REMOVAL ACTION PLAN

FOR

HOLTZMAN-SILVERMAN
WASHTENAW COUNTY, MICHIGAN

Prepared For:

U.S. Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois

CONTRACT NO. 68-01-7367

TAT-05-N-00084

TDD NO. 5-8711-09

Prepared By:

WESTON-SPER
Technical Assistance Team
Region V

June 1988

PCB COMPLIANCE INSPECTION REPORT

I SITE IDENTIFICATION

Textile Road Drum Site
NW¼, Section 25, Ypsilanti Township
Washtenaw County, Michigan

II DATES OF INSPECTION

June 29, 1983

III PARTICIPANTS

June 23, 1983 Meeting

Mr. Elmore Eltzroth, MDNR, Groundwater Quality Division, District Supervisor
Mr. Gene Hall, MDNR, Groundwater Quality Division, Investigator
Ms. Margaret Fields, MDNR/EPA, PCB Unit (Author)
Mr. Barry Johnson, Washtenaw County Health Department, Director
Mr. Robert Colburn, Washtenaw County Health Department
Mr. David Pluddeman, Washtenaw County Health Department
Mr. Dan McClaughlin, Washtenaw County Sheriff Department
Mr. John Voelpel, Attorney, Hotzman & Silverman
Mr. Gilbert Silverman, Land Contract Vendee
Mr. Dan Baumhardt, H & S Property Manager
Mr. John Pirich, Attorney, Thumm's
Mr. Lewis Thumm, Son of Land Titled Owners, Land Contract Vendors

June 29, 1983 Site Inspection

Entirety

Mr. Gene Hall, MDNR, Groundwater Quality Division, Investigator
Ms. Margaret Fields, MDNR/EPA, PCB Unit
Mr. Dan Baumhardt, H & S Property Manager

Afternoon

Mr. Ken Mangus, Thumm Propery Care Taker

Review Only

Mr. John Voelpel, Attorney, Holtzman & Silverman (a.m.)
Mr. John Pirich, Attorney, Thumm's (a.m.)
Mr. & Mrs. Thumm, Sr., Title Owners (a.m.)
Mr. Robert Colburn, Washtenaw County Health Department (p.m.)
Mr. Dan McLaughlin, Washtenaw County Sheriffs Department (p.m.)

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

1.0 SITE DESCRIPTION

The Holtzman-Silverman Company site, a former gravel pit and dump site, is located in Ypsilanti Township, Washtenaw County, Michigan (Figure 1). The site occupies 62 acres in a suburban area near Ford Lake (Figure 2); it is bordered on the north by Textile Road, on the west by Bunton Road, on the east by the Ford Motor Company, and on the south by privately owned agricultural land.

The local topography is generally flat. The nearest surface water body, Ford Lake, lies 500-ft north of the site. The soil in the area is described as Fox sandy loam, which is comprised of sand and gravel. The abundance of surface water bodies in the area indicates a shallow water table.

Most of the residences surrounding the site are served by municipal water mains which draw 50% of the required water from the Bridge Road wells, the closest of which is within 1,000-ft of the site and approximately 90-ft deep. According to Ypsilanti Community Utility Authority (YCUA) maps, there are residences that use private wells less than 1 mile from the site.

2.0 SITE BACKGROUND

The site was originally owned by the Ford Motor Company who sold it to an unknown individual. In turn, Lamar Thumm purchased the property in August 1947, and used it as a sand and gravel quarry. Excavation activities at the site coupled with the area's high water table, resulted in approximately 2/3 of the property being covered by artificial ponds. To fill excavated areas, Mr. Thumm allowed dumping on the property. Harold Handley, who had a contract to haul fly ash and cinder from the General Motors Willow Run Plant was the predominant contributor of fill material. In addition, the adjoining Ford Motor Company dumped wooden block floor debris at the site. Other generators dumped construction debris and dirt. Reportedly, Mr. Thumm did not allow dumping of household rubbish at the site.

On May 18, 1973, Mr. Thumm sold the property on a 10-year land contract to Holtzman-Silverman Company, a Southfield, Michigan real estate development company.

On March 22, 1983, in response to a complaint from a local resident concerning drums on the property, Gene Hall of the Michigan Department of Natural Resources (MDNR) and Robert Colburn of the Washtenaw County Department of Public Health (WDPH) inspected the site. Numerous drums were observed, which according to the site caretaker had been there for at least 12 years. On April 12, 1983, Mr. Hall, Mr. Colburn, and Bob LaMare, also of the MDNR, returned to the site to collect samples of soil, water, and material contained in approximately 40 drums. Analytical results (discussed in Section 4.0) indicated that polychlorinated biphenyl (PCB) levels in both soils and drums were greater than

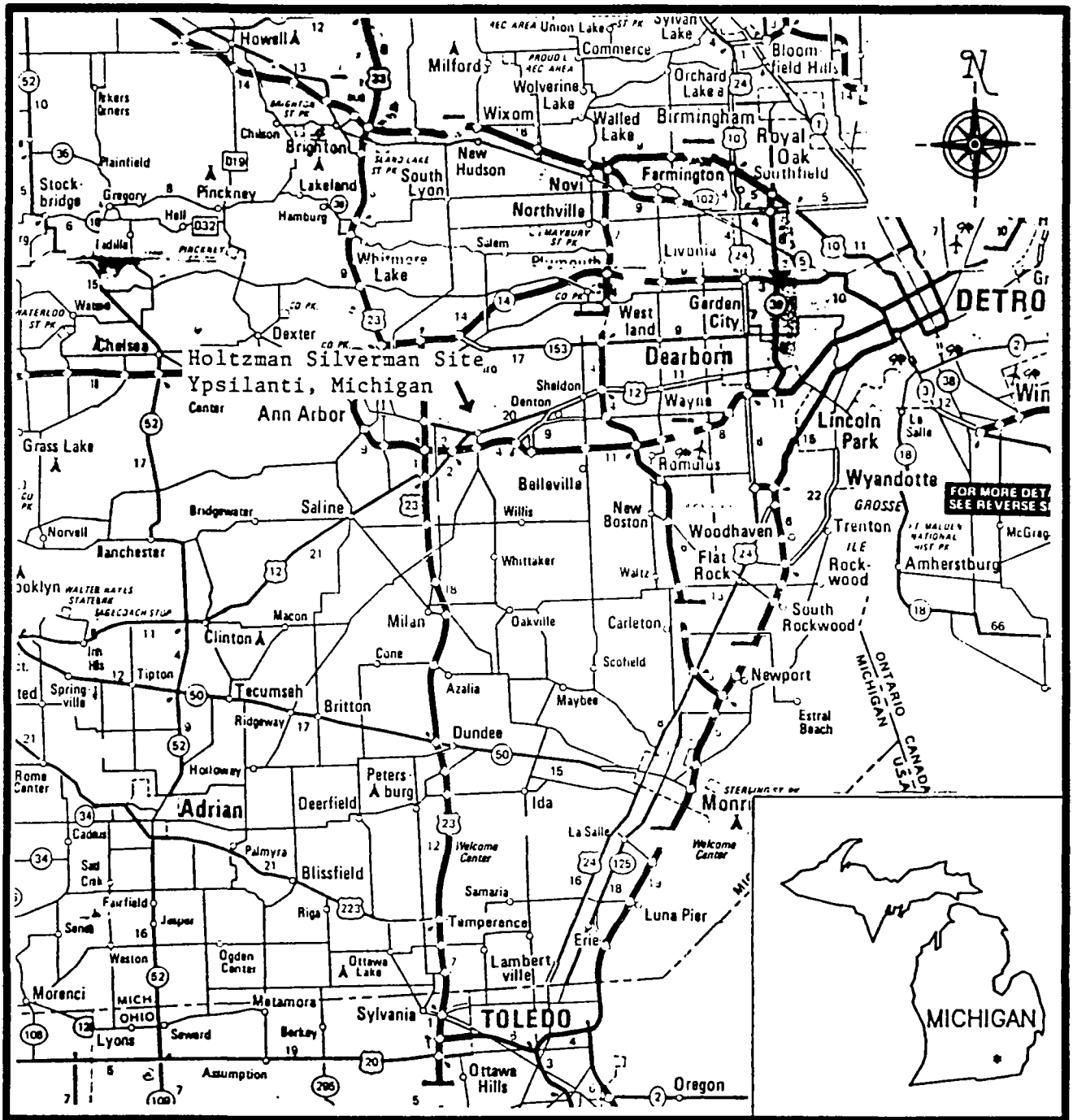

FIGURE 1.

SITE LOCATION MAP

HOLTZMAN–SILVERMAN SITE

YPSILANTI, MICHIGAN

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN T. LAUNIUS	DATE 12/87	PCS # 1376
APPROVED GHD	DATE 6/8/88	TDD # 5–8711–09

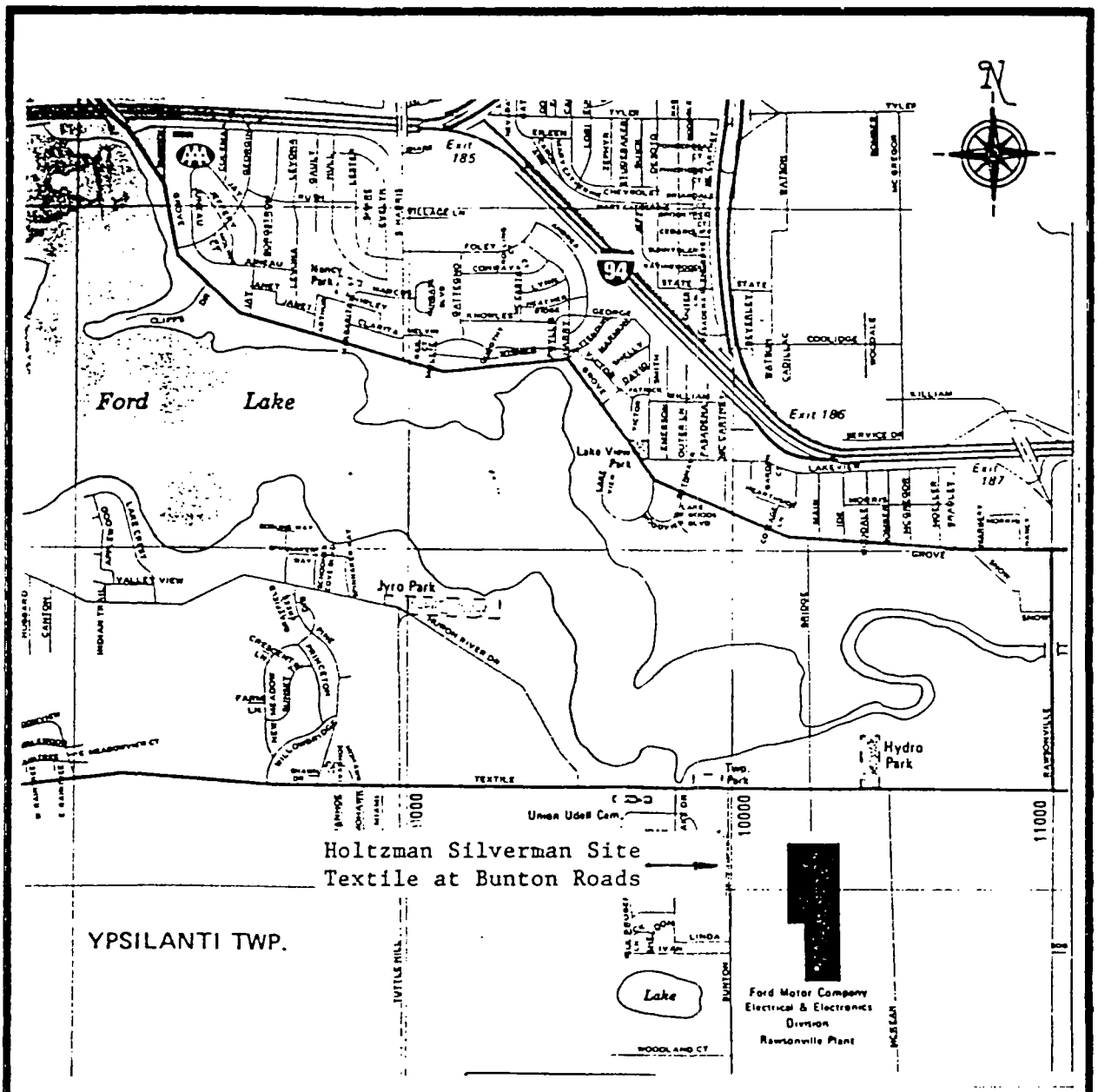

FIGURE 2

SITE LOCATION MAP

HOLTZMAN–SILVERMAN SITE

YPSILANTI, MICHIGAN

NOT TO SCALE

WESTON MANAGERS DESIGNERS/CONSULTANTS

DRAWN	DATE	PCS #
T. LAUNIUS	12/87	1376
APPROVED	DATE	TDD #
GFM	6/9/88	5–8711–09

50 parts per million (ppm), which is the level set forth by the Toxic Substance Control Act (TSCA) which requires specific management and disposal practices.

Because of the presence of PCB contamination, the Holtzman-Silverman Company withheld the final land contract payment, and deeded the property back to Mr. Thumm. Concurrently, the MDNR installed a snow fence to restrict access to the areas where elevated concentrations of PCBs had been detected.

On November 29, 1983, the MDNR notified Mr. Thumm and the Holtzman-Silverman Company and requested that as potentially responsible parties (PRPs) they initiate a clean-up of the site. Both parties declined, denying ownership of the property. However, in February 1984, the Holtzman-Silverman Company reportedly disposed of 49 drums from the site.

At a hearing held in November 1984, in Lansing, Michigan, the U.S. Environmental Protection Agency (U.S. EPA) proposed that a $25,000 fine be levied under the provisions of the TSCA against PRPs Mr. Thumm and the Holtzman-Silverman Company. The complaint was dismissed because it could not be conclusively proven that PCBs in the soil at the site had leaked from the drums. It was further concluded that any PCBs in the soil were probably present before the effective date of the PCB disposal ban regulations.

In February 1986, the Holtzman-Silverman Company was again notified by the MDNR that if they did not undertake a clean-up at the site, public funds would be expended to do so, and costs incurred could be recovered in court.

The MDNR collected five drum and two soil samples on March 20, 1987, for additional site characterization.

On October 27, 1987, as requested by the MDNR, three members of the Ecology and Environment (E&E) Field Investigation Team (FIT) met with Mr. Hall (MDNR) at the Holtzman-Silverman Company site to discuss monitoring well installation. The FIT reported that ground water monitoring wells were to be installed at the site during the next 2 to 4 months. During the inspection, the team noted thirteen 55-gallon drums on the property. Oil and a solidified tar-like substance were observed leaking from some of the drums. Mr. Hall excavated a 1-ft sump hole near where the MDNR soil samples has been collected. Reportedly, within 1 minute, the hole filled up with an oil-like substance, indicating that the soils were saturated with oil. No monitoring wells were installed. The FIT also performed a magnetometer study at the site on November 17, 1987, which indicated anomalies in various locations, suggesting the presence of buried drums. On the day of the inspection, the FIT reportedly observed local residents on the site.

The U.S. EPA Remedial Response Branch requested that the U.S. EPA Emergency Response Section investigate the site to determine the necessity of an immediate action.

3.0 SITE ASSESSMENT

On December 16, 1987, Technical Assistance Team (TAT) members Tim Launius and Ann Patchak conducted an assessment at the Holtzman-Silverman Company site. Air monitoring was performed with a combustible gas indicator (CGI), and a photoionization detector (PID). Monitoring was also conducted with a radiation meter. No readings above background were detected with any of the monitoring instruments.

The 62-acre site was accessible from the north and west sides of the property, while a chain-link, barbed-wire fence bordered the east perimeter, and a brush and tree area lined the southern boundary (Figure 3). Within the Holtzman-Silverman Company site perimeter was a fenced-in concrete block building, a partially fenced soil-stained area, three ponds, a building foundation, and a two-track road. On the day of the site investigation, because of winter conditions, the ponds were frozen and snow covered the site grounds.

The concrete building and surrounding yard, situated at the north end of the Holtzman-Silverman Company property near Textile Road, covered approximately 1-acre, and was secured with a chain-link, barbed-wire fence which and an unlocked gate. The fenced-in yard contained the following:

- 10 closed, unlabeled, steel 55-gallon drums;
- One closed, unlabeled, steel 55-gallon drum, which appeared to have leaked a black tar-like substance;
- Nine closed, unlabeled, steel 5 to 30-gallon containers, some of which had been numbered; and,
- One closed, labeled "Ford Paint Plant, Mt. Clemens, Michigan," steel 55-gallon drum, situated approximately 20-ft from the other drums and containers.

Four to 5-ft mounds of soil or fill material were observed throughout a soil-stained 2-acre area, in the northeast portion of the site. This area was observed to be partially encompassed by a snow fence. In addition to the mounds within the soil-stained area, there were 3 to 4-ft mounds of soil were present throughout the site.

The principal pond located along the southern and eastern portions of the property covered approximately 1/3 to 1/2 of the Holtzman-Silverman Company site. Two smaller ponds, each

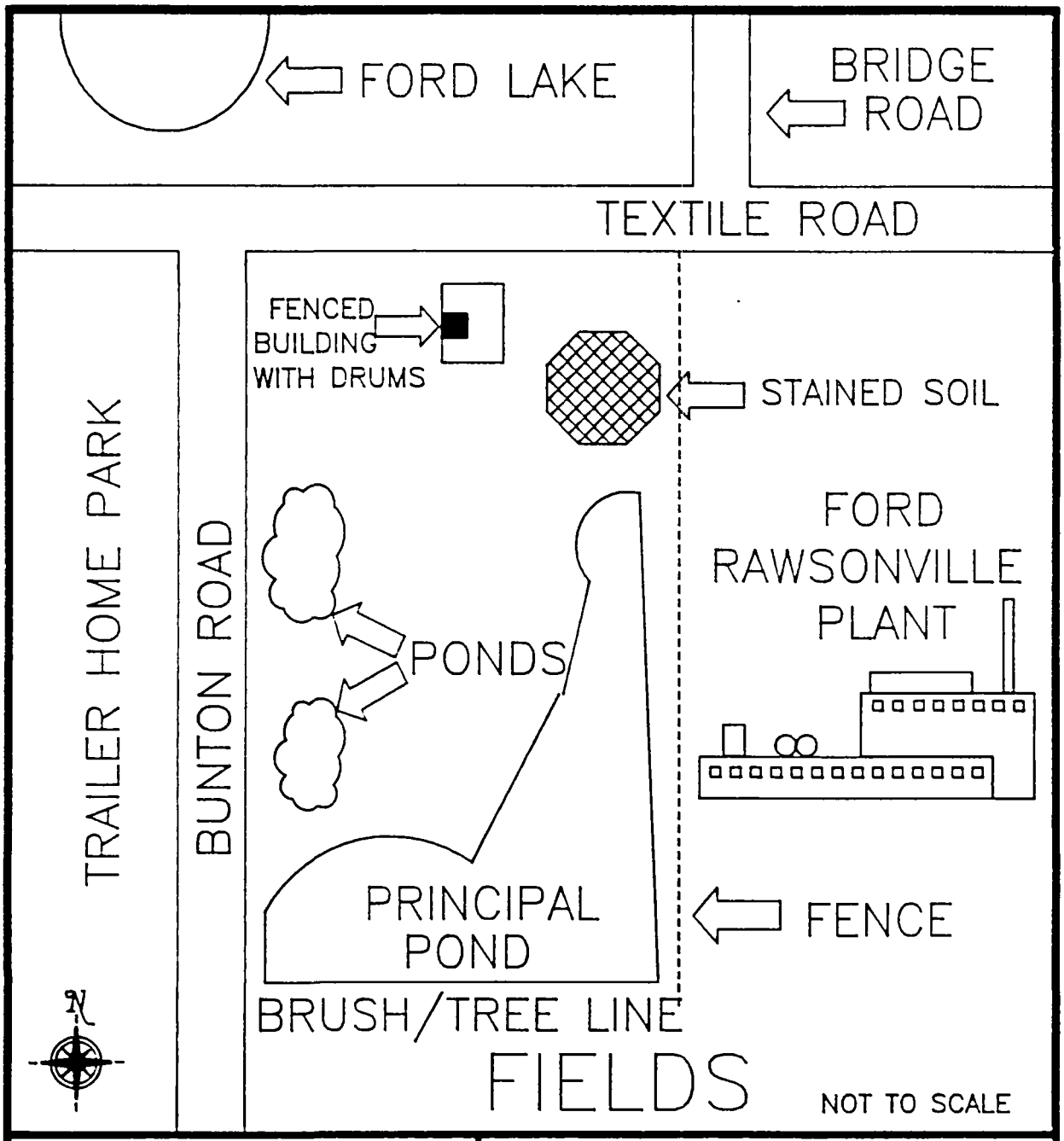

FIGURE 3
SITE MAP
HOLTZMAN–SILVERMAN
YPSILANTI, MICHIGAN

WESTON
MANAGERS DESIGNERS/CONSULTANTS

DRAWN M.W. TURNBULL	DATE 2/10/88	PCS # 1376
APPROVED	DATE 6/15/88	TDD # 5-8711-09

approximately 1/2 acre, were located on the western side of the property, and were separated by a berm. The building foundation observed in the middle of the Holtzman-Silverman Company site between the three ponds, contained four drums: two empty and corroded, and two partially corroded with one containing liquid, suspected to be water.

A second site assessment was conducted on January 8, 1988, by U.S. EPA On-Scene Coordinators (OSCs) Ed Burk and Ralph Dollhopf, and TAT member Tim Launius. Two notable changes had occurred since the December 16, 1987, TAT inspection: The garage door on the concrete building had been broken open, and one of the small drums in the fenced-off area had ruptured releasing a black, shiny, paint-like material. The sub-zero temperatures typical of the area may have caused the drum to burst.

4.0 ANALYTICAL RESULTS

PCB-contaminated soils and sediments at the Holtzman-Silverman Company site have been documented since early 1983. The analytical results presented in Table 1 were compiled from MDNR records. Samples collected during the MDNR's initial investigation indicated elevated levels of PCBs in drums (210 ppm), and the presence of PCB-contaminated soil (160 to 500 ppm).

Later analytical results have confirmed the presence of PCBs in surface soils (360 ppm). A sample collected at a depth of 8-ft, where the ground water soil interface lies, yielded a concentration of 22 ppm PCB. PCB levels in pond sediments (1.1 to 100 ppm) exceeded the U.S. Geological Survey (USGS) alert level for Great Lakes harbor sediment (.02 ppm) (Bowden, 1976).

PCBs were non-detectable in both fish tissue and pond water samples collected at the site in 1983. These analytical results provided documentation that PCBs had not migrated to either the aqueous phase or to the food chain by 1983. No additional sampling of fish tissue or pond water has been conducted since that date.

In the pond sediment, dichlorodiphenyldichloroethane (DDD) was detected at 0.048 and 0.110 ppm, and dichlorodiphenyldichloroethylene (DDE), a degradation product of dichlorodiphenyltrichloroethylene (DDT), was detected at concentrations of 0.078 and 0.051 ppm in pond sediment samples. These levels are above the USGS alert level in Great Lakes sediment of 0.020 ppm for DDT and other pesticides (Bowden 1976).

TABLE 1

ANALYTICAL RESULTS OF MDNR SAMPLING
AT THE HOLTZMAN-SILVERMAN SITE
YPSILANTI, MICHIGAN

(all concentrations reported in ppm)

DATE	MEDIUM	PARAMETER	CONCENTRATION		USGS[1] ALERT LEVEL IN SEDIMENT
4/12/83	Drum	PCB	8.1		—
	Drum	PCB	61.0		—
	Drum	PCB	210.		—
	Soil	PCB	500.		—
	Soil	PCB	160.		—
6/8/83	Fish Tissue	PCB	ND <0.1		—
	Fish Tissue	Pesticide	ND <0.1		—
	Pond Sediment	PCB	1.1		.020
	Pond Sediment	PCB	8.3		.020
	Pond Sediment	DDD	.048	(DDT)	.020
	Pond Sediment	DDD	.110	(DDT)	.020
	Pond Sediment	DDE	.078	(DDT)	.020
	Pond Sediment	DDE	.051	(DDT)	.020
6/29/83	Soil Surface	PCB	14.0		—
	Soil Surface	PCB	360.0		—
	Soil 2.5-ft	PCB	6.1		—
	*Soil 8-ft	PCB	22.0		—
	Pond Sediment	PCB	100.0		—
	Pond Water	PCB	ND <.0002		.020
	Black Waste	PCB	28.0		—
	Wood Blocks	PCB	11.0		—
3/20/86	Drum	PCB	32		—
	Drum	PCB	43		—
	Drum	PCB	17		—
	Soil	PCB	230.		—

[1] Bowden, R.J.- 1976
* Sample taken at ground water soil interface.

5.0 THREATS TO HUMAN HEALTH AND THE ENVIRONMENT

5.1 Threats as Related to the National Contingency Plan

Paragraph (b) (2) of Section 300.65 of the National Contingency Plan (NCP) outlines several factors which may be considered in determining the appropriateness of a removal action. Several of these factors were observed at the Holtzman-Silverman Company site, and are listed as follows:

- Actual or potential exposure to hazardous substances, or pollutants, or contaminants by nearby populations animals, or the food chain;
- Actual or potential contamination of drinking water supplies or sensitive ecosystems;
- Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release;
- High levels of hazardous substances or pollutants or contaminants in soils at or near the surface that may migrate; and,
- Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released.

5.1.1 Threat of Exposure

Samples collected by the MDNR indicate that hazardous substances exist at the Holtzman-Silverman Company site. Most of the site is unrestricted, and drums within the fenced area are accessible. There is evidence of vehicles being driven on the site, and access to the areas of stained soil is unrestricted as a result of a trampled snow fence, which was originally installed by the MDNR in 1983. Because the site is unrestricted, neighboring residents and wildlife inhabiting the area are potentially exposed to contaminants via inhalation, ingestion, and dermal routes of exposure.

5.1.2 Potential Drinking Water Contamination

Since groundwater monitoring has not been conducted at the site, this status is unknown; however, FIT investigations indicated oil saturated soil on-site. Private wells exist within 1/2 mile of the site, and the YCUA wells, which serve most of eastern Washtenaw County, including the City of Ypsilanti, are within 1,000-ft of the site.

5.1.3 Threat of Release

Drums in the fenced area show evidence of previous leakage. Corroded drums elsewhere on the site are open and could easily release their contents upon further deterioration. The possibility of buried drums also exists, as evidenced by anomalies recorded by the magnetometer survey.

5.1.4 Threat of Migration

The large variability of weather conditions in southeastern Michigan may cause migration or release of contaminants. As observed by the TAT, it is already suspected that freezing conditions may have caused one drum to burst open, releasing its contents. Conversely, periods of extended precipitation may cause migration of contaminated soil to adjacent surface water bodies.

5.2 Threats of Specific Chemicals

PCB concentrations of up to 360 ppm have been documented in soil which, given the weather conditions in the area, could potentially migrate. There is significant documentation of the negative health effects of PCB exposure, as well as the strong tendency of PCBs to bioaccumulate. PCBs are suspected human carcinogens, and have been linked to varying degrees of dermatologic and hepatic effects. Primary routes of direct exposure include ingestion, inhalation, and direct contact with the skin.

The presence of DDD and DDE in low concentrations in the pond sediment has been documented. Introduction of these products into the aquatic environment, upon release from the pond sediment, would likely have toxic effects on the aquatic life in the ponds.

6.0 RECOMMENDATIONS

The previously outlined conditions indicate that the Holtzman-Silverman site poses threats to human health and the environment. These conditions are based primarily on sampling analyses conducted by the MDNR. The TAT therefore recommends:

- Constructing a fence around the entire site to restrict access and prevent unauthorized disposal of additional materials on the site;
- Sampling and disposal of drums containing unknown material; and,
- Investigating ground water, soil, sediment, and surface water contamination.

If the PRPs are unable or unwilling to perform the above actions, the TAT recommends that the U.S. EPA conduct a removal action.

In order to assist the U.S. EPA in mitigating the threats posed by Holtzman-Silverman site, the TAT has prepared a Removal Action Plan (RAP). This RAP does not present a detailed scope of work, because a thorough inventory of all wastes present on the site has not been performed, and an extent of contamination study has not been undertaken. Both the disposal and transportation cost are estimated; however, a disposal facility has not been identified.

6.1 Immediate Stabilization Actions

6.1.1 Fence Construction

To limit access to the aforementioned hazards on-site, the TAT recommends fencing the perimeter of the site with a chain-link hazard fence in accordance with MDNR standard procedures. The Emergency Response Contractor Service (ERCS) should procure a subcontractor to construct the fence around the three sides currently unfenced, connecting it with the existing fence on the east side of the site (Figure 4). Construction of a fence on the perimeter would restrict access to known contaminated areas.

A breakdown of costs for this option is presented in Section 7.0.

6.1.2 Drum Stabilization and Disposal

The 21 drums on-site will be sampled and analyzed for disposal parameters and disposed of at an off-site facility in compliance with the RCRA off-site policy. Disposal cost will vary dependent on the contents of the drums.

A breakdown of estimated costs for disposal is presented in Section 7.0. It is anticipated that all drums will be overpacked.

6.1.3 Actions Required upon Completion of Fencing and Disposal of Drummed Material

The emergency stabilization actions could end at this point, if deemed appropriate by agreements between the Emergency Response Section and Remedial Branches of the U.S. EPA. Agreements as to the scope of the project in mitigating threats to the ground water and surface contamination of soils, sediments and surface water bodies should be consistent with the overall clean-up plan, and be formulated at this time. If it is decided that the Emergency Response Section of the U.S. EPA is to continue with further removal actions, the TAT recommends the following scope of work.

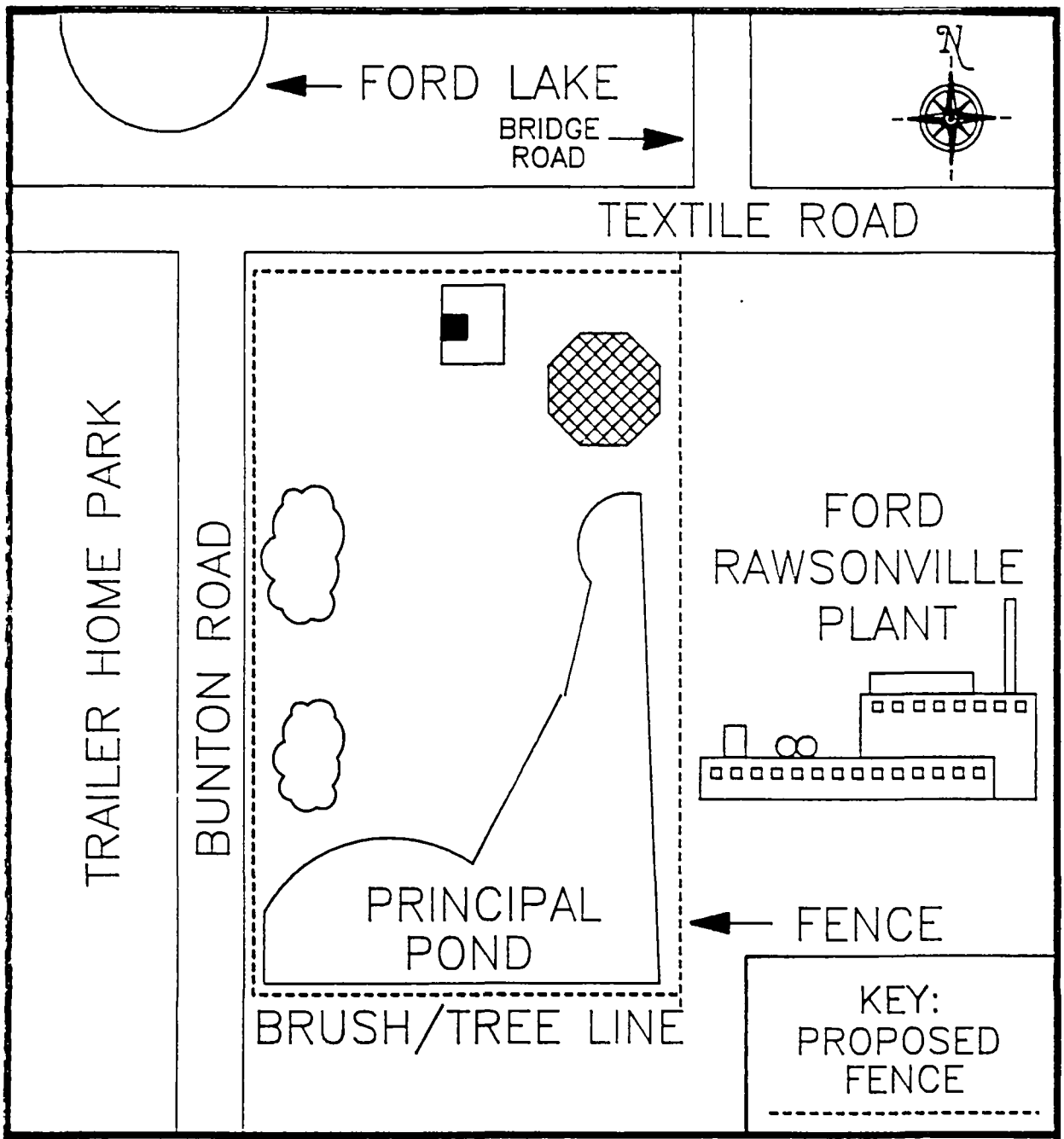

FIGURE 4

SITE MAP

HOLTZMAN–SILVERMAN

YPSILANTI, MICHIGAN

NOT TO SCALE

WESTON MANAGERS DESIGNERS/CONSULTANTS

DRAWN M.W. TURNBULL	DATE 2/10/88	PCS # 1376
APPROVED	DATE	TDD # 5–8711–09

6.2 Scope of Work

6.2.1 Extent of Contamination (EOC)

An Extent of Contamination (EOC) study should be conducted addressing the contaminated ground water, surface soils, sediments and surface water bodies. In addition, the EOC study should address the possibility of buried drums, by utilizing magnetometer or ground penetrating radar surveys. The surveys should confirm and further delineate anomalies already found to be present on-site.

Monitoring wells should be installed on-site to determine vertical and horizontal contamination. These wells, plus the potable residential and city wells within the influence area, should also be sampled and analyzed for contaminants.

An EOC sampling plan should be developed to delineate the extent of soil and sediment contamination. An additional fish tissue study could be undertaken to determine whether the food chain within the water body on-site has become affected.

Based on the EOC study, remediation of the site would entail one of the following options:

- Excavation and disposal of contaminated soils and sediments;
- On-site treatment of contaminated soils and sediments;
- Consolidation and capping on-site contaminated material; or,
- Referral of the site to the U.S. EPA Remedial Branch for inclusion on the National Priorities List (NPL).

7.0 COSTS

The costs presented in this section represent fencing of the entire site, and sampling and disposal of 21 drums. The costs for an EOC study including a magnetometer survey are not addressed in this report. It is estimated that 4,600 linear ft of chain-link fence with 3 strands of barbed-wire will be required to encompass the entire perimeter of the site. One 20-ft security gate will be installed for the entry/exit of large vehicles. Fence construction, and sampling and overpacking of the drums would require 8 days. An interim demobilization period would be required to procure disposal acceptance. Loading, transport, and disposal of the drums would require 2 additional days. As such, it is estimated that the recommended actions will require 10 days to complete, and are based on a 12-hour work day.

COSTS

Redacted-information not relevant to the selection of the removal action.