SURREY CORPORATION and SURREY COMPANY

ALSY MANUFACTURING SITE
Remedial Investigation and Feasibility Study

WORK PLAN

FINAL DRAFT

March 1996

LMS
LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Environmental Science & Engineering Consultants
One Blue Hill Plaza • Pearl River, New York 10965

#698-001

TABLE 1-1 (page 1 of 3)

ALSY MANUFACTURING
SITE # 1-30-027

PROJECT SCHEDULE

Task	Subtask	Work Task	Date or Due Date
1		DEVELOPMENT OF WORK PLANS	5/5/95
	1.1	Review Existing Data	5/5/95
	1.2	Site Visit	4/25/95
	1.3	RI/FS Workplan	5/28/95
	1.3.1	NYSDEC Comments to Workplan	6/28/95
	1.4	Final Workplan	3/18/96
	1.4.1	NYSDEC Approval and Notice to Proceed	3/18/96*
	1.4.2	Public Information Meeting	3/30/96*
2		REMEDIAL INVESTIGATION	
	2.1	Site Reconnaissance and Survey	4/2/96
	2.2	Building and Elevation Drawings	5/2/96
	2.3	Aerial/Vertical Extent of Contamination	4/2/96-6/30/96
	2.3.1	Perimeter Investigation	4/2/96-6/30/96
	2.3.2	Geophysical Survey and Existing Well Locations	4/2/96-6/30/96
	2.3.3	On-site Soil Contamination Characterization	4/2/96-6/30/96

TABLE 1-1 (page 2 of 3)

ALSY MANUFACTURING
SITE # 1-30-027

PROJECT SCHEDULE

Task	Subtask	Work Task	Date or Due Date
	2.3.4	Water Quality Screening	4/2/96-6/30/96
	2.3.5	Monitoring Well Installation and Abandonment of Existing Wells	5/16/96-6/16/96
	2.3.6	Well Sampling and Slug Testing	6/20/96-6/30/96
	2.4	Data Validation and Usability Report	6/15/96-8/15/96
	2.5	Site Survey and Sample Point Additions	6/15/96-7/15/96
	2.6	Private Well Survey	6/25/96-7/15/96
	2.7	Adjacent Property Owner Survey	6/25/96-7/20/96
	2.8	Draft RI Report	10/30/96
	2.9	Review of RI Report	11/30/96
	2.10	Final RI	3/30/97*
3		FEASIBILITY STUDY	
	3.1	ID Objectives	7/20/96-8/20/96

TABLE 1-1 (page 3 of 3)

ALSY MANUFACTURING
SITE # 1-30-027

PROJECT SCHEDULE

Task	Subtask	Work Task	Date or Due Date
	3.2	Develop Remedial Alternatives	8/20/96-12/20/96
	3.3	Evaluate Alternatives	8/20/96-12/20/96
	3.4	Recommend Preferred Alternatives	8/20/96-12/20/96
	3.5	Draft F/S	12/20/96
	3.6	Final F/S	4/1/97
	3.7	ROD	9/1/97

*Dates may vary depending on review and comment period.

SURREY CORPORATION and SURREY COMPANY

ALSY MANUFACTURING SITE
Remedial Investigation and Feasibility Study

FIELD SAMPLING PLAN
FINAL DRAFT

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SURREY COMPANY AND SURREY CORPORATION

FIELD SAMPLING PLAN

ALSY MANUFACTURING
Oyster Bay, Nassau County

Site No. 130027

REMEDIAL INVESTIGATION/FEASIBILITY STUDY

March 1996

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
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CHAPTER 1

INTRODUCTION

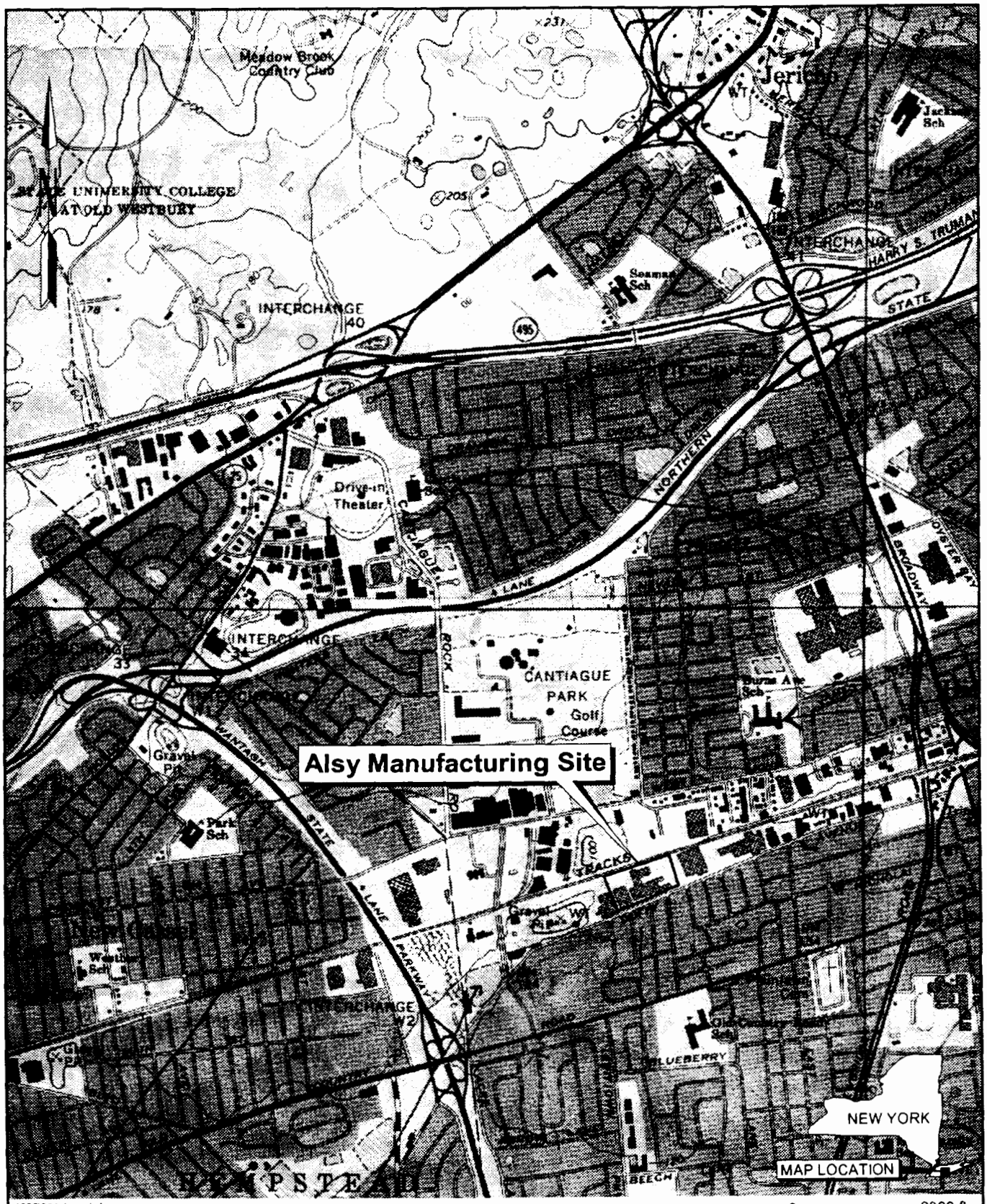
1.1 SITE DESCRIPTION

The Alsy Manufacturing Site (Site), located at 270 and 280 Duffy Avenue in Hicksville, Nassau County, New York, is designated as a Class 2 Site, No. 1-30-027, on the New York State Registry of Inactive Hazardous Waste Disposal Sites (Figure 1-1). The Site is situated on approximately 4 acres of land, bounded on the north by the Long Island Railroad and a construction and demolition (C&D) debris reclaimer, on the south by Duffy Avenue, and on the east and west by other active and vacant industrial or commercial operations (Figure 1-2). The Site is improved with two one-story buildings faced with stucco and brick: the building at 270 Duffy Avenue is occupied by several commercial operations, and the building at 280 Duffy Avenue is occupied by a shoe store. On-site vegetation is limited to the Long Island Railroad bed, a narrow landscaped strip behind 270 Duffy Avenue, the immediate front of 270 Duffy Avenue, and a narrow strip of grass and mature trees along Duffy Avenue. The remainder of the unimproved parts of the Site are paved.

1.2 SITE HISTORY

From 1975 until 31 March 1991, Alsy Manufacturing, Inc. ("Alsy") operated at the Site, producing and selling electric lamps and lamp shades (NYSDEC Order on Consent, Site No. 1-30-027, Index No. WI-0579-92-01). Alsy's manufacturing processes included antiquing and brass plating (NYSDEC Order on Consent WI-0579-92-01). Prior to 1975, the Site was occupied by Metalab, a laboratory furniture manufacturer (EA Science and Technology, Phase I Investigation, Alsy Manufacturing, 1987). Until 1985, the Site was owned by Balatem Corporation; in 1985, Surrey Corporation purchased the Site and assumed Balatem Corporation's lease with Alsy, the sole tenant. In 1991, Alsy ceased its operations at the Site. Currently, the Site is owned by the Surrey Company.

According to records reviewed, the wastes generated and stored at the Site during Alsy's operations include: waste water treatment sludge containing cyanide, copper and zinc, paint strippers and thinners generated in the cleaning of painting equipment, and 1,1,1-trichloroethane from vapor degreasers (EA Phase I Investigation). These wastes were removed by a licensed industrial waste scavenger for off-site disposal (Fred C. Hart Associates, Inc. Phase II Work Plan, 1990). A State Pollutant Discharge Elimination System (SPDES) permit was issued to Alsy in 1977 for two on-site discharge points, authorizing discharge of sanitary wastes from one



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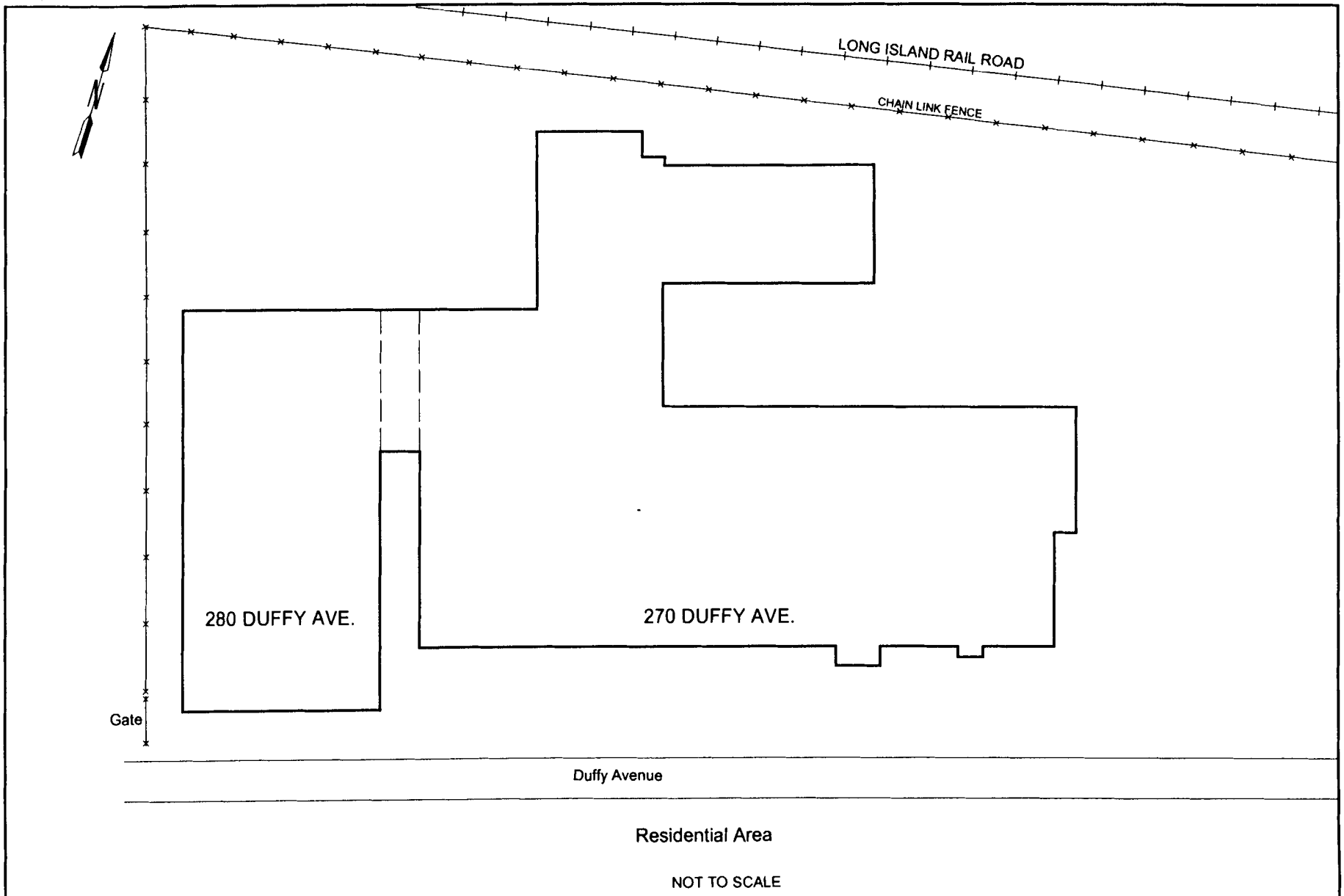
Map source: USGS 7.5-minute series quadrangle, Hicksville, NY, 1967, photorevised 1979.

LMS Lawler, Matusky & Skelly Engineers One Blue Hill Plaza • Pearl River, New York 10965 ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS	**Site Location** **Alsy Manufacturing - Oyster Bay, New York**	**Figure 1-1**



Map Source: Fred C. Hart (after Soil Mechanics Drilling Corp. [1985]).

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Site Sketch

Alsy Manufacturing - Oyster Bay, New York

Figure 1-2

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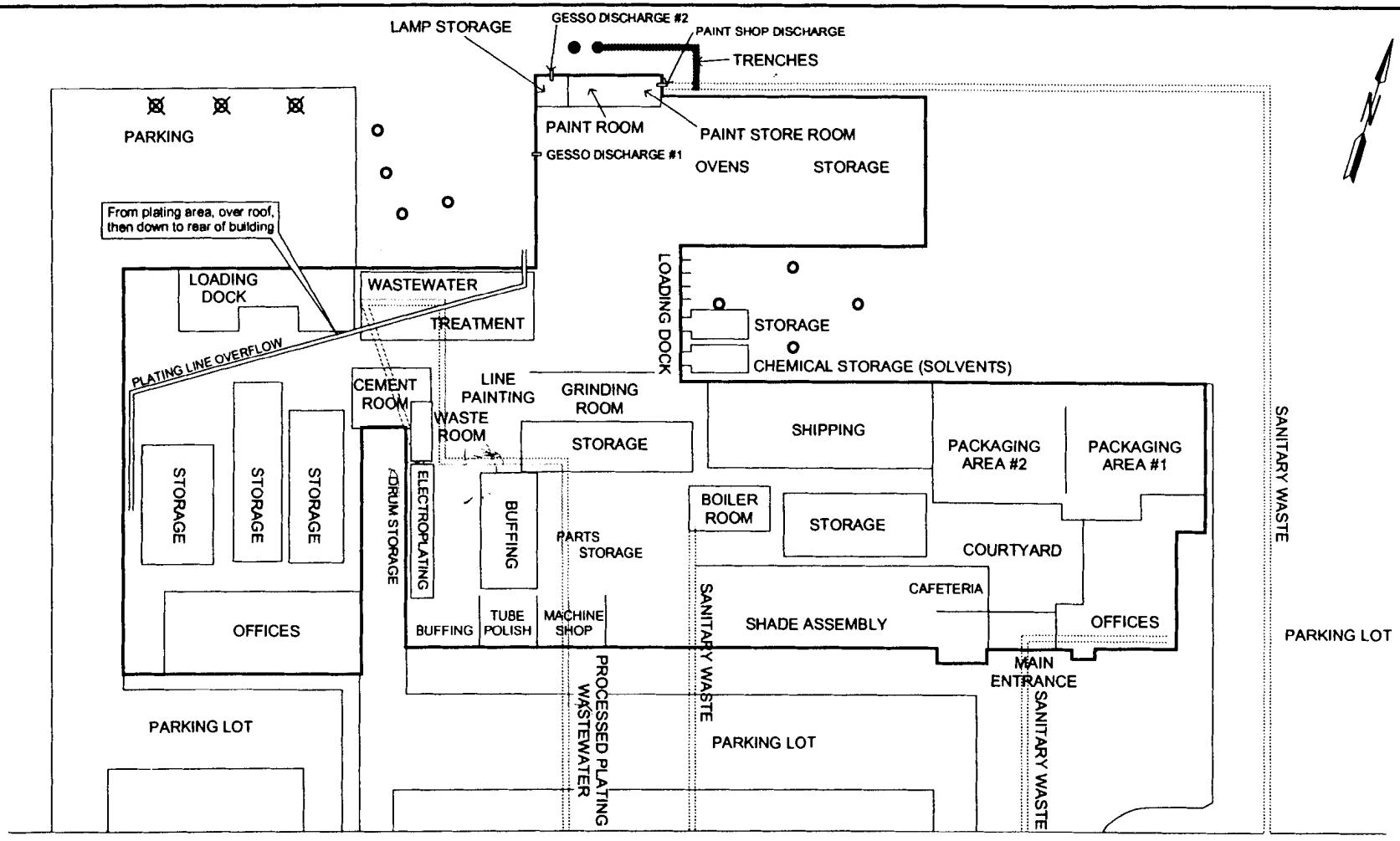
of the discharge points, and industrial waste waters containing copper, nickel, zinc, total nitrogen, cyanide and chlorine within specified concentrations from the other point (Hart Phase II).

Between 1977 and 1983, the Nassau County Department of Health (NCDOH) and the New York State Department of Environmental Conservation (NYSDEC) conducted investigations at the Site in response to alleged permit violations (Hart Phase II). Samples gathered during these inspections indicated concentrations of permitted metals in excess of allowable levels, and the presence of methylene chloride, chloroform, trichloroethane, toluene, xylene and trichloroethylene (Hart Phase II). In addition, the results of self-monitoring conducted by Alsy in 1977-78 and 1980-81 showed concentrations of copper, cyanide, nickel, total nitrogen and zinc in excess of permit levels (Hart Phase II). Samples collected by NCDOH were collected from a discharge trough, collection trench, effluent pipe, and various settling tanks within the building adjacent to the plating area (Hart Phase II). Industrial discharge exceedences recorded by NCDOH are summarized in Table 1-1, and exceedences based on Alsy's monitoring data are summarized in Table 1-2 (Tables from Hart Phase II).

In February 1984, a joint inspection by NCDOH and NYSDEC identified four apparently unpermitted discharge points, as well as three industrial leach pools and two trenches, behind the buildings (Figure 1-3)(Hart Phase II). Subsequent to the February 1984 inspection, between August 1984 and April 1988, soil and groundwater samples were collected by NYSDEC, NCDOH, the United States Environmental Protection Agency (USEPA) and consultants employed by either Balatem Corporation or Alsy, including Soil Mechanics Drilling Corporation, H2M Corporation, and Roux Associates, Inc. (Hart Phase II). The investigations conducted by Soil Mechanics Drilling Corporation and H2M Corporation confirmed the existence of five additional leach pools and three drywell catch basins (Hart Phase II). Sampling in these areas indicated heavy metal and volatile organic compound (VOC) contamination consistent with previous investigations. (A more complete description of previous investigations can be found at Chapter II, section c of the Citizen Participation Plan).

In 1986, Alsy entered into an administrative order on consent with NYSDEC in settlement of alleged permit violations. In 1987, NYSDEC commissioned EA Science and Technology to conduct a Phase I site assessment, and in June 1987, a Phase I report was issued. Based on the Phase I report, NYSDEC classified the Site as a Class 2a Site on the Registry of Inactive Hazardous Waste Disposal Sites, an intermediate classification signifying that hazardous waste disposal is believed to have taken place, but further investigation is required to confirm whether conditions present a significant threat to public health or the environment.



Map source: Surrey Company and Surrey Corporation Plaintiff's Exhibit

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Result of Regulatory Agencies Inspections and Sampling

Alsy Manufacturing - Oyster Bay, New York

Figure 1-3

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TABLE 1--1 *

INDUSTRIAL DISCHARGE LIMIT VIOLATIONS
DOH SAMPLES

Parameter	Permit Limit (mg/L)[1]	Reported Discharge (mg/L)	Date/Period of Violation	Location
pH	6.0-8.5	4.3	10/12/77	Discharge Trough
Copper	0.4	1.42	10/12/77	Discharge Trough
Zinc	0.6	5.5	10/12/77	Discharge Trough
pH	6.0-8.5	4.6	1/11/78	Effluent Pipe
Copper	0.4	14.7	1/11/78	Effluent Pipe
Nickel	2.0	12.7	1/11/78	Effluent Pipe
Zinc	0.6	2.2	1/11/78	Effluent Pipe
Trichloroethylene[2,3]	0.050[4]	0.42	4/26/78	Discharge Trough
Copper	0.4	5.5	6/29/78	Settling Tank #3
Nickel	2.0	5.8	6/29/78	Settling Tank #3
Zinc	0.6	1.3	6/29/78	Settling Tank #3
Copper	0.4	0.8	8/8/78	Settling Tank #1
Nickel	2.0	3.55	8/8/78	Settling Tank #1
Copper	0.4	18	12/4/79	Discharge Trough
Nickel	2.0	2.4	12/4/79	Discharge Trough
Zinc	0.6	4	12/4/79	Discharge Trough
Trichloroethylene[2]	0.050[4]	0.145	8/19/80	Discharge Trough
Chloroform[2]		0.107	3/24/81	Discharge Trough
Trichloroethylene[2]	0.050[4]	0.179	3/24/81	Discharge Trough
pH	6.0-8.5	4.3	11/17/83	Collection Trench
Copper	0.4	3.05	11/17/83	Collection Trench
Chloroform[2]		0.009	11/17/83	Collection Trench
Methylene Chloride[2]		0.063	11/17/83	Collection Trench
1,1,1-Trichloroethane[2]		0.03	11/17/83	Collection Trench
Total Xylenes[2]		0.01	11/17/83	Collection Trench

1 -- pH in pH units.
2 -- Not allowed at any levels by permit.
3 -- Sample collected by DEC.
4 -- State Health Department Guideline.

* From Fred C. Hart Associates, Inc., Site Investigation Work Plan, Alsy Manufacturing Site No. 130027, January 25, 1990 (Table 2--1)

TABLE 1--2 *

INDUSTRIAL DISCHARGE LIMIT VIOLATIONS
ALSY MANUFACTURING

Parameter	Permit Limit[1] (mg/L)	Reported Discharge (mg/L)	Date/Period of Violation
Copper	0.4	7.2	8/01/77--8/31/77
Nickel	2.0	4.973	8/01/77--8/31/77
Nitrogen (total)	10.0	50.2	8/01/77--8/31/77
Zinc	0.6	2.66	8/01/77--8/31/77
pH	6.0--8.5	9.56	9/01/77--9/30/77
Copper	0.4	7.02	9/01/77--9/30/77
Cyanide	0.4	0.54	9/01/77--9/30/77
Zinc	0.6	4.82	9/01/77--9/30/77
pH	6.0--8.5	10.18	10/01/77--10/31/77
Copper	0.4	3.62	10/01/77--10/31/77
Zinc	0.6	0.968	10/01/77--10/31/77
pH	6.0--8.5	11.44	11/01/77--11/30/77
Copper	0.4	2.242	11/01/77--11/30/77
Zinc	0.6	1.532	11/01/77--11/30/77
Copper	0.4	3.523	12/01/77--12/31/77
Zinc	0.6	1.587, 5.092	12/01/77--12/31/77
Copper	0.4	1.158	3/13/78
Cyanide	0.4	0.77	3/13/78
Zinc	0.6	0.827	3/13/78
pH	6.0--8.5	4.02	6/13/78
Nitrogen (total)	10	10.7	6/13/78
Copper	0.4	1.111	7/18/78
Nitrogen (total)	10	11.9	7/18/78

1 -- pH in pH units.

* From Fred C. Hart Associates, Inc., Site Investigation Work Plan, Alsy Manufacturing Site No. 130027, January 25, 1990 (Table 2--1)

TABLE 1--2

INDUSTRIAL DISCHARGE LIMIT VIOLATIONS
ALSY MANUFACTURING

(CONTINUED)

Parameter	Permit Limit (mg/L)	Reported Discharge (mg/L)	Date/Period of Violation
pH	6.0--8.5	9.38	11/4/80
Copper	0.4	4.159	11/4/80
Zinc	0.6	0.689	11/4/80
Copper	0.4	0.611	11/11/80
Cyanide	0.4	12.5	11/18/80
Nitrogen (total)	10	83.49	11/18/80
Nickel	2	6.596	11/18/80
Zinc	0.6	1.208	11/18/80
pH	6.0--8.5	12.75	11/25/80
Cyanide	0.4	1.2	11/25/80
Nitrogen (total)	10	12.47	11/25/80
pH	6.0--8.5	8.92	12/5/80
Nitrogen (total)	10	13.15	12/5/80
pH	6.0--8.5	9.42	12/9/80
Nitrogen (total)	10	35.12	12/9/80
pH	6.0--8.5	9.85	1/6/81
Copper	0.4	0.484	1/13/81
Nitrogen (total)	2	17.43	1/13/81
Copper	0.4	1.108	1/20/81
Nickel	2	2.391	1/20/81
Nitrogen (total)	10	14.19	1/20/81
Copper	0.4	7.387	1/27/81
Nickel	2	6.891	1/27/81
Nitrogen (total)	10	52.15	1/27/81
Zinc	0.6	1.552	1/27/81

In 1989, Surrey Corporation entered into an administrative order on consent with NYSDEC pursuant to which it was to conduct a Phase II site investigation of the Site. Surrey Corporation retained Fred C. Hart Associates, Inc. (Hart) to conduct the Phase II, and in 1990 Hart prepared a work plan for the investigation and it was submitted to the DEC for approval. Before the implementation of Phase II investigation, NYSDEC reevaluated the data assembled for the Site and determined that it should be classified as a Class 2, a classification that signifies that a Site does pose a threat to human health and environment. This reclassification meant that instead of a Phase II, it would be necessary to conduct a remedial investigation and feasibility study (RI/FS) of the Site.

Surrey Company, the current owner and Surrey Corporation, the former owner, entered into a new administrative order on consent with NYSDEC on 28 March 1995, and retained Lawler, Matusky & Skelly Engineers (LMS) to perform the RI/FS.

Since the 1987 Phase I site assessment, the Site has been graded and paved, and the buildings have been renovated and refaced. Several commercial enterprises currently occupy office space in the building at 270 Duffy Avenue and a wholesale shoe business occupies the building at 280 Duffy Avenue.

1.3 SUMMARY OF INFORMATION AND RELEVANT REPORTS

LMS has in its possession the following information, which it has reviewed and will make use of in the conception and performance of the RI/FS.

- Sampling notes and logs from Environmental Management Limited, Parrat Wolff, Inc., Soil Mechanics Drilling Corp., Richard D. Galli, P.E., P.C., and Roux Associates, Inc.

- Boring logs and well logs, permits and field notes indicating depths to groundwater over various periods of time.

- Selections from certain depositions conducted during litigation relating the Site in which possible discharge locations are discussed, and site maps indicating discharge locations and arrangement of cesspools.

- Photocopies of black and white photographs of the rear area of the Site prior to paving, hazardous waste disposal information, records from the files of NCDOH, Material Safety Data Sheets for Alsy's facility, and several NYSDEC letters relating to Alsy's facility.

LMS has also reviewed the following relevant reports:

EA Science and Technology, June 1987, Engineering Investigations at Inactive Hazardous Waste Sites, Phase I Investigation, Alsy Manufacturing Site No. 130027. Performed for New York State Department of Environmental Conservation.

Roux Associates, Inc., February 1989, Soil and Groundwater Investigation, Alsy Corporation. Performed for Alsy Manufacturing, Inc.

Roux Associates, Inc., September 1989, Groundwater Monitoring Data Summary Report, Alsy Corporation, Hicksville, New York.

Richard. Galli, P.E., P.C., January 1990, Phase II Investigation, Magnusonic Devices, Inc., NYSDEC Site 130031. Performed for International Clinical Laboratories, Inc.

Fred C. Hart Associates, Inc., January 1990, Site Investigation Work Plan, Alsy Manufacturing Site No. 130027. Performed for Surrey Corporation.

Environmental Management, LTD., April 1992, Chronology of Closure Activities by Alsy Manufacturing, Hicksville, New York, June 1990 to January 1991.

1.4 OBJECTIVES OF THE SAMPLING EFFORT

The objectives of the remedial investigation (RI) to be conducted at the Alsy Site are to (1) characterize conditions within the Site and at its borders with regard to subsurface geological conditions that affect contaminant plume migration, (2) identify and catalog any existing plumes of contamination, (3) locate areas on-site where contaminated soils still have the potential for contributing to the existing groundwater contamination, and (4) compare results with historical sampling data.

The feasibility study (FS) will be conducted after the completion of the RI activities. The objectives of the FS are to address contamination found, if any, in site media (groundwater, soil, etc.) during the RI and to investigate remedial technologies that can be applied to contaminated site media.

1.5 SITE GEOLOGY AND HYDROGEOLOGY

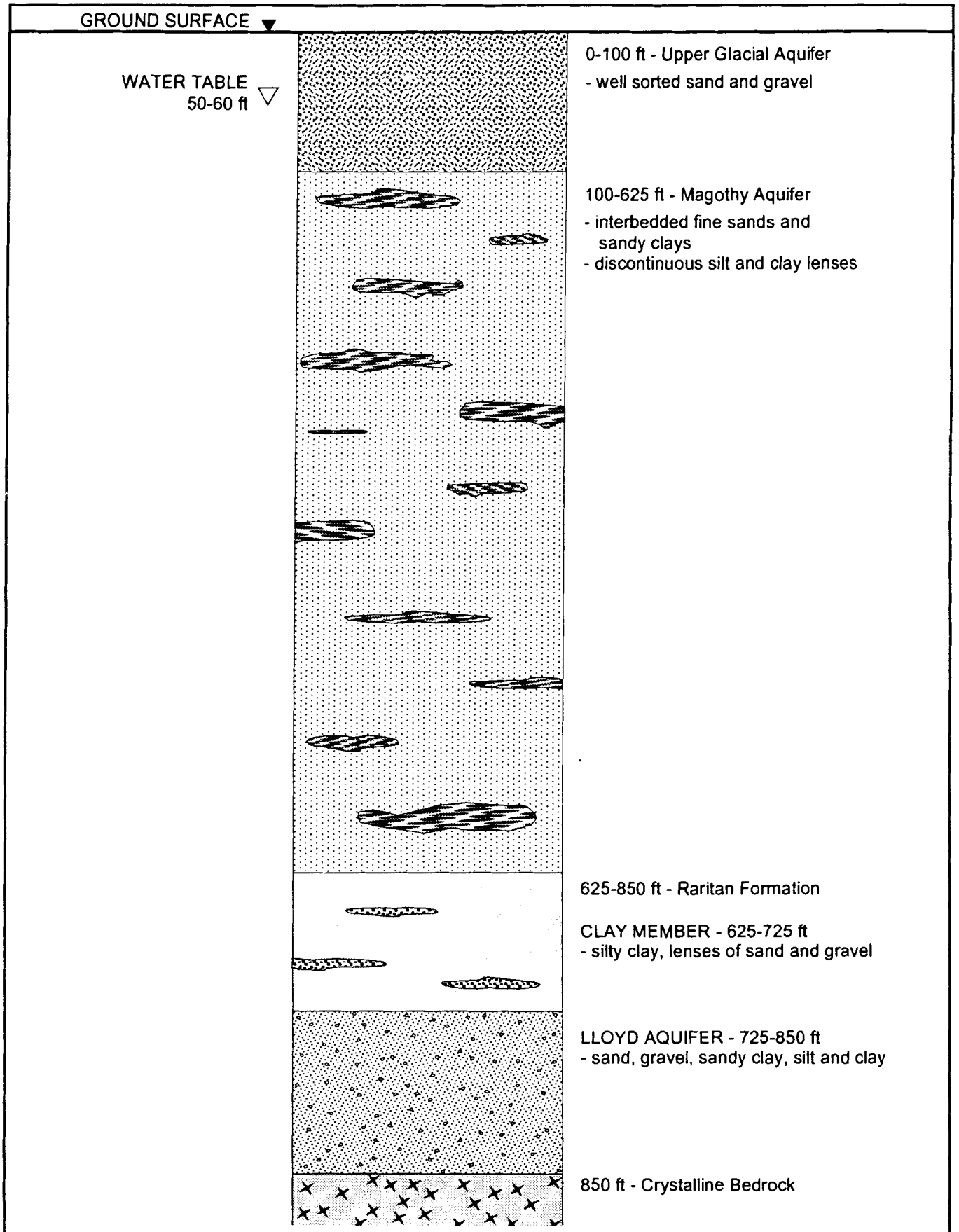
Long Island is composed of unconsolidated sediments of Pleistocene and Cretaceous ages overlying crystalline bedrock of the Precambrian Age. The Cretaceous deposits are composed of continentally derived sediments underlying Pleistocene glacial deposits. These unconsolidated deposits form the three major aquifers that constitute the principal water resources on Long Island: the Upper Glacial, Magothy and Lloyd aquifers (Richard D. Galli Phase II Investigation 1990).

The Site is directly underlain by the Upper Glacial Aquifer (UGA), which is Pleistocene in age and approximately 100 ft in thickness in the Site vicinity. The UGA consist of well-sorted sand and gravel (Figure 1-4) (EA Phase I Investigation). The UGA exhibits high horizontal hydraulic conductivity rates of 270 ft/day, with specific yields in wells averaging as much as 1500 gal/min (Richard D. Galli Phase II Investigation).

The Magothy Aquifer is Cretaceous in age and underlies the UGA. It is approximately 525 ft in thickness in the vicinity of the Site and consists of interbedded fine sands and sandy clays; layers of quartz and iron oxide are common. A basal zone of coarse sand and gravel approximately 25 to 50 ft thick is common. Locally, the Magothy contains numerous discontinuous silt and clay lenses (EA Phase I Investigation). The average horizontal hydraulic conductivity of the Magothy is 50 ft/day.

The Raritan Formation is composed of a Clay member and the Lloyd sand member, both Cretaceous in age. The Clay member of the Raritan Formation is approximately 150 ft in thickness and is composed of clay, silty clay, and lenses of sand and gravel with common lignite and pyrite. The Clay member has a low vertical hydraulic conductivity of 10^{-3} ft/day and serves as the confining unit for the Lloyd Aquifer. The Lloyd sand member of the Raritan Formation comprises the Lloyd Aquifer; it is approximately 250 ft thick and is composed of discontinuous layers of sand, gravel, sandy clay, silt, and clay (EA Phase I Investigation). The Lloyd Aquifer lies unconformably on top of the bedrock surface and has an overall moderate horizontal hydraulic conductivity of approximately 40 ft/day (Richard D. Galli Phase II Investigation).

Bedrock, which lies approximately 850 ft below the surface in the Site vicinity, is composed of relatively impermeable crystalline bedrock of Precambrian age. The bedrock surface is considered to be the bottom hydrologic boundary of the Long Island Aquifer System (Richard D. Galli Phase II Investigation).



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Typical Cross Section in the Site Vicinity

Alsy Manufacturing - Oyster Bay, New York

Figure 1-4

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All three aquifers are hydraulically interconnected, with bedrock forming the lowermost boundary. The confining layers normally present between the UGA and the Magothy are absent or discontinuous in the Site area, leaving both aquifers in direct hydraulic contact. However, both formations are highly stratified and horizontal movement of groundwater within each aquifer is much greater than vertical movement between the two (Richard D. Galli Phase II Investigation).

CHAPTER 2

PREPARATORY ACTIVITIES

2.1 REVIEW OF EXISTING SITE DATA

In order to provide historical data on the Site and to aid in the location of the sampling points for the RI field investigation, LMS will review all the relevant existing Site information and data regarding the Alsy Manufacturing Site. This task will be completed concurrently with the preparation of the work plan.

Surrey Corporation will provide LMS with copies of all of the relevant files, including documentation of the lawsuit, sampling data collected by NCDOH and NYSDEC, and prior reports completed on the property and surrounding area.

2.2 BUILDING FOUNDATION PLAN AND ELEVATION DRAWINGS

LMS will attempt to locate any building floor plans, including utility plans; the Nassau County or the Town of Oyster Bay Engineer's Office will be contacted to obtain these maps. Any old maps of the facility will also be obtained and reviewed to determine whether other chemicals may be found on the Site because of previous owners' operations. The building foundation plans and any floor plans will be used during the site reconnaissance to better locate sampling points inside the building.

2.3 SITE RECONNAISSANCE

A detailed site reconnaissance will be conducted in order to locate sampling points. The locations for the probe samples will be determined and marked in the field. The exteriors of the buildings will be inspected and, if available, floor plans will be used to isolate rooms or areas for sampling, with notations made on the drawings. All areas of the Site will be inspected for access and clearance for project vehicles.

2.4 CLEARANCE FOR MONITORING WELL PLACEMENT AND UTILITY MARKOUT

After the locations of the proposed RI monitoring wells have been finalized, the necessary clearance for access, work, and utility markouts will be obtained. Access to and clearance for public property will be obtained by LMS. Access to and clearance for private property will be

obtained by NYSDEC. Once the proposed well locations have been cleared for access, a utility markout will be conducted.

Approximately two weeks before the commencement of drilling or probing activities, the proposed well or probe locations will be marked in the field and noted on the site map. The utility companies will be provided with the proposed locations and asked to provide utility markouts within a 100-ft radius around the proposed locations. If no utilities are found, the location will be marked to indicate that no utilities are found within the 100-ft radius. Before drilling activities commence, the utility markout will be field checked and, if any questions remain or planned drilling activities are too close to utilities (i.e., within 5 to 10 ft), a field meeting between the utility company and the LMS field geologist will be arranged to plan the required drilling activities accordingly.

CHAPTER 3

SAMPLING LOCATIONS

3.1 GROUND-PENETRATING RADAR SURVEY

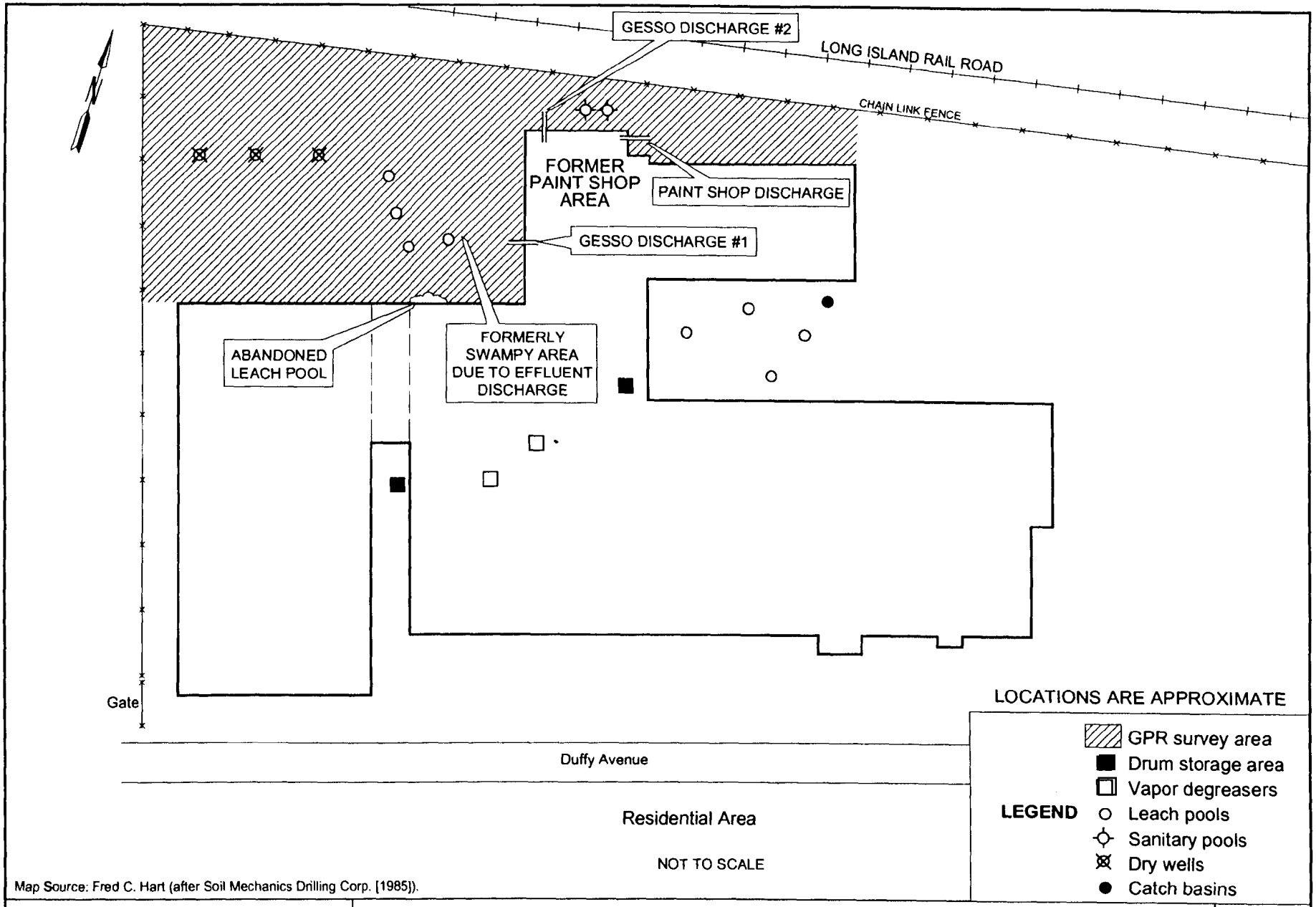
The information gathered during the preparation of the Site work plan has been used to estimate the number and relative position of discharge locations on-site. A ground-penetrating radar (GPR) survey is proposed to be conducted in the northern area of the Site where historical information has indicated surface discharge occurred. The survey will attempt to identify subsurface structures that would indicate a dry well or leaching point. The survey may also identify significant shallow confining layers. Preliminary file review indicates that at least one GPR survey will need to be conducted to the rear of both buildings (Figure 3-1). In addition to locating any subsurface leach pits or dry wells, GPR will also be used to attempt to locate any hidden or buried monitoring wells located on-site. Arrangements will be made to conduct the GPR survey when the parking lots are as empty as possible - during off-hours on the weekend, or at the end of the workday. This will prevent any unnecessary inconvenience to the occupants of the office space. Once potential contamination sources have been identified, soil probe locations proposed for the areas will be refined.

3.2 SOIL/WATER SCREENING (PROBES)

A total of 39 soil and groundwater probe points will be installed throughout the Site to determine background levels of contamination and the location of any on-site disposal areas. Soil, soil gas, and groundwater samples will be collected from the probe locations in numbers specifically described in this chapter. Each sample will be analyzed for the parameters and using methods described in Chapter 5. Final probe depths will be determined in the field and will depend on the nature of the subsurface material. Groundwater under non-drought conditions is expected to occur at depths of 50 to 60 ft below grade. Information in the vicinity of the Site gathered in September 1995 indicated groundwater at 8-10 feet lower than normal conditions. Subtasks 1 and 2 described below indicate specific target depths for the various probes.

3.2.1 Subtask 1: Vertical and Lateral Plume Identification at Property Boundaries

Approximately 10 probe points will be installed in an attempt to locate the lateral and vertical extent of any contaminant plumes entering or leaving the Alsy Site. The probe points will be located along the up-, side-, and downgradient edges of the property (Figure 3-2). Soil gas



Map Source: Fred C. Hart (after Soil Mechanics Drilling Corp. [1985]).

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Ground Penetrating Radar (GPR) Survey Area and Historical Disposal Information
Alsy Manufacturing - Oyster Bay, New York

Figure 3-1

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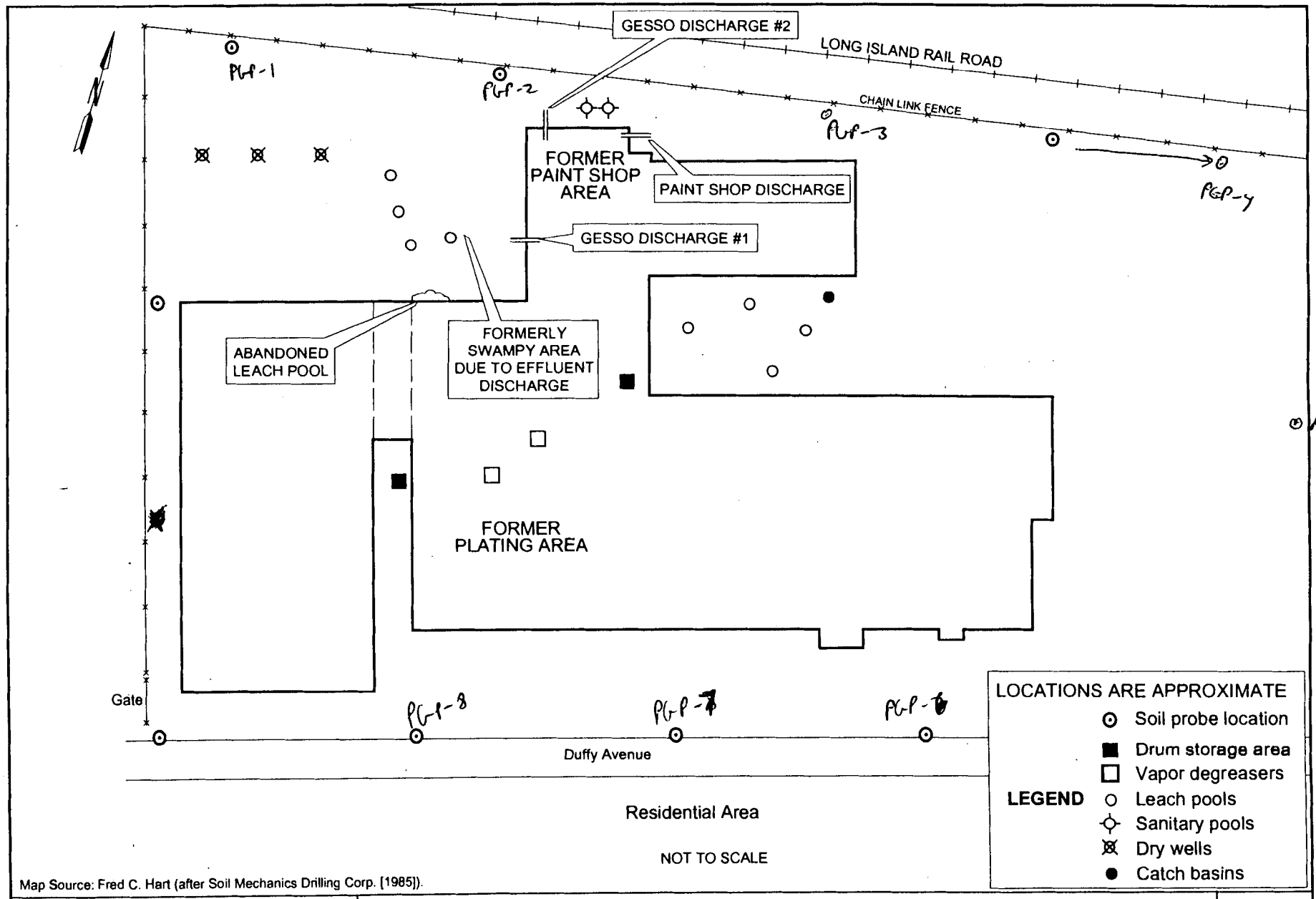

Map Source: Fred C. Hart (after Soil Mechanics Drilling Corp. [1985]).

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Subtask 1: Soil Probe Locations

Alsy Manufacturing - Oyster Bay, New York

Figure 3-2

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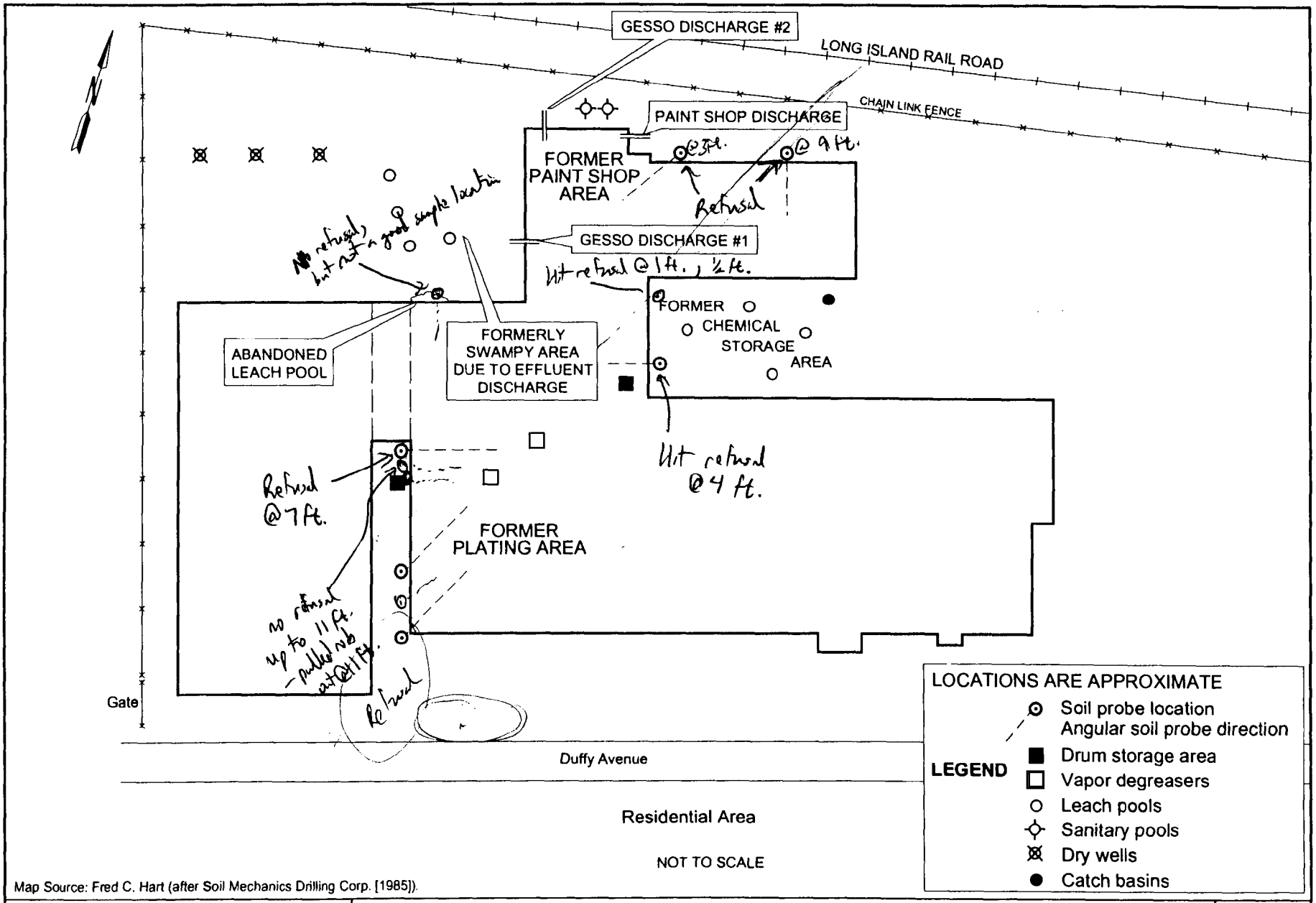
samples will be collected from each point at two discrete depths (20 total) above the water table and analyzed on-site using the field GC. Approximately three groundwater samples (30 total) will be collected from each point in 10- to 15-ft intervals once the groundwater table has been encountered. A target depth for the bottom of each point is approximately 50 ft below the non-drought water table. This has been found to be the maximum attainable depth for this type of subsurface sampling equipment.

3.2.2 **Subtask 2: On-site Soil Contamination Characterization**

The objective of this subtask is to identify, characterize, and delineate the soil contamination in and around the source or discharge points. Approximately six shallow, angled probe points will be installed, aimed at collecting soil, waste, or groundwater samples directly below any enclosures suspected of leaching contaminants (Figure 3-3). Samples are proposed to be collected under the following locations of former processes: vapor degreasers, solvent storage, painting shops, and plating tanks. Soil and soil gas samples will be collected from two discrete depth intervals in each probe point (12 total for each matrix). Soil samples will be collected to determine whether soil gas contamination is the result of pore gas or chemicals in the soil matrix. The final depth at which the points will be installed will be determined by the angle of approach and limits of the equipment.

In addition, 23 test probes (20 water table, 3 deep) will be located around discharge locations (Figure 3-4). Probe locations will initially be set in order to sample directly into the leach pits. Samples will be collected from the lower depth of the pits where residual waste may be present. If the bottom of the pits are found to be solid, the probe equipment will be removed and the hole continued adjacent to the structure. Sampling down to the water table will be along the edge of the structure; this should be within the discharge influence zone of the leach pit. If the pits are not found to have a hard bottom, the probe will be advanced to the full depth at that location. Although the probe locations have been indicated on Figure 3-4, the actual placement will be based on the results of the GPR survey and field analysis of samples as they are received. Each hole will extend to the water table. Three deep probes, similar to those installed in Subtask 1, will be installed to further characterize the on-site plume(s). Approximately four soil samples (80 total) will be collected from each shallow probe point above the water table; three soil samples (9 total) will be collected from the deeper probes. One groundwater sample (20 total) will be collected from each shallow probe that reaches the water table; three groundwater samples (9 total) will be collected from the three proposed deeper holes.



Map Source: Fred C. Hart (after Soil Mechanics Drilling Corp. [1985]).

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Subtask 2: Shallow Angular Soil Probe Locations

Alsy Manufacturing - Oyster Bay, New York

Figure 3-3

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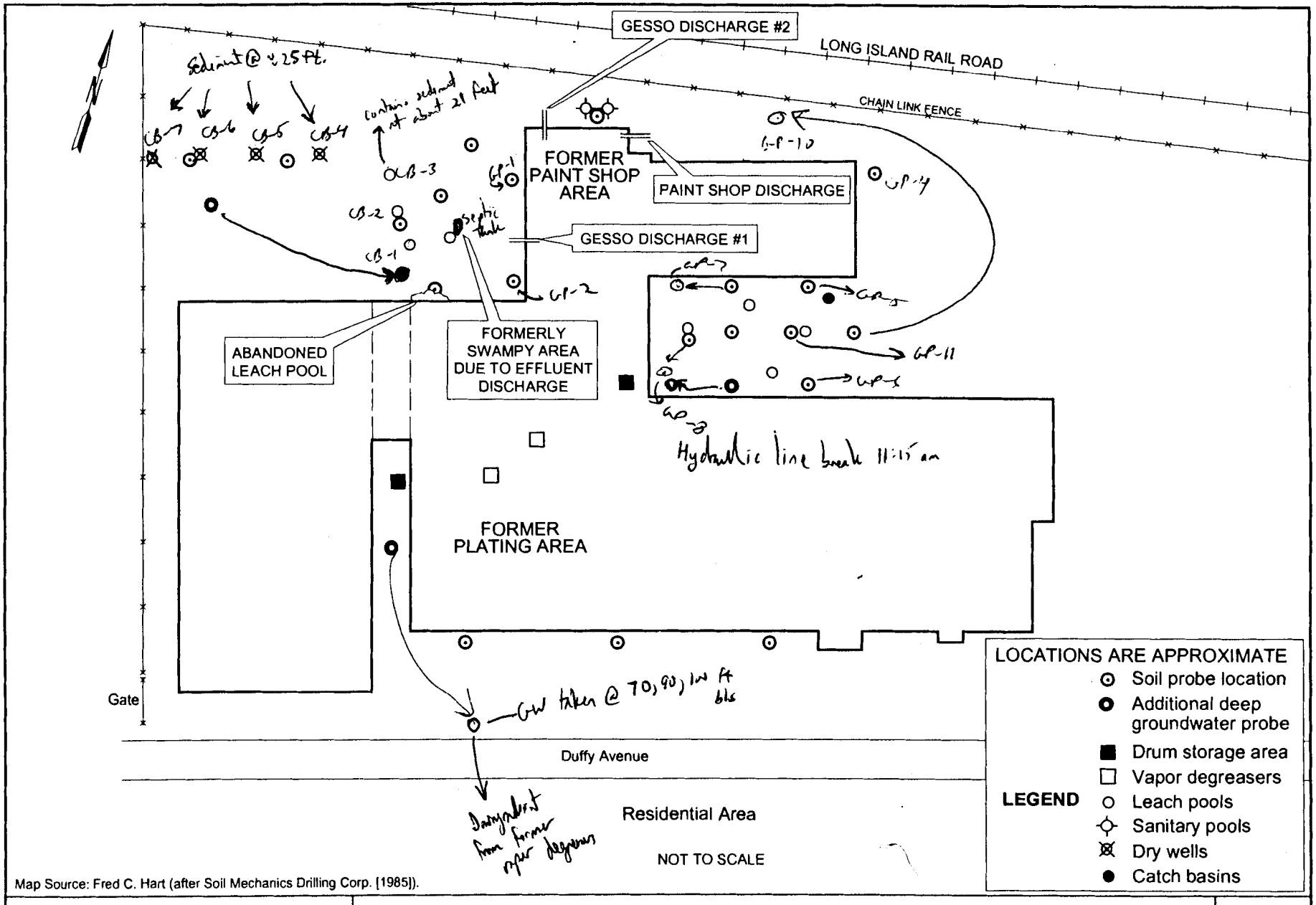

Map Source: Fred C. Hart (after Soil Mechanics Drilling Corp. [1985]).

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Subtask 2: Contaminant Source Delineation Soil and Groundwater Test Probes

Alsy Manufacturing - Oyster Bay, New York

Figure 3-4

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3.3 MONITORING WELLS

3.3.1 Purpose

In order to monitor the groundwater quality upgradient and downgradient of the Site, and to determine the extent of shallow groundwater contamination as a result of Site activities, five new monitoring wells will be installed and sampled on-site (Figure 3-5). Wells will be installed using hollow-stem drilling methods according to NYSDEC Exhibit 3, Guidelines for Exploratory Boring Monitoring Wells Installation, and Documentation of These Activities. Usable existing monitoring wells will be made serviceable for sampling in order to fully characterize the Site.

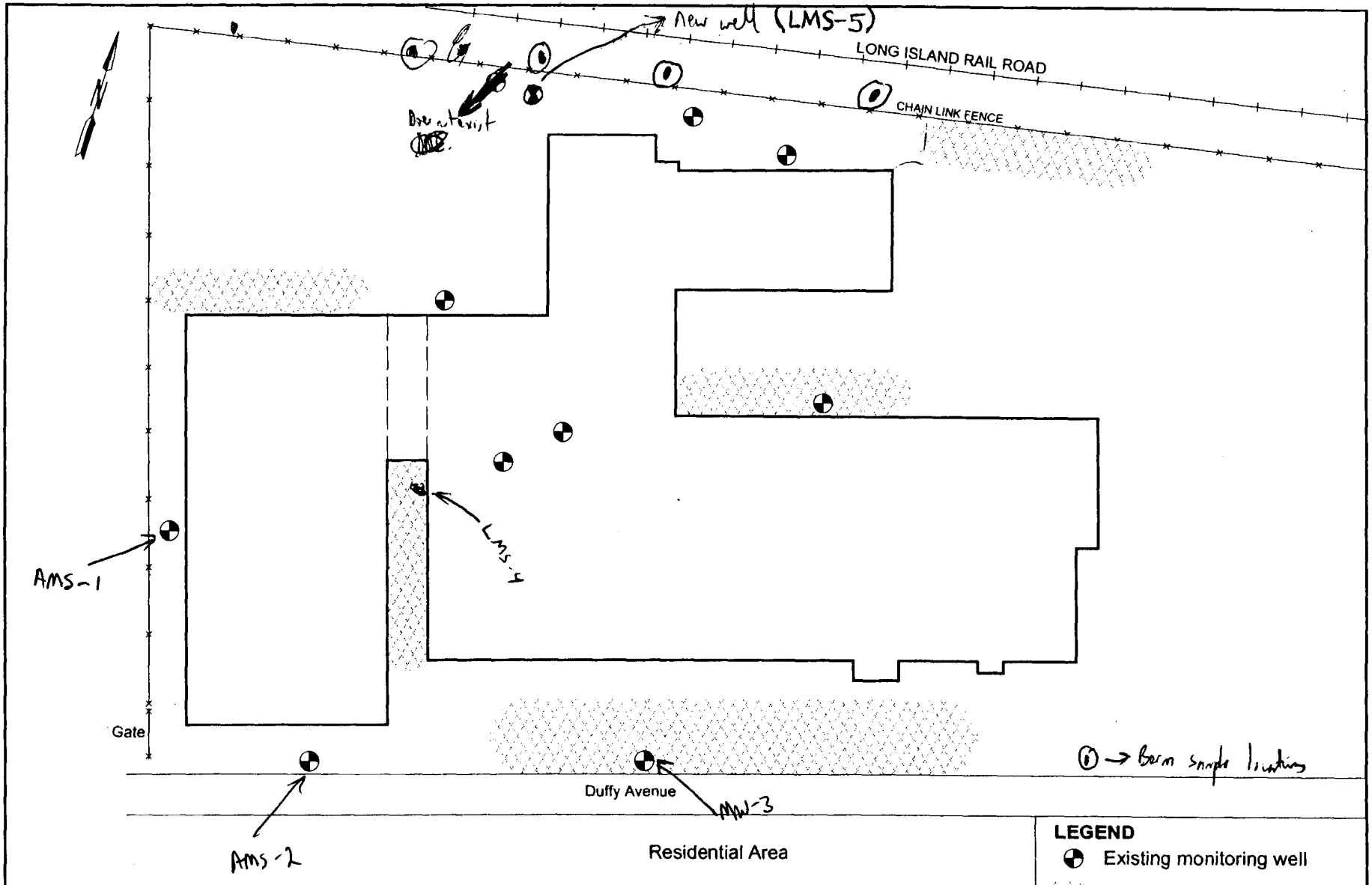
3.3.2 Existing Wells

During the site reconnaissance four monitoring wells were located. Two were accessible, one of them having an unsecured cover casing. LMS did not access the other two wells. As the field investigation begins, LMS will sound the open wells to determine whether debris has entered the casing and whether the wells are capable of yielding samples. Wells that were not accessed but were found will be opened and inspected for use as sampling points.

Wells that were not visible during the site reconnaissance will be located (if possible) using GPR or metal detecting equipment. Prior to installing new wells LMS will attempt to uncover the existing buried wells. When this is done each well be inspected and its condition assessed. If the well can be repaired for use as a viable sampling point, new surface casing and backfill will be used to bring it to grade. LMS has assumed that five existing wells will be available and suitable for sampling. Well locations will be based on sampling data and existing serviceable wells. Unsuitable wells will be abandoned according to procedures described in Section 4.4.4.

3.3.3 New Wells

A total of five new shallow wells will be installed at the Alsy Site; this number is based on the assumption that five of the existing wells will be available and suitable for sampling. The depth will be based on groundwater depth and results of field analysis from screening groundwater samples. The wells will be placed in both up- and downgradient positions in relation to the source areas to map the movement of groundwater and the contaminants within it. The exact locations will be in conjunction with existing serviceable wells to cover the maximum effective area.



Map Source: Fred C. Hart (after Soil Mechanics Drilling Corp. [1985]).

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New and Existing Monitoring Well Locations

Alsy Manufacturing - Oyster Bay, New York

Figure 3-5

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CHAPTER 4

FIELD INVESTIGATION PROCEDURES

4.1 ELEVATION SURVEY

A licensed land surveyor will begin preparing a Site survey and boundary map prior to any sampling events. The Site survey will include relevant Site features such as building footprints, fencing, roadways, and topographic contour lines in 1-ft intervals. All elevations will be determined to U.S. Geological Survey (USGS) datum. The surveyor will also establish the locations and elevations of the newly installed and existing monitoring wells to allow for accurate water level measurements and groundwater contour maps. Elevation readings will be accurate to within 0.01 ft, and will be established at ground surface, the top of the monitoring well casing. Horizontal control will be established by determining the location and distance of each monitoring well with respect to at least two nearby permanent objects. Horizontal measurements will be accurate to within 2 ft. The site map will show locations of the probes installed during the RI.

4.2 GPR SURVEY

A GPR survey will be conducted in the northern area of the Site where subsurface leach pools and discharges were reported (Figure 3-1). GPR involves "scanning the shallow subsurface material with a device that emits and records the return signals of electromagnetic energy in the RADAR wavelength" (LMS GPR 1994). The GPR system's antenna is pulled along the ground in the area to be surveyed following preestablished survey lines. The survey lines are placed parallel to each other at distances appropriate for the type of materials expected to be found. Additional parallel and perpendicular lines may be added to better define a suspect area (LMS GPR 1994). Upon completion of the survey, a report summarizing findings will be prepared. The report will include subsurface profile information that will be used to specifically locate existing buried wells, leach pits, and waste material. Specific sample locations will then be more accurately placed in order to provide the most complete data.

4.3 SOIL AND GROUNDWATER PROBES

4.3.1 Soil Probes

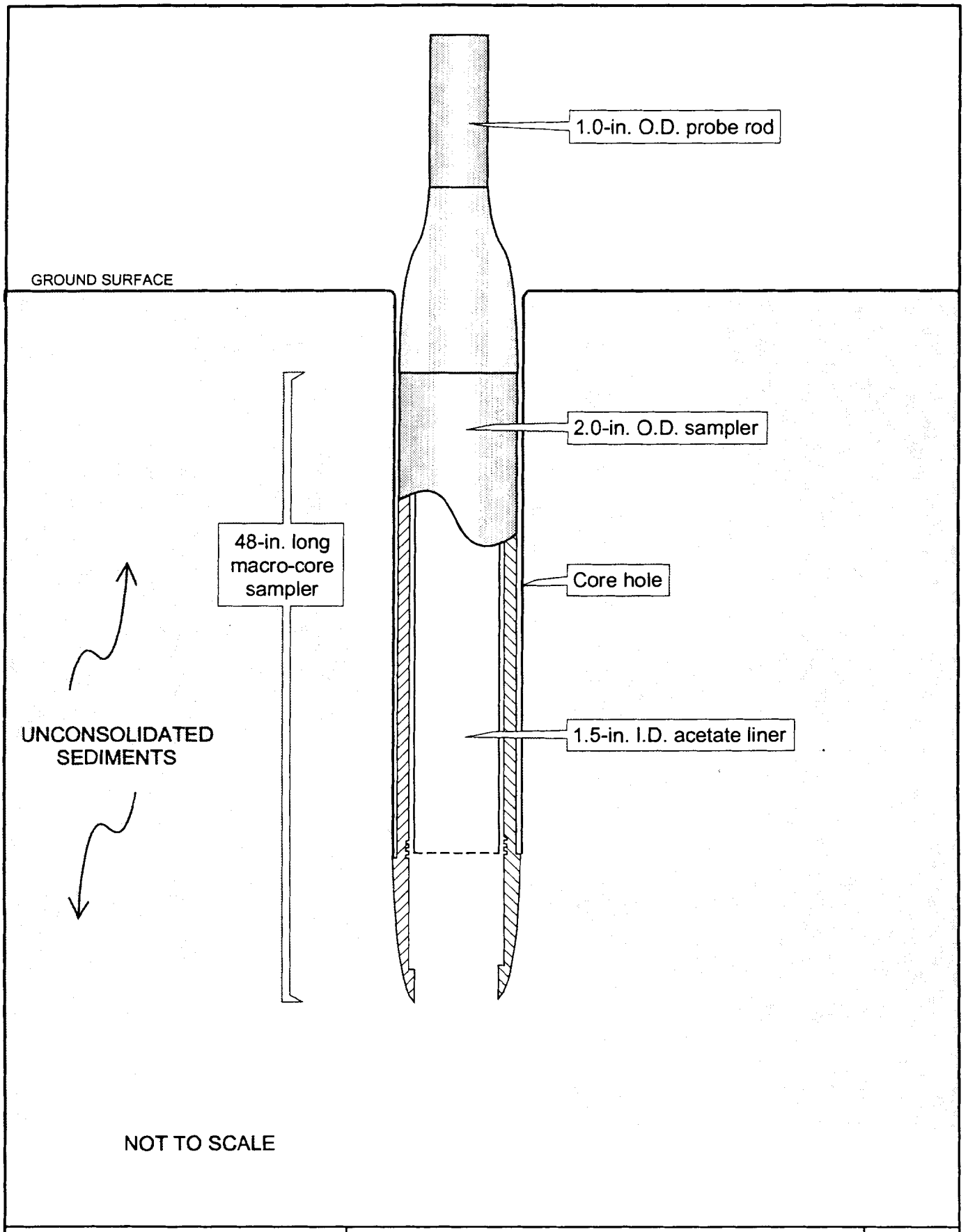
A total of 39 soil probe locations will be installed throughout the Site (Figures 3-2, 3-3, 3-4). The probe points will be installed using a truck-mounted drill rig utilizing a hydraulic piston,

direct-push installation method. Soil sampling will be accomplished using a 2.0-in. inside diameter (I.D.) macro-core sampler that collects soil in 4-ft intervals, or a 1.5-in. large-bore sampler, that collects soil in 2-ft intervals (Figure 4-1). The core is pushed or hammered to the desired sampling depth via the hydraulic system. Soil samples are recovered in a dedicated acetate liner that is placed inside the core. Upon removal from the core, both ends of the liner are capped and the soil sample is scanned with an HNU photoionization detector (PID) and described on a probe log. The following are noted on the probe log: sample depth, soil descriptions, moisture content, color, density, evidence of contamination (odor, sheen, PID readings), and location. Soil samples will be transferred to laboratory-cleaned glass jars and labeled with the appropriate sample location, sample interval, date, time, sampler, and analyses required.

4.3.2 **Groundwater Probes**

At selected soil probe locations, groundwater samples will be collected by attaching a groundwater screen or slotted point sampler to the probe rods (Figure 4-2). The screen point sampler is constructed of a stainless steel mesh enclosed in a stainless steel sheath. The slotted point sampler is constructed of stainless steel rod with slots cut into the sides. Both samplers enable samples to be collected from discrete intervals and allow for the pumping of groundwater from the sampling point. The screen point sampler is lowered or driven to 1 or 2 ft below the desired sampling depth; the probe rods are then raised 2 ft and the screen is extended below the rods into the sampling interval. The slotted point sampler is simply driven to the desired sampling depth. Once the screen or slotted points are in place, one of two sampling methods may be employed. A dedicated length of polyethylene tubing with a bottom check valve is inserted into the probe rods to the screened or slotted interval. The tubing is then oscillated up and down and water is forced into the tube as the check ball is repeatedly raised and lowered. A second method involves attaching the dedicated tubing directly to the screen or slotted point sampler by means of a stainless steel adapter. The top of the tubing is then attached to a peristaltic pump and the groundwater can be pumped from the screened interval. The method of sample collection will be based on groundwater depth and yield of the aquifer materials. It is expected that the groundwater will require a combination of surging and pumping in order to get sufficient sample.

Groundwater samples will be transferred from the tubing directly into laboratory-cleaned glass jars and labeled with the appropriate sample location, interval, date, time, sampler, and analyses required.



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Macro Core Sampler Cross Section

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Figure 4-1

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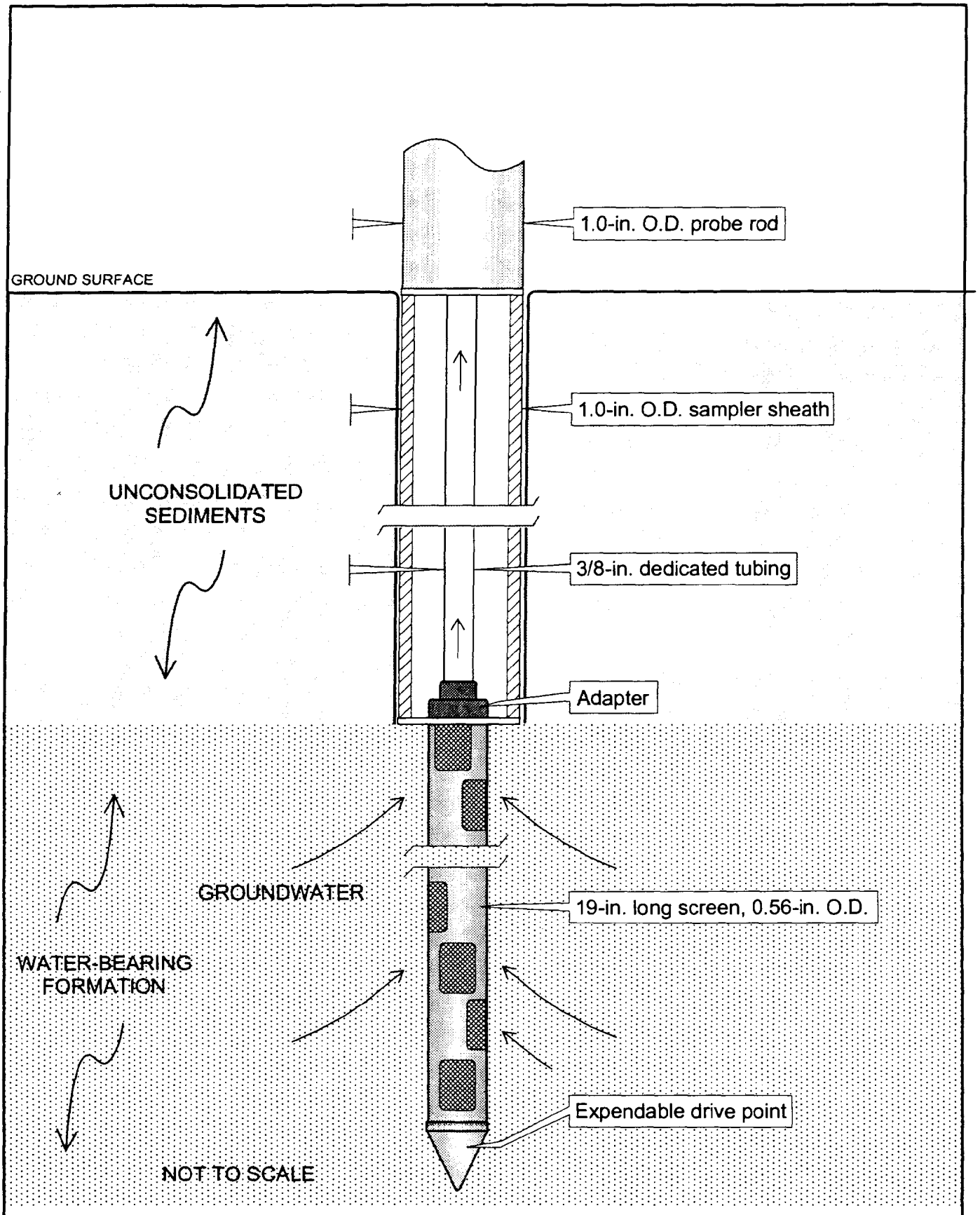

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Probe Unit Groundwater Sampler Cross Section

Alsy Manufacturing - Oyster Bay, New York

Figure 4-2

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4.3.3 Soil Gas Probes

At selected soil probes, soil gas samples will be collected via a soil gas extraction system through the probe rods. Probe rods are driven to the desired sampling depth and the expendable drive point is disengaged from the leading rod by pulling the rods up a few inches; direct contact between the leading rod and the soil is created. A dedicated length of polyethylene tubing is then lowered into the rods and connected to the lead probe and expendable point holder by means of a stainless steel adapter (Figure 4-3). O-ring connections provide for a vacuum-tight seal, preventing contamination from up-hole and assuring that the sample is collected from the bottom of the hole. The top of the polyethylene tubing is connected to a vacuum pump capable of withdrawing a controlled amount of soil gas. One tube volume of soil gas will be purged prior to sampling. The soil gas sample is collected by inserting a syringe directly into the tubing and withdrawing the soil gas sample. The syringe is then transported to the on-site laboratory to be analyzed. Sample collection time, depth, location, and amount of soil gas withdrawn will be noted on a soil gas sampling log (Figure 4-4).

Upon completion of sampling activities, the soil probe point will be backfilled to grade level as needed with bentonite grout. If soil cuttings are available, the probe hole may be backfilled with cuttings provided:

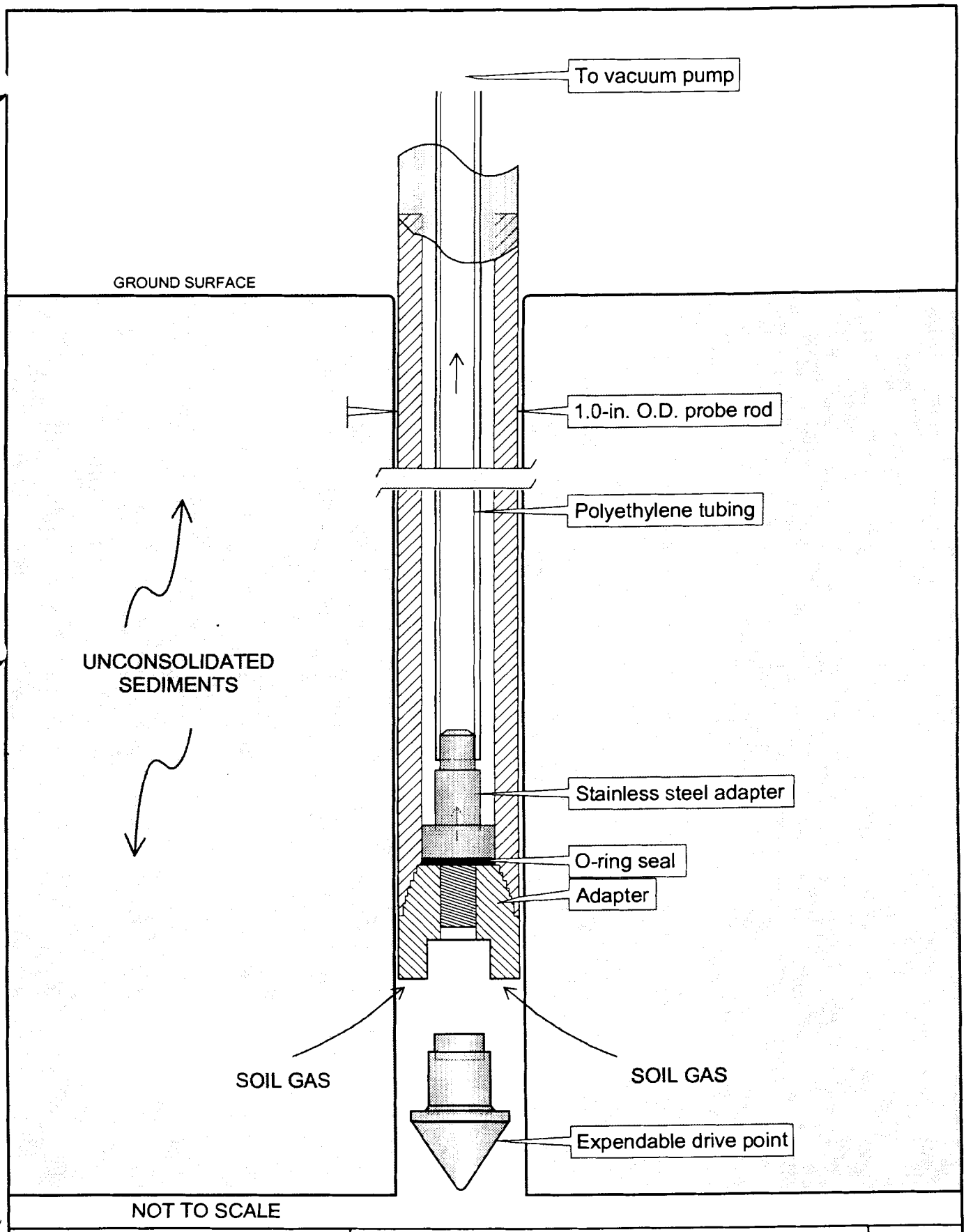
- the probe hole will not be used for the installation of a monitoring well,
- the probe hole did not penetrate an aquitard, nor an aquiclude,
- backfilling with cuttings will not create a significant path for vertical movement of contaminants.

All sampling equipment will be decontaminated as described in Section 4.6.

4.4 MONITORING WELL INSTALLATION

4.4.1 Procedure

The borings for the proposed monitoring wells will be advanced using a truck-mounted drill rig utilizing hollow-stem augers. Sampling will be accomplished by using a split-spoon sampler according to the standard penetration test method ASTM-D 1586 (Figure 4-5). Split spoons will be taken in 5-ft intervals above the water table and continuously below that point. As each split spoon is taken, the soils will be scanned for signs of organic vapors and logged by the on-site



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Probe Soil Gas Extraction System

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Figure 4-3

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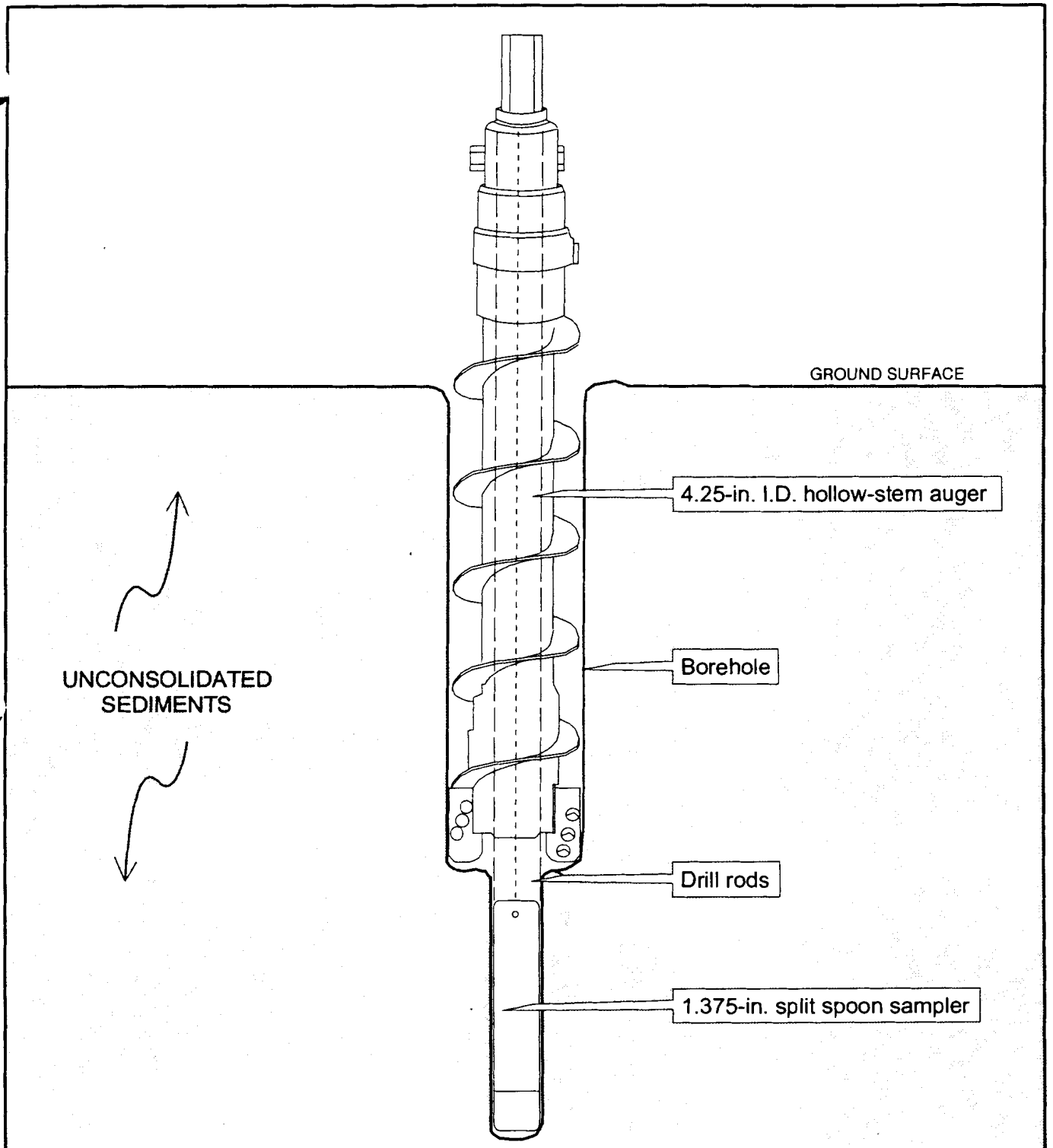
Figure 4-4

LAWLER, MATUSKY & SKELLY ENGINEERS SOIL GAS DATA SHEET	JOB NO.:	OVA METER:
	SITE:	DATE:
	OPERATOR:	CREW:

TIME	SAMPLE LOCATION	POINT DEPTH	PUMP RATE	OVA		COMMENTS
				WITH FILTER	WITHOUT FILTER	



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Test Boring/Sampling Cross Section

Alsy Manufacturing - Oyster Bay, New York

Figure 4-5

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LMS geologist. The field boring log will include information regarding blow counts, detailed stratigraphic information, meter readings (PID), sample moisture, etc. (Figure 4-6). Soil cuttings will be handled as discussed in Section 4.7.1.

The exact depth of each boring will depend on the actual depth to the water table and the results of the groundwater probe analysis for that area. The final depth will be set to cover existing shallow contaminant plumes if they are found to exist.

When the bottom of the boring is reached a 2-in. I.D. schedule 40 flush-thread PVC monitoring well will be installed. Each well will have 10-15 ft of slotted screen at the bottom.

As the augers are slowly retracted, the filter pack, which is composed of a clean silica sand, will be allowed to fill the annulus around the well screen. The screen slotting size and corresponding sand will be chosen to provide the best in situ filtering of fine-grained material from groundwater samples. The filter pack will be added up to 2 ft above the top of the screen. A 12-in layer of sand choke (00 Morie sand) will be added above the sand pack to prevent migration of bentonite into the sand pack. A 2-ft layer of bentonite pellets will be added above the sand pack. These will be hydrated by adding potable water at a slow but steady rate for approximately 20-30 min. The remainder of the borehole annulus will be back-filled using a cement-bentonite mixture, which is consistent with NYSDEC Exhibit 3, Guidelines for Exploratory Boring Monitoring Wells Installation and Documentation of These Activities. An elbowed tremie pipe will be used to tremie the cement-bentonite mixture down the borehole.

At the surface, each monitoring well will be fitted with a secured protective casing. In areas where the well will not be damaged by vehicular traffic, a standpipe protective casing will be installed. This casing will be continued approximately 2-3.5 ft below the ground surface, unless otherwise dictated by field conditions. This type of casing will be secured in the ground by mounding concrete around the casing and sloping the concrete away from the well. The concrete pad will be approximately 2 ft in diameter. The casing should have a hasp so that it can be locked. If flush-mounted casings are needed, these casings will include a positive sealing cover and an inner locking cap. Each flush-mounted casing will be outfitted with an internal drain. The concrete pad for a flush-mounted casing should be approximately 2 ft in diameter and slightly raised and sloped from the well to help provide for drainage away from the well. Care will be taken to finish the well to aid in preventing snow plows from destroying the casing while plowing. A typical overburden monitoring well construction is shown in Figure 4-7. Following completion of each monitoring well, a well completion log will be filed that will include a diagram of the well, volume, and type of material used, and interval over which materials were installed (Figure 4-8).

Figure 4-6

SUBSURFACE EXPLORATION - TEST BORING LOG

SHEET of

DATA BY:

PROJECT No.:

PROJECT NAME:

BORING No.:

CLIENT:

START DATE:

DRILLER:

FINISH DATE:

BORING LOCATION:

TOTAL DEPTH:

MONITORING INSTRUMENT(S):

DEPTH TO WATER:

WEIGHT: FALL: GROUND SURFACE ELEVATION:

SAMPLE HAMMER lb in.

HOLE DIAMETER:

SAMPLE DEPTH	0" to 6"	6" to 12"	12" to 18"	18" to 24"	RETAINED SAMPLE	RECOVERY (ft)	SAMPLE No.	INSTRUMENT READING	DEPTH (ft)	STRATIGRAPHIC COLUMN	CLASSIFICATION OF MATERIALS
											f - fine and - 35-50% m - medium some - 20-35% c - coarse little - 10-20% trace - 0-10%
									1		
									2		
									3		
									4		
									5		
									6		
									7		
									8		
									9		
									10		
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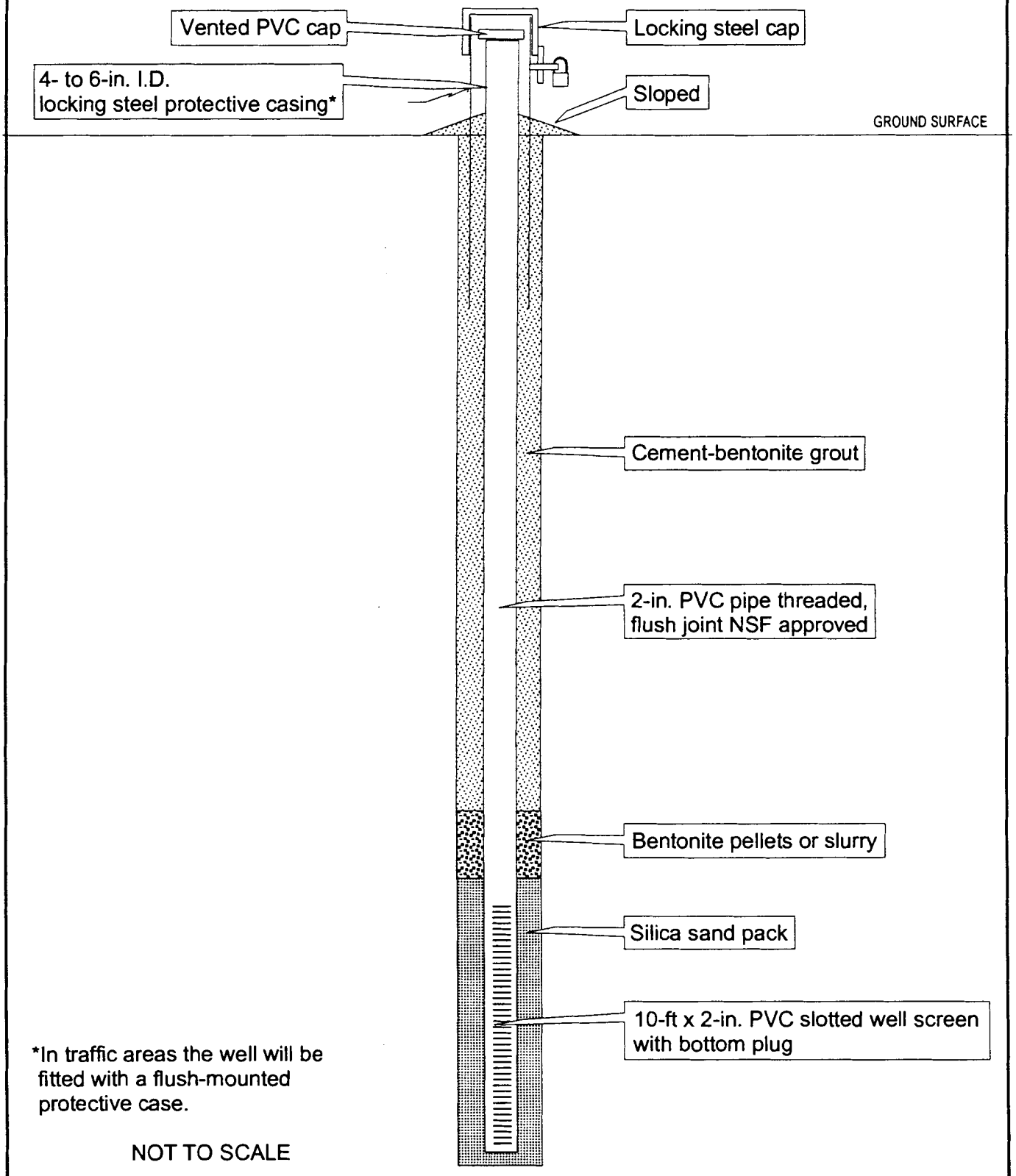

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Typical Overburden Monitoring Well Construction

Alsy Manufacturing - Oyster Bay, New York

Figure 4-7

\698GEO.ds4

Figure 4-8

MONITORING WELL COMPLETION LOG

PROJECT NUMBER:

PROJECT NAME:

WELL No.:

CLIENT:

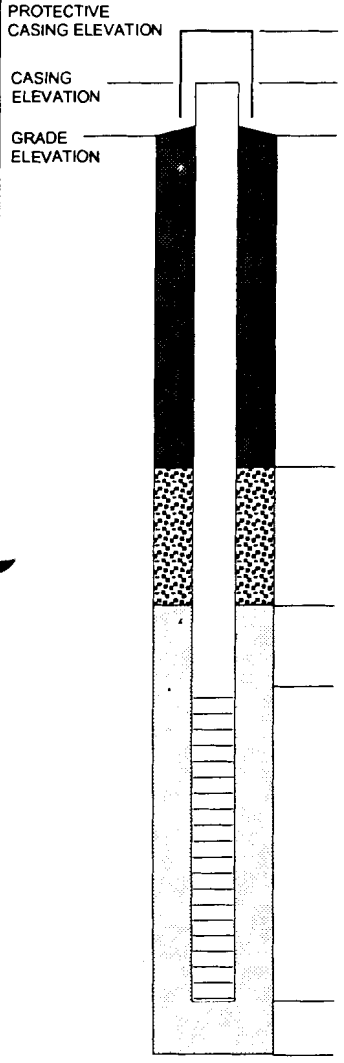
LOCATION:

DATE DRILLED:

DATE DEVELOPED:

WELL CONSTRUCTION COMPLETED:

DEVELOPING METHOD:



NOT TO SCALE

INSPECTOR:

DRILLING CONTRACTOR:

TYPE OF WELL:

STATIC WATER LEVEL:

DATE:

MEASURING POINT:

TOTAL DEPTH OF WELL:

TOTAL DEPTH OF BORING:

DRILLING METHOD

TYPE:

DIAMETER:

CASING:

SAMPLING METHOD

TYPE:

DIAMETER:

WEIGHT:

FALL:

INTERVAL:

RISER PIPE LEFT IN PLACE

MATERIAL:

DIAMETER:

LENGTH:

JOINT TYPE:

SCREEN

MATERIAL:

INTERVAL:

DIAMETER:

STRATIGRAPHIC UNITS SCREENED:

SLOT SIZE:

FILTER PACK

GRADE:

SAND:

GRAVEL:

NATURAL:

AMOUNT:

INTERVAL:

SEAL(s)

CHECK APPLICABLE		INTERVAL:	AMOUNT:
Portland Cement			
Bentonite Slurry		INTERVAL:	AMOUNT:
Bentonite Pellets		INTERVAL:	AMOUNT:
Other:		INTERVAL:	AMOUNT:

LOCKING CASING: ☐ NO ☐ YES KEY NO:

NOTES:

LMS LAWLER, MATUSKY & SKELLY ENGINEERS

4.4.2 Well Development

The monitoring wells will be developed no earlier than 24 hrs after installation. The goal of the development is to provide a low-turbidity sample by removing any fine-grained materials from the well case and sand pack. The wells will be developed using air-lift pumping, which involves quickly pumping high volumes of water from the screened zone of the well by introducing a surge of high-pressure air. The rapid removal of water causes the water within the sand pack around the screen to rapidly rush into the well. This action serves to flush any fines from the well casing and sand pack. As the well develops, the tubing in the well will be rapidly surged up and down within the screened zone to allow for additional flushing action in the well. At several points during the development, estimates of well yield and measurements of turbidity, temperature, pH, and conductivity will be made. The new monitoring wells will be developed until the groundwater reaches a turbidity of 50 nephelometric units (NTU) or less, or until the development continues for 4 hrs. Development water will be handled as discussed in Section 4.7.2.

4.4.3 Abandonment Procedures

Those existing on-site wells found to be unsuitable for sampling will be abandoned. Abandonment will consist of tremie grouting the unusable wells closed with a mixture of portland cement and bentonite. This will prevent downward migration within the well casing. Because of the types of chemicals stored and discharged on-site, and because the wells that may be abandoned are monitoring wells and are not potable wells, LMS does not propose to chlorinate them prior to grouting because adding free chlorine may increase the level and/or types of contaminants found.

4.4.4 Slug Testing

Once the wells have been developed and the first round of groundwater samples collected (monitoring well sampling procedures are located in Section 5.4.3), slug testing will be conducted to determine the horizontal hydraulic conductivity within the screened section of the monitoring well. These calculated values for hydraulic conductivity will be needed to adequately evaluate remedial alternatives as a pump test is not planned. Slug testing equipment will include a weighted stainless steel slug, an in situ pressure transducer, and a Hermit data logger. The slug will be quickly lowered into the well to create an instantaneous rise in the water level. The water level in the well will then be allowed to equilibrate back to its original level. At this point, the slug will be rapidly removed from the well, causing a rapid drop in water level. The Hermit data logger will be programmed to collect head data at an optimal

sampling frequency. This head data will then be downloaded to a personal computer. Using equations derived by Bouwer and Rice for partially penetrating unconfined wells, aquifer hydraulic conductivity values will be calculated.

4.5 FISH AND WILDLIFE IMPACT ANALYSIS (FWIA)

The objective of a FWIA is to identify and evaluate the ecological impacts in an area as a result of exposure to hazardous waste(s). The first step in conducting a FWIA is to identify any fish or wildlife that currently exist on-site and those that existed on-site prior to the introduction of any contaminants. NYSDEC FWIA guidelines state that "if no resources are associated with the Site or if there is no potential for contaminant migration to the resources, then only the necessary information to support that conclusion should be provided" (NYSDEC FWIA). The Alsy Site and surrounding properties are developed commercial and residential areas. No evidence of fish or wildlife was found during LMS' site reconnaissance, therefore a FWIA is not proposed at this time. Should investigations conducted during the first phase of the RI indicate that a wildlife population exposure route may be affected by Site activities, a work plan for an assessment will be prepared in accordance with NYSDEC guidance.

4.6 DECONTAMINATION

4.6.1 Field Procedures

All equipment that comes into contact with potentially contaminated soils, groundwater, or dust will be decontaminated before being removed from the Site. In addition, equipment utilized during the installation of soil and water probes, soil borings, and monitoring wells will be decontaminated between each point, boring, or well location to prevent cross-contamination. Dedicated sampling equipment will be utilized or all sampling equipment will be decontaminated between sampling locations, using the following cold wash methods:

1. Physically remove packed dirt, grit, mud, and debris with a wire or stiff bristle brush.

2. Scrub all potentially contaminated surface areas with a water/detergent solution.

3. Rinse off scrub solution with a potable water rinse.

Sampling equipment intended for reuse (nondedicated) may be steam cleaned following a detergent scrub and will receive a final rinse with deionized/distilled water prior to collection of samples. Drilling equipment will be steam cleaned following the physical removal of packed dirt. Equipment will be allowed (if possible) to air dry before reuse.

A decontamination area will be set up on-site in a location where it will not impede the movement of on-site vehicular or pedestrian traffic. A decontamination pad will be constructed to collect decontamination water generated by steam cleaning. The pad will be constructed so as to enable vehicles to drive onto the pad to be decontaminated. Decontamination water will be collected in a sump within the decontamination pad and will be pumped to appropriate containers. The water used in cold wash decontamination procedures will be poured directly into appropriate containers.

4.6.2 Laboratory Procedures

Laboratory decontamination of field sampling equipment will include the following steps:

1. Scrub with tap water and nonphosphate detergent.
2. Rinse with tap water.
3. Rinse with 10% HNO_3*.
4. Rinse with distilled/deionized water.
5. Rinse with pesticide grade methanol**.
6. Rinse with deionized water.
7. Air dry.
8. Wrap in autoclaved aluminum foil.

4.7 WASTE HANDLING AND DISPOSAL

Work-derived wastes include soil cuttings, decontamination water, disposable personnel protective equipment, well abandonment materials, well development and purge water, and general trash. These wastes, together with any residual amount of waste derived from previous activities, will be handled as described below.

4.7.1 Soil Cuttings From Probes and Monitoring Well Installation

The subsurface soil generated from exploration activities at the Site will be disposed of based on the results of the laboratory analyses. Material found not to be contaminated as per

---

* Steps 3 and 4 are omitted if metals are not being analyzed.

** Steps 5 and 6 are omitted if organics are not being analyzed.

NYSDEC, HWR-94-4046, Determination of Soil Cleanup Objectives and Cleanup Levels will be disposed of and handled in accordance with NYSDEC, HWR-89-4032, Disposal of Drill Cuttings.

Material found to be contaminated will be containerized, labeled, and stored at one location on Site. LMS will maintain an inventory of any containerized material. Following completion of the RI/FS, LMS will provide Surrey Company/Surrey Corporation with a list of experienced and licensed waste removal contractors to handle testing and disposal.

4.7.2 Well Development, Purge, and Decontamination Water

The groundwater and decontamination water generated from well installation, development, and purging will be collected and, following approval of Nassau County Department of Public Works (NCDPW), will be disposed of in the on-site sanitary sewer.

If disposal of a portion of all the water generated from on-site RI activities is not permitted to be disposed of in the sanitary sewer, it will be containerized and stored on-site with other material for later disposal by Surrey Company.

4.7.3 Disposal of Personnel Protective Equipment (PPE) and General Trash

Used personnel protective equipment and other trash will be stored in appropriate trash bags or 55-gal drums on-site. Upon completion of field activities, the trash generated will be transported to LMS' laboratory for proper disposal.

CHAPTER 5

SAMPLING AND ANALYTICAL PROCEDURES

Sampling and analytical procedures to be conducted at the Alsy Manufacturing Site are presented below. The procedures are in accordance with the NYSDEC guidelines included in Sampling Guidelines and Protocols (March 1991) and Exhibit 3: Guidelines for Exploratory Boring, Monitoring Well Installation, and Documentation of These Activities. A summary of the analyses to be performed on the environmental and QA/QC samples obtained is included in Tables 5-1 and 5-2. Analytical and quality assurance/quality control (QA/QC) procedures are further detailed in the Quality Assurance Project Plan (QAPjP) for the Site.

5.1 Probe Sampling and Analyses

Soil, soil gas and groundwater samples collected from on-site soil probes will be analyzed for VOCs on-site using a portable gas chromatograph (GC). Soil and groundwater samples will be extracted using a modification of EPA SW-846 Method 3810 for headspace extraction of VOCs. VOCs of interest will include aromatic hydrocarbons (benzene, toluene, ethylbenzene, and xylene [BTEX]) and chlorinated compounds. The headspace extraction method allows a large number of samples to be screened in a relatively short time. The extraction procedure consists of placing the sample in a laboratory-cleaned vial and heating it in a temperature-controlled water bath at 25°C to allow VOCs to volatilize. The headspace is then sampled through the septum port in the sample vial, injected into the GC, and analyzed. Soil gas samples collected from on-site soil probes will be collected in syringes of known volume and injected directly into the GC and analyzed. QA/QC parameters include initial and continuing calibration standards and blanks.

A complete description of field chain-of-custody procedures, mobile laboratory equipment calibration procedures, sample matrix, analysis and method breakdown, validation, and the mobile laboratory's standard operating procedures (SOP) may be found in the Site-specific QAPjP.

Soil samples will also be analyzed for total metals (arsenic, cadmium, chromium, copper, lead, nickel, and zinc) by the subcontracted laboratory, Nytest Environmental, Inc. (NEI), in accordance with EPA Method 6010. The results of the analyses will be reported to LMS within 24 hours of sample receipt by the laboratory.

TABLE 5-1 (Page 1 of 3)

ANALYTICAL AND MOBILE LABORATORY SAMPLING SUMMARY

Alsy Site RI/FS

TASK	LABORATORY	MATRIX	APPROXIMATE No. OF FIELD SAMPLES	ANALYSES	PROTOCOL	METHOD	DELIVERABLES
Perimeter Groundwater Screening	Mobile Laboratory	Water	30	VOCs	N/A	Field GC	Data only
		Soil gas	20	VOCs	N/A	Field GC	Data only
	Analytical Laboratory (NEI)	Water	60[1]	Metals (As, Cd, Cr, Cu, Pb, Ni, Zn)	SW846	6010	Data only
		Water	*6, (12')*	*TCL VOCs, TAL Metals, CN^-*	*CLP*	*91-1, Superfund CLP Inorganics, 335.2*	*ASP Superfund Category B*
On-Site Soil and Groundwater Screening	Mobile Laboratory	Water	20	VOCs	N/A	Field GC	Data only
		Soil Gas	12	VOCs	N/A	Field GC	Data only
		Soil	92	VOCs	N/A	Field GC	Data only

Note: items that are in italics are confirmatory samples.
1 - Analyses will be done for total and dissolved metals.
N/A - Not applicable.

5-1A1

TABLE 5-1 (Page 2 of 3)

ANALYTICAL AND MOBILE LABORATORY SAMPLING SUMMARY

Alsy Site RI/FS

TASK	LABORATORY	MATRIX	APPROXIMATE No. OF FIELD SAMPLES	ANALYSES	PROTOCOL	METHOD	DELIVERABLES
On-Site Soil and Groundwater Screening (continued)	Analytical Laboratory (NEI)	Water	40[1]	Metals (As, Cd, Cr, Cu, Pb, Ni, Zn)	SW846	6010	Data only
		Soil	92	Metals (As, Cd, Cr, Cu, Pb, Ni, Zn)	SW846	6010	Data only
		Water	*4, (8[1])*	*TCL VOCs, TAL Metals, CN^-*	*CLP*	*91-1, Superfund CLP Inorganics, 335.2*	*ASP Superfund Category B*
		Soil	*18*	*TCL VOCs, TAL Metals, CN^-*	*CLP*	*91-1, Superfund CLP Inorganics, 335.2*	*ASP Superfund Category B*
			20	*TCLP Metals[2]*	*SW-846*	*1311/6010*	*ASP Superfund Category B*

Note: Items that are in italics are confirmatory samples.
1 - Analyses will be done for total and dissolved metals.
2 - Contingent based on results of TAL metal analyses.
N/A - Not applicable.

TABLE 5-1 (Page 3 of 3)

ANALYTICAL AND MOBILE LABORATORY SAMPLING SUMMARY

Alsy Site RI/FS

TASK	LABORATORY	MATRIX	APPROXIMATE No. OF FIELD SAMPLES	ANALYSES	PROTOCOL	METHOD	DELIVERABLES
On-Site Plume Characterization Sampling	Mobile Laboratory	Water	9	VOCs	N/A	Field GC	Data only
		Soil	9	VOCs	N/A	Field GC	Data only
	Analytical Laboratory (NEI)	Water	18[1]	Metals (As, Cd, Cr, Cu, Pb, Ni, Zn)	SW846	6010	Data only
		Soil	9	Metals (As, Cd, Cr, Cu, Pb, Ni, Zn)	SW846	6010	Data only
		Water	*2, (4[1])*	*TCL VOCs, TAL Metals, CN^-*	*CLP*	*91-1, Superfund CLP Inorganics, 335.2*	*ASP Superfund Category B*
		Soil	*2*	*TCL VOCs, TAL Metals, CN^-*	*CLP*	*91-1, Superfund CLP Inorganics, 335.2*	*ASP Superfund Category B*
Groundwater Monitoring Wells	Analytical Laboratory (NEI)	Water	10, (20[1])	Full TCL , TAL Metals, CN^-	CLP	91-1, 91-2, 91-3, Superfund CLP Inorganics, 335.2	ASP Superfund Category B

1 - Analyses will be done for total and dissolved metals.
N/A - Not applicable.

5-1A3

TABLE 5-2 (Page 1 of 2)

QA/QC SUMMARY TABLE

Alsy Site RI/FS

SUBTASK	MATRIX	NUMBER OF SAMPLES	ANALYSIS	PROTOCOL	METHOD
Probe Sampling					
Trip Blank	Water	1	TCL VOCs	CLP	91-1
Field Blank	Water	2	TCL VOCs, TAL Metals, CN^-	CLP	91-1, Superfund CLP Inorganics, 335.2
Spike & Spike Duplicate	Water	4[1]	TAL Metals, CN^-	CLP	Superfund CLP Inorganics, 335.2
MS/MSD/MSB	Water	2	TCL VOCs	CLP	91-1
Spike & Spike Duplicate	Soil	2	TAL Metals, CN^-	CLP	Superfund CLP Inorganics, 335.2
MS/MSD/MSB	Soil	2	TCL VOCs	CLP	91-1

TABLE 5-2 (Page 2 of 2)

QA/QC SUMMARY TABLE

Alsy Site RI/FS

SUBTASK	MATRIX	NUMBER OF SAMPLES	ANALYSIS	PROTOCOL	METHOD
Groundwater Sampling					
Trip Blank	Water	1	TCL VOCs	CLP	91-1
Field Blank	Water	1	Full TCL, TAL Metals, CN^-	CLP	91-1, 91-2, 91-3, Superfund CLP Inorganics, 335.2
Spike & Spike Duplicate	Water	2	TAL Metals, CN^-	CLP	Superfund CLP Inorganics, 335.2
MS/MSD/MSB	Water	1	Full TCL	CLP	91-1, 91-2, 91-3
Blind duplicate	Water	2[1]	Full TCL, TAL Metals, CN^-	CLP	91-1, 91-2, 91-3, Superfund CLP Inorganics, 335.2

5.1.1 Soil Sampling Procedures

Soil samples from the probe points will be collected using a 2.0-in. outside diameter (O.D.) macro-core or 1.5-in large-bore sampler. Actual soil samples are contained within the core in 1.5-in. O.D. acetate liners (Figure 4-1). After removal from the boring, both ends of the acetate liner will be capped and holes will be driven into the liner to facilitate scanning for organic vapors. With the exception of samples intended for VOC analyses, the soil samples taken from the liners will be homogenized in laboratory-cleaned stainless steel bowls. The samples will then be placed in laboratory-cleaned glass jars using laboratory-cleaned stainless steel spoons. The sample jars will be labeled with the site name, job number, sample location/identification, date, time, sampler, and parameters for analysis. All samples will be stored in coolers maintained at 4°C prior to transport to the contract analytical laboratory.

5.1.1.1 Soil Analyses

Soil samples from each probe location will be analyzed on-site with the mobile GC for VOCs and by NEI for metals using methods described in Section 5.1 and in Appendix C of the QAPjP. NEI will provide 24 hour turnaround for these metals analyses. Table 5-1 provides an outline of sample matrices number, and analytical methods.

A total of 20 percent of the soil samples screened on-site for VOCs, and screened by NEI for metals, will also be submitted to NEI to be analyzed for the following parameters: Target Compound List (TCL) VOCs, and Target Analyte List (TAL) metals and cyanide. A full description of laboratory quantitation limits, quality assurance procedures, analytical procedures, chain-of-custody procedures, data validation, and laboratory SOPs are presented in the QAPjP. Table 5-1 provides an outline of sample matrices, number, analytical methods, and deliverables.

5.1.2 SOIL GAS SAMPLING PROCEDURES

At selected soil probes, soil gas samples will be collected via a soil gas extraction system through the probe rods. Probe rods are driven to the desired sampling depth and the expendable drive point is disengaged from the leading rod by pulling the rods up a few inches; direct contact between the leading rod and the soil is created. A dedicated length of polyethylene tubing is then lowered into the rods and connected to the lead probe and expendable point holder by means of a stainless steel adapter (Figure 4-3). O-ring connections provide for a vacuum-tight seal, preventing contamination from up-hole and assuring that the sample is collected from the bottom of the hole. The top of the polyethylene tubing is connected to a

vacuum pump capable of withdrawing a controlled amount of soil gas. The soil gas sample is collected by inserting a syringe directly into the tubing and withdrawing the soil gas sample. The syringe is then transported to the on-site laboratory to be analyzed. Sample collection time, depth, location, and amount of soil gas withdrawn will be noted on a soil gas sampling log (Figure 4-4).

5.1.2.1 Soil Gas Analysis

Soil gas samples collected from on-site soil probe locations will be analyzed on-site for VOCs using the mobile GC. A full description of the field custody and mobile laboratory equipment calibration procedures, analytical procedures, and the mobile laboratory's SOP is presented in the QAPjP.

5.1.3 Groundwater Probe Sampling Procedures

Groundwater samples will be collected from soil probe points using a screen-point water sampler (Figure 4-2). The sampler is driven to about 1 ft beyond the target sampling depth, the probe rods are pulled back 2 ft, and the screen point sampler is extended into the sampling interval. Once the screen is at the sampling interval, two methods of sampling may be employed. A dedicated length of polyethylene tubing with a bottom check valve is lowered into the probe rods to the screen. The tubing is then oscillated up and down by hand and water is forced up the tube as the check ball is raised and lowered. A second method involves attaching the dedicated tubing directly to the screened interval by means of a stainless steel adapter. A vacuum is then applied to the top of the tubing using a peristaltic pump and the water sample may be transferred directly to the sample jar.

Groundwater samples will be placed in laboratory-cleaned glass jars labeled with the site name, job number, sample location/identification, sampler, date, time, and parameters for analysis. All samples will be stored in coolers maintained at 4°C prior to transport to the on-site laboratory and to NEI.

5.1.3.1 Groundwater Probe Analyses

Groundwater samples collected from on-site soil probe locations will be analyzed by the on-site GC for VOCs. Filtered and unfiltered groundwater samples will be collected and submitted to NEI for 24-hr turnaround metals screening. Both filtered and unfiltered samples will be analyzed for arsenic, cadmium, chromium, copper, lead, nickel, and zinc. Unfiltered samples will also be analyzed for total suspended solids (TSS). A full description of laboratory quantitation limits, quality assurance procedures, analytical procedures, chain-of-custody procedures, data validation, and laboratory SOPs are presented in the QAPjP. Table 5-1 provides an outline of sample matrices, number, analytical methods and deliverables.

A total of 20 percent of the groundwater samples screened on-site for VOCs and at NEI for total and dissolved metals will be analyzed by NEI for the following parameters: TCL VOCs and total and dissolved TAL metals and cyanide. Table 5-1 provides an outline of sample matrices, number, analytical methods and deliverables.

5.2 Groundwater Well Sampling and Analysis

Prior to sampling at each well, the initial static water level and well depth will be measured to within 0.01 ft using an electronic water level meter. The volume of water to be purged from the well prior to sampling will be calculated based on the borehole diameter and the height of the water column. Two methods of purging will be used, depending on the yield of the well. The first method, generally used on poor-yielding wells, involves purging with a dedicated laboratory-cleaned PVC bailer. The second method, generally used on medium- to high-yield wells, entails purging with a centrifugal pump, dedicated polyethylene tubing, and a foot valve.

Purging will begin at the bottom of the well to remove accumulated fines. The pumping rate will be adjusted to maintain a steady recovery and pumping volume. If a steady state can be achieved, and the silt has been removed from the bottom of the well, the intake of the tubing will be gradually raised to the top of the water column to ensure that the entire water column is purged. If the well purges dry before the calculated required volume has been removed, the well will be allowed to recover and then purged again to ensure that the groundwater in the immediate area of the well has been removed. In general, a minimum of three borehole volumes will be purged from each well unless the well purges dry before this is accomplished. The purge volume will be calculated using the following formula:

$$\text{Purge volume} = 0.93 \times H$$

For water table wells H is the water column height in feet. For wells with the screen set below the water table, H will be defined as the total length of the sand pack or open hole plus a 5-ft safety factor. The constant 0.93 was determined based on the volume in a 2-in. casing set within a 8.25-in. diameter hole and a sand pack with 30% porosity. For open-hole bedrock wells the purge constant will be 0.65, which is the volume of water per foot in a 4-in.-diameter hole. Turbidity, specific conductance, pH, and temperature will be measured at intervals during the purging with precalibrated instruments. The objective of the purging process is to ensure representative groundwater samples with turbidity values of 50 (NTU) or less so as to meet NYSDEC water clarity requirements for sample analysis.

After purging, the wells will be allowed to recover to at least 90% of the initial water column volume before sampling. Samples will be collected with dedicated laboratory-cleaned Teflon bailers from the top of the water column. Temperature, pH, specific conductance, and turbidity will be measured at the start and ending of sampling. Field data will be recorded on each well sampling log. Samples will be placed in precleaned bottles or vials provided by the analytical laboratory. All sample bottles will be labeled with the site name, job number, sample identification, date, time, and parameters for analysis. Preservatives will be added to the samples in the field when appropriate.

5.2.1 Groundwater Well Analyses

A complete round of groundwater sampling will be conducted once the new monitoring wells have been installed and developed. Both filtered and unfiltered samples will be collected and analyzed for TAL metals for comparison to the probe sample results. Unfiltered samples will also be analyzed for TSS. A full description of laboratory quantitation limits, quality assurance procedures, analytical procedures, chain-of-custody procedures, data validation, and laboratory SOPs are presented in the QAPjP. Table 5-1 provides an outline of sample matrices, number, analytical methods and deliverables. Each of the samples will be submitted, under appropriate chain-of-custody protocol, to NEI for full TCL/TAL analyses.

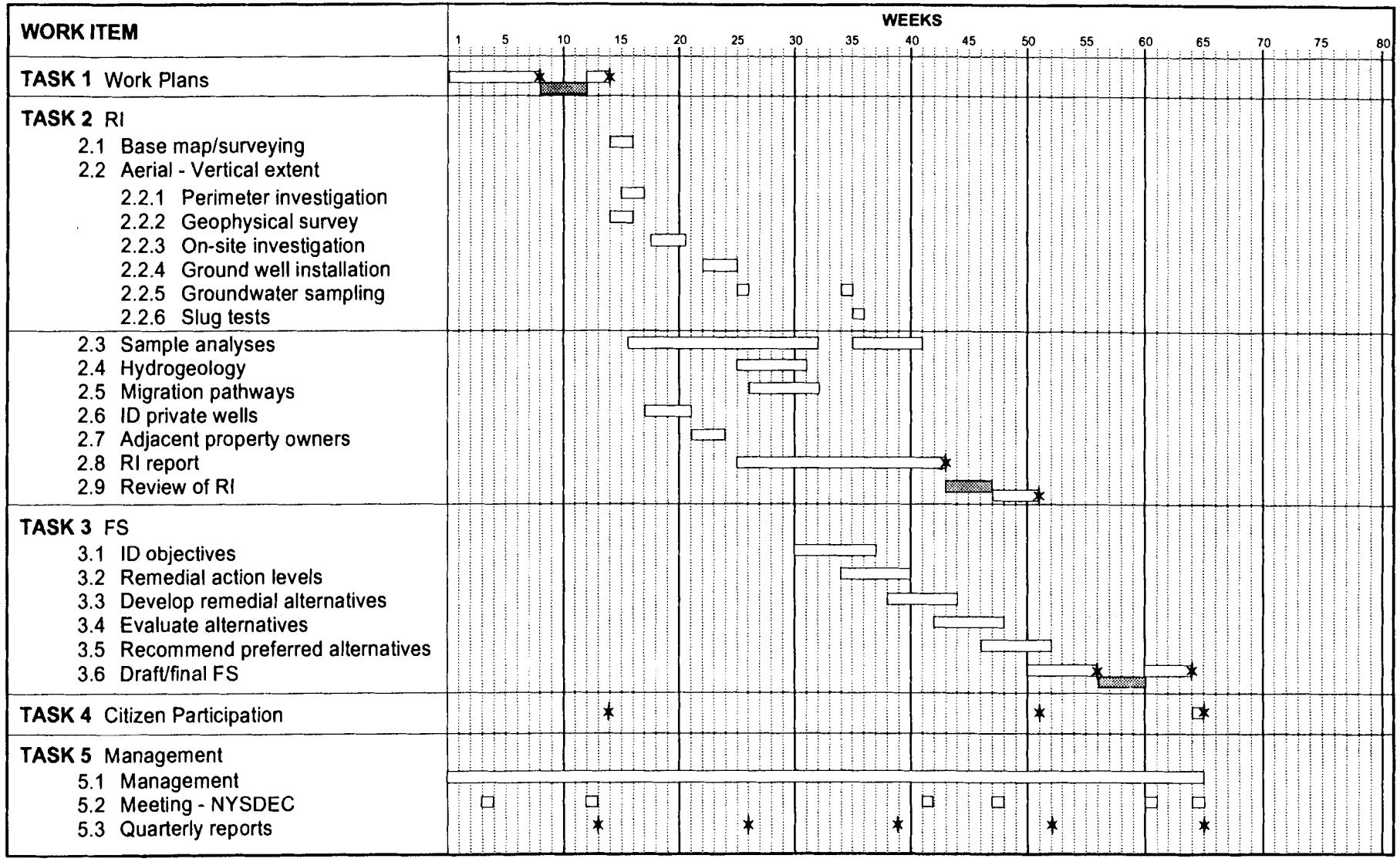
CHAPTER 6

FIELD ACTIVITIES SCHEDULE

The field activities schedule for the RI is presented in Figure 6-1.

FIGURE 6-1

PROPOSED PROJECT SCHEDULE
Alsy RI/FS



LEGEND

- LMS work
- Review by NYSDEC
- Report or fact sheet due

CHAPTER 7

PROJECT STAFFING

7.1 LMS STAFF AND RESPONSIBILITIES

The field activities to be conducted at the Alsy Manufacturing Site as outlined in this Field Activities Plan will be performed by the LMS staff identified in Figure 7-1. The areas of responsibility of the key staff involved in the field activities are summarized below.

Mr. Kevin P. McCarty will be the project manager for this project. Mr. McCarty will be directly responsible to Surrey Corporation for the conduct of the project and will provide overall supervision and guidance of project personnel. He will ensure staff and resources availability for completion of the project, approve assignments, work scopes, budgets, and staffing plans, and provide technical advice on the project approach.

Dr. Thomas E. Pease, P.E., manager of LMS' Hazardous Waste & Geology Group, will be the partner-in-charge for this project. As partner-in-charge he will review the major technical conclusions drawn and administrative decisions made.

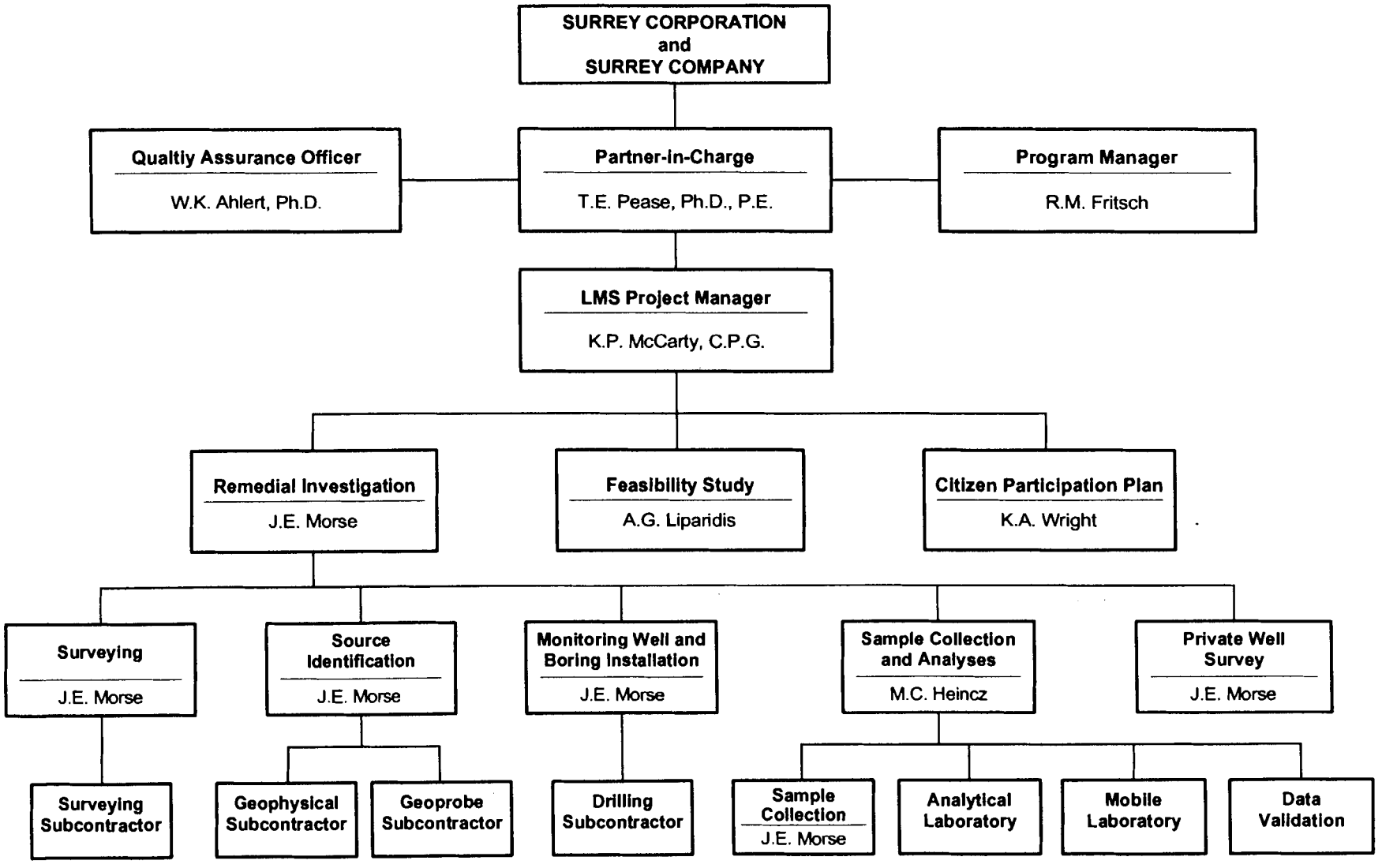
Ms. Ruth M. Fritsch will be the program manager for the Alsy Manufacturing Site RI/FS and will be the primary LMS contact for the NYSDEC. Ms. Fritsch's responsibilities will include technical and administrative support to the project manager and technical review of all submittals.

Ms. Karen A. Wright will serve as the project's Health and Safety Officer. In this role, she will be responsible for conducting the Site health and safety reconnaissance, preparing the Site-specific Health and Safety Plan (HASP), and ensuring compliance with the HASP provisions. Ms. Wright will also ensure that all field personnel have received appropriate health and safety, first aid, and CPR training, and have met the requirements of LMS' medical monitoring program. Ms. Wright will also serve as the citizen participation coordinator for the project.

Dr. William K. Ahlert will be the project Quality Assurance Officer (QAO). In this capacity, Dr. Ahlert will coordinate the preparation of and review the Site-specific quality assurance project plan (QAPjP) and provide ongoing surveillance of project activities to ensure conformance with the QAPjP. Dr. Ahlert is also responsible for reviewing project sampling and analytical procedures to ensure representative sample collection and performance of

FIGURE 7-1

PROJECT ORGANIZATION CHART
Alsy Manufacturing Site RI/FS



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analytical methodologies within specified criteria. Upon completion of data validation, Dr. Ahlert will oversee preparation of a data usability report qualifying the analytical results as necessary.

Ms. Jennifer E. Morse will serve as RI manager for the initial and detailed Site characterization, including oversight of all field activities. Her duties will include technical and administrative coordination of the probing, drilling, and surveying subcontractors; supervision of environmental sampling, and scheduling of field activities. Ms. Morse will also function as the on-site HSO during implementation of the field activities and as the project geologist, including evaluation of the field information obtained. She will be the primary author and coordinate the preparation of the detailed RI report.

Mr. Anthony Liparidis will be responsible for completion of the FS. Mr. Liparidis' responsibilities will include screening and detailed evaluation of alternatives. He will be the primary author of the FS letter reports and the final report to be submitted to NYSDEC.

Ms. Maria C. Heincz will be responsible for chemical assessments related to the Alsy Manufacturing project. Ms. Heincz will assist Dr. Ahlert in preparation of the QAPjP. Her duties will also include maintaining contact with the field team members, analytical laboratory, and data validator, and subsequent evaluation of the data generated, including preparation of data usability reports.

7.2 SUBCONTRACTORS

The subcontractors to be employed in completion of the field work at the Site are listed in Table 7-1, along with areas of subcontracting and their scope of work, subject to satisfactorily agreeing on terms and conditions, budgets and schedules.

TABLE 7-1

FIELD SAMPLING PLAN
PROPOSED SUBCONTRACTORS LIST
Alsy Manufacturing Site RI/FS

AREA OF SUBCONTRACTING	SCOPE OF WORK	PROPOSED SUBCONTRACTOR
Surveying	Complete survey of Site and elevation survey of all monitoring wells.	Affiliates & Deborah Lee King, L.S.
Analytical Laboratory	Perform chemical analysis on all samples.	Nytest Environmental Inc.
Data Validation	Evaluate selected samples analyzed by analytical laboratory for compliance with NYSDEC Analytical Services Protocol (ASP) and project data quality objectives.	Data Validation Services
Geoprobe	Install soil, soil gas, and groundwater probes throughout Site.	Zebra Environmental
Drilling	Perform soil borings and installation of monitoring wells.	Aquifer Drilling & Testing, Inc.
Geophysical Survey	Perform ground-penetrating radar (GPR) survey of Site to identify any former on-site disposal areas.	Sub-Surface Informational Surveys, Inc.

CHAPTER 8

SUPPORTING DOCUMENTS

8.1 HEALTH AND SAFETY PLAN

A Site-specific HASP prepared as a separate document is based on information obtained during the health and safety site reconnaissance conducted prior to preparation of the plan. All field activities will be performed in accordance with the procedures described in the HASP. Field personnel, including all subcontractors, will be supplied with a copy of the HASP and must sign a copy indicating that they have reviewed the plan prior to entry on to the Site.

8.2 QUALITY ASSURANCE PROJECT PLAN

A QAPjP has been prepared as a separate document for the sampling and analyses to be conducted at the Site. The QAPjP specifies QA objectives for the data collection effort as well as field and laboratory QA/QC requirements. All sampling and analyses will be conducted in accordance with the procedures and protocols specified in the QAPjP.

SURREY CORPORATION and SURREY COMPANY

ALSY MANUFACTURING SITE
Remedial Investigation and Feasibility Study

CITIZEN PARTICIPATION PLAN
FINAL DRAFT

March 1996

LMS
LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Environmental Science & Engineering Consultants
One Blue Hill Plaza • Pearl River, New York 10965

#698-001

SURREY COMPANY AND SURREY CORPORATION
SYOSSET, NEW YORK

ALSY MANUFACTURING SITE
HICKSVILLE, NASSAU COUNTY, NEW YORK
REMEDIAL INVESTIGATION/FEASIBILITY STUDY

Site I.D. No. 1-30-027

CITIZEN PARTICIPATION PLAN

March 1996

LAWLER, MATUSKY & SKELLY ENGINEERS LLP
Environmental Science & Engineering Consultants
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CITIZEN PARTICIPATION PLAN

ALSY MANUFACTURING SITE

Inactive Hazardous Waste Disposal Site

I INTRODUCTION TO PLAN

The New York State Department of Environmental Conservation (NYSDEC) is committed to a citizen participation program (CPP) as part of its responsibilities for the inactive hazardous waste site remedial program. Citizen participation promotes public understanding of these responsibilities, planning activities, and remedial activities at inactive hazardous waste disposal sites. It provides an opportunity for NYSDEC to acquire information from the public that will enable the agency to develop a comprehensive remedial program that is protective of both public health and the environment.

As part of its inactive hazardous waste disposal site remedial program, NYSDEC requires that a CPP be developed. This CPP has been prepared for the Alsy Manufacturing Site remedial investigation/feasibility study (RI/FS) in accordance with the requirements in 6NYCRR Part 375.7 (Requirements for Citizen and Participation) and the guidance provided in New York State Inactive Hazardous Waste Site Citizen Participation Plan dated 30 August 1988.

The CPP is one of several plans prepared in the initial stages of an RI/FS. The others include the Field Sampling Plan (FSP), the Health and Safety Plan (HASP), and the Quality Assurance Project Plan (QAPjP). These plans were developed in accordance with the Order on Consent #W1-0579-92-01; the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA); the Superfund Amendments and Reauthorization Act (SARA); the U.S. Environmental Protection Agency's (USEPA) document entitled Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (interim final, October 1988); the National Contingency Plan (NCP); and the Environmental Conservation Law of New York.

II BASIC SITE INFORMATION

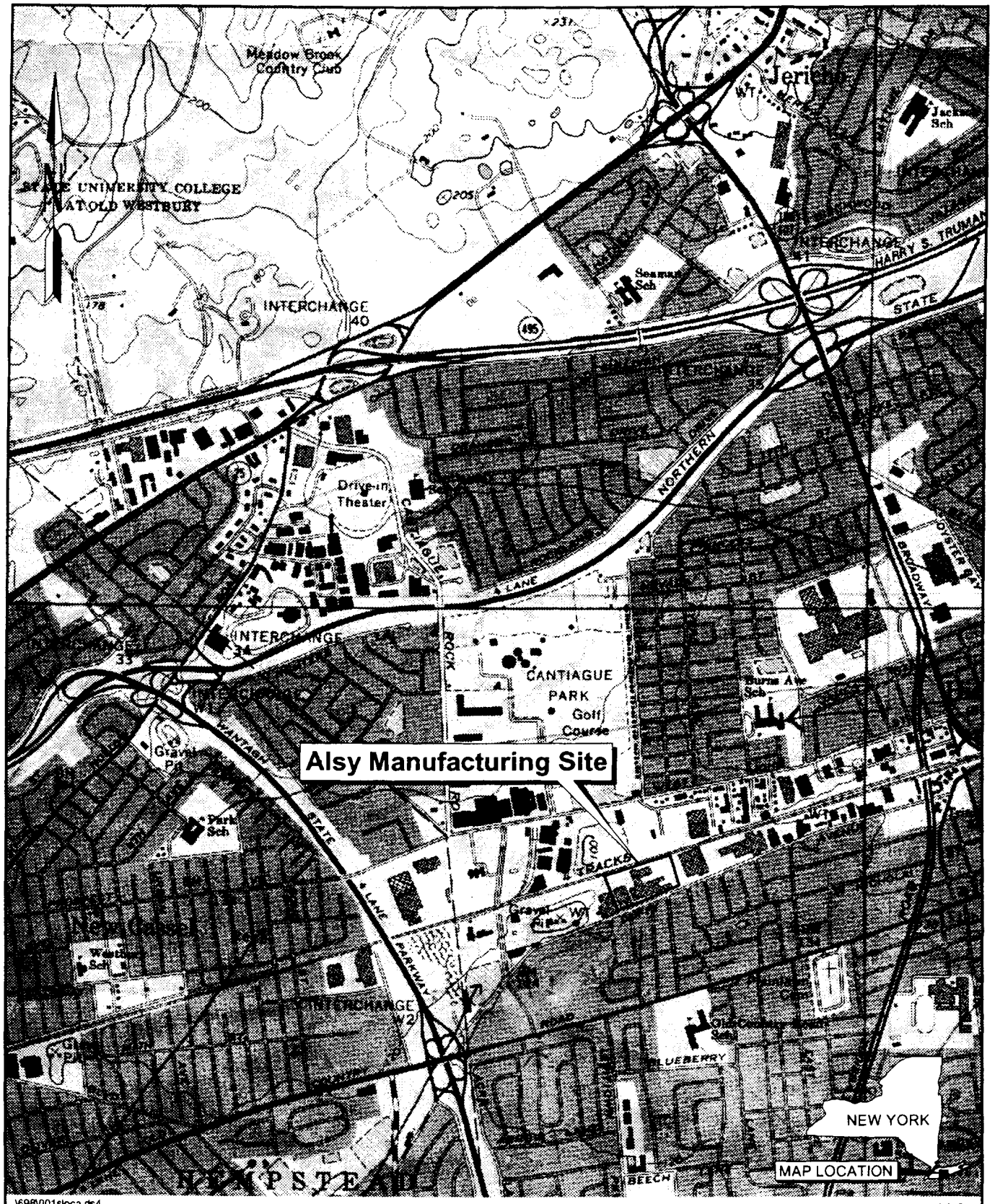
a. Site Description

The Alsy Manufacturing Site (Site), located at 270 and 280 Duffy Avenue in Hicksville, Nassau County, New York, is designated as a Class 2 Site, No. 1-30-027, on the New York State Registry of Inactive Hazardous Waste Disposal Sites (Figure 1). The Site is situated on approximately 4 acres of land, bounded on the north by the Long Island Railroad and a construction and demolition (C&D) debris reclaimer, on the south by Duffy Avenue, and on the east and west by other active and vacant industrial or commercial operations (Figure 2). The Site is improved with two one-story buildings faced with stucco and brick: the building at 270 Duffy Avenue is occupied by several commercial operations, and the building at 280 Duffy Avenue is occupied by a shoe store. On-site vegetation is limited to the Long Island Railroad bed, a narrow landscaped strip behind 270 Duffy Avenue, the immediate front of 270 Duffy Avenue, and a narrow strip of grass and mature trees along Duffy Avenue. The remainder of the unimproved parts of the Site are paved.

b. Site History

According to information gathered by the NYSDEC, and supplemented by investigations performed on behalf of previous Site owners, prior to 1975, the Site was occupied by Metalab, a laboratory furniture manufacturer. From 1975 until 31 March 1991, Alsy Manufacturing, Inc. ("Alsy") operated at the Site, producing and selling electric lamps and lamp shades. Alsy's manufacturing processes included antiquing and brass plating. During most of that time, the Site was owned by Balatem Corporation, which leased the property to Metalab, and after 1975, to Alsy. In 1985, Balatem Corporation sold the Site to Surrey Corporation, which assumed Balatem Corporation's lease with Alsy, the sole tenant. In 1989, with Alsy still leasing the Site, Surrey Corporation transferred the property to Surrey Company, the current owner. Alsy ceased operations at the Site in 1991.

According to records reviewed, the wastes generated and stored at the Site during Alsy's operations include: waste water treatment sludge containing cyanide, copper and zinc, paint strippers and thinners generated in the cleaning of painting equipment, and 1,1,1-trichloroethane from vapor degreasers (EA Phase I Investigation). These wastes were removed by a licensed industrial waste scavenger for off-site disposal (Fred C. Hart Associates, Inc. Phase II Work Plan, 1990). A State Pollutant Discharge Elimination System (SPDES) permit was issued to Alsy in 1977 for two on-site discharge points, authorizing discharge of sanitary wastes from one of the discharge points, and industrial waste waters containing copper, nickel, zinc, total



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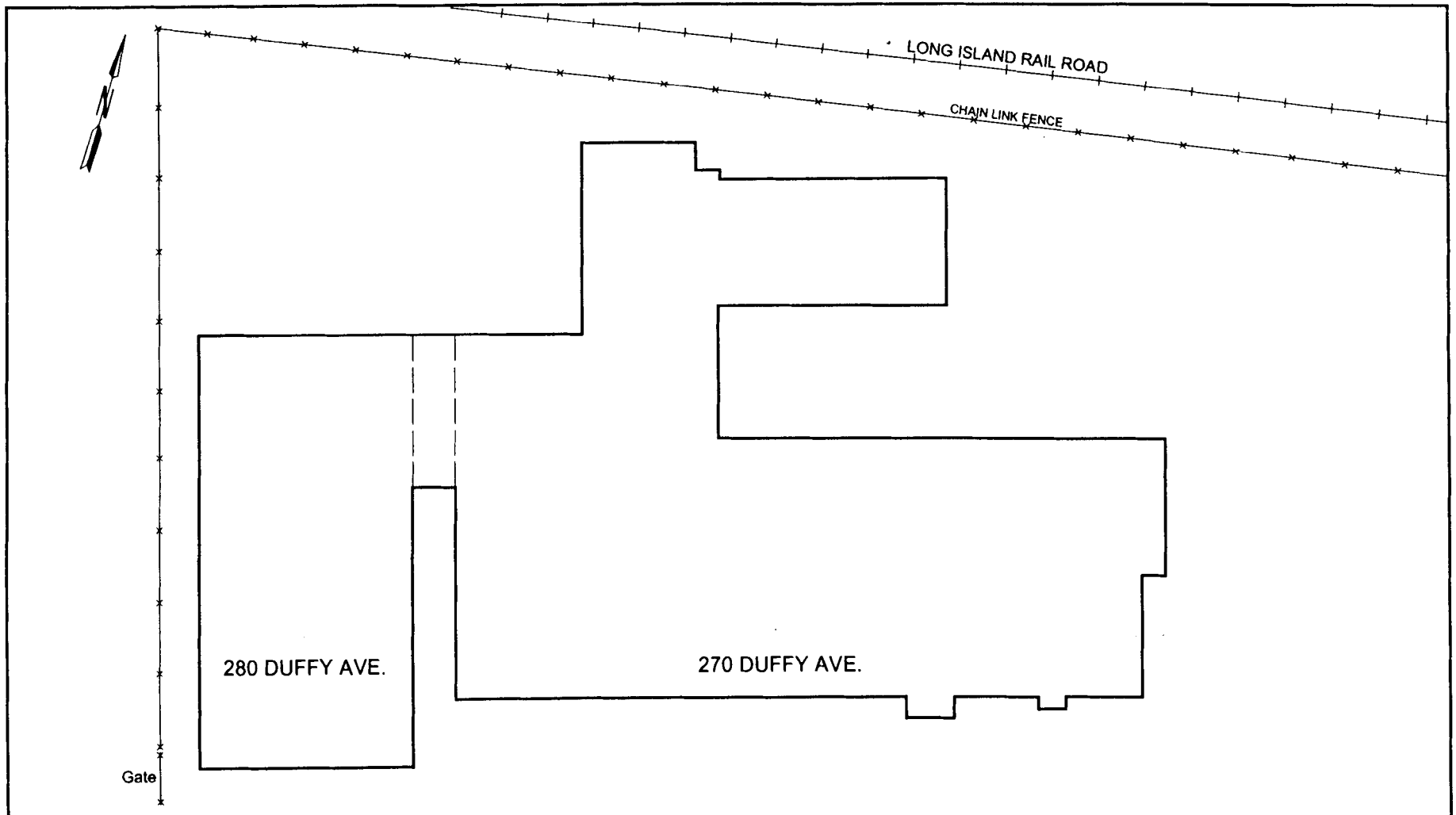
0 2000 ft

SCALE IN FEET

Map source: USGS 7.5-minute series quadrangle, Hicksville, NY, 1967, photorevised 1979.

LMS Lawler, Matusky & Skelly Engineers One Blue Hill Plaza • Pearl River, New York 10965 ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS	**Site Location** **Alsy Manufacturing - Oyster Bay, New York**	**Figure 1**



NOT TO SCALE

Map Source: Fred C. Hart (after Soil Mechanics Drilling Corp. [1985]).

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ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS

Site Sketch

Alsy Manufacturing - Oyster Bay, New York

Figure 2

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nitrogen, cyanide and chlorine within specified concentrations from the other point (Hart Phase II).

Between 1977 and 1983, the Nassau County Department of Health (NCDOH) and the NYSDEC conducted investigations at the Site in response to alleged permit violations (Hart Phase II). Samples gathered during these inspections indicated concentrations of permitted metals in excess of allowable levels, and the presence of methylene chloride, chloroform, trichloroethane, toluene, xylene and trichloroethylene (Hart Phase II). In addition, the results of self-monitoring conducted by Alsy in 1977-78 and 1980-81 showed concentrations of copper, cyanide, nickel, total nitrogen and zinc in excess of permit levels (Hart Phase II). Industrial discharge exceedences recorded by NCDOH are summarized in Table 1, and exceedences based on Alsy's monitoring data are summarized in Table 2 (Tables from Hart Phase II).

In February 1984, a joint inspection by NCDOH and NYSDEC identified four apparently unpermitted discharge points, as well as three industrial leach pools and two trenches, behind the buildings (Hart Phase II). Subsequent to the February 1984 inspection, between August 1984 and April 1988, soil and groundwater samples were collected by NYSDEC, NCDOH, the USEPA and consultants employed by either Balatem Corporation or Alsy, including Soil Mechanics Drilling Corporation, H2M Corporation, and Roux Associates, Inc. (Hart Phase II). The investigations conducted by Soil Mechanics Drilling Corporation and H2M Corporation confirmed the existence of five additional leach pools and three drywell catch basins (Hart Phase II). Sampling in these areas indicated heavy metal and volatile organic compound (VOC) contamination consistent with previous investigations.

In 1986, Alsy entered into an administrative order on consent with NYSDEC in settlement of alleged permit violations. In 1987, NYSDEC commissioned EA Science and Technology to conduct a Phase I site assessment, and in June 1987, a Phase I report was issued. Based on the Phase I report, NYSDEC classified the Site as a Class 2a Site on the Registry of Inactive Hazardous Waste Disposal Sites, an intermediate classification signifying that hazardous waste disposal is believed to have taken place, but further investigation is required to confirm whether conditions present a significant threat to human health or the environment.

In 1989, Surrey Corporation entered into an administrative order on consent with NYSDEC pursuant to which it was to conduct a Phase II site investigation of the Site. Surrey Corporation retained Fred C. Hart Associates, Inc. (Hart) to conduct the Phase II, and in 1990 Hart prepared a work plan for the investigation and it was submitted to the NYSDEC for approval. Before the implementation of Phase II investigation, NYSDEC reevaluated the data assembled for the Site and determined that it should be classified as a Class 2, a classification

TABLE 1 *

INDUSTRIAL DISCHARGE LIMIT VIOLATIONS
DOH SAMPLES

Parameter	Permit Limit (mg/L)[1]	Reported Discharge (mg/L)	Date/Period of Violation	Location
pH	6.0-8.5	4.3	10/12/77	Discharge Trough
Copper	0.4	1.42	10/12/77	Discharge Trough
Zinc	0.6	5.5	10/12/77	Discharge Trough
pH	6.0-8.5	4.6	1/11/78	Effluent Pipe
Copper	0.4	14.7	1/11/78	Effluent Pipe
Nickel	2.0	12.7	1/11/78	Effluent Pipe
Zinc	0.6	2.2	1/11/78	Effluent Pipe
Trichloroethylene [2,3]	0.050 [4]	0.42	4/26/78	Discharge Trough
Copper	0.4	5.5	6/29/78	Settling Tank #3
Nickel	2.0	5.8	6/29/78	Settling Tank #3
Zinc	0.6	1.3	6/29/78	Settling Tank #3
Copper	0.4	0.8	8/8/78	Settling Tank #1
Nickel	2.0	3.55	8/8/78	Settling Tank #1
Copper	0.4	18	12/4/79	Discharge Trough
Nickel	2.0	2.4	12/4/79	Discharge Trough
Zinc	0.6	4	12/4/79	Discharge Trough
Trichloroethylene [2]	0.050 [4]	0.145	8/19/80	Discharge Trough
Chloroform [2]		0.107	3/24/81	Discharge Trough
Trichloroethylene [2]	0.050 [4]	0.179	3/24/81	Discharge Trough
pH	6.0-8.5	4.3	11/17/83	Collection Trench
Copper	0.4	3.05	11/17/83	Collection Trench
Chloroform [2]		0.009	11/17/83	Collection Trench
Methylene Chloride [2]		0.063	11/17/83	Collection Trench
1,1,1-Trichloroethane [2]		0.03	11/17/83	Collection Trench
Total Xylenes [2]		0.01	11/17/83	Collection Trench

1 -- pH in pH units.
2 -- Not allowed at any levels by permit.
3 -- Sample collected by DEC.
4 -- State Health Department Guideline.

* From Fred C. Hart Associates, Inc., Site Investigation Work Plan, Alsy Manufacturing Site No. 130027, January 25, 1990 (Table 2--1)

TABLE 2 *

INDUSTRIAL DISCHARGE LIMIT VIOLATIONS
ALSY MANUFACTURING

Parameter	Permit Limit (mg/L)	Reported Discharge (mg/L)	Date/Period of Violation
Copper	0.4	7.2	8/01/77--8/31/77
Nickel	2.0	4.973	8/01/77--8/31/77
Nitrogen (total)	10.0	50.2	8/01/77--8/31/77
Zinc	0.6	2.66	8/01/77--8/31/77
pH	6.0--8.5	9.56	9/01/77--9/30/77
Copper	0.4	7.02	9/01/77--9/30/77
Cyanide	0.4	0.54	9/01/77--9/30/77
Zinc	0.6	4.82	9/01/77--9/30/77
pH	6.0--8.5	10.18	10/01/77--10/31/77
Copper	0.4	3.62	10/01/77--10/31/77
Zinc	0.6	0.968	10/01/77--10/31/77
pH	6.0--8.5	11.44	11/01/77--11/30/77
Copper	0.4	2.242	11/01/77--11/30/77
Zinc	0.6	1.532	11/01/77--11/30/77
Copper	0.4	3.523	12/01/77--12/31/77
Zinc	0.6	1.587, 5.092	12/01/77--12/31/77
Copper	0.4	1.158	3/13/78
Cyanide	0.4	0.77	3/13/78
Zinc	0.6	0.827	3/13/78
pH	6.0--8.5	4.02	6/13/78
Nitrogen (total)	10	10.7	6/13/78
Copper	0.4	1.111	7/18/78
Nitrogen (total)	10	11.9	7/18/78

1 -- pH in pH units.

* From Fred C. Hart Associates, Inc., Site Investigation Work Plan, Alsy Manufacturing Site No. 130027, January 25, 1990 (Table 2--1)

TABLE 2

INDUSTRIAL DISCHARGE LIMIT VIOLATIONS
ALSY MANUFACTURING

(CONTINUED)

Parameter	Permit Limit (mg/L)	Reported Discharge (mg/L)	Date/Period of Violation
pH	6.0--8.5	9.38	11/4/80
Copper	0.4	4.159	11/4/80
Zinc	0.6	0.689	11/4/80
Copper	0.4	0.611	11/11/80
Cyanide	0.4	12.5	11/18/80
Nitrogen (total)	10	83.49	11/18/80
Nickel	2	6.596	11/18/80
Zinc	0.6	1.208	11/18/80
pH	6.0--8.5	12.75	11/25/80
Cyanide	0.4	1.2	11/25/80
Nitrogen (total)	10	12.47	11/25/80
pH	6.0--8.5	8.92	12/5/80
Nitrogen (total)	10	13.15	12/5/80
pH	6.0--8.5	9.42	12/9/80
Nitrogen (total)	10	35.12	12/9/80
pH	6.0--8.5	9.85	1/6/81
Copper	0.4	0.484	1/13/81
Nitrogen (total)	2	17.43	1/13/81
Copper	0.4	1.108	1/20/81
Nickel	2	2.391	1/20/81
Nitrogen (total)	10	14.19	1/20/81
Copper	0.4	7.387	1/27/81
Nickel	2	6.891	1/27/81
Nitrogen (total)	10	52.15	1/27/81
Zinc	0.6	1.552	1/27/81

that signifies that a Site does pose a threat to human health or the environment. This reclassification meant that instead of a Phase II, it would be necessary to conduct a remedial investigation and feasibility study (RI/FS) of the Site.

Surrey Company, the current owner and Surrey Corporation, the former owner, entered into a new administrative order on consent with NYSDEC on 28 March 1995, and retained Lawler, Matusky & Skelly Engineers (LMS) to perform the RI/FS.

Since the 1987 Phase I site assessment, the Site has been graded and paved, and the buildings have been renovated and refaced. Several commercial enterprises currently occupy office space in the building at 270 Duffy Avenue and a wholesale shoe business occupies the building at 280 Duffy Avenue.

c. Previous Investigations

Following is a summary of the previous investigations of the Alsy Site:

- In February 1984 NYSDEC conducted several inspections and found several unpermitted discharges, overflowing leach pools, and a septic pool.

- Additional leach pool samples were collected by NYSDEC during a subsequent investigation in August 1984.

- In November 1984 Soil Mechanics Drilling Corporation (Soil Mechanics), conducted a site investigation for Balatem Corporations. Samples were collected from standing water, a dry well, and existing septic pools.

- H2M collected samples from several leach pools and catch basins and sampled two soil piles in April 1985 in response to a Summary Abatement Order (SAO) issued by NYSDEC to Alsy.

- The New York State Department of Health (NYSDOH) collected subsurface soil samples at six locations in April 1985.

- NYSDEC collected six water samples from leach pools and catch basins, three soil/sludge samples from leach pools and catch basins, one discrete surface soil sample, two composite surface soil samples, and one composite soil pile sample in May 1985.

- Soil Mechanics installed and sampled two monitoring wells in January 1987.

- NUS Corporation (NUS), a USEPA contractor, collected groundwater, sediment, and surface water samples in June 1987.

- In 1988 and 1989 Roux Associates, Inc. (Roux), was retained by Alsy and collected soil and groundwater samples from the existing monitoring wells. Roux also installed and sampled eight additional monitoring wells and drilled and sampled five test borings.

The work plan for the Phase II investigation prepared by Hart summarized data from the above-cited previous investigations on the Alsy Site. Based on a review of the data the identified contaminants of concern include eight volatile organic compounds (VOCs), five metals, and cyanide. Table 3 presents a summary taken from the Hart report of the highest concentrations for the major contaminants of concern found previously on the Site for the various environmental matrices sampled (Hart Phase II).

d. Problems Identified at the Site

In November 1987 NYSDEC classified the Alsy Manufacturing Site as a Class 2a inactive hazardous waste site. This was based on the results of a Phase I site assessment of the Site conducted by EA Science & Technology in 1987. 1,1,1-Trichloroethane (1,1,1-TCA) was found at a concentration of 10,000 μg/l in the groundwater on the Site and 42,000 μg/l in a leach pool. Methylene chloride (MC), ethylbenzene, toluene, and xylenes were detected at 12,000, 55,000, 2,500,000, and 40,000 μg/l respectively, in a leach pool. Other VOCs detected at the Site at elevated levels included: trichloroethylene (TCE), tetrachloroethylene (TETRA), and 1,1-dichloroethane (1,1-DCA) (Hart Phase II). Heavy metals, including arsenic, copper, lead, nickel, and zinc, were found at elevated concentrations in the leach pools, and cyanide was found at elevated levels in soil and sediment samples from leach pools (Hart Phase II).

MC, TCE, TETRA, arsenic, and nickel are potential human carcinogens according to the National Institute for Occupational Safety and Health (NIOSH). As the Site is paved, no immediate public health threat exists related to contact with contaminated soils. The local residences are serviced by a public water supply; therefore, no immediate public health threat exists in relation to contaminated groundwater, either.

TABLE 3

CHEMICALS FOUND AND CONCENTRATIONS DETECTED
Alsy Manufacturing Site

COMPOUND	SOIL (mg/kg)	SEDIMENT (mg/kg)	GROUNDWATER (µg/l)	LEACH POOL (µg/l)
1,1-Dichloroethane	11	-	220	280
Ethylbenzene	-	860	-	55,000
Methylene chloride	-	99	340	12,000
Tetrachloroethylene	-	35	680	67
Toluene	7	3000	330	2,500,000
1,1,1-Trichloroethane	1500	0.6	10,000	42,000
Trichloroethylene	1	-	214	190
Xylenes	3	6,200	-	40,000
Arsenic	201	-	360	90,000
Copper	29,100	365	1620	464,000
Lead	-	-	341	96,500
Nickel	50,700	226	2340	169,000
Zinc	17,100	974	971	286,000
Cyanide	182	17.8	-	-

III PROJECT DESCRIPTION

LMS has been retained by Surrey to perform an RI/FS at the Alsy Manufacturing Site. The goals of the RI/FS are to define the nature and extent of the contamination at and originating from the Site resulting from Site operations, evaluate potential remedial alternatives, and recommend a remedial action for the Site.

As part of the RI/FS, work plans are required to be prepared. An RI/FS Work Plan describes the overall scope of the project. The FSP describes the field work to be conducted. The HASP describes health and safety practices and air monitoring requirements to be employed during the field work. The QAPjP describes the quality assurance/quality control (QA/QC) procedures to be used for collecting and analyzing samples. The Citizen Participation Plan (CPP), which is part of the workplan, describes the procedures to be used to exchange information with the interested/affected public as the project proceeds.

After the documents are prepared and reviewed by NYSDEC, they will be available for review by the public at the document repositories (Section VI).

The RI of the Alsy Manufacturing Site will consist of the following field activities:

- Site Survey. Preparation of a surveyed base map that includes property boundaries and topography.

- Soil Gas and Groundwater Survey. Ten soil gas points will be located along the up-, side-, and downgradient edges of the property. Soil gas samples will be collected at two depths above the water table from each point. A probe will be used to drill and collect the soil gas samples. The samples will be analyzed for VOCs using a field gas chromatograph (GC). At the same 10 locations used for the soil gas survey, three groundwater samples will be collected at each location and analyzed for VOCs using a field GC. Filtered and unfiltered water samples will also be collected and analyzed at Nytest Environmental, Inc. (NEI), a NYSDOH-certified laboratory for metals. The samples will be collected in 10- to 15-ft intervals. One groundwater sample from each location will be submitted for confirmatory Target Compound List (TCL) VOC analysis by NEI. One filtered and one unfiltered groundwater sample will be sent to NEI for Target Analyte List (TAL) metals and cyanide.

- Ground Penetrating Radar (GPR) Survey. A GPR survey will be conducted to identify structures below the ground surface such as leach pools and dry wells.

- Soil Sampling. Soil samples will be collected around the structures identified during the GPR survey using the a soil probe. Six shallow test holes will be installed below strategic points along the buildings. Soil gas and soil samples will be collected from each location at two depths and analyzed for VOCs using the field GC. Soil samples will also be analyzed for metals by NEI. Twenty additional test holes will be drilled to a depth of about 65 ft out from the discharge point at increasing distances. Four soil and one filtered groundwater sample will be analyzed on-site and at NEI for VOCs and metals. Three additional deep test holes will be drilled to a depth of approximately 110 ft. Three soil and three groundwater samples will be collected from each of the three additional test holes and analyzed for VOCs with the field GC. Filtered groundwater samples will be sent to NEI for TAL metals analysis. All soil samples will be analyzed by NEI for chromium, nickel, copper, zinc, lead, cadmium, antimony, and tin using an XRF meter. One soil and one groundwater sample will be sent to NEI for confirmatory VOC analysis and TAL metals and cyanide. Confirmatory analysis will be reviewed and selected samples will then be submitted for toxicity characteristic leaching procedure (TCLP) metals.

- Monitoring Well Installation and Sampling. Five new monitoring wells will be constructed at locations based on the results of the groundwater probe sampling. Split-spoon soil samples will be collected and logged during the construction of the new monitoring wells. Groundwater from each of the five new monitoring wells and five of the existing wells will be collected and submitted for analysis to NEI for TCL organics [VOCs, semivolatile organic compounds (SVOCs), pesticides, and polychlorinated biphenyls (PCBs)], and TAL metals and cyanide. Each well will be slug tested following sampling to determine specific aquifer properties, including horizontal permeability.

- Abandonment of Existing Monitoring Wells. Existing monitoring wells will be located during the GPR survey and assessed as to their usability; the wells will be repaired, if necessary. Unusable wells will be abandoned by grouting in accordance with NYSDEC protocol.

The results of the field investigation will be summarized and submitted to Surrey and to NYSDEC in the draft RI report. Comments from Surrey/NYSDEC on the RI investigation will be evaluated and incorporated into the final RI prior to completing the FS.

Following completion of the RI, LMS will complete the FS, which will identify remedial action levels and quantities of contamination. Remedial action levels will be identified in accordance with state and Federal regulations and guidelines. Remedial alternatives will be developed to address the contaminants of concern at the Site. These alternatives will be evaluated for their effectiveness, implementability, and cost.

Based on the detailed evaluation of the alternatives in the FS, an alternative will be recommended. The draft FS report submitted to Surrey and NYSDEC will include remedial action levels, quantities of contaminated media, development of remedial alternatives, evaluation of the alternatives, and the recommended alternative.

The schedule of remedial program activities is shown on Table 4 for the RI/FS.

TABLE 4

ALSY MANUFACTURING
SITE # 1-30-027

PROJECT SCHEDULE

TASK	WORK TASK	START DATE OR DUE DATE
1	Development of Work Plans	5/5/95
	NYSDEC Approval and Notice to Proceed	3/18/96*
	Public Information Meeting	3/30/96*
2	Remedial Investigation	4/2/96
	Draft RI Report	10/30/96
	Review of RI Report	11/30/96
3	Feasibility Study	7/20/96
	Draft/Final F/S	12/20/96*
4	Public Information Meeting	1/20/97*

*Dates are approximated and will be based on review and comment period.

IV IDENTIFICATION OF AFFECTED AND/OR INTERESTED PUBLIC

LOCAL OFFICIALS

Town of Oyster Bay:

Town Supervisor Lewis J. Yevoli
54 Audrey Avenue
Oyster Bay, NY 11771
(516) 624-6350

Town Board Members
Thomas L. Clark
Angelo A. Delligatti
Leonard G. Kunzig
Joseph D. Muscarella
Louis G. Savinetti
Leonard B. Symons
54 Audrey Avenue
Oyster Bay, NY 11771
(516) 624-6300

Town Clerk (vacant as of 5/8/95)
54 Audrey Avenue
Oyster Bay, NY 11771
(516) 624-6333

Department of Environmental Control
Richard Lenz or
Eric Swenson - Superintendent
150 Miller Street
Syosset, NY 11799
(516) 677-5935

COUNTY OFFICIALS:

Nassau County Executive
Thomas Gulotta
1 West Street
Mineola, NY 11501
(516) 571-3131

Nassau County District Attorney
Denis Dillon
262 Old Country Road
Mineola, NY 11501
(516) 571-3800

STATE OFFICIALS:

Governor George Pataki
The State Capital
Executive Chamber
Albany, NY 12224
(518) 474-1041

Assemblywoman Donna Ferrara
150 Post Avenue
Westbury, NY 11590
(516) 338-2693

Assemblyman Philip Healey
700 Broadway
Massapequa, NY 11758
(516) 541-8222

Assemblyman Marc Herbst
183 Broadway
Hicksville, NY 11801
(516) 938-3168

Assemblyman David Sidikman
146A Manetto Hill Road
Plainview, NY 11803
(516) 822-5590

Senator Kemp Hannon
1600 Stewart Avenue
Westbury, NY 11590
(516) 222-0068

Senator Norman Levy
100 Broadhollow Road
Farmingdale, NY 11735
(516) 845-4063

Senator Carl Marcellino
250 Townsand Square
Oyster Bay, NY 11771
(516) 922-1811

Senator Michael Tully, Jr.
1 Expressway Plaza, Suite 201
Roslyn Heights, NY 11577
(516) 484-7070

FEDERAL OFFICIALS:

Congressman Gary Ackerman
229 Main Street
Huntington, NY 11743
(516) 423-2154

Congressman Peter King
1003 Park Blvd.
Massapequa Park, NY 11762
(516) 541-4225

Senator Alfonse D'Amato
7 Penn Plaza
7th Avenue, Suite 600
New York, NY 10001
(212) 947-7390

Senator Daniel P. Moynihan
405 Lexington Avenue, Suite 4101
New York, NY 10174
(718) 661-5150

ADJACENT PROPERTY OWNERS:

Long Island Railroad
Jamaica Station
Jamaica, NY 11435
(718) 990-7400

SmithKline Beecham Corp. (owner of Magnusonic Devices, Inc., at 290 Duffy Avenue)
709 Swedeland Road
P.O. Box 1539
King of Prussia, PA 19406-0939

Paul Industries, Inc.
260 Duffy Avenue
Hicksville, NY 11801

ADDITIONAL INTERESTED/AFFECTED PUBLIC:

Hicksville Water District
4 Dean Street
Hicksville, NY 11801
(516) 931-0184

Hicksville Public Schools - School Board
Division Avenue
Hicksville, NY 11801
(516) 733-6600

Long Island Citizen's Advisory Committee on Hazardous Waste
Attn: Jeffrey Fullmer, LICAC HW Co-chairman
550 Nesconset Highway
Hauppauge, NY 11787

Duffy Park Civic Association
Attn: David M. Staton, President
349 West Nicholai Street
Hicksville, NY 11801

Sierra Club Long Island
325 Laurel Lane
Laurel Hollow, NY 11797

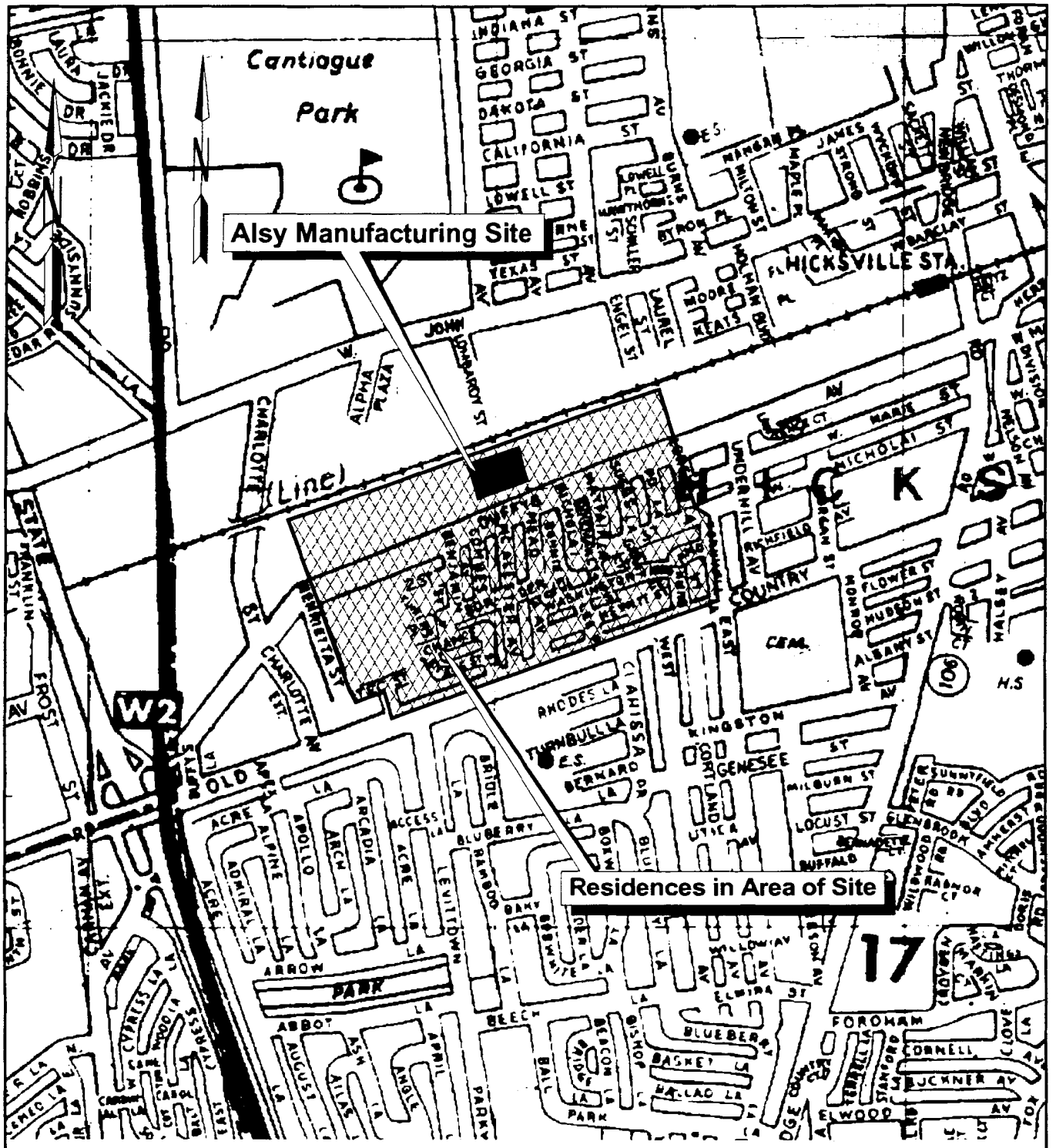
Citizens Campaign for the Environment
518 Broadway
Massapequa, NY 11758

Oyster Bay Historical Society
20 Summit
Oyster Bay, NY 11771

Northwest Civil Association
95 Kuhl Avenue
Hicksville, NY 11801

RESIDENTS IN THE AREA OF THE SITE:

Local residents are considered those who live within the area bounded by Old Country Road to the south; Henrietta Street and Tec Street to the west (extending north to Long Island Railroad tracks (LIRR); the LIRR tracks to the north; and Lorettala Lane and Cornwall Lane to the east (extending north to the LIRR tracks). See Figure 3 for map of area. Land owners who do not reside within the above- referenced boundary are considered to be residents in the area of the Site with regard to citizen participation.



Map source: Hagstrom Map of Nassau County, 1991.

LMS Lawler, Matusky & Skelly Engineers One Blue Hill Plaza • Pearl River, New York 10965 ENVIRONMENTAL SCIENCE & ENGINEERING CONSULTANTS	**Location of Residences in Area of Site** **Alsy Manufacturing - Oyster Bay, New York**	**Figure 3** v001-resi.ds4

MEDIA:

News 12 Long Island
1 Media Crossways Drive
Woodbury, NY 11797
(516) 496-1200

Newsday
235 Pinelawn Road
Melville, NY 11747
(516) 843-2700

Hicksville Illustrated News
132 East 2nd Street
Mineola, NY 11501
(516) 747-8282

Hicksville - A Mid-Island Herald
1 Jonathan Avenue
Hicksville, NY 11801
(516) 931-1400

Pennysaver
26 Jericho Turnpike
Jericho, NY 11753
(516) 333-7400

WABC - TV Channel 7
Eyewitness News Long Island Bureau
100 Supreme Court Drive
Mineola, NY 11501
(516) 294-7777

WACI
48 South Service Road
Melville, NY 11747
(516) 420-8954

WOR Radio
121 Front Street
Mineola, NY 11501
(516) 294-6533

WPIX - TV
100 Supreme Court Drive
Mineola, NY 11501
(516) 248-5603

WPOB-FM
50 Kennedy Drive
Plainview, NY 11803
(516) 937-6373

WRHU
1000 Fulton Avenue
Hempstead, NY 11590
(516) 463-5667

V IDENTIFICATION OF DEPARTMENT CONTACTS

NYSDEC Project Manager:
Christopher LaFemina
NYSDEC
N. Loop Rd, SUNY Campus
Stony Brook, NY
(516) 444-0242

NYSDEC Division of Enforcement Contact Person:
Rosalie K. Rusinko, Esq.
Division of Enforcement
NYSDEC
200 White Plains Road
Tarrytown, NY 10591
(914) 332-1835

NYSDEC Citizen Participation Specialist
NYSDEC
N. Loop Rd, SUNY Campus
Joshua Epstein
Stony Brook, NY
(516) 444-0249

NYSDEC Toll Free 800 Contact Number:
(800) 342-9296

New York State Department of Health (NYSDOH) Contact Person:
Nina Knapp
2 University Plaza
Albany, NY 12203-3399
(518) 458-6402
(800) 458-1158 Ext. 402 (in state only)

Michael Kadlec
Environmental Health Specialist
2 University Plaza, Room 205
Albany, NY 12203-3399
(518) 458-6305

Nassau County Department of Health Contact Person: Steven Silvers
240 Old Country Road
Mineola, NY 11501
(516) 571-3642

VI IDENTIFICATION OF DOCUMENT REPOSITORY

Documents related to remedial activities at the Site are available for public review at:

1. Hicksville Public Library
   169 Jerusalem Avenue
   Hicksville, NY
   (516) 931-1417

   Library Hours: Monday through Thursday 9:00 a.m. to 9:00 p.m.; Friday 9:00 a.m. to 7:00 p.m.; Saturday 9:00 a.m. to 5:00 p.m.; and Sunday 1:00 p.m. to 5:00 p.m. The library is closed on Sundays from June through October.

   Contact: Assistant Director Marilyn Kappenberg

2. NYSDEC Region 1 Office
   N. Loop Rd, SUNY Campus
   Stony Brook, NY
   (516) 444-0249

   NYSDEC Hours: Monday through Friday 8:30 a.m. to 4:45 p.m.

   Contact: Joshua Epstein

The documents that will be available at the repository over the course of the project include: draft RI/FS Work Plan, final RI/FS Work Plan, HASP, QAPjP, FSP, this CPP, draft RI report, draft RI/FS report, final RI/FS report, public meeting transcript, and other information as appropriate.

VII DESCRIPTION OF SPECIFIC CITIZEN PARTICIPATION ACTIVITIES FOR EACH MAJOR ELEMENT OF THE REMEDIAL PLAN

CITIZEN PARTICIPATION PLAN

After the CPP is approved at least one copy will be available at each of the two document repositories.

FACT SHEETS

Three fact sheets will be prepared during the course of the project. The first fact sheet will be prepared and distributed to the contact list (Section IV), be available at the document repositories, announce the date, time, and location of the first public meeting, and summarize the RI work plan activities. The second fact sheet will be distributed after completion of the RI field work and submittal of the draft RI report. A third fact sheet will be prepared and sent to the contact list notifying the interested parties of the availability of the final draft RI/FS report. The fact sheet will summarize the findings of the study, provide a brief analysis of the proposed remedial program and the reasons for its selection, and request comments on the RI/FS, and announce the date, time, and location of a public meeting.

PUBLIC MEETINGS/PRESS RELEASES

Two public meetings are planned, with a place to be designated at a later date. The first informal public meeting will be held to discuss the RI/FS work plans. A press release (written and distributed by NYSDEC) will be distributed to Newsday and the local weeklies to announce the availability of the draft RI/FS work plans and the date, time, and location of the informal public meeting. The final RI/FS work plans will be prepared after the meeting and will be available at the document repositories.

A second press release will be prepared and distributed by NYSDEC to announce the completion of the RI Report, its placement into the repositories, and the mailing of the RI fact sheet to the contact list.

A second public meeting will be held upon completion of the FS at which the RI/FS report will be discussed. A transcript of the public meeting will be prepared and made available for public inspection and copying at the document repositories. A third press release will be prepared and distributed by NYSDEC to announce the completion of the draft final RI/FS, the date, time, and location of the public meeting, and the notice of the public comment period.

date, time, and location of the public meeting, and the notice of the public comment period. A 30-day comment period will be allowed during which the public can transmit comments on the report to NYSDEC. A responsiveness summary will be prepared and sent to the interested public on the contact list. If the actual implemented program differs significantly from the selected program, a press release will be prepared and distributed by NYSDEC that will describe the differences and the reasons for the changes.

VIII GLOSSARY

AVAILABILITY SESSION - Scheduled gathering of the NYSDEC staff, potentially responsible party (PRP) staff, and the public in a setting less formal than a public meeting. Encourages one-to-one discussions in which the public meets with NYSDEC and PRP staff on an individual or small group basis to discuss particular questions or concerns.

CITIZEN PARTICIPATION - A process to inform and involve the interested/affected public in the decision-making process during identification, assessment, and remediation of inactive hazardous waste sites. This process helps to assure that the best decisions are made from environmental, human health, economic, social, and political perspectives.

CITIZEN PARTICIPATION PLAN - A document that describes the Site-specific citizen participation activities that will take place to complement the "technical" (remedial) activities. It also provides Site background and rationale for the selected citizen participation program for the Site. A plan may be updated or altered as public interest or the technical aspects of the program change.

CITIZEN PARTICIPATION SPECIALIST - A NYSDEC staff member who provides guidance, evaluation, and assistance to help carry out a Site-specific citizen participation program.

CONSENT ORDER - A legal and enforceable negotiated agreement between NYSDEC and responsible parties under which responsible parties agree to undertake investigation and cleanup or pay for the costs of investigation and cleanup work at a site. The order includes a description of the remedial actions to be undertaken at the site and a schedule for implementation.

CONSTRUCTION - PRP selects contractors and supervises construction work to carry out the designed remedial alternative. Construction may be as straightforward as excavation of contaminated soil with disposal at a permitted hazardous waste facility. On the other hand, it may involve drum sampling and identification, complete encapsulation, leachate collection, storage and treatment, groundwater management, or other technologies. Construction costs may vary from several thousand dollars to many millions of dollars, depending on the size of the site; the soil; groundwater and other conditions; and the nature of the wastes.

CONTACT LIST - Names, addresses, and/or telephone numbers of individuals, groups, organizations, and media interested and/or affected by a particular hazardous waste site. The

list is compiled and updated by the PRP. Interest in the site, stage of remediation, and other factors guide how comprehensive the list becomes. Used to help the PRP inform and involve the interested/affected public.

CONTRACT - A legal document signed by a contractor and NYSDEC to carry out specific site remediation activities.

CONTRACTOR - A person or firm hired to furnish materials or perform services, especially in construction projects.

DELISTING - Removal of a site from the state Registry based on study that shows the site does not contain hazardous wastes.

DOCUMENT REPOSITORY - Typically, a regional NYSDEC office and/or public building, such as a library near a particular site, at which documents related to remedial and citizen participation activities at the site are available for public review. Provides access to documents at times and a location convenient to the public. Environmental Management Councils (EMCs), Conservation Advisory Committees (CACs), and active local groups often can serve as supplemental document repositories.

FEASIBILITY STUDY (FS) - A process for developing, evaluating, and selecting remedial actions, using data gathered during the RI to define the objectives of the remedial program for the site and broadly develop remedial action alternatives; perform an initial screening of these alternatives; and perform a detailed analysis of a limited number of alternatives that remain after the initial screening stage.

INFORMATION OR FACT SHEET - A written discussion of a site's remedial process, or some part of it, prepared by the PRP for the public in easily understandable language. May be prepared for the "general" public or a particular segment. Uses may include, for example, discussion of an element of the remedial program, opportunities for public involvement, availability of a report or other information, or announcement of a public meeting. May be mailed to all or part of the interested public, distributed at meetings and availability sessions, or sent on an "as-requested" basis.

INTERIM REMEDIAL MEASURE (IRM) - An action taken to resolve an immediate hazard or an action that can be accomplished very quickly to reduce the contamination and the potential risk.

MONITORING/MAINTENANCE - Denotes postclosure activities to ensure continued effectiveness of the remedial actions. Typical monitoring/maintenance activities include quarterly inspection by an engineering technician, measurement of level of water in monitoring wells, or collection of groundwater and surface water samples and analysis for factors showing the condition of water, presence of toxic substances, or other indicators of possible pollution from the site. Monitoring/maintenance may be required indefinitely at many sites.

PHASE I SITE INVESTIGATION - Preliminary characterizations of hazardous substances present at a site; estimates pathways by which pollutants might be migrating away from the original site of disposal; identifies population or resources that might be affected by pollutants from a site; observes how the disposal area was used or operated; and gathers information regarding who might be responsible for wastes at a site. Involves a search of records from all agencies known to be involved with a site and interviews with site owners, employees, and local residents to gather pertinent information about a site. Information gathered is summarized in a Phase I report.

After a Phase I investigation, NYSDEC may choose to initiate an emergency response, to nominate the site for the National Priority List, or, where additional information is needed to determine site significance, to conduct a further (Phase II) investigation.

PHASE II SITE INVESTIGATION - Ordered by NYSDEC when additional information is still needed after completion of Phase I to properly classify the site. A Phase II investigation is not sufficiently detailed to determine the full extent of the contamination, to evaluate remedial alternatives, or to prepare a conceptual design for construction. Information gathered is summarized in a Phase II report and is used to arrive at a final hazard ranking score and to classify the site.

POTENTIALLY RESPONSIBLE PARTY (PRP) LEAD SITE - An inactive hazardous waste site at which those legally liable for the site have accepted responsibility for investigating problems at the site, and for developing and implementing the site's remedial program. PRPs include those who owned the site during the time wastes were placed, current owners, past and present operators of the site, and those who generated the wastes placed at the site. Remedial programs developed and implemented by PRPs generally result from an enforcement action taken by the state and the costs of the remedial program are generally borne by the PRP.

PROJECT MANAGER - A NYSDEC staff member within the Division of Hazardous Waste Remediation (usually an engineer, geologist, or hydrogeologist) responsible for overseeing all PRP activities and ultimate disposition of one or more hazardous waste sites. The project

manager works with the Office of Public Affairs as well as fiscal and legal staff to accomplish site-related goals and objectives.

PUBLIC - The universe of individuals, groups, and organizations (1) affected (or potentially affected) by an inactive hazardous waste site and/or its remedial program; (2) interested in the site and/or its remediation; (3) having information about the site and its history.

PUBLIC MEETING - A scheduled gathering of staff and the public to give and receive information, ask questions, and discuss concerns. Such meetings may be relatively informal or more formal. The latter usually include a public comment period and means of documenting this input and response (a responsiveness summary).

PUBLIC NOTICE - A written or verbal informational technique for telling people about an important part of a site's remedial program coming up soon (e.g., announcement that the report for the RI/FS is publicly available or that a public meeting has been scheduled). The public notice may be formal and meet legal requirements (for example, what it must say, such as announcing the beginning of a public comment period; where, when, and how it is published).

PUBLISH - For purposes of 6NYCRR Part 375.7, at a minimum requires publication of a legal notice in a local newspaper of general circulation.

Another kind of public notice may be more informal and may not be legally required (e.g., paid newspaper advertisement, telephone calls to key citizen leaders, targeted mailings).

RANKING SYSTEM - The U.S. Environmental Protection Agency uses a hazard ranking system (HRS) to assign numerical scores to each inactive hazardous waste site. The scores express the relative risk or danger from the site.

REMEDIAL DESIGN - Once a remedial action has been selected, technical drawings and specifications for remedial construction at a site are developed, as specified in the final RI/FS report. Design documents are used to bid and construct the chosen remedial actions. Remedial design is prepared by consulting engineers with experience in inactive hazardous waste disposal site remedial actions.

REMEDIAL INVESTIGATION (RI) - A process to determine the nature and extent of contamination by collecting data and analyzing the site. It includes sampling and monitoring as necessary, and the gathering of sufficient information to determine the necessity for, and proposed extent of, a remedial program for the site.

RESPONSIBLE PARTIES - Individuals or companies (e.g., site owners, operators, transporters, or generators of hazardous waste) responsible for or contributing to the contamination problems at a hazardous waste site. PRP is a potentially responsible party.

RESPONSIVENESS SUMMARY - A formal or informal written or verbal summary and response by NYSDEC to public questions and comments. Prepared during or after important elements in a site's remedial program. The responsiveness summary may list and respond to each question, or summarize and respond to questions in categories.

SITE CLASSIFICATION - NYSDEC assigns sites to classifications established by state law, as follows:

- CLASSIFICATION 1 - A site causing or presenting an imminent danger of causing irreversible or irreparable damage to the public health or environment - immediate action required.

- CLASSIFICATION 2 - A site posing a significant threat to the public health or environment - action required.

- CLASSIFICATION 2a - A temporary classification for a site known or suspected to contain hazardous waste. Most likely the site will require Phase I and Phase II investigations to obtain more information. Based on the results, the site then would be reclassified or removed from the state Registry of Inactive Hazardous Waste Sites if found not to contain hazardous wastes.

- CLASSIFICATION 3 - A site that has hazardous waste confirmed, but not a significant threat to the public health or environment - action may be deferred.

- CLASSIFICATION 4 - A site that has been properly closed - requires continued management.

- CLASSIFICATION 5 - A site that has been properly closed, with no evidence of present or potential adverse impact - no further action required.

SITE PLACED ON REGISTRY OF INACTIVE HAZARDOUS WASTE SITES - Each inactive site known or suspected of containing hazardous waste must be included in the Registry. Therefore, all sites that state or county environmental or public health agencies identify as known or suspected to have received hazardous waste should be listed in the

REFERENCES CITED

1) Fred C. Hart Associates, Inc. 1990. Site Investigation Work Plan, Alsy Manufacturing Site No. 130017.

2) EA Science & Technology. 1987. Engineering Investigations at Inactive Hazardous Waste Sites in State of New York Phase I Investigation, Alsy Manufacturing Site No. 130027, Town of Oyster Bay, Nassau County.