



include the use of physical barriers or institutional controls (e.g., deed restrictions or alternative water supply).

Somers Industrial Finishing does not meet the first criterion since current groundwater monitoring data shows that cadmium, chromium, nickel, and cyanide are present in the groundwater above CT DEP Remediation Standards. However, there appears to be no potential for current direct human exposure on-site, because the lagoon area has been capped, and contaminated surface soils have been removed from the Site or treated. Ground water in the area is classified as GA and is used for drinking water. However, most residences and businesses in the vicinity are supplied by town water. The nearest residential drinking water supply well is approximately 0.2 miles cross-gradient, and the nearest public drinking water supply wells are 0.25 miles upgradient. Both private and public wells in the area are monitored by the Somers Health Department, and no contamination has been found to date. Therefore, the Somers Industrial Finishing Site meets the second criterion and should be assigned the "YE" code for Human Exposures Controlled (CA725).

Supervisory Signature:  Date: 11/24/28

# **RCRIS ENVIRONMENTAL INDICATORS EVALUATION MEMORANDUM**

**Somers Industrial Finishing Site**  
Somers, Connecticut  
(CTD062202791)

Prepared by:

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Emergency Planning & Response Branch

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## Somers Industrial Finishing Site (CTD062202791)

### I. Site Description

#### A. Facility Operations

Somers Industrial Finishing Corp. (SIFC) operated a metal plating and finishing facility located at 19 Field Road, Somers, Connecticut from 1972 until 1984, when the company went out of business. The Somers Industrial Finishing Site is located in a mixed commercial/residential area near the center of Somers, Connecticut. The Site consists of an approximately 3,000 square foot single story building and two former waste water settling lagoons on a 0.9 acre parcel of land. Abutting properties include an automotive repair shop, a day care center, and a vacant woodworking shop. Figure 1 shows the geographic location of the facility, and Figure 2 shows the layout of the site. The only known previous owner of the Site, Bob France, also operated a plating shop at the Site, reportedly dating back to the 1950s.

SIFC conducted various metal finishing processes including electroplating of zinc, nickel, cadmium, and chromium, black oxide (ferric oxide) conversion coating, bright dipping, brass cleaning, chrome coloring, metal stripping, and metal cleaning. Various products were produced, including nuts and bolts. In 1978 a waste water treatment system (WWTS) was installed at the Site. The WWTS included cyanide oxidation, chrome reduction, neutralization, a media filter, and two treatment/disposal lagoons. The sludge generated by the WWTS was classified as a listed (F006) RCRA hazardous waste. In 1983, inspections by EPA and the Connecticut Department of Environmental Protection (DEP) revealed that the lagoons were being used to store this sludge for over 90 days, in violation of SIFC's "generator-only" RCRA status. This violation of RCRA led to a series of orders and other administrative actions by DEP directed at RCRA permitting, ground water monitoring, and closure of the lagoons. SIFC compliance with DEP's requirements was generally poor. SIFC went out of business in 1984 without fulfilling RCRA requirements for closure of the lagoons or their post-closure care.

The Site is currently abandoned, and the building is in an advanced state of decay. EPA conducted a fund-lead removal action at this Site from February through December 1997. The removal action addressed drums and containers of hazardous substances, the two lagoons, a water supply well, and underground storage tanks at the Site. Containers of laboratory chemicals and reagents and other drums and containers found at the Site were shipped off-site for disposal. An extensive soil sampling effort was undertaken to characterize soils at the Site. Cadmium and chromium contamination was documented in the lagoon area. Highly-contaminated soils were excavated and shipped off-site for disposal. Soils with lower-levels of contamination were treated on-site to minimize contaminant mobility and to reduce hexavalent chromium to trivalent chromium. An interim cap was also installed in the lagoon area to minimize rainwater infiltration. In addition, a former water supply well at the Site was decommissioned. Concurrent with EPA's cleanup, DEP removed two underground fuel oil storage tanks from the site.

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The following table identifies RCRA-regulated units, Solid Waste Management Units (SWMUs), and other Areas of Concern (AOCs) at the Site. The first three were identified in the RCRA Facility Assessment (RFA). The last two were found during the fund-lead Superfund removal action conducted by EPA.

Area Name	Description	Dates Used	Release Status	Actions Taken
1. Treatment/ Disposal Lagoons	Two approx. 50'x50' lagoons, separated by a 10' berm, were formerly located at the south end of the property.	1978-1985	<i>known release to soil and ground water</i>  Based on EPA's sampling results, soils in the lagoon area were contaminated with cadmium (2100 ppm), chromium (5400 ppm), nickel (6700 ppm), and zinc (62,000 ppm). Ground water sampling by SIFC in the late 1980s and by DEP in 1997 showed that the lagoon has released cadmium (up to 1,300 ppb), chromium (up to 1,100 ppb), nickel (1,700 ppb), and cyanide (up to 950 ppb) to the ground water.	In 1984-1985, SIFC removed the remaining sludge from the lagoon and disposed the excavated materials off-site. As part of the Superfund removal action, EPA disposed of highly-contaminated soils off-site, treated remaining soils on-site, down to the water table, to minimize contaminant mobility and to reduce hexavalent chromium to trivalent chromium, and installed an interim cap over the lagoon area.
2. Process Building- WWTS	The WWTS consisted of four aboveground tanks and one media filter, located in the Site building.	1978-1984	<i>known release to lagoons</i>  Both the WWTS and floor drains within the building were plumbed to the treatment/disposal lagoons. Contamination in the lagoon area is believed to have originated from the WWTS.	The lagoon area was remediated as part of EPA's removal Action.
3. Process Building- Production Areas	Plating operation were conducted inside the building. Extensive floor staining indicates that spillage was common. Floor drains throughout the building flowed into the lagoon area.	1950s-1984	<i>high potential to release</i>  Extensive floor staining and concrete deterioration indicate the potential of contamination in and under the concrete slab foundation. Floor drains throughout the building were plumbed to the treatment/disposal lagoons.	The lagoon area was remediated as part of EPA's removal Action. Containers of laboratory chemicals and other hazardous substances found in these areas were transported off-site for proper disposal as part of EPA's removal action.

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<b>Area Name</b>	<b>Description</b>	<b>Dates Used</b>	<b>Release Status</b>	<b>Actions Taken</b>
4. Underground Storage Tanks	Two approximately 1,000-gal USTs, containing fuel oil, were formerly located along the east side of the building.	unknown-1997	<i>low potential for release</i>	The USTs were removed by DEP in April 1997, concurrent with EPA's removal action. There was no evidence of leakage in the excavations, and soil sampling did not detect petroleum hydrocarbons.
5. Water Supply Well	A water supply well (246 feet deep) was formerly located near the southwest corner of the Site.	unknown-1997	<i>potential exacerbation of ground water release</i>  The well posed a threat of serving as a conduit for ground water contamination to spread to deeper water-bearing zones.	EPA properly decommissioned the former supply well as part of the removal action. Prior to decommissioning, EPA sampled water from this well for metals, cyanide, and VOCs. Contaminants included cadmium (53/58 ppb), chromium (72/80 ppb), nickel (79/82 ppb), lead (106/114 ppb), and cyanide 1,400/2,100 ppb).

**B. Facility Setting**

**1. Geology**

The Site is located approximately ½ mile west of a north-south fault line in a Newark type basin. The bedrock is a poorly-sorted Triassic sandstone interbedded with discontinuous lenses of conglomerite. The depth to bedrock is approximately 43 feet. Overlying the bedrock is a layer of reddish-brown glacial till, deposited during Pleistocene Epoch. The till is composed of shale, sandstone, and conglomerate fragments. The thickness of the till at the Site is estimated at 10 feet. Overlying the till is a layer of ice-contact stratified drift and outwash materials deposited during glacial retreat. This material is graded from coarse gravel to fine sand and silt. The thickness of this material at the Site is estimated at approximately 30 feet. Surface soils at the Site are classified as Manchester gravelly loam, a well-drained dark brown to reddish brown gravelly sand, gravelly loamy sand, or very gravelly sand. These soils are typically very acidic and highly permeable. Additionally, the wetlands which abut the Site to the south have a 5-10 foot layer of peat at the surface.

**2. Hydrogeology**

Depth to ground water at the facility ranges from 5-15 feet below ground surface. Ground water flows northwest, toward Field Road. In the shallow overburden (15-28 feet bgs), hydraulic conductivity is estimated at 2.0 feet/day, and ground water velocity is estimated at 0.35 feet/day. In the deeper overburden (28-32 feet bgs) hydraulic conductivity is estimated at 0.12 feet/day, and

## Somers Industrial Finishing Site (CTD062202791)

ground water velocity is estimated at 0.021 ft/day. Ground water in this area is classified GA, indicating that it is a drinking water aquifer.

### 3. Surface Water

Surface runoff from the Site enters an area of wetlands that abuts the Site to the south. These wetlands drain into Abbey Brook, about 1 mile southwest of the Site. Abbey Brook flows into the Connecticut River via the Scantic River. Although the abutting wetlands are part of the 100-year flood plain, the Site is not. SIFC was permitted to discharge treated waste water to the wetland area, and overflow piping from the lagoons was plumbed to the wetland. However, soil and sediment sampling conducted in this area by EPA did not reveal contamination.

### 4. Potential Receptors

The former SIFC facility is abandoned and there are no workers on site. The nearest residences are approximately 500 feet from the Site, and a day care center/preschool abuts the Site to the south. There are no fences or other barriers to site access. Table 10 summarizes the population distribution of residents located within a four-mile radius from Somers Industrial Finishing.

#### **RESIDENTS LIVING NEAR Somers Industrial Finishing SITE**

<u>Distance from Property</u>	<u>Estimated Population</u>
0.00-0.25 miles	39
0.25-0.50 miles	229
0.50-1.00 miles	753
1.00-2.00 miles	2,250
2.00-3.00 miles	3,672
<u>3.00-4.00 miles</u>	<u>8,602</u>
<b>TOTAL:</b>	<b>15,545</b>

The land in the vicinity of the Site is mixed use, with commercial establishments, municipal buildings, residences, and the day care center. The area is served by the town water supply system. However, some private wells are still in use. According to the Somers Department of Health, the nearest industrial and residential drinking water wells, are situated approximately 0.15 miles and 0.2 miles, respectively, west (cross-gradient) of the property. No contamination has been found in these wells to date. The Preston Well Field, which provides drinking water for the Town of Somers, is located approximately 1300 feet south (upgradient) of the Site. Both private and public wells in the area are monitored by the Somers Health Department. No contamination has been found in these wells to date.

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### C. Groundwater Monitoring System

SIFC installed seven monitoring wells (five screened in the shallow overburden and two screened in the deeper overburden) throughout the property. The monitoring well network demonstrates that ground water flows northwest, toward Field Road. Contaminants found in the ground water match chemicals used by SIFC and are believed to have originated from the former lagoons. Low contaminant levels in the down gradient well indicate that the plume is relatively small. SIFC sampled ground water from these wells during 1988-1989. DEP sampled the monitoring wells in 1997, during EPA's removal action. The following table summarizes exceedances of the Connecticut Remediation Standards (GA Ground Water Protection Criteria) applicable to the area. Ground water monitoring has not detected the presence of volatile organic compounds.

CONSTITUENT	DEP ACTION LEVEL (ppb)	PEAK CONCENTRATION (ppb)
Cadmium	5	1,300
Chromium, total	50	1,100
Chromium, hexavalent	NA	510
Nickel	100	1,700
Cyanide, total	200	950
Cyanide, amenable	NA	180

## II. Environmental Indicator Findings and Supporting Arguments

### Human Exposure Controlled (CA725)

Based upon the information contained in the references reviewed including environmental sampling results, the site operations, and environmental setting (physical and demographic), it is suggested that Somers Industrial Finishing can be classified as a site where human exposures are controlled (YE determination). Based upon guidance specified in the July 29, 1994 U.S. EPA "RCRIS Corrective Action Environmental Indicator Event Codes" memorandum (Guidance), one of the following two criteria must be met for a YE determination. These are:

1. Remedial measures have been implemented with the result that all maximum contaminants detected or reasonably suspected are less than or equal to their respective action levels (e.g., MCLs for groundwater, a 10 - 6 risk level for other contaminants, or any other number designated as the action level) or do not exceed an Agency specified cleanup standard for the facility, and/or

## Somers Industrial Finishing Site (CTD062202791)

2. There is no unacceptable human exposure to any contaminant concentration above action levels that had been detected or is reasonably suspected based on current contaminant concentrations and the current site conditions. Although contamination remains at the facility that may require further remediation, action has been taken or site conditions are otherwise such that unacceptable threats to human health from actual exposure to the contamination are not plausible based on current uses of the site. Such actions may include the use of physical barriers or institutional controls (e.g., deed restrictions or alternative water supply).

Somers Industrial Finishing does not meet the first criterion since current groundwater monitoring data shows that cadmium, chromium, nickel, and cyanide are present in the groundwater above DEP Remediation Standards. However, there appears to be no potential for current direct human exposure on-site, because the lagoon area has been capped, and contaminated surface soils have been removed from the Site or treated. Ground water in the area is classified as GA and is used for drinking water. However, most residences and businesses in the vicinity are supplied by town water. The nearest residential drinking water supply well is approximately 0.2 miles cross-gradient, and the nearest public drinking water supply wells are 0.25 miles upgradient. Both private and public wells in the area are monitored by the Somers Health Department, and no contamination has been found to date. Therefore, the Somers Industrial Finishing Site meets the second criterion and should be assigned the "YE" code for Human Exposures Controlled (CA725).

### Groundwater Releases Controlled (CA750)

Based upon the information contained in the references reviewed including ground water monitoring results, site operations and environmental setting (physical), it is suggested that Somers Industrial Finishing cannot be classified as a site where groundwater releases are controlled (YE determination) or where no releases to groundwater have occurred (NR determination). Based upon the Guidance of July 29, 1994, one of the following two criteria must be met for a YE determination. These are:

1. An engineered system has been installed that is designed and operating (including performance monitoring) to effectively control further migration beyond a designated boundary such as the engineered system, the facility boundary, a line upgradient of receptors, or the leading edge of the plume as defined by levels above the Agency established action levels or clean-up standards, and/or
2. The Agency has determined that the groundwater clean-up objectives can be met without the use of an engineered system through the remedial measures selected including facilities where the contamination will naturally attenuate.

SIFC does not meet the first criterion since no ground water treatment system has been installed, and current ground water contaminant levels are too high to meet the second criterion. However,

### **Somers Industrial Finishing Site (CTD062202791)**

the potential exists that the second criterion may be met in the future. The combination of off-site disposal of highly-contaminated soils and on-site treatment of lesser-contaminated soils (which extended down to the water table) which EPA accomplished during this removal action represents a complete elimination of the source of ground water contamination at the Site. This source removal, along with the interim cap, may foster a significant improvement in ground water quality in the future, to the extent that contaminants already in the ground water may naturally attenuate. Additional ground water sampling will need to be conducted in the future to determine whether natural attenuation will result in the second criterion, and therefore CA750, being met.

Since Somers Industrial Finishing does not satisfy either criteria for a YE determination, the CA750 event code should be left blank. According to the Guidance, "blank spaces or no entries should only be interpreted to mean that the releases have not yet been determined at the facility, not that the facility has uncontrolled releases."

### **III. Recommended Actions**

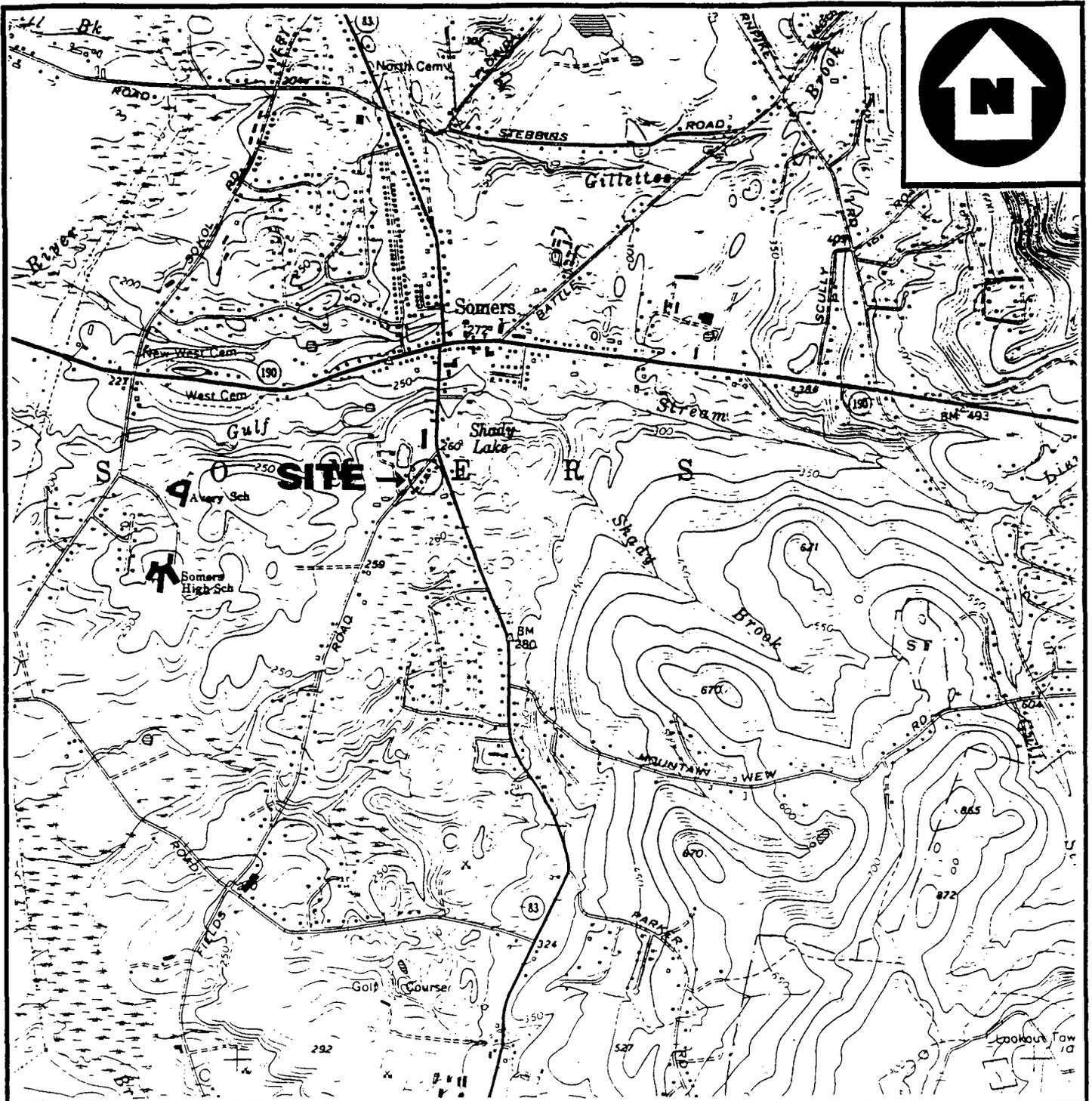
The following actions are recommended to achieve a YE designation for event code CA750:

- Future property owners or DEP should continue to sample the monitoring wells at the Site periodically so that trends in ground water can be tracked over time and compared to historic data. If steady downward trends are observed that are likely to result in Connecticut Remediation Standards being met by natural attenuation, this Site may then be assigned a "YE" designation, based on the second criterion, for "Ground Water Releases Controlled" (CA750) at such time.

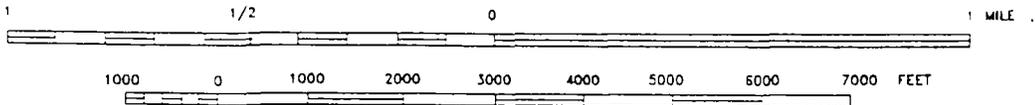
## Somers Industrial Finishing Site (CTD062202791)

### IV. References

1. RCRA Facility Assessment, Somers Industrial Finishing Corporation. Prepared for U.S. Environmental Protection Agency, by Versar, Inc. February 17, 1988.
2. Ground Water Quality Assessment Plan for Somers Industrial Finishing Corporation, by Fuss & O'Neill, Inc., January 1988.
3. Hydrogeologic Report for Somers Industrial Finishing Corporation, by Fuss & O'Neill, Inc., June 1988.
4. Somers Industrial Finishing Corporation 1989 Ground-Water Monitoring Summary, by Fuss & O'Neill, June 16, 1989.
5. Somers Industrial Finishing Corporation Quarterly Monitoring Results (2nd Year, 1st Quarter), by Fuss & O'Neill, August 11, 1989.
6. Somers Industrial Finishing Corporation Quarterly Monitoring Results (2nd Year, 2nd Quarter), by Fuss & O'Neill, November 27, 1989.
7. Removal Program Preliminary Assessment/Site Investigation for Somers Industrial Finishing Corp. Site. Prepared for U.S. Environmental Protection Agency, by Roy F. Weston, Inc. Superfund Technical Assessment and Response Team. December 1995.
8. Connecticut Remediation Standard Regulations. January 30, 1996.
9. Final Report, Somers Industrial Finishing, ground water analysis data. Prepared by Connecticut Department of Public Health, Bureau of Laboratory Services for the Department of Environmental Protection. March 21, 1997.
10. Removal Program After Action Report for the Somers Industrial Finishing Removal Site. Prepared for U.S. Environmental Protection Agency Region I, by Roy F. Weston, Inc. Superfund Technical Assessment and Response Team. February 1998.
11. Steve Jacobs, Town Sanitarian, Somers Health Department, pers. comm. May 4, 1998.
12. Federal Superfund Removal Action File, Somers Industrial Finishing Site (Site ID 013J). U.S. Environmental Protection Agency, Region I, Office of Site Remediation and Restoration.



BASE MAP IS A PORTION OF THE FOLLOWING 7.5 X 15' U.S.G.S. QUADRANGLE(S):  
 ELLINGTON, CT 1984



QUADRANGLE LOCATION

SITE LOCATION MAP

SOMERS INDUSTRIAL FINISHING  
 19 FIELDS ROAD  
 SOMERS, CONNECTICUT

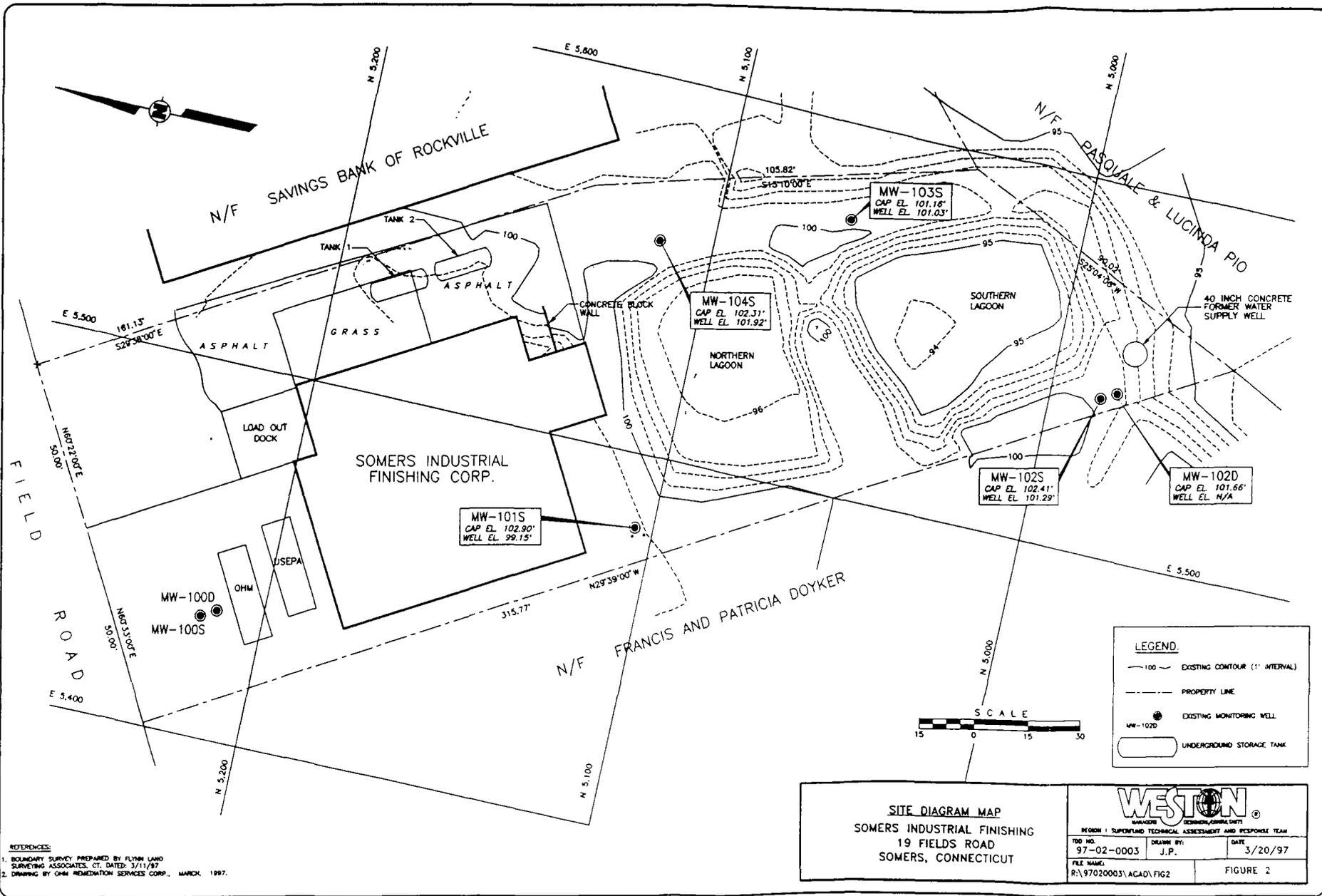


REGION I SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM

TDD NO. 97-02-0003	DRAWN BY: J. PADDEN	DATE 5/97
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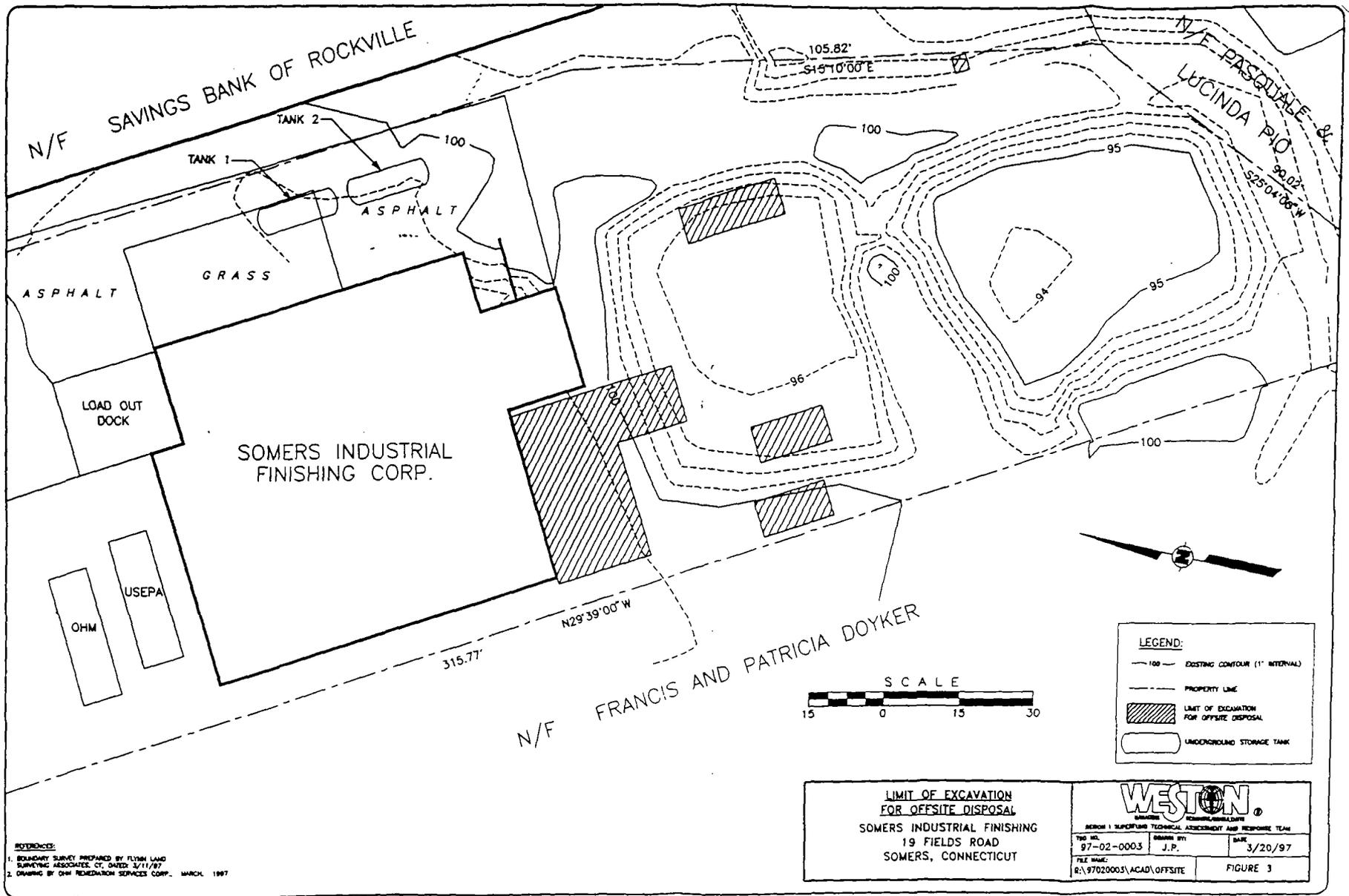
FILE NAME: r:\97020003\ACAD\2151FIG1

FIGURE 1



**REFERENCES**

- BOUNDARY SURVEY PREPARED BY FLYNN LAND SURVEYING ASSOCIATES, CT, DATED: 3/11/97
- DRAWING BY OHM REMEDIATION SERVICES CORP., MARICH, 1997.



**REFERENCES:**

- BOUNDARY SURVEY PREPARED BY FLEMING LAND SURVEYING ASSOCIATES, CT, DATED 3/11/97
- DRAWING BY OHM REMEDIATION SERVICES CORP., MARCH, 1997



N/F SAVINGS BANK OF ROCKVILLE

N/F

PASQUALE & LUCINDA PIO

105.82'

S15°10'00"E

ASPHALT

GRASS

SOMERS INDUSTRIAL FINISHING CORP.

USEPA

N29°39'00"W

315.77'

N/F FRANCIS AND PATRICIA DOYKER

LEGEND:

— 100 — EXISTING CONTOUR (1' INTERVAL)

--- PROPERTY LINE

[Hatched Box] LIMIT OF EXCAVATION FOR SOIL TREATMENT



- REFERENCES
1. BOUNDARY SURVEY PREPARED BY FLYNN LAND SURVEYING ASSOCIATES, CT. DATED: 3/11/87
  2. DRAWING BY OHM REMEDIATION SERVICES CORP., MARCH, 1997.

**LIMIT OF EXCAVATION FOR SOIL TREATMENT**  
 SOMERS INDUSTRIAL FINISHING  
 19 FIELDS ROAD  
 SOMERS, CONNECTICUT



REGION 1 SUPERFUND TECHNICAL ASSESSMENT AND RESPONSE TEAM		
FIG. NO. 97-02-0003	DRAWN BY J.P.	DATE 3/20/97
FILE NAME R:\97020003\ACAD\TREAT	FIGURE 4	