4-Bromophenyl-phenylether	330 u
118-74-1	Hexachlorobenzene	330 u
87-86-5	Pentachlorophenol	1600 u
85-01-8	Phenanthrene	330 u
120-12-7	Anthracene	330 u
84-74-2	Di-n-Butylphthalate	330 u
206-44-0	Fluoranthene	330 u
129-00-0	Pyrene	330 u
85-68-7	Butylbenzylphthalate	330 u
91-94-1	3,3'-Dichlorobenzidine	660 u
56-55-3	Benzofluoranthene	330 u
117-81-7	bis(2-Ethylhexyl)Phthalate	2100
218-01-9	Chrysene	330 u
117-84-0	Di-n-Octyl Phthalate	1600
205-99-2	Benzofluoranthene	330 u
207-08-9	Benzofluoranthene	330 u
50-32-8	Benzofluoranthene	330 u
193-39-5	Indeno(1,2,3-cd)Pyrene	330 u
53-70-3	Dibenzofluoranthene	330 u
191-24-2	Benzofluoranthene	330 u

(1) Cannot be separated from diphenylamine

000907

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VSS-3-Soils

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared: July 27, 1986

Separatory Funnel Extraction Yes

Date Analyzed: July 27, 1986

Continuous Liquid - Liquid Extraction Yes

Conc/Dil Factor: 1

Percent Moisture (decanted) 21

CAS Number		ug/l or ug · Kg (Circle One)
319-84-6	Alpha-BHC	8.0u
319-85-7	Beta-BHC	8.0u
319-86-8	Delta-BHC	8.0u
58-89-9	Gamma-BHC (Lindane)	8.0u
76-44-8	Heptachlor	8.0u
309-00-2	Aldrin	8.0u
1024-57-3	Heptachlor Epoxide	8.0u
959-98-8	Endosulfan I	8.0u
60-57-1	Dieldrin	16.0u
72-55-9	4,4'-DDE	16.0u
72-20-8	Endrin	16.0u
33213-65-9	Endosulfan II	16.0u
72-54-8	4,4'-DDD	16.0u
1031-07-8	Endosulfan Sulfate	16.0u
50-29-3	4,4'-DDT	16.0u
72-43-5	Methoxychlor	16.0u
53494-70-5	Endrin Ketone	80.0u
57-74-9	Chlordane	80.0u
8001-35-2	Toxaphene	160.0u
12674-11-2	Aroclor-1016	80.0u
11104-28-2	Aroclor-1221	80.0u
11141-16-5	Aroclor-1232	80.0u
53469-21-9	Aroclor-1242	80.0u
12672-29-6	Aroclor-1248	80.0u
11097-69-1	Aroclor-1254	160.0u
11096-82-5	Aroclor-1260	160.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

000908

V_s _____ or W_s 30 V_i 1,000 V_t 40

Laboratory Name NYTEST ENV INC.

Case No URS-V

Sample Number
VSS-3-Soil

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 79209	Methyl Acetate	VDA	8.79	2J
2. 141786	Ethyl Acetate	VOR	13.41	4J
3.				
4.	unknown siloxane	BNA	12.81	300J
5.				
6.	unknown siloxane	BNA	16.22	434J
7.				
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000909

VSS-3 SOIL
Sample No.

7-22-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SOW NO. _____

LAB SAMPLE ID NO. VSS-3 SOIL 7-22-86 OC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____
Matrix: Water _____ Soil _____ Sludge _____ Other _____

ug/L or (ug/kg) dry weight (Circle One)

1. Aluminum <u>NR</u>	13. Magnesium <u>NR</u>
2. Antimony <u>0.05 U</u>	14. Manganese <u>NR</u>
3. Arsenic <u>1.64</u>	15. Mercury <u>0.100</u>
4. Barium <u>NR</u>	16. Nickel <u>0.015 U</u>
5. Beryllium <u>0.75</u>	17. Potassium <u>NR</u>
6. Cadmium <u>0.03 U</u>	18. Selenium <u>0.002 U</u>
7. Calcium <u>NR</u>	19. Silver <u>0.88</u>
8. Chromium <u>2.52</u>	20. Sodium <u>NR</u>
9. Cobalt <u>NR</u>	21. Thallium <u>1.64</u>
10. Copper <u>4.16</u>	22. Tin <u>NR</u>
11. Iron <u>NR</u>	23. Vanadium <u>NR</u>
12. Lead <u>1.89</u>	24. Zinc <u>7.69</u>
Cyanide <u>0.08</u>	Percent Solids (H) <u>79.25</u>
PHENOLS <u>0.002</u>	

ICP Interlement and background corrections applied? Yes _____ No _____
If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

000019

VSS-4 - Soil

Organics Analysis Data Sheet (Page 1)

Laboratory Name Nystest Environmental Inc.
Lab Sample ID No >VFA039
Sample Matrix Soil
Data Release Authorized By [Signature]

Case No URS-V
QC Report No
Contract No 85-11532
Date Sample Received 7/22/86

Volatile Compounds

Concentration Low Medium (Circle One)
Date Extracted/Prepared 7/25/86
Date Analyzed 7/25/86
Conc./Dil Factor 0.200 pH
Percent Moisture (Not Decanted)

Table with 3 columns: CAS Number, Compound Name, and Concentration (ug/l or ug/Kg). Includes entries like Chloromethane (10 u), Bromomethane (10 u), Vinyl Chloride (10 u), etc.

Table with 3 columns: CAS Number, Compound Name, and Concentration (ug/l or ug/Kg). Includes entries like 1,2-Dichloropropane (5 u), Trans-1,3-Dichloropropene (5 u), Trichloroethene (5 u), etc.

* Calculated using dry weight

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 included.

- List of Data Reporting Qualifiers: V (Value), U (Undetectable), J (Judged), C (Confirmed), B (Blank), Other.

Laboratory Name Hyttest Environmental Inc.
 Case No URS-V

Sample Number
V55-4-Soil

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)
 Date Extracted/Prepared 7/22
 Date Analyzed 8/21
 Conc/Dil Factor: 33.0
 Percent Moisture (Decanted) 37.1

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	330 u
111-44-4	bis(2-Chloroethyl)Ether	330 u
95-57-8	2-Chlorophenol	330 u
541-73-1	1,3-Dichlorobenzene	330 u
106-46-7	1,4-Dichlorobenzene	330 u
100-51-6	Benzyl Alcohol	330 u
95-50-1	1,2-Dichlorobenzene	330 u
95-48-7	2-Methylphenol	595
39638-32-9	bis(2-chloroisopropyl)Ether	330 u
106-44-5	4-Methylphenol	330 u
621-64-7	N-Nitroso-Di-n-Propylamine	330 u
67-72-1	Hexachloroethane	330 u
98-95-3	Nitrobenzene	330 u
78-59-1	Isophorone	330 u
88-75-5	2-Nitrophenol	330 u
105-67-9	2,4-Dimethylphenol	330 u
65-85-0	Benzoic Acid	1600 u
111-91-1	bis(2-Chloroethoxy)Methane	330 u
120-83-2	2,4-Dichlorophenol	330 u
120-82-1	1,2,4-Trichlorobenzene	330 u
91-20-3	Naphthalene	330 u
106-47-8	4-Chloroaniline	330 u
87-68-3	Hexachlorobutadiene	330 u
59-50-7	4-Chloro-3-Methylphenol	330 u
91-57-8	2-Methylnaphthalene	330 u
77-47-4	Hexachlorocyclopentadiene	330 u
88-06-2	2,4,6-Trichlorophenol	330 u
95-95-4	2,4,5-Trichlorophenol	1600 u
91-58-7	2-Chloronaphthalene	330 u
88-74-4	2-Nitroaniline	1600 u
131-11-3	Dimethyl Phthalate	330 u
208-96-8	Acenaphthylene	330 u
99-09-2	3-Nitroaniline	1600 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	330 u
51-28-5	2,4-Dinitrophenol	1600 u
100-02-7	4-Nitrophenol	1600 u
132-64-9	Dibenzofuran	330 u
121-14-2	2,4-Dinitrotoluene	330 u
606-20-2	2,6-Dinitrotoluene	330 u
84-66-2	Diethylphthalate	330 u
7005-72-3	4-Chlorophenyl-phenylether	330 u
86-73-7	Fluorene	330 u
100-01-6	4-Nitroaniline	1600 u
534-52-1	4,6-Dinitro-2-Methylphenol	1600 u
86-30-6	N-Nitrosodiphenylamine (1)	330 u
101-55-3	4-Bromophenyl-phenylether	330 u
118-74-1	Hexachlorobenzene	330 u
87-86-5	Pentachlorophenol	1600 u
85-01-8	Phenanthrene	330 u
120-12-7	Anthracene	330 u
84-74-2	Di-n-Butylphthalate	615
206-44-0	Fluoranthene	645
129-00-0	Pyrene	330 u
85-68-7	Butylbenzylphthalate	330 u
91-94-1	3,3'-Dichlorobenzidine	660 u
56-55-3	Benzo(a)Anthracene	330 u
117-81-7	bis(2-Ethylhexyl)Phthalate	7000
218-01-9	Chrysene	330 u
117-84-0	Di-n-Octyl Phthalate	350
205-99-2	Benzo(b)Fluoranthene	330 u
207-08-9	Benzo(k)Fluoranthene	330 u
50-32-8	Benzo(a)Pyrene	330 u
193-39-5	Indeno(1,2,3-cd)Pyrene	330 u
53-70-3	Dibenz(a,h)Anthracene	330 u
191-24-2	Benzo(g,h,i)Perylene	330 u

* Amounts determined using dry weight.

(1) Cannot be separated from diphenylamine

000990

Laboratory Name NYTEST ENV. INC.

Case No WR3-V

Sample Number
VSS-4-Soils

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared: July 22, 1980

Separatory Funnel Extraction Yes

Date Analyzed: July 22, 1980

Continuous Liquid - Liquid Extraction Yes

Conc./Dil Factor: 1

Percent Moisture (decanted) 37

CAS Number		ug/100ug * Kg (Circle One)
319-84-6	Alpha-BHC	8.0u
319-85-7	Beta-BHC	8.0u
319-86-8	Delta-BHC	8.0u
58-89-9	Gamma-BHC (Lindane)	8.0u
76-44-8	Heptachlor	8.0u
309-00-2	Aldrin	8.0u
1024-57-3	Heptachlor Epoxide	8.0u
959-98-8	Endosulfan I	8.0u
60-57-1	Dieldrin	16.0u
72-55-9	4,4'-DDE	16.0u
72-20-8	Endrin	16.0u
33213-65-9	Endosulfan II	16.0u
72-54-8	4,4'-DDD	16.0u
1031-07-8	Endosulfan Sulfate	16.0u
50-29-3	4,4'-DDT	16.0u
72-43-5	Methoxychlor	16.0u
53494-70-5	Endrin Ketone	80.0u
57-74-9	Chlordane	80.0u
8001-35-2	Toxaphene	160.0u
12674-11-2	Aroclor-1016	80.0u
11104-28-2	Aroclor-1221	80.0u
11141-16-5	Aroclor-1232	80.0u
53469-21-9	Aroclor-1242	80.0u
12672-29-6	Aroclor-1248	80.0u
11097-69-1	Aroclor-1254	160.0u
11096-82-5	Aroclor-1260	160.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s _____ or W_s 30 V_i 1,000 V_t 4.0

000991

Laboratory Name NYTEST ENVIRONMENTAL INC.
 Case No URS-V

Sample Number
VSS-4-Soil

Organics Analysis Data Sheet
 (Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	Phenol	VOA	25.07	16J
2.				
3.	71432 Benzene	BNA	3.75	21975J
4.				
5.	unknown PNA	"	28-33	1172J
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000992

VSS4 SOIL
Sample No.

7-22-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO. _____

SCH NO. _____

LAB SAMPLE ID NO. VSS4 SOIL 7-22-86 QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium _____
Matrix: Water _____ Soil _____ Sludge _____ Other _____

µg/L or mg/kg dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>NR</u>
2. Antimony	<u>0.54</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>3.97</u>	15. Mercury	<u>0.095</u>
4. Barium	<u>NR</u>	16. Nickel	<u>0.150</u>
5. Beryllium	<u>0.0030</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>0.0030</u>	18. Selenium	<u>0.0020</u>
7. Calcium	<u>NR</u>	19. Silver	<u>0.0050</u>
8. Chromium	<u>7.47</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>1.43</u>
10. Copper	<u>7.94</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>4.76</u>	24. Zinc	<u>20.2</u>
Cyanide	<u>0.51</u>	Percent Solids (W)	<u>62.92</u>
PHENOLS	<u>0.135</u>		

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

000020

VSS-5-Soil

Organics Analysis Data Sheet (Page 1)

Laboratory Name Nystest Environmental Inc.
Lab Sample ID No >VA032
Sample Matrix Soil
Data Release Authorized By [Signature]

Case No URS-V
OC Report No
Contract No 85-11532
Date Sample Received 7-22-86

Volatile Compounds

Concentration Low Medium (Circle One)
Date Extracted/Prepared 7/25/86
Date Analyzed 7/25/86
Conc./Dil Factor 0.200 pH
Percent Moisture (Not Decanted)

Table with 3 columns: CAS Number, Name, and ug/l or ug/Kg (Circle One). Rows include Chloromethane, Bromomethane, Vinyl Chloride, Chloroethane, Methylene Chloride, Acetone, Carbon Disulfide, 1,1-Dichloroethene, 1,1-Dichloroethane, Trans-1,2-Dichloroethene, Chloroform, 1,2-Dichloroethane, 2-Butanone, 1,1,1-Trichloroethane, Carbon Tetrachloride, Vinyl Acetate, and Bromodichloromethane.

Table with 3 columns: CAS Number, Name, and ug/l or ug/Kg (Circle One). Rows include 1,2-Dichloropropane, Trans-1,3-Dichloropropene, Trichloroethene, Dibromochloromethane, 1,1,2-Trichloroethane, Benzene, cis-1,3-Dichloropropene, 2-Chloroethylvinylether, Bromoform, 4-Methyl-2-Pentanone, 2-Hexanone, Tetrachloroethene, 1,1,2,2-Tetrachloroethane, Toluene, Chlorobenzene, Ethylbenzene, Styrene, and Total Xylenes.

* Calculated on dry weight.

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 coded.

- List of Data Reporting Qualifiers: Value (if result is a value greater than or equal to the detection limit report the value), U (indicates compound was analyzed for but not detected), J (indicates an estimated value), C (This flag applies to pesticide parameters...), B (This flag is used when the analyte is found...), Other (Other specific flags and footnotes...)

Laboratory Name Hyttest Environmental Inc.
 Case No WRS-V

Sample Number
VSS-5-Soil

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration (Low) Medium (Circle One)
 Date Extracted/Prepared 7/22/86
 Date Analyzed 8/21/86
 Conc/Dil Factor: 33.0
 Percent Moisture (Decanted) 28.7

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	330 u
111-44-4	bis(2-Chloroethyl)Ether	330 u
95-57-8	2-Chlorophenol	330 u
541-73-1	1,3-Dichlorobenzene	330 u
106-46-7	1,4-Dichlorobenzene	330 u
100-51-6	Benzyl Alcohol	330 u
95-50-1	1,2-Dichlorobenzene	330 u
95-48-7	2-Methylphenol	330 u
39638-32-9	bis(2-chloroisopropyl)Ether	330 u
106-44-5	4-Methylphenol	330 u
621-64-7	N-Nitroso-Di-n-Propylamine	330 u
67-72-1	Hexachloroethane	330 u
98-95-3	Nitrobenzene	330 u
78-59-1	Isophorone	330 u
88-75-5	2-Nitrophenol	330 u
105-67-9	2,4-Dimethylphenol	330 u
65-85-0	Benzoic Acid	1600 u
111-91-1	bis(2-Chloroethoxy)Methane	330 u
120-83-2	2,4-Dichlorophenol	330 u
120-82-1	1,2,4-Trichlorobenzene	330 u
91-20-3	Naphthalene	330 u
106-47-8	4-Chloroaniline	330 u
87-68-3	Hexachlorobutadiene	330 u
59-50-7	4-Chloro-3-Methylphenol	330 u
91-57-6	2-Methylnaphthalene	330 u
77-47-4	Hexachlorocyclopentadiene	330 u
88-06-2	2,4,6-Trichlorophenol	330 u
95-95-4	2,4,5-Trichlorophenol	1600 u
91-58-7	2-Chloronaphthalene	330 u
88-74-4	2-Nitroaniline	1600 u
131-11-3	Dimethyl Phthalate	330 u
208-96-8	Acenaphthylene	330 u
99-09-2	3-Nitroaniline	1600 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	330 u
51-28-5	2,4-Dinitrophenol	1600 u
100-02-7	4-Nitrophenol	1600 u
132-64-9	Dibenzofuran	330 u
121-14-2	2,4-Dinitrotoluene	330 u
606-20-2	2,6-Dinitrotoluene	330 u
84-66-2	Diethylphthalate	330 u
7005-72-3	4-Chlorophenyl-phenylether	330 u
86-73-7	Fluorene	330 u
100-01-6	4-Nitroaniline	1600 u
534-52-1	4,6-Dinitro-2-Methylphenol	1600 u
86-30-6	N-Nitrosodiphenylamine (1)	330 u
101-55-3	4-Bromophenyl-phenylether	330 u
118-74-1	Hexachlorobenzene	330 u
87-86-5	Pentachlorophenol	1600 u
85-01-8	Phenanthrene	330 u
120-12-7	Anthracene	330 u
84-74-2	Di-n-Butylphthalate	330 u
206-44-0	Fluoranthene	330 u
129-00-0	Pyrene	330 u
85-68-7	Butylbenzylphthalate	330 u
91-94-1	3,3'-Dichlorobenzidine	660 u
56-55-3	Benzo(a)Anthracene	330 u
117-81-7	bis(2-Ethylhexyl)Phthalate	330 u
218-01-9	Chrysene	330 u
117-84-0	Di-n-Octyl Phthalate	330 u
205-99-2	Benzo(b)Fluoranthene	330 u
207-08-9	Benzo(k)Fluoranthene	330 u
50-32-8	Benzo(a)Pyrene	330 u
193-39-5	Indeno(1,2,3-cd)Pyrene	330 u
53-70-3	Dibenz(a,h)Anthracene	330 u
191-24-2	Benzo(g,h,i)Perylene	330 u

* Amounts based on dry weight

(1) Cannot be separated from diphenylamine

001052

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VSS-5-Soils

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared: July 22, 1986

Separatory Funnel Extraction Yes

Date Analyzed: July 27, 1986

Continuous Liquid-Liquid Extraction Yes

Conc/Dil Factor: 1

Percent Moisture (decanted) 39

CAS Number		ug/l or ug·Kg (Circle One)
319-84-6	Alpha-BHC	8.0u
319-85-7	Beta-BHC	8.0u
319-86-8	Delta-BHC	8.0u
58-89-9	Gamma-BHC (Lindane)	8.0u
76-44-8	Heptachlor	8.0u
309-00-2	Aldrin	8.0u
1024-57-3	Heptachlor Epoxide	8.0u
959-98-8	Endosulfan I	8.0u
60-57-1	Dieldrin	16.0u
72-55-9	4,4'-DDE	16.0u
72-20-8	Endrin	16.0u
33213-65-9	Endosulfan II	16.0u
72-54-8	4,4'-DDD	16.0u
1031-07-8	Endosulfan Sulfate	16.0u
50-29-3	4,4'-DDT	16.0u
72-43-5	Methoxychlor	16.0u
53494-70-5	Endrin Ketone	80.0u
57-74-9	Chlordane	80.0u
8001-35-2	Toxaphene	160.0u
12674-11-2	Aroclor-1016	80.0u
11104-28-2	Aroclor-1221	80.0u
11141-16-5	Aroclor-1232	80.0u
53469-21-9	Aroclor-1242	80.0u
12672-29-6	Aroclor-1248	80.0u
11097-69-1	Aroclor-1254	160.0u
11096-82-5	Aroclor-1260	160.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

001053

V_s _____ or W_s 30 V_i 1,000 V_t 4.0

Laboratory Name NYTEST ENV INC.
 Case No URS-V

Sample Number
VSS-5-Soil

Organics Analysis Data Sheet
 (Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 79209	Methyl acetate	VOA	8.74	3 J
2. 141786	Ethyl acetate	VOA	13.44	4 J
3.	Trimethyl heptatriene	VOA	25.02	10 J
4.	Trimethyl bicycloheptane	VOA	28.29	4 J
6. 71432	Benzene	RNA	3.61	2616 J
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001054

VSS-5 SOIL

7-22-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL CASE NO.

SOW NO.

LAB SAMPLE ID NO. VSS-5 SOIL 7-22-86 QC REPORT NO.

Elements Identified and Measured

Concentration: Low Medium Matrix: Water Soil Sludge Other

ug/L or mg/kg dry weight (Circle One)

Table with 24 rows of element names and values (e.g., Aluminum NR, Antimony 0.50 U, Arsenic 3.91, Barium NR, Beryllium 3.09, Cadmium 0.003 U, Calcium NR, Chromium 5.54, Cobalt NR, Copper 12.2, Iron NR, Lead 8.32, Magnesium NR, Manganese NR, Mercury 0.032, Nickel 3.26, Potassium NR, Selenium 0.002 U, Silver 0.005 U, Sodium NR, Thallium 0.002 U, Tin NR, Vanadium NR, Zinc 28.4, Percent Solids (1) 61.30, Cyanide 8.24, PLEWALS 1.563)

ICP Interelement and background corrections applied? Yes No

If yes, corrections applied before or after generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

000021

VSS-6-soil

Organics Analysis Data Sheet (Page 1)

Laboratory Name Nytest Environmental Inc.
Sample ID No >VA033
Sample Matrix Soil
Release Authorized By fshah

Case No URS-V
QC Report No
Contract No 85-11532
Date Sample Received 7/22/86

Volatile Compounds

Concentration Low Medium (Circle One)
Date Extracted/Prepared 7/25/86
Date Analyzed 7/25/86
Conc./Dil Factor 0.200 pH
Percent Moisture (Not Decanted)

Table with 3 columns: CAS Number, Compound Name, ug/l or ug/Kg (Circle One). Rows include Chloromethane, Bromomethane, Vinyl Chloride, Chloroethane, Methylene Chloride, Acetone, Carbon Disulfide, 1,1-Dichloroethene, Trans-1,2-Dichloroethene, Chloroform, 1,2-Dichloroethane, 2-Butanone, 1,1,1-Trichloroethane, Carbon Tetrachloride, Vinyl Acetate, Bromodichloromethane.

Table with 3 columns: CAS Number, Compound Name, ug/l or ug/Kg (Circle One). Rows include 1,2-Dichloropropane, Trans-1,3-Dichloropropane, Trichloroethene, Dibromochloromethane, 1,1,2-Trichloroethane, Benzene, cis-1,3-Dichloropropane, 2-Chloroethylvinylether, Bromoform, 4-Methyl-2-Pentanone, 2-Hexanone, Tetrachloroethene, 1,1,2,2-Tetrachloroethane, Toluene, Chlorobenzene, Ethylbenzene, Styrene, Total Xylenes.

* Calculated on dry weight.

Data Reporting Guidelines

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 or g/100 ug based on necessary concentration adjustment.
C: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS.
Other: Other specific flags and footnotes may be required.

001116

Laboratory Name Hyttest Environmental Inc.
 Case No URS-V

Sample Number
VSS-6-Soil

Organics Analysis Data Sheet
 (Page 2)

Semivolatile Compounds

Concentration Low Medium (Circle One)
 Date Extracted/Prepared 7/22/86
 Date Analyzed 8/21/86
 Conc/Dil Factor: 330
 Percent Moisture (Decanted) 84.6%

GPC Cleanup Yes No
 Separatory Funnel Extraction Yes
 Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	330 u
111-44-4	bis(2-Chloroethyl)Ether	330 u
95-57-8	2-Chlorophenol	330 u
541-73-1	1, 3-Dichlorobenzene	330 u
106-46-7	1, 4-Dichlorobenzene	330 u
100-51-6	Benzyl Alcohol	330 u
95-50-1	1, 2-Dichlorobenzene	330 u
95-48-7	2-Methylphenol	330 u
39638-32-9	bis(2-chloroisopropyl)Ether	330 u
106-44-5	4-Methylphenol	330 u
621-64-7	N-Nitroso-Di-n-Propylamine	330 u
67-72-1	Hexachloroethane	330 u
98-95-3	Nitrobenzene	330 u
78-59-1	Isophorone	330 u
88-75-5	2-Nitrophenol	330 u
105-67-9	2, 4-Dimethylphenol	330 u
65-85-0	Benzoic Acid	1600 u
111-91-1	bis(2-Chloroethoxy)Methane	330 u
120-83-2	2, 4-Dichlorophenol	330 u
120-82-1	1, 2, 4-Trichlorobenzene	330 u
91-20-3	Naphthalene	330 u
106-47-8	4-Chloroaniline	330 u
87-68-3	Hexachlorobutadiene	330 u
59-50-7	4-Chloro-3-Methylphenol	330 u
91-57-6	2-Methylnaphthalene	330 u
77-47-4	Hexachlorocyclopentadiene	330 u
88-06-2	2, 4, 6-Trichlorophenol	330 u
95-95-4	2, 4, 5-Trichlorophenol	1600 u
91-58-7	2-Chloronaphthalene	330 u
88-74-4	2-Nitroaniline	1600 u
131-11-3	Dimethyl Phthalate	330 u
208-96-8	Acenaphthylene	330 u
99-09-2	3-Nitroaniline	1600 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	330 u
51-28-5	2, 4-Dinitrophenol	1600 u
100-02-7	4-Nitrophenol	1600 u
132-64-9	Dibenzofuran	330 u
121-14-2	2, 4-Dinitrotoluene	330 u
606-20-2	2, 6-Dinitrotoluene	330 u
84-66-2	Diethylphthalate	330 u
7005-72-3	4-Chlorophenyl-phenylether	330 u
86-73-7	Fluorene	330 u
100-01-6	4-Nitroaniline	1600 u
534-52-1	4, 6-Dinitro-2-Methylphenol	1600 u
86-30-6	N-Nitrosodiphenylamine (1)	330 u
101-55-3	4-Bromophenyl-phenylether	330 u
118-74-1	Hexachlorobenzene	330 u
87-86-5	Pentachlorophenol	1600 u
85-01-8	Phenanthrene	330 u
120-12-7	Anthracene	330 u
84-74-2	Di-n-Butylphthalate	330 u
206-44-0	Fluoranthene	330 u
129-00-0	Pyrene	330 u
85-68-7	Butylbenzylphthalate	330 u
91-94-1	3, 3'-Dichlorobenzidine	660 u
56-55-3	Benzo(a)Anthracene	330 u
117-81-7	bis(2-Ethylhexyl)Phthalate	5800
218-01-9	Chrysene	330 u
117-84-0	Di-n-Octyl Phthalate	330 u
205-99-2	Benzo(b)Fluoranthene	330 u
207-08-9	Benzo(k)Fluoranthene	330 u
50-32-8	Benzo(a)Pyrene	330 u
193-39-5	Indeno(1, 2, 3-cd)Pyrene	330 u
53-70-3	Dibenz(a,h)Anthracene	330 u
191-24-2	Benzo(g,h,i)Perylene	330 u

(1) Cannot be separated from diphenylamine

001117

Laboratory Name NYTEST ENV. INC.

Case No WRJ-V

Sample Number
VSS-6-Soils

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared: July 22, 1986

Separatory Funnel Extraction Yes

Date Analyzed: July 31, 1986

Continuous Liquid-Liquid Extraction Yes

Conc./Dil Factor: 1

Percent Moisture (decanted) 85

CAS Number		ug/l or ug * Kg (Circle One)
319-84-6	Alpha-BHC	8.0u
319-85-7	Beta-BHC	8.0u
319-86-8	Delta-BHC	8.0u
58-89-9	Gamma-BHC (Lindane)	8.0u
76-44-8	Heptachlor	8.0u
309-00-2	Aldrin	8.0u
1024-57-3	Heptachlor Epoxide	8.0u
959-98-8	Endosulfan I	8.0u
60-57-1	Dieldrin	16.0u
72-55-9	4,4'-DDE	16.0u
72-20-8	Endrin	16.0u
33213-65-9	Endosulfan II	16.0u
72-54-8	4,4'-DDD	16.0u
1031-07-8	Endosulfan Sulfate	16.0u
50-29-3	4,4'-DDT	16.0u
72-43-5	Methoxychlor	16.0u
53494-70-5	Endrin Ketone	80.0u
57-74-9	Chlordane	80.0u
8001-35-2	Toxaphene	160.0u
12674-11-2	Aroclor-1016	80.0u
11104-28-2	Aroclor-1221	80.0u
11141-16-5	Aroclor-1232	80.0u
53469-21-9	Aroclor-1242	80.0u
12672-29-6	Aroclor-1248	80.0u
11097-69-1	Aroclor-1254	160.0u
11096-82-5	Aroclor-1260	160.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

001118

V_s _____ or W_s 30 V_i 1,000 V_t 4.0

Laboratory Name NYTEST ENV INC.

Case No URS-V

Sample Number
VSS-6-Soil

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. <u>122394</u>	<u>N-Phenyl benzene amine</u>	<u>VDA</u>	<u>21.43</u>	<u>150J</u>
2.				
3. <u>71432</u>	<u>Benzene</u>	<u>BNA</u>	<u>3.61</u>	<u>153610J</u>
4.				
6.	<u>unknown alkane</u>	<u>"</u>	<u>31.42</u>	<u>30286J</u>
6.				
7.	<u>"</u>	<u>"</u>	<u>36.84</u>	<u>43084J</u>
8.				
9.	<u>"</u>	<u>"</u>	<u>40.59</u>	<u>83117J</u>
10.				
11.				
12.				
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30.				

001119

YSS-6 SOIL
Sample No.

9-22-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL

CASE NO. _____

SCW NO. _____

LAB SAMPLE ID NO. YSS-6 SOIL 9-22-86

QC REPORT NO. _____

Elements Identified and Measured

Concentration: Low Medium High

Matrix: Water Soil Sludge Other

ug/L or (mg/kg) dry weight (Circle One)

1. Aluminum	<u>NR</u>	13. Magnesium	<u>NR</u>
2. Antimony	<u>0.050</u>	14. Manganese	<u>NR</u>
3. Arsenic	<u>12.3</u>	15. Mercury	<u>0.013U</u>
4. Barium	<u>NR</u>	16. Nickel	<u>0.015U</u>
5. Beryllium	<u>2.909</u>	17. Potassium	<u>NR</u>
6. Cadmium	<u>2.59</u>	18. Selenium	<u>0.002U</u>
7. Calcium	<u>NR</u>	19. Silver	<u>0.005U</u>
8. Chromium	<u>14.3</u>	20. Sodium	<u>NR</u>
9. Cobalt	<u>NR</u>	21. Thallium	<u>9.74</u>
10. Copper	<u>48.7</u>	22. Tin	<u>NR</u>
11. Iron	<u>NR</u>	23. Vanadium	<u>NR</u>
12. Lead	<u>19.5</u>	24. Zinc	<u>98.7</u>
Cyanide	<u>0.04</u>	Percent Solids (H)	<u>15.39</u>
PHENOLS	<u>1.354</u>		

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments:

000022

VSS-7-Soil

Organics Analysis Data Sheet (Page 1)

Laboratory Name Nystest Environmental Inc. Lab Sample ID No > VAO34 Sample Matrix Soil Data Release Authorized By Jshah

Case No URS-V OC Report No Contract No 85-11532 Date Sample Received 7/22/86

Volatile Compounds

Concentration (Low) Medium (Circle One) Date Extracted/Prepared 7/25/86 Date Analyzed 7/25/86 Conc./Dil Factor 0.000 pH Percent Moisture (Not Decanted)

Table with 3 columns: CAS Number, Compound Name, and ug/l or ug/Kg (Circle One). Rows include Chloromethane, Bromomethane, Vinyl Chloride, Chloroethane, Methylene Chloride, Acetone, Carbon Disulfide, 1,1-Dichloroethene, 1,1-Dichloroethane, Trans-1,2-Dichloroethene, Chloroform, 1,2-Dichloroethane, 2-Butanone, 1,1,1-Trichloroethane, Carbon Tetrachloride, Vinyl Acetate, and Bromodichloromethane.

Table with 3 columns: CAS Number, Compound Name, and ug/l or ug/Kg (Circle One). Rows include 1,2-Dichloropropane, Trans-1,3-Dichloropropene, Trichloroethene, Dibromochloromethane, 1,1,2-Trichloroethane, Benzene, cis-1,3-Dichloropropene, 2-Chloroethylmethyl ether, Bromoform, 4-Methyl-2-Pentanone, 2-Hexanone, Tetrachloroethene, 1,1,2,2-Tetrachloroethane, Toluene, Chlorobenzene, Ethylbenzene, Styrene, and Total Xylenes.

* Calculated on dry weight

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 or g. 10 ug/l or ug/kg on necessary concentration dilution action if this is not necessary, 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 relatively hazardous compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero or g. 10 ug/l or ug/kg. If the detection limit is 10 ug/l and a concentration of 2 ug/l is calculated report as J. C: This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component results are 2 ug/kg with the final extract should be confirmed by GC/MS. B: This flag is used when the analyte is found in the extract but the sample is not a pesticide product. The footnote should read B. The data user is the appropriate authority. Other: Other specific flags and footnotes may be required. The results must be clearly identified and attached to the data summary report.

001177

Laboratory Name Nytest Environmental Inc.

Case No URS-V

Sample Number
VSS-7-Soil

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low Medium (Circle One)

Date Extracted/Prepared 7/22/86

Date Analyzed 8/21/86

Conc/Dil Factor: 33.0

Percent Moisture (Decanted) 72.8

GPC Cleanup Yes No

Separatory Funnel Extraction Yes

Continuous Liquid-Liquid Extraction Yes

CAS Number		ug/l or ug/Kg (Circle One)
108-95-2	Phenol	330 u
111-44-4	bis(2-Chloroethyl)Ether	330 u
95-57-8	2-Chlorophenol	330 u
541-73-1	1,3-Dichlorobenzene	330 u
106-46-7	1,4-Dichlorobenzene	330 u
100-51-6	Benzyl Alcohol	330 u
95-50-1	1,2-Dichlorobenzene	330 u
95-48-7	2-Methylphenol	330 u
39638-32-9	bis(2-chloroisopropyl)Ether	330 u
106-44-5	4-Methylphenol	330 u
621-64-7	N-Nitroso-Di-n-Propylamine	330 u
67-72-1	Hexachloroethane	330 u
98-95-3	Nitrobenzene	330 u
78-59-1	Isophorone	330 u
88-75-5	2-Nitrophenol	330 u
105-67-9	2,4-Dimethylphenol	330 u
65-85-0	Benzoic Acid	1600 u
111-91-1	bis(2-Chloroethoxy)Methane	330 u
120-83-2	2,4-Dichlorophenol	330 u
120-82-1	1,2,4-Trichlorobenzene	330 u
91-20-3	Naphthalene	330 u
106-47-8	4-Chloroaniline	330 u
87-68-3	Hexachlorobutadiene	330 u
59-50-7	4-Chloro-3-Methylphenol	330 u
91-57-6	2-Methylnaphthalene	330 u
77-47-4	Hexachlorocyclopentadiene	330 u
88-06-2	2,4,6-Trichlorophenol	330 u
95-95-4	2,4,5-Trichlorophenol	1600 u
91-58-7	2-Chloronaphthalene	330 u
88-74-4	2-Nitroaniline	1600 u
131-11-3	Dimethyl Phthalate	330 u
208-96-8	Acenaphthylene	330 u
99-09-2	3-Nitroaniline	1600 u

CAS Number		ug/l or ug/Kg (Circle One)
83-32-9	Acenaphthene	330 u
51-28-5	2,4-Dinitrophenol	1600 u
100-02-7	4-Nitrophenol	1600 u
132-64-9	Dibenzofuran	330 u
121-14-2	2,4-Dinitrotoluene	330 u
606-20-2	2,6-Dinitrotoluene	330 u
84-66-2	Diethylphthalate	330 u
7005-72-3	4-Chlorophenyl-phenylether	330 u
86-73-7	Fluorene	330 u
100-01-6	4-Nitroaniline	1600 u
534-52-1	4,6-Dinitro-2-Methylphenol	1600 u
86-30-6	N-Nitrosodiphenylamine (1)	330 u
101-55-3	4-Bromophenyl-phenylether	330 u
118-74-1	Hexachlorobenzene	330 u
87-86-5	Pentachlorophenol	1600 u
85-01-8	Phenanthrene	330 u
120-12-7	Anthracene	330 u
84-74-2	Di-n-Butylphthalate	330 u
206-44-0	Fluoranthene	330 u
129-00-0	Pyrene	300 u
85-68-7	Butylbenzylphthalate	330 u
91-94-1	3,3'-Dichlorobenzidine	660 u
56-55-3	Benzofluoranthene	330 u
117-81-7	bis(2-Ethylhexyl)Phthalate	12000 u
218-01-9	Chrysene	330 u
117-84-0	Di-n-Octyl Phthalate	330 u
205-99-2	Benzofluoranthene	330 u
207-08-9	Benzofluoranthene	330 u
50-32-8	Benzofluoranthene	330 u
193-39-5	Indeno(1,2,3-cd)Pyrene	330 u
53-70-3	Dibenzofluoranthene	330 u
191-24-2	Benzofluoranthene	330 u

(1) Cannot be separated from diphenylamine

001178

Laboratory Name NYTEST ENV. INC.

Case No URS-V

Sample Number
VSS-7-Soils

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

GPC Cleanup Yes No

Date Extracted/Prepared: July 22, 1986

Separatory Funnel Extraction Yes

Date Analyzed: July 31, 1986

Continuous Liquid - Liquid Extraction Yes

Conc./Dil Factor: 1

Percent Moisture (decanted) 73

CAS Number		ug/100ug * Kg (Circle One)
319-84-6	Alpha-BHC	8.0u
319-85-7	Beta-BHC	8.0u
319-86-8	Delta-BHC	8.0u
58-89-9	Gamma-BHC (Lindane)	8.0u
76-44-8	Heptachlor	8.0u
309-00-2	Aldrin	8.0u
1024-57-3	Heptachlor Epoxide	8.0u
959-98-8	Endosulfan I	8.0u
60-57-1	Dieldrin	16.0u
72-55-9	4,4'-DDE	16.0u
72-20-8	Endrin	16.0u
33213-65-9	Endosulfan II	16.0u
72-54-8	4,4'-DDD	16.0u
1031-07-8	Endosulfan Sulfate	16.0u
50-29-3	4,4'-DDT	16.0u
72-43-5	Methoxychlor	16.0u
53494-70-5	Endrin Ketone	80.0u
57-74-9	Chlordane	80.0u
8001-35-2	Toxaphene	160.0u
12674-11-2	Aroclor-1016	80.0u
11104-28-2	Aroclor-1221	80.0u
11141-16-5	Aroclor-1232	80.0u
53469-21-9	Aroclor-1242	80.0u
12672-29-6	Aroclor-1248	80.0u
11097-69-1	Aroclor-1254	160.0u
11096-82-5	Aroclor-1260	160.0u

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

001179

V_s _____ or W_s 30 V_i 20,000 V_t 40

Laboratory Name NYTEST ENV INC.

Case No URS-V

Sample Number
VSS-7-Sol

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 79209	Methyl acetate	VOA	8.81	12 J
2. 41786	Ethyl acetate	VOA	13.51	12 J
3.	Unknown	VOA	25.18	23 J
4.	Unknown	VOA	26.10	25 J
5.				
6. 71432	Benzene	BNA	3.61	13456 J
7.				
8.	Cyclopropane (a) naphthalene	"	19.96	563 J
9.				
10.	Unknown alkane	"	20.98	744 J
11.				
12.	Unknown alkane	"	36.82	9144 J
13.				
14.	" "	"	40.59	6069 J
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

001180

V557 SOIL
Sample No.

7-22-86

INORGANIC ANALYSIS DATA SHEET

LAB NAME NYTEST ENVIRONMENTAL (AST. NO.) _____

SOW NO. _____

LAB SAMPLE ID NO. V557 SOIL 7-22-86 OR REPORT NO. _____

Elements Identified and Measured

Concentration: Low _____ Medium

Matrix: Water _____ Soil Sludge _____ Other _____

ug/L or (ug/kg dry weight) (Circle One)

1. Aluminum <u>NR</u>	13. Magnesium <u>NR</u>
2. Antimony <u>0.50U</u>	14. Manganese <u>NR</u>
3. Arsenic <u>8.80</u>	15. Mercury <u>0.22</u>
4. Barium <u>NR</u>	16. Nickel <u>0.016U</u>
5. Beryllium <u>11.3</u>	17. Potassium <u>NR</u>
6. Cadmium <u>0.003U</u>	18. Selenium <u>0.002U</u>
7. Calcium <u>NR</u>	19. Silver <u>0.005U</u>
8. Chromium <u>9.54</u>	20. Sodium <u>NR</u>
9. Cobalt <u>NR</u>	21. Thallium <u>1.47</u>
10. Copper <u>23.8</u>	22. Tin <u>NR</u>
11. Iron <u>NR</u>	23. Vanadium <u>NR</u>
12. Lead <u>26.7</u>	24. Zinc <u>95.4</u>
Cyanide <u>0.04</u>	Percent Solids (W) <u>27.24</u>

PHENOLS 0.325

ICP Interelement and background corrections applied? Yes _____ No _____

If yes, corrections applied before _____ or after _____ generation of raw data.

Footnote:

NR - not required by contract at this time

Footnote: For reporting results to NYSDEC, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Appendix K
Water Quality Standards And Criteria

NYSDEC Surface Water Quality Standards (6 NYCRR, Part 701)

NYSDEC Groundwater Quality Regulations (6 NYCRR, Part 703)

NYSDEC Technical and Operational Guidance Series (85-W-38)

NYSDOH Maximum Contaminant Levels, Public Water Supplies
(10 NYCRR, Subpart 5-1)

NYSDOH Standards, Sources of Water Supply (10 NYCRR, Part 170)

USEPA Safe Drinking Water Act, Maximum Contaminant Levels
(40 CFR, Part 141)

USEPA Recommended Maximum Contaminant Levels (RMCL)
(40 CFR, Part 141, Subpart F)

USEPA Secondary Drinking Water Regulations (40 CFR, Part 143)

USEPA CWA & SDWA Guidelines (USEPA, 1985, Table 5-2)

NYSDEC SURFACE WATER QUALITY STANDARDS (6 NYCRR, Part 701)

QUALITY STANDARDS FOR CLASS "B" and "C" WATERS

<u>Items</u>	<u>Specifications</u>
Coliform	The monthly median coliform value for 100 ml of sample shall not exceed 2,400 from a minimum of five examinations, and provided that not more than 20 percent of the samples shall exceed a coliform value of 5,000 for 100 ml of sample and the monthly geometric mean fecal coliform value for 100 ml of sample shall not exceed 200 from a minimum of five examinations. This standard shall be met during all periods when disinfection is practiced.
pH	Shall be between 6.5 and 8.5.
Total dissolved solids	None at concentrations which will be detrimental to the growth and propagation of aquatic life. Waters having present levels less than 500 milligrams per liter shall be kept below this limit.
Dissolved oxygen	For cold waters suitable for trout spawning, the DO concentration shall not be less than 7.0 mg/l from other than natural conditions. For trout waters, the minimum daily average shall not be less than 6.0 mg/l. At no time shall the DO concentration be less than 5.0 mg/l. For non-trout waters, the minimum daily average shall not be less than 5.0 mg/l. At no time shall the DO concentration be less than 4.0 mg/l.
<u>Substance</u>	<u>Standards (ppb)</u>
Aldrin and Dieldrin	0.001
Remarks:	applies to sum of aldrin and dieldrin
Aluminum, ionic	100
Ammonia as NH ₃	AWQC (mg/l) = 0.031 [f(T)/g(pH)] g(pH) = 1; if pH >7.7 g(pH) = 10 [0.74(7.7-pH)]; if pH <7.7 f(T) = 1; if T >10°C

NYSDEC SURFACE WATER QUALITY STANDARDS (6 NYCRR, Part 701)

QUALITY STANDARDS FOR CLASS "B" and "C" WATERS
(Cont'd.)

<u>Substance</u>	<u>Standards (ppb)</u>
Ammonia as NH ₃ (Cont'd.)	$f(T) = \frac{1 + 10^{(9.73-pH)}}{1 + 10^{(pK_T-pH)}}; \text{ if } T < 10^\circ\text{C}$ $pK_T = 0.090 + \frac{2730}{(T + 273.2)}$
Arsenic (dissolved)	190
Azinphosmethyl	0.005
Benzidine	0.1
Beryllium (acid-soluble)	11; hardness ≤ 75 ppm 1,100; hardness > 75 ppm
Bis(2-ethyl hexyl)phthalate	0.6
Boron (acid-soluble)	10,000
Cadmium (acid-soluble)	$\exp(0.7852 [\ln(\text{ppm hardness})] - 3.490)$
Carbofuran	1.0
Chlorobenzene	5
Chromium (acid-soluble)	$\exp(0.819 [\ln(\text{ppm hardness})] + 3.688)$
Chromium (VI) (acid-soluble)	11
Cobalt (acid-soluble)	5
Copper (acid-soluble)	$\exp(0.9422 [\ln(\text{ppm hardness})] - 1.464)$
Cyanide (free)	5.2
DDT, DDD and DDE	0.001
Demeton	0.1
Diazinon	0.08
Dichlorobenzenes	5
Endosulfan	0.09
Endrin	0.002

NYSDEC SURFACE WATER QUALITY STANDARDS (6 NYCRR, Part 701)

QUALITY STANDARD FOR CLASS "B" and "C" WATERS
(Cont'd.)

<u>Substance</u>	<u>Standards (ppb)</u>
Fluoride	$(0.02) \exp (0.907 [\ln (\text{ppm hardness})] + 7.394)$
Heptachlor and Heptachlor epoxide	0.001
Hexachlorobutadiene	1.0
Hexachlorocyclohexanes Remarks: applies to sum of all isomers	0.01
Hexachlorocyclopentadiene	0.45
Hydrazine	5 ug/l; <50 ppm hardness 10 ug/l; >50 ppm hardness
Hydrogen sulfide (undissociated)	2.0
Hydroquinone	2.2
Iron	300
Isodecyl diphenyl phosphate	1.73
Isothiazolones, total	1
Lead (acid-soluble)	$\exp (1.266 [\ln (\text{ppm hardness})] - 4.661)$
Linear alkyl benzene sulfonates Remarks: LAS with side chains greater than 13 carbons	40
Malathion	0.1
Methoxychlor	0.03
Methylene bithiocyanate	1.0
Mirex	0.001
Nickel (acid-soluble)	$\exp (0.76 [\ln (\text{ppm hardness})] + 1.06)$
Nitrilotriacetate (NTA)	5,000

NYSDEC SURFACE WATER QUALITY STANDARDS (6 NYCRR, Part 701)

QUALITY STANDARDS FOR CLASS "B" and "C" WATERS
(Cont'd.)

<u>Substance</u>	<u>Standards (ppb)</u>
Nitrite	100 warm water fishery waters 20 cold water fishery waters
Parathion and Methyl parathion	0.008
Pentachlorophenol	0.4
Phenols, total chlorinated	1.0
Phenols, total unchlorinated	5.0
Polychlorinated biphenyl, PCB	0.001
Quaternary ammonium compounds	10
Selenium (acid-soluble)	1.0
Silver (ionic)	0.1
Sulfite	200
2,3,7,8-Tetrachlorodibenzo- p-dioxin (TCDD)	0.000001
Thallium (acid-soluble)	8
Toxaphene	0.005
Trichlorobenzenes	5
Triphenylphosphate	4
Vanadium (acid-soluble)	14
Zinc (acid-soluble)	30

QUALITY STANDARDS FOR CLASS "D" WATERS

<u>Items</u>	<u>Specifications</u>
pH	Shall be between 6.0 and 9.5.
Dissolved oxygen	Shall not be less than 3 milligrams per liter at any time.
Coliform	The monthly median coliform value for 100 ml of sample shall not exceed 2,400 from a minimum of five examinations and provided that not more than 20 percent of the samples shall exceed a coliform value of 5,000 for 100 ml of sample and the monthly geometric mean fecal coliform value for 100 ml of sample shall not exceed 200 from a minimum of five examinations. This standard shall be met during all periods when disinfection is practiced.

<u>Substance</u>	<u>Standards (ppb)</u>
Aldrin and Dieldrin	0.001
Remarks:	applies to sum of aldrin and dieldrin
Ammonia as NH ₃	$AWQC \text{ (ppm)} = 0.15 [f(T)/g(pH)]$ $g(pH) = 1 + 10^{[1.03 (7.32 - pH)]}$ $f(T) = 1; \text{ if } T \geq 10^{\circ}\text{C}$ $f(T) = \frac{1 + 10^{(9.73-pH)}}{1 + 10^{(pK_T-pH)}}; \text{ if } T < 10^{\circ}\text{C}$ $pK_T = 0.90 + \frac{2730}{(T + 273.2)}$
Arsenic (dissolved)	360
Benzidine	0.1
Cadmium (acid-soluble)	$\exp (1.128 [\ln (\text{ppm hardness})] - 3.828)$
Carbofuran	10
Chlorobenzene	50
Chromium (acid-soluble)	$\exp (0.819 [\ln (\text{ppm hardness})] + 3.688)$
Chromium (VI) (acid-soluble)	16

QUALITY STANDARDS FOR CLASS "D" WATERS
(Cont'd.)

<u>Substance</u>	<u>Standards (ppb)</u>
Copper (acid-soluble)	exp (0.9422 [ln (ppm hardness)]) - 1.464)
Cyanide (free)	22
DDT, DDD and DDE	0.001
Dichlorobenzenes	50
Endosulfan	0.22
Endrin	0.002
Fluoride	(0.1) exp (0.907 [ln (ppm hardness)]) + 7.394)
Heptachlor and Heptachlor epoxide	0.001
Hexachlorobutadiene	10
Hexachlorocyclohexanes	2
Remarks:	applies to sum of all isomers
Hexachlorocyclopentadiene	4.5
Hydrazine	50 ug/l; <50 ppm hardness 100 ug/l; ≥50 ppm hardness
Hydroquinone	4.4
Iron	300
Isodecyl diphenyl phosphate	22
Isothiazolones, total	10
Lead (acid-soluble)	exp (1.266 [ln (ppm hardness)]) - 1.416)
Mirex	0.001
Nickel (acid-soluble)	exp (0.76 [ln (ppm hardness)]) + 4.02)
Phenols, total chlorinated	1.0
Phenols, total unchlorinated	5.0
Polychlorinated biphenyl, PCB	0.001

QUALITY STANDARDS FOR CLASS "D" WATERS
(Cont'd.)

<u>Substance</u>	<u>Standards (ppb)</u>
Silver (acid-soluble)	$\exp (1.72 [\ln (\text{ppm hardness})] - 6.52)$
2,3,7,8-Tetrachlorodibenzo- p-dioxin (TCDD)	0.000001
Thallium (acid-soluble)	20
Toxaphene	1.6
Trichlorobenzenes	50
Triphenyl phosphate	40
Vanadium (acid-soluble)	190
Zinc (acid-soluble)	$\exp (0.83 [\ln (\text{ppm hardness})] + 1.95)$

NYSDEC GROUNDWATER QUALITY REGULATIONS (6 NYCRR, PART 703)

<u>Items</u>	<u>Standards</u>
Sewage, industrial waste or other wastes, taste or odor producing substances, toxic pollutants, thermal discharges, radioactive substances or other deleterious matter.	None which may impair the quality of the ground waters to render them unsafe or unsuitable for a potable water supply or which may cause or contribute to a condition in contravention of standards for other classified waters of the State.
The concentration of the following substances or chemicals:	Shall not be greater than the limit specified, except where exceeded due to natural conditions:
Arsenic (As)	0.025 mg/l
Barium (Ba)	1.0 mg/l
Cadmium (Cd)	0.01 mg/l
Chloride (Cl)	250 mg/l
Chromium (Cr) Hexavalent	0.05 mg/l
Copper (Cu)	1.0 mg/l
Cyanide (Cn)	0.2 mg/l
Fluoride (F)	1.5 mg/l
Foaming Agents ¹	0.5 mg/l
Iron (Fe) ²	0.3 mg/l
Lead (Pb)	0.025 mg/l
Manganese (Mn) ²	0.3 mg/l
Mercury (Hg)	0.002 mg/l
Nitrate (as N)	10.0 mg/l
Phenols	0.001 mg/l
Selenium (Se)	0.02 mg/l
Silver (Ag)	0.05 mg/l
Sulfate (SO ₄)	250 mg/l

NYSDEC GROUNDWATER QUALITY REGULATIONS (6 NYCRR, PART 703)
(Cont'd.)

<u>Items</u>	<u>Standards</u>
Zinc (Zn)	5 mg/l
pH Range	6.5-8.5
Aldrin, or 1, 2, 3, 4, 10, 10-hexachloro-1, 4, 4a, 5, 8, 8a-hexahydro-endo-1, 4-exc-5, 8-dimethanonaphthalene	Not detectable ³
Chlordane, or 1, 2, 4, 5, 6, 7, 8, 8-octachloro-2, 3, 3a, 4, 7, 7a-hexahydro-4, 7- methanoindene	0.1 ug/l
DDT, or 2, 2-bis- (p-chloro- phenyl)-1, 1, 1-trichloro- ethane and metabolites	Not detectable ³
Dieldrin, or 6,7-epoxy aldrin	Not detectable ³
Endrin, or 1, 2, 3, 4, 10, 10-hexachloro-6, 7-epoxy-1, 4, 4a, 5, 6, 7, 8, 8a-octa- hydro-endo-1, 4-endo-5, 8-dimethanonaphthalene	Not detectable ³
Heptachlor, or 1, 4, 5, 6, 7, 8, 8-heptachloro-3a, 4, 7, 7a-tetrahydro-4, 7-meth- anoindene and metabolites	Not detectable ³
Lindane and other Hexa- chlorocyclohexanes or mixed isomers of 1, 2, 3, 4, 5, 6-hexachlorocyclo- hexane	Not detectable ³
Methoxychlor, or 2, 2-bis- (p-methoxyphenyl)-1, 1, 1- trichloroethane	35.0 ug/l
Toxaphene (a mixture of at least 175 chlorinated cam- phene derivatives)	Not detectable ³
2,4-Dichlorophenoxyacetic acid (2,4-D)	4.4 ug/l

NYSDEC GROUNDWATER QUALITY REGULATIONS (6 NYCRR, PART 703)
(Cont'd.)

<u>Items</u>	<u>Standards</u>
2, 4, 5-Trichlorophenoxy-propionic acid (2, 4, 5-TP) (Silvex)	0.26 ug/l
Vinyl chloride (chloroethene)	5.0 ug/l
Benzene	Not detectable ³
Benzo (a) pyrene	Not detectable ³
Kepone or decachlorooctahydro-1, 3, 4-metheno-2H-cyclobuta (cd) pentalen-2-one (chlordeone)	Not detectable ³
Polychlorinated biphenyls (PCB) (Aroclor)	0.1 ug/l
Ethylene thiourca (ETU)	Not detectable ³
Chloroform	100 ug/l
Carbon tetrachloride (tetrachloromethane)	5 ug/l
Pentachloronitrobenzene (PCNB)	Not detectable ³
Trichloroethylene	10 ug/l
Diphenylhydrazine	Not detectable ³
bis (2-chloroethyl) ether	1.0 ug/l
2, 4, 5-Trichlorophenoxyacetic acid (2, 4, 5-T)	35 ug/l
2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin (TCDD)	3.5×10^{-5} ug/l
2-Methyl-4-chlorophenoxyacetic acid (MCPA)	0.44 ug/l
Amiben, or 3-amino-2, 5-dichlorobenzoic acid (chloramben)	87.5 ug/l

NYSDEC GROUNDWATER QUALITY REGULATIONS (6 NYCRR, PART 703)
(Cont'd.)

<u>Items</u>	<u>Standards</u>
Dicamba, or 2-methoxy-3, 6-dichlorobenzoic acid	0.44 ug/l
Alachlor, or 2-chloro-2', 6'-diethyl-N- (meth oxy-methyl)-acetanilide (Lasso)	35.0 ug/l
Butachlor, or 2-chloro-2', 6'-diethyl-N- (butoxymethyl) acetanilide (Machete)	3.5 ug/l
Propachlor, or 2-chlor-N- iso-propyl-N-acetanilide (Ramrod)	35.0 ug/l
Propanil, or 3', 4'-dichlor- opropionanilide	7.0 ug/l
Aldicarb, [2-methyl-2- (methylthio) propionalde- hyde o-(methyl carbamoyl) oxime[and methomyl [1- methylthioacetaldehyde o- (methyl-carbamoyl) oxime]	0.35 ug/l
Bromacil, or 5-broma-3- secbutyl-6-methluracil	4.4 ug/l
Paraquat, or 1, 1'-dime- thyl-4, 4'-dipyridylum	2.98 ug/l
Trifluralin, or a, a, a- trifluoro-2, 6-dinitro-, N-dipropyl-p- toluidine (Treflan)	35.0 ug/l
Nitralin, or 4-(methylsul- fonyl)-2, 6-dinitro-N, N- dipropylaniline (Planavin)	35.0 ug/l
Benefin, or N-butyl-N-ethyl- a, a, a-trifluoro-2, 6- dinitro-p-toluidine (Balan)	35.0 ug/l
Azinphosmethyl, or 0, 0- dimethyl-S-4 oxo-1, 2, 3- benzotriazin-3 (4H)-ylmethyl- phosphorodithioate (Guthion)	4.4 ug/l

NYSDEC GROUNDWATER QUALITY REGULATIONS (6 NYCRR, PART 703)
(Cont'd.)

<u>Items</u>	<u>Standards</u>
Diazinon, or O, O-diethyl O-(2)-isopropyl-4-methyl- 6-pyrimidinyl)-Phosphoro- thioate	0.7 ug/l
Phorate (also for Disulfo- ton), or O, O-diethyl-S- [(ethylthio)methyl]-phos- phorodithioate (Thimet R), and disulfoton, or O, O- diethyl-S [(2-ethylthio) ethyl] phosphorodithioate (Di-System R)	Not detectable ³
Carbaryl, or 1-naphthyl-N- methylcarbamate	28.7 ug/l
Ziram, or zinc salts of di- methylthiocarbamic acid	4.18 ug/l
Ferbam, or iron salts of dimethylthiocarbamic acid	4.18 ug/l
Captan, or N-trichloro- methylthio-4-cyclohexene-1, 2-dicarboximide	17.5 ug/l
Folpet, or N-trichloro methylthiophthalimide	56.0 ug/l
Hexachlorobenzene (HCB)	0.35 ug/l
Paradichlorobenzene (PDB) (Also orthodichlorobenzene)	4.7 ug/l
Parathion (and Methyl para- thion), or (O,-O-diethyl- O-p-nitrophenylphosphor- thioate, an methyl parathion, or O,O-dimethyl-O-p-nitro- phenylphosphorothioate	1.5 ug/l
Malathion, or S-1, 2-bis (ethoxycarbonyl) ethyl-O, O-dimethylphosphorodithioate	7.0 ug/l

NYSDEC GROUNDWATER QUALITY REGULATIONS (6 NYCRR, PART 703)
(Cont'd.)

<u>Items</u>	<u>Standards</u>
Maneb, or manganese salt of ethylene-bis-dithiocarbamic acid	1.75 ug/l
Zineb, or zinc salt of ethylene-bis-dithiocarbamic acid	1.75 ug/l
Dithane, or zincate of manganese ethylene-bis-dithiocarbamate	1.75 ug/l
Thiram, or tetramethylthiuramdisulfide	1.75 ug/l
Atrazine, or 2-chloro-4-ethylamino-6-isopropylamino-S-triazine	7.5 ug/l
Propazine, or 2-chloro-4,6-diisopropylamino-S-triazine	16.0 ug/l
Simazine, or 2-chloro-4, 6-diethylamino-S-triazine	75.25 ug/l
Di-n-butylphthalate	770 ug/l
Di(2-ethylhexyl)phthalate (DEHP)	4.2 mg/l
Hexachlorophene, or 2, 2'-methylene-bis (3, 4, 6-trichlorophenol)	7 ug/l
Methyl methacrylate	0.7 mg/l
Pentachlorophenol (PCP)	21 ug/l
Styrene	931 ug/l

Notes:

- 1) Foaming agents determined as methylene blue active substances (MBAS) or other tests as specified by the commissioner.

NYSDEC GROUNDWATER QUALITY REGULATIONS (6 NYCRR, PART 703)
(Cont'd.)

Notes:
(Cont'd.)

- 2) Combined concentration of iron and manganese shall not exceed 0.5 mg/l.
- 3) Not detectable means by tests or analytical determinations referenced in section 6 NYCRR, Part 703.4.

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-0001



Henry G. Williams
Commissioner

July 24, 1985

MEMORANDUM

TO: Bureau Directors, Regional Water Engineers, Section Chiefs

SUBJECT: Division of Water Technical and Operational Guidance Series
(85-W-38)

Ambient Water Quality Standards and Guidance Values
(Originator: John Zambrano)

I. Purpose

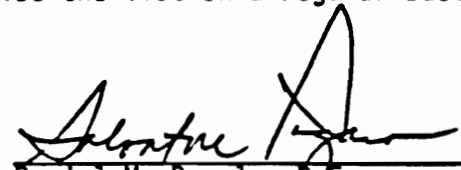
The purpose of this document is to provide a compilation of water quality standards and guidance values for toxic and non-conventional pollutants to be used in the Department's regulatory programs, including the SPDES permit program.

II. Discussion

This substantial revision of TOGS 85-W-38 is the result of the promulgation of amendments to 6 NYCRR Part 701-702, effective on August 2, 1985, governing the development and use of surface water quality standards and guidance values. This revision uses a new format in the tabulation and does not include the methodologies for the development of standards and guidance values. The user is referred to the regulations for a description of the methodologies.

III. Guidance

The Quality Evaluation Section will use the attached list in developing SPDES permit water quality-based effluent limits. The Criteria and Standards Section will maintain and revise the list on a regular basis.


for Daniel M. Barolo, P.E.
Director
Division of Water

Attachments

cc: Dr. Banks
Mr. Pagano
Mr. Mt. Pleasant
Regional Engineers for Environmental Quality
Ms. Chrimes

Table 1. Summary of Water Quality Classifications
 (See 6 NYCRR Part 701 for detailed explanation)

	<u>Class</u>	<u>Best Usage</u>	<u>Conditions Related To Best Usage</u>
Surface Water (Fresh)	D	Secondary contact recreation (only)	Fish survival
	C	Fishing, and D	Fish survival and propagation
	B	Primary contact recreation and C	
	A	Drinking water supply, food processing and B	Meets drinking water standards with treatment and disinfection
	AA	Drinking water supply, food processing and B	Meets drinking water standards with disinfection only
	A-S	Best usage same as in A Classification (Great Lakes Water Quality Agreement)	
	AA-S	Any use except disposal of sewage, industrial wastes or other wastes (Champlain Drainage Basin)	
Surface Water (Saline)	SD	Not for recreational purposes, shellfish culture, or development of fishlife due to natural or man-made conditions	
	SC	Fishing, except for shellfish for market purposes	
	SB	Primary and secondary contact recreation and SC	
	SA	Shellfishing for market purpose and SB	
	I	Secondary contact recreation and other uses except primary contact recreation and shellfishing for market purposes (Interstate Sanitary District)	
Ground-water (Fresh)	GA	Source of potable water supply	

limit calculation to be used for each substance in developing a SPDES effluent limit are also given.

D. Miscellaneous

1. Chemical Abstract Service (CAS) Numbers

The substances listed in the tabulation can be described by other names. Chemical Abstract Service numbers are provided where appropriate, to assist in determining the applicability of listed substances to synonymous chemical names.

2. Hardness

Hardness is the sum of the calcium and magnesium concentrations expressed as mg/l of CaCO_3 . The hardness of the receiving water has a distinct effect on the toxicity of certain substances. Where applicable, the appropriate formula is provided to calculate the standard or guidance value using hardness.

3. Hydrologic Flow Base

A consistent, clearly understood, written guidance to the methodology of selecting hydrologic flow base figures is important to the permit development process. Representatives of NYSDEC and the NYSDOH developed the recommended flow base requirements to be used in setting permit limits. In general, for substances having standards or guidance values based on acute or chronic aquatic toxicity, MA7CD/10 stream flow should be used to develop maximum daily effluent limits. Chemical effects of pollutants on aquatic life are not generally based on average lifetime intake. Chronic effect levels on aquatic life are generally considered those which result in lethal toxicity at some sensitive life stage or perhaps the lethal toxic effect resulting from a 10 to 30 day exposure of juveniles or adult organisms. Since the sensitive life stage may occur at low flow periods or a chronic effect could occur within 30 days, it is appropriate to use the MA7CD/10 streamflow when effluent limits are based on water quality criteria developed for aquatic toxicity. Where human health concerns are the consideration, MA30CD/10 flow base is generally used to develop monthly average effluent limits. The appropriate flow bases to be used in connection with the standards and guidance values are given in Table 2.

4. Total of Organic Chemicals

In developing a SPDES permit for a surface water discharge with human health concerns, a 100 ug/l maximum ambient water quality value is required for the total of designated organic chemicals. Organics with standards or guidance values are included in this total. The 100 ug/l maximum value will similarly be used for groundwater discharge permits. On the attached list, the symbol (§) preceding a chemical designates it as being included in the total organic chemical category. As described in the Part 701 regulations, substances with standards or guidance values greater than 100 ug/l are not included in the total.

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

Date of Revision: July 24, 1985

SUBSTANCE (CAS NO.)	WATER CLASSES	MICROGRAMS/LITER		TYPE	NOTES
		STANDARD	GUIDANCE VALUES		
§ Acenaphthene (83-32-9)	A, A-S, AA, AA-S	20	20	H	C C
	GA			H	
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I			A	
	SD			A	
§ Acrylic acid (79-10-7)	A, A-S, AA, AA-S			50	H H A A A A A
	GA			50	
	A, A-S, AA, AA-S, B, C				
	D				
	SA, SB, SC				
	I				
	SD				
§ Acrylonitrile (107-13-1)	A, A-S, AA, AA-S			0.07	H H A A A A A
	GA			0.07	
	A, A-S, AA, AA-S, B, C				
	D				
	SA, SB, SC				
	I				
	SD				
§ Alachlor (15972-60-8)	A, A-S, AA, AA-S	35.0			H H A A A A A
	GA				
	A, A-S, AA, AA-S, B, C				
	D				
	SA, SB, SC				
	I				
	SD				
§ Aldicarb (116-06-3)	A, A-S, AA, AA-S	7			H H A A A A A
	GA				
	A, A-S, AA, AA-S, B, C				
	D				
	SA, SB, SC				
	I				
	SD				
§ Aldicarb & Methomyl (116-06-3; 16752-77-5)	A, A-S, AA, AA-S	0.35			H H A A A A A
	GA				
	A, A-S, AA, AA-S, B, C				
	D				
	SA, SB, SC				
	I				
	SD				

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

Date of Revision: July 24, 1985

SUBSTANCE (CAS NO.)	WATER CLASSES	MICROGRAMS/LITER		TYPE	NOTES
		STANDARD	GUIDANCE VALUES		
§ Aminocresols (95-84-1; 2835-95-2; 2835-99-6)	A, A-S, AA, AA-S	*		H	
	GA	*		H	
	A, A-S, AA, AA-S, B, C	**		A	
	D	**		A	
	SA, SB, SC			A	
	I			A	
	SD			A	

Remarks: * Refer to Standards for phenolic compounds
** Refer to Standards for phenols-total unchlorinated

§ Aminomethylene phosphonic acid salts (NA)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I			A	
	SD			A	

§ Aminopyridine (462-08-8; 504-24-5; 504-29-0)	A, A-S, AA, AA-S		1	H	B
	GA		1	H	B
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I			A	
	SD			A	

Remarks: Applies to sum of isomers.

Ammonia	A, A-S, AA, AA-S		2,000*	H	R
	GA			H	
	A, A-S, AA, AA-S, B, C	**		A	H
	D	**		A	H
	SA, SB, SC			A	
	I			A	
	SD			A	

Remarks: * $\text{NH}_3 + \text{NH}_4$ as N.
** Un-ionized ammonia only as NH_3 ; formulas for calculating standards at varying pH and temperature for different Classes are as follows:

AA; AA-S, A; A-S, B; C;

$$\text{Standard (mg/l)} = 0.031 [f(T)/g(\text{pH})]$$

T = temperature in °C and
g(pH) = 1; if pH \geq 7.7

g(pH) = $10^{[0.74(7.7-\text{pH})]}$; if pH < 7.7
f(T) = 1; if T \geq 10°C

f(T) = $\frac{1 + 10^{(9.73-\text{pH})}}{1 + 10^{(\text{pK}_T-\text{pH})}}$; if T < 10°C

$$\text{pK}_T = 0.090 + \frac{2730}{(T + 273.2)}$$

D;

$$\text{Standard (mg/l)} = 0.15 [f(T)/g(\text{pH})]$$

g(pH) = $1 + 10^{[1.03(7.32-\text{pH})]}$
f(T) as above

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		STANDARD	GUIDANCE VALUES		
§ Aniline (62-53-3)	A, A-S, AA, AA-S		1	H	A
	GA		1	H	A
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Anthracene (120-12-7)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Antimony (7440-36-0)	A, A-S, AA, AA-S		3	H	B
	GA		3	H	B
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Arsenic (7440-38-2)	A, A-S, AA, AA-S	50		H	Q
	GA	25		H	S
	A, A-S, AA, AA-S, B, C	190*		A	H
	D	360*		A	H
	SA, SB, SC	63*		A	H
	I		63*	A	H
	SD	120*		A	H
Remarks: * Dissolved arsenic form					
§ Aryltriazoles (NA)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Atrazine (1912-24-9)	A, A-S, AA, AA-S			H	
	GA	7.5		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	

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		STANDARD	GUIDANCE VALUES		
§ Benzisothiazole (271-61-4)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Benzo(b)- fluoranthene (205-99-2)	A, A-S, AA, AA-S		0.002	H	D
	GA		0.002	H	D
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Benzo(k)- fluoranthene (207-08-9)	A, A-S, AA, AA-S		0.002	H	D
	GA		0.002	H	D
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Benzo(a)pyrene (50-32-8)	A, A-S, AA, AA-S		0.002	H	A
	GA	ND		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Remarks: ND - Not Detectable					
Beryllium (7440-41-7)	A, A-S, AA, AA-S		3	H	B
	GA		3	H	B
	A, A-S, AA, AA-S, B, C	11* or 1,100**		A	H
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Remarks: * When hardness is less than or equal to 75 ppm. ** When hardness is greater than 75 ppm. All standards and values except Human apply to acid-soluble form.					
§ Bis (2-chloro- ethyl) ether (111-44-4)	A, A-S, AA, AA-S		0.03	H	A
	GA	1.0		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	

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		STANDARD	GUIDANCE VALUES		
§ Bromoform (75-25-2)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Butachlor (23184-66-9)	A, A-S, AA, AA-S			H	
	GA	3.5		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Butoxyethoxy- ethanol (112-34-5)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Butoxypropanol (5131-66-8)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Butyl benzyl phthalate (85-68-7)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Butyl isopropyl phthalate (NA)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	

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		STANDARD	GUIDANCE VALUES		
Chloride (NA)	A, A-S, AA, AA-S	250,000		H	R
	GA	250,000		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Chlorobenzene (108-90-7)	A, A-S, AA, AA-S	20		H	C
	GA		20	H	C
	A, A-S, AA, AA-S, B, C	5		A	I
	D	50		A	L
	SA, SB, SC		5	A	I
	I SD		5 50	A A	I L
§ Chloroform (67-66-3)	A, A-S, AA, AA-S	0.2		H	A
	GA	100		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ 2-Chloronaphthalene (91-58-7)	A, A-S, AA, AA-S	10		H	D
	GA		10	H	D
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ 5-Chloro-o-toluidine (95-79-4)	A, A-S, AA, AA-S		0.7	H	A
	GA		0.7	H	A
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Chromium (7440-47-3)	A, A-S, AA, AA-S	50		H	Q
	GA			H	
	A, A-S, AA, AA-S, B, C	*		A	H
	D	**		A	H
	SA, SB, SC			A	
	I SD			A A	

Remarks: * $\exp(0.819 [\ln (\text{ppm hardness})] + 1.561)$
 ** $\exp(0.819 [\ln (\text{ppm hardness})] + 3.688)$
 all standards except Human apply to acid-soluble form.

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		STANDARD	GUIDANCE VALUES		
§ 2,4-Dichloro- phenoxyacetic acid (94-75-7)	A, A-S, AA, AA-S	100		H	Q
	GA	4.4		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ DDT, DDD & DDE (50-29-3; 72-54-8; 72-55-9)	A, A-S, AA, AA-S	0.01		H	A
	GA	ND		H	S
	A, A-S, AA, AA-S, B, C	0.001		A	H
	D	0.001		A	H
	SA, SB, SC	0.001		A	H
	I SD	0.001	0.001	A A	H H
Remarks: ND - Not Detectable					
§ Demeton (8065-48-3; 298-03-3; 126-75-0)	A, A-S, AA, AA-S			H	
	GA			H	
	A, A-S, AA, AA-S, B, C	0.1		A	J
	D			A	
	SA, SB, SC	0.1		A	J
	I SD		0.1	A A	J J
§ Diazinon (333-41-5)	A, A-S, AA, AA-S			H	
	GA	0.7		H	S
	A, A-S, AA, AA-S, B, C	0.08		A	J
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Dibromochloro- methane (124-48-1)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Dibromodichloro- methane (NA)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	

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		STANDARD	GUIDANCE VALUES		
§ 1,2-Dichloroethane (107-06-2)	A, A-S, AA, AA-S	0.8		H	A
	GA		0.8	H	A
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ 1,1-Dichloroethylene (75-35-4)	A, A-S, AA, AA-S		0.07	H	A
	GA		0.07	H	A
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ trans-1,2- Dichloroethylene (156-60-5)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Dichloro- fluoromethane (75-43-4)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ 2,4-Dichlorophenol (120-83-2)	A, A-S, AA, AA-S	0.3		H	C
	GA		0.3	H	C
	A, A-S, AA, AA-S, B, C	*		A	
	D	*		A	
	SA, SB, SC			A	
	I SD			A A	
Remarks: * Refer to standard for phenols - total chlorinated.					
§ Dichloropropanes (78-99-9; 78-87-5; 142-28-9; 26638-19-7)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Remarks: Applies to sum of dichloropropane isomers.					

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		STANDARD	GUIDANCE VALUES		
§ Diphenyl- hydrazine (122-66-7)	A, A-S, AA, AA-S	ND	0.05*	H	A
	GA			H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Remarks: * (1,2-) isomer only. ND - Not Detectable					
§ Dithane (142-59-6)	A, A-S, AA, AA-S	1.75		H	
	GA		H	S	
	A, A-S, AA, AA-S, B, C		A		
	D		A		
	SA, SB, SC		A		
	I SD		A A		
§ Dodecylguanidine salts (13590-97-1; 2439-10-3)	A, A-S, AA, AA-S		50	H	B
	GA		50	H	B
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Remarks: Applies to the sum of dodecylguanidine salts, as dodecylguanidine.					
§ Dyphylline (479-18-5)	A, A-S, AA, AA-S	50		H	D
	GA		50	H	D
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Endosulfan (115-29-7)	A, A-S, AA, AA-S			H	
	GA			H	
	A, A-S, AA, AA-S, B, C	0.009		A	H
	D	0.22		A	H
	SA, SB, SC	0.001		A	H
	I SD		0.001	A A	H H
§ Endrin (72-20-B)	A, A-S, AA, AA-S	0.2		H	Q
	GA	ND		H	S
	A, A-S, AA, AA-S, B, C	0.002		A	H
	D	0.002		A	H
	SA, SB, SC	0.002		A	H
	I SD		0.002	A A	H H
Remarks: ND - Not Detectable					

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		STANDARD	GUIDANCE VALUES		
§ Fluorene (86-73-7)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Fluoride (NA)	A, A-S, AA, AA-S	1,500		H	R
	GA	1,500		H	S
	A, A-S, AA, AA-S, B, C	*		A	J
	D	**		A	J
	SA, SB, SC			A	
	I SD			A A	
Remarks: * (0.02) exp(0.907 [ln (ppm hardness)] + 7.394) ** (0.1) exp(0.907 [ln (ppm hardness)] + 7.394)					
§ Folpet (133-07-3)	A, A-S, AA, AA-S		56.0	H	S
	GA		56.0	H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Gross Alpha Radiation (NA)	A, A-S, AA, AA-S	15 pCi/L*		H	Q
	GA	15 pCi/L*		H	Q
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Remarks: * 15 picocuries per liter, excluding radon and uranium.					
Gross Beta Radiation (NA)	A, AA	1,000 pCi/L*		H	R
	A-S, AA-S	1,000 pCi/L*		H	R
	GA	1,000 pCi/L*		H	R
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
I SD			A A		
Remarks: * 1,000 picocuries per liter, excluding strontium-90 and alpha emitters.					
§ Guaifenesin (93-14-1)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	

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		STANDARD	VALUES		
§ 2-Hexanone (591-78-6)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A	
§ Hydrazine (302-01-2)	A, A-S, AA, AA-S			H	
	GA			H	
	A, A-S, AA, AA-S, B, C	*		A	J
	D	**		A	K
	SA, SB, SC			A	
	I SD			A	
Remarks: * 5 ug/l at less than 50 ppm hardness and 10 ug/l at greater than or equal to 50 ppm hardness.					
** 50 ug/l at less than 50 ppm hardness and 100 ug/l at greater than or equal to 50 ppm hardness.					
Hydrogen sulfide (7783-06-4)	A, A-S, AA, AA-S		**	H	
	GA		**	H	
	A, A-S, AA, AA-S, B, C	2.0*		A	H
	D			A	
	SA, SB, SC	2.0*		A	H
	I SD		2.0*	A	H
Remarks: * Undissociated. ** Refer to Sulfides.					
§ Hydroquinone (123-31-9)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C	2.2		A	J
	D	4.4		A	K
	SA, SB, SC			A	
	I SD			A	
§ 1-Hydroxy-ethylidene-1,1-diphosphonic acid (2809-21-4)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A	
§ 2-(2-Hydroxy-3,5-di-tert-pentylphenyl) - benzotriazole (25973-55-1)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A	

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		STANDARD	GUIDANCE VALUES		
Lead (7439-92-1)	A, A-S, AA, AA-S	50		H	Q
	GA	25		H	S
	A, A-S, AA, AA-S, B, C	*		A	H
	D	**		A	H
	SA, SB, SC	8.6		A	H
	I		8.6	A	H
	SD	220		A	H
Remarks: * $\exp(1.266 [\ln(\text{ppm hardness})] - 4.661)$ ** $\exp(1.266 [\ln(\text{ppm hardness})] - 1.416)$ All standards and values except Human apply to acid-soluble form.					
§ Linear alkyl benzene sul- fonates (LAS) (NA)	A, A-S, AA, AA-S			H	
	GA			H	
	A, A-S, AA, AA-S, B, C	40*		A	J
	D			A	
	SA, SB, SC			A	
	I			A	
	SD			A	
Remarks: * LAS with side chains greater than 13 carbons only.					
Magnesium (7439-95-4)	A, A-S, AA, AA-S	35,000		H	B
	GA		35,000	H	B
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I			A	
	SD			A	
§ Malathion (121-75-5)	A, A-S, AA, AA-S			H	
	GA	7.0		H	S
	A, A-S, AA, AA-S, B, C	0.1		A	H
	D			A	
	SA, SB, SC	0.1		A	H
	I		0.1	A	H
	SD			A	
§ Maneb (12427-38-2)	A, A-S, AA, AA-S			H	
	GA	1.75		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I			A	
	SD			A	
Manganese (7439-96-5)	A, A-S, AA, AA-S	300		H	Q
	GA	300		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I			A	
	SD			A	

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		STANDARD	GUIDANCE VALUES		
§ Methyl chloride (74-87-3)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Methylene bisthiocyanate (6317-18-6)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C	1.0		A	J
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Methylene chloride (75-09-2)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ 4-(1-Methylethoxy)- 1-butanol (31600-69-8)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ 2-Methylethyl- 1,3-dioxolane (126-39-6)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Methyl methacrylate (80-62-6)	A, A-S, AA, AA-S			H	
	GA	700*		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Remarks: * Methyl Methacrylate not included in 100 ug/l summation criterion for Class GA.					
§ Mirex (2385-85-5)	A, A-S, AA, AA-S		0.04	H	A
	GA		0.04	H	A
	A, A-S, AA, AA-S, B, C	0.001		A	H
	D	0.001		A	H
	SA, SB, SC	0.001		A	H
	I SD		0.001 0.001	A A	H H

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

Date of Revision: July 24, 1985

SUBSTANCE (CAS NO.)	WATER CLASSES	MICROGRAMS/LITER		TYPE	NOTES
		STANDARD	GUIDANCE VALUES		
Nitrite (NA)	A, A-S, AA, AA-S			H	
	GA			H	
	A, A-S, AA, AA-S, B, C	100*	or 20**	A	J
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Remarks: * Warm water fishery waters. ** Cold water fishery waters.					
§ Nitrobenzene (98-95-3)	A, A-S, AA, AA-S	30		H	C
	GA		30	H	C
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ N-Nitroso- diphenylamine (86-30-6)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Paraquat (4685-14-7)	A, A-S, AA, AA-S			H	
	GA			H	
	A, A-S, AA, AA-S, B, C	2.98		A	S
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Parathion & Methyl parathion I,N (56-38-2; 298-00-0)	A, A-S, AA, AA-S			H	
	GA			H	
	A, A-S, AA, AA-S, B, C	1.5		A	S
	D	0.008		A	
	SA, SB, SC			A	
	I SD			A A	
§ Pentachloro- nitrobenzene (608-93-5)	A, A-S, AA, AA-S			H	
	GA		ND	H	
	A, A-S, AA, AA-S, B, C			A	S
	D			A	
	SA, SB, SC			A	
	I SD			A A	

Remarks: ND - Not Detectable.

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

Date of Revision: July 24, 1985

SUBSTANCE (CAS NO.)	WATER CLASSES	MICROGRAMS/LITER		TYPE	NOTES
		STANDARD	GUIDANCE VALUES		
§ Phenyl ether (101-84-8)	A, A-S, AA, AA-S	10		H	C
	GA		10	H	C
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Phenylpropanol- amine (14838-15-4)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Phorate & Disulfoton (298-02-2; 298-04-4)	A, A-S, AA, AA-S			H	S
	GA	ND		H	
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Remarks: ND - Not Detectable.					
§ Polychlorinated biphenyl, PCB (NA)	A, A-S, AA, AA-S	0.01		H	A
	GA	0.1		H	S
	A, A-S, AA, AA-S, B, C	0.001		A	H
	D	0.001		A	H
	SA, SB, SC	0.001		A	H
	I SD	0.001	0.001	A A	H H
§ Propachlor (1918-16-7)	A, A-S, AA, AA-S			H	S
	GA	35.0		H	
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Propanil (709-98-8)	A, A-S, AA, AA-S			H	S
	GA	7.0		H	
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Propazine (139-40-2)	A, A-S, AA, AA-S			H	S
	GA	16.0		H	
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

Date of Revision: July 24, 1985

SUBSTANCE (CAS NO.)	WATER CLASSES	MICROGRAMS/LITER		TYPE	NOTES
		STANDARD	GUIDANCE VALUES		
Silver (7440-22-4)	A, A-S, AA, AA-S	50		H	Q
	GA	50		H	S
	A, A-S, AA, AA-S, B, C	0.1*		A	I
	D	**		A	H***
	SA, SB, SC			A	
	I SD		2.3	A	H
Remarks: * ionic silver. ** $\exp(1.72 [\ln(\text{ppm hardness})] - 6.52)$ *** NOTE in promulgated standards is incorrect. Correct NOTE is H. Acid soluble form applies to D and SD Classes.					
§ Simazine (122-34-9)	A, A-S, AA, AA-S			H	
	GA	75.25		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A	
Strontium 90 (NA)	A, A-S, AA, AA-S	8 pCi/L*		H	Q
	GA			H	
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A	
Remarks: * If two or more radionuclides are present, the sum of their doses shall not exceed annual potential dose of 4 millirems per year.					
§ Styrene (100-42-5)	A, A-S, AA, AA-S	50		H	C
	GA	931*		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A	
Remarks: * Styrene not included in 100 ug/l summation criterion for Class GA.					
Sulfate (NA)	A, A-S, AA, AA-S	250,000		H	Q
	GA	250,000		H	S
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A	

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

Date of Revision: July 24, 1985

SUBSTANCE (CAS NO.)	WATER CLASSES	MICROGRAMS/LITER		TYPE	NOTES
		STANDARD	GUIDANCE VALUES		
§ Tetrahydro- furan (109-99-9)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
Thallium (7440-28-0)	A, A-S, AA, AA-S		4	H	B
	GA		4	H	B
	A, A-S, AA, AA-S, B, C	8		A	I
	D	20		A	K
	SA, SB, SC			A	
	I SD			A A	
§ Theophylline (58-55-9)	A, A-S, AA, AA-S	40		H	B
	GA		40	H	B
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Thiram (137-26-8)	A, A-S, AA, AA-S	1.75		H	S
	GA			H	
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Toluene (108-88-3)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ o-Toluidine (95-53-4)	A, A-S, AA, AA-S		0.6	H	A
	GA		0.6	H	A
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	
§ Tolyltriazole (29385-43-1)	A, A-S, AA, AA-S		50	H	E
	GA		50	H	E
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I SD			A A	

Remarks: All standards and values except Human apply to acid-soluble form.

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

Date of Revision: July 24, 1985

SUBSTANCE (CAS NO.)	WATER CLASSES	MICROGRAMS/LITER		TYPE	NOTES	
		STANDARD	GUIDANCE VALUES			
§ Trichloro- ethylene (79-01-6)	A, A-S, AA, AA-S	10	3	H	A S	
	GA			H		
	A, A-S, AA, AA-S, B, C			A		
	D			A		
	SA, SB, SC			A		
	I SD			A A		
§ Trichloro- fluoromethane (75-69-4)	A, A-S, AA, AA-S			50	H E	
	GA			50		
	A, A-S, AA, AA-S, B, C			A		
	D			A		
	SA, SB, SC			A		
	I SD			A A		
§ Trichlorotri- fluoroethanes (26523-64-8; 354-58-5; 76-13-1)	A, A-S, AA, AA-S			50*	H E	
	GA			50*		
	A, A-S, AA, AA-S, B, C			A		
	D			A		
	SA, SB, SC			A		
	I SD			A A		
Remarks: * Applies to sum of isomers.						
§ Trifluralin (1582-09-8)	A, A-S, AA, AA-S			35.0	H S	
	GA					H
	A, A-S, AA, AA-S, B, C					A
	D					A
	SA, SB, SC					A
	I SD					A A
§ Trimethyl- benzenes (25551-13-7; 526-73-8; 95-63-6; 108-67-8)	A, A-S, AA, AA-S			50*	H E	
	GA			50*		
	A, A-S, AA, AA-S, B, C			A		
	D			A		
	SA, SB, SC			A		
	I SD			A A		
Remarks: * Applies to sum of isomers.						
§ Trimethyl- pyridine (collidine) (108-75-8; 1462-84-6)	A, A-S, AA, AA-S			50	H E	
	GA			50		
	A, A-S, AA, AA-S, B, C			A		
	D			A		
	SA, SB, SC			A		
	I SD			A A		

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

Date of Revision: July 24, 1985

SUBSTANCE (CAS NO.)	WATER CLASSES	MICROGRAMS/LITER		TYPE	NOTES
		STANDARD	GUIDANCE VALUES		
§ Zineb (12122-67-7)	A, A-S, AA, AA-S	1.75		H	S
	GA			H	
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I			A	
§ Ziram (137-30-4)	A, A-S, AA, AA-S	4.18		H	S
	GA			H	
	A, A-S, AA, AA-S, B, C			A	
	D			A	
	SA, SB, SC			A	
	I			A	
	SD			A	

NEW YORK STATE AMBIENT WATER QUALITY STANDARDS AND GUIDANCE VALUES

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NYSDOH MAXIMUM CONTAMINANT LEVELS

PUBLIC WATER SUPPLIES (10 NYCRR, SUBPART 5-1)

<u>Organic Chemicals</u>	<u>Maximum Contaminant Level (milligrams per liter)</u>
Chlorinated hydrocarbons:	
Endrin (1,2,3,4,10,hexachloro-6,7-epoxy-1,4,4a,6,7,8,8a-octa hydro-1,4-endo, endo-5,8-dimethano naphthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachloro-cyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2,2-bis[p-methoxyphenyl]ethane)	0.1
Toxaphene (C ₁₀ H ₁₀ Cl ₈ -Technical chlorinated camphene, 67-69 percent chlorine) ..	0.005
Chlorophenoxy:	
2,4-D (2,4-Dichlorophenoxyacetic acid) ..	0.1
2,4,5-TP Silvex (2,4,5-Trichloro phenoxypropionic acid)	0.01
<u>Inorganic Chemicals</u>	<u>Maximum Contaminant Level (milligrams per liter)</u>
Arsenic (As)	0.05
Barium (Ba)	1.0
Cadmium (Cd)	0.01
Chloride (Cl)	250.0
Chromium (Cr)	0.05
Copper (Cu)	1.0
Iron (Fe)	0.3 ¹
Lead (Pb)	0.05
Manganese (Mn)	0.3 ¹

NYSDOH MAXIMUM CONTAMINANT LEVELS

PUBLIC WATER SUPPLIES (10 NYCRR, SUBPART 5-1)
(Cont'd.)

<u>Inorganic Chemicals</u>	<u>Maximum Contaminant Level</u> <u>(milligrams per liter)</u>
Mercury (Hg)	0.002
Nitrate (as N)	10
Selenium (Se)	0.01
Silver (Ag)	0.05
Sodium (Na)	No designated limits ²
Sulfate (SO ₄)	250.0
Zinc (Zn)	5.0
<u>Physical Characteristics</u>	<u>Units</u>
Color	15
Corrosivity	Non-corrosive ³
Odor	3

Notes:

- 1) If iron and manganese are both present, the total concentration of both substances should not exceed 0.5 milligrams per liter. Higher levels of iron may be allowed by the State when justified by the supplier of water.
- 2) Water containing more than 20 milligrams per liter of sodium should not be used for drinking by those on severely restricted sodium diets. Water containing more than 270 milligrams per liter of sodium should not be used for drinking by those on moderately restricted sodium diets.
- 3) Corrosivity shall be determined by calcium carbonate saturation or other method acceptable to the commissioner. A water other than noncorrosive may be allowed by the State based on justification submitted by the supplier of water.

NYSDOH STANDARDS, SOURCES OF WATER SUPPLY

(10 NYCRR, PART 170)

<u>Items</u>	<u>Standards</u>
Floating solids; settleable solids; oil; sludge deposits; tastes or odor producing substances	None attributable to sewage, industrial wastes or other wastes.
Sewage or waste effluents	None which are not effectively disinfected.
pH	Range between 6.5 and 8.5.
Dissolved oxygen	For trout waters, greater than 5.0 parts per million; for non-trout waters greater than 4.0 parts per million.
Toxic wastes, oil, deleterious substances, colored or other wastes or heated liquids	None alone or in combination with other substances or wastes in sufficient amounts or at such temperatures as to make the waters unsafe or unsuitable as a source of water supply for drinking, culinary or food processing purposes. Provided further, that the concentration or quantity of the constituents or characteristics hereinafter set forth shall not exceed the allowable limits established therefor.
<u>Physical:</u>	
Turbidity	5 units
<u>Microbiological:</u>	
Coliform organism	50 per 100 ml.
<u>Inorganic Chemicals:</u>	
Ammonia (NH ₃)	<2.0
Arsenic (As)	0.05
Barium (Ba)	1.0
Boron (B)	1.0
CCE	0.2

NYSDOH STANDARDS, SOURCES OF WATER SUPPLY

(10 NYCRR, PART 170)
(Cont'd.)

<u>Inorganic Chemicals:</u>	(Concentration in mg/l)
Cadmium (Cd)	0.01
Chloride (Cl)	250
Chromium (Hexavalent) (Cr+6)	0.05
Copper (Cu)	<0.2
Cyanide (CN)	<0.1
Fluoride (F)	<1.5
Lead (Pb)	0.05
Mercury (Hg)	0.005
Nitrates (NO ₃) + Nitrates (NO ₂)	10.
Selenium (Se)	0.01
Silver (Ag)	0.05
Sodium (Na)	<20.
Sulfate (SO ₄)	250.
Total dissolved solids	500.
Uranyl ion	<5.0
Zinc (Zn)	<0.3
<u>Organic Chemicals:</u>	(Concentration in mg/l)
Organic nitrogen	0.5
Oxygen consumed	2.0
Phenols	0.001
<u>Pesticides:</u>	
Aldrin	0.017
Chlordane	0.008

NYSDOH STANDARDS, SOURCES OF WATER SUPPLY

(10 NYCRR, PART 170)
(Cont'd.)

Pesticides:

DDT	0.042
Dieldrin	0.017
Endrin	0.001
Heptachlor	0.018
Heptachlor epoxide	0.018
Herbicides	0.1
Lindane	0.056
Methoxychlor	0.085
Organic phosphates + carbamates	0.1
Toxaphene	0.005

USEPA SAFE DRINKING WATER ACT, MAXIMUM CONTAMINANT

LEVELS (40 CFR, PART 141)

<u>Inorganic Substances</u>	<u>Standards</u>
Arsenic	0.05 mg/l
Barium	1. mg/l
Cadmium	0.010 mg/l
Chromium	0.05 mg/l
Lead	0.05 mg/l
Mercury	0.002 mg/l
Nitrate (as N)	10. mg/l
Selenium	0.01 mg/l
Silver	0.05 mg/l
Fluoride	4.0 mg/l
<u>Organic Substances</u>	<u>Standards</u>
Chlorinated hydrocarbons:	
Endrin	0.0002 mg/l
Lindane	0.004 mg/l
Methoxychlor	0.1 mg/l
Toxaphene	0.005 mg/l
Chlorophenoxy:	
2,4-D	0.1 mg/l
2,4,5-TP Silvex	0.01 mg/l
Total trihalomethanes:	
The sum of the concentrations of bromodichloromethane, dibromochloromethane, bromoform and chloroform	0.10 mg/l

USEPA SAFE DRINKING WATER ACT, MAXIMUM CONTAMINANT LEVELS

40 CFR, PART 141

<u>Inorganic Substances</u>	<u>Standards</u>
Fluoride	4.0 mg/l
<u>Organic Substances</u>	<u>Standards (mg/l)</u>
Benzene	0.005
Vinyl chloride	0.001
Carbon tetrachloride	0.005
1,2-Dichloroethane	0.005
Trichloroethylene (Trichloroethene)	0.005
1,1-Dichloroethylene (1,1-Dichloroethene)	0.007
1,1,1-Trichloroethane	0.20
p-Dichlorobenzene (1,4-Dichlorobenzene)	0.75

Note: MCL's proposed in the Federal Register 11/13/85
Final standards due out 6/87

USEPA RECOMMENDED MAXIMUM CONTAMINANT LEVELS

40 CFR, PART 141, SUBPART F

<u>Inorganic Substances</u>	<u>Standards</u>
Fluoride	4.0 mg/l
<u>Organic Substances</u>	<u>Standards</u>
Benzene	0
Vinyl chloride	0
Carbon tetrachloride	0
1,2-Dichloroethane	0
Trichloroethylene	0
1,1-Dichloroethylene	0.007 mg/l
1,1,1-Trichloroethane	0.20 mg/l
p-Dichlorobenzene	0.75 mg/l
Tetrachloroethylene	0

USEPA SECONDARY DRINKING WATER REGULATIONS (40 CFR, Part 143)

<u>Item</u>	<u>Guideline</u>
Chloride	250 mg/l
Color	15 color units
Copper	1 mg/l
Corrosivity	Noncorrosive
Fluoride	2.0 mg/l
Foaming Agents	0.5 mg/l
Iron	0.3 mg/l
Manganese	0.05 mg/l
Odor	3 threshold odor number
pH	6.5-8.5
Sulfate	250 mg/l
TDS	500 mg/l
Zinc	5 mg/l

USEPA CWA AND SDWA GUIDELINES

(USEPA, 1985)

Chemical	Safe Drinking Water Act, MCLs (mg/l unless otherwise noted)	Clean Water Act, Water Quality Criteria for Human Health--	Clean Water Act, Water Quality Criteria for Human Health--
		Fish and Drinking Water	Drinking Water Only ^a
Acenaphthene		20 ug/l (organoleptic) ^b	20 ug/l (organoleptic)
Acrolein		320 ug/l	540 ug/l
Acrylonitrile		0 (58 ng/l) ^c	0 (63 ng/l)
Aldrin		0 (0.074 ng/l)	0 (1.2 ng/l)
Antimony		146 ug/l	146 ug/l
Arsenic	0.05	0 (2.2 ng/l)	0 (2.5 ng/l)
Asbestos		0 (30,000 fibers/l)	0 (30,000 fibers/l)
Barium	1.0		
Benzene		0 (0.66 ug/l)	0 (0.67 ug/l)
Benzidine		0 (0.12 ng/l)	0 (0.15 ng/l)
Beryllium		0 (3.7 ng/l)	0 (3.9 ng/l)
Cadmium	0.01	10 ug/l	10 ug/l
Carbon tetrachloride		0 (0.4 ug/l)	0 (0.42 ug/l)
Chlordane		0 (0.46 ng/l)	0 (22 ng/l)
Chlorinated benzenes			
Hexachlorobenzene		0 (0.72 ng/l)	0 (21 ng/l)
1,2,4,5-Tetrachlorobenzene		38 ug/l	180 ug/l
Pentachlorobenzene		74 ug/l	570 ug/l
Trichlorobenzene		Insufficient data	Insufficient data
Monochlorobenzene		488 ug/l	488 ug/l
Chlorinated ethanes			
1,2-Dichloroethane		0 (0.94 ug/l)	0 (0.94 ug/l)
1,1,1-Trichloroethane		18.4 mg/l	19 mg/l
1,1,2-Trichloroethane		0 (0.6 ug/l)	0 (0.6 ug/l)
1,1,2,2-Tetrachloroethane		0 (0.17 ug/l)	0 (0.17 ug/l)
Hexachloroethane		0 (1.9 ug/l)	0 (2.4 ug/l)
Monochloroethane		Insufficient data	Insufficient data
1,1-Dichloroethane		Insufficient data	Insufficient data
1,1,1,2-Tetrachloroethane		Insufficient data	Insufficient data
Pentachloroethane		Insufficient data	Insufficient data

USEPA CWA AND SDWA GUIDELINES

(USEPA, 1985)
(Cont'd.)

Chemical	Safe Drinking Water Act, MCLs (mg/l unless otherwise noted)	Clean Water Act, Water Quality Criteria for Fish and Drinking Water	Clean Water Act, Water Quality Criteria for Human Health-- Adjusted for Drinking Water Only ^a
Dichloromethane		See Halomethanes	See Halomethanes
2,4-Dichloropheno1		3.09 mg/l	3.09 mg/l
Dichloropropanes/Dichloropropenes		Insufficient data	Insufficient data
Dichloropropenes		87 ug/l	87 ug/l
Dieldrin		0 (0.071 ng/l)	0 (1.1 ng/l)
2,4-Dimethylpheno1		400 ug/l (organo1eptic)	400 ug/l (organo1eptic)
2-4-Dinitrotoluene		0 (0.11 ug/l)	0 (0.11 ug/l)
1,2-Diphenylhydrazine		0 (42 ng/l)	0 (46 ng/l)
Endosulfan		74 ug/l	138 ug/l
Endrin	0.0002	1 ug/l	1 ug/l
Ethylbenzene		1.4 mg/l	2.4 mg/l
Fluoranthene		42 ug/l	188 ug/l
Fluoride	1.4-2.4	Insufficient data	Insufficient data
Haloethers		Insufficient data	Insufficient data
Halomethanes		0 (0.19 ug/l)	0 (0.19 ug/l)
Heptachlor		0 (0.28 ng/l)	0 (11 ng/l)
Hexachlorobutadiene		0 (0.45 ug/l)	0 (0.45 ug/l)
Hexachlorocyclohexanes			
Lindane (99% gamma-HCH)	0.004		
alpha-HCH		0 (9.2 ng/l)	0 (13 ng/l)
beta-HCH		0 (16.3 ng/l)	0 (23.2 ng/l)
gamma-HCH		0 (18.6 ng/l)	0 (26.4 ng/l)
delta-HCH		Insufficient data	Insufficient data
epsilon-HCH		Insufficient data	Insufficient data
Technical-HCH		0 (12.3 ng/l)	0 (17.4 ng/l)
Hexachlorocyclopentadiene		206 ug/l	206 ug/l

USEPA CWA AND SDWA GUIDELINES

(USEPA, 1985)
(Cont'd.)

Chemical	Safe Drinking Water Act, MCLs (mg/l unless otherwise noted)	Clean Water Act, Water Quality Criteria for Human Health--	Clean Water Act, Water Quality Criteria for Human Health--
		Fish and Drinking Water	Drinking Water Only ^a
Isophorone		5.2 mg/l	5.2 mg/l
Chlorinated naphthalenes		Insufficient data	Insufficient data
Chlorinated phenols			
3-Monochlorophenol		0.1 ug/l (organoleptic)	0.1 ug/l (organoleptic)
4-Monochlorophenol		0.1 ug/l (organoleptic)	0.1 ug/l (organoleptic)
2,3-Dichlorophenol		0.04 ug/l (organoleptic)	0.04 (ug/l (organoleptic)
2,5-Dichlorophenol		0.5 ug/l (organoleptic)	0.5 ug/l (organoleptic)
2,6-Dichlorophenol		0.2 ug/l (organoleptic)	0.2 ug/l (organoleptic)
3,4-Dichlorophenol		0.3 ug/l (organoleptic)	0.3 ug/l (organoleptic)
2,3,4,6-Tetrachlorophenol		1.0 ug/l (organoleptic)	1.0 ug/l (organoleptic)
2,4,5-Trichlorophenol		2,600 ug/l	2,600 ug/l
2,4,6-Trichlorophenol		0 (1.2 ug/l)	0 (1.8 ug/l)
2-Methyl-4-chlorophenol		1,800 ug/l (organoleptic)	1,800 ug/l (organoleptic)
3-Methyl-4-chlorophenol		3,000 ug/l (organoleptic)	3,000 ug/l (organoleptic)
3-Methyl-6-chlorophenol		20 ug/l (organoleptic)	20 ug/l (organoleptic)
Chlorophenoxy			
2,4-Dichlorophenoxyacetic acid (2,4-D)	0.1		
2,4,5-Trichlorophenoxypropionic acid (2,4,5-TP)	0.01		
Chloroalkyl ethers			
bis-(Chloromethyl) ether		0 (0.0038 ng/l)	0 (0.0039 ng/l)
bis-(2-Chloroethyl) ether		0 (30 ng/l)	0 (30 ng/l)
bis-2-Chloroisopropyl) ether	0.1 ^d	34.7 ug/l	34.7 ug/l
Chloroform		0 (0.19 ug/l)	0 (0.19 ug/l)
2-Chlorophenol		0.1 ug/l (organoleptic)	0.1 ug/l (organoleptic)
Chromium Cr+6	0.05	50 ug/l	50 ug/l
Cr+3		170 mg/l	179 mg/l
Copper		1 mg/l (organoleptic)	1 mg/l (organoleptic)
Cyanide		200 ug/l	200 ug/l

USEPA CWA AND SDWA GUIDELINES

(USEPA, 1985)
(Cont'd.)

Chemical	Safe Drinking Water Act, MCLs (mg/l unless otherwise noted)	Clean Water Act, Water Quality Criteria for Human Health--	
		Fish and Drinking Water	Drinking Water Only ^a
DDT		0 (0.024 ng/l)	0 (>1.2 ng/l)
Dichlorobenzenes (all isomers)		400 ug/l	470 ug/l
Dichlorobenzidines		0 (10.3 ng/l)	0 (20.7 ng/l)
Dichloroethylenes		0 (33 ng/l)	0 (33 ng/l)
1,1-Dichloroethylene		Insufficient data	Insufficient data
1,2-Dichloroethylene		50 ug/l	50 ug/l
Lead	0.05	144 ng/l	10 ug/l
Mercury	0.002		
Methoxychlor	0.1		
Naphthalene		Insufficient data	Insufficient data
Nickel		13.4 ug/l	15.4 ug/l
Nitrate (as N)	10.0		
Nitrobenzene		19.8 mg/l	19.8 mg/l
Nitrophenols			
2,4-Dinitro-c-cresol		13.4 ug/l	13.6 ug/l
Dinitrophenol		70 ug/l	70 ug/l
Mononitrophenol		Insufficient data	Insufficient data
Trinitrophenol		Insufficient data	Insufficient data
Nitrosamines			
n-Nitrosodimethylamine		0 (1.4 ng/l)	0 (1.4 ng/l)
n-Nitrosodiethylamine		0 (0.8 ng/l)	0 (0.8 ng/l)
n-Nitrosodi-n-butylamine		0 (6.4 ng/l)	0 (6.4 ng/l)
n-Nitrosodiphenylamine		0 (4.9 ug/l)	0 (7.0 ug/l)
n-Nitrosopyrrolidine		0 (16 ng/l)	0 (16 ng/l)
Pentachlorophenol		1.01 mg/l	1.01 mg/l
Phenol		3.5 mg/l	3.5 mg/l

USEPA CWA AND SDWA GUIDELINES

(USEPA, 1985)
(Cont'd.)

Chemical	Safe Drinking Water Act, MCLs (mg/l) unless otherwise noted)	Clean Water Act, Water Quality Criteria for Human Health--	
		Fish and Drinking Water	Adjusted for Drinking Water Only ^a
Phthalate esters			
Dimethylphthalate		313 mg/l	350 mg/l
Diethylphthalate		350 mg/l	434 mg/l
Dibutylphthalate		34 mg/l	44 mg/l
Di-2-ethylhexyl-phthalate		15 mg/l	21 mg/l
Polychlorinated biphenyls (PCBs)		0 (0.079 ng/l)	0 (>12.6 ng/l)
Polynuclear aromatic hydrocarbons (PAHs)		0 (2.8 ng/l)	0 (3.1 ng/l)
Radionuclides			
Radium-226 and 228	5 pCi/l		
Gross alpha activity	15 pCi/l		
Tritium	20,000 pCi/l		
Strontium-90	8 pCi/l		
Other man-made	e		
Selenium	0.01	10 ug/l	10 ug/l
Silver	0.05	50 ug/l	50 ug/l
2,3,7,8-TCDD		0 (0.000013 ng/l)	0 (0.00018 ng/l)
Tetrachloroethylene		0 (0.8 ug/l)	0 (0.88 ug/l)
Thallium		13 ug/l	17.8 ug/l
Toluene		14.3 mg/l	15 mg/l
Toxaphene	0.005	0 (0.71 mg/l)	0 (25.8 mg/l)
Trichloroethylene		0 (2.7 ug/l)	(2.8 ug/l)
Trihalomethane (total) ^f	0.1		
Vinyl chloride		0 (2.0 ug/l)	(2.0 ug/l)
Zinc		5 mg/l (organoleptic)	5 mg/l (organoleptic)

USEPA CWA AND SDWA GUIDELINES

(USEPA, 1985)
(Cont'd.)

Notes:

- a) These adjusted criteria, for drinking water ingestion only, were derived from published EPA Water Quality Criteria (45 FR 79318-79379, November 28, 1980) for combined fish and drinking water ingestion and for fish ingestion alone. These adjusted values are not official EPA Water Quality Criteria, but may be appropriate for Superfund sites with contaminated ground water. In the derivation of these values, intake was assumed to be 2 liters/day for drinking water and 6.5 grams/day for fish; human body weight was assumed to be 70 kilograms.
- b) Criteria designated as organoleptic are based on taste and odor effects, not human health effects. Health-based Water Quality Criteria are not available for these chemicals.
- c) Criteria for all carcinogens is zero; the concentration given in parentheses corresponds to a carcinogenic risk of 10^{-6} . Water Quality Criteria documents present concentrations resulting in risks from 10^{-9} to 10^{-6} . To obtain concentrations corresponding to risks of 10^{-4} and 10^{-5} , the 10^{-6} concentrations should be multiplied by 100 and 10, respectively. To obtain concentrations corresponding to risk of 10^{-7} , 10^{-6} concentrations should be divided by 10.
- d) Chloroform is one of four trihalomethanes whose sum concentration must be less than 0.1 mg/l.
- e) Activity corresponding to total body or any internal organ dose of 4 mrem/year.
- f) Total trihalomethanes refers to the sum concentration of chloroform, bromodichloromethane, dibromochloromethane, and bromoform.

APPENDIX L

Calculations

APPENDIX L - CALCULATIONS

TABLE OF CONTENTS

<u>Item</u>	<u>Calculation Page Nos.</u>	<u>Text Reference Section</u>
Surface Water Dilution	1-3	6.3.2
Water Balance	4-7	7.2
HELP Output-Infiltration Analysis	8-16	7.2.1
RI/FS Costing Procedures	17-18	8.0
Cost Estimate: Incineration	19-21	10.3.1
Cost Estimate: Leachate Transportation	22-23	8.3.2.1
Cost Estimate: On-Site Treatment (Construction)	24-30	8.3.2.2.8
Cost Estimate: On-Site Treatment (O/M)	31-38	8.3.2.2.8
Cost Estimate: Leachate Storage Facility	39	8.3.2.2.8
Down-Scale of Treatment/Disposal Costs	40	8.3.2.2.8
Slurry Wall & Drain Evaluation	41-56	8.3.3
Cost Estimate: Waste Excavation & Disposal	57	10.3.1
Cost Estimate: Supplementary Capping	58-61	10.3.1
Cost Estimate: Leachate Collection Drain	62-63	10.3.1
Cost Estimate: Leachate Collection Wells	64-66	10.3.1
Unit Rates: Slurry Wall	67-70	10.3.1
Combined Cost of Remedial Alternatives	71	10.3.2
Construction Cost Estimate: Addt. Items	72	12.2
Monitoring Program Costs	73-75	12.4

SUBJECT: _____

Surface Water Dilution

CALCULATIONS

Page 1

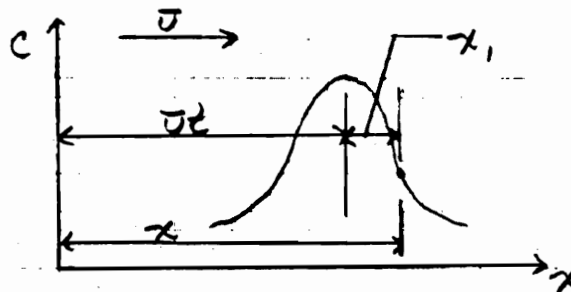
Discussion: Surface water contamination will be diluted in moving downstream away from the site. Calculate dilution using the convective-diffusion equation. Assume that contaminants are conservative, i.e., that physical/chemical/biological reductions can be ignored and that the only process causing dilution is mechanical dispersion. Actual dilution will be greater due to volatilization, biological decay, settlement, adsorption, etc.

One-Dimensional Form of Convective-Diffusion Eq. in Turbulence

$$\frac{\partial c}{\partial t} + u \frac{\partial c}{\partial x} = D_L \frac{\partial^2 c}{\partial x^2} \quad [\text{Eq. 1}]$$

where: c = concentration $[\text{ML}^{-3}]$
 t = time $[\text{T}]$
 u = longitudinal velocity $[\text{LT}^{-1}]$
 x = longitudinal distance $[\text{L}]$
 D_L = longitudinal dispersion coefficient $[\text{L}^2\text{T}^{-1}]$

Frame of Reference



$$x_1 = x - \bar{u}t \quad [\text{Eq. 2}]$$

i.e., we are watching the diffusion process as we move downstream with average current velocity \bar{u}

Convective-Diffusion Equation reduces to

$$\frac{\partial c}{\partial t} = D_L \frac{\partial^2 c}{\partial x_1^2} \quad [\text{Eq. 3}]$$

SUBJECT: _____

Surface Water Dilution

CALCULATIONS

Page 2

Initial and Boundary Conditions

$$c = c(x_1, t)$$

Initial Condition: For a unit "spike" of contaminant injected at $t = 0$: $c(x_1, 0) = \delta(x_1)$

where $\delta(x) =$ Dirac delta function
 $= \phi$ everywhere except @

$$\int_{-\infty}^{\infty} \delta(x) dx = 1$$

i.e., area under spike
is unity

For an instantaneous injection of mass M into a receiving water with density ρ across a section of area A

$$c(x_1, 0) = \frac{M}{\rho A} \delta(x_1)$$

Boundary Condition: Allowing unlimited spreading of contaminant

$$c(\pm\infty, t) = \phi$$

Eg [3] can be solved for these initial & boundary conditions using method of Laplace transforms to yield:

$$c(x_1, t) = \frac{(M/\rho A)}{\sqrt{4\pi D_L t}} e^{-\frac{x_1^2}{4D_L t}}$$

or, converting to x coordinate from x_1

$$c(x, t) = \frac{(M/\rho A)}{\sqrt{4\pi D_L t}} e^{-\frac{(x - \bar{u}t)^2}{4D_L t}}$$

For this dilution analysis, consider the centerline dilution

$$x = x_m = \bar{u}t \quad \therefore x_1 = \phi$$

$$c(x_m, t) = \frac{(M/\rho A)}{\sqrt{4\pi D_L t}} = \frac{(M/\rho A)}{\sqrt{4\pi D_L (x_m/\bar{u})}}$$

SUBJECT: _____

Surface Water Dilution

CALCULATIONS

Page 3

Calculate Dilution (D), where:

$$D = \frac{C(x_m=0, t)}{C(x_m, t)}$$

Comment: The use of the Dirac delta function as an initial condition results in a hypothetical concentration approaching infinity at x or t equal to zero. This is due to the nature of the function, where a finite volume of mass is injected over an infinitely small ($x=0$) distance. In reality, the "slug" of stream water passing the site will be given a finite concentration of contaminant (C_0) over the finite stream length adjacent to the site. Since we are concerned only with dilution downstream, and not in the vicinity of the site, assume $C = C_0$ at an arbitrary distance $x_m = 100$ ft. Then:

$$C_0 = C(100, t) = \frac{(M/PA)}{\sqrt{4\pi D_L \cdot 100/t}}$$

$$C = C(x_m, t) = \frac{(M/SA)}{\sqrt{4\pi D_L x_m/t}}$$

$$D = \frac{C_0}{C} = \frac{\sqrt{x_m}}{\sqrt{100}}$$

$$\text{or } x_m = 100 D^2$$

where x_m = distance downstream (ft)
to achieve dilution D

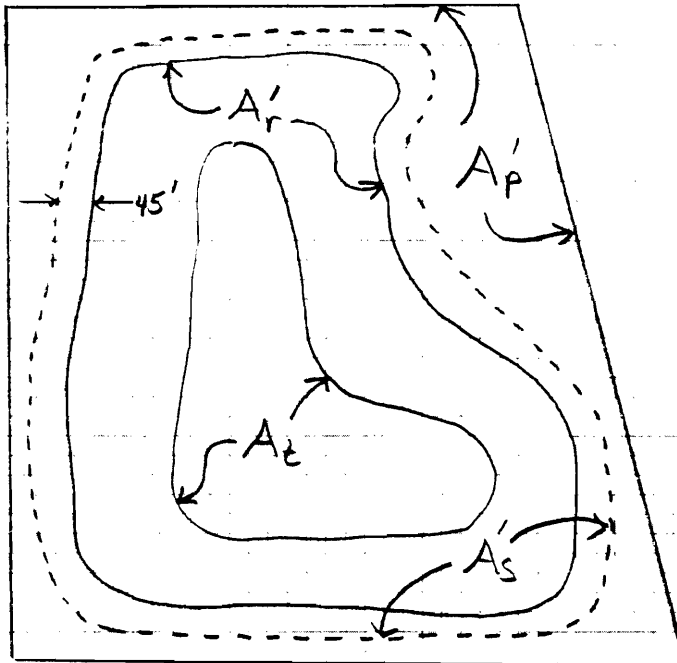
D	x_m - ft	x_m - mi
2	400	0.078
5	2,500	0.47
10	10,000	1.9
100	1,000,000	189.

SUBJECT: Volney Landfill
Water Balance - Revised

CALCULATIONS

Page 4

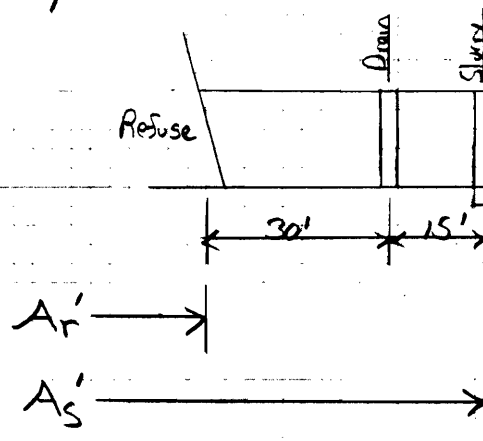
Discussion: Refer to Section 7.0 of report for methodology. Use revised area calculations (attached) as follows:



- A_2 = Area enclosed by existing PVC membrane
- A_r' = Area occupied by refuse
- A_s' = Area enclosed by a line 45 ft outside of and parallel to refuse
- A_p' = Area enclosed by the perimeter reference line (Fig 7-2)

Note: Sub-areas A_1 , A_2 and A_3 not shown

Comment: The line 45 ft outside of and parallel to the limit of refuse represents the probable location for a perimeter leachate collection drain and slurry wall.



A_s' will be used as the basis for infiltration analysis and subsequent cost estimates for capping, etc.

Note: A_r' , A_s' and A_p' are total areas enclosed by their respective enclosure lines (i.e., $A_p' > A_s' > A_r' > A_e$). In the infiltration analysis, we are concerned with the incremental sideslope area A_s , where $A_s = A_s' - A_e$.

SUBJECT: Volney Landfill
Water Balance - Revised

CALCULATIONS
Page 5

<u>Section Acreages</u>	Section 1	Section 2	Section 3	Total Site
A_t	8.28	8.60	4.99	21.87
A_r'	16.92	17.79	15.34	50.05
A_s'	19.95	19.52	17.31	56.78
A_p'	30.48	15.01	14.59	60.08
A_s	11.67	10.92	12.32	34.91

Areas in acres

Water Balance Analysis

	Section 1	Section 2	Section 3	Total Site
A_t (acres)	8.28	8.60	4.99	21.87
A_s (acres)	11.67	10.92	12.32	34.91
I_n (gpd)	5,510	5,200	5,650	16,360
S_n (gpd)	1,230	1,210	1,070	3,510
Q_n (gpd)	4,280	3,990	4,580	12,850

Notes: Precip = 47.97 in/yr
 $i_t = 0.62$ in/yr
 $i_s = 5.91$ in/yr
 $S_n = 0.83$ in/yr

$$I_n = i_t A_{nt} + i_s A_{ns} \left[\frac{\text{ac-in}}{\text{yr}} \times \left(\frac{1 \text{ ft}}{12 \text{ in}} \times \frac{43,560 \text{ ft}^2}{\text{ac}} \times \frac{74.4 \text{ gal}}{\text{ft}^3} \times \frac{1 \text{ yr}}{365 \text{ d}} \right) \right]$$

$$S_n = S_n (A_{nt} + A_{ns}) \times 74.4$$

$$Q_n = I_n - S_n$$

SUBJECT: VOLNEY- PLANIMETER OF 3 SECTIONS OF
PVC CAP + LIMITS OF REFUSE

CALCULATIONS

Page 6

AREAS	PLANIMETER READING	AVERAGE	CONVERSION / SQ. FT.
AT-1	9.0 & 9.04	9.02	360,800
AS-1	24.78	24.78	991,861
AT-2	9.28 & 9.46	9.37	374,800
AS-2a	2.78 & 2.8	2.79	111,600
AS-2b	4.54 + 4.54	4.54	181,600
			<u>293,200</u>
AT-3	5.4 & 5.47	5.435	217,400
AS-3	10.88 & 10.94	10.91	436,400

AT-1 = 360,800^{sq} = 8.28 AC.
 AT-2 = 374,800 = 8.60 AC. = 21.87 AC. } AT
 AT-3 = 217,400 = 4.99 AC.

AS-1 = 991,861 = 22.77 AC.
 AS-2 = 293,200 = 6.73 AC. = 39.52 AC.
 AS-3 = 436,400 = 10.02 AC.
 TOTAL 61.45 AC.

AP'

① $8.28 + 22.77 - \frac{(1650)(15)}{43,560} = 30.48 \text{ AC.}$

② $8.60 + 6.73 - \frac{(920)(15)}{43,560} = 15.01 \text{ AC.}$

③ $4.99 + 10.02 - \frac{(860+370)(15)}{43,560} = 14.59 \text{ AC.}$

TOTAL: $21.87 + 39.52 - \frac{(2020+1780)(15)}{43,560} = 60.08 \text{ AC.}$

SUBJECT: PLANIMETER COMPUTATIONS OF
REACH 1 & 2, AND LIMITS OF REFUSE+ PVC CAP

CALCULATIONS

Page 7

LIMITS OF PVC CAP+ REFUSE

AREAS

① = 18.425 = 737,000 = 16.92 AC.

② = 19.375 = 775,000 = 17.79 AC.

③ = 16.725 = 669,000 = 15.34 AC.

TOTAL 50.05 AC.

} Ar'

As'

① $16.92 + (2930)(45) / 43,560 = 19.95$ AC.

② $17.92 + (1670)(45) / 43,560 = 19.52$ AC.

③ $15.34 + (1900)(45) / 43,560 = 17.31$ AC.

TOTAL: $50.05 + (6500)(45) / 43,560 = 56.78$ AC.

} As'

```

*****
*
*      HYDROLOGIC EVALUATION OF LANDFILL PERFORMANCE
*      HELP VERSION 1
*
*      WRITTEN BY
*
*      PAUL R. SCHROEDER
*      AUGUST, 1983
*
*      OF THE
*      WATER RESOURCES ENGINEERING GROUP
*      ENVIRONMENTAL LABORATORY
*      USAE WATERWAYS EXPERIMENT STATION
*      P.O. BOX 631
*      VICKSBURG, MS 39180
*
*****
*
*      USER'S GUIDE AVAILABLE UPON REQUEST
*      FOR CONSULTATION CONTACT AUTHORS AT
*      (601) 634-3709 OR (601) 634-3710
*
*****

```

1.1 DO YOU WANT TO ENTER OR CHECK DATA OR TO OBTAIN OUTPUT?

- ENTER 1 FOR CLIMATOLOGIC INPUT,
- 2 FOR SOIL OR DESIGN DATA INPUT,
- 3 TO RUN THE SIMULATION AND OBTAIN DETAILED OUTPUT,
- 4 TO STOP THE PROGRAM, AND
- 5 TO RUN THE SIMULATION AND OBTAIN ONLY SUMMARY OUTPUT.

YES

VOLNEY:TOP RUN 1D
VOLNEY LANDFILL, OSWEGO COUNTY, NY
FEBRUARY 8, 1987

FAIR GRASS

LAYER 1

VERTICAL PERCOLATION LAYER	
THICKNESS	= 12.00 INCHES
EVAPORATION COEFFICIENT	= 3.100 MM/DAY**0.5
POROSITY	= 0.5200 VOL/VOL
FIELD CAPACITY	= 0.4500 VOL/VOL
WILTING POINT	= 0.3600 VOL/VOL
EFFECTIVE HYDRAULIC CONDUCTIVITY	= 0.28000000 INCHES/HR

LAYER 2

BARRIER SOIL LAYER WITH LINER	
THICKNESS	= 30.00 INCHES
EVAPORATION COEFFICIENT	= 3.100 MM/DAY**0.5
POROSITY	= 0.5200 VOL/VOL
FIELD CAPACITY	= 0.4500 VOL/VOL
WILTING POINT	= 0.3600 VOL/VOL
EFFECTIVE HYDRAULIC CONDUCTIVITY	= 0.11300000 INCHES/HR

WASTE LAYER THICKNESS = 480.00 INCHES
 EVAPORATION COEFFICIENT = 3.300 MM/DAY**0.5
 POROSITY = 0.5200 VOL/VOL
 FIELD CAPACITY = 0.3200 VOL/VOL
 WILTING POINT = 0.1900 VOL/VOL
 EFFECTIVE HYDRAULIC CONDUCTIVITY = 0.28299999 INCHES/HR

GENERAL SIMULATION DATA

SCS RUNOFF CURVE NUMBER = 75.00
 TOTAL AREA OF COVER = 958320. SQ. FT
 EVAPORATIVE ZONE DEPTH = 10.00 INCHES
 LINER LEAKAGE FRACTION = 0.000500
 EFFECTIVE EVAPORATION COEFFICIENT = 3.100 MM/DAY**0.5
 UPPER LIMIT VEG. STORAGE = 5.2000 INCHES
 INITIAL VEG. STORAGE = 4.0500 INCHES

CLIMATOLOGIC DATA FOR SYRACUSE NEW YORK

MONTHLY MEAN TEMPERATURES, DEGREES FAHRENHEIT

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.22	25.66	33.12	44.58	56.99	67.02
71.98	70.54	63.08	51.62	39.21	29.18

MONTHLY MEANS SOLAR RADIATION, LANGLEYS PER DAY

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
106.33	164.90	260.07	366.34	455.24	502.95
496.67	438.10	342.93	236.66	147.76	100.05

LEAF AREA INDEX TABLE

DATE	LAI
1	0.00
121	0.00
138	0.61
155	0.99
171	0.99
188	0.99
205	0.99
222	0.99
239	0.89
255	0.65
272	0.32
289	0.17
366	0.00

289 0.17
366 0.00

FAIR GRASS

WINTER COVER FACTOR = 0.60

CALCULATIONS

Page 11

AVERAGE MONTHLY TOTALS FOR 74 THROUGH 78

	<u>JAN/JUL</u>	<u>FEB/AUG</u>	<u>MAR/SEP</u>	<u>APR/OCT</u>	<u>MAY/NOV</u>	<u>JUN/DEC</u>
PRECIPITATION (INCHES)	3.01 6.32	1.98 4.98	3.59 5.35	3.67 3.91	3.71 3.29	4.61 3.54
RUNOFF (INCHES)	0.000 1.724	0.000 1.046	3.942 2.023	3.757 1.786	1.191 1.752	0.249 0.564
EVAPOTRANSPIRATION (INCHES)	0.737 3.920	1.061 4.084	2.120 3.073	2.107 1.879	3.361 1.139	4.235 0.768
PERCOLATION FROM BASE OF COVER (INCHES)	0.0448 0.0567	0.0404 0.0517	0.0504 0.0516	0.0537 0.0550	0.0531 0.0550	0.0511 0.0570
PERCOLATION FROM BASE OF LANDFILL (INCHES)	0.0450 0.0555	0.0406 0.0537	0.0471 0.0507	0.0525 0.0544	0.0539 0.0541	0.0510 0.0571
DRAINAGE FROM BASE OF COVER (INCHES)	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000
DRAINAGE FROM BASE OF LANDFILL (INCHES)	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000

AVERAGE ANNUAL TOTALS FOR 74 THROUGH 78

	(INCHES)	(CU. FT.)	PERCENT
PRECIPITATION	47.97	3830884.	100.00
RUNOFF	18.032	1440030.	37.59
EVAPOTRANSPIRATION	28.485	2274793.	59.38
PERCOLATION FROM BASE OF COVER	0.6207	49568.	1.29
PERCOLATION FROM BASE OF LANDFILL	0.6156	49164.	1.28
DRAINAGE FROM BASE OF COVER	0.000	0.	0.00
DRAINAGE FROM BASE OF LANDFILL	0.000	0.	0.00

CALCULATIONS

Page 12

PEAK DAILY VALUES FOR 74 THROUGH 78

	(INCHES)	(CU. FT.)
PRECIPITATION	3.90	311454.0
RUNOFF	2.580	206014.3
PERCOLATION FROM BASE OF COVER	0.0120	960.1
PERCOLATION FROM BASE OF LANDFILL	0.0046	370.9
DRAINAGE FROM BASE OF COVER	0.000	0.0
DRAINAGE FROM BASE OF LANDFILL	0.000	0.0
HEAD ON BASE OF COVER	12.1	
HEAD ON BASE OF LANDFILL	0.0	
SNOW WATER	7.84	625811.7
MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.5200	
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.3600	

Abort, Retry, Ignore? A

C:\CD
C:\HELP.DIR

yes

VOLNEY:SIDES FINAL RUN
VOLNEY LANDFILL, OSWEGO COUNTY, NY
FEBRUARY 8, 1987

LAYER 1

VERTICAL PERCOLATION LAYER	
THICKNESS	= 6.00 INCHES
EVAPORATION COEFFICIENT	= 3.100 MM/DAY**0.5
POROSITY	= 0.5200 VOL/VOL
FIELD CAPACITY	= 0.4500 VOL/VOL
WILTING POINT	= 0.3600 VOL/VOL
EFFECTIVE HYDRAULIC CONDUCTIVITY	= 0.0140000 INCHES/HR

LAYER 2

BARRIER SOIL LAYER	
THICKNESS	= 18.00 INCHES
EVAPORATION COEFFICIENT	= 3.100 MM/DAY**0.5
POROSITY	= 0.5200 VOL/VOL
FIELD CAPACITY	= 0.4500 VOL/VOL
WILTING POINT	= 0.3600 VOL/VOL
EFFECTIVE HYDRAULIC CONDUCTIVITY	= 0.0140000 INCHES/HR

WASTE LAYER
 THICKNESS = 240.00 INCHES
 EVAPORATION COEFFICIENT = 3.300 MM/DAY**0.5
 POROSITY = 0.5200 VOL/VOL
 FIELD CAPACITY = 0.3200 VOL/VOL
 WILTING POINT = 0.1900 VOL/VOL
 EFFECTIVE HYDRAULIC CONDUCTIVITY = 0.28299999 INCHES/HR

GENERAL SIMULATION DATA

SCS RUNOFF CURVE NUMBER = 90.00
 TOTAL AREA OF COVER = 1437480. SQ. FT
 EVAPORATIVE ZONE DEPTH = 5.90 INCHES
 EFFECTIVE EVAPORATION COEFFICIENT = 3.100 MM/DAY**0.5
 UPPER LIMIT VEG. STORAGE = 3.0680 INCHES
 INITIAL VEG. STORAGE = 2.3895 INCHES

CLIMATOLOGIC DATA FOR SYRACUSE NEW YORK

MONTHLY MEAN TEMPERATURES, DEGREES FAHRENHEIT

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
24.22	25.66	33.12	44.58	56.99	67.02
71.98	70.54	63.08	51.62	39.21	29.18

MONTHLY MEANS SOLAR RADIATION, LANGLEYS PER DAY

JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
106.33	164.90	260.07	366.34	455.24	502.95
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272	0.32
289	0.17
366	0.00

FAIR GRASS

15

AVERAGE MONTHLY TOTALS FOR 74 THROUGH 78

	JAN/JUL	FEB/AUG	MAR/SEP	APR/OCT	MAY/NOV	JUN/DEC
PRECIPITATION (INCHES)	3.01 6.32	1.98 4.98	3.59 5.35	3.67 3.91	3.71 3.29	4.61 3.54
RUNOFF (INCHES)	0.000 3.024	0.000 2.106	1.733 2.569	2.685 1.523	0.990 1.024	1.224 0.205
EVAPOTRANSPIRATION (INCHES)	0.737 3.105	1.061 2.819	2.152 2.561	2.272 1.798	2.726 1.131	3.189 0.785
PERCOLATION FROM BASE OF COVER (INCHES)	0.0000 0.0821	0.0000 0.1119	1.9390 0.2857	1.5117 0.4711	0.2297 0.8040	0.0528 0.4201
PERCOLATION FROM BASE OF LANDFILL (INCHES)	0.0119 0.0687	0.0001 0.1183	1.0341 0.1987	2.2743 0.5020	0.3457 0.6182	0.0669 0.6678
DRAINAGE FROM BASE OF COVER (INCHES)	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000
DRAINAGE FROM BASE OF LANDFILL (INCHES)	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000	0.000 0.000

AVERAGE ANNUAL TOTALS FOR 74 THROUGH 78

	(INCHES)	(CUBIC FT.)	PERCENT
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AVERAGE ANNUAL TOTALS FOR 74 THROUGH 78

	(INCHES)	(CU. FT.)	PERCENT
PRECIPITATION	47.97	5746326.	100.00
RUNOFF	17.083	2046375.	35.61
EVAPOTRANSPIRATION	24.335	2915131.	50.73
PERCOLATION FROM BASE OF COVER	5.9083	707754.	12.32
PERCOLATION FROM BASE OF LANDFILL	5.9068	707573.	12.31
DRAINAGE FROM BASE OF COVER	0.000	0.	0.00
DRAINAGE FROM BASE OF LANDFILL	0.000	0.	0.00

PEAK DAILY VALUES FOR 74 THROUGH 78

	(INCHES)	(CU. FT.)
PRECIPITATION	3.90	467181.0
RUNOFF	3.342	400395.0
PERCOLATION FROM BASE OF COVER	0.2500	29945.6
PERCOLATION FROM BASE OF LANDFILL	0.1825	21867.3
DRAINAGE FROM BASE OF COVER	0.000	0.0
DRAINAGE FROM BASE OF LANDFILL	0.000	0.0
HEAD ON BASE OF COVER	0.7	
HEAD ON BASE OF LANDFILL	0.0	
SNOW WATER	7.84	938717.5
MAXIMUM VEG. SOIL WATER (VOL/VOL)	0.5110	
MINIMUM VEG. SOIL WATER (VOL/VOL)	0.3592	

URS COMPANY, INC.
CONSULTING ENGINEERS

SUBJECT: RT/FS Costing Procedures
Present Worth Analysis

REGISTRATION NO. _____

Page 17

Discussion: The total present worth (PW) of a remedial measure generally consists of 3 components:

(a) Present worth of capital (construction) cost

The PW of a capital cost (C) is equal to the capital cost itself.

(b) Present worth of replacement cost

If a measure must be replaced after x years, at a replacement cost (R), which may or may not be equal to its full capital cost (C), the present worth of this replacement cost is given by:

$$PW_R = \frac{1}{(1+i)^x} R$$

where i = discount rate (as per USEPA Draft Remedial Action Costing Procedure Manual, use $i = 10\%$)

$$\therefore PW_R = \frac{1}{(1.1)^x} R$$

(c) Present worth of annual operation & maintenance (O&M) costs

If a measure is designed to operate for a period of n years, and has a uniform annual O&M cost of OM during that period, then the present worth of this O&M is given by:

$$PW_{OM} = \frac{(1+i)^n - 1}{i(1+i)^n} OM$$

using the above i of 10%, and assuming a maximum operating period of 30 years (i.e., $n = 30$), as per USEPA Costing Procedure Manual (Sept 1985):

$$PW_{OM} = (9.43)(OM)$$

Therefore, total present worth (PW) is:

$$PW = C + \left(\frac{1}{1.1^x}\right) R + (9.43) OM$$

where C = construction cost
 R = replacement cost (if $x < n = 30$)
 OM = annual O&M cost
 x = no. of years till replacement

BY AMM DATE 5/12/87

URS COMPANY, INC.
CONSULTING ENGINEERS

SHEET NO. 1 OF 1

CHKD. BY _____ DATE _____

JOB NO. _____

SUBJECT: RI/FS Costing Procedures
Present worth Analysis

CALCULATIONS
Page 18

If $n = 5$ years (for incineration)

$$PW_{om} = \frac{(1 + -1)^5 - 1}{-1(1 + -1)^5} OM$$

$$PW_{om} = (3.79)(OM)$$

SUBJECT: VOLNEY LANDFILL**CALCULATIONS**ON SITE WASTE INCINERATIONPage 19COST ESTIMATE

DISCUSSION: THE FEASIBILITY OF PERFORMING ON SITE INCINERATION OF THE WASTE CONTAINED IN THE LANDFILL WAS INVESTIGATED.

QUANTITY

55 ACRES @ 45' AVG. DEPTH

ASSUME 50 #/CF

$$55A \times 43,560 \text{ SF/A} \times 45' \times 50 \#/\text{CF} \times 1 \text{ TON}/2000 \# \\ = 2,700,000 \text{ TONS} \checkmark$$

CAPITAL COSTS

MR. JOE DELLICCOVA OF ENVIRONMENTAL SYSTEMS & SERVICES, A DIVISION OF COMBUSTION ENGINEERING, WAS CONSULTED, AMONG OTHERS;

FOR THE GIVEN CONDITIONS MR. DELLICCOVA ADVISED THE USE OF A SERIES OF 9' LONG ROTARY KILN INCINERATORS WITH A CAPACITY OF 150 TON/DAY (6.25 T/HR). CAPITAL COST WOULD BE \$20 MILLION EA.

SAY 250 WORKING DAYS/YR @ 75%

OPERATING TIME

$$250 \times .75 = 187.5 \text{ DAYS/YR}$$

$$187.5 \text{ D/YR} \times 150 \text{ T/D} = 28,125 \text{ T/Y}$$

SAY A 5 YR SCHEDULE IS REQ'D.

$$2,700,000 \text{ T} / 5 \text{ YR} = 540,000 \text{ T/YR}$$

$$540,000 \text{ T/YR} \times 1 \text{ YR} / 28,125 \text{ T} = 19 \text{ UNITS REQ'D}$$

$$19 \text{ UNITS} \times \$20 \text{ MILLION EA} = \$380 \text{ MILLION}$$

OPERATING COST

MR. DELLICCOVA WOULD NOT SPECULATE ON OPERATING COSTS.

MR. PAT PHILLIPS OF VESTA EXPLAINED THAT ON SIMILAR HAZARDOUS CLEAN-UPS THEIR ROTARY KILN USED 8 MILLION BTU/HR TO INCINERATE 1 TON/HR FOR A 6.25 T/HR UNIT USE 8 MILL \times 6 = 48 MILLION BTU/HR ASSUME #6 FUEL @ 1.6×10^9 BTU/GAL @ \$1/GAL

$$48 \times 10^6 \text{ BTU/HR} \times 1 \text{ GAL} / 1.6 \times 10^9 \text{ BTU} \times \$1/\text{GAL} \\ = \$3000/\text{HR} / \text{UNIT}$$

SUBJECT: YOUNEX LANDFILL
ON SITE WASTE INCINERATION
COST ESTIMATE

CALCULATIONS
Page 20

OPERATING COSTS (CONTINUED)

$$\$3,000/\text{UNIT HR} \times 19 \text{ UNITS} = \$57,000/\text{HR}$$

ASSUME 2 OPERATORS PER UNIT PLUS 2 SUPERVISING OPERATORS @ \$20/HR

$$19 \text{ UNITS} \times 2 \text{ OP./UNIT} + 2 \text{ OPER.} = 40 \text{ OPERATORS}$$

$$40 \text{ OPER.} \times \$20/\text{HR} = \$800/\text{HR}$$

$$\text{TOTAL OPERATING COSTS} = \$57,800/\text{HR}$$

$$\begin{aligned} & \$57,800/\text{HR} \times 24 \text{ HR/DAY} \times 187.5 \text{ DAY/YR} \\ & = \$260 \text{ MILLION/YR} \end{aligned}$$

COST TO EXCAVATE & HAUL WASTES

$$\begin{aligned} & 540,000 \text{ T/YR} \times 2000 \#/\text{TON} \times 1 \text{ CF}/500 \# \times 1 \text{ CY}/27 \text{ CF} \\ & = 800,000 \text{ CY/YR} \end{aligned}$$

FROM 1987 MEANS (LOADED COST)

$$\begin{aligned} 2.3 - 160 - 1650 \text{ EXCAVATE, } 50 \text{ CY BUCKET} &= \$0.90/\text{CY} \\ + 15\% \text{ TO LOAD ON TRUCK} &= .14/\text{CY} \end{aligned}$$

$$\begin{aligned} 2.3 - 300 - 0310 \text{ HAULING, } 12 \text{ CY TRUCK} \\ \text{1/2 MI RT.} &= 1.21/\text{CY} \end{aligned}$$

$$\text{TOTAL} = \$2.25/\text{CY}$$

$$\$2.25/\text{CY} \times 800,000 \text{ CY/YR} = \$1,800,000/\text{YR}$$

SUBJECT: Valley Landfill
On-Site Waste Incineration
Cost Estimate (Revised)

CALCULATIONS
Page 21

Discussion: Previous analysis assumed incineration of all 4,000,000 cy of on-site material. Revise estimate to incinerate only the old, southern half of the landfill (~2,000,000 cy)

Allow 5 yrs for total project

$$\begin{aligned} \therefore 2,000,000 \text{ cy} / 5 \text{ yr} &= 400,000 \text{ cy/yr} \\ &\times 0.675 \text{ tons/cy (i.e., 50 lb/ft}^3\text{)} \\ &= 270,000 \text{ tons/yr} \end{aligned}$$

Assume as before that each rotary kiln burns 150 tons/day (24-hr day) and operates 187.5 days/yr. Therefore, each unit burns 28,125 tons/yr. The total # of units reqd. is:

$$(270,000 \text{ tons/yr}) / (28,125 \text{ tons/yr/unit}) = 9.6$$

say 10 units

Construction (i.e., Direct Capital) cost:

$$10 \text{ rotary kiln units @ } \$20,000,000/\text{unit} = \$200 \text{ million}$$

Operating costs

Fuel: \$3,000/unit-hr (as before)

$$\times 10 \text{ units} \times 24 \text{ hr/day} \times 187.5 \text{ d/yr} = \$135 \text{ million/yr}$$

Labor: 1 Supervisor + (2 operators/unit) (10 units) = 21 operators

$$(21 \text{ ops.}) (\$20/\text{op-hr}) = \$420/\text{hr}$$

$$\$420/\text{hr} \times 24 \text{ hr/day} \times 187.5 \text{ day/yr} = \$1.89 \text{ million/yr}$$

Waste Excavation & Hauling: \$2.45/cy (as before)

$$(\$2.45/\text{cy}) (400,000 \text{ cy/yr}) = \$0.98 \text{ million/yr}$$

SUBJECT: YOLNEY LANDFILL CALCULATIONS
TRUCKING COST FOR LEACHATE DISPOSAL Page 22
DIRECT CAPITOL COST & O/M COST ESTIMATE

IT IS ANTICIPATED THAT THE AMOUNT OF LEACHATE TO BE DISPOSED OF WILL BE EQUAL TO 18,000 GAL/DAY @ 5 DAYS/WK.

1. DIRECT CAPITOL COST

- A) PURCHASE PRICE OF A 6,000 GAL, STAINLESS STEEL, 43' TRAILER

QUOTE FROM UTILITY TRI-TANK
 = \$ 37,500.

- B) PURCHASE PRICE OF A 1987, 300 HP MACK TRACTOR

QUOTE FROM BUFFALO MACK TRUCK
 = \$ 64,000

- C) TOTAL = \$ 37,000 + 64,000 = \$ 101,000

2. OPERATING & MAINTENANCE COST

- A) HOURLY OPERATING COST FROM 1987 MEANS

1.5.1 - 150 - 2500 6x2 40 TON 240 HP TRACTOR
 = \$ 12.15/HR

- B) TEAMSTER WAGES

FROM NYS DEPARTMENT OF LABOR WAGE RATES
 TEAMSTER HEAVY/HIGHWAY GROUP 3
 6/01/87 - 5/31/88

WAGES \$ 15.19 / HR

HEALTH 1.25

PENSION 2.10

TOTAL = 18.54 / HR

- C) OPERATING TIME

18,000 GAL/DAY ÷ 6,000 GAL/LOAD = 3 LOADS/DAY
 1/2 HR TO FILL + 1/2 HR TO DUMP + 1/2 HOUR, 20 MILE ROUND TRIP = 1 1/2 HR/LOAD X 3 LOADS/DAY
 = 4 1/2 HR/DAY + 1/2 HR LUNCH = 5 HR/DAY
 5 HR/DAY X 5 DAYS/WK X 52 WKS/YR
 = 1300 HR/YR.

SUBJECT: VOLNEY LANDFILL

TRUCKING COSTS FOR LEACHATE DISPOSAL

DIRECT CAPITAL COST & O/M COST ESTIMATE

CALCULATIONS

Page 23

2. D) TOTAL O/M COST

$$(\$12.15/\text{HR} + \$18.54/\text{HR}) \times 1300 \text{ HRS}/\text{YR}$$

$$= \$39,897/\text{YR}$$

$$\text{SAY } \$\underline{\underline{40,000/\text{YR}}}$$

$$\text{TOTAL PRESENT WORTH} = \$101,000 + 9.43(\$40,000) \\ = \$478,000$$

$$\text{EQUIVALENT ANNUAL COST} = \$478,000 / 9.43 \\ = \$51,000/\text{YR}$$

$$\text{COST/GALLON} = \$51,000/\text{YR} \div [18,000 \times 5^4/\text{WK} \times 52^{\text{W}}/\text{YR}] \\ = \$0.011/\text{GALLON}$$

$$\text{SAY } \$\underline{\underline{0.01/\text{GALLON}}}$$

BY CWP DATE 2/19/87

URS COMPANY, INC.
CONSULTING ENGINEERS

SHEET NO. 1 OF 7

CHKD. BY _____ DATE _____

JOB NO. 35102

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
CAPITAL COST SUMMARY

CALCULATIONS
Page 24

<u>ITEM NO</u>	<u>EQUIPMENT</u>	<u>SOURCE</u>	<u>COST</u>
①	EQUALIZATION/STORAGE TANK	MEANS	\$126,000 ⁰⁰
	EQUAL/STOR. AGITATOR	RICHARDSON	14,000 ⁰⁰
②	BIOREACTOR w feed pumps(2), blowers(2), decanter + control panel	JET-TECH	165,000 ⁰⁰
③	DISCHARGE PUMPS(2)	RICHARDSON	5,400 ⁰⁰
④	FILTER PRESS	STEWART	19,200 ⁰⁰
⑤	FEED PUMPS(2)	GLAUBER+CARPENTER	4,000 ⁰⁰
⑥	AIR COMPRESSOR	RICHARDSON	2,800 ⁰⁰
⑦	SLUDGE TANK	MEANS	3,000 ⁰⁰
⑧	STEAM GENERATOR	ULRICH	23,000 ⁰⁰

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
CAPITAL COST ESTIMATE CALCULATIONS
 Page 25

① EQUALIZATION/STORAGE TANK WITH AGITATOR
SIZE TANK

$$13,000 \text{ gpd} \times 11.2 \text{ (Storm Event)} = 145,600 \text{ gal.}$$

Say 150,000 gal

COST TANK

84¢/gal (MEANS 1987)

$$150,000 \times 0.84 = \$126,000$$

SIZE AGITATOR

$$0.15 \text{ HP/1000 GAL (ULRICH)} \times 150,000 \text{ GAL} = 22.5 \text{ HP}$$

SAY 25 HP

COST AGITATOR

\$14,000 (RICHARDSON)

② BIOREACTOR

SIZE BIOREACTOR

$$13,000 \text{ gpd} \times 7 \text{ days} = 81,000 \text{ GPW}$$

$$\frac{81,000 \text{ GPW}}{5 \text{ process days/week}} = 18,200 \text{ gal/process day}$$

$$\frac{18,200 \text{ gal}}{0.8 \text{ (ONSTREAM FACTOR)}} = 22,750 \text{ gal}$$

FROM PAS REPORT by URS, Oct 1985

$$FV_{\text{BIOREACTOR}} = 2 \times \text{Volume/Batch} = 45,500$$

SAY 50,000 gal

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
CAPITAL COST ESTIMATE

CALCULATIONS

Page 26

COST BIOREACTOR

BUDGET QUOTE JET TECH, INC.

50,000 GAL REACTOR	\$85,000
FEED PUMP, BLOWER, DECANTER WITH INSTALLED SPARES	\$40,000
CONTROL PANEL	\$20,000
	<hr/>
	\$145,000

③ DISCHARGE PUMPS
SIZE PUMP
ASSUME 3 HR DISCHARGE

$$\frac{22,750 \text{ gal}}{180 \text{ min}} = 126 \text{ gpm}$$

COST PUMP

CENTRIFUGAL PUMP
150 gpm @ 100' HD.
7 1/2 HP TEFC Motor

	= \$2200 (RICHARDSON)
	\$500 (RICHARDSON)
	<hr/>
	\$2700

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
CAPITAL COST ESTIMATE CALCULATIONS
Page 27

④ FILTER PRESS
SIZE PRESS
ASSUMPTIONS

- ① DAILY FLOW = 22,750 gal.
- ② INFLUENT COD = 1500 mg/l (DATA GERAGHTY + MILLER - 1984)
- ③ 10% OF COD REMOVED BY PAC (PAS REPORT - OCT 1985)
- ④ 20 LB PAC REQUIRED / LB COD REMOVED
- ⑤ 25% OF PAC WASTED PER BATCH
- ⑥ NO APPRECIABLE BIO SLUDGE PRODUCED (PAS REPORT - OCT 1985)
- ⑦ 40% SOLIDS FOR FILTER CAKE
- ⑧ CAKE DENSITY = 70 LB / FT³

$$\frac{1550 \text{ mg/l PAC}}{10} \times \frac{3.785 \text{ l}}{\text{gal}} \times \frac{1 \text{ lb}}{454,000 \text{ mg}} \times \frac{20 \text{ lb}}{1 \text{ lb}} \times 22,750 \text{ gal} \times 0.25 = 150 \text{ lb solids wasted per batch}$$

$$\frac{150 \text{ lb}}{0.40} \times \frac{\text{FT}^3}{70 \text{ lb}} = 5.4 \text{ FT}^3 \text{ CAKE}$$

CHOOSE JW1 PRESS

PLATE SIZE 630mm

CAPACITY 6 FT³

FILTRATION AREA 2150'

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
CAPITAL COST ESTIMATE CALCULATIONS
Page 28

COST PRESS

BUDGET QUOTE JWI PRESS FROM SIEWARTEQPT.

40 FT³, 1000mm J-PRESS - \$60,000

EXPONENT FOR EQUIPMENT

COST VS. CAPACITY = 0.6 (PETERS + TIMMERHAUS)

$$\left(\frac{6}{40}\right)^{0.6} \times \$60,000 = \$19,200$$

⑤ FILTER PRESS FEED PUMPSIZE PUMP

$$\frac{150 \text{ LBS SOLIDS}}{215 \text{ FT}^2} = 0.7 \text{ LBS/FT}^2$$

TYP FEED RATE = 2-3 LBS/FT²/HR

$$\text{Cycle time} = \frac{0.7}{2} \times \frac{60 \text{ min}}{\text{hr}} = 21 \text{ min}$$

ASSUME SLUDGE CONCENTRATION = 5%

$$\frac{150 \text{ LB SOLIDS}}{0.05} \times \frac{\text{GAL}}{8.34 \text{ LB}} \div 21 \text{ MIN} = 17 \text{ gpm}$$

COST PUMP

BUDGET QUOTE GLAUBER + CARPENTER

M-15 WILDEN ≈ \$2,000

BY CWP DATE 2/19/87

URS COMPANY, INC.
CONSULTING ENGINEERS

SHEET NO. 6 OF 7

CHKD. BY _____ DATE _____

JOB NO. 35102

SUBJECT: YOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
CAPITAL COST ESTIMATE

CALCULATIONS
Page 29

⑥ AIR COMPRESSOR

SIZE COMPRESSOR

ASSUME PUMP DISCHARGE 17 gpm @ 100 psig
FROM WILDEN PUMP CURVE APPROXIMATELY 30 SCFM
REQUIRED

COST COMPRESSOR

INGERSOLL-RAND MODEL 7HD
25 CFM @ 175 psig

\$2800 (RICHARDSON)

⑦ SLUDGE TANK

SIZE TANK

$$\frac{150 \text{ LB}}{0.05} \times \frac{\text{GAL}}{8.34 \text{ LB}} = 360 \text{ GAL}$$

SAY 3000 GAL TO ALLOW FOR
SLUDGE VARIABILITY

COST TANK

$$3000 \text{ GAL} \times \$1/\text{GAL (MEANS 1987)} = \$3000$$

BY CWP DATE 2/19/87

URS COMPANY, INC.
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SHEET NO. 7 OF 7
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SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
CAPITAL COST ESTIMATE

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⑧ STEAM GENERATOR SIZE GENERATOR

ASSUME MIN. TEMP LEACHATE = 5°C (41°F)

ASSUME TEMP RAISED TO 25°C (77°F)

ASSUME 800 BTU/LB STEAM ALLOWING FOR EFFICIENCY
OF HEAT TRANSFER

$$\dot{m}C_p\Delta T = 125 \text{ gpm} \times \frac{60 \text{ min}}{\text{hr}} \times \frac{8.34 \text{ lb}}{\text{gal}} \times \frac{1 \text{ BTU}}{\text{LB}^{\circ}\text{F}}$$

$$\times (77^{\circ}\text{F} - 41^{\circ}\text{F}) \times \frac{\text{LB}}{800 \text{ BTU}} \times \frac{\text{kg}}{2.2 \text{ LB}} \times \frac{\text{HR}}{3600 \text{ s}}$$

$$= 0.4 \text{ kg steam/s required}$$

$$0.4 \times 1.2 \text{ (SAFETY FACTOR)} = 0.5 \text{ kg/s}$$

COST GENERATOR

0.5 kg/s STEAM CAPACITY
PACKAGED OIL-FIRED BOILER

\$23,000 (ULRICH)

BY CWP DATE 2/19/87

URS COMPANY, INC.
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JOB NO. 35102

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
O&M COST SUMMARY CALCULATIONS
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<u>ITEM NO.</u>	<u>ITEM</u>	<u>COST</u>
①	STEAM	18,200 ⁰⁰
②	ELECTRICITY	5,000 ⁰⁰
③	GAS	1,600 ⁰⁰
④	PAC	26,800 ⁰⁰
⑤	DISPOSAL	7,200 ⁰⁰
⑥	WATER QUALITY ANALYSIS	30,000 ⁰⁰

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
O+M COST ESTIMATE

CALCULATIONS

Page 32UTILITY COSTS① STEAM
UNIT COSTAS per ULRICH STEAM COST FROM PROCESS
MODULE

$$C_{s,u} = a \times \text{CE Plant Cost Index} + b \times C_{s,f}$$

 $C_{s,u}$ = utility price

a = coefficient for capital + labor expenses

b = coefficient for fuel price

 $C_{s,f}$ = fuel cost

FOR STEAM,

$$a = \frac{2.3 \times 10^{-5}}{m_s^{0.9}}$$

where m_s = mass flow rate steam (kg/s)

$$b = 0.0020 p^{0.14} \text{ where } p = \text{pressure (bar)}$$

Therefore,

$$C_{s,u} = 2.3 \times 10^{-5} m_s^{-0.9} \times \text{CE plant cost index} + 0.0020 p^{0.14} \times C_{s,f}$$

$$m_s = 0.5 \text{ kg/s}$$

$$\text{CE Plant Cost Index} = 316.8$$

$$p = 20 \text{ bar}$$

$$C_{s,u} = \dots$$

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
O+M COST ESTIMATE

CALCULATIONS
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$$C_{S,U} = 2.3 \times 10^{-5} (0.5)^{-0.9} (316.8) + [(0.0020) (20)^{0.14} (\$5.60)]$$

$$= 0.01 + 0.017$$

$$= \$0.027/\text{kg}$$

$$\$0.027/\text{kg} \times \frac{\text{kg}}{2.2\text{lb}} \times 1000\text{lb} = \$12.27/1000\text{lb}$$

Say \$12.00/1000lb

ANNUAL COST STEAM

$$\text{MAX HEAT DUTY} = 2.25 \frac{\text{gpm}}{\text{hr}} \times \frac{8.34\text{lb}}{\text{gal}} \times \frac{1\text{BTU}}{\text{lb}^\circ\text{F}} \times (77^\circ\text{F} - 41^\circ\text{F})$$

$$2.25 \times 10^6 \text{ BTU/HR} \times \frac{\text{LB STEAM}}{800\text{BTU}} \times \frac{\$12.00}{1000\text{LB}} = \$33.75/\text{HR}$$

SAY \$35/HR

FOR ESTIMATE ASSUME MAX HEAT DUTY IS
REQUIRED FOR 6 HRS PER DAY, 4 MONTHS PER YEAR

$$\$35/\text{HR} \times \frac{6\text{HRS}}{\text{DAY}} \times \frac{260\text{DAYS}}{3} = \boxed{\$18,200}$$

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
O&M COST ESTIMATE

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② ELECTRICAL

HORSE POWER REQUIRED

AGITATOR	25HP
BLOWER	30HP
COMPRESSOR	7.5HP
PUMPS	<u>15 HP</u>
TOTAL	77.5HP

$$I_{3\phi} = \frac{746 \times \text{HP}}{\sqrt{3} \times E \times \text{efficiency} \times \text{Power Factor}}$$

$$= \frac{746 \times 77.5}{1.732 \times 480 \times .85 \times .87}$$

$$= 94$$

$$\text{KVA} = \frac{E \times I \times \sqrt{3}}{1000} = \frac{480(94)(1.732)}{1000}$$

$$= 78.1$$

$$\text{KW} = \text{KVA} \times \text{Power Factor}$$

$$= 78.1 \times .87 = 67.9$$

Assume demand = 60%
Actual usage = 67.9 x 0.6 = 40.8 KW
40.8 KW x 2080 HR/YR x \$0.06/KWH = \$5000

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
O+M COST ESTIMATE

CALCULATIONS
Page 35

③ GAS

HEAT LOSS BUILDING

$$q = U A \Delta T$$

Assume Ave $\Delta T = 30^\circ F$

Assume Bldg Dimensions $40' \times 40' \times 20'$

$$U_{walls} = 0.19 \text{ BTU/ft}^2 \cdot ^\circ F \cdot \text{hr}$$

$$U_{roof} = 0.026 \text{ BTU/ft}^2 \cdot ^\circ F \cdot \text{hr}$$

$$q = q_{walls} + q_{roof}$$

$$q = 0.19 (2 \times (40 + 40) \times 20) (30) + 0.026 (40 \times 40) (30)$$

$$q = 19,500 \text{ BTU/hr}$$

HEAT LOSS INFILTRATION

$$h_i = \frac{V \Delta T}{T_F}$$

$$V = \text{Volume} \times \# \text{ air Changes/hr}$$

$$= 20 \times 40 \times 40 \times 2 = 64,000$$

$$\Delta T = 30^\circ F$$

$$T_F = 55^\circ F$$

$$h_i = \frac{(64000) (30)}{55} = 34,900 \text{ BTU/HR}$$

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
O+M COST ESTIMATE

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TOTAL HEAT LOSS

$$q + h_i = 54,400 \text{ BTU/HR}$$

ASSUME

- ① Gas required an average of 6 months/year and 24 hrs/day
- ② BTU value gas = 800 BTU/FT³

ANNUAL COST

$$54,400 \text{ BTU/HR} \times 24 \text{ HR} \times 180 \text{ DAY/YR} \times \frac{\text{FT}^3}{800 \text{ BTU}} \times \frac{\$5.50}{1000 \text{ FT}^3}$$

$$\approx \$1600$$

CHEMICAL COSTS

④ PAC COST

ASSUMPTIONS

- ① 22,750 GAL/BATCH TREATED
- ② 260 BATCHES/YEAR
- ③ INFLUENT COD = 1500 mg/l (DATA GERAGHTY+MILLER - 1984)
- ④ 10% COD REMOVED BY PAC (PAS REPORT - OCT 1985)
- ⑤ 20 LB PAC REQUIRED/LB PAC REMOVED

BY CWP DATE 2/19/87

URS COMPANY, INC.
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JOB NO. 35102

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
O+M COST ESTIMATE 37

$$\frac{1550 \text{ mg/l}}{10} \times \frac{3.785 \text{ gal}}{\text{gal}} \times \frac{1 \text{ lb}}{454000 \text{ mg}} \times \frac{20 \text{ lb}}{1 \text{ lb}} \times 22,750 \text{ gal}$$

$$\times 260 \text{ batch/yr} \times \$1.70/\text{lb} = \boxed{\$26,800}$$

DISPOSAL COSTS

⑤ CAKE DISPOSAL

SIZE OF FILTER PRESS = 6 FT³

ONE PRESS DROP MADE PER DAY

$$\frac{6 \text{ FT}^3}{\text{BATCH}} \times 260 \text{ BATCH/YR} \times \$4.60/\text{FT}^3 = \boxed{\$7,200}$$

SUBJECT: VOLNEY LANDFILL
LEACHATE TREATMENT SYSTEM
O&M COST ESTIMATE

CALCULATIONS
Page 33

⑥ WATER QUALITY ANALYSIS

CONVENTIONAL ANALYSIS

<u>ANALYSIS</u>	<u>COST</u>
BOD	21.00
COD	21.00
OIL + GREASE	27.00
PH	5.00
TSS	9.00
TDS	11.00
TSS	11.00
AMMONIA	20.00
ACIDITY + ALKALINITY	16.00
TOC	27.50
HARDNESS	11.00
TKN	23.00
NITRATE + NITRITE	22.00
SULFATE	<u>12.50</u>
	237.00

SAY \$300

ANNUAL COST = 52 x \$300 = \$15,600

HSL ANALYSIS

VOA	}	\$900
BNA		
PCB + PEST		
METALS		\$210
CN		\$35
PHENOL		<u>\$35</u>

\$1180 SAY \$1200

ANNUAL COST = 12 x \$1200 = \$14,400

SUBJECT: VOLNEY LANDFILL

LEACHATE STORAGE TANK

COST ESTIMATE

1. STORAGE TANK

1,000,000 GAL (78 DAY STORAGE @ 13,000 GPD.)

A) TANK COST

FROM 1987 MEANS (LOADED COST)

13.1 - 770 - 0300 1,000,000 GAL PRESTRESSED

CONCRETE TANK = \$400,000

(APPROX SIZE = 110' Ø X 15' HIGH)

B) FOUNDATION SLAB

125' x 125' x 2'

CONCRETE VOLUME = $\frac{125^2 \times 2}{27} = 1157 \text{ CY}$

FROM 1987 MEANS (LOADED COST)

3.3 - 140 - 4050 FOUNDATION MAT = \$175/CY

1157 CY x \$175/CY = \$202,000

C) TOTAL TANK COST

TANK + FND.

\$400,000 + 202,000 = \$602,000

2. MISCELLANEOUS

A) SUPPLY AND INSTALL PUMPS

2 \$3,200 EA X 2 UNITS =

\$6,400

B) PIPING, 100' @ \$25'/FT =

2,500

C) ELECTRICAL ALLOW -

2,000

D) TOTAL =

\$10,900

SAY \$11,000

SUBJECT: Valney Landfill
Scale - Down of Leachate Treatment /
Disposal Costs

REVISIONS
PAGE 40

Discussion: Base costs for off-site leachate disposal and on-site leachate treatment are calculated using a total flow rate of 13,000 gpd, as per previous site water balance with existing landfill cap on side slopes. This cap allows an infiltration of 5.91 in/yr (i_s). A supplementary cap would greatly reduce infiltration but, as a practical matter, not eliminate it altogether. Assume i_s = 0.5 in/yr with supplementary cap. Now revise water balance. Then scale down leachate disposal/treatment costs by the ratio of total lateral flow (Q_n) with and without a supplementary cap.

Alternate Water Balance Analysis - With Supplementary Cap

	Section 1	Section 2	Section 3	Total Site
A ₂ (acres)	8.28	8.60	4.99	21.87
A ₃ (acres)	11.67	10.92	12.32	34.91
I _n (gpd)	820	800	690	2,310
S _n (gpd)	*	*	*	*
Q _n (gpd)	820	800	690	2,310

Notes: $I_n = (i_2 A_{n2} + i_s A_{n3}) \times 74.4$

$S_n = S_n (A_{n2} + A_{n3}) \times 74.4$

$Q_n = I_n$ (* Lower inflow will reduce volume of water in fill and the head on lodgement fill. For purposes of this scale-down analysis, assume S_n with supplemental cap is 0, and all infiltration will be collected)

where: $i_2 = 0.62$ in/yr & $i_s = 0.50$ in/yr

∴ When supplementary capping of landfill sideslopes is used, scale down capital costs (~ size of facilities) and operation/maintenance costs, for both off-site disposal and on-site treatment, by the following factor:

$$\text{Scale-Down Factor} = \frac{\text{Leachate Disposal Costs w/ Supp. Capping}}{\text{Leachate Disposal Costs without Supp. Capping}}$$

$$= 2,310 / 12,850 = 0.18 \text{ say } 20\%$$

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SUBJECT: Volney - Slurry Wall and Drain Evaluation

CALCULATIONS

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Discussion: See accompanying profile around landfill perimeter. A leachate collection drain will be installed along portions of this drain where there is a significant thickness of saturated soil overlying lodgement till, i.e., the water table falls above the lodgement till surface. Specifically, the drain will consist of two segments:

Reach 1 (North side of landfill)

Approximate Limits: Sta 31+00 to 51+20

Approximate Length: 2020 Ft

Depth From Ground Surface to Lodgement Till

Avg = 31 Ft

Max = 39 Ft

Depth From Water Table to Lodgement Till

Avg = 19 Ft

Max = 25 Ft

Reach 2 (Southwest edge of landfill)

Approximate Limits: Sta 60+00 to 9+20

Approximate Length: 1780 Ft

Depth From Ground Surface to Lodgement Till

Avg = 19 Ft

Max = 36 Ft

Depth From Water Table to Lodgement Till

Avg = 12 Ft

Max = 31 Ft

The primary function of a slurry wall would be to prevent the backflow of water from outside the landfill into the collection drain. A secondary function would be to improve the collection efficiency of the drain. Concentrating on the primary function, the value of a slurry wall will be calculated as follows:

- (a) Hydrologic Analysis - Calculate the outside flow of water to the drain without a slurry wall. Assume the wall will prevent 90% of this outside flow (the remaining 10% allowed for seepage under and through wall).
- (b) Benefit of Wall - In terms of treatment costs, calculate the wall benefit as the cost of treating outside water which could be prevented by wall.
- (c) Cost of Wall - Calculate construction cost of wall, compare with its benefit, and determine if wall is justified.

SUBJECT: Valney - Slurry Wall & Drain Evaluation

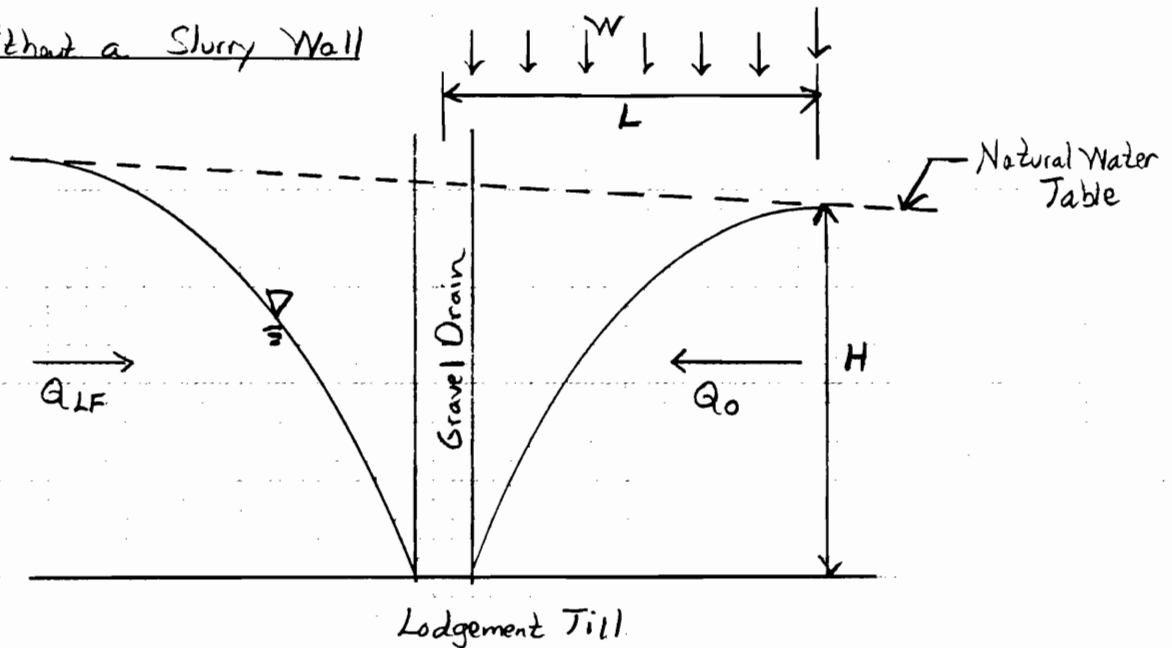
CALCULATIONS

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Hydrologic Analysis

Refer to Dunn Geoscience Corporation (DGC) analysis of perimeter drain (attached). Use this analytical method but modify parameters and average over drain length.

Without a Slurry Wall



Q_{LF} = Groundwater discharge from landfill [L³/T]

Q_0 = Groundwater discharge drawn back into drain from outside the landfill [L³/T]

K = Average hydraulic conductivity of sediments penetrated by the drain [L/T]

H = Average head of water of water above drain invert = lodgement till surface [L]

X = Drain length [L]

L = Limit of drain's hydraulic influence [L]

W = Average annual recharge rate outside the drain [L/T]

Q_{LF} = lateral flow from landfill (see simplified site model)

$Q_0 = \frac{XKH^2}{2L}$ (Dupuit - Forheimer for one side of drain with head at drain = 0.)

$L = \sqrt{\frac{KH^2}{2W}}$

SUBJECT: Volney - Slurry Wall & Drain Evaluation

CALCULATIONS

Page 43Hydrologic Analysis (cont)Reach 1

Q_{LF} - This reach (31+00 to 51+20) is primarily within A_1 of the simplified site model. Most of the lateral drainage from A_1 ($Q_A = 6,740$ gpd) should be directed through this section of the perimeter. To account for extraneous losses, allow for approximately 20% of Q_1 to "miss" the drain, leaving $Q_{LF} \approx 5,400$ gpd.

Q_0 - $X = 2020$ ft
 $H = 19$ ft
 $K = 0.77$ ft/day (see Sheet 4)
 $W = 0.00274$ ft/day (12 in/yr - assumed value corresponding to approximately 1/3 of avg. annual precipitation)

$$\therefore L = \sqrt{(0.77)(19)^2 / 2(0.00274)} = 225 \text{ ft}$$

$$Q_0 = [(2020)(0.77)(19)^2] / [2(225)] \approx 1,250 \text{ ft}^3/\text{day}$$

$$\approx 9,350 \text{ gpd}$$

\therefore Assume a slurry wall can prevent 90% of 9,350 gpd,
or 8,400 gpd

Reach 2

Q_{LF} - This reach overlaps A_2 and A_3 in the simplified model. Assume as above that the drain intercepts approximately 80% of the combined lateral drainage from A_2 (2,410 gpd) and A_3 (3,710 gpd). Therefore, $Q_{LF} \approx 4,900$ gpd

Q_0 - $X = 1780$ ft
 $H = 12$ ft
 $K = 0.81$ ft/day (Sheet 4)
 $W = 0.00274$ ft/day

$$\therefore L = \sqrt{(0.81)(12)^2 / 2(0.00274)} = 146 \text{ ft}$$

$$Q_0 = [(1780)(0.81)(12)^2] / [2(146)] = 712 \text{ ft}^3/\text{day}$$

$$\approx 5,300 \text{ gpd}$$

\therefore Assume a slurry wall can prevent 90% of 5,300 gpd,
or 4,800 gpd

URS COMPANY, INC.
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SUBJECT: Valley Landfill - Slurry Wall & Drain Evaluation

RESOLUTIONS

Weighted Average K Values for Drain

Reach	Well Location	Well No.	Sat. Depth over fill	Rep. Depth (ft)	Rep. Depth (%)	Well No.	K (ft/d)	Rep. Depth (ft)	Rep. Depth (%)	Depth-Weighted Avg K (ft/d)	Rep. Slas.	Rep. Length (ft)	Rep. Length (%)
1	8	85	19.0		100%		0.768			0.77	31 → 36	500	25%
	7	75	26.7		50%	7D	0.110		50%	0.30	36 → 44	800	40%
	6	6	14.8		100%	N/A	1.30		N/A	1.30	44 → 51.2	720	35%
2	4	45	3.7		100%	N/A	0.0283		N/A	0.0283	60 → 68.6	860	48%
	2	2	2.6		100%	N/A	1.53		N/A	1.53	0 → 9.2	720	52%

Reach 1:
$$\text{Avg } K = (1.86 \text{ ft/d})(25\%) + (0.30 \text{ ft/d})(40\%) + (1.30 \text{ ft/d})(35\%)$$

$$= 0.77 \text{ ft/day } (2.7 \times 10^{-4} \text{ cm/sec})$$

Reach 2:
$$\text{Avg } K = 0.0283 \text{ ft/day } (48\%) + 1.53 (52\%)$$

$$= 0.81 \text{ ft/day } (2.9 \times 10^{-4} \text{ cm/sec})$$

BY DWR DATE 2/14/87

SHEET NO. 5 OF 6

CHKD. BY AMM DATE 2/17/87

URS COMPANY, INC.
CONSULTING ENGINEERS

JOB NO. _____

SUBJECT: Volney - Slurry Wall & Drain Evaluation

REVISIONS

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Benefit of Slurry Wall

The unit cost for leachate disposal has been estimated as:

0.05/gallon - off-site POTW

0.065/gallon - on-site treatment

Use # 0.065/gallon to estimate the potential benefit of a wall.

$$\text{Reach 1: Benefit} = (8,400 \text{ gal/day})(365 \text{ day/yr})(\$0.065/\text{gal}) \\ \approx \$200,000/\text{yr}$$

Present worth of benefit ($i=10\%$, $n=30$ yr)

$$\text{PWF} = \frac{[(1+i)^n - 1]}{i(1+i)^n} = 9.43$$

$$\text{PW} = (9.43)(\$200,000) = \underline{\$1,886,000}$$

$$\text{Reach 2: Benefit} = (4,800 \text{ gal/day})(365 \text{ day/yr})(\$0.065) \\ \approx \$114,000$$

Present worth of benefit

$$\text{PW} = (9.43)(\$114,000) = \underline{\$1,075,000}$$

BY DWR DATE 2/14/87SHEET NO. 6 OF 6CHKD. BY AMM DATE 2/17/87

URS COMPANY, INC.
CONSULTING ENGINEERS

JOB NO. _____

SUBJECT: Volney - Slurry Wall & Drain Evaluation

CALCULATIONS

Page 46Cost of Slurry Wall

At PAS, an SB wall was recently constructed for \$7/square foot. Price quotes from Helen Kramer Landfill (New Jersey Superfund site) over the past 2 months have all been around \$6/sf. This will be a relatively simple wall, less than 40 foot deep, with relatively easy excavation. Use a price of \$7.00/sf.

$$\text{Reach 1: Avg depth} \times \text{Wall length} = (31')(2020') = 62,620 \text{ ft}^2$$

$$\text{Key depth} \times \text{Wall length} = (3')(2020') = 6,060 \text{ ft}^2$$

$$\underline{68,680 \text{ ft}^2}$$

$$10\% \text{ SF \& Leveling} \quad \underline{6,868 \text{ ft}^2}$$

$$\text{Total Wall Quantity} \approx 75,500 \text{ ft}^2$$

$$\therefore \text{Wall Cost} = (75,500 \text{ ft}^2) (\$7.00/\text{ft}^2)$$

$$\approx \underline{\$529,000}$$

Conclusion: Benefit of \$1,886,000 (PW) compares with cost of \$529,000. Slurry wall is justified.

$$\text{Reach 2: Avg depth} \times \text{Wall length} = (19')(1780') = 33,820 \text{ ft}^2$$

$$\text{Key depth} \times \text{Wall length} = (3')(1780') = 5,340 \text{ ft}^2$$

$$\underline{39,160 \text{ ft}^2}$$

$$10\% \text{ SF \& Leveling} \quad \underline{3,916 \text{ ft}^2}$$

$$\text{Total Wall Quantity} \approx 43,100 \text{ ft}^2$$

$$\therefore \text{Wall Cost} = (43,100 \text{ ft}^2) (\$7.00/\text{ft}^2)$$

$$\approx \underline{\$302,000}$$

Conclusion: Benefit of \$1,075,000 compares with cost of \$302,000. Slurry wall is justified.



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CALCULATIONS
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539 FRANKLIN STREET
BUFFALO, NEW YORK 14202
(716) 884-1500

January 12, 1987

Mr. Daniel W. Rothman, P.E.
URS Company, Inc.
625 Delaware Avenue
Buffalo, New York 14202

RE: Preliminary Hydrologic Analysis
Horizontal Drain for Volney Landfill
Oswego County, New York

Dear Mr. Rothman:

This letter summarizes hydrogeologic review and analysis conducted by Dunn Geoscience Corporation (DGC) in support of a Feasibility Study being prepared by URS Company for the Volney (Oswego Valley) Landfill. More specifically, this report presents a preliminary hydrologic basis for an engineering appraisal of a horizontal-drain type hydraulic barrier around the landfill near the limits of former waste deposition.

Introduction:

Hydraulic barriers are commonly utilized in proximity to areas of groundwater contamination whenever site-specific subsurface conditions are compatible with their installation and operation. Two of the most common types of barriers are vertical wells and horizontal drains. Although vertical wells can be used as a cost-effective barrier whenever subsurface

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conditions are appropriate, DGC did not directly address the use of vertical wells at the Volney site due to difficult schedule constraints. However, review of site-specific hydrogeologic data and information suggest that a vertical well system installed to act as a hydraulic barrier might be technically impractical and at best, marginally cost-effective primarily due to the geometry of the principal water bearing units; a geometry which lacks the sufficient saturated thickness to allow the development of efficient radial-flow drawdown cones.

METHODOLOGY:

This evaluation was initiated by the review of data information provided by URS Company personnel. Documents referencing this data and information as well as other information used in the preparation of this report are listed in an addendum to this letter. The specific data of interest included:

- 1.) the areal extent of waste deposition,
- 2.) the presence and areal distribution of water bearing zones located along the path of drain installation,
- 3.) the thickness and depth of these water bearing zones,
- 4.) a representative infiltration rate for the natural soils surrounding the landfill,
- 5.) representative values of hydraulic conductivity for the units to be penetrated by the drain and,
- 6.) the areal extent of the less permeable cap now covering the landfill.

This data was used in consideration with slightly different versions of the Dupuit modification of Darcy's Law; a fundamental groundwater flow equation. Subsequent calculations resulted in estimates of long term average discharge for the total horizontal drain system and estimates of the limits of the drain's areal hydraulic influence on the prevailing groundwater regime.

DISCUSSION AND RESULTS

An initial objective of this evaluation was to provide an analysis for a horizontal drain encircling the area of former waste deposition. Upon review of the information presented in the Dunn Geoscience hydrogeologic investigation of the site, it was noted that there were two areas along the perimeter of the waste over which a shallow water table was apparently absent. This may be due to a combination of factors including the relative impermeability of the soils, their stratigraphic sequence, and

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the adjoining topography at these sites. These sites are located on the western side of the landfill between BW-4 and BW-6 and on the eastern side, essentially between BW-9 and BW-10. The total length of these apparently unsaturated areas is approximately 1900 feet. Accordingly, as these areas did not appear as if they would yield water to a drain at a maximum approximate depth of 20 feet below the prevailing ground surface, these stretches of landfill perimeter were not included in the calculations used for this report. If the drain concept appeared feasible, the justification of installing the drain in these areas would merit further consideration and data collection.

Analysis of the installation of the drain around all but 1900 feet of landfill perimeter indicates such an installation would have limited feasibility from a hydrologic perspective. Furthermore, environmental and/or design/construction considerations indicate that a drain may have some additional serious disadvantages. Average long term discharge from such a system could be expected to be on the order of 17,000 gallons per day (12 gpm). The system would perform very well in the vicinity of BW-6 where a combination of a shallow, relatively thick, and highly permeable water bearing zone might influence groundwater levels as far as 900 feet on either side of the drain. However, system weaknesses would develop in the vicinity of BW-1 and BW-8 where the deeper, less permeable lacustrine deposits exist below the depth of practical drain installation. If installed at an invert depth of 20 feet, this might allow the escape of contaminated groundwater or leachate beneath the hydraulic influence of the drain.

SUMMARY AND CONCLUSIONS

A hydrologic evaluation of a proposed hydraulic barrier around the Volney Landfill has been completed. This has indicated that a horizontal drain with its invert placed at an approximate average depth of 20 feet, would be capable of hydraulically limiting contaminated groundwaters from leaving the site along 50 percent of its 6600-foot length. Due to subsurface conditions at two locations and a lack of data at two others, the reliability of the drain to fully meet its intended objectives has to be considered poor at this time. Accordingly, it is recommended that further consideration to isolate the wastes or their byproducts at the Volney Landfill would be better devoted to other remediation concepts.

REVISIONS
PAGE 41

Letter to Mr. Daniel W. Rothman, P.E.
URS Company, Inc.

1/12/87

If you should have any questions after reviewing the above information,
please do not hesitate to call us.

Very truly yours,

DUNN GEOSCIENCE CORPORATION

Gerald S. Sikora
Manager, Buffalo Office

GSS/mtd
attach.

Letter to Mr. Daniel W. Rothman, P.E.
URS Company, Inc.

1/12/87

REFERENCES

Phase I Report: Engineering Investigations and Evaluations at Active Hazardous Waste Disposal Sites Volney Landfill, Engineering-Science, Inc., June, 1983.

Draft: Dunn Geoscience Corporation. Hydrogeologic Investigation Volney Landfill Site, Oswego, New York, Vol. I & II, May, 1986.

Fetter, C.W., Jr., Applied Hydrogeology, Chas. E. Merrill Publishing Co., 1980.



539 FRANKLIN STREET
BUFFALO, NEW YORK 14202
(716) 884-1500

Calculations
Page 52

January 16, 1987

Mr. Daniel W. Rothman, P.E.
URS Company, Inc.
625 Delaware Avenue
Buffalo, New York 14202

RE: Volney Landfill Drain Report and Calculations

Dear Mr. Rothman:

As you requested on January 13th, enclosed are three pages of calculations used in the preparation of our letter report of January 12th regarding a preliminary hydrologic analysis of a horizontal drain around the Volney Landfill.

While putting these calculations in an orderly form, an error was discovered in the calculation of the saturated thickness of one section along the hypothetical drain. This error caused us to underestimate the average daily discharge of the drain by about 11 percent. Please refer to your report of January 12th and note that the average long term discharge from this drain should be approximately 17,000 gallons per day (12 gpm) and NOT 15,100 gallons per day (10.5 gpm) as stated. In no way does this error change other aspects of our report or its conclusions.

Please excuse this error. For your convenience, we are providing you with a corrected copy which is also enclosed herein.

If you should have any further questions, please don't hesitate to contact us.

Very truly yours,

DUNN GEOSCIENCE CORPORATION

Gerald S. Sikora
Manager, Buffalo Office

GSS/mtd.

Enc. 3.

CALCULATIONS USED IN THE PREPARATION OF THE
DUNN GEOSCIENCE LETTER REPORT JANUARY 12, 1987
REGARDING DRAIN AROUND VOLNEY LANDFILL

Stick-up Calculations (Su)

BW-1	493.35 - 490.69 = 2.7
BW-2	489.07 - 486.69 = 2.5
BW-3S	475.73 - 473.38 = 2.4
BW-3I	475.86 - 472.98 = 2.9
BW-4S	485.71 - 483.46 = 2.3
BW-6	458.50 - 455.67 = 2.8
BW-7S	456.74 - 453.71 = 3.0
BW-8D	463.43 - 461.20 = 2.2
BW-10S	495.14 - 492.48 = 2.7
BW-11	493.63 - 491.34 = 2.3
BW-12	498.61 - 495.79 = 2.8
BW-15	452.42 - 449.47 = 3.0
BW-16	467.94 - 465.52 = 2.4
BW-8S	463.59 - 461.56 = 2.0

CALCULATIONS

PAGE 53

Depth-to-Water Calculations (from grade)

	DTW _{mp} *	(Su)	
BW-1	21.15	- 2.7	= 18.5
BW-2	8.83	- 2.5	= 6.3
BW-3S	7.23	- 2.4	= 4.8
BW-3I	8.31	- 2.9	= 5.4
BW-4S	13.77	- 2.3	= 11.5
BW-6	6.21	- 2.8	= 3.4
BW-7S	6.54	- 3.0	= 3.5
BW-8D	12.71	- 2.2	= 10.5
BW-10S	> 16.5	- 2.7	= > 13.8
BW-11	21.54	- 2.3	= 19.2
BW-12	14.67	- 2.8	= 11.9
BW-15	9.21	- 3.0	= 6.2
BW-16	6.02	- 2.4	= 3.6
BW-8S	12.58	- 2.0	= 10.6

* water level
measurements made
by URS personnel on
11/10/86

DUNN GEOSCIENCE VOLNEY DRAIN CALCULATIONS CONT'D

Median Sand & Gravel Hydraulic Conductivity Calculation

- 1.1×10^{-1} ft/day
- 1.3
- 1.78
- 2.96
- 11.93
- 14.34

CALCULATIONS
Page 54

$$\frac{2.96 + 11.93}{2} = 7.4 \text{ ft/day}$$

Average Fine Sand Hydraulic Conductivity Calculation

$$\begin{aligned}
 &6.76 \times 10^{-1} \\
 &4.87 \times 10^{-1} \\
 &7.68 \times 10^{-1} \\
 &8.59 \times 10^{-1} \\
 &+ \frac{1.19}{3.98} \div 5 = 7.96 \times 10^{-1} \text{ rounded off} = 8 \times 10^{-1} \text{ ft/day}
 \end{aligned}$$

Calculation of Saturated ^{Thickness} Above Drain Invert or Lodgement

Till Well	Depth to invert of drain or lodgement till		DTW <u>gale</u>	=	Saturated <u>Thickness</u>
BW-6	18	-	3.4	=	14.6
BW-7S	7.5	-	3.5	=	4.0
BW-2	10	-	6.3	=	2.7
BW-8S	20	-	10.6	=	9.4
BW-4S	15	-	11.5	=	3.5
BW-12	12.5	-	11.9	=	0.6
BW-1	20	-	18.5	=	1.5

DUNN GEOSCIENCE VOLNEY DRAIN CALCULATIONS CONT'D

Presuming that the drains dewater the full saturated thickness that is available to it and that representative long term average annual ground water recharge at the site is approximately six inches per year, the following equations were used to develop the following table.

$$Q = \frac{X K H^2}{L} \quad L = \sqrt{\frac{K H^2}{2W}}$$

CALCULATIONS
Page 55

- where
- Q = ground water discharge
 - X = length of section penetrated by the drain
 - H = head of water in water bearing zone above the drain invert
 - L = limit of hydraulic influence of the drain
 - K = hydraulic conductivity of the sediments penetrated by the drain along a given section
 - W = average annual recharge rate

Section	K	H	L	X	Q
BW-4	7.4	3.5	183	1230	609
BW-2	1.5	2.7	64	300	51
BW-12	7.4	0.6	31	750	64
BW-1	0.8	1.5	26	400	28
BW-8	0.8	9.4	162	1000	175
BW-7	7.4	4	209	500	312
BW-6	7.4	4.6	73	500	1032

2271 Ft³/day

$$2271 \times 7.48 = \pm 17,000 \text{ gals/day} \div 1440 = \pm 12 \text{ gallons/min}$$

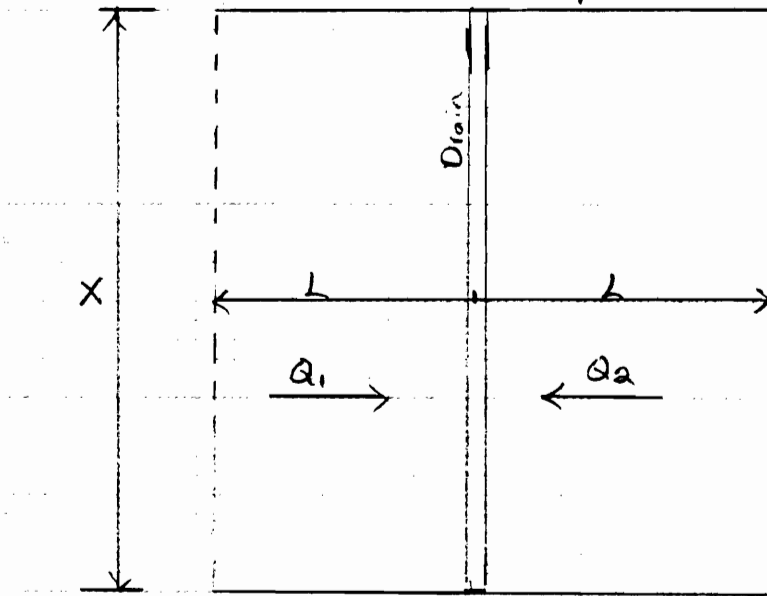
URS COMPANY, INC.
CONSULTING ENGINEERS

SUBJECT: Dunn Geoscience Drain Report

CALCULATIONS

Page 56

Discussion: Mtg w/ G. Sikora to discuss his variation on use of Dupuit-Forcheimer Equation. Equation used in report is his own derivation, based on previous work & classes under Todd. His derivation presented as follows:



$Q = Q_1 + Q_2 =$ groundwater discharge

$L =$ Limit of hydraulic influence of drain

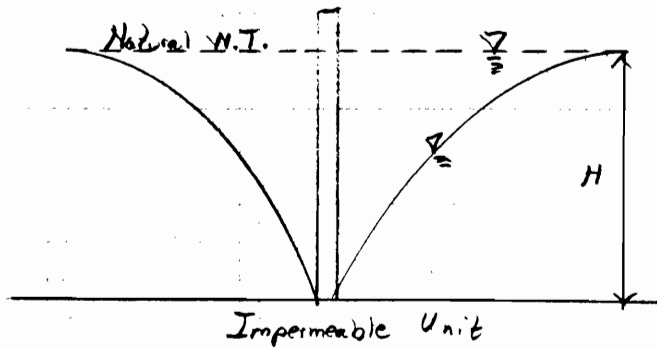
$X =$ length of section penetrated by drain

$H =$ head of water in water-bearing zone above drain invert

$K =$ Hydraulic conductivity of sediments in section penetrated by drain

$W =$ average annual recharge rate

$h =$ head of water to which drain draws down (assume ϕ)



Basic Dupuit-Forcheimer Eq. :

$$Q = XK(H^2 - h^2)/L$$

$$= XKH^2/L$$

$$= Q_{out}$$

$$Q_{in} = 2W LX = Q_{out} = XKH^2/L \quad \therefore L = \sqrt{KH^2/2W}$$

or looking @ one side only :

$$Q_1 = XKH^2/2L = Q_{out} \quad \& \quad Q_{in} = WLX$$

$$\therefore L = \sqrt{KH^2/2W}$$

(same as before, with Q_1 equal to $1/2$ of Q from both sides)

URS COMPANY, INC.
CONSULTING ENGINEERS

SUBJECT: Volney Landfill CALCULATIONS

Waste Excavation and off-Site Disposal 280 57

Discussion: Concept involves excavation of southern landfill section (~2,000,000 c.y.) and transportation to off-site disposal facility.

Refs: Compendium of Costs of Remedial Technologies at Hazardous Waste Sites (USEPA, Ma, 1985)

1) Excavation/removal: Range \$0.89 - \$4.09/cy
Level C or B will be required. Depth of fill up to 60 ft.
Special provisions to prevent fires/explosions. Use \$4.00/cy

2) Transportation: Range \$1.67 - \$94.40/cy
Disposal location unknown. SCA & CECOS ~ 200 miles from site in Niagara County. Assume 400 miles typical. Average for 12 sites in above reference = \$0.17/ton/mile. Assume 1 ton = 1 c.y. Use \$0.17/c.y./mi x 400 miles = \$68.00/cy

3) Disposal: Range \$12.00 to \$283.20/c.y.
Assume landfill disposal. Based upon past dealings with local secure landfill firms, use \$150/cy.

Total Cost = \$4.00 + \$68.00 + \$150.00 = \$222/cy

2,000,000 cy @ \$222/cy = \$444,000,000

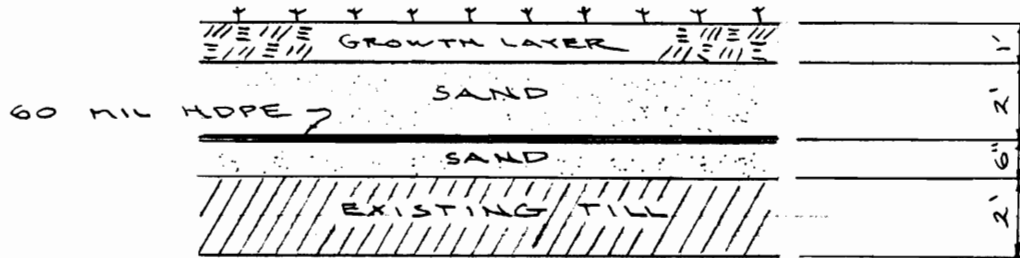
SUBJECT: VOLNEY LANDFILL

CALCULATIONS

UP GRADING OF EXISTING CAP

Page 58

DIRECT CAPITOL COST & Q/M COST ESTIMATE



1. DIRECT CAPITOL COSTS

REFERENCE - 1987 MEANS BARE COSTS & QUOTES FROM LOCAL PITS

NOTE: AVAILABLE TOPSOIL IS SCARCE IN THIS AREA AND THERE WILL PROBABLY NOT BE ENOUGH AVAILABLE FOR EVEN A 6" COVERING OF THE SITE. THEREFORE, IT IS PROPOSED THAT AVAILABLE LOCAL SOIL BE USED FOR THE VEGETATIVE GROWTH LAYER WITH A SPECIAL SEED MIX. IN ADDITION, ADDITIONAL PREPARATION WILL BE REQ'D, ALONG WITH JUTE NETTING.

A) SEEDING

2-B-2 - 450-1000 HYDRAULIC SEEDING FOR LARGE AREAS INCL. SEED, FERTILIZER & MULCH = \$0.36 / SY

2-B-2-450-0600 LIMESTONE @ 50 # / 1000 SF = 2.84
= \$0.00284 / SF x 9 SF / SY = \$0.026 / SF
TOTAL = 0.36 + 0.026 = \$0.39 / SY

TO ACCOUNT FOR SPECIAL MIX REQ'D AND ADDITIONAL PREPARATION THIS PRICE WILL BE DOUBLED

2 x \$0.39 = \$0.78 / SY

2-B-050-0010 JUTE MESH = 0.75 / SY

B) GROWTH LAYER

1.53 / SY

LOCAL SAND/GRAVEL MATERIALS, SCREENED AS REQ'D ARE AVAILABLE FROM VARIOUS LOCAL PITS (NORTHERN, PUGLIA, LAZAREK) FOR APPROXIMATELY \$7 / CY DELIVERED (CONT'D)

SUBJECT: YOLNEY LANDFILL CALCULATIONS
UP-GRADING OF EXISTING CAP Page 51
DIRECT CAPITAL COST & O/M COST ESTIMATE

1. B) GROWTH LAYER (CONT'D)
 $\$7/CY \times \frac{1}{3} CY/SY (1' \text{ LAYER}) = \underline{\underline{\$2.33/SY}}$

C) SAND
 MATERIAL QUOTE FROM NORTHERN SAND & GRAVEL,
 & CONFIRMED BY SEVENSON AS PURCHASE
 PRICE FOR SAND DELIVERED TO PAS SITE
 FROM W.A. AGGREGATE & PUGLIA'S PIT.

$\$7/CY \text{ DELIVERED} = 7.00/CY$
 PLACEMENT FROM TRUCKS

2.3-050-0400 LABOR = 0.84/CY

EQUIP. = 2.06/CY

COMPACTION

2.3-050-0300 = 1.99/CY

TOTAL = $\$11.34/CY$

$\$11.34/CY \times \left(\frac{2' + 0.5'}{3'} \right) = \underline{\underline{\$9.45/SY}}$

D) HDPE
 GUNBLE QUOTED $\$0.60/SF$ STANDARD
 $\$0.60 + \frac{1}{3}(\$0.60) = \$0.80/SF$ TEXTURED
 SCHLEGEL QUOTED $\$0.40$ STANDARD
 $\$0.75$ TEXTURED

TO BE CONSERVATIVE THE HIGH QUOTE WILL
 BE USED

$\$0.80/SF \times 9 SF/SY = \underline{\underline{\$7.20/SY}}$

E) MOW EXISTING GRASS

2.1.2-150-0010 CLEARING BRUSH = $\$0.23/SY$

USE HALF THIS COST SINCE

EXISTING VEGETATION IS

JUST GRASS $\$0.23/SY \div 2 = \underline{\underline{\$0.12/SY}}$

F) TOTAL UNIT COST

A+B+C+D+E

$\$1.53 + 2.33 + 9.45 + 7.20 + 0.12 = 20.63/SY$

ADD OH & P @ 20% =

4.13

$\underline{\underline{\$24.76/SY}}$

SUBJECT: VOLNEY LANDFILL CALCULATIONS
UP-GRADING EXISTING CAP Page 60
DIRECT CAPITAL COST & O/M COST ESTIMATE

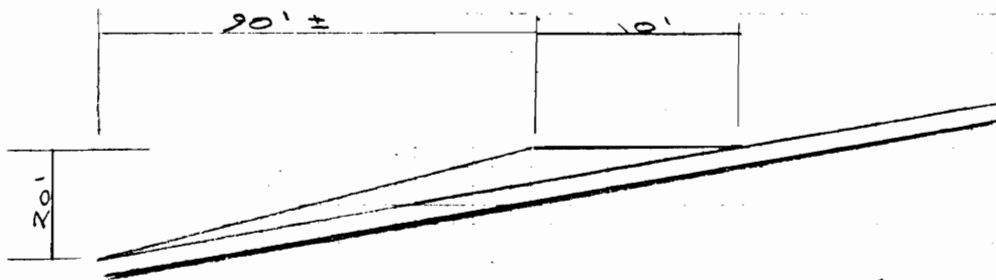
1. G) TOTAL COST OF CAP UP-DATE
 $35 \text{ ACRES} \times 4890 \text{ SY/ACRE} \times 24.76/\text{SY}$
 $\approx 4,194,000$

2. TERRACING

AN ALLOWANCE SHOULD BE MADE TO TERRACE THE LANDFILL AS AN EROSION CONTROL REQUIREMENT. THIS TERRACING WILL BE DONE WITH REGRADING FILL BELOW THE VEGETATIVE GROWTH LAYER AND ABOVE THE TOP CUSHION SAND LAYER.

A) VOLUME REQUIRED

ONE TEN FOOT WIDE TERRACE REQ'D FOR EVERY 20' OF VERTICAL DROP.
 THE ENTIRE CIRCUMFERENCE OF THE SITE REQ'S AT LEAST ONE TERRACE WITH AN ADDITIONAL ONE REQ'D ALONG THE EAST EDGE
 TOTAL LENGTH = 6,500'



$$A = \frac{1}{2} BH = \frac{1}{2} 10(20) = 100 \text{ SF}$$

$$V = 100 \text{ SF} \times 6,500' = 650,000 \text{ CF}$$

$$650,000 \text{ CF} \times \frac{1 \text{ CY}}{27 \text{ CF}} \approx 24,000 \text{ CY}$$

B) UNIT COST

THE SAME UNIT PRICE AS WAS DEVELOPED IN ITEM 1.C ABOVE, FOR SAND WOULD BE APPROPRIATE = \$11.34/CY

+ 20% OH&P = 2.27

C) TOTAL COST

\$13.61 / CY x 24,000 CY = \$326,640

SUBJECT: YONKES LANDFILL

CALCULATIONS

UP-GRADING OF EXISTING CAPPage 61DIRECT CAPITAL COST & O&M COST ESTIMATE**3. PASSIVE GAS VENTING**

THE SAND LAYER UNDERLYING THE MEMBRANE WILL ACT TO FACILITATE MOVEMENT OF DECOMPOSITION GASES TOWARDS THE PRESENTLY EXISTING VENTS THAT EXIST ON A ONE PER ACRE BASIS. THESE VENTS WILL BE DESTROYED DURING CONSTRUCTION AND WILL REQUIRE REPLACEMENT

$$1/ACRE \times 32 ACRES \times 300 EA = \$9,600$$

A. OPERATION & MAINTENANCE COSTS

ASSUME THAT TWICE A YEAR A CREW WILL BE REQ'D TO REGRADE EROSION & SETTLEMENT PROBLEMS, AND TO MAINTAIN THE VEGETATIVE COVER.

USE CREW B-G FROM 1987 MEANS

2 LABORERS, 1 OPERATOR & 1 BACKHOE

@ \$576.20/DAY

ASSUME 5 WORKING DAYS WILL BE REQ'D EACH TIME

$$5 DAYS \times \$576.20/DAY \times 2 = \$5762/YR$$

SAY \$6,000/YR

SUBJECT: VOLNEY LANDFILLLEACHATE COLLECTION DRAINCOST ESTIMATEPage 62

REQUIRED: A FILTER FABRIC LINED, STONE FILLED TRENCH 4' WIDE AND UP 39' DEEP. SHEET PILING WILL BE REQ'D DUE TO THE DEPTH OF THE TRENCH. $1' \times 1' \times 4' = 4 \text{ CF/SF} = 0.148 \text{ CY/SF}$

ESTIMATING REFERENCE: 1987 MEANS
COSTS INCLUDE O&P

A) SHEET PILING

ASSUME THE SHEETING WILL BE PULLED AND SALVAGED

ITEM 2.3-380-1000 40' DEEP PULL & SALVAGE
@ 38 PSF = \$430/TON

$$38 \text{ LBS/SF} \times \$430/2000 \text{ LBS} = \$8.17/\text{SF}$$

$$\$8.17/\text{SF} \times 2 \text{ SIDES} = \$16.34/\text{SF OF TRENCH}$$

B) EXCAVATION

ITEM 2.3-160-0300 CRAWLER MOUNTED BACKHOE WITH $3\frac{1}{2}$ CY BUCKET = \$1.67/CY

$$1.67/\text{CY} \times 0.148 \text{ CY/SF} = \$0.25/\text{SF}$$

C) FILTER FABRIC

MATERIAL COST, ITEM 7.1-050-0610 = \$0.29/SF
\$0.29/SF x 2 SIDES + 20% OVERLAP = \$0.70/SF

LABOR FOR PLACEMENT (15' LONG ROLLS)

ASSUME AN AVG. DEPTH OF 25',

AND 4 LABORERS REQ. 1 HR TO PLACE

A 13' WIDE LENGTH. (2' OVERLAP)

$$4 \times \$23.65/\text{HR} = (25' \times 13') = \$0.29/\text{SF}$$

$$\text{TOTAL} = \$0.70 + \$0.29 = \$0.99/\text{SF}$$

SAY \$1.00/SF

D) STONE FILL

\$8/CY DELIVERED AND DUMPED

(THIS PRICE IS FROM A PERSONAL

KNOWLEDGE OF THE LOCAL MATERIAL COSTS)

$$\$8/\text{CY} \times 0.148 \text{ CY/SF} = \$1.18/\text{SF}$$

E) SPREAD SPOILS

ITEM 2.3-200-0010 SPREAD DUMPED MATERIAL,

BY DOZER, NO COMPACTION = \$1.09/CY

$$\$1.09/\text{CY} \times 0.148 \text{ CY/SF} = \$0.16/\text{SF}$$

SUBJECT: VOLNEY LANDFILL

LEACHATE COLLECTION DRAIN

COST ESTIMATE

CALCULATIONS

PAGE 63

F) TOTAL UNIT COST

A + B + C + D + E

$$\$16.34 + \$0.25 + \$1.00 + \$1.18 + \$0.16 = \$18.93/SF$$

SAY \$19.00/SF

G) TOTAL ESTIMATED COST

$$\text{TRENCH 1} = 31' (\text{AVG}) \times 2020' = 62,620 \text{ SF}$$

$$\text{TRENCH 2} = 19' (\text{AVG}) \times 1780 = 33,820 \text{ SF}$$

TOTAL =

$$\begin{array}{r}
 96,440 \text{ SF.} \\
 \times \quad \$19./\text{SF} \\
 \hline
 = \$1,832,360
 \end{array}$$

SUBJECT: VOLNY LANDFILL
LEACHATE COLLECTION WELLS
DIRECT CAPITAL COST ESTIMATE CALCULATIONS
Page 64

1. MATERIAL COSTS

A) 36" Ø OUTER CASING

FREX WELL DRILLING QUOTED \$36/FT
\$36/FT X 35' DEEP = \$1260

B) 14" Ø STAINLESS STEEL INNER CASING

FREX WELL DRILLING QUOTED \$110/FT
\$110 X 35' = \$3850

C) 14" Ø STAINLESS STEEL SCREEN

FREX WELL DRILLING QUOTED \$140/FT
140' X 10' = \$1400

D) STAINLESS STEEL WELL CAP

FREX WELL DRILLING QUOTED \$300 EA

E) SILICA SAND PACK

DOWELL SCHUMBERGER QUOTED \$8.45/100# +
72¢/TON MILE

UNIT WEIGHT = 100#/CF (AS PER DOWELL)

REQ'D AMOUNT

$$\left[\frac{\pi (36"/12)^2}{4} - \frac{\pi (14"/12)^2}{4} \right] 35' = 210 \text{ CF}$$

$$210 \text{ CF} \times 100 \text{ \#/CF} = 21,000 \text{ \#} = 10.5 \text{ TON}$$

$$\text{MATERIAL COST} = 21,000 \text{ \#} \times \$8.45/100\text{\#} = \$1774.50$$

SHIPPING (DEPEW TO OSWEGO)

$$10.5 \text{ T} \times 360 \text{ MI} \times \$0.72/\text{T.MI.} = 2721.60$$

TOTAL =

4496.10

NOTE: DOWELL DID SUPPLY TO THE
PAS SITE. (TOTAL BILL = \$6,500)

SAY \$4500

F) TOTAL MATERIAL COST

A + B + C + D + E

$$\$1260 + \$3850 + \$1400 + \$300 + \$4500 = \underline{\underline{\$11310}}$$

2. EQUIPMENT COST

SEWERT EQUIPMENT QUOTED \$6,600

FOR PUMP WITH CONTROLS

SUBJECT: VOLNEY LANDFILL
LEACHATE COLLECTION WELL
DIRECT CAPITAL COST ESTIMATE

3. INSTALLATION COST

A) OUTER CASING (RATES FROM 1987 MEANS)

SAY 1 25 TON HYDR. CRANE @ \$407.60/DAY
1 CRANE OPERATOR @ 21.20/HR
2 LABORERS @ 16.10/HR

4 HR INSTALLATION, ASSUMING CASING IS PLACED IN EXCAVATED TRENCH AND BACKFILLED AGAINST.

$$[21.20 + 2(16.10)] \times 4 + 407.60 = \$621.20$$

B) INNER CASING

SAY 1 25 TON HYDR. CRANE @ 407.60/DAY
1 CRANE OPERATOR @ 21.20/HR
3 LABORERS @ 16.10/HR
1 BACKHOE 161.80/DAY

CRANE WILL PULL OUTER CASING AS SAND BACK IS PLACED. LABORER WILL CUT OUTER CASING AS IT IS PULLED AND BACKHOE WILL HOLD THE INNER CASING PLUMB.

1 BACKHOE OPERATOR @ 19.60/HR

SAY 4 HRS

$$[21.20 + 3(16.10) + 19.60] \times 4 + (407.60 + 161.80) = \$925.80$$

C) PUMP INSTALLATION

2 LABORERS, 2 HRS.

$$2(16.10/HR) \times 2 HRS = 64.4$$

D) MOUNTING & INSTALLING CONTROLS

2 LABORERS, 4 HRS (\$16.10/HR)
1 ELECTRICIAN, 8 HRS (\$22.65/HR)
2(16.10) \times 4 + (22.65) \times 8 = \$310

E) TOTAL INSTALLATION COST

A + B + C + D

$$\$621.20 + 925.80 + 64.40 + 310 = 1921.40$$

SAY \$2000

BY REM DATE 2/17/87

URS COMPANY, INC.
CONSULTING ENGINEERS

SHEET NO. 3 OF 3

CHKD. BY AMM DATE 2/17/87

JOB NO. 35102

SUBJECT: YOLNEZ LANDFILL
LEACHATE COLLECTION WELLS
DIRECT CAPITAL COSTS Page 66

A. TOTAL COST

$$\begin{aligned} & 1 + 2 + 3 \\ & \$ 11,310 + \$ 6,600 + \$ 2,000 = \$ 19,910 \\ & \text{ADD } 20\% \text{ O\&P} = \quad \underline{\quad 3,982} \\ & \text{TOTAL} = \quad \quad \quad 23,892 \\ & \text{SAY } \underline{\underline{\$ 25,000}} \end{aligned}$$

SUBJECT: YOLNEY LANDFILLSLURRY WALLDIRECT CAPITAL COSTPage 67

THE PRICES BID IN AUGUST 1985 FOR THE P.A.S. MAIN SITE, FOR SLURRY WALL CONSTRUCTION USING TRENCH SPOILS FOR THE SB BACKFILL WERE:

SEVENSON: \$ 7 / SF
 GEO CON : \$ 5.07 / SF

FOR THE HELEN KRAMER LANDFILL IN NEW JERSEY THIS OFFICE RECENTLY RECEIVED THE FOLLOWING QUOTES:

SLURRY WALL INC. \$ 3.50 / SF
 HYCON CONST. SYST. \$ 6 TO 8 / SF

WHEN MIKE ELIA, PRESIDENT OF SEVENSON CONTAINMENT CORP. WAS ASKED FOR A SLURRY WALL QUOTE FOR THE HELEN KRAMER LANDFILL, BASED ON HIS EXPERIENCE @ P.A.S. HE GAVE A \$6 / SF QUOTE.

THEREFORE IT IS RECOMMENDED THAT \$6 / SF BE USED FOR ESTIMATING PURPOSES

THIS FIGURE FALLS WITHIN THE RANGE OF \$ 4.50 - 13.86 / SF GIVEN IN THE "COMPENDIUM OF COST OF REMEDIAL TECHNOLOGIES AT HAZARDOUS WASTE SITES" DATED MAY 1985 AND COMPILED BY THE ENVIRONMENTAL LAW INSTITUTE FOR THE USEPA.

ATTACHED ARE TELEPHONE BIDS RECEIVED FROM SLURRY WALL INC., HYCON CONST. & SEVENSON

"TELEPHONE BID"

Page 69

NAME AND ADDRESS OF FIRM SUBMITTING BID: <div style="text-align: center;"><i>HYCON CONST SYSTEMS</i></div> <hr/> <div style="text-align: center;"><i>4 WEST 58TH ST</i></div> <hr/> <div style="text-align: center;"><i>NY NY 10019</i></div> <hr/> VENDOR'S REPRESENTATIVE: <i>G. STAPPAZZON</i> VENDOR'S PHONE NO.: <i>(212) 688-9216</i>	DESCRIPTION OF PROJECT BEING BID ON <hr/> <div style="text-align: center;"><i>Helen Kramer</i></div> <hr/> <div style="text-align: center;"><i>Landfill</i></div> <hr/>
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TERMS:	DELIVERY DATA:	F.O.B.:
		<input checked="" type="checkbox"/> PREPAID <input type="checkbox"/> COLL SUBJECT TO INSPECTION

QUANTITY	DESCRIPTION	UNIT PRICE	TOTAL C
	PREL PRICING ESTIMATE		
	<i>Assume 400 LF 3' Wide Varies 50 to 65'</i>		
	<i>average 60' w/ gravel - sand/gravel separator</i>		
	<i>Level "D" Protection No hauling new fill</i>		
	<i>material onto site</i>		
	<i>Estimate</i>	<i>\$ 6 to 8 / 5F</i>	
	<i>Based on 300⁵⁵ / 10 hour shift</i>		
	<i>Use 1086 Kooking w/ long stick down to</i>		
	<i>50' w/ follow edge w/ Landfill</i>		

FREIGHT COSTS \$	SALES TAX \$	TOTAL COST FOR LABOR \$	TOTAL COST FOR MATERIAL \$	GRAND TOTAL \$
Freight costs are sales tax exempt. - Always separate.	<input type="checkbox"/> TAX EXEMPT	ALL WORK AND MATERIAL AS PER PLANS AND SPECIFICATIONS <input type="checkbox"/> YES <input type="checkbox"/> NO		

BID INCLUSIONS	BID EXCLUSIONS

DATE THIS BID PHONED IN: <i>12/1/86</i>	TIME THIS BID PHONED IN: <i>11:25</i> AM	SIGNATURE OF REPRESENTATIVE ACCEPTING THIS BID: <i>X [Signature]</i>
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SUBJECT: Volney Landfill
Combined Cost of Remedial Alternatives

CALCULATION
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Job	Alternatives							
	1	2	3	4a	4b	5a	5b	6
Total Capital Costs (\$ X 10 ³)	0	535,800	6,208	4,754	5,081	10,290	10,412	274,000
Abandon (0)	0							
Excavate & Remove (535,800)		535,800						
Site-Side w/ Capping (6,208)			6,208			6,208	6,208	
Leachate Drain (3,914)				3,914	3,914	3,914	3,914	
Off-Site Leachate Disposal (240)				240				
Off-Site w/ Capping (207 X 870 = 168)						168		
On-Site Leachate Treatment (1,175)					1,175			
On-Site w/ Capping (290)*							290	
Incineration (274,000)								274,000
Annual O/M (\$ X 10³)	0	535,800	6,208	4,754	5,081	10,290	10,412	274,000
Abandon (0)	0							
Excavate & Remove (0)		0						
Site-Side w/ Cap (6.0)			6.0			6.0	6.0	
Leachate Drain (1.2)				1.2	1.2	1.2	1.2	
Off-Site Disposal (285.2)				285.2				
Off-Site Disposal w/ Cap (57.0)					183.8	57.0		
On-Site Treatment (183.8)								
On-Site Treatment w/ Cap (36.8)							36.8	
Incineration (137,870)								137,870
Total P/M (\$ X 10³)	0	0	6.0	286.4	185.0	64.2	44.0	137,870
Abandon (0)	0							
Excavate & Remove (535,800)		535,800						
Site-Side w/ Cap (6,208)			6,208			6,208	6,208	
Leachate Drain (3,930)				3,930	3,930	3,930	3,930	
Off-Site Disposal (3,529)				3,529				
Off-Site Disposal w/ Cap (706)						706		
On-Site Treatment (2,908)					2,908			
On-Site Treatment w/ Cap (637)							637	
Incineration (796,600)								796,600
TOTAL	0	535,800	6,208	7,459	6,838	10,901	10,832	796,600

* Cost of Treatability Study (\$170,000) unchanged. All other direct and indirect capital costs reduced by 20 percent.

BY DWR DATE 2/23/87

SHEET NO 1 OF 1

CHKD. BY _____ DATE _____

URS COMPANY, INC.
CONSULTING ENGINEERS

JOB NO. _____

SUBJECT: Velney Landfill
Construction Cost Estimate

Discussion: In final construction cost estimate (i.e., direct capital costs), make allowance for: Project Initiation (mobilization, medical surveillance, preliminary site work, temporary access & parking areas); Temporary Construction Facilities (office trailers, security trailer, soils lab, hygiene facility, medical facility, storage trailer); Job Site Safety (Level C, B). Based upon our experience @ PAS, the contractors will mark up these up-front items, making them impossible to estimate conventionally since they include profit, risk and other intangibles. Use PAS averages

Category	Sevenson Bid		Geo-Con Bid		Average	
	\$	% of Total	\$	% of Total	\$	% of Total
Proj. Initiation	386,000	13.0	367,000	9.3	375,000	11.2
Facilities	260,000	8.8	617,000	15.8	438,000	12.3
Safety	58,000	2.0	66,000	1.7	62,000	1.8
					<u>875,000</u>	<u>25.3</u>

Conclusion: On this project, apply the following percentages to subtotal of construction costs

Project Initiation	15%
Facilities	16%
Safety	2%
	<u>33%</u>

Note: 33% X Construction Subtotal
≈ 25% X Total

SUBJECT: Proposed Long-Term Groundwater Monitoring Program at Valley Landfill **CALCULATIONS**
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Analytical Parameters / Costs

Basis of Unit Costs \approx Recent price quotes (1987) from various CLP labs on various projects

<u>Class / Compound</u>	<u>Unit Cost</u>
HSL Volatiles	\$ 200
Total Phenols	30
Metals:	
Arsenic	} \rightarrow \$10 - \$25 each \$270 will get us all 27 HSL metals. Use this figure as an upset and, if package is more economical, expand analysis to all HSL metals
Beryllium	
Iron	
Lead	
Manganese	
Mercury	
Nickel	
Selenium	
Thallium	
Zinc	
Leachate Indicators	
Alkalinity	10
Ammonia Nitrogen	30
COD	30
Hardness	10
TDS	15
TOC	20
Total	\$ 615 / sample

Sampling Costs

Assume 2 persons can sample 10 wells per day (including QA/QC documentation, clean, shipping, field measurements). During the 1st 2 years, there are 27 wells (11 residential, 16 monitoring)
For a 2-man crew, allow:

- 1-day (10 hrs) : preparation & follow-up
- 1-day (10 hrs) : purging monitoring wells
- 1-day (10 hrs) : travel
- 3-days (30 hrs) : sampling

60 hrs X \$29/hr payroll X 2.65 = \$3,180 (labor)
6 @ \$13/hr + \$9/hr

SUBJECT: Proposed Long-Term Groundwater Monitoring
Program at Valley Landfill**CALCULATIONS**
Page 74Sampling Costs (cont.)

Travel: 500 miles @ \$0.23/mi = \$115

Subsistence: 6x2 = 12 man-days @ \$65/m-day = \$780

Equipment: For rental & disposable, allow: \$200

Shipping: Allow \$400

∴ Total Direct: \$115 + \$780 + \$200 + \$400 = \$1,495

Total Sampling Cost = Labor + Direct
= \$3,180 + \$1,495
= \$4,675 say \$4,700After 1st 2 years, # of wells reduced to 19 (11 resid. + 8 monitor)

∴ Labor = 50 hrs x \$90/hr x 2.65 = \$2,650

Travel = \$115 (unchanged)

Subsistence = 10 man-days @ \$65 = \$650

Equipment = \$140 (provided by wells)

Shipping = \$280 (provided by wells)

∴ Total Sampling Cost = \$3,835 say \$3,800Annual Costs1st 2 years:Per Round: Sampling + Analysis
= \$4,700 + 27 samples @ \$615/sample
= \$21,305 per round

Per Year: (\$21,305/round) x (4 rounds/yr) = \$85,220

say \$85,000/yrYears 3 → 30:Per round: Sampling + Analysis
= \$3,800 + 19 samples @ \$615/sample
= \$15,485/round

Per year: (\$15,485/round) x (1 round/yr) = \$15,485

say \$16,000/yr

SUBJECT: Proposed Long-Term Groundwater Monitoring
Program at Volney Landfill

CALCULATIONS

Page 75Present Worth of MonitoringYears 1 → 2

$$(P/A, i, n) = \frac{(1+i)^n - 1}{i(1+i)^n}$$

where P = Present Worth
A = Annual cost
i = interest factor (0.10)
n = # years (2)

$$= \frac{[(1.1)^2 - 1]}{0.1(1.1)^2}$$

$$= 1.74$$

$$\therefore P = 1.74A = 1.74(\$85,000) = \$147,500$$

Years 3 → 30

First bring back to end of Yr. 2

$$(P_1/A, i, n) = \frac{[(1.1)^{28} - 1]}{0.1(1.1)^{28}}$$

$$= 9.31$$

$$\therefore P_1 = (9.31)(\$16,000) = \$148,900$$

= Present worth of costs over years 3 → 30
at the end of year 2

= F

= Future Value

$$(P/F, i, n) = 1/(1+i)^n$$

$$= 1/(1.1)^2$$

$$= 0.83$$

$$\therefore P = (0.83)(\$148,900) = \$123,100$$

~~~~~&gt; Total Present Worth

$$= \$147,500 + \$123,100 = \$270,600$$