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# EAST HAMPTON SEPTAGE LAGOON

# CONCEPT ENGINEERING WORK PLAN

PREPARED FOR

TOWN OF EAST HAMPTON

Remediation

MAY, 1993

fanning, phillips & molnar
ENGINEERS
RONKONKOMA NEW YORK

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HAZARDOUS WASTE REMEDIATION
NYSDEC REGION 1

# EAST HAMPTON SEPTAGE LAGOON
# CONCEPT ENGINEERING WORK PLAN

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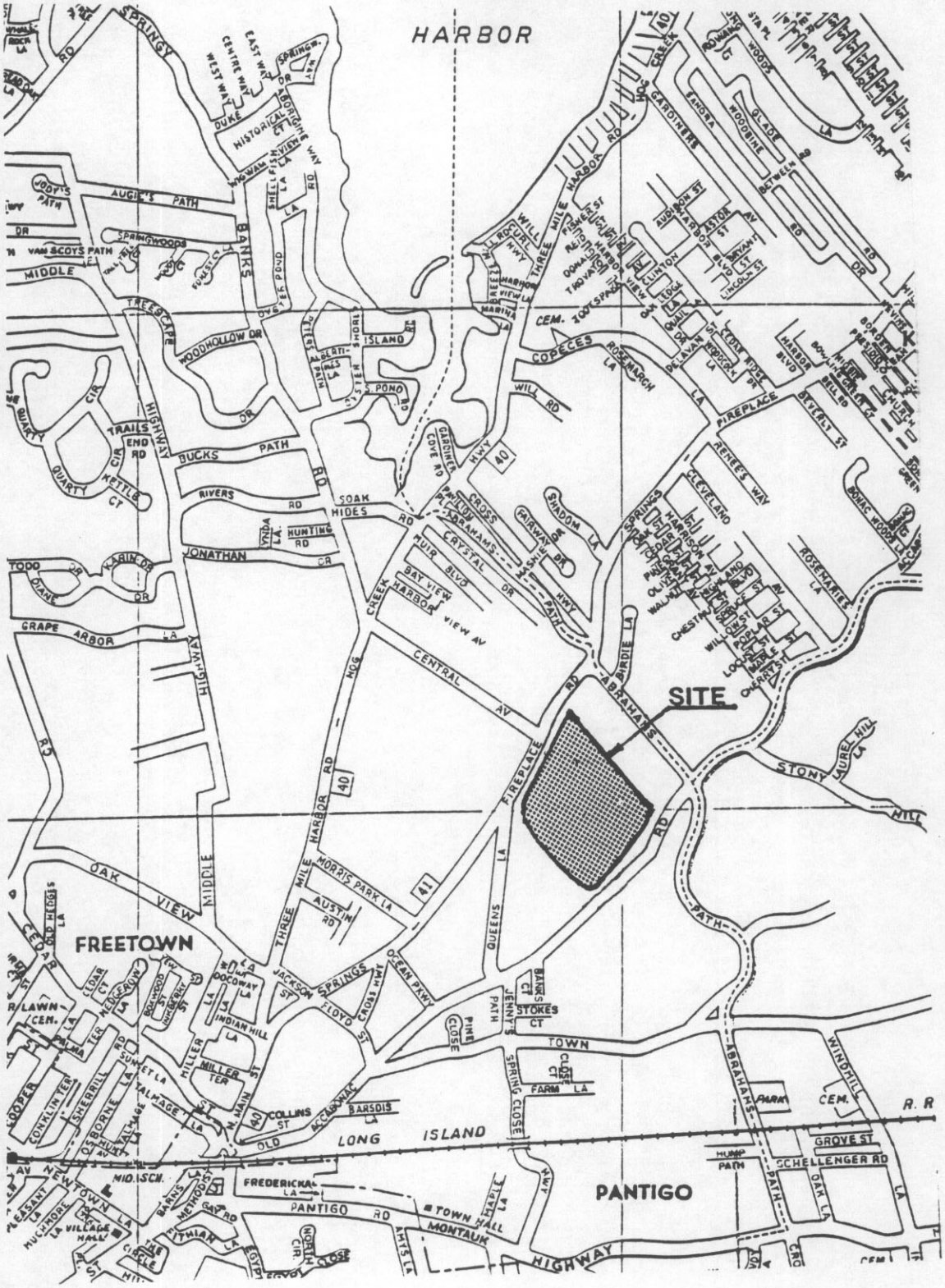

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## SECTION 1.0
## INTRODUCTION

### 1.1 Legal and Sampling History of Site

The Springs-Fireplace Road Landfill is a municipal solid waste landfill located between Accabonac Road and Springs-Fireplace Road in the Village of Springs, Town of East Hampton, Suffolk County, New York (see Figure 1.1) for site location. The landfill, which is owned and was operated by the Town of East Hampton, was established in the early 1960s on 27 acres of undeveloped property to replace the town dump and is now approximately 60 acres in size. It is reported to have accepted municipal, commercial, light industrial waste, and septage sludge.

Septage lagoons, which used to accept septage waste from local haulers, are located just southwest of the entrance off Accabonac Road. The septage lagoons were used from 1964 to 1987. The Town of East Hampton no longer allows the dumping of septage at this landfill. A sewage treatment plant (STP) was constructed in 1987 to treat such waste, and all dumping at the lagoons ceased. Sludge from the STP is dried on sand beds with under drains. During the winter months when the beds are frozen, the sludge is taken to the Bergen Point STP for disposal. At the May 15, 1989 site inspection, measurements of the lagoons were made and the in-place volume of the liquid phase and sludge was calculated. This indicated the total sludge volume of the two lagoons was 330,000 gallons (747 $yd^3$ dry basis) and a liquid phase volume of 414,000 gallons. The solids content for the combined sludge was approximately 46 percent. The liquid volume will fluctuate depending on rain events. The lagoons seem not to drain, at least not to reduce the liquid phase significantly between rain events. They are identified as the north and south lagoons. The sludge surface was not level with some


HARBOR
SITE
FREETOWN
PANTIGO
LONG ISLAND
R. R
TOWN
HIGHWAY
SPRING
MIDDLE
BANKS
MIDDLE
BUCKS PATH
RIVERS RD
SOAK HIDES RD
JONATHAN
GRAPE ARBOR LA
OAK VIEW
THREE MILE HARBOR RD
CENTRAL AV
ABRAHAMS PATH
FIREPLACE
STONY HILL RD
QUEENS LA
MORRIS PARK LA
AUSTIN RD
OCEAN PKWY
JACKSON SPRINGS
FLOYD CROSS HWY
PANTIGO RD
MONTAUK HIGHWAY
SCHELLENGER RD
GROVE ST
WINDMILL
CEM.
FARM
PATH
TOWN HALL
METHODIST
NEW TOWN LA
VILLAGE HALL
MUCHMORE
PLEASANT
SHERRILL
CONKLIN
LAWN CEM.
INDIAN HILL
MILLER TER
MILLER ST
SUNSET LA
YALMAGE
OSBORNE LA
N. MAIN
COLLINS ST
BARSDIS
OLD
ACCABONAC
FREDERICKA
NO. I SCH.
GAY RD
EGYPT
NORTH CIR
AMITY LA
MAPLE LA
HUMP
SPRING CLOSE
FARM LA
PINE CLOSE
JENNY'S PATH
STOKES CT
BARNS CT
OLD MORRIS LA
CEDAR
CEDAR CT
HEMLOCK
ROSEWOOD
HUNTER RUN
BROADWAY
TRAILS END RD
KETTLE CT
QUARRY CIR
QUARRY
KARIN DR
DIANE DR
TODO
HUNTING RD
LYNDA LA
BAY VIEW
CRYSTAL
QUIR BLVD
CROSS
ABRAHAMS
FAIRWAY DR
SHADOW LA
GARDINER COVE RD
HWY 40
WILL RD
COPECES
ROSEMARCH LA
CEM. 1607SPAN
CLEVELAND
REMEE'S WAY
SPRINGS
HARBOR
PINE
WILLOW
CHESTNUT
POPLAR
MAPLE
CHERRY
ROSEMARIES LA
BONAC WOODS
BYTHEWAY
HARBOR BLVD
COVE
CEDAR KNOLL
DELAWARE
QUAIL
OAK
CLINTON
BLOCK
ASTOR
BRYANT
LINCOLN
AUDUBON
HARBOR
FISHER
THREE MILE HARBOR RD
WILLOW CREEK
GARDINERS
WOODBINE
GLADE
BETWEEN
ROWING
WOODS
SPRINGS
WEST WAY
CENTRE WAY
EAST WAY
DUKE
HISTORICAL CT
WINDSWEPT
SPRINGS
SPRINGS
SPRINGS

mounding at the perimeter of the lagoons. The walls of both lagoons were estimated to be at a 45° slope. The lagoons may have, in the past, unknowingly received hazardous substance in the septic sludge.

The Springs-Fireplace Landfill site was listed by the New York State Department of Environmental Conservation as an Inactive Hazardous Waste Disposal Site, classification 2A, I.D. #1-52-058. On December 13, 1981, Michael J. O'Toole Jr., P.E., Director, Division of Hazardous Waste Remediation, NYSDEC delisted the landfill site except the lagoon area. The lagoons are, therefore, still listed in category 2A (temporary classifications for sites that have inadequate and/or insufficient data for inclusion in any of the other classifications).

In March, 1982, the Suffolk County Department of Health Services sampled the sludge and performed priority pollutant analysis on the samples.

The lagoons were sampled on September 20, 1988 and a EPTox analysis was done. In May, 1989 sampling of the north and south lagoons was done by Fanning, Phillips and Molnar (FP&M). FP&M sampled the sludge and water on October 1, 1990 testing for EP-Toxicity and total metals on the sludge and analyzed the water for organics and inorganics.

1.2 Purpose of Plan

This plan is to determine the best cost effective acceptable technology for remediation of the Septage Lagoons and final disposal of the sludge. There will be a post excavation investigation consisting of soil borings, sampling and well installation to determine if any contamination has occurred from leaching of the lagoons as part of a Phase II Investigation which will be part of a separate document.

compare & Town 4046

## SECTION 2.0
## PREVIOUS INVESTIGATIONS

The septage lagoons and landfill have been investigated as part of prior studies and reports (March, 1982, SCDHS, July, 1989, FP&M, November, 1989, FP&M and June, 1990, FP&M).

### 2.1 Sampling Results and Conclusions

In March of 1982, the Suffolk County Department of Health Services sampled sludge in the unlined septage lagoons. (Source: EA Science & Technology, Phase 1 Investigation for the East Hampton Landfill 1981).

Five (5) samples were collected on May 16, 1989 at the north and south lagoons by Fanning, Phillips & Molnar.

Four (4) additional samples taken and analyzed in October, 1990 by FP&M. In addition to metals, VOC, semi VOC, pesticides, PCBs, and EP Toxicity was also tested. In October, 1990 the water above the sludge was also tested. Results are shown in Table 2.1, 2.2, and 2.3.

Table 2.1 shows the soils to required remediation. Using the NYSDEC most recent guidance (TAGM HWR-92-4046 soil cleanup objectives and cleanup levels, the sludge would require remediation. Parameters in both the metal group and the VOC are above these guidance values. Table 2.1 also confirms the lack of PCB in the sludge. Table 2.2 shows the water above the sludge and the sludge to have little chemical interaction. The only violation of GA standard were iron magnese and lead. No organic violation except for phenols occurred. No VOCs were found (except for acetone). Pesticides, PCBs and semi volatiles were undetectable in the water. Table 2.3 shows the EP Toxicity tests performed in two sludge samples. Both samples showed no violations.

**TABLE 2.1**
**DETECTED COMPOUNDS AND METALS IN SLUDGE**
**FROM THE SEPTAGE LAGOON**
**(Springs-Fireplace Landfill)**

| PARAMETERS | DATE: March, 1982 | May, 1989 NORTH LAGOON S-1 | May, 1989 NORTH LAGOON S-2 | May, 1989 NORTH LAGOON S-3 | May, 1989 SOUTH LAGOONS S-4 | May, 1989 SOUTH LAGOONS S-5 | October, 1990 S-1 (North Lagoon) | October, 1990 S-2 (South Lagoon) | NYSDEC Soil Cleanup Objectives |
|---|---|---|---|---|---|---|---|---|---|
| **Metals mg/kg** | | | | | | | | | |
| Aluminum | NT | 7,120 | NT | NT | 6,650 | NT | 7,110 | 10,500 | SB |
| Arsenic | NT | 2.60 | NT | NT | 6.70 | NT | U | U | 7.5 |
| Barium | NT | 262 | NT | NT | 498 | NT | <56.0 | 640 | 300 |
| Cadmium | NT | 3.60 | NT | NT | 10.8 | NT | 1.4 | 8.7 | 1.0 |
| Chromium | NT | 26.2 | NT | NT | 44.0 | NT | 11.2 | 50.9 | 10.0 |
| Copper | NT | 1,020 | NT | NT | 1,550 | NT | 78 | 1,890 | 25.0 |
| Sodium | NT | 1,740 | NT | NT | 2,370 | NT | 204 | 691 | SB |
| Zinc | NT | 1,210 | NT | NT | 1,880 | NT | 115 | 2,470 | 20.0 |
| Calcium | NT | 5,020 | NT | NT | 7,350 | NT | 784 | 9,160 | SB |
| Iron | NT | 8,640 | NT | NT | 9,170 | NT | 7,420 | 12,140 | 2,000 |
| Lead | NT | 146 | NT | NT | 484 | NT | 18.5 | 798 | 30 |
| Magnesium | NT | 833 | NT | NT | 1,050 | NT | 756 | 1,530 | SB |
| Manganese | NT | 64.3 | NT | NT | 61.5 | NT | 101 | 101.8 | SB |
| Mercury | NT | 2.90 | NT | NT | 4.20 | NT | 0.33 | 2.1 | 0.1 |
| Nickel | NT | 19.0 | NT | NT | 26.4 | NT | < 11.2 | 36.4 | 13.0 |
| Potassium | NT | 224 | NT | NT | 214 | NT | 476 | 618 | SB |
| Selenium | NT | 1.40 | NT | NT | 2.90 | NT | < 1.4 | 4.2 | 2.0 |
| Silver | NT | 21.4 | NT | NT | 26.4 | NT | < 2.8 | 29.1 | SB |
| **Volatile Organic Compounds ug/kg** | | | | | | | | | |
| Toluene | 2,500 | 1,100 | 16,000 | 1,700 | 2,700 | 3,300 | 210 | 2,200 | 1,500 |
| Chlorobenzene | U | 240 | U | 12,000 | U | U | 1,200 | 410 | 1,700 |
| 1,2-Dichlorobenzene | U | 1,700 | 12,000 | 13,000 | 61,000 | 27,000 | 2,100 | U | 7,900 |
| 1,3-Dichlorobenzene | U | 470 | 4,200 | 350 | 11,000 | 5,500 | U | U | 1,600 |
| 1,4-Dichlorobenzene | U | 970 | 8,800 | 3,100 | 17,000 | 9,100 | U | U | 8,500 |
| Xylenes | U | 144 | 1,100 | 180 | 17,000 | 8,100 | 63 | 6,400 | 1,200 |
| Carbon Disulfide | U | U | 1,500 | 210 | U | 2,000 | < 11 | 650 | 2,700 |
| Ethylbenzene | U | U | U | U | 3,300 | 1,700 | < 11 | 1,200 | 5,500 |
| Acetone | U | 360 | 3,700 | 1,100 | 1,300 | 2,000 | 940 | 23,000 | 200 |
| Methylene Chloride | 42,000 | U | U | U | U | U | < 11 | 51 | 100 |
| Trichloroethylene | U | U | U | U | U | U | < 11 | 54 | 700 |
| Benzene | U | U | U | U | U | U | < 11 | 67 | 60 |
| 2 Butanone | U | U | U | U | U | U | 200 | 6,600 | 300 |
| Phenols | 39 | U | U | U | U | U | U | U | |
| **Semi-Volatile Organic Compounds ug/kg** | | | | | | | | | |
| 4-Chloroaniline | NT | 3,000 | NT | NT | 9,800 | NT | U | U | 220 |
| 2-Methylnaphthalene | NT | U | NT | NT | 6,200 | NT | < 520 | U | 36,400 |
| Bis(2ethylhexyl) phthalate | NT | | | | | | < 60 | U | 50,000 |
| **Pesticides and PCBs ug/kg** | | | | | | | | | |
| Pesticides and PCBs | NT | U | NT | NT | U | NT | NT | NT | 1000 |

U - Undetected

NT - indicate that the parameter was not tested.

**TABLE 2.2**
**DETECTED COMPOUNDS IN THE WATER ABOVE THE SLUDGE**
**FROM THE SEPTAGE LAGOONS**
**AT THE SPRINGS-FIREPLACE LANDFILL**
**OCTOBER 1, 1990**

| PARAMETERS | NYS 6NYCRR Part 700-705 11-15-91 Togs | A-1 (North Lagoon) | A-2 (South Lagoon) |
|---|---|---|---|
| **Metals (mg/l)** | | | |
| Silver | .05 | U | U |
| Aluminum | - | 4.2 | 1.9 |
| Barium | 1.0 | U | U |
| Calcium | - | 32.75 | 127 |
| Cadmium | 0.01 | U | U |
| Chromium | 0.05 | U | U |
| Copper | 0.2 | U | 0.31 |
| Iron | 0.3 | 3.0 | 1.9 |
| Mercury | 2.0 | U | 1.4 ppb |
| Potassium | - | 3.8 | 3.4 |
| Magnesium | 35.0 | 1.7 | 3.1 |
| Manganese | 0.3 | 0.74 | 0.23 |
| Sodium | 20.0 | 2.6 | 9.9 |
| Nickel | - | U | U |
| Lead | .025 | 16 ppb | 67 ppb |
| Selenium | .010 | U | U |
| Zinc | 0.3 | 0.06 | 0.55 |
| **Volatile Organic Compounds (ug/l)** | | | |
| Methylene Chloride | 5.0 | U | U |
| Trichloroethene | 5.0 | U | U |
| Benzene | 0.7 | U | U |
| Toluene | 5.0 | U | U |
| Chlorobenzene | 5.0 | U | U |
| Ethylbenzene | 5.0 | U | U |
| Xylenes (total) | 5.0 | U | U |
| Acetone | 50.0 | U | 22 |
| 2-Butanone (MEK) | 50.0 | U | U |
| Carbon Disulfide | 50.0 | U | U |
| Phenols | 1.0 | 4.0 | 7.2 |

**Notes**

Semi volatiles, pesticides and PCB were all undetected.
U - Undetected

# TABLE 2.3
# EP TOXICITY ANALYSIS OF SLUDGE FROM THE SEPTAGE LAGOONS AT THE SPRINGS-FIREPLACE LANDFILL OCTOBER 1, 1990

| PARAMETERS | S-1 (North Lagoon) | S-2 (South Lagoon) | Regulatory Levels (mg/l) |
|---|---|---|---|
| **EP Toxicity Metals** | | | |
| Barium | <0.2 | 0.36 | 100.0 |
| Chromium | 0.02 | U | 5.0 |
| Arsenic | U | U | 5.0 |
| Cadmium | U | U | 1.0 |
| Lead | U | U | 5.0 |
| Mercury | U | U | 0.2 |
| Silver | U | U | 5.0 |
| Selenium | U | U | 1.0 |

U - Undetected

TAC232

## SECTION 3.0
## ALTERNATIVES FOR WATER AND SLUDGE REMOVAL

ask John Spades
ask Dilip re STP

### 3.1 Water Removal and Disposal

#### 3.1.1 Water Removal

Because the water in the lagoons is fairly clean, it is proposed that the supernatant water in the lagoons will be carefully pumped out of the lagoon and allowed to filter through 80 feet of unsaturated zone and reach the water table. Care will be taken as to not distribute the sludge. The last foot of water will be carefully pumped into tank cars.

#### 3.1.2 Disposal of Water

water needs testing first
Need Andys approval
Andy Yerman 8/26/93

##### 3.1.2.1 To Septage Treatment Plant

The tanker trucks can discharge into the septage treatment plant at a rate calculated not to hydraulically overload the system. At the present plant capacity, however, the influent of septage is utilizing the entire capacity of the plant, and at times results in overload requiring transhipment to the Bergen Point STP.

water needs testing first
Bergen Pt has to approve

##### 3.1.2.2 To Bergen Point STP

Presently excess water/sludge from the septage treatment facility is being shipped to the Bergen Point STP and water from the lagoon can be likewise disposed at Bergen Point STP.

##### 3.1.2.3 On Site Leaching Pool/Lagoon

water needs testing first

It is physically possible to dispose of the water on site to the leaching fields of the septage treatment plant. However, with the mixture of sludges it is doubtful this water would meet groundwater discharge standards, and therefore, would not be an acceptable alternative.

## 3.2 Septage Sludge Removal

### 3.2.1 Removal

The sludge is quite thick, the solids content for the two lagoons are 24.8 percent and 64 percent with a weighted average of ≈45 percent. This makes pumping difficult.

#### 3.2.1.1 By Backhoe or Crane and Truck

The semi-solid sludge can be removed by using a "Backhoe" or a "Clam Shell" Crane. The backhoe may not have a long enough reach to clean the center of the lagoon. The crane has the added advantage of not having to climb into the pit area. The truck should be water tight and be supplied with a disposable liner.

#### 3.2.1.2 By Liquification and Pumping

The sludge can be mixed with the supernatant liquid and the mixture pumped into a tanker truck. This alternative would be useful if both the liquid and sludge are to be discharged into the septage treatment plant or a STP. Mixing, however, would be difficult and possibly counter-productive.

### 3.2.2 Volume Reduction

For storage and/or final disposition of the sludge a reduction in volume will usually result in lower costs. The cost of volume reduction will be compared to the disposal saving to determine if it is worthwhile.

#### 3.2.2.1 Filter Press

Filters, belt or press type have been used to reduce the volume of sludge by increasing the solids content to approximately 85 percent. The type of filter used will depend on cost per unit sludge processed, final volume (% moisture) attained and filtrate generated.

3.2.2.2 Existing Sludge Drying Beds – not acceptable because of hay waste

The septage treatment system was designed with 1 covered and 5 uncovered sludge drying beds. These are presently unused, the sludge from the plant is trucked to the Bergen Point STP. The beds are not usable during low temperatures (Nov., Dec., Jan., Feb.) since the sand and sludge freezes. This limits the possible use to a March to October time window.

3.2.3 Storage of Sludge – long term storage is not acceptable.

If the sludge is not removed from the site for final disposal immediately after extraction from the lagoons, some interim storage is necessary. This storage must be such as not to create further contamination or nuisance.

3.2.3.1 On Lined Pad With Cover

The sludge after dewatering may be stored on an impervious (paved or lined) pad and covered to prevent rainwater or snow from causing leachate.

3.2.3.2 On Lined Pad With Cover And Aeration – Part 212 + AG 1 may apply

The sludge may be stored per 3.2.3.1 with the addition of aeration. This can be accomplished by placing aeration pipes connected to a blower on the lined pad prior to piling the sludge. This will aerobically digest any putresible material left and prevent odors.

3.2.3.3 In Lined Roll-Off With Cover

The sludge may be stored in roll-offs that are water-proof or have a plastic liner. These will require a cover to eliminate precipitation.

3.2.3.4 Mixed With Wood Chips And Left In Place – NOT acceptable

After the supernatant liquid is removed it may be possible to mix existing wood chips with the remaining sludge and leave in place prior

to final disposition. This method may not be acceptable to the regulatory agency since the sludge has hazardous volatile substances in it.

3.2.3.5 No Storage

If the sludge is removed from the lagoon directly to the final disposition point storage is not necessary.

## SECTION 4.0
## DISPOSAL ALTERNATIVES

There are several technologies available for the final disposition of the septage sludge. Since the sludge has been digesting for over 6 years and is not hazardous by State or Federal standards, the disposal methods considered will be that applicable for non-hazardous compostable materials.

### 4.1 Composed With MSW

The town is presently constructing a MSW Composting Facility. This facility is projected to "on-line" July, 1994. Although the sludge can be composted with the MSW, this method would require storage for several months.

### 4.2 Off-Site To Landfill Or Incinerator

The sludge can be de-watered and transported directly to an off-site landfill or incinerator. This method would require de-watering, but no long term storage. The disposal at a landfill or incinerator will require approval of NYSDEC and a letter of approval from the appropriate regulatory agencies if the site is not in New York State.

### 4.3 To Septage Treatment Plant

The on-site Septage Treatment Facility now has the hydraulic capacity to process an average flow of 80,000 gallons/day utilizing an Equalization Tank. Mr. Dave Paolelli Superintendent of the Department of Sanitation reports that the plant is at capacity and excess septage arriving at the plant is transhipped to the Bergen Point STP.

### 4.4 To Bergen Point STP

The sludge may be pumped into a tanker truck (3.2.1.2) and shipped directly to the Bergen Point or other STP that will accept the waste.

This method would not require any on-site storage. Since excess septage is presently being shipped to Bergen Point, tanker trucks are available.

4.5 Composted With Wood Chips -Not acceptable

The sludge can be composted with the wood chip stored on-site and used by the Parks Department or stored for future use as a bulking agent for the MSW Composting Facility.

## SECTION 5.0
## ANALYSIS AND SELECTION OF ALTERNATIVES

The assorted technologies applicable to the removal, storage and disposal of the septic sludge and supernatant liquid. These are tabulated in Table 5.1. The last column "priority" is the preferred priority of choices.

Hence, it would appear that the most feasible cost-effective solution is to:

- Pump out the excess water to within one foot of the sludge.
- Remove the remaining water and transport to Bergen Point
- Use a crane to remove the sludge onto a truck
- Transport the sludge to an area on site that is lined and covered and can be aerated until the VOC is reduced to levels that are acceptable by air stripping and biodegradation
- Store the sludge for one year until we can compost it with municipal solid waste

Fanning, Phillips and Molnar recommends that detailed plans and specifications for this interim measure be drawn up and submitted to the state. Following approval, it is recommended that swift actions take place.

**TABLE 5.1**
**TABLE OF ALTERNATIVE TECHNOLOGIES**

| SECTION | TECHNIQUE | FEASIBILITY | | COST EFFECTIVE | | USABLE TECHNIQUE | | PRIORITY |
|---|---|---|---|---|---|---|---|---|
| | | YES | NO | YES | NO | YES | NO | |
| 3.1.1 | **Water Removal**-Tanker Truck | ✓ | | ✓ | | ✓ | | 1 |
| 3.1.2 | Water Disposal | | | | | | | |
| 3.1.2.1 | Septage Treatment Plant | | ✓ | ✓ | | | ✓ | 2 |
| 3.1.2.2 | Bergen Point STP | ✓ | | ✓ | | ✓ | | 1 |
| 3.1.2.3 | On-site leaching | ✓ | | ✓ | | | ✓ | 3 |
| 3.2.1 | **Sludge Removal** | | | | | | | |
| 3.3.1.1 | Backhoe/Crane and Truck | ✓ | | ✓ | | ✓ | | 1 |
| 3.2.1.2 | Liquidification and Pumping | ✓ | | | ✓ | | ✓ | 2 |
| 3.2.2 | **Volume Reduction** | | | | | | | |
| 3.2.2.1 | Filtration | ✓ | | | ✓ | ✓ | | 2 |
| 3.2.2.2 | Drying Beds | | ✓ | ✓ | | ✓ | | 1 |
| 3.2.3 | **Storage of Sludge** | | | | | | | |
| 3.2.3.1 | Lined Pad with Cover | ✓ | | ✓ | | ✓ | | 2 |
| 3.2.3.2 | Lined Pad with Cover and Aeration | ✓ | | ✓ | | ✓ | | 1 |
| 3.2.3.3 | Roll-Off with Cover | ✓ | | ✓ | | ✓ | | 3 |
| 3.2.3.4 | Mixed with Chips and Left in Place | | ✓ | ✓ | | ✓ | | 5 |
| 3.2.3.5 | No Storage | ✓ | | ✓ | | ✓ | | 4 |
| 4.0 | **Sludge Disposal** | | | | | | | |
| 4.1 | Composted with MSW | ✓ | | ✓ | | ✓ | | |
| 4.2 | Landfilled or Incinerated | ✓ | | | ✓ | ✓ | | 3 |
| 4.5 | Composted with Wood Chips | ✓ | | ✓ | | ✓ | | 3 |

## SECTION 6.0
## POST EXCAVATION INVESTIGATION

The soil at the bottom of the bottom of the lagoon will be removed to a depth where visual examination indicates the soil is no longer mixed with sludge. This soil will be disposed of with the sludge. Borings and observation wells will be installed in accordance with an approved plan under separate cover.

# APPENDIX A

# LABORATORY TESTS

COTEST LABORATORIES, INC.

ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777

LAB NO. C882212/1 10/18/88

East Hampton, Town of
Springs Fireplace Road
East Hampton, NY 11967
ATTN: Larry Penny

SOURCE OF SAMPLE: Scavenger Waste (eptox metals)
COLLECTED BY: JHW/ETL DATE COL'D:09/20/88 RECEIVED:09/20/88

SAMPLE: EP Extract of sediment, east lagoon (south

| ANALYTICAL PARAMETERS | | | ANALYTICAL PARAMETERS |
|---|---|---|---|
| Arsenic as As | mg/L* | 0.006 | |
| Barium as Ba | mg/L* | 0.15 | |
| Cadmium as Cd | mg/L* | 0.006 | |
| Chromium as Cr | mg/L* | <0.02 | |
| Lead as Pb | mg/L* | <0.005 | |
| Mercury as Hg | mg/L* | <0.001 | |
| Selenium as Se | mg/L* | <0.005 | |
| Silver as Ag | mg/L* | <0.01 | |
| Endrin | ug/L* | <0.25 | |
| Methoxychlor | ug/L* | <0.5 | |
| Lindane | ug/L* | <0.25 | |
| Toxaphene | ug/L* | <5 | |
| 2,4-D | ug/L* | <0.25 | |
| 2,4,5-TP | ug/L* | <0.25 | |
| pH | units | 7.0 | |

cc:

REMARKS: *Analysis performed on EP Extract according to USEPA EP Toxicity procedure (40 CFR Part 261-Appen. II).

DIRECTOR Thomas P. Cotter

8959

ECOTEST LABORATORIES, INC. ENVIRONMENTAL TESTING

377 SHEFFIELD AVE. • N. BABYLON, N.Y. 11703 • (516) 422-5777

LAB NO. C882212/2 10/18/88

East Hampton, Town of
Springs Fireplace Road
East Hampton, NY 11967
ATTN: Larry Penny

SOURCE OF SAMPLE: Scavenger Waste (eptox metals)
COLLECTED BY: JHW/ETL DATE COL'D:09/20/88 RECEIVED:09/20/88

SAMPLE: EP Extract of sediment, west lagoon (NORTH)

| ANALYTICAL PARAMETERS | | | ANALYTICAL PARAMETERS |
|---|---|---|---|
| Arsenic as As 5.0 | mg/L* | <0.005 | |
| Barium as Ba | mg/L* | 0.18 | |
| Cadmium as Cd 1.0 | mg/L* | 0.008 | |
| Chromium as Cr 5.0 | mg/L* | <0.02 | |
| Lead as Pb 5.0 | mg/L* | 0.010 | |
| Mercury as Hg 0.2 | mg/L* | <0.001 | |
| Selenium as Se 1.0 | mg/L* | <0.005 | |
| Silver as Ag 5.0 | mg/L* | <0.01 | |
| Endrin | ug/L* | <0.2 | |
| Methoxychlor | ug/L* | <0.4 | |
| Lindane | ug/L* | <0.2 | |
| Toxaphene | ug/L* | <2 | |
| 2,4-D | ug/L* | <0.2 | |
| 2,4,5-TP | ug/L* | <0.2 | |
| pH | units | 7.1 | |

cc:

REMARKS: *Analysis performed on EP Extract according to USEPA EP Toxicity procedure (40 CFR Part 261-Appen. II).

DIRECTOR Thomas R. Gaul

n= 8960

# H2M LABS, INC.

575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122


MK

LAB NO: 9011159

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... BLANK

DATE COLLECTED. 09/28/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: TRIP BLANK

REMARKS: SPRINGS

TCL PURGEABLE ORGANICS - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| CHLOROMETHANE | <10 | STYRENE | <5 |
| BROMOMETHANE | <10 | | |
| VINYL CHLORIDE | <10 | | |
| CHLOROETHANE | <10 | | |
| METHYLENE CHLORIDE | <5 | | |
| 1,1-DICHLOROETHENE | <5 | | |
| 1,1-DICHLOROETHANE | <5 | | |
| C/T-1/2-DICHLOROETHENE | <5 | | |
| CHLOROFORM | <5 | | |
| 1,2-DICHLOROETHANE | <5 | | |
| 1,1,1-TRICHLOROETHANE | <5 | | |
| CARBON TETRACHLORIDE | <5 | | |
| BROMODICHLOROMETHANE | <5 | | |
| 1,2-DICHLOROPROPANE | <5 | | |
| TRANS-1,3-DICHLOROPROPENE | <5 | | |
| TRICHLOROETHENE | <5 | | |
| DIBROMOCHLOROMETHANE | <5 | | |
| 1,1,2-TRICHLOROETHANE | <5 | | |
| CIS-1,3-DICHLOROPROPENE | <5 | | |
| BENZENE | <5 | | |
| BROMOFORM | <5 | | |
| 1,1,2,2-TETRACHLOROETHANE | <5 | | |
| TETRACHLOROETHENE | <5 | | |
| TOLUENE | <5 | | |
| CHLOROBENZENE | <5 | | |
| ETHYLBENZENE | <5 | | |
| XYLENES (TOTAL) | <5 | | |
| ACETONE | <10 | | |
| 2-BUTANONE (MEK) | <10 | | |
| 4-METHYL-2PENTANONE(MIBK) | <10 | | |
| CARBON DISULFIDE | <5 | | |
| VINYL ACETATE | <10 | | |
| 2-HEXANONE | <10 | | |

COPIES TO:

DATE ISSUED 10/11/90

DATE RUN..... 10/04/90
DATE REPORTED.. 10/11/90

J M Slavin
LABORATORY DIRECTOR

ORIGINAL

(516)694-3040 FAX:(516)694-4122

LAB NO: 9011158

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: FIELD BLANK

REMARKS: SPRINGS

| PARAMETER (S) | RESULTS | UNITS |
|---|---|---|
| SILVER | <0.01 | mg/l |
| ALUMINUM | <0.2 | mg/l |
| ARSENIC | <10 | ug/l |
| BORON | <0.10 | mg/l |
| BARIUM | <0.2 | mg/l |
| BERYLLIUM | <5 | ug/l |
| BOD5 | <20 | mg/l |
| CALCIUM | 0.31 | mg/l |
| CALCIUM HARDNESS | .78 | mg/l |
| CADMIUM | <5 | ug/l |
| CHLORIDE | <2 | mg/l |
| CYANIDE | <10 | ug/l |
| COD | <15 | mg/l |
| COLOR | <5 | units |
| CHROMIUM | <0.01 | mg/l |
| COPPER | <0.02 | mg/l |
| IRON | 0.16 | mg/l |
| TOTAL HARDNESS | .78 | mg/l |
| MERCURY | <0.2 | ug/l |
| POTASSIUM | 0.38 | mg/l |
| MAGNESIUM | <0.2 | mg/l |
| MANGANESE | <0.02 | mg/l |
| SODIUM | 0.61 | mg/l |
| AMMONIA (NH3) | <0.02 | mg/l |
| NICKEL | <0.04 | mg/l |
| NITRATE (AS N) | <0.1 | mg/l |
| LEAD | <5 | ug/l |
| TOTAL PHENOLS | <1 | ug/l |
| ANTIMONY | <60 | ug/l |
| SELENIUM | <5 | ug/l |
| SULFATE | <5 | mg/l |
| TOTAL ALKALINITY | 2 | mg/l |
| TOTAL DISSOLVED SOLIDS | 9 | mg/l |

COPIES TO:

DATE ISSUED 10/23/90

Stanley Isaacson
LABORATORY DIRECTOR

ORIGINAL

(516)694-3040 FAX:(516)694-4122

LAB NO: 9011158

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: FIELD BLANK

REMARKS: SPRINGS

TCL SEMI-VOLATILE ORGANICS - ( ug/l )

| PARAMETER (S) | RESULT |
|---|---|
| 1,3-DICHLOROBENZENE | <10 |
| 1,4-DICHLOROBENZENE | <10 |
| HEXACHLOROETHANE | <10 |
| BIS(2-CHLOROETHYL)ETHER | <10 |
| 1,2-DICHLOROBENZENE | <10 |
| BIS(2-CHL.ISOPROPYL)ETHER | <10 |
| N-NITROSO-DIPROPYLAMINE | <10 |
| NITROBENZENE | <10 |
| HEXACHLOROBUTADIENE | <10 |
| 1,2,4-TRICHLOROBENZENE | <10 |
| ISOPHORONE | <10 |
| NAPHTHALENE | <10 |
| BIS(2-CHL.ETHOXY)METHANE | <10 |
| HEXACHLOROCYCLOPENTADIENE | <10 |
| 2-CHLORONAPHTHALENE | <10 |
| ACENAPHTHYLENE | <10 |
| ACENAPHTHENE | <10 |
| DIMETHYLPHTHALATE | <10 |
| 2,6-DINITROTOLUENE | <10 |
| FLUORENE | <10 |
| 4-CHL.PHENYL PHENYLETHER | <10 |
| 2,4-DINITROTOLUENE | <10 |
| DIETHYL PHTHALATE | <10 |
| N-NITROSODIPHENYLAMINE | <10 |
| HEXACHLOROBENZENE | <10 |
| 4-BROMOPHENYLPHENYLETHER | <10 |
| PHENANTHRENE | <10 |
| ANTHRACENE | <10 |
| DI-N-BUTYL PHTHALATE | <10 |
| FLUORANTHENE | <10 |
| PYRENE | <10 |
| BUTYL BENZYL PHTHALATE | <10 |
| BIS(2ETHYLHEXYL)PHTHALATE | <10 |

| PARAMETER (S) | RESULT |
|---|---|
| CHRYSENE | <10 |
| BENZO(A)ANTHRACENE | <10 |
| 3,3-DICHLOROBENZIDINE | <20 |
| DI-N-OCTYL PHTHALATE | <10 |
| BENZO(B)FLUORANTHENE | <10 |
| BENZO(K)FLUORANTHENE | <10 |
| BENZO(A)PYRENE | <10 |
| INDENO(1,2,3-C,D)PYRENE | <10 |
| DIBENZO(A,H)ANTHRACENE | <10 |
| BENZO (G,H,I)PERYLENE | <10 |
| 2-CHLOROPHENOL | <10 |
| 2-NITROPHENOL | <10 |
| PHENOL | <10 |
| 2,4-DIMETHYLPHENOL | <10 |
| 2,4-DICHLOROPHENOL | <10 |
| 2,4,6-TRICHLOROPHENOL | <10 |
| 4-CHLORO-3-METHYLPHENOL | <10 |
| 2,4-DINITROPHENOL | <50 |
| 2-METH.-4,6-DINITROPHENOL | <50 |
| PENTACHLOROPHENOL | <50 |
| 4-NITROPHENOL | <50 |
| 2-METHYLPHENOL | <10 |
| 4-METHYLPHENOL | <10 |
| BENZOIC ACID | <50 |
| 2,4,5-TRICHLOROPHENOL | <50 |
| BENZYL ALCOHOL | <10 |
| 4-CHLOROANILINE | <10 |
| 2-METHYLNAPHTHALENE | <10 |
| 2-NITROANILINE | <50 |
| 3-NITROANILINE | <50 |
| DIBENZOFURAN | <10 |
| 4-NITROANILINE | <50 |

COPIES TO:

DATE ISSUED 10/23/90

DATE EXTRACTED. 10/05/90
DATE RUN..... 10/11/90
DATE REPORTED.. 10/11/90

Stanley Isaacson
LABORATORY DIRECTOR

ORIGINAL

LAB NO: 9011158

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: FIELD BLANK

REMARKS: SPRINGS

PESTICIDES AND PCB'S - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| LINDANE | <0.05 | | |
| HEPTACHLOR | <0.05 | | |
| ALDRIN | <0.05 | | |
| HEPTACHLOR EPOXIDE | <0.05 | | |
| DIELDRIN | <0.1 | | |
| ENDRIN | <0.1 | | |
| P,P'DDT | <0.1 | | |
| METHOXYCHLOR | <0.5 | | |
| TOXAPHENE | <1.0 | | |
| CHLORDANE | <0.5 | | |
| BETA-BHC | <0.1 | | |
| DELTA-BHC | <0.1 | | |
| ALPHA-BHC | <0.1 | | |
| P,P'-DDD | <0.1 | | |
| P,P'-DDE | <0.1 | | |
| ENDOSULFAN I | <0.1 | | |
| ENDOSULFAN II | <0.1 | | |
| ENDOSULFAN SULFATE | <0.1 | | |
| ENDRIN ALDEHYDE | <0.1 | | |
| O,P DDT | <0.1 | | |
| AROCLOR 1016 | <0.5 | | |
| AROCLOR 1221 | <0.5 | | |
| AROCLOR 1232 | <0.5 | | |
| AROCLOR 1242 | <0.5 | | |
| AROCLOR 1248 | <0.5 | | |
| AROCLOR 1254 | <1.0 | | |
| AROCLOR 1260 | <1.0 | | |

COPIES TO:

DATE EXTRACTED. 10/03/90
DATE RUN..... 10/05/90
DATE REPORTED.. 10/08/90

DATE ISSUED 10/23/90

Stanley Isaacson
LABORATORY DIRECTOR

ORIGINAL

(516)694-3040 FAX:(516)694-4122

LAB NO: 9011158

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: FIELD BLANK

REMARKS: SPRINGS

HERBICIDES - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| 2,4,-D | <0.2 | | |
| 2,4,5-TP (SILVEX) | <0.05 | | |

COPIES TO:

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DATE EXTRACTED. 10/08/90
DATE RUN..... 10/08/90
DATE REPORTED.. 10/08/90

Stanley Pearson
LABORATORY DIRECTOR

ORIGINAL

(516)694-3040 FAX:(516)694-4122

LAB NO: 9011158

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: FIELD BLANK

REMARKS: SPRINGS

| PARAMETER (S) | RESULTS | UNITS |
|---|---|---|
| TOTAL KJELDAHL NITROGEN | <0.2 | mg/l |
| THALLIUM | <10 | ug/l |
| TOTAL ORGANIC CARBON(TOC) | <0.5 | mg/l |
| TURBIDITY | <1 | units |
| ZINC | 0.06 | mg/l |

COPIES TO:

DATE ISSUED 10/23/90

Stanley Jeanson
LABORATORY DIRECTOR

ORIGINAL

H2M LABS, INC.
575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122

LAB NO: 9011158

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: FIELD BLANK

REMARKS: SPRINGS

TCL PURGEABLE ORGANICS - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| CHLOROMETHANE | <10 | STYRENE | <5 |
| BROMOMETHANE | <10 | | |
| VINYL CHLORIDE | <10 | | |
| CHLOROETHANE | <10 | | |
| METHYLENE CHLORIDE | <5 | | |
| 1,1-DICHLOROETHENE | <5 | | |
| 1,1-DICHLOROETHANE | <5 | | |
| C/T-1/2-DICHLOROETHENE | <5 | | |
| CHLOROFORM | <5 | | |
| 1,2-DICHLOROETHANE | <5 | | |
| 1,1,1-TRICHLOROETHANE | <5 | | |
| CARBON TETRACHLORIDE | <5 | | |
| BROMODICHLOROMETHANE | <5 | | |
| 1,2-DICHLOROPROPANE | <5 | | |
| TRANS-1,3-DICHLOROPROPENE | <5 | | |
| TRICHLOROETHENE | <5 | | |
| DIBROMOCHLOROMETHANE | <5 | | |
| 1,1,2-TRICHLOROETHANE | <5 | | |
| CIS-1,3-DICHLOROPROPENE | <5 | | |
| BENZENE | <5 | | |
| BROMOFORM | <5 | | |
| 1,1,2,2-TETRACHLOROETHANE | <5 | | |
| TETRACHLOROETHENE | <5 | | |
| TOLUENE | <5 | | |
| CHLOROBENZENE | <5 | | |
| ETHYLBENZENE | <5 | | |
| XYLENES (TOTAL) | <5 | | |
| ACETONE | <10 | | |
| 2-BUTANONE (MEK) | <10 | | |
| 4-METHYL-2PENTANONE(MIBK) | <10 | | |
| CARBON DISULFIDE | <5 | | |
| VINYL ACETATE | <10 | | |
| 2-HEXANONE | <10 | | |

COPIES TO:

DATE ISSUED 10/23/90

DATE RUN..... 10/04/90
DATE REPORTED.. 10/11/90

Stanley Isaacson
LABORATORY DIRECTOR

ORIGINAL

H2M LABS, INC.
575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122

PD

LAB NO: 9011189

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... SOIL
SPECIAL
METHOD.... GRAB

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE S-1

REMARKS: SPRINGS

RECEIVED APR 05 1991

| PARAMETER (S) | RESULTS | UNITS |
|---|---|---|
| SILVER | <2.8 | mg/kg |
| ALUMINUM | 7110 | mg/kg |
| ARSENIC | <2.8 | mg/kg |
| BARIUM | <56.0 | mg/kg |
| BERYLLIUM | <1.4 | mg/kg |
| CALCIUM | 784 | mg/kg |
| CADMIUM | 1.4 | mg/kg |
| CYANIDE | <1.6 | mg/kg |
| COBALT | <14.0 | mg/kg |
| CHROMIUM | 11.2 | mg/kg |
| COPPER | 78 | mg/kg |
| IRON | 7420 | mg/kg |
| MERCURY | 0.33 | mg/kg |
| POTASSIUM | 476 | mg/kg |
| MAGNESIUM | 756 | mg/kg |
| MANGANESE | 101 | mg/kg |
| SODIUM | 204 | mg/kg |
| NICKEL | <11.2 | mg/kg |
| LEAD | 18.5 | mg/kg |
| ANTIMONY | <16.8 | mg/kg |
| SELENIUM | <1.4 | mg/kg |
| THALLIUM | <2.8 | mg/kg |
| TOTAL SOLIDS | 71.4 | % |
| VANADIUM | <14.0 | mg/kg |
| ZINC | 115 | mg/kg |

COPIES TO:

DATE ISSUED 10/24/90

Stanley Isaacs
LABORATORY DIRECTOR

ORIGINAL

# H2M LABS, INC.

575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122


LAB NO: 9011187

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... SOIL
SPECIAL
METHOD.... GRAB

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE S-1

REMARKS: SPRINGS

| PARAMETER (S) | RESULTS | UNITS |
|---|---|---|
| SILVER | <0.01 | mg/l |
| ARSENIC | <62 | ug/l |
| BARIUM | <0.2 | mg/l |
| CADMIUM | <5 | ug/l |
| CHROMIUM | 0.02 | mg/l |
| MERCURY | <0.2 | ug/l |
| LEAD | <31 | ug/l |
| SELENIUM | <51 | ug/l |
| TOTAL SOLIDS | 64 | % |

COPIES TO:

DATE ISSUED 10/12/90

J M Slavin
LABORATORY DIRECTOR

ORIGINAL

# H2M LABS, INC.

575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122


LAB NO: 9011187

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... SOIL
SPECIAL
METHOD.... GRAB

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE S-1

REMARKS: SPRINGS

TCL SEMI-VOLATILE ORGANICS - ( ug/kg )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| 1,3-DICHLOROBENZENE | <520 | CHRYSENE | <520 |
| 1,4-DICHLOROBENZENE | <520 | BENZO(A)ANTHRACENE | <520 |
| HEXACHLOROETHANE | <520 | 3,3-DICHLOROBENZIDINE | <1000 |
| BIS(2-CHLOROETHYL)ETHER | <520 | DI-N-OCTYL PHTHALATE | <520 |
| 1,2-DICHLOROBENZENE | 2100 | BENZO(B)FLUORANTHENE | <520 |
| BIS(2-CHL.ISOPROPYL)ETHER | <520 | BENZO(K)FLUORANTHENE | <520 |
| N-NITROSO-DIPROPYLAMINE | <520 | BENZO(A)PYRENE | <520 |
| NITROBENZENE | <520 | INDENO(1,2,3-C,D)PYRENE | <520 |
| HEXACHLOROBUTADIENE | <520 | DIBENZO(A,H)ANTHRACENE | <520 |
| 1,2,4-TRICHLOROBENZENE | <520 | BENZO (G,H,I)PERYLENE | <520 |
| ISOPHORONE | <520 | 2-CHLOROPHENOL | <520 |
| NAPHTHALENE | <520 | 2-NITROPHENOL | <520 |
| BIS(2-CHL.ETHOXY)METHANE | <520 | PHENOL | <520 |
| HEXACHLOROCYCLOPENTADIENE | <520 | 2,4-DIMETHYLPHENOL | <520 |
| 2-CHLORONAPHTHALENE | <520 | 2,4-DICHLOROPHENOL | <520 |
| ACENAPHTHYLENE | <520 | 2,4,6-TRICHLOROPHENOL | <520 |
| ACENAPHTHENE | <520 | 4-CHLORO-3-METHYLPHENOL | <520 |
| DIMETHYLPHTHALATE | <520 | 2,4-DINITROPHENOL | <2600 |
| 2,6-DINITROTOLUENE | <520 | 2-METH.-4,6-DINITROPHENOL | <2600 |
| FLUORENE | <520 | PENTACHLOROPHENOL | <2600 |
| 4-CHL.PHENYL PHENYLETHER | <520 | 4-NITROPHENOL | <2600 |
| 2,4-DINITROTOLUENE | <520 | 2-METHYLPHENOL | <520 |
| DIETHYL PHTHALATE | <520 | 4-METHYLPHENOL | <520 |
| N-NITROSODIPHENYLAMINE | <520 | BENZOIC ACID | <2600 |
| HEXACHLOROBENZENE | <520 | 2,4,5-TRICHLOROPHENOL | <2600 |
| 4-BROMOPHENYLPHENYLETHER | <520 | BENZYL ALCOHOL | <520 |
| PHENANTHRENE | <520 | 4-CHLOROANILINE | <520 |
| ANTHRACENE | <520 | 2-METHYLNAPHTHALENE | <520 |
| DI-N-BUTYL PHTHALATE | <520 | 2-NITROANILINE | <2600 |
| FLUORANTHENE | <520 | 3-NITROANILINE | <2600 |
| PYRENE | <520 | DIBENZOFURAN | <520 |
| BUTYL BENZYL PHTHALATE | <520 | 4-NITROANILINE | <2600 |
| BIS(2ETHYLHEXYL)PHTHALATE | 760 | | |

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DATE RUN..... 10/11/90
DATE REPORTED.. 10/11/90

J M Slavin
LABORATORY DIRECTOR

ORIGINAL

H2M LABS, INC.
575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122

LAB NO: 9011187

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... SOIL
SPECIAL
METHOD.... GRAB

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE S-1

REMARKS: SPRINGS

PESTICIDES AND PCB'S - ( ug/kg )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| LINDANE | <25 | | |
| HEPTACHLOR | <25 | | |
| ALDRIN | <25 | | |
| HEPTACHLOR EPOXIDE | <25 | | |
| DIELDRIN | <50 | | |
| ENDRIN | <50 | | |
| P,P'DDT | <50 | | |
| METHOXYCHLOR | <250 | | |
| TOXAPHENE | <500 | | |
| CHLORDANE | <250 | | |
| BETA-BHC | <50 | | |
| DELTA-BHC | <50 | | |
| ALPHA-BHC | <50 | | |
| P,P'-DDD | <50 | | |
| P,P'-DDE | <50 | | |
| ENDOSULFAN I | <50 | | |
| ENDOSULFAN II | <50 | | |
| ENDOSULFAN SULFATE | <50 | | |
| ENDRIN ALDEHYDE | <50 | | |
| O,P DDT | <50 | | |
| AROCLOR 1016 | <250 | | |
| AROCLOR 1221 | <250 | | |
| AROCLOR 1232 | <250 | | |
| AROCLOR 1242 | <250 | | |
| AROCLOR 1248 | <250 | | |
| AROCLOR 1254 | <500 | | |
| AROCLOR 1260 | <500 | | |

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DATE RUN..... 10/09/90
DATE REPORTED.. 10/11/90

J M Slavin
LABORATORY DIRECTOR

ORIGINAL

H2M LABS, INC.
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(516)694-3040 FAX:(516)694-4122

LAB NO: 9011187

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... SOIL
SPECIAL
METHOD.... GRAB

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE S-1

REMARKS: SPRINGS

TCL PURGEABLE ORGANICS - ( ug/kg )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| CHLOROMETHANE | <21 | STYRENE | <11 |
| BROMOMETHANE | <21 | | |
| VINYL CHLORIDE | <21 | | |
| CHLOROETHANE | <21 | | |
| METHYLENE CHLORIDE | <11 | | |
| 1,1-DICHLOROETHENE | <11 | | |
| 1,1-DICHLOROETHANE | <11 | | |
| C/T-1/2-DICHLOROETHENE | <11 | | |
| CHLOROFORM | <11 | | |
| 1,2-DICHLOROETHANE | <11 | | |
| 1,1,1-TRICHLOROETHANE | <11 | | |
| CARBON TETRACHLORIDE | <11 | | |
| BROMODICHLOROMETHANE | <11 | | |
| 1,2-DICHLOROPROPANE | <11 | | |
| TRANS-1,3-DICHLOROPROPENE | <11 | | |
| TRICHLOROETHENE | <11 | | |
| DIBROMOCHLOROMETHANE | <11 | | |
| 1,1,2-TRICHLOROETHANE | <11 | | |
| CIS-1,3-DICHLOROPROPENE | <11 | | |
| BENZENE | <11 | | |
| BROMOFORM | <11 | | |
| 1,1,2,2-TETRACHLOROETHANE | <11 | | |
| TETRACHLOROETHENE | <11 | | |
| TOLUENE | 210 | | |
| CHLOROBENZENE | 1200 | | |
| ETHYLBENZENE | <11 | | |
| XYLENES (TOTAL) | 63 | | |
| ACETONE | 940 | | |
| 2-BUTANONE (MEK) | 200 | | |
| 4-METHYL-2PENTANONE(MIBK) | <21 | | |
| CARBON DISULFIDE | <11 | | |
| VINYL ACETATE | <21 | | |
| 2-HEXANONE | <21 | | |

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DATE RUN..... 10/04/90
DATE REPORTED.. 10/11/90

J M Slavin
LABORATORY DIRECTOR

ORIGINAL

# H2M LABS, INC.

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PP
LAB NO: 9011190

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... SOIL
SPECIAL
METHOD.... GRAB

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE S-2

REMARKS: SPRINGS

RECEIVED APR 05 1991

| PARAMETER (S) | RESULTS | UNITS |
|---|---|---|
| SILVER | 29.1 | mg/kg |
| ALUMINUM | 10500 | mg/kg |
| ARSENIC | <7.3 | mg/kg |
| BARIUM | 640 | mg/kg |
| BERYLLIUM | <3.6 | mg/kg |
| CALCIUM | 9160 | mg/kg |
| CADMIUM | 8.7 | mg/kg |
| CYANIDE | <4.0 | mg/kg |
| COBALT | <36.4 | mg/kg |
| CHROMIUM | 50.9 | mg/kg |
| COPPER | 1890 | mg/kg |
| IRON | 12140 | mg/kg |
| MERCURY | 2.1 | mg/kg |
| POTASSIUM | 618 | mg/kg |
| MAGNESIUM | 1530 | mg/kg |
| MANGANESE | 101.8 | mg/kg |
| SODIUM | 691 | mg/kg |
| NICKEL | 36.4 | mg/kg |
| LEAD | 798 | mg/kg |
| ANTIMONY | <43.6 | mg/kg |
| SELENIUM | 4.2 | mg/kg |
| THALLIUM | <7.3 | mg/kg |
| TOTAL SOLIDS | 27.5 | % |
| VANADIUM | <36.4 | mg/kg |
| ZINC | 2470 | mg/kg |

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Stanley Isaacs
LABORATORY DIRECTOR

ORIGINAL

# H2M LABS, INC.

575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122


LAB NO: 9011188

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... SOIL
SPECIAL
METHOD.... GRAB

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE S-2

REMARKS: SPRINGS

| PARAMETER (S) | RESULTS | UNITS |
|---|---|---|
| SILVER | <0.01 | mg/l |
| ARSENIC | <62 | ug/l |
| BARIUM | 0.36 | mg/l |
| CADMIUM | <5 | ug/l |
| CHROMIUM | 0.01 | mg/l |
| MERCURY | <0.2 | ug/l |
| LEAD | <31 | ug/l |
| SELENIUM | <51 | ug/l |
| TOTAL SOLIDS | 24.8 | % |

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J M Slavin
LABORATORY DIRECTOR

ORIGINAL

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(516)694-3040 FAX:(516)694-4122


**LAB NO: 9011188**

**FANNING, PHILLIPS & MOLNAR**
**909 MARCONI AVENUE**
**RONKONKOMA, NY 11779**

TYPE..... SOIL
SPECIAL
METHOD.... GRAB

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE S-2

REMARKS: SPRINGS

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TCL SEMI-VOLATILE ORGANICS - ( ug/kg )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| 1,3-DICHLOROBENZENE | <1300 | CHRYSENE | <1300 |
| 1,4-DICHLOROBENZENE | <1300 | BENZO(A)ANTHRACENE | <1300 |
| HEXACHLOROETHANE | <1300 | 3,3-DICHLOROBENZIDINE | <2700 |
| BIS(2-CHLOROETHYL)ETHER | <1300 | DI-N-OCTYL PHTHALATE | <1300 |
| 1,2-DICHLOROBENZENE | 2500 | BENZO(B)FLUORANTHENE | <1300 |
| BIS(2-CHL.ISOPROPYL)ETHER | <1300 | BENZO(K)FLUORANTHENE | <1300 |
| N-NITROSO-DIPROPYLAMINE | <1300 | BENZO(A)PYRENE | <1300 |
| NITROBENZENE | <1300 | INDENO(1,2,3-C,D)PYRENE | <1300 |
| HEXACHLOROBUTADIENE | <1300 | DIBENZO(A,H)ANTHRACENE | <1300 |
| 1,2,4-TRICHLOROBENZENE | <1300 | BENZO (G,H,I)PERYLENE | <1300 |
| ISOPHORONE | <1300 | 2-CHLOROPHENOL | <1300 |
| NAPHTHALENE | <1300 | 2-NITROPHENOL | <1300 |
| BIS(2-CHL.ETHOXY)METHANE | <1300 | PHENOL | <1300 |
| HEXACHLOROCYCLOPENTADIENE | <1300 | 2,4-DIMETHYLPHENOL | <1300 |
| 2-CHLORONAPHTHALENE | <1300 | 2,4-DICHLOROPHENOL | <1300 |
| ACENAPHTHYLENE | <1300 | 2,4,6-TRICHLOROPHENOL | <1300 |
| ACENAPHTHENE | <1300 | 4-CHLORO-3-METHYLPHENOL | <1300 |
| DIMETHYLPHTHALATE | <1300 | 2,4-DINITROPHENOL | <6700 |
| 2,6-DINITROTOLUENE | <1300 | 2-METH.-4,6-DINITROPHENOL | <6700 |
| FLUORENE | <1300 | PENTACHLOROPHENOL | <6700 |
| 4-CHL.PHENYL PHENYLETHER | <1300 | 4-NITROPHENOL | <6700 |
| 2,4-DINITROTOLUENE | <1300 | 2-METHYLPHENOL | <1300 |
| DIETHYL PHTHALATE | <1300 | 4-METHYLPHENOL | <1300 |
| N-NITROSODIPHENYLAMINE | <1300 | BENZOIC ACID | <6700 |
| HEXACHLOROBENZENE | <1300 | 2,4,5-TRICHLOROPHENOL | <6700 |
| 4-BROMOPHENYLPHENYLETHER | <1300 | BENZYL ALCOHOL | <1300 |
| PHENANTHRENE | <1300 | 4-CHLOROANILINE | <1300 |
| ANTHRACENE | <1300 | 2-METHYLNAPHTHALENE | 4600 |
| DI-N-BUTYL PHTHALATE | <1300 | 2-NITROANILINE | <6700 |
| FLUORANTHENE | <1300 | 3-NITROANILINE | <6700 |
| PYRENE | <1300 | DIBENZOFURAN | <1300 |
| BUTYL BENZYL PHTHALATE | <1300 | 4-NITROANILINE | <6700 |
| BIS(2ETHYLHEXYL)PHTHALATE | 2700 | | |

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J M Slavin
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ORIGINAL

H2M LABS, INC.
575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122

LAB NO: 9011188

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... SOIL
SPECIAL
METHOD.... GRAB

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE S-2

REMARKS: SPRINGS

PESTICIDES AND PCB'S - ( ug/kg )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| LINDANE | <64 | | |
| HEPTACHLOR | <64 | | |
| ALDRIN | <64 | | |
| HEPTACHLOR EPOXIDE | <64 | | |
| DIELDRIN | <130 | | |
| ENDRIN | <130 | | |
| P,P'DDT | <130 | | |
| METHOXYCHLOR | <640 | | |
| TOXAPHENE | <1300 | | |
| CHLORDANE | <640 | | |
| BETA-BHC | <130 | | |
| DELTA-BHC | <130 | | |
| ALPHA-BHC | <130 | | |
| P,P'-DDD | <130 | | |
| P,P'-DDE | <130 | | |
| ENDOSULFAN I | <210 | | |
| ENDOSULFAN II | <130 | | |
| ENDOSULFAN SULFATE | <130 | | |
| ENDRIN ALDEHYDE | <130 | | |
| O,P DDT | <130 | | |
| AROCLOR 1016 | <640 | | |
| AROCLOR 1221 | <640 | | |
| AROCLOR 1232 | <640 | | |
| AROCLOR 1242 | <640 | | |
| AROCLOR 1248 | <640 | | |
| AROCLOR 1254 | <1300 | | |
| AROCLOR 1260 | <1300 | | |

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DATE RUN..... 10/09/90
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ORIGINAL

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LAB NO: 9011188

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... SOIL
SPECIAL
METHOD.... GRAB

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE S-2

REMARKS: SPRINGS

TCL PURGEABLE ORGANICS - ( ug/kg )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| CHLOROMETHANE | <92 | STYRENE | <46 |
| BROMOMETHANE | <92 | | |
| VINYL CHLORIDE | <92 | | |
| CHLOROETHANE | <92 | | |
| METHYLENE CHLORIDE | 51 | | |
| 1,1-DICHLOROETHENE | <46 | | |
| 1,1-DICHLOROETHANE | <46 | | |
| C/T-1/2-DICHLOROETHENE | <46 | | |
| CHLOROFORM | <46 | | |
| 1,2-DICHLOROETHANE | <46 | | |
| 1,1,1-TRICHLOROETHANE | <46 | | |
| CARBON TETRACHLORIDE | <46 | | |
| BROMODICHLOROMETHANE | <46 | | |
| 1,2-DICHLOROPROPANE | <46 | | |
| TRANS-1,3-DICHLOROPROPENE | <46 | | |
| TRICHLOROETHENE | 54 | | |
| DIBROMOCHLOROMETHANE | <46 | | |
| 1,1,2-TRICHLOROETHANE | <46 | | |
| CIS-1,3-DICHLOROPROPENE | <46 | | |
| BENZENE | 67 | | |
| BROMOFORM | <46 | | |
| 1,1,2,2-TETRACHLOROETHANE | <46 | | |
| TETRACHLOROETHENE | <46 | | |
| TOLUENE | 2200 | | |
| CHLOROBENZENE | 410 | | |
| ETHYLBENZENE | 1200 | | |
| XYLENES (TOTAL) | 6400 | | |
| ACETONE | 23000 | | |
| 2-BUTANONE (MEK) | 6600 | | |
| 4-METHYL-2PENTANONE(MIBK) | <92 | | |
| CARBON DISULFIDE | 650 | | |
| VINYL ACETATE | <92 | | |
| 2-HEXANONE | <92 | | |

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DATE RUN..... 10/04/90
DATE REPORTED.. 10/11/90

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ORIGINAL

# H2M LABS, INC.

575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122

LAB NO: 9011156

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-1

REMARKS: SPRINGS

| PARAMETER (S) | RESULTS | UNITS |
|---|---|---|
| SILVER | <0.01 | mg/l |
| ALUMINUM | 4.2 | mg/l |
| ARSENIC | <10 | ug/l |
| BORON | <0.10 | mg/l |
| BARIUM | <0.2 | mg/l |
| BERYLLIUM | <5 | ug/l |
| BOD5 | <20 | mg/l |
| CALCIUM | 13.1 | mg/l |
| CALCIUM HARDNESS | 32.75 | mg/l |
| CADMIUM | <5 | ug/l |
| CHLORIDE | 13 | mg/l |
| CYANIDE | <10 | ug/l |
| COD | 20 | mg/l |
| COLOR | 100 | units |
| CHROMIUM | <0.01 | mg/l |
| COPPER | <0.02 | mg/l |
| IRON | 3.0 | mg/l |
| TOTAL HARDNESS | 39.72 | mg/l |
| MERCURY | <0.2 | ug/l |
| POTASSIUM | 3.8 | mg/l |
| MAGNESIUM | 1.7 | mg/l |
| MANGANESE | 0.74 | mg/l |
| SODIUM | 2.6 | mg/l |
| AMMONIA (NH3) | 0.39 | mg/l |
| NICKEL | <0.04 | mg/l |
| NITRATE (AS N) | <0.1 | mg/l |
| LEAD | 16 | ug/l |
| TOTAL PHENOLS | 4.0 | ug/l |
| ANTIMONY | <60 | ug/l |
| SELENIUM | <5 | ug/l |
| SULFATE | 42.0 | mg/l |
| TOTAL ALKALINITY | 42 | mg/l |
| TOTAL DISSOLVED SOLIDS | 125 | mg/l |

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LABORATORY DIRECTOR

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# H2M LABS, INC.

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LAB NO: 9011156

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-1

REMARKS: SPRINGS

| PARAMETER (S) | RESULTS | UNITS |
|---|---|---|
| TOTAL KJELDAHL NITROGEN | 1.0 | mg/l |
| THALLIUM | <10 | ug/l |
| TOTAL ORGANIC CARBON(TOC) | 11.2 | mg/l |
| TURBIDITY | 27 | units |
| ZINC | 0.06 | mg/l |

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QA/QC

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LAB NO: 9011156

PANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-1

REMARKS: SPRINGS

## TCL SEMI-VOLATILE ORGANICS - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| 1,3-DICHLOROBENZENE | <10 | CHRYSENE | <10 |
| 1,4-DICHLOROBENZENE | <10 | BENZO(A)ANTHRACENE | <10 |
| HEXACHLOROETHANE | <10 | 3,3-DICHLOROBENZIDINE | <20 |
| BIS(2-CHLOROETHYL)ETHER | <10 | DI-N-OCTYL PHTHALATE | <10 |
| 1,2-DICHLOROBENZENE | <10 | BENZO(B)FLUORANTHENE | <10 |
| BIS(2-CHL.ISOPROPYL)ETHER | <10 | BENZO(K)FLUORANTHENE | <10 |
| N-NITROSO-DIPROPYLAMINE | <10 | BENZO(A)PYRENE | <10 |
| NITROBENZENE | <10 | INDENO(1,2,3-C,D)PYRENE | <10 |
| HEXACHLOROBUTADIENE | <10 | DIBENZO(A,H)ANTHRACENE | <10 |
| 1,2,4-TRICHLOROBENZENE | <10 | BENZO (G,H,I)PERYLENE | <10 |
| ISOPHORONE | <10 | 2-CHLOROPHENOL | <10 |
| NAPHTHALENE | <10 | 2-NITROPHENOL | <10 |
| BIS(2-CHL.ETHOXY)METHANE | <10 | PHENOL | <10 |
| HEXACHLOROCYCLOPENTADIENE | <10 | 2,4-DIMETHYLPHENOL | <10 |
| 2-CHLORONAPHTHALENE | <10 | 2,4-DICHLOROPHENOL | <10 |
| ACENAPHTHYLENE | <10 | 2,4,6-TRICHLOROPHENOL | <10 |
| ACENAPHTHENE | <10 | 4-CHLORO-3-METHYLPHENOL | <10 |
| DIMETHYLPHTHALATE | <10 | 2,4-DINITROPHENOL | <50 |
| 2,6-DINITROTOLUENE | <10 | 2-METH.-4,6-DINITROPHENOL | <50 |
| FLUORENE | <10 | PENTACHLOROPHENOL | <50 |
| 4-CHL.PHENYL PHENYLETHER | <10 | 4-NITROPHENOL | <50 |
| 2,4-DINITROTOLUENE | <10 | 2-METHYLPHENOL | <10 |
| DIETHYL PHTHALATE | <10 | 4-METHYLPHENOL | <10 |
| N-NITROSODIPHENYLAMINE | <10 | BENZOIC ACID | <50 |
| HEXACHLOROBENZENE | <10 | 2,4,5-TRICHLOROPHENOL | <50 |
| 4-BROMOPHENYLPHENYLETHER | <10 | BENZYL ALCOHOL | <10 |
| PHENANTHRENE | <10 | 4-CHLOROANILINE | <10 |
| ANTHRACENE | <10 | 2-METHYLNAPHTHALENE | <10 |
| DI-N-BUTYL PHTHALATE | <10 | 2-NITROANILINE | <50 |
| FLUORANTHENE | <10 | 3-NITROANILINE | <50 |
| PYRENE | <10 | DIBENZOFURAN | <10 |
| BUTYL BENZYL PHTHALATE | <10 | 4-NITROANILINE | <50 |
| BIS(2ETHYLHEXYL)PHTHALATE | <10 | | |

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DATE EXTRACTED.
DATE RUN..... 10/11/90
DATE REPORTED.. 10/11/90

LABORATORY DIRECTO

QA/QC

H2M LABS, INC.
575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122

LAB NO: 9011156

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-1

REMARKS: SPRINGS

HERBICIDES - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| 2,4,-D | <0.2 | | |
| 2,4,5-TP (SILVEX) | <0.05 | | |

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DATE ISSUED 10/23/9

DATE EXTRACTED.
DATE RUN..... 10/08/90
DATE REPORTED.. 10/08/90

LABORATORY DIRECTO

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(516)694-3040 FAX:(516)694-4122


LAB NO: 9011156

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-1

REMARKS: SPRINGS

## PESTICIDES AND PCB'S - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| LINDANE | <0.05 | | |
| HEPTACHLOR | <0.05 | | |
| ALDRIN | <0.05 | | |
| HEPTACHLOR EPOXIDE | <0.05 | | |
| DIELDRIN | <0.1 | | |
| ENDRIN | <0.1 | | |
| P,P'DDT | <0.1 | | |
| METHOXYCHLOR | <0.5 | | |
| TOXAPHENE | <1.0 | | |
| CHLORDANE | <0.5 | | |
| BETA-BHC | <0.1 | | |
| DELTA-BHC | <0.1 | | |
| ALPHA-BHC | <0.1 | | |
| P,P'-DDD | <0.1 | | |
| P,P'-DDE | <0.1 | | |
| ENDOSULFAN I | <0.1 | | |
| ENDOSULFAN II | <0.1 | | |
| ENDOSULFAN SULFATE | <0.1 | | |
| ENDRIN ALDEHYDE | <0.1 | | |
| O,P DDT | <0.1 | | |
| AROCLOR 1016 | <0.5 | | |
| AROCLOR 1221 | <0.5 | | |
| AROCLOR 1232 | <0.5 | | |
| AROCLOR 1242 | <0.5 | | |
| AROCLOR 1248 | <0.5 | | |
| AROCLOR 1254 | <1.0 | | |
| AROCLOR 1260 | <1.0 | | |

COPIES TO:

DATE ISSUED 10/23/9

DATE EXTRACTED.
DATE RUN..... 10/05/90
DATE REPORTED.. 10/08/90

LABORATORY DIRECTC

QA/QC

H2M LABS, INC.
575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122

LAB NO: 9011156

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-1

REMARKS: SPRINGS

TCL PURGEABLE ORGANICS - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| CHLOROMETHANE | <10 | STYRENE | <5 |
| BROMOMETHANE | <10 | | |
| VINYL CHLORIDE | <10 | | |
| CHLOROETHANE | <10 | | |
| METHYLENE CHLORIDE | <5 | | |
| 1,1-DICHLOROETHENE | <5 | | |
| 1,1-DICHLOROETHANE | <5 | | |
| C/T-1/2-DICHLOROETHENE | <5 | | |
| CHLOROFORM | <5 | | |
| 1,2-DICHLOROETHANE | <5 | | |
| 1,1,1-TRICHLOROETHANE | <5 | | |
| CARBON TETRACHLORIDE | <5 | | |
| BROMODICHLOROMETHANE | <5 | | |
| 1,2-DICHLOROPROPANE | <5 | | |
| TRANS-1,3-DICHLOROPROPENE | <5 | | |
| TRICHLOROETHENE | <5 | | |
| DIBROMOCHLOROMETHANE | <5 | | |
| 1,1,2-TRICHLOROETHANE | <5 | | |
| CIS-1,3-DICHLOROPROPENE | <5 | | |
| BENZENE | <5 | | |
| BROMOFORM | <5 | | |
| 1,1,2,2-TETRACHLOROETHANE | <5 | | |
| TETRACHLOROETHENE | <5 | | |
| TOLUENE | <5 | | |
| CHLOROBENZENE | <5 | | |
| ETHYLBENZENE | <5 | | |
| XYLENES (TOTAL) | <5 | | |
| ACETONE | <10 | | |
| 2-BUTANONE (MEK) | <10 | | |
| 4-METHYL-2PENTANONE(MIBK) | <10 | | |
| CARBON DISULFIDE | <5 | | |
| VINYL ACETATE | <10 | | |
| 2-HEXANONE | <10 | | |

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DATE ISSUED 10/23/9

DATE RUN..... 10/04/90
DATE REPORTED.. 10/11/90

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575 Broad Hollow Road, Melville, N.Y. 11747
(516)694-3040 FAX:(516)694-4122

LAB NO: 9011157

FANNING, PHILLIPS & MOLNAR
909 MARCONI AVENUE
RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-2

REMARKS: SPRINGS

| PARAMETER (S) | RESULTS | UNITS |
|---|---|---|
| SILVER | <0.01 | mg/l |
| ALUMINUM | 1.9 | mg/l |
| ARSENIC | <10 | ug/l |
| BORON | <0.10 | mg/l |
| BARIUM | <0.2 | mg/l |
| BERYLLIUM | <5 | ug/l |
| BOD5 | 57 | mg/l |
| CALCIUM | 50.8 | mg/l |
| CALCIUM HARDNESS | 127 | mg/l |
| CADMIUM | <5 | ug/l |
| CHLORIDE | 21 | mg/l |
| CYANIDE | <10 | ug/l |
| COD | 130 | mg/l |
| COLOR | 50 | units |
| CHROMIUM | 0.02 | mg/l |
| COPPER | 0.31 | mg/l |
| IRON | 1.9 | mg/l |
| TOTAL HARDNESS | 139.71 | mg/l |
| MERCURY | 1.4 | ug/l |
| POTASSIUM | 3.4 | mg/l |
| MAGNESIUM | 3.1 | mg/l |
| MANGANESE | 0.23 | mg/l |
| SODIUM | 9.9 | mg/l |
| AMMONIA (NH3) | 1.8 | mg/l |
| NICKEL | <0.04 | mg/l |
| NITRATE (AS N) | <0.1 | mg/l |
| LEAD | 67 | ug/l |
| TOTAL PHENOLS | 7.2 | ug/l |
| ANTIMONY | <60 | ug/l |
| SELENIUM | <5 | ug/l |
| SULFATE | 44.0 | mg/l |
| TOTAL ALKALINITY | 126 | mg/l |
| TOTAL DISSOLVED SOLIDS | 308 | mg/l |

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RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-2

REMARKS: SPRINGS

| PARAMETER (S) | RESULTS | UNITS |
|---|---|---|
| TOTAL KJELDAHL NITROGEN | 22.0 | mg/l |
| THALLIUM | <10 | ug/l |
| TOTAL ORGANIC CARBON(TOC) | 110. | mg/l |
| TURBIDITY | 4.5 | units |
| ZINC | 0.55 | mg/l |

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RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-2

REMARKS: SPRINGS

## TCL SEMI-VOLATILE ORGANICS - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| 1,3-DICHLOROBENZENE | <10 | CHRYSENE | <10 |
| 1,4-DICHLOROBENZENE | <10 | BENZO(A)ANTHRACENE | <10 |
| HEXACHLOROETHANE | <10 | 3,3-DICHLOROBENZIDINE | <20 |
| BIS(2-CHLOROETHYL)ETHER | <10 | DI-N-OCTYL PHTHALATE | <10 |
| 1,2-DICHLOROBENZENE | <10 | BENZO(B)FLUORANTHENE | <10 |
| BIS(2-CHL.ISOPROPYL)ETHER | <10 | BENZO(K)FLUORANTHENE | <10 |
| N-NITROSO-DIPROPYLAMINE | <10 | BENZO(A)PYRENE | <10 |
| NITROBENZENE | <10 | INDENO(1,2,3-C,D)PYRENE | <10 |
| HEXACHLOROBUTADIENE | <10 | DIBENZO(A,H)ANTHRACENE | <10 |
| 1,2,4-TRICHLOROBENZENE | <10 | BENZO (G,H,I)PERYLENE | <10 |
| ISOPHORONE | <10 | 2-CHLOROPHENOL | <10 |
| NAPHTHALENE | <10 | 2-NITROPHENOL | <10 |
| BIS(2-CHL.ETHOXY)METHANE | <10 | PHENOL | <10 |
| HEXACHLOROCYCLOPENTADIENE | <10 | 2,4-DIMETHYLPHENOL | <10 |
| 2-CHLORONAPHTHALENE | <10 | 2,4-DICHLOROPHENOL | <10 |
| ACENAPHTHYLENE | <10 | 2,4,6-TRICHLOROPHENOL | <10 |
| ACENAPHTHENE | <10 | 4-CHLORO-3-METHYLPHENOL | <10 |
| DIMETHYLPHTHALATE | <10 | 2,4-DINITROPHENOL | <50 |
| 2,6-DINITROTOLUENE | <10 | 2-METH.-4,6-DINITROPHENOL | <50 |
| FLUORENE | <10 | PENTACHLOROPHENOL | <50 |
| 4-CHL.PHENYL PHENYLETHER | <10 | 4-NITROPHENOL | <50 |
| 2,4-DINITROTOLUENE | <10 | 2-METHYLPHENOL | <10 |
| DIETHYL PHTHALATE | <10 | 4-METHYLPHENOL | <10 |
| N-NITROSODIPHENYLAMINE | <10 | BENZOIC ACID | <50 |
| HEXACHLOROBENZENE | <10 | 2,4,5-TRICHLOROPHENOL | <50 |
| 4-BROMOPHENYLPHENYLETHER | <10 | BENZYL ALCOHOL | <10 |
| PHENANTHRENE | <10 | 4-CHLOROANILINE | <10 |
| ANTHRACENE | <10 | 2-METHYLNAPHTHALENE | <10 |
| DI-N-BUTYL PHTHALATE | <10 | 2-NITROANILINE | <50 |
| FLUORANTHENE | <10 | 3-NITROANILINE | <50 |
| PYRENE | <10 | DIBENZOFURAN | <10 |
| BUTYL BENZYL PHTHALATE | <10 | 4-NITROANILINE | <50 |
| BIS(2ETHYLHEXYL)PHTHALATE | <10 | | |

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DATE RUN..... 10/11/90
DATE REPORTED.. 10/11/90

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RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

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COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-2

REMARKS: SPRINGS

HERBICIDES - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| 2,4,-D | <0.2 | | |
| 2,4,5-TP (SILVEX) | <0.05 | | |

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RONKONKOMA, NY 11779

TYPE..... MISCELLANEOUS LIQUID

DATE COLLECTED. 10/01/90
DATE RECEIVED.. 10/02/90
COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-2

REMARKS: SPRINGS

PESTICIDES AND PCB'S - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| LINDANE | <0.05 | | |
| HEPTACHLOR | <0.05 | | |
| ALDRIN | <0.05 | | |
| HEPTACHLOR EPOXIDE | <0.05 | | |
| DIELDRIN | <0.1 | | |
| ENDRIN | <0.1 | | |
| P,P'DDT | <0.1 | | |
| METHOXYCHLOR | <0.5 | | |
| TOXAPHENE | <1.0 | | |
| CHLORDANE | <0.5 | | |
| BETA-BHC | <0.1 | | |
| DELTA-BHC | <0.1 | | |
| ALPHA-BHC | <0.1 | | |
| P,P'-DDD | <0.1 | | |
| P,P'-DDE | <0.1 | | |
| ENDOSULFAN I | <0.1 | | |
| ENDOSULFAN II | <0.1 | | |
| ENDOSULFAN SULFATE | <0.1 | | |
| ENDRIN ALDEHYDE | <0.1 | | |
| O,P DDT | <0.1 | | |
| AROCLOR 1016 | <0.5 | | |
| AROCLOR 1221 | <0.5 | | |
| AROCLOR 1232 | <0.5 | | |
| AROCLOR 1242 | <0.5 | | |
| AROCLOR 1248 | <0.5 | | |
| AROCLOR 1254 | <1.0 | | |
| AROCLOR 1260 | <1.0 | | |

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COLLECTED BY... CL99

POINT NO:
LOCATION: SAMPLE A-2

REMARKS: SPRINGS

TCL PURGEABLE ORGANICS - ( ug/l )

| PARAMETER (S) | RESULT | PARAMETER (S) | RESULT |
|---|---|---|---|
| CHLOROMETHANE | <10 | STYRENE | <5 |
| BROMOMETHANE | <10 | | |
| VINYL CHLORIDE | <10 | | |
| CHLOROETHANE | <10 | | |
| METHYLENE CHLORIDE | <5 | | |
| 1,1-DICHLOROETHENE | <5 | | |
| 1,1-DICHLOROETHANE | <5 | | |
| C/T-1/2-DICHLOROETHENE | <5 | | |
| CHLOROFORM | <5 | | |
| 1,2-DICHLOROETHANE | <5 | | |
| 1,1,1-TRICHLOROETHANE | <5 | | |
| CARBON TETRACHLORIDE | <5 | | |
| BROMODICHLOROMETHANE | <5 | | |
| 1,2-DICHLOROPROPANE | <5 | | |
| TRANS-1,3-DICHLOROPROPENE | <5 | | |
| TRICHLOROETHENE | <5 | | |
| DIBROMOCHLOROMETHANE | <5 | | |
| 1,1,2-TRICHLOROETHANE | <5 | | |
| CIS-1,3-DICHLOROPROPENE | <5 | | |
| BENZENE | <5 | | |
| BROMOFORM | <5 | | |
| 1,1,2,2-TETRACHLOROETHANE | <5 | | |
| TETRACHLOROETHENE | <5 | | |
| TOLUENE | <5 | | |
| CHLOROBENZENE | <5 | | |
| ETHYLBENZENE | <5 | | |
| XYLENES (TOTAL) | <5 | | |
| ACETONE | 22 | | |
| 2-BUTANONE (MEK) | <10 | | |
| 4-METHYL-2PENTANONE(MIBK) | <10 | | |
| CARBON DISULFIDE | <5 | | |
| VINYL ACETATE | <10 | | |
| 2-HEXANONE | <10 | | |

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