New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation

SARATOGA TREE NURSERY

ROUTE 50 FACILITY

Saratoga County, N.Y.

~ 546043 ~

Preliminary Remedial Investigation Report
Off-Site Sampling Program

June 1995

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1.0 BACKGROUND

The Saratoga Tree Nursery is located on Route 50 in the City of Saratoga Springs, Saratoga County, NY. The Nursery occupies approximately 130 acres, of which approximately 30 acres are actively used by the New York State Department of Environmental Conservation (NYSDEC). Nursery operations involve the production of tree and shrub seedlings for conservation plantings on both public and private lands. The Nursery has been operating since the 1910.

Historically, in addition to nursery operations, the facility served as the field headquarters for the Bureau of Forest Insect and Disease Control from the mid 1940's through 1978. The two programs operated separately but shared the same facility until they were consolidated under the Bureau of Forest Resource Management in 1978. Insect control program operations involved the routine handling and application of a variety of pesticides.

The exact history of pesticide storage and handling at the Saratoga facility is unknown. Such compounds as DDT, lead arsenate, methoxychlor, chlordane, dieldrin, lindane and other compounds are known to have been stored at the Nursery. Further, it is known that the facility was used for the seasonal mixing of DDT, in anticipation of aerial application in Saratoga and surrounding regions. The primary purpose for the DDT application was to control the gypsy moth population. The process involved the on-site mixing of DDT with fuel oil and water, inside heated tanker trailers. This process created an oil/water emulsion which was subsequently transported to waiting aircraft for spraying. Interviews with former employees identified an area near the present Nursery loading dock (ref. Figure 2) as a mixing area for DDT. The usage of DDT at the Saratoga facility was discontinued in 1966.

In 1994, as part of a routine petroleum tank removal/replacement at the Nursery, soil samples were collected to determine the extent of any residual petroleum contamination. The tanks were situated adjacent to the Mechanic Shop (ref. Figure 3), near the Nursery's western property line. Some minor petroleum contamination was identified, resulting in the excavation and removal of approximately forty cubic yards of soil. However, analysis also revealed the presence of DDT in soil in the vicinity of the tanks. Nursery staff subsequently requested the assistance of the NYSDEC's Division of Hazardous Waste Remediation (DHWR) in the collection of additional soil samples to determine whether a DDT contamination problem existed. In October of 1994, DHWR staff collected surface and subsurface soil samples from a variety of locations on the western portion of the Nursery property. Data revealed that DDT and its breakdown products were present at elevated levels in the area reportedly used for mixing and loading operations by the Bureau of Forest Insect and Disease Control. Data also revealed elevated levels of DDT near the Nursery's western property line, an area reportedly used for tanker truck rinsing and flushing following daily mixing operations. Based on this information, DHWR collected additional soil samples along the fence line which divides the Nursery from private properties on Hathorn Boulevard in the Geyser Crest residential community. These homes were constructed in the early 1970s, subsequent to the termination of pesticide mixing operations at the Nursery. These samples were collected to determine the potential for off-site contamination.

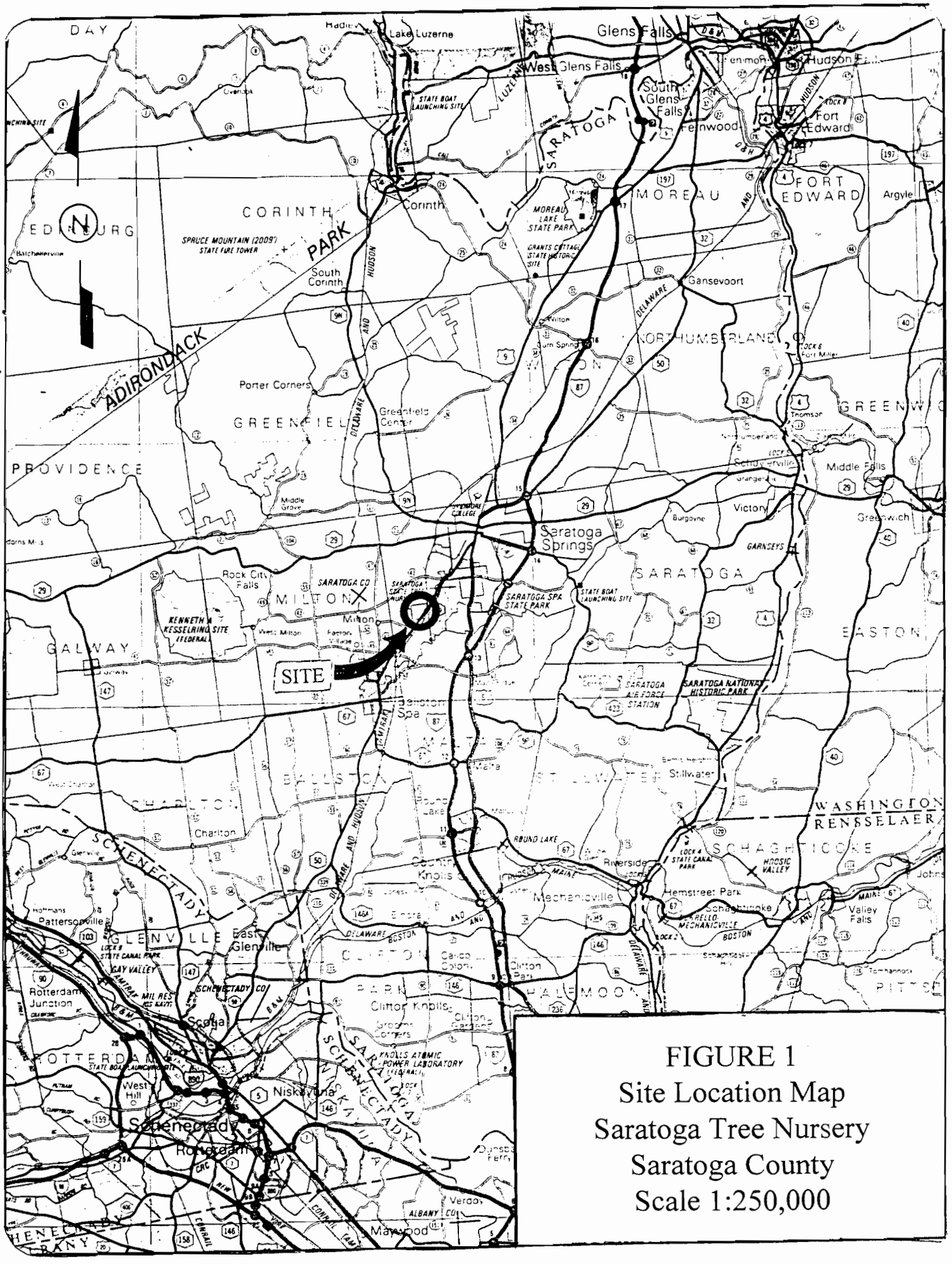
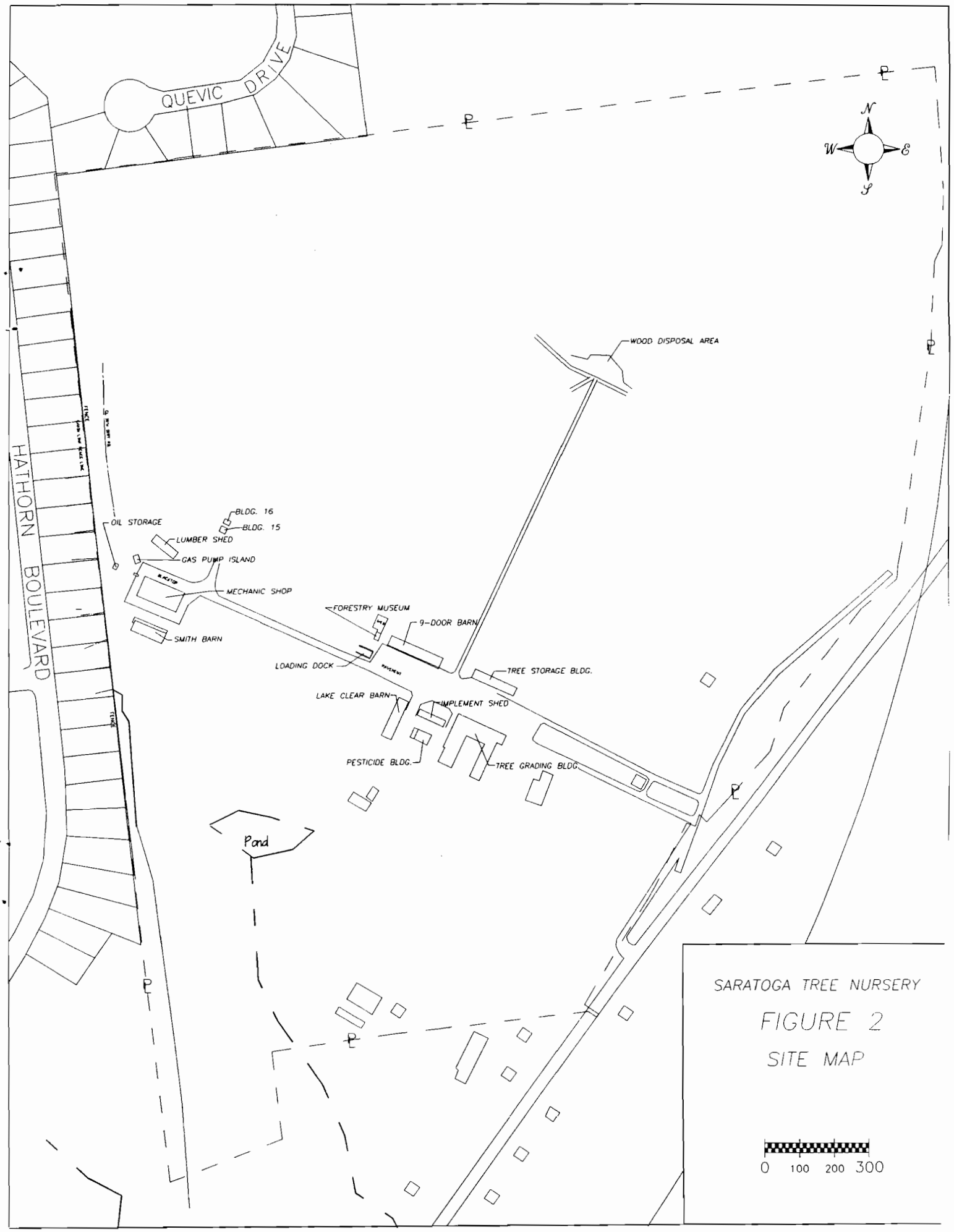


FIGURE 1
Site Location Map
Saratoga Tree Nursery
Saratoga County
Scale 1:250,000


QUEVIC DRIVE
HATHORN BOULEVARD
N
W
E
S
WOOD DISPOSAL AREA
OIL STORAGE
BLDG. 16
BLDG. 15
LUMBER SHED
GAS PUMP ISLAND
MECHANIC SHOP
SMITH BARN
FORESTRY MUSEUM
9-DOOR BARN
LOADING DOCK
TREE STORAGE BLDG.
LAKE CLEAR BARN
IMPLEMENT SHED
PESTICIDE BLDG.
TREE GRADING BLDG.
Pond
SARATOGA TREE NURSERY
FIGURE 2
SITE MAP
0 100 200 300

Data revealed that several of these samples contained levels of DDT which were above what could be considered typical background concentrations.

In January of 1995, a third sampling round was conducted on the Nursery property to assist in the delineation of the problem. The results of all three sampling rounds are detailed in the NYSDEC report entitled "Saratoga Tree Nursery Route 50 Facility, Sampling and Data Report", dated February 1995.

In a February Fact Sheet the NYSDEC advised the public of the identified problem. On February 16, 1995, the NYSDEC and the New York State Department of Health (NYSDOH) held a public Availability Session to discuss the findings of the sampling to date and their intentions regarding additional study. The NYSDEC informed the public that a Remedial Investigation (RI) would be conducted to determine the extent of the DDT contamination. The NYSDEC indicated that the RI would be conducted in two phases, an Off-Site Investigation, then an On-Site Investigation. The NYSDEC informed residents in the immediate vicinity of the identified problem of plans to collect samples from their backyards.

The NYSDEC's "Off-Site Investigation Work Plan" was finalized and made available to the public in March. On March 27, 1995 the sampling program commenced. This report summarizes the findings of the Off-Site Investigation.

2.0 INVESTIGATION METHODOLOGIES

The Off-Site sampling program involved the collection of background soil samples, groundwater samples from several identified well points, and surface and subsurface soil samples from ten residential properties. No standing/ponded surface water or sediment was encountered during the off-site program.

2.1 Background Sampling

Due to the widespread usage of DDT in the past, DDT and its breakdown products are expected to be present in soils throughout the northeast. National soil surveys indicate the range of background levels for DDT and its breakdown products is 0.01 to 18 parts per million (ppm), with the higher end of that range usually related to the past use of insecticide (orchards, etc.). The purpose of background sampling is to determine the typical DDT concentration locally. This information is used in conjunction with environmental and health risk data in the development of site-specific remedial objectives (i.e. cleanup goals).

Background samples were collected from eight locations on and around the Nursery property. The sample locations are shown in Appendix A. Each sample was a composite of five equal subsamples collected near each corner and the center of a one square meter area. Sample depth

was 0-3 inches. Samples were composited into aluminum pans using a disposable trowel and a representative sample was then placed in a two ounce glass jar. Samples were subsequently transported to the laboratory, following proper chain of custody procedures.

Analysis revealed a local background range for DDT and its breakdown products of 0.026 to 0.27 ppm. The analytical data is included in Appendix A.

2.2 Soil Sampling

2.2.1 On-Site Sampling

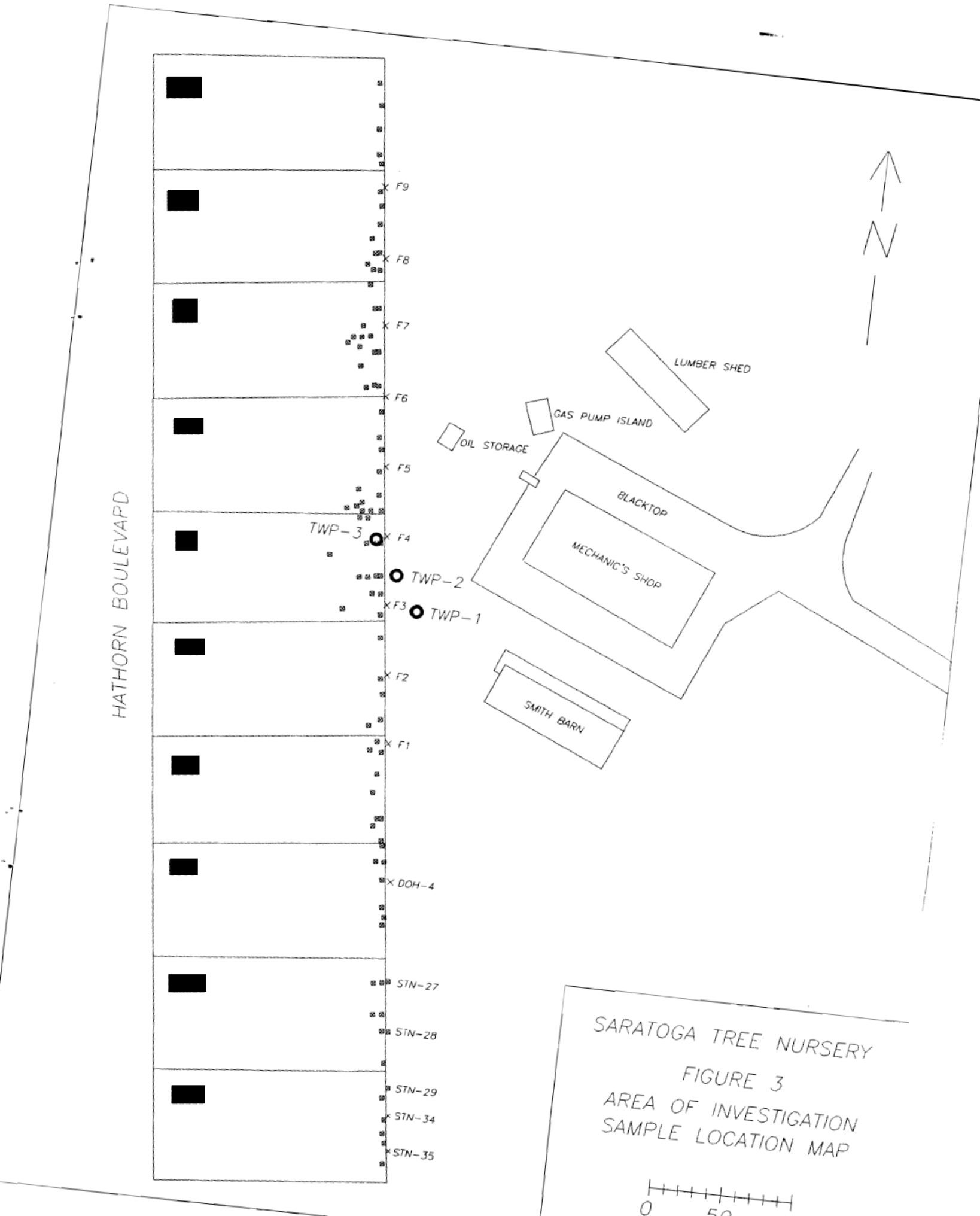
Based existing data, eight properties were selected to be included in the Off-Site sampling program. As a component of this study, however, additional sampling was conducted on site to determine whether sampling was warranted on additional properties. Beginning where previous sampling had left off, extending approximately 250 feet south to an area reportedly prone to flooding, ten additional sample points were selected (ref. Figure 3). This area is situated behind Nos. [redacted] Surface and subsurface soil samples were collected at each location. Each sample was collected on the Nursery property, near the fence. Data revealed elevated levels of DDT at sample locations STN-26,27,28,34 and 35. These sample points are situated behind lot Nos. [redacted] In light of this information, these two properties were incorporated into the Off-Site sampling program. The analytical data is included in Appendix C.

2.2.2 Off-Site Sampling

The residential soil samples were collected in each yard beginning at a distance of three feet from the fence line and deeper (west) into properties, as necessary, based on analytical results. Typically, samples were collected at depths of 0-3, 3-12 and 12-24 inches below ground surface at each location. Based on analytical data, deeper samples were collected as necessary.

Surface soil sample collection involved compositing five equal subsamples near each corner and the center of a one square meter area. Sample depth was 0-3 inches below the ground surface. Samples were composited into aluminum pans using a disposable trowel and a representative sample was then placed in a two ounce glass jar for analysis.

Subsurface soil samples were collected using stainless steel hand augers. Sample points were typically situated in the center of the surface composite area. Disposable trowels were used to transfer soil from the auger to the sample jars. The augers were properly decontaminated between sample intervals and locations. The physical characteristics (color, texture, etc.) of the soil samples were recorded on sample data sheets at each sample location.


HATHORN BOULEVARD
F9
F8
F7
F6
F5
TWP-3
F4
TWP-2
F3
TWP-1
F2
F1
DOH-4
STN-27
STN-28
STN-29
STN-34
STN-35
LUMBER SHED
GAS PUMP ISLAND
OIL STORAGE
BLACKTOP
MECHANIC'S SHOP
SMITH BARN
N
SARATOGA TREE NURSERY
FIGURE 3
AREA OF INVESTIGATION
SAMPLE LOCATION MAP
0
50

Samples were analyzed by NYSDEC Laboratory staff using Millipore EnviroGard DDT Soil Test Kits. The test kits report the total concentration present of DDT and its breakdown products (DDD and DDE). All analytical data was subsequently validated by the DHWR Quality Assurance Officer. Additionally, for quality control purposes, twenty (20) of the soil samples collected were randomly selected and analyzed using standard laboratory procedures to verify test kit accuracy. The results of this verification sampling supported the accuracy of the test kits. This data is included in Appendix D.

2.3 Groundwater Sampling

The NYSDEC conducted a well survey, polling residences in the vicinity of the Nursery as to whether they were serviced by a water supply well or well point. It is believed that the entire Geyser Crest Community is serviced by public water. A number of Hathorn Boulevard residents reported usage of well points for non-potable uses (lawn watering, pools, etc.). Two of these homes in close proximity to the identified problem, [redacted] and [redacted] were selected as sample points. Also [redacted] which is located a considerable distance (est. 1700 feet) from the identified problem, was sampled to provide background water quality data. Additionally, three groundwater samples were collected from temporary well points installed in the vicinity of an identified area of petroleum contamination. The sampling program identified an isolated area of oil contamination on one of the residential properties. To characterize the nature of the contamination, soil samples and groundwater samples were collected in this area. The findings are discussed in Section 4.2.

Groundwater sample collection involved purging the well points, removing a minimum of five well volumes prior to sample collection. Samples were collected in one liter glass jars and transported immediately to the NYSDEC laboratory. Samples were analyzed for DDT, DDE, DDD and seventeen other organo-chlorine pesticides.

3.0 PHYSICAL CHARACTERISTICS OF THE STUDY AREA

The topography at the study area is moderately to steeply sloping (west to east), with an elevation drop of four to six feet across most of the backyards. The Nursery property is situated at the toe of this slope and has generally flat topography. The native soil is characterized as a light red/brown fine to medium sand grading to dark brown fine to medium sand. The groundwater table was encountered at shallow depths (one to five feet) across the study area.

4.0 NATURE AND EXTENT OF CONTAMINATION

The Off-Site Investigation was designed to determine whether elevated levels of DDT, resulting from formulation practices at the facility, were present beyond the Nursery property boundary. Soil samples and groundwater samples were collected from adjacent residential properties, to assist in the identification and delineation of any DDT contamination.

4.1 Soil Sampling

The investigation involved the collection and analysis of surface and subsurface soil samples from a total of ten properties. These included Nos. [redacted]

If soil sample results revealed the presence of elevated levels of DDT in backyards, additional samples were collected to determine the horizontal and vertical extent of the contamination. Yards where initial sampling revealed no contamination were also subject to additional sampling (points closer to the fence typically), to confirm the property was not impacted.

The sample results for each of the properties are included in Appendix B. The test kits utilized for the soil analysis do not differentiate between DDT and its breakdown products, in light of their similar properties, so the reported concentrations reflect the combined total of DDT, DDD and DDE present. The levels detected in each backyard are presented in Table 1. The ranges shown correspond to the top two soil horizons sampled. These are the "A" and "B" horizons which typically represent depths of 0-3" and 3-12" below ground surface, respectively.

TABLE 1

Property	0-3"/A Horizon	3-12"/B Horizon
[redacted]	0.01-0.14 ppm	0.01-0.02 ppm
	0.08-8.38 ppm	0.01-12.3 ppm
	0.08-10 ppm	0.01-5.7 ppm
	0.01-62.1 ppm	0.06-27.6 ppm
	0.01-11.6 ppm	0.01-57 ppm
	0-0.01 ppm	0.01-2.29 ppm
	0.01-4.7 ppm	0.04-2.64 ppm
	0.01-10.64 ppm	0.01-0.06 ppm
	0.03-1.81 ppm	0.01-0.09 ppm
	0.01-0.02 ppm	0.01-0.02 ppm

Data revealed the presence of elevated levels of DDT, likely due to past operations at the facility, on six of the ten properties sampled. Generally, the contamination is limited to shallow depths (12 inches or less) and confined to the area in the vicinity of the fence. The average concentration for all properties for DDT and its breakdown products was 2.38 ppm for the 0-3 inch soil horizon and 2.01 ppm for the 3-12 inch soil horizon.

In several instances elevated levels of DDT and its breakdown products were detected at deeper depths, in one instance as deep as five feet below the ground surface.

Figures which depict the sample locations, horizons and the levels of DDT detected have been prepared for each of the properties sampled. These are included in Appendix B.

4.2 Groundwater Sampling

The analytical results from the residential well point samples revealed no detectable levels for any of the pesticide compounds.

During the soil sampling program an area of visibly stained soils, which appeared to be primarily petroleum constituents, was encountered on one of the residential properties. The origin of this contamination is not known. The oil stained soil was first observed at a depth of approximately eighteen inches below the ground surface. Additional borings were installed to evaluate the vertical and horizontal extent of this problem. Evaluation revealed that the staining extended to a depth of at least five feet. Borings installed immediately north, south, east and west of the initial sample point revealed that the contamination is isolated.

When installing these borings, groundwater was encountered at a depth of approximately five feet below the ground surface. In light of the identified problem, a temporary well point was installed in this area to examine groundwater quality and to assess whether a connection existed between the oil and DDT contamination problems. A petroleum odor was evident and a sheen was apparent of the surface of this water sample. Two additional temporary well points were installed downgradient of this location to allow collection of additional groundwater samples.

Analytical results from the temporary well points revealed the presence of DDT in all three samples, above the groundwater quality standard which is nondetect (ND) for the sum of the compounds. The highest concentration detected was from the well point situated within the area of observed contamination (TWP-3). DDT was detected in the two downgradient well points at concentrations generally consistent with that seen in the nearby water supply well. The samples results are illustrated below:

TABLE 2

Sample Point	DDT	DDD	DDE	Total
TWP-1	0.19	ND	0.09	0.28
TWP-2	0.18	0.04	0.06	0.28
TWP-3	10.2	2.6	0.39	13.19

All results are in parts per billion (ppb)

Elevated levels of DDT were detected in both soil and groundwater samples from this area. Whether a connection exists between the oil contamination and the DDT contamination is unclear at this time, however, findings support that the oil contamination is not widespread and likely the

result of an isolated dumping/disposal incident. The identified petroleum contamination will be incorporated into the remedial program. The On-Site Investigation will include a comprehensive groundwater study, which will evaluate these findings relative to site-wide groundwater quality.

5.0 HUMAN HEALTH EVALUATION

All chemicals have the potential to affect an individual's health, but this depends on many factors. The chemical has to be present in a location or form where a person can actually be exposed to it. Exposure can be caused by eating or drinking the chemical (ingestion), by breathing the chemical (inhalation) or by having it come into direct contact with skin (dermal). Other factors that are important are how much of the chemical an individual may be exposed to (dose), how long the individual is exposed to it (duration), what other chemicals the individual may have been exposed to, how healthy that person is, as well as the age, sex, family traits and life style of that individual.

DDT, or dichlorodiphenyltrichloroethane, is a highly effective insecticide that was banned in the United States in the early 1970's due to concerns related to its accumulation in the environment. DDT is still widely used outside the United States. DDT is a relatively stable chemical and is therefore persistent in the natural environment. People who accidentally ingested large amounts of DDT had effects on the nervous system that went away once the exposure stopped. DDT causes cancer in laboratory animals exposed to high levels over their lifetimes. Whether DDT causes cancer in humans is unknown. Exposure to high levels of DDT causes damage to the liver and reproductive systems of laboratory animals and the offspring of laboratory animals exposed during pregnancy. Chemicals that cause adverse effects in laboratory animals at high levels of exposure may increase the risk of adverse effects in humans exposed to lower levels for long periods of time. Accordingly, the chemical and toxicological properties of DDT are fundamental considerations in the development of a cleanup goal.

5.1 Cleanup Goal Derivation

Where contamination has been identified, the NYSDEC works with the NYSDOH in the development of a site-specific cleanup goal(s). As discussed above, this process involves the evaluation of the chemical and toxicological properties of the contaminant(s) in conjunction with pertinent health risk data. Further, environmental factors are considered such as protection of groundwater. Conservative scenarios are assumed in this evaluation. Property usage (e.g. residential vs. industrial) and background soil data are additional considerations. The selected cleanup goal represents a level(s) which will not pose a health or an environmental concern, based on the known properties and health effects of the contaminant(s), therefore allowing unrestricted usage of the remediated property.

DDT is often evaluated in conjunction with its breakdown products, DDD and DDE. These individual compounds are typically added together due to their similar effects and properties.

Based upon the evaluation of both health and environmental factors, the cleanup goal established to address the identified off-site contamination is 2 ppm (combined total).

6.0 SUMMARY AND CONCLUSIONS

The Off-Site Investigation was designed to determine whether elevated levels of DDT, resulting from formulation practices at the facility, were present beyond the Nursery property boundary. The results of the sampling program have revealed that contamination does exist beyond the Nursery property boundary, on private properties. The results show, however, that the contamination is generally low in concentration (typically less than 15 ppm), shallow in depth (0-12") and limited in extent.

Examination of the results relative to the established cleanup goal of 2 ppm, reveals that properties at [redacted] will not require remedial action. The data shows that all samples contained concentrations of DDT and its breakdown products below 2 ppm, supporting that there is no health threat posed in these yards. Examination of the sampling data from [redacted] reveals that levels were detected above 2 ppm. While the levels detected do not pose an immediate health concern, they are likely related to past operations at the facility and do warrant cleanup. Results from the sampling at [redacted] appear to support that no remediation is necessary. However, in light of the proximity of elevated levels on the adjacent property to the south and on the Nursery, the [redacted] property may be subject to some limited excavation during the remedial program, should confirmatory sampling during the excavation of the adjacent areas indicate elevated levels are present in the southeast corner of this property.

Examination of the sample results relative to the established cleanup goal allows delineation (horizontal and vertical) of the areas off site which require action. Until the On-Site Investigation is completed, however, the full extent of the DDT contamination will not be known. The On-Site program is scheduled to commence in the summer of 1995. Once the full extent of the contamination has been identified, various remedial alternatives will be evaluated to determine how to best address the contamination problem (e.g. treatment vs. disposal). This evaluation process is referred to as a Feasibility Study (FS).

In light of the identified off-site contamination, the NYSDEC intends to conduct an Interim Remedial Measure (IRM) to address the affected properties. An IRM is a remedial measure which is conducted in advance of a final remedy. The planned IRM program will involve the excavation of contaminated soil from affected properties and temporarily stockpiling the material on the Nursery property. Properties will then be backfilled with clean topsoil and seeded. This approach will permit the remediation of the private properties on an expedited basis. Section 7 details the planned IRM program.

7.0 IRM SOIL REMOVAL PROGRAM

The Off-Site investigation identified six private residences with levels of DDT in soil above the established cleanup level of 2 ppm. This Section presents the work plan for the IRM soil removal program. Section 7.1 describes the steps involved with excavating, stockpiling, and storage of the soil. Section 7.2 describes the steps involving the sampling and analysis of the soil for cleanup confirmation. Section 7.3 discusses a schedule for conducting the IRM.

7.1 Soil Excavation, Stockpiling and Storage

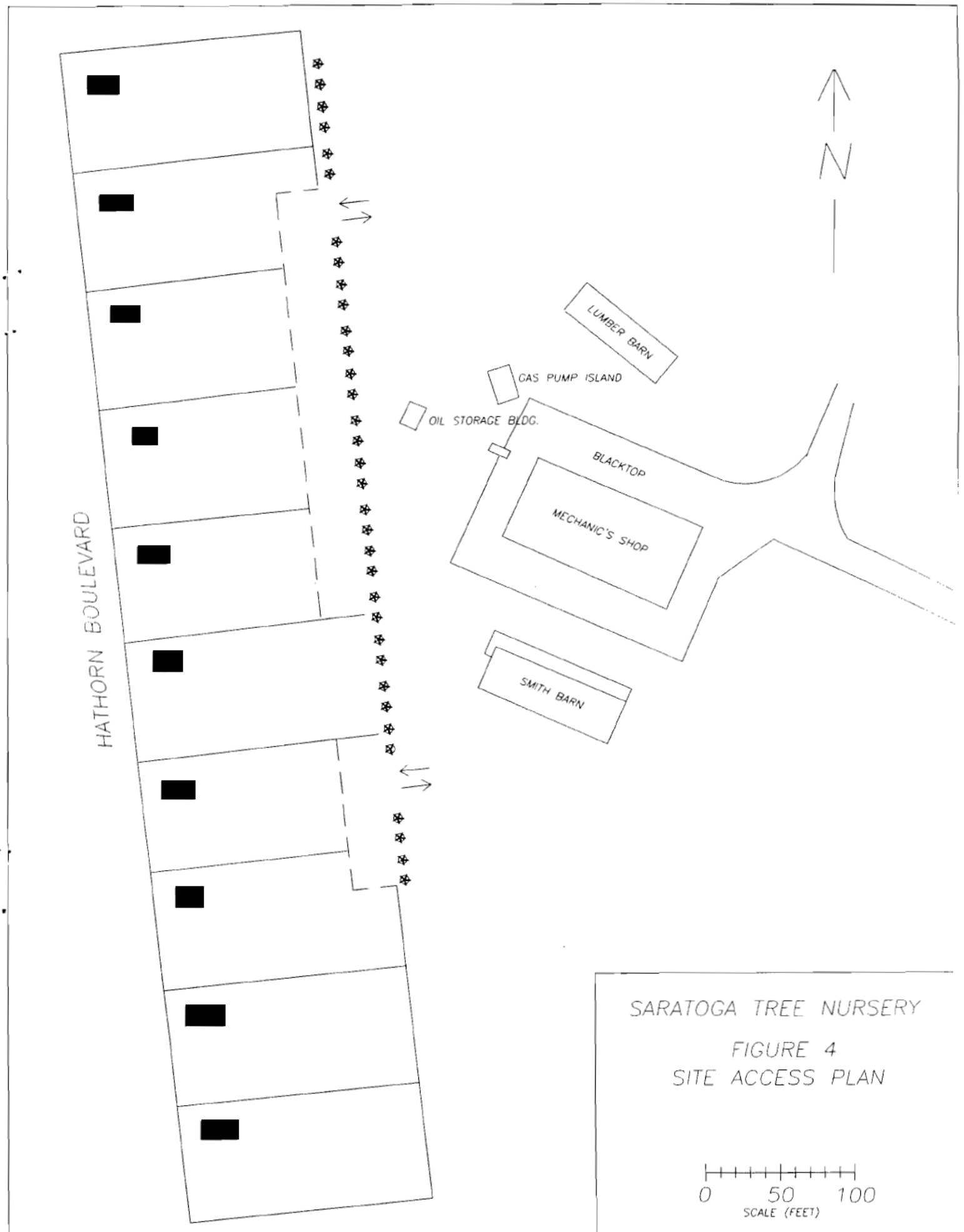
As discussed previously, the IRM program will involve excavation, backfilling with topsoil and seeding to address the off-site DDT contamination. This section provides an overview of the plan to remove the contaminated soil and restore the properties to their undisturbed condition.

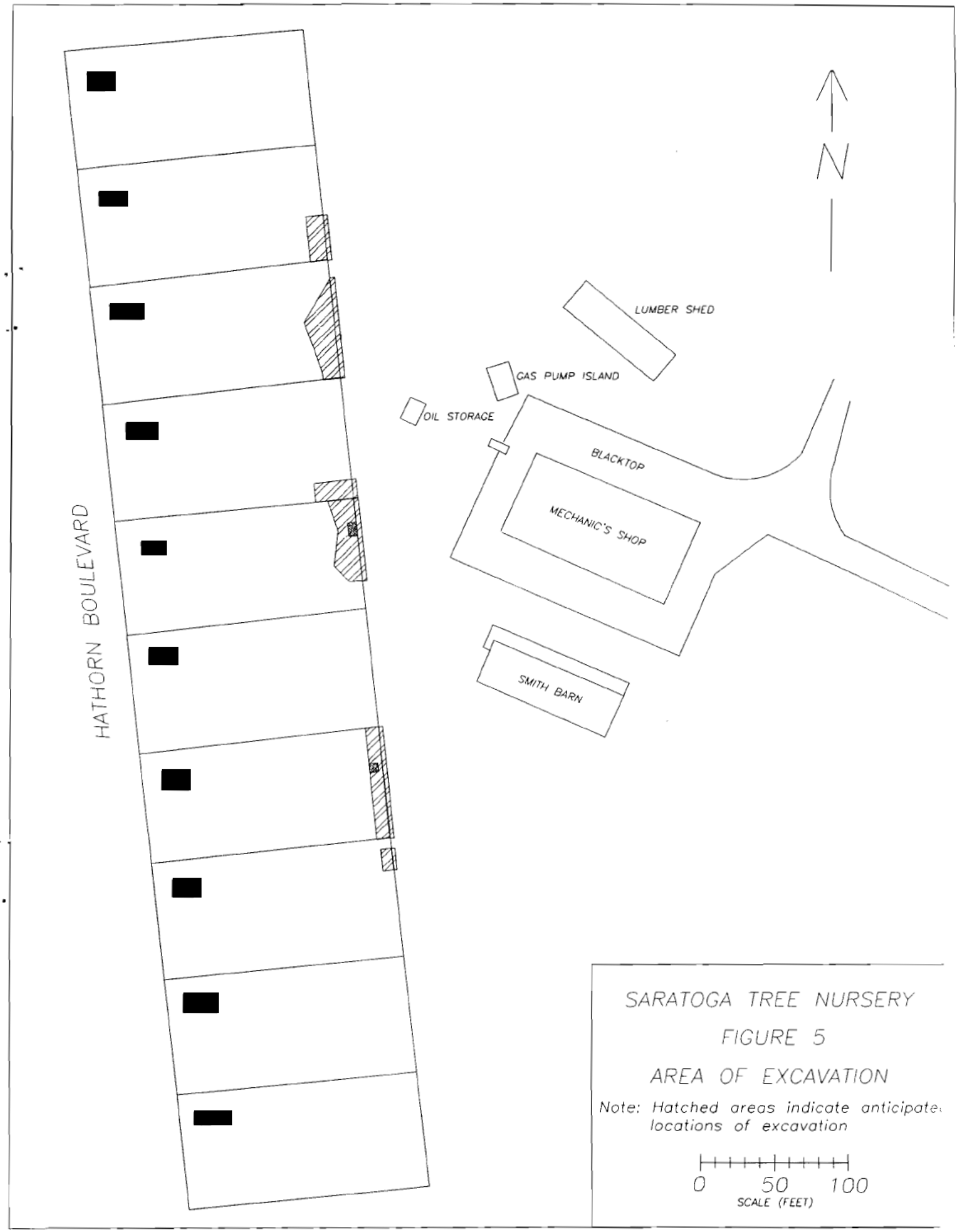
7.1.1 Clearing/Site Preparation

There is currently a chain link fence separating the Saratoga Tree Nursery and the residential properties on Hathorn Blvd. A row of cedar trees, located on the Nursery property adjacent to the fence, serves as a privacy barrier. To minimize the impact of the excavation program on the residents and their property, the NYSDEC proposes to access the backyards from the Nursery property. An access way for excavating equipment will have to be established from the Nursery to the private properties for each of the two areas of concern (Lot Nos. [redacted]). To accomplish this and to remove soil from the nursery property behind the cedar trees, the Nursery's fence will be temporarily removed from both areas of concern. Additionally, fences which separate the private properties from one another will be temporarily removed from the area subject to remediation, to facilitate excavation activities and property access. As fence is removed, lot corners will be marked for future reference. Temporary fencing will be erected to provide an exclusion zone in the area of construction and to maintain the enclosure of the backyard, which is required where swimming pools are located. Figure 4 illustrates the site access plan.

All brush, undergrowth, leaf compost, and rubbish located in areas of concern will be removed prior to commencing excavation activities. Brush, undergrowth, and leaf compost will be disposed of in the composting area at the Nursery. Rubbish will be disposed of in a sanitary landfill. Every effort will be made to protect mature trees, however some small trees will be removed to facilitate access. The NYSDEC will work with residents regarding remedial activities on their property.

Once an access way has been established and the surface has been prepared, the areas of intended excavation will be flagged. Figure 5 shows the planned areas of excavation.


HATHORN BOULEVARD
LUMBER BARN
GAS PUMP ISLAND
OIL STORAGE BLDG.
BLACKTOP
MECHANIC'S SHOP
SMITH BARN
N
SARATOGA TREE NURSERY
FIGURE 4
SITE ACCESS PLAN
0
50
100
SCALE (FEET)



SARATOGA TREE NURSERY

FIGURE 5

AREA OF EXCAVATION

Note: Hatched areas indicate anticipated locations of excavation

0 50 100

SCALE (FEET)

7.1.2 Excavation

Once the site is clear of surface materials and the area has been staked out, excavation will begin. Excavation will be accomplished in most areas with a small backhoe. In areas close to mature trees, hand shovels will be utilized to the extent practicable. Nursery staff will provide guidance when working around trees to ensure their protection.

Excavation will be carried out to depths of 1 to 1.5 feet below ground surface for the majority of the area of concern. Two smaller, isolated areas will be excavated to an estimated depth of 5 feet below ground surface. These areas are situated in the central portion of Lot No. [redacted] and the northern portion of Lot No [redacted] Excavation depths will be based on sampling data generated during the Off-Site investigation. When the initial excavation is complete, confirmatory sampling will be conducted to determine if further excavation is necessary. Soil with DDT concentrations greater than 2 ppm will be removed, if practical, given the need to work around existing trees and their root systems.

Excavation of contaminated soil on Nursery property between the cedar trees and the fence will also be conducted, as necessary, as a component of the IRM. The estimated volume (total) of soil to be removed as part of the IRM program is 180 cubic yards.

When excavation is complete, clean backfill will be placed in the excavation. Sufficient backfill will be placed to return yards to their former grade or to provide at least one foot of cover, should it not be possible to fully excavate around roots. When clean fill is in place and properly compacted, grass seed will be placed in all areas that have been affected by the IRM. Also, trees that have been removed will be replaced as necessary (property owners discretion).

When the off-site removal is complete, the construction fencing will be removed and all original fencing will be restored. Any fence damaged by the IRM will be repaired or replaced.

7.1.3 Stockpiling of Contaminated Soil

Excavated soil will be stockpiled on the Nursery property. The selected stockpile area is located in the central portion of the Nursery, east of the Mechanic Shop. Contaminated soil will be placed on and covered with an impermeable, UV resistant geomembrane. The geomembrane will be placed to ensure that the contaminated soil does not come into contact with clean soil, surface water runoff, or precipitation. The edges of the membrane will be weighted down to keep the membrane in place. Erosion and sediment control devices will be installed around the stockpile, as necessary. The contaminated soil will be stockpiled on nursery property until the remedial work associated with on-site contamination is complete.

7.2 Soil Sampling

A cleanup goal of 2 ppm total DDT, DDE, DDD, has been established for the private properties. Confirmatory sampling will be conducted during excavation activities to ensure all contaminated soil is removed. During excavation(s), samples will be collected for analysis from the excavation floor and walls, prior to backfilling.

7.2.1 Quality Assurance/Quality Control

Confirmatory samples will be analyzed using Millipore Envirogard DDT test kits.

7.2.1.1 Sample Custody

Chain-of-Custody forms will be filled out in order to provide an accurate written record that can be used to trace the possession and handling of a sample from its collection through its analysis (ref. Appendix F). This form will accompany the sample containers during selection and preparation at the laboratory, during shipment to the field, and during return shipment to the laboratory. A sample is in custody if it is:

- In someone's physical possession;
- In someone's view;
- Locked up; or
- Kept in a secure area that is restricted to authorized personnel.

Samples will be properly stored and meet all holding times required for analysis.

Each sample will be labeled with an identification number and plastic clear tape over the label to prevent pealing while shipping or storing. Duplicate copies of the Chain of Custody form will be filled out. One copy of the form will be retained by the samplers, and one form will be sealed in a plastic bag and taped inside the lid of the shipping cooler. After the shipping cooler is closed, custody seals provided by the laboratory will be affixed to the latch and across the front and back of the cooler lid, and signed by the person relinquishing the samples to the shipper. The samples must be delivered to the laboratory within 48 hours of collection.

7.2.1.2 Sample Documentation

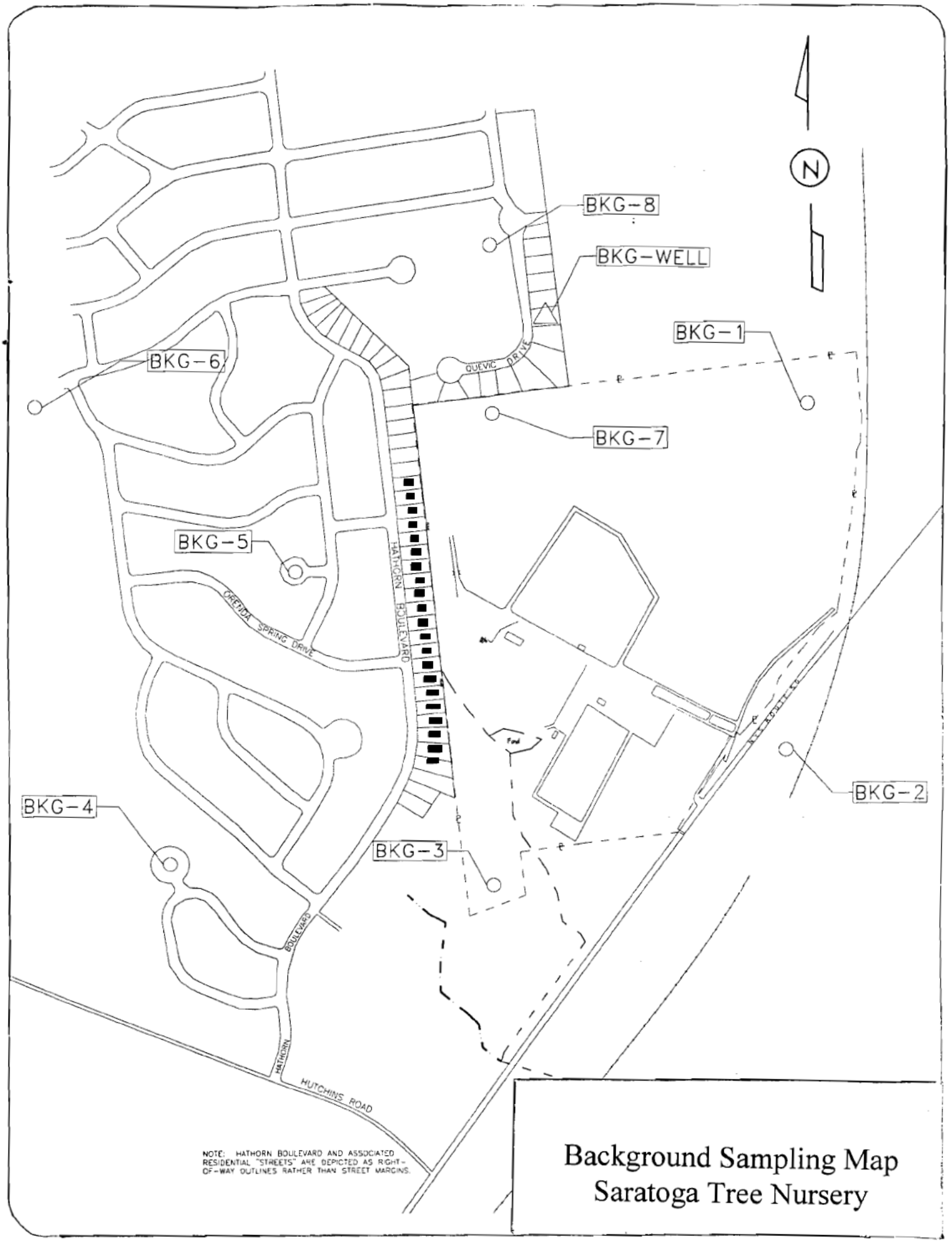
A sampling summary sheet will be filled out for each sample taken. An example of this form is included in Appendix F.

7.3 Schedule

The IRM program is tentatively scheduled to commence in the mid to late summer, 1995. It is estimated the soil removal and restoration will take approximately four to six weeks to complete. This estimate reflects the time needed to complete the entire project. The time required to complete the work on individual properties will vary, however, every effort will be made to limit the duration of the direct work on each property.

APPENDIX A

Background Sample Locations and Data



Background Sampling Map
Saratoga Tree Nursery

MARCH 1995 BACKGROUND SAMPLING RESULTS

Saratoga Tree Nursery

SAMPLE LOCATION	DDT ppm	DDE ppm	DDD ppm	TOTAL ppm
BKG-1	0.130	0.023	0.067	0.220
BKG-2	0.060	0.012	ND	0.072
BKG-3	0.029	ND	ND	0.029
BKG-4	0.026	ND	ND	0.026
BKG-5	0.064	0.007	ND	0.071
BKG-6	0.046	ND	ND	0.046
BKG-7	0.150	0.052	0.072	0.274
BKG-8	0.060	0.006	ND	0.066

APPENDIX B

Residential Sampling Data

N

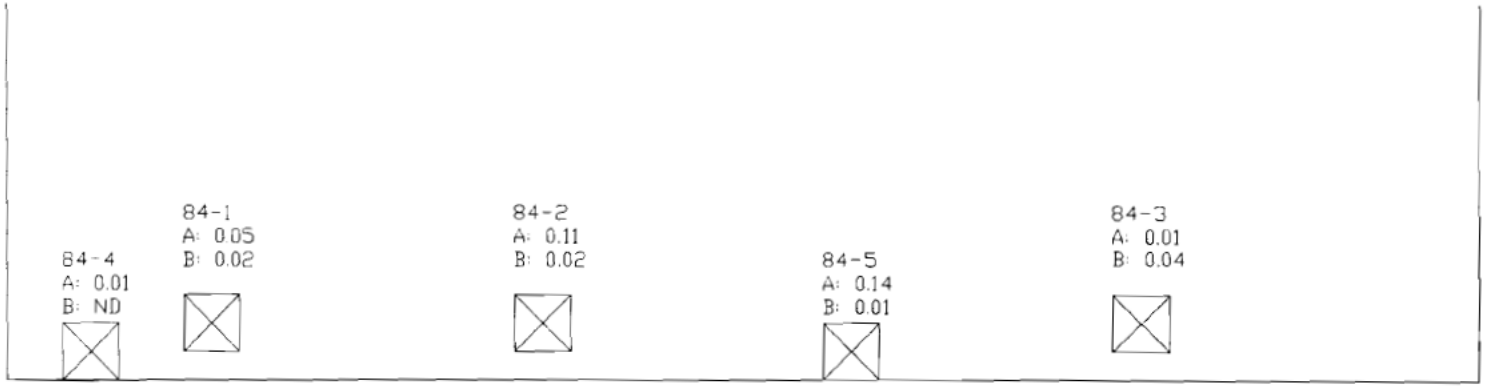
SARATOGA TREE NURSERY

SAMPLING LOCATIONS

0 5 10
Feet

[redacted]

A: 0-3' soil horizon
B: 3-12' soil horizon
ND: not detected in sample



The numbers shown above denote approximate concentrations of DDT in soil. All levels noted are in parts per million (ppm). The letter designations denote sample depths below ground surface (see key above).

N

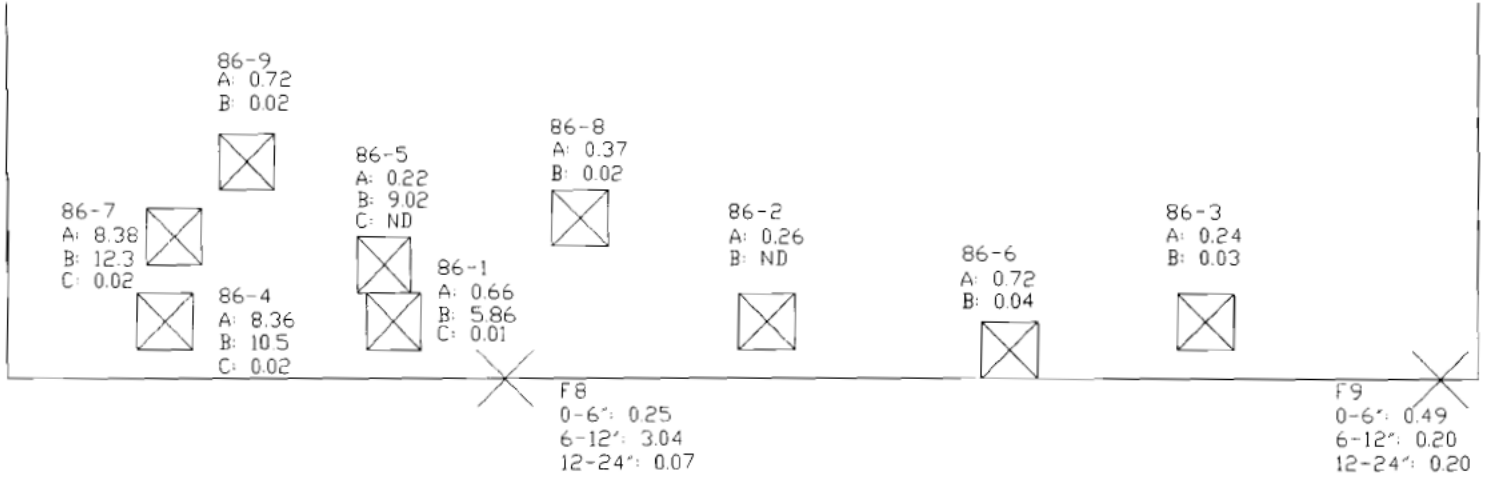
SARATOGA TREE NURSERY

SAMPLING LOCATIONS

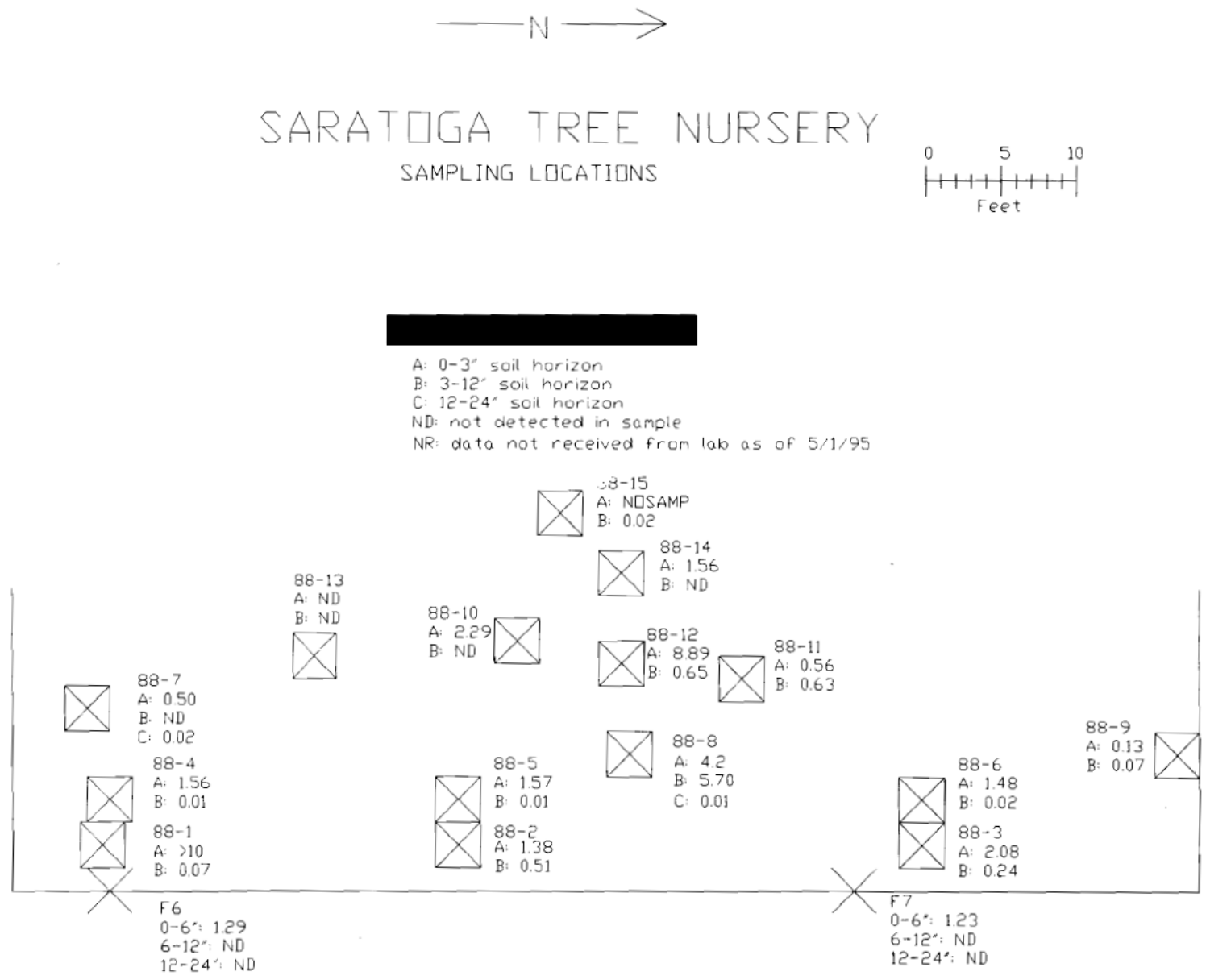
0 5 10
Feet

[redacted]

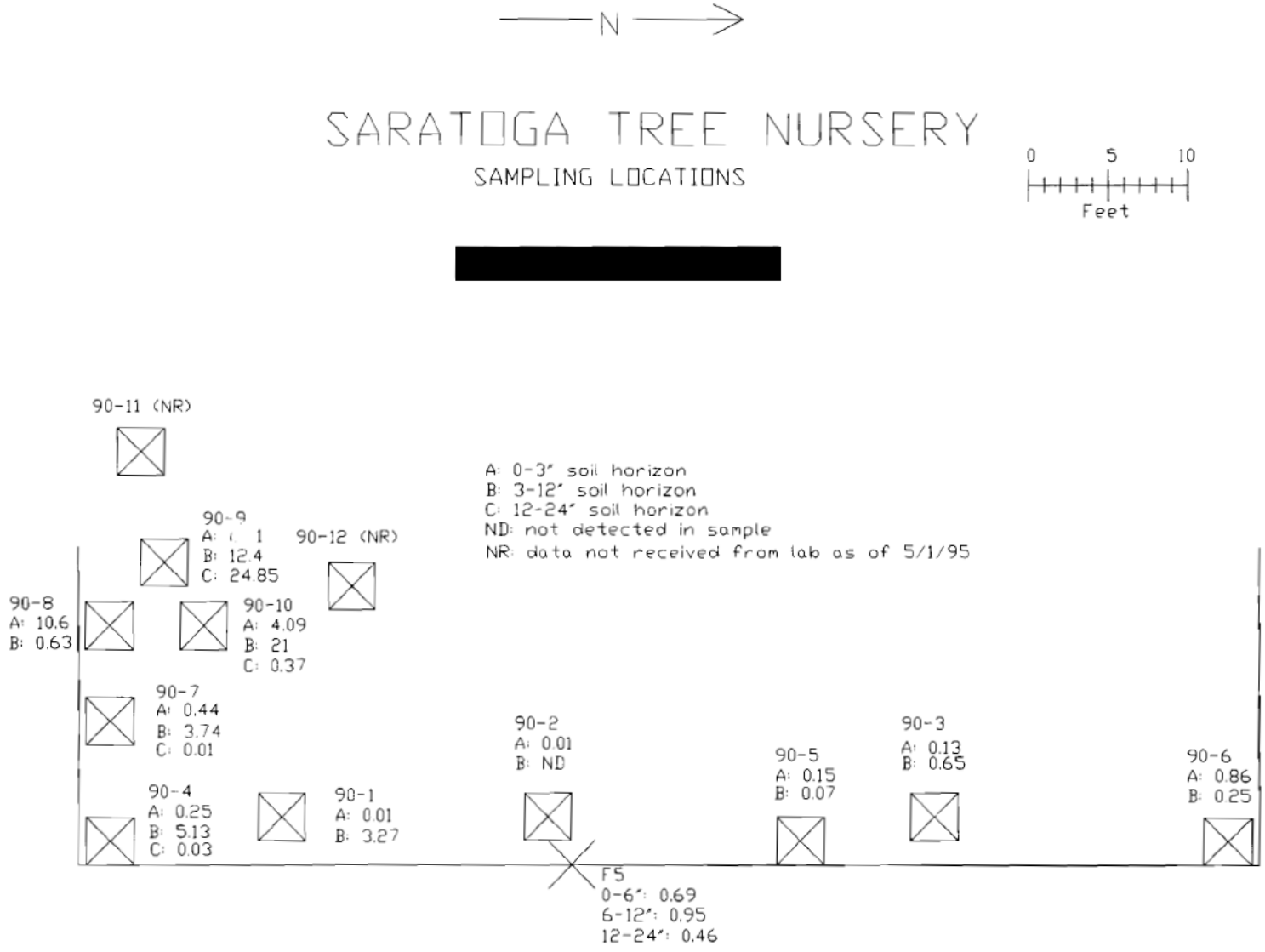
A: 0-3" soil horizon
B: 3-12" soil horizon
C: 12-24" soil horizon
ND: not detected in sample



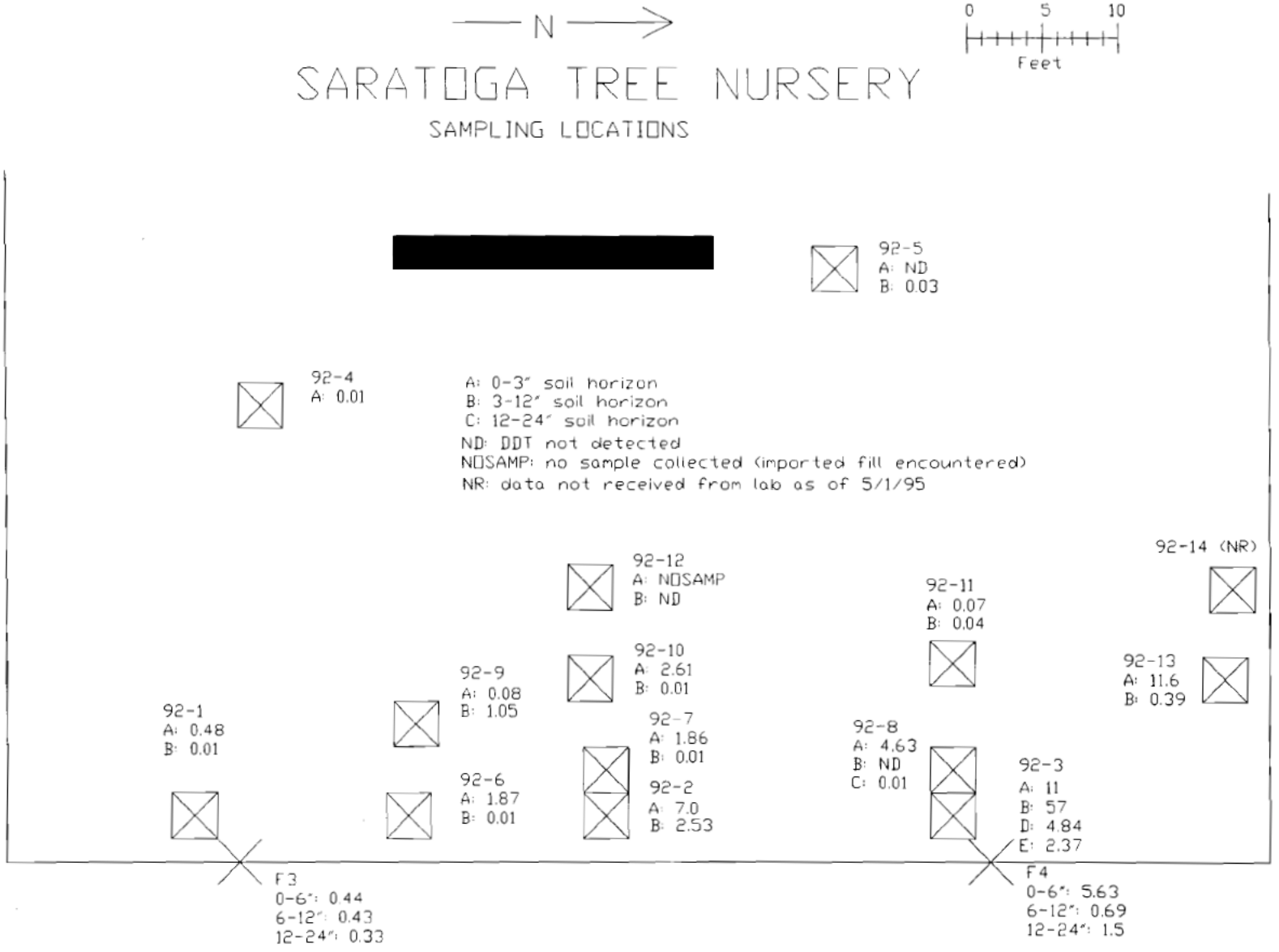
The numbers shown above denote approximate concentrations of DDT in soil. All levels noted are in parts per million (ppm). The letter designations denote sample depths below ground surface (see key above)



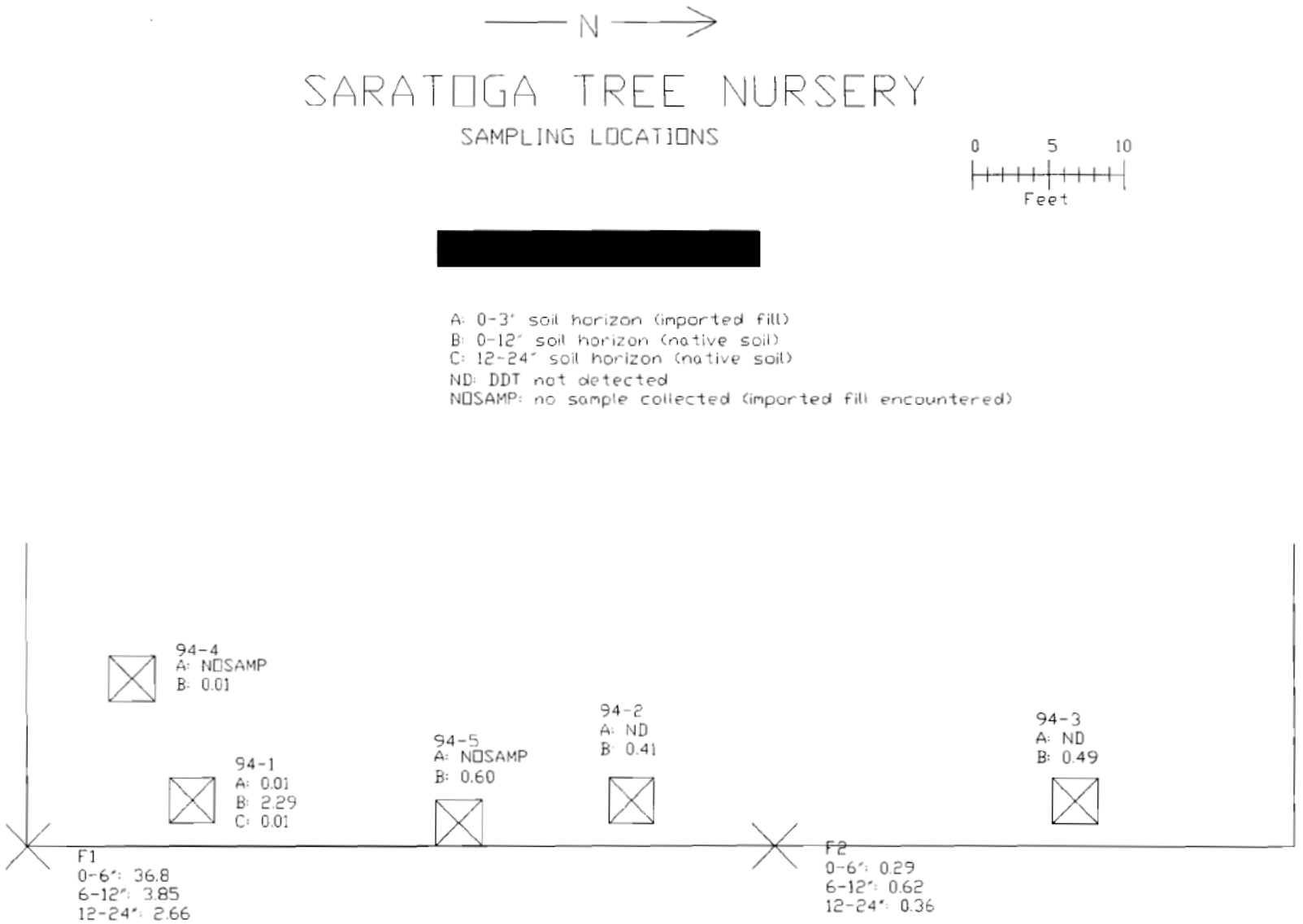
The numbers shown above denote approximate concentrations of DDT in soil. All levels noted are in parts per million (ppm). The letter designations denote sample depths below ground surface (see key above).



The numbers shown above denote approximate concentrations of DDT in soil. All levels noted are in parts per million (ppm). The letter designations denote sample depths below ground surface (see key above).



The numbers shown above denote approximate concentrations of DDT in soil. All levels noted are in parts per million (ppm)
The letter designations denote sample depths below ground surface (see key above).



The numbers shown above denote approximate concentrations of DDT in soil. All levels noted are in parts per million (ppm). The letter designations denote sample depths below ground surface (see key above).

N

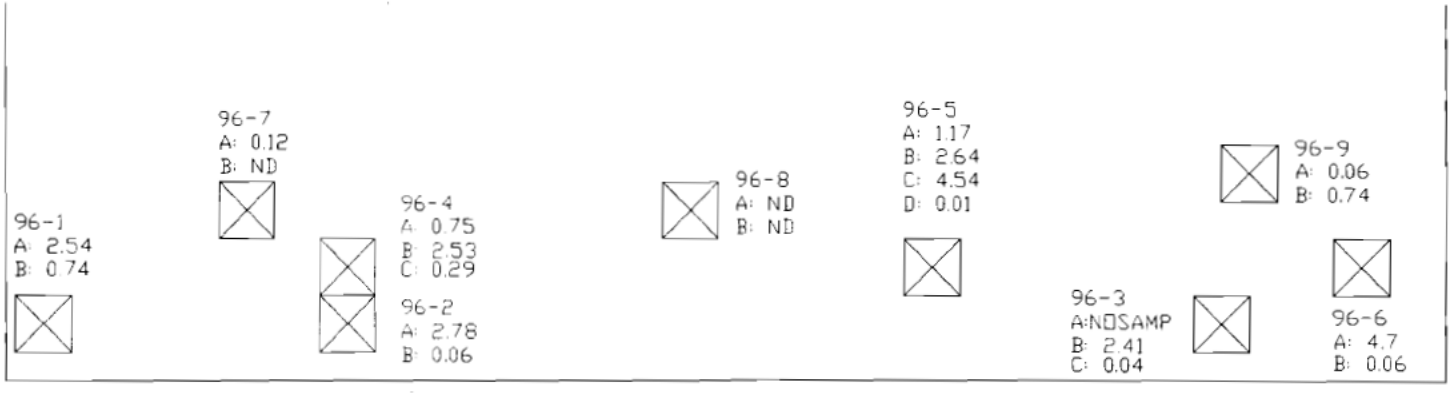
SARATOGA TREE NURSERY

SAMPLING LOCATIONS

0 5 10
Feet

[redacted]

A: 0-3" soil horizon (native soil)
B: 3-12" soil horizon (native soil)
C: 12-24" soil horizon (native soil)
D: 24-36" soil horizon (native soil)
ND: DDT not detected
NOSAMP: no sample collected (imported fill encountered)



The numbers shown above denote approximate concentrations of DDT in soil. All levels noted are in parts per million (ppm). The letter designations denote sample depths below ground surface (see key above).

N

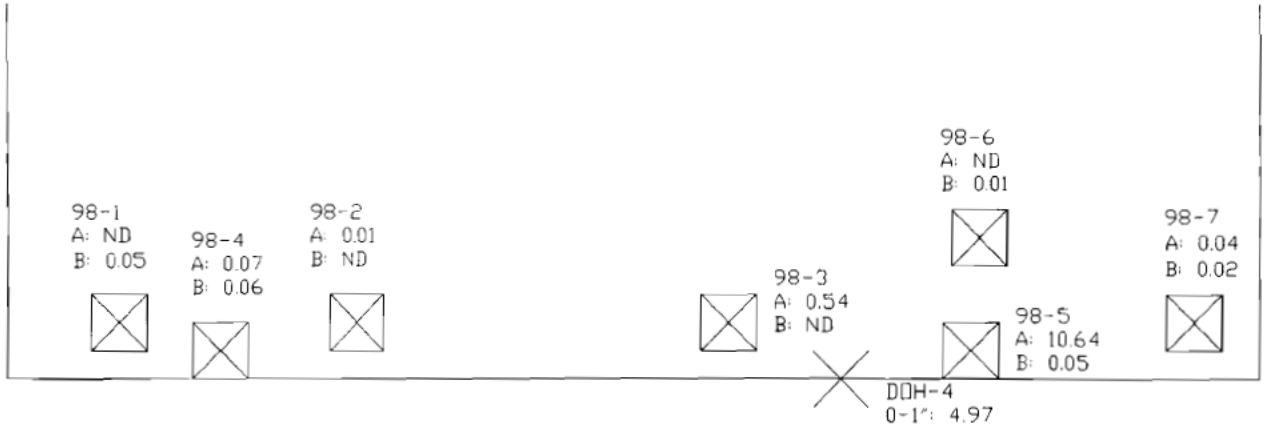
SARATOGA TREE NURSERY

SAMPLING LOCATIONS

0 5 10
Feet

[redacted]

A: 0-3" soil horizon
B: 3-12" soil horizon
C: 12-24" soil horizon
ND: DDT not detected



The numbers shown above denote approximate concentrations of DDT in soil. All levels noted are in parts per million (ppm). The letter designations denote sample depths below ground surface (see key above).

N

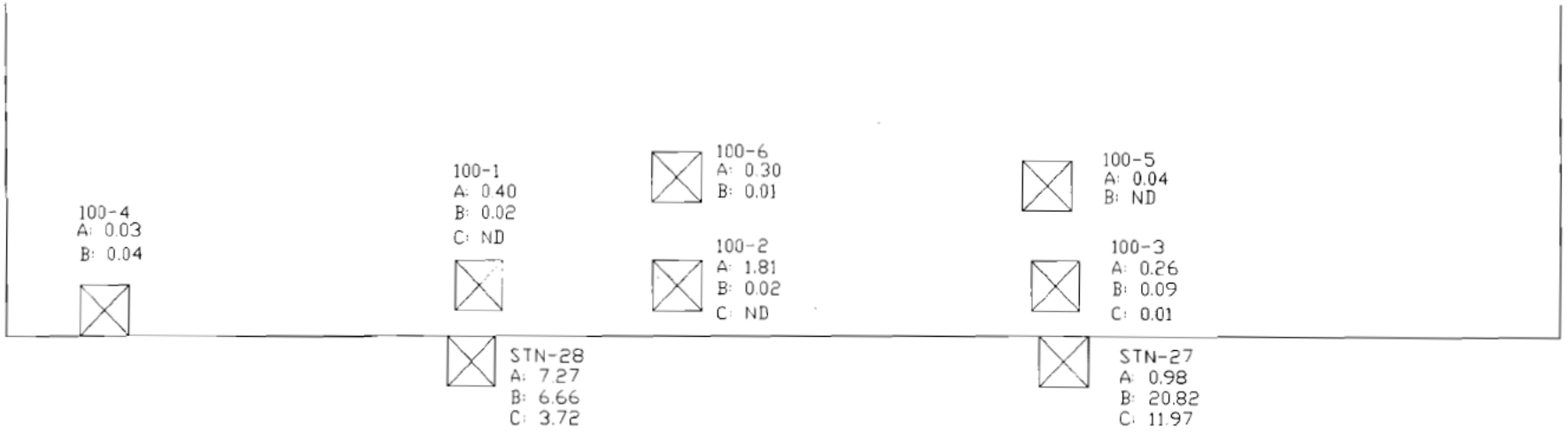
SARATOGA TREE NURSERY

SAMPLING LOCATIONS

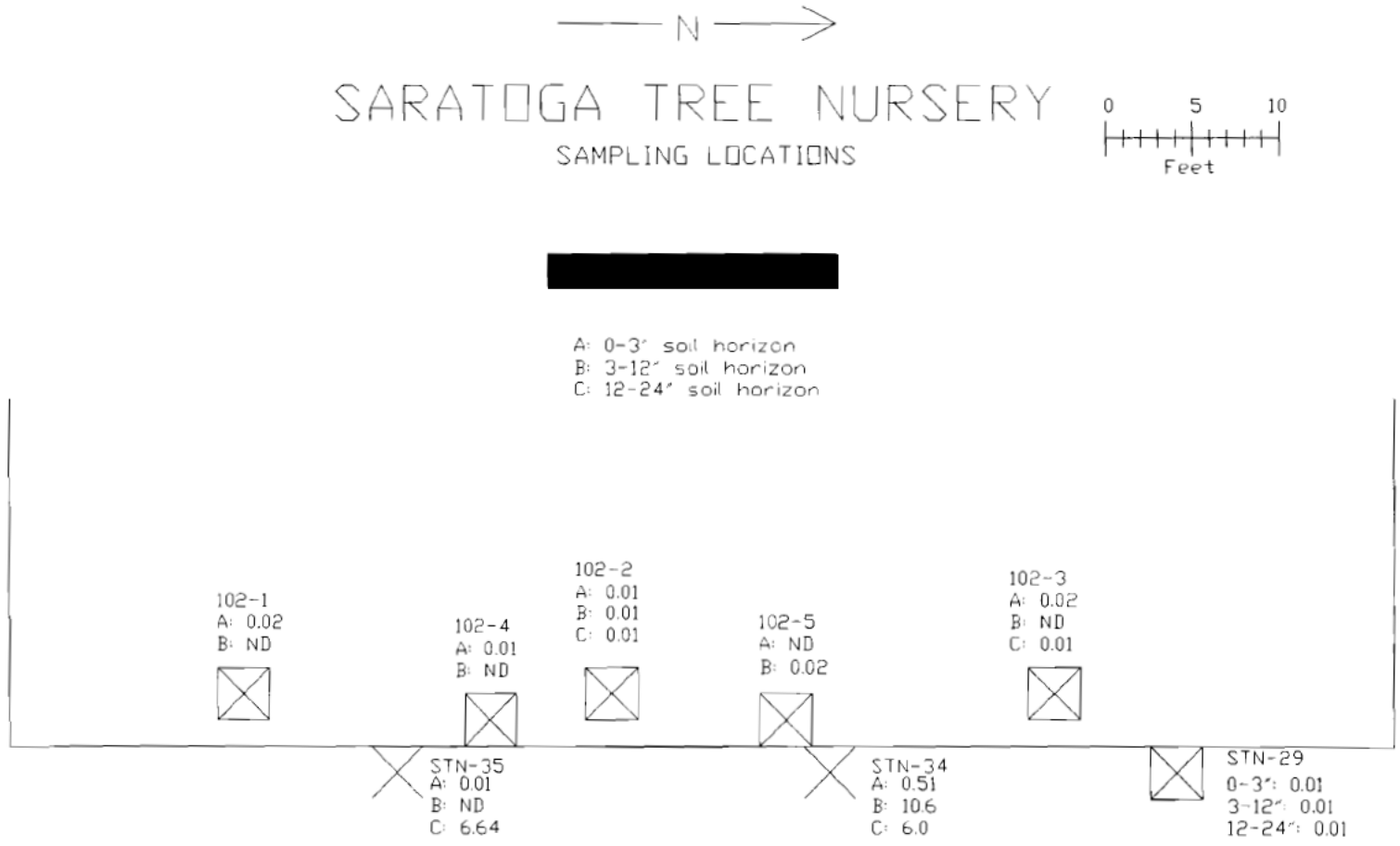
0 5 10
Feet

[redacted]

A: 0-3" soil horizon
B: 3-12" soil horizon
C: 12-24" soil horizon
ND: DDT not detected



The numbers shown above denote approximate concentrations of DDT in soil. All levels noted are in parts per million (ppm). The letter designations denote sample depths below ground surface (see key above).



The numbers shown above denote approximate concentrations of DDT in soil. All levels noted are in parts per million (ppm). The letter designations denote sample depths below ground surface (see key above).

APPENDIX C

Soil Test Kit Data Summary Sheets

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

IMMUNOASSAY FOR DDT

DATE: 3/31/95 RESULTS REPORTED AS PPM

SAMPLE NUMBER	CONCENTRATION RANGE		SAMPLE NUMBER	CONCENTRATION RANGE	
84-3B	< 0.2	(0.04)	STN27 3-12"	> 10	
98-4A	< 0.2	(0.07)	STN27 12-24"	> 10	
98-4B	< 0.2	(0.06)	STN28 0-3"	> 1 < 10	(7.27)
98-5A	> 10		90-6A	< .1	(0.86)
98-5B	< 0.2	(0.05)	90-6B	< 1	(0.25)
92-6A	> 1 < 10	(1.87)	100-1A	< 1	(0.40)
92-6B	< 0.2	(0.01)	100-1B	< 0.2	(0.02)
92-7A	> 1 < 10	(1.86)	100-2A	> 1 < 10	(1.81)
92-7B	< 0.2	(0.01)	100-2B	< 0.2	(0.02)
92-8A	> 1 < 10	(4.63)	100-3A	> 0.2 < 1	(0.26)
86-2A	< 0.2	(0.13)	100-3B	< 0.2	(0.09)
90-1A	< 0.2	(0.01)	86-4A	> 1 < 10	(8.36)
86-3B	< 0.2	(0.03)	86-4B	> 10	
STN26 3-12"	< 1	(0.71)	86-5A	> 0.2 < 1	(0.22)
STN26 12-24"	< 0.2	(0.03)	86-5B	> 1 < 10	(4.28)
STN26 0-3"	> 10				
STN27 0-3"	< 1	(0.98)			

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

IMMUNOASSAY FOR DDT

DATE: 3/31/97 RESULTS REPORTED AS PPM

SAMPLE NUMBER	CONCENTRATION RANGE		SAMPLE NUMBER	CONCENTRATION RANGE	
98-1A	< 0.2	(0.00)	92-5B	< 0.2	(0.03)
98-1B	< 0.2	(0.05)	88-1A	> 10	
98-2A	< 0.2	(0.01)	98-1B	< 0.2	(0.07)
98-2B	< 0.2	(0.00)	88-2A	> 1 < 10	(1.38)
98-3A	< 1.0	(0.54)	88-2B	< 1	(0.51)
98-3B	< 0.2	(0.00)	88-3A	> 1 < 10	(2.08)
96-1A	> 1 < 10	(2.54)	88-3B	> 0.2 < 1	(0.24)
96-1B	< 1	(0.74)	90-1A	< 0.2	(0.00)
96-2A	> 1 < 10	(2.78)	90-1B	> 0.2 < 1	(0.39)
96-2B	< 0.2	(0.06)	90-2A	< 0.2	(0.01)
92-1A	< 1	(0.48)	90-2B	< 0.2	(0.00)
92-1B	< 0.2	(0.01)	90-3A	< 0.2	(0.13)
92-2A	> 10		90-3B	> 0.2 < 1	(0.65)
92-2B	> 1 < 10	(2.53)	86-1A	> 0.2 < 1	(0.66)
92-3A	> 10		86-1B	> 1 < 10	(5.86)
92-3B	> 10		86-2A	< 0.2	(0.08)
92-4A	< 0.2	(0.01)	86-2B	< 0.2	(0.00)
92-5A	<0.2	(0.00)			

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date: 3/31/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
86-3A	0.24	SPL86-2A	0.26
86-3B	0.01	SPL90-1A	0.01
94-1A	0.01	SPL86-3B	0.03
94-1B	2.29	STN-26B	0.71
94-2A	0.00	STN-26C	0.03
94-2B	0.41	STN-27A	0.98
94-3A	0.00	STN-28A	7.27
94-3B	0.49	STN-28A (D)	4.22
96-3B	2.41		
SPL90-1B	3.27		
SPL90-1B (D)	1.87		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date: 4/3/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
84-3B	0.04	STN-28B	6.66
98-4A	0.07	STN-28C	3.72
98-4B	0.06	84-1A	0.05
98-5A	10.64*	84-1B	0.02
98-5B	0.05	84-2A	0.11
92-6A	1.87	84-2B	0.02
92-6B	0.01	84-3A	0.01
92-7A	1.86	96-6B	0.04
92-7B	0.01	96-6B (D)	0.06
92-8A	4.63		
92-8A (D)	3.74		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date: 4/4/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
STN-29A	0.01	88-6A	1.48
STN-29B	0.01	88-6B	0.02
84-3B	0.01	96-4A	0.75
92-8B	0.00	96-4B	2.53
92-3D	4.84	96-5A	1.17
92-3E	2.37	96-5B	2.64
92-3E (D)	2.30	90-4A	0.25
88-4A	1.56	90-4B	5.13
88-4B	0.01	90-5A	0.15
88-5A	1.57	90-5B	0.06
88-5B	0.01	90-5B (D)	0.07

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date: 4/5/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
90-6A	0.86		
90-6B	0.25		
100-1A	0.40		
100-1B	0.02		
100-2A	1.81		
100-2B	0.02		
100-3A	0.26		
100-3B	0.09		
86-4A	8.36		
86-5A	0.22		
86-5B	4.28		
86-5B (D)	9.02		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date: 4/6/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
92-2A	7.0		
92-3A	11.0		
92-3B	57		
96-6A	4.7		
86-4B	10.5		
86-6A	0.72		
86-6B	0.04		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date: 4/10/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
96-8B	0.00	92-11A	0.07
96-9B	0.74	96-7A	0.12
100-4B	0.04	96-9A	0.06
100-5B	0.00	98-9A	0.64
98-7B	0.02	98-7A	0.04
98-6B	0.01	100-4A	0.03
98-6B (D)	0.00	100-5A	0.04
96-8A	0.01	86-8A	0.37
96-7B	0.00	90-7A	0.44
92-9A	0.08	86-7A	8.38
92-10A	2.61	86-7A (D)	5.87

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSEPUATION

IMMUNOASSAY FOR DDT

DATE:4/12/95 RESULTS REPORTED AS PPM

SAMPLE NUMBER	CONCENTRATION RANGE		SAMPLE NUMBER	CONCENTRATION RANGE
100-1C	< 0.2 (0.00)			
100-2C	< 0.2 (0.00)			
100-3C	< 0.2 (0.01)			
96-3C	< 0.2 (0.04)			
96-4C	> 0.2 < 1 (0.29)			
96-5C	> 1 < 10 (4.54)			
94-1C	< 0.2 (0.01)			
92-1C	< 0.2 (0.09)			
92-8C	< 0.2 (0.01)			
90-4C	< 0.2 (0.03)			
86-1C	< 0.2 (0.01)			
86-4C	< 0.2 (0.02)			
86-5C	< 0.2 (0.00)			

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay - DDT

Date: 4/12/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
92-11B	0.04	STN-31	0.20
92-10B	0.01	94-4B	0.01
92-9B	1.05	94-5B	0.60
86-8B	0.02	84-4A	0.01
90-7B	3.74	84-4B	0.00
88-7A	0.50	84-5A	0.14
88-7B	0.00	84-5B	0.01
88-9A	0.13	96-5D	0.01
88-8A	12.30	96.5D (D)	0.01
88-8A (D)	9.93		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date:4/13/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
88-8B	5.70	102-2A	0.03
86-7B	RERUN (4/14)	102-2B	0.01
STN-30A	RERUN (4/14)	102-3A	0.02
STN-30B	8.36	102-3B	0.00
STN-32A	0.76	STN-33A	1.41
STN-32B	1.06	STN-33B	5.69
102-1A	0 02	STN-33B (D)	5.78
102-1B	0.00		
90-7C	0.01		
90-7C (D)	0 01		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date: 4/14/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
88-8A	4.2		
88-8C	0.01		
88-7C	0.02		
86-7B	12.3		
86-7C	0.02		
STN-30A	2.50		
STN-30C	0.15		
102-2C	0.01		
102-3C	0.01		
102-3C (D)	0.00		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date: 4/19/95 Results Reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
88-11A	0.56	88-10A	2.29
88-11B	0.63	88-10B	0.00
86-9A	0.72	92-12B	NO RESULT
86-9B	0.02	102-4A	0.01
90-8A	10.63	102-4B	0.00
90-8B	0.63	STN-36A	0.00
STN-31	0.30	STN-36B	0.00
STN-34A	0.51	102-5A	0.00
STN-34B	10.63	102-5B	0.02
88-~~9A~~ 12A	8.89	STN-35A	0.01
88-~~9B~~ 12B	0.65	STN-35B	0.00
88-9B (D)	0.66	STN-35C	6.64

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date: 4/25/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
88-14B	0.01	100-6B	0.01
88-13A	0.08	100-6A	0.30
88-14A	1.56	STN-37B	0.01
88-13B	0.00	STN-37C	0.01
92-13B	0.39	STN-37A	0.02
92-12B	0.00	STN-38A	0.06
92-13A	11.6	STN-38B	0.05
90-10A	4.09	STN-38C	0.00
		STN-39A	0.07
		STN-39B	0.71
		STN-39C	0.00

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date: 4/26/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
90-9B	12.4		
90-9A	62.1		
90-10B	27.6		
90-9C	24.85		
90-10C	0.37		
STN-32C	0.08		
STN-30C	0.06		
STN-33C	3.79		
STN-35C	0.01		
STN-35C (D)	0.00		

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Divison of Hazardous Waste Remediation

Immunoassay : DDT

Date: 5/1/95 Results reported as PPM

Sample Number	Concentration Range	Sample Number	Concentration Range
90-11A	0.00		
90-11B	0.00		
88-15B	0.02		
90-12A	0.00		
90-12B	0.00		
92-14B	0.59		
92-14B (D)	0.48		

APPENDIX D

Laboratory Data Sheets - Soil

(results are in parts per billion)

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: 86-7B

SAMPLE NUMBER: 595-101-28

EXTRACTION METHOD: SFE

MATRIX: SOIL

% SOLID: NC

PESTICIDE	QUANT (ug/kg)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	1800
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	2100
ENDOSULFAN SULFATE	ND
4,4'-DDT	5300
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 100

AROCLOR	QUANT (ug/kg)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: 88-9A

SAMPLE NUMBER: 595-104-17

EXTRACTION METHOD: SFE

MATRIX: SOIL

% SOLID: NC

PESTICIDE	QUANT (ug/kg)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	790
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	500
ENDOSULFAN SULFATE	ND
4,4'-DDT	2600
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 1

AROCLOR	QUANT (ug/kg)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY FIELD ID: 90-10B

SAMPLE NUMBER: 595-114-06 EXTRACTION METHOD: SFE

MATRIX: SOIL % SOLID: NC

PESTICIDE	QUANT (ug/kg)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	290
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	400
ENDOSULFAN SULFATE	ND
4,4'-DDT	1100
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 1

AROCLOR	QUANT (ug/kg)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/APOCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY FIELD ID: PS-9B

SAMPLE NUMBER: F9F101-13SUP EXTRACTION METHOD: SFE

MATRIX: SOIL % SOLID: NC

PESTICIDE	QUANT (ug/kg)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	170
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	120
ENDOSULFAN SULFATE	ND
4,4'-DDT	420
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

APOCLORS - CRDL

DILUTION FACTOR - 1

APOCLOR	QUANT (ug/kg)
1016	NA
1221	NA
1232	NA
1242	ND
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: 92-9B

SAMPLE NUMBER: 595-101-13

EXTRACTION METHOD: SFE

MATRIX: SOIL

% SOLID: NC

PESTICIDE	QUANT (ug/kg)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	200
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	920
ENDOSULFAN SULFATE	ND
4,4'-DDT	550
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 1

AROCLOR	QUANT (ug/kg)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: 102-2B

SAMPLE NUMBER: 595-101-39

EXTRACTION METHOD: SFE

MATRIX: SOIL

% SOLID: NC

PESTICIDE	QUANT (ug/kg)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	21
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	3.8
ENDOSULFAN SULFATE	ND
4,4'-DDT	39
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 1

AROCLOR	QUANT (ug/kg)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: STN-33A

SAMPLE NUMBER: 595-101-44

EXTRACTION METHOD: SFE

MATRIX: SOIL

% SOLID: NC

PESTICIDE	QUANT (ug/kg)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	85
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	130
ENDOSULFAN SULFATE	ND
4,4'-DDT	510
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 1

AROCLOR	QUANT (ug/kg)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: STN-34C

SAMPLE NUMBER: 595-104-16

EXTRACTION METHOD: SFE

MATRIX: SOIL

% SOLID: NC

PESTICIDE	QUANT (ug/kg)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	44
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	87
ENDOSULFAN SULFATE	ND
4,4'-DDT	87
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

APOCLORS - CRDL

DILUTION FACTOR - 1

AROCLOR	QUANT (ug/kg)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: STN36-B

SAMPLE NUMBER: 595-104-29

EXTRACTION METHOD: SFE

MATRIX: SOIL

% SOLID: NC

PESTICIDE	QUANT (ug/kg)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	19
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	9.6
ENDOSULFAN SULFATE	ND
4,4'-DDT	39
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 1

AROCLOR	QUANT (ug/kg)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: (6-12") STN38

SAMPLE NUMBER: 595-114-23

EXTRACTION METHOD: SFE

MATRIX: SOIL

% SOLID: NC

PESTICIDE	QUANT (ug/kg)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	[illegible]
GAMMA-BHC	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
HEPTACHLOR EPOXIDE	NC
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	37
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	34
ENDOSULFAN SULFATE	NC
4,4'-DDT	70
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND-ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR

AROCLOR	QUANT (ug/kg)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: (6-12") STN3P

SAMPLE NUMBER: 595-114-26

EXTRACTION METHOD: SFE

MATRIX: SOIL

% SOLID: NC

PESTICIDE	QUANT (ug/kg)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	40
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	98
ENDOSULFAN SULFATE	ND
4,4'-DDT	79
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 1

AROCLOR	QUANT (ug/kg)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

Inchcape Testing Services
Aquatec Laboratories

55 South Park Drive
Colchester, VT 05446
Tel. 802-655-1203
Fax. 802-655-1248

April 28, 1995

Mr. John M. Ryan, Chief
Analytical Services Section
Bureau of Water Research
New York State Department of
Environmental Conservation
50 Wolf Road, Room 301
Albany, New York 12233-3502

Re: ITS-Aquatec Project No. 94216
New York State Contract No. C003218
Case No. FA094, SDG No. 086

Dear Mr. Ryan:

Enclosed are the analytical results for the samples received intact from the New York State Department of Environmental Conservation on April 3, 1995. Laboratory numbers and quality control samples were assigned as follows:

New York State Sample ID	Laboratory Number	Sample Matrix
Samples Received on April 3, 1995 ETR No. 50289		
33	252098	Soil
34	252099	Soil
35	252100	Soil
36	252101	Soil
48	252102	Soil
49	252103	Soil
50	252104	Soil
51	252105	Soil
53	252106	Soil
53MS	252106MS	Soil
53MSD	252106MD	Soil
MSB	252107	Soil

Please note the use of the following additional qualifier when reporting pesticide/Aroclor results:

Y = The estimated compound concentration has been reported from response exceeding standard calibration range.

Peak height was used for calibration and quantitation of all compounds on both analytical columns.

Surrogate recoveries for decachlorobiphyenyl could not be calculated from the RTx-35 column for samples 53, 53MS and 53MSD due to matrix interferences.

Heptachlor was identified in the extraction method blank below the Contract Required Quantitation Limits (CRQL) on the RTx-1701 column. All samples in which heptachlor was detected have been appropriately flagged with a "B" qualifier.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

If there are any questions or clarifications regarding this submittal, please contact your Project Director, David Robinson at (802) 655-1203.

Sincerely,

Karen R. Chirgwin
Laboratory Operations Director

KRC/lml

Enclosure

94216B18APR95

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

34 (SPL 862A)

Lab Name: AQUATEC INC Contract: C003218

Lab Code: AQUAI Case No.: FA094 SAS No.: SDG No.: 086

Matrix: (soil/water) SOIL Lab Sample ID: 252099

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

% Moisture: 46 decanted: (Y/N) N Date Received: 04/03/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/06/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.00 (uL) Dilution Factor: 10.0

GPC Cleanup: (Y/N) Y pH: 5.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	31	U
319-85-7	beta-BHC	31	U
319-86-8	delta-BHC	31	U
58-89-9	gamma-BHC (Lindane)	31	U
76-44-8	Heptachlor	31	U
309-00-2	Aldrin	31	U
1024-57-3	Heptachlor epoxide	92	
959-98-8	Endosulfan I	31	U
60-57-1	Dieldrin	61	U
72-55-9	4,4'-DDE	41	JP
72-20-8	Endrin	61	U
33213-65-9	Endosulfan II	61	U
72-54-8	4,4'-DDD	61	U
1031-07-8	Endosulfan sulfate	61	U
50-29-3	4,4'-DDT	80	P
72-43-5	Methoxychlor	310	U
53494-70-5	Endrin ketone	61	U
7421-93-4	Endrin aldehyde	61	U
5103-71-9	alpha-Chlordane	120	
5103-74-2	gamma-Chlordane	100	
8001-35-2	Toxaphene	3100	U
12674-11-2	Aroclor-1016	610	U
11104-28-2	Aroclor-1221	1200	U
11141-16-5	Aroclor-1232	610	U
53469-21-9	Aroclor-1242	610	U
12672-29-6	Aroclor-1248	610	U
11097-69-1	Aroclor-1254	610	U
11096-82-5	Aroclor-1260	610	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

36 (SPL 8638)

Lab Name: AQUATEC INC Contract: C003218

Lab Code: AQUAI Case No.: FA094 SAS No.: SDG No.: 086

Matrix: (soil/water) SOIL Lab Sample ID: 252101

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

%.Moisture: 16 decanted: (Y/N) N Date Received: 04/03/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/06/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.00 (uL) Dilution Factor: 2.00

GPC Cleanup: (Y/N) Y pH: 5.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	4.0	U
319-85-7	beta-BHC	4.0	U
319-86-8	delta-BHC	4.0	U
58-89-9	gamma-BHC (Lindane)	4.0	U
76-44-8	Heptachlor	4.0	U
309-00-2	Aldrin	4.0	U
1024-57-3	Heptachlor epoxide	4.0	U
959-98-8	Endosulfan I	4.0	U
60-57-1	Dieldrin	7.8	U
72-55-9	4,4'-DDE	44	
72-20-8	Endrin	7.8	U
33213-65-9	Endosulfan II	7.8	U
72-54-8	4,4'-DDD	7.8	U
1031-07-8	Endosulfan sulfate	7.8	U
50-29-3	4,4'-DDT	63	
72-43-5	Methoxychlor	40	U
53494-70-5	Endrin ketone	7.8	U
7421-93-4	Endrin aldehyde	7.8	U
5103-71-9	alpha-Chlordane	4.0	U
5103-74-2	gamma-Chlordane	4.0	U
8001-35-2	Toxaphene	400	U
12674-11-2	Aroclor-1016	78	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	78	U
53469-21-9	Aroclor-1242	78	U
12672-29-6	Aroclor-1248	78	U
11097-69-1	Aroclor-1254	78	U
11096-82-5	Aroclor-1260	78	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

35 (SPL901A)

Lab Name: AQUATEC INC Contract: C003218

Lab Code: AQUAI Case No.: FA094 SAS No.: SDG No.: 086

Matrix: (soil/water) SOIL Lab Sample ID: 252100

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

% Moisture: 5 decanted: (Y/N) N Date Received: 04/03/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/06/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.00 (uL) Dilution Factor: 10.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	18	U
319-85-7	beta-BHC	18	U
319-86-8	delta-BHC	18	U
58-89-9	gamma-BHC (Lindane)	18	U
76-44-8	Heptachlor	18	U
309-00-2	Aldrin	18	U
1024-57-3	Heptachlor epoxide	11	J
959-98-8	Endosulfan I	18	U
60-57-1	Dieldrin	34	U
72-55-9	4,4'-DDE	34	U
72-20-8	Endrin	34	U
33213-65-9	Endosulfan II	34	U
72-54-8	4,4'-DDD	34	U
1031-07-8	Endosulfan sulfate	34	U
50-29-3	4,4'-DDT	34	U
72-43-5	Methoxychlor	180	U
53494-70-5	Endrin ketone	34	U
7421-93-4	Endrin aldehyde	34	U
5103-71-9	alpha-Chlordane	130	
5103-74-2	gamma-Chlordane	130	
8001-35-2	Toxaphene	1800	U
12674-11-2	Aroclor-1016	340	U
11104-28-2	Aroclor-1221	700	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	340	U
12672-29-6	Aroclor-1248	340	U
11097-69-1	Aroclor-1254	340	U
11096-82-5	Aroclor-1260	340	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

33 (SPL 90-113)

Lab Name: AQUATEC INC Contract: C003218

Lab Code: AQUAI Case No.: FA094 SAS No.: SDG No.: 086

Matrix: (soil/water) SOIL Lab Sample ID: 252098

Sample wt/vol: 30.1 (g/mL) G Lab File ID:

% Moisture: 14 decanted: (Y/N) N Date Received: 04/03/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/06/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.00 (uL) Dilution Factor: 2.00

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	3.9	U
319-85-7	beta-BHC	3.9	U
319-86-8	delta-BHC	3.9	U
58-89-9	gamma-BHC (Lindane)	3.9	U
76-44-8	Heptachlor	3.9	U
309-00-2	Aldrin	3.9	U
1024-57-3	Heptachlor epoxide	2.3	J
959-98-8	Endosulfan I	3.9	U
60-57-1	Dieldrin	7.7	U
72-55-9	4,4'-DDE	210	Y
72-20-8	Endrin	7.7	U
33213-65-9	Endosulfan II	7.7	U
72-54-8	4,4'-DDD	20	P
1031-07-8	Endosulfan sulfate	7.7	U
50-29-3	4,4'-DDT	510	PY
72-43-5	Methoxychlor	39	U
53494-70-5	Endrin ketone	7.7	U
7421-93-4	Endrin aldehyde	7.7	U
5103-71-9	alpha-Chlordane	7.1	
5103-74-2	gamma-Chlordane	4.9	
8001-35-2	Toxaphene	390	U
12674-11-2	Aroclor-1016	77	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	77	U
53469-21-9	Aroclor-1242	77	U
12672-29-6	Aroclor-1248	77	U
11097-69-1	Aroclor-1254	77	U
11096-82-5	Aroclor-1260	77	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

33DL

Lab Name: AQUATEC INC Contract: C003218

Lab Code: AQUAI Case No.: FA094 SAS No.: SDG No.: 086

Matrix: (soil/water) SOIL Lab Sample ID: 252098D1

Sample wt/vol: 30.1 (g/mL) G Lab File ID:

% Moisture: 14 decanted: (Y/N) N Date Received: 04/03/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/06/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.00 (uL) Dilution Factor: 20.0

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	39	U
319-85-7	beta-BHC	39	U
319-86-8	delta-BHC	39	U
58-89-9	gamma-BHC (Lindane)	39	U
76-44-8	Heptachlor	39	U
309-00-2	Aldrin	39	U
1024-57-3	Heptachlor epoxide	39	U
959-98-8	Endosulfan I	39	U
60-57-1	Dieldrin	77	U
72-55-9	4,4'-DDE	190	D
72-20-8	Endrin	77	U
33213-65-9	Endosulfan II	77	U
72-54-8	4,4'-DDD	77	U
1031-07-8	Endosulfan sulfate	77	U
50-29-3	4,4'-DDT	940	D
72-43-5	Methoxychlor	390	U
53494-70-5	Endrin ketone	77	U
7421-93-4	Endrin aldehyde	77	U
5103-71-9	alpha-Chlordane	39	U
5103-74-2	gamma-Chlordane	39	U
8001-35-2	Toxaphene	3900	U
12674-11-2	Aroclor-1016	770	U
11104-28-2	Aroclor-1221	1600	U
11141-16-5	Aroclor-1232	770	U
53469-21-9	Aroclor-1242	770	U
12672-29-6	Aroclor-1248	770	U
11097-69-1	Aroclor-1254	770	U
11096-82-5	Aroclor-1260	770	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

50 (SPL92-2A)

Lab Name: AQUATEC INC Contract: C003218

Lab Code: AQUAI Case No.: FA094 SAS No.: SDG No.: 086

Matrix: (soil/water) SOIL Lab Sample ID: 252104

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

% Moisture: 29 decanted: (Y/N) N Date Received: 04/03/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/06/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/26/95

Injection Volume: 1.00 (uL) Dilution Factor: 5.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	12	U
319-85-7	beta-BHC	12	U
319-86-8	delta-BHC	12	U
58-89-9	gamma-BHC (Lindane)	12	U
76-44-8	Heptachlor	12	U
309-00-2	Aldrin	12	U
1024-57-3	Heptachlor epoxide	12	U
959-98-8	Endosulfan I	12	U
60-57-1	Dieldrin	23	U
72-55-9	4,4'-DDE	600	Y
72-20-8	Endrin	20	J
33213-65-9	Endosulfan II	23	U
72-54-8	4,4'-DDD	29	P
1031-07-8	Endosulfan sulfate	23	U
50-29-3	4,4'-DDT	1500	Y
72-43-5	Methoxychlor	120	U
53494-70-5	Endrin ketone	24	
7421-93-4	Endrin aldehyde	23	U
5103-71-9	alpha-Chlordane	12	U
5103-74-2	gamma-Chlordane	12	U
8001-35-2	Toxaphene	1200	U
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	470	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

50DL ~~SB-47 SB~~

Lab Name: AQUATEC INC Contract: C003218

Lab Code: AQUAI Case No.: FA094 SAS No.: SDG No.: 086

Matrix: (soil/water) SOIL Lab Sample ID: 252104D1

Sample wt/vol: 30.3 (g/mL) G Lab File ID:

% Moisture: 29 decanted: (Y/N) N Date Received: 04/03/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/06/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.00 (uL) Dilution Factor: 50.0

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	120	U
319-85-7	beta-BHC	120	U
319-86-8	delta-BHC	120	U
58-89-9	gamma-BHC (Lindane)	120	U
76-44-8	Heptachlor	120	U
309-00-2	Aldrin	120	U
1024-57-3	Heptachlor epoxide	120	U
959-98-8	Endosulfan I	120	U
60-57-1	Dieldrin	230	U
72-55-9	4,4'-DDE	570	D
72-20-8	Endrin	230	U
33213-65-9	Endosulfan II	230	U
72-54-8	4,4'-DDD	230	U
1031-07-8	Endosulfan sulfate	230	U
50-29-3	4,4'-DDT	1800	D
72-43-5	Methoxychlor	1200	U
53494-70-5	Endrin ketone	230	U
7421-93-4	Endrin aldehyde	230	U
5103-71-9	alpha-Chlordane	120	U
5103-74-2	gamma-Chlordane	120	U
8001-35-2	Toxaphene	12000	U
12674-11-2	Aroclor-1016	2300	U
11104-28-2	Aroclor-1221	4700	U
11141-16-5	Aroclor-1232	2300	U
53469-21-9	Aroclor-1242	2300	U
12672-29-6	Aroclor-1248	2300	U
11097-69-1	Aroclor-1254	2300	U
11096-82-5	Aroclor-1260	2300	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

49 (SPL 92-57)

Lab Name: AQUATEC INC Contract: C003218

Lab Code: AQUAI Case No.: FA094 SAS No.: SDG No.: 086

Matrix: (soil/water) SOIL Lab Sample ID: 252103

Sample wt/vol: 30.1 (g/mL) G Lab File ID:

% Moisture: 7 decanted: (Y/N) N Date Received: 04/03/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/06/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.3 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	1.8	U
319-85-7	beta-BHC	1.8	U
319-86-8	delta-BHC	1.8	U
58-89-9	gamma-BHC (Lindane)	1.8	U
76-44-8	Heptachlor	1.6	BJ
309-00-2	Aldrin	1.8	U
1024-57-3	Heptachlor epoxide	1.8	U
959-98-8	Endosulfan I	1.8	U
60-57-1	Dieldrin	3.5	U
72-55-9	4,4'-DDE	3.5	U
72-20-8	Endrin	3.5	U
33213-65-9	Endosulfan II	3.5	U
72-54-8	4,4'-DDD	3.5	U
1031-07-8	Endosulfan sulfate	3.5	U
50-29-3	4,4'-DDT	1.8	J
72-43-5	Methoxychlor	18	U
53494-70-5	Endrin ketone	3.5	U
7421-93-4	Endrin aldehyde	3.5	U
5103-71-9	alpha-Chlordane	1.8	U
5103-74-2	gamma-Chlordane	1.8	U
8001-35-2	Toxaphene	180	U
12674-11-2	Aroclor-1016	35	U
11104-28-2	Aroclor-1221	72	U
11141-16-5	Aroclor-1232	35	U
53469-21-9	Aroclor-1242	35	U
12672-29-6	Aroclor-1248	35	U
11097-69-1	Aroclor-1254	35	U
11096-82-5	Aroclor-1260	35	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

51 (SPL 92-58)

Lab Name: AQUATEC INC Contract: C003218

Lab Code: AQUAI Case No.: FA094 SAS No.: SDG No.: 086

Matrix: (soil/water) SOIL Lab Sample ID: 252105

Sample wt/vol: 30.4 (g/mL) G Lab File ID:

% Moisture: 25 decanted: (Y/N) N Date Received: 04/03/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/06/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.2	U
319-85-7	beta-BHC	2.2	U
319-86-8	delta-BHC	2.2	U
58-89-9	gamma-BHC (Lindane)	2.2	U
76-44-8	Heptachlor	2.2	JPB
309-00-2	Aldrin	2.2	U
1024-57-3	Heptachlor epoxide	1.2	JP
959-98-8	Endosulfan I	2.2	U
60-57-1	Dieldrin	4.3	U
72-55-9	4,4'-DDE	17	
72-20-8	Endrin	4.3	U
33213-65-9	Endosulfan II	4.3	U
72-54-8	4,4'-DDD	2.3	JP
1031-07-8	Endosulfan sulfate	4.3	U
50-29-3	4,4'-DDT	40	
72-43-5	Methoxychlor	22	U
53494-70-5	Endrin ketone	4.3	U
7421-93-4	Endrin aldehyde	4.3	U
5103-71-9	alpha-Chlordane	3.0	P
5103-74-2	gamma-Chlordane	1.9	J
8001-35-2	Toxaphene	220	U
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	88	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	43	U
11096-82-5	Aroclor-1260	43	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

48 (SPL 98-2A)

Lab Name: AQUATEC INC Contract: C003218

Lab Code: AQUAI Case No.: FA094 SAS No.: SDG No.: 086

Matrix: (soil/water) SOIL Lab Sample ID: 252102

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

% Moisture: 42 decanted: (Y/N) N Date Received: 04/03/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/06/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

GPC Cleanup: (Y/N) Y pH: 7.6 Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.9	U
319-85-7	beta-BHC	2.9	U
319-86-8	delta-BHC	2.9	U
58-89-9	gamma-BHC (Lindane)	2.9	U
76-44-8	Heptachlor	2.9	U
309-00-2	Aldrin	2.9	U
1024-57-3	Heptachlor epoxide	2.2	JP
959-98-8	Endosulfan I	2.9	U
60-57-1	Dieldrin	5.7	U
72-55-9	4,4'-DDE	8.5	P
72-20-8	Endrin	5.7	U
33213-65-9	Endosulfan II	5.7	U
72-54-8	4,4'-DDD	3.3	J
1031-07-8	Endosulfan sulfate	3.4	JP
50-29-3	4,4'-DDT	23	
72-43-5	Methoxychlor	15	J
53494-70-5	Endrin ketone	5.7	U
7421-93-4	Endrin aldehyde	5.7	U
5103-71-9	alpha-Chlordane	2.2	JP
5103-74-2	gamma-Chlordane	1.4	JP
8001-35-2	Toxaphene	290	U
12674-11-2	Aroclor-1016	57	U
11104-28-2	Aroclor-1221	120	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	57	U
12672-29-6	Aroclor-1248	57	U
11097-69-1	Aroclor-1254	57	U
11096-82-5	Aroclor-1260	57	U

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

53 (SPL 58-28)

Lab Name: AQUATEC INC Contract: C003218

Lab Code: AQUAI Case No.: FA094 SAS No.: SDG No.: 086

Matrix: (soil/water) SOIL Lab Sample ID: 252106

Sample wt/vol: 30.1 (g/mL) G Lab File ID:

% Moisture: 28 decanted: (Y/N) N Date Received: 04/03/95

Extraction: (SepF/Cont/Sonc) SONC Date Extracted: 04/06/95

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 04/25/95

Injection Volume: 1.00 (uL) Dilution Factor: 1.00

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

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	2.4	U
319-85-7	beta-BHC	2.4	U
319-86-8	delta-BHC	2.4	U
58-89-9	gamma-BHC (Lindane)	2.4	U
76-44-8	Heptachlor	2.4	U
309-00-2	Aldrin	2.4	U
1024-57-3	Heptachlor epoxide	1.3	JP
959-98-8	Endosulfan I	2.4	U
60-57-1	Dieldrin	4.6	U
72-55-9	4,4'-DDE	8.1	P
72-20-8	Endrin	4.6	U
33213-65-9	Endosulfan II	3.8	J
72-54-8	4,4'-DDD	3.5	JP
1031-07-8	Endosulfan sulfate	4.4	JP
50-29-3	4,4'-DDT	7.6	
72-43-5	Methoxychlor	16	JP
53494-70-5	Endrin ketone	2.7	JP
7421-93-4	Endrin aldehyde	4.6	U
5103-71-9	alpha-Chlordane	5.2	P
5103-74-2	gamma-Chlordane	4.4	P
8001-35-2	Toxaphene	240	U
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	93	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U

APPENDIX E

Laboratory Data Sheets - Groundwater

(results are in parts per billion)

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: W. PT. - SCH

SAMPLE NUMBER: 595-087-T1

EXTRACTION METHOD: SPE

MATRIX: WATER

% SOLID: NC

PESTICIDE	QUANT (ug/L)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	ND
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	ND
ENDOSULFAN SULFATE	ND
4,4'-DDT	ND
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 1

AROCLOR	QUANT (ug/L)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: W. PT. - 94H

SAMPLE NUMBER: 595-087-01

EXTRACTION METHOD: SPE

MATRIX: WATER

% SOLID: NC

PESTICIDE	QUANT (ug/L)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	ND
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	ND
ENDOSULFAN SULFATE	ND
4,4'-DDT	ND
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 1

AROCLOR	QUANT (ug/L)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: W. PT. - 960

SAMPLE NUMBER: 595-087-32

EXTRACTION METHOD: SPE

MATRIX: WATER

% SOLID: NC

PESTICIDE	QUANT (ug/L)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	ND
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	ND
ENDOSULFAN SULFATE	ND
4,4'-DDT	ND
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 1

AROCLOR	QUANT (ug/L)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/APOCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: TWP-1

SAMPLE NUMBER: 595-103-01

EXTRACTION METHOD: SPE

MATRIX: WATER

% SOLID: NC

PESTICIDE	QUANT (ug/L)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	0.09
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	ND
ENDOSULFAN SULFATE	NC
4,4'-DDT	0.19
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	NC
CHLORDANE (ALPHA/GAMMA)	ND-ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

APOCLORS - CRDL

DILUTION FACTOR - 2

APOCLOR	QUANT (ug/L)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: TWP-2

SAMPLE NUMBER: 595-103-02

EXTRACTION METHOD: SPE

MATRIX: WATER

% SOLID: NC

PESTICIDE	QUANT (ug/L)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	0.06
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	0.04
ENDOSULFAN SULFATE	ND
4,4'-DDT	0.13
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 2

AROCLOR	QUANT (ug/L)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

TCL PESTICIDES/AROCLORS ANALYSIS

SITE NAME: SARATOGA TREE NURSERY

FIELD ID: TMP-3

SAMPLE NUMBER: 595-103-03

EXTRACTION METHOD: SPE

MATRIX: WATER

% SOLID: NC

PESTICIDE	QUANT (ug/L)
ALPHA-BHC	ND
BETA-BHC	ND
DELTA-BHC	ND
GAMMA-BHC	ND
HEPTACHLOR	ND
ALDRIN	ND
HEPTACHLOR EPOXIDE	ND
ENDOSULFAN I	ND
DIELDRIN	ND
4,4'-DDE	3.39 MI
ENDRIN	ND
ENDOSULFAN II	ND
4,4'-DDD + 2,4'-DDD	2.6
ENDOSULFAN SULFATE	ND
4,4'-DDT	10.2
ENDRIN ALDEHYDE	ND
ENDRIN KETONE	ND
METHOXYCHLOR	ND
CHLORDANE (ALPHA/GAMMA)	ND/ND
TOXAPHENE	NA

DETECTION LIMIT:

PESTICIDES - CRDL

AROCLORS - CRDL

DILUTION FACTOR - 4

AROCLOR	QUANT (ug/L)
1016	NA
1221	NA
1232	NA
1242	NA
1248	NA
1254	NA
1260	NA

MI - Matrix interference

APPENDIX F

Sample Forms - Chain of Custody and Sample Data Sheet

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF HAZARDOUS WASTE REMEDIATION
BUREAU OF TECHNICAL SERVICES

CHAIN OF CUSTODY RECORD

SITE NAME:_____ SITE CODE:_____

DEC REGION:_____ T&A CODE:_____

VOA (40ml)	BNA; PEST/PCB (1 liter)	METALS (preserved) (500ml/1 liter)	SOIL JARS

BOTTLES RELEASED BY: (Signature,date/time)_____

BOTTLES RECEIVED BY: (Signature,date/time)_____

FIELD ID	TYPE GRAB/ COMP	MATRIX	DATE	VOA	BNA PES PCB	MET	LAB ID

COLLECTED BY: (Signature,date/time)_____

RELINQUISHED BY: (Signature,date/time)_____

LABORATORY ACCESSION BY: (Signature,date/time)_____

SAMPLE SUMMARY SHEET

SITE NAME: Saratoga Tree Nursery
REGISTRY NO.: NA
SAMPLE ID NO.: _____
SAMPLING DATE: _____
SAMPLING TIME: _____
SAMPLE LOCATION: _____
SAMPLING PERSONNEL: _____ _____
_____ _____

MATRIX TYPE (check one)				
Water☐	Waste☐	Sediment☐	Soil☐	Surf Water☐
Depth to Water:	Description:	Stream Depth:	Sample Depth:	Temperature:
Temperature:		Temperature:	Sample Type:	pH:
# Volumes. Purged:		Core Depth:		
Well Volume:		Was Core Recovered?:		
pH:		pH:		

Type of Sample: Grab:___ Composite:___ Other:_____

Sample Containers (Describe volume and number):

_____

_____

_____

Photograph: Frame:_____ Number:_____ Time:_____

Other (Sample description, special circumstances, etc.):

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____