

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action  
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Facility Name: Former Timex Manufacturing Facility  
Facility Address: Park Road Extension, Middlebury, CT 06762  
Facility EPA ID #: CTD001165208

1. Has all available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this EI determination?

If yes - check here and continue with #2 below.

If no - re-evaluate existing data, or

if data are not available skip to #6 and enter "IN" (more information needed) status code.

**BACKGROUND**

**Definition of Environmental Indicators (for the RCRA Corrective Action)**

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

**Definition of "Current Human Exposures Under Control" EI**

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

**Relationship of EI to Final Remedies**

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

**Duration / Applicability of EI Determinations**

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

**Documents reviewed for this EI evaluation include:**

- a. Preliminary Assessment Report, CTDEP, November 1990.
- b. RFI Report, May 1993
- c. RFI Human Health Risk Assessment, August 1994.
- d. Human Health Evaluation-Current off-site Receptors, August 1994.
- e. Supplemental RFI Report, August 1998.
- f. Corrective Measures Study Report, December 1998.
- g. Design Basis for Groundwater Extraction and Treatment System, October 1999.
- h. Long Term Monitoring Plan, January 2000.
- i. Long Term Groundwater Monitoring, February 2001.
- j. Year One, Operations and Maintenance Report, Groundwater Extraction and Treatment System, October 2001.

**SITE BACKGROUND**

The Former Timex Site is located on 59 acres of land, the western portion of which is situated on the southern end of a north-south trending drumlin. The site is made up of three separate parcels. Parcel 1, which comprises the northeast corner of the site and includes Artificial Pond and baseball fields, is owned by Timex. Parcel 2A, located at the southeastern corner of the site, includes the former General Data Comm (GDC) headquarters building and Little Tracy's Pond. This parcel was recently sold by GDC and will reportedly be re-developed as a doctor's office. Parcel 2B, which is currently owned by Middlebury Office Park (MOP), is located at the top of the hill on the western side of the site, and includes the former Timex manufacturing building and several smaller buildings near the main building, including a helicopter hangar, storage buildings and a materials testing building.

Undeveloped land abuts the site to the south. Residential and non-residential properties are located along Kelly Road approximately 2,500 feet south of the site. The site is bounded to the east by Route 63, to the north by Park Road Extension, and to the west by a residential subdivision which is situated on a north south trending hill parallel to the hill on the subject site. An intermittent "unnamed stream" flows south in the valley between the two hills, near the western property boundary. Artificial Pond and Little Tracy's Pond are part of a surface water system (Long Swamp Brook) which flows south near Route 63 along the eastern side of the property. Groundwater is classified as GB/GA on site, and GA surrounding the site.

**A. Site History.**

The Timex facility was constructed in 1944 to manufacture fuses for World War II. By the late 1940's, the facility was converted for the manufacture of watches, watch parts, and gyroscopes. From the late 1940's until manufacturing ceased in 1984, manufacturing processes at the facility included 1) metal finishing operations, such as blanking, machining, tumbling, and vapor degreasing; 2) electroplating operations, such as bright dipping, plating, cleaning, reject stripping and chromating; and 3) laboratory or prototype development work involving liquid crystal diodes.

Up until 1968, process wastewater from electroplating and metal finishing operations flowed east of the former manufacturing building, without treatment, to an unlined swale, which directed the wastewater overland and eventually to Little Tracy's Pond. In 1968, the original treatment system was constructed to treat cyanide, chromium and acid/alkaline wastewater. The original system included a network of trenches and pipes connecting tanks and neutralization pits inside the building with sludge drying beds and industrial wastewater lagoons outside the main building. Major upgrades of the wastewater treatment system occurred in June 1976 and 1979. From 1942 until connection to the Naugatuck sanitary sewer system in 1972, sanitary wastes consisting of wastewater from toilets, showers, sinks and the cafeteria were disposed on-site using a system outfitted with two settling tanks, sand filters, and flow of the filtered effluent to the unnamed brook in the southwest corner of the site.

In December 1983, portions of the property were sold to GDC. Timex leased the northern portion of the main building from GDC until Timex moved to an off-site location in July 2001. GDC used the southern portion of the main building for administrative and other purposes. In an August 27, 2002 telephone conversation with Bob Brackett of EPA, Paul Liles, President of MOP, stated that GDC filed for bankruptcy and moved out of the main building on January 15, 2002. Currently, the main building is vacant except for a 15,000 square foot area which is

being leased to a computer design company. According to Mr. Liles, the former GDC headquarters building has been vacant for several years

## B. Site Hydrogeology and Contamination

The former manufacturing building is situated above a surface drainage and groundwater divide. Precipitation falling on the western slope of the divide drains to the unnamed stream along the southwest corner of the site. Rain falling on the eastern slope drains to Long Swamp Brook, which flows north to south through the eastern half of the site and connects two manmade ponds (the Artificial Pond created in 1978, and Little Tracy's Pond which was created prior to 1944). The site is underlain by alluvial deposits up to 25 feet thick, and as much as 166 feet of dense glacial till deposits. A sand layer near the base of the till exists at some locations up to 25 feet in thickness. Bedrock is a high grade metamorphic felsic gneiss. Depth to bedrock ranges from 86 feet to 166 feet on site. Bedrock is moderately weathered and fractured from 86 to 140 feet below grade. Competent bedrock was found below 140 feet. Depth to groundwater ranged from 36 feet to 1.25 feet.

Groundwater in the till moves radially away from the top of the hill and vertically downward, recharging the basal sand lens just above the bedrock and the bedrock itself. A portion of the shallow groundwater in the till discharges to surface water bodies to the east and west of the site (unnamed stream, the Artificial Pond, and Long Swamp Brook). Groundwater in the bedrock and basal sand lense flows to the southeast toward the Naugatuck River. Flow in the bedrock is largely horizontal through fractures although there is a slight upward component of flow in the vicinity of Long Swamp Brook and the wetlands near Kelly Road.

Four areas of concern have been identified: Area 1, the former sludge drying beds, former sanitary filter beds, and former container storage area; Area 2, the former industrial wastewater treatment lagoons; Area 3, the helicopter fuel UST area; and Area 4, Little Tracey's Pond. Possible organic sources included an oil water separator associated with a vapor degreaser, a still for the recovery and reuse of dirty solvent from the vapor degreaser, a paint spray booth, and a fume scrubber system. Vapor degreasing operations used various chlorinated organic solvents, including methylene chloride, TCE and TCA. Several former USTs were used over the years by Timex, including 4 fuel oil USTs, 2 diesel USTs, three gasoline USTs. According to information supplied by Mr. Liles, all USTs at the site have been removed from the property (most recently in 1996 by GDC), except for one 10,000 gallon jet fuel UST installed in December 1989 which is still in use.

The overburden and bedrock water bearing zones in the southwest corner of the site have been impacted by VOCs (12 VOCs were detected in groundwater; the most widespread contaminants are TCE, dichloroethenes, and vinyl chloride). The primary source area is located in the vicinity of the southern end of the former manufacturing building, and includes the former sludge drying beds, former container storage area, and the former sanitary filter beds. Also nearby is the former helipad UST where groundwater in the overburden has been contaminated with benzene. VOCs in groundwater extend beyond the site boundary to the south and southwest of the site in bedrock and overburden at concentrations exceeding CTDEP RSR Ground Water Protection Criteria (GWPC). For example, 1,700 ppb of TCE was detected in monitoring well RFW-27, which is screened from 91 to 101 feet in bedrock just west of the unnamed stream and the facility boundary. A second VOC groundwater plume extends east of the building as far as the Artificial Pond, but is confined to the overburden. The plume does not extend to monitoring wells in the vicinity of the GDC office building located next to Little Tracy's Pond.

The closest public water supply source is 1.8 miles to the south. Six former production and potable water supply wells were at one time used on site but are now inactive. In July 1991, the main Timex facility was connected to the city water supply for drinking water. The GDC building, which was constructed in 1978-1979, has always been connected to the municipal water supply. In 1992 and 1993, Timex sampled 50 residential water supplies southwest of the Timex site for VOCs. Five water supplies near the southwest corner of the Timex site were found to contain TCE and other VOCs exceeding MCLs. The residences were provided bottled water until the affected homes were hooked up to the municipal water supply by Timex in 1996.

C. Site Investigations

Timex began site investigation activity in 1982. In 1989, Timex performed a site assessment and sampled on-site production wells. In November 1991, Timex completed a closure plan for the former container storage area. A Preliminary Assessment Report was prepared by CTDEP in November 1990.

In 1992, Timex conducted a Supplemental Hydrogeologic Investigation to assess groundwater quality in bedrock. In May, 1993, Timex submitted the RFI Report. Test pits and soil borings were performed, overburden monitoring wells were installed, and groundwater, soils, and surface water and sediment samples were collected from 9 stations and analyzed. CTDEP issued a Consent Decree in 1994 requiring further investigation. In 1994, Timex submitted a Human Health Risk Assessment which concluded that risks were primarily from exposure to chlorinated solvents in groundwater.

In October 1998, Timex submitted the Supplemental RFI. This study included a soil gas survey, installation of overburden and bedrock wells on and off site, collection and analysis of soil, groundwater and surface water samples, pump testing, and bedrock fracture trace analysis. The primary source area for the VOCs in groundwater was determined to be a location in the vicinity of the southern end of the former manufacturing building. The soil gas survey was conducted at the southwest corner of the main building and identified several VOC "hot spots", which were then further investigated by performing borings and collecting soil samples.

An approximately 500 foot long groundwater pump and treat system designed to capture and treat the VOC groundwater plumes has been operating since September 2000. The pump and treat system employs five approximately 240 foot deep bedrock extraction wells which are in good communication with the basal sand lense under the till which capture the overburden and bedrock plumes. Contaminated groundwater is pumped to a treatment building which discharges treated groundwater to the municipal sewer line. Currently the system is pumping at about 20 to 30 gallons per minute. A Long Term Monitoring Plan (LTMP) was developed to document the operation and environmental monitoring of the groundwater extraction system. In October 2001, Timex prepared the Year One Operations and Maintenance Report, Groundwater Extraction and Treatment System. This report concludes that the groundwater extraction system is providing effective containment of the dissolved contaminant plume. Long term monitoring plans call for the sampling of 30 monitoring wells and 5 surface water locations on a quarterly basis for 2 years and on semiannual basis for the next 3 years.

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be "**contaminated**"<sup>1</sup> above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale / Key Contaminants</u>
Groundwater	<u>X</u>	___	___	Chlorinated VOCs
Air (indoors) <sup>2</sup>	<u>X</u>	___	___	Chlorinated VOCs suspected
Surface Soil (e.g., <2 ft)	___	<u>X</u>	___	
Surface Water	<u>X</u>	___	___	Chlorinated VOCs
Sediment	___	<u>X</u>	___	
Subsurf. Soil (e.g., >2 ft)	___	<u>X</u>	___	
Air (outdoors)	___	<u>X</u>	___	

\_\_\_ If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

X If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing

supporting documentation.

\_\_\_\_\_ If unknown (for any media) - skip to #6 and enter "IN" status code.

**Rationale and Reference(s):**

**Groundwater.** The "appropriate levels" being used for this question were CTDEP Remediation Standard Regulations (RSRs) Groundwater Protection Criteria (GWPC) for GAA aquifers. Sampling data from about 48 monitoring wells indicate that groundwater is contaminated with chlorinated VOCs. Concentrations of vinyl chloride, PCE, TCE, and their breakdown products exceed CTDEP GWPC standards.

**Indoor Air.** The "appropriate levels" being used to compare indoor air concentrations for Question 2 are Region IX PRGs for ambient air, which are based on inhalation exposures to a residential population. However, indoor air has not been sampled at the site. Other appropriate levels are CTDEP RSR Industrial/Commercial Volatilization Criteria for groundwater, which is applicable for groundwater within 15 feet of a building. However, groundwater under the building is approximately 20 to 25 feet below grade, so the CTDEP RSR I/C VC criteria are not strictly applicable.

The main VOC source area appears to be beneath or near the southern end of the manufacturing building due to condensation from a vapor degreaser. Although there are no monitoring wells directly below the building, there are three shallow wells located in the vicinity of the southern end of the building. Of the three wells, RFW-20 is located closest to the building (within approximately 20 feet of the building and surrounded by the building to the west, north, and east). Groundwater lies at approximately 25 feet below grade. A groundwater sample collected in 1997 from RFW-20 did not detect VOCs above the I/C VC criteria

Monitoring well RFW-1 is located approximately 60 feet west (downgradient) of the southern end and 70 feet south (downgradient) of part of the main building (depth to groundwater is approximately 29 feet). A groundwater sample collected from RFW-1 in 1997 detected vinyl chloride at a concentration of 19 ppb, above the I/C VC criteria of 2 ppb.

Monitoring well RFW-16 is located approximately 50 feet west (downgradient) of the main building. A groundwater sample collected from RFW-16 in 1997 detected concentrations of TCE (2100ppb), vinyl chloride (130ppb) and 1,1 DCE (29 ppb) above the I/C VC criteria of 540, 2, and 6 ppb, respectively. This well has also been monitored on a quarterly basis since October 2000. Recent results are consistent with historical sampling results.

In 1995, Timex conducted a passive soil gas survey consisting of 34 locations in the vicinity of the southwest corner of the main building, including three locations through the floor of a utility access trench beneath the building. The results (reported as micrograms sorbed, not as concentrations) indicated several VOC "hot spots", with the highest levels of TCE in soil gas located beneath the southern end of the former manufacturing building. The "hot spot" areas were then further investigated by performing borings and collecting soil samples. Of the six locations sampled under the building, only moderate concentrations of VOCs were detected in soils (the maximum concentration of TCE in soil beneath the building was 0.22 ppm).

EPA concludes that indoor air is reasonably expected to be contaminated with VOCs above Region IX PRGs.

**Surficial Soils.** The "appropriate levels" being used for this question are CTDEP RSR Direct Exposure Criteria (DEC) for industrial/commercial (I/C) exposures. The results of surficial soil sampling were that all sampling data were below the criteria.

**Surface Water.** The “appropriate levels” being used for this question are CTDEP Human Health Criteria for Consumption of Water and Organisms. Surface water samples were collected from 9 locations in 1990 and in 1997/1998. Results were that methylene chloride was detected in one sample collected in 1990 equal to the Criteria concentration of 4.7 ppb; 1,1-Dichloroethene was detected in two samples collected in 1997 at concentrations two orders of magnitude above the Criteria of 0.057 ppb; and TCE was detected in a sample collected in 1998 at a concentration equal to the Criteria of 2.7 ppb. No metals were detected in the 1997/1998 sampling round. Surface water has also been sampled at five locations as part of the quarterly monitoring program which began in October 2000. In general, only low concentrations of chlorinated solvents (low ppb range) have been detected, at concentrations consistent with historical results.

EPA concludes that surface water is contaminated with VOCs above the CTDEP Human Health Criteria for Consumption of Water and Organisms..

**Sediment.** The “appropriate levels” being used for this question are the CTDEP RSR DEC for industrial/commercial exposures. Results of sediment sampling were that VOCs and metals were not detected at concentrations above the criteria.

**Subsurface Soils.** The “appropriate levels” being used for this question are the RSR DEC for I/C exposures. The results of subsurface soil sampling were that all sampling results were below the criteria.

**Air (outdoors).** Outdoor air is not reasonably suspected to be contaminated.

Footnotes:

<sup>1</sup> “Contamination” and “contaminated” describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based “levels” (for the media, that identify risks within the acceptable risk range).

<sup>2</sup> Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

3. Are there **complete pathways** between “contamination” and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

Potential **Human Receptors** (Under Current Conditions)

<b>“Contaminated” Media</b>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food <sup>3</sup>
Groundwater	No	No	No	Yes	No	No	No
Air (indoors)	No	Yes	No	Yes	No	No	No
<del>Soil (surface, e.g., &lt;2 ft)</del>							
Surface Water	No	Yes	No	Yes	Yes	No	No
<b>Sediment</b>							
<del>Soil (subsurface e.g., &gt;2 ft)</del>							
<del>Air (outdoors)</del>							

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated") as identified in #2 above.
2. enter "yes" or "no" for potential "completeness" under each "Contaminated" Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("\_\_\_"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

\_\_\_ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

X If yes (pathways are complete for any "Contaminated" Media - Human Receptor combination) - continue after providing supporting explanation.

\_\_\_ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code

Rationale and Reference(s):

**Groundwater:** After Timex determined that nearby private wells were contaminated, Timex connected the residents to the municipal water supply in 1996. The facility is also serviced by the municipal water. There are no known water supply wells in the vicinity of the site, and therefore groundwater in the vicinity of the site is not used for drinking. The only likely exposures would be to construction workers who might come into contact briefly with groundwater during construction activities.

**Indoor Air:** Workers and construction workers are exposed to indoor air.

**Surface Water:** On-site workers, construction workers, and trespassers could be expected to occasionally be exposed to surface water at the site.

<sup>3</sup> Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

- 4 Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be "**significant**"<sup>4</sup> (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

X If no (exposures can not be reasonably expected to be significant (i.e., potentially "unacceptable") for any complete exposure pathway) - skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

\_\_\_\_\_ If yes (exposures could be reasonably expected to be “significant” (i.e., potentially “unacceptable”) for any complete exposure pathway) - continue after providing a description (of each potentially “unacceptable” exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to “contamination” (identified in #3) are not expected to be “significant.”

\_\_\_\_\_ If unknown (for any complete pathway) - skip to #6 and enter “IN” status code

**Rationale and Reference(s):**

**Groundwater:** The only likely exposures would be to construction workers who might come into contact briefly with groundwater during construction activities. However, the areas with the highest concentrations of VOCs in groundwater (near the source area around the southern end of the former manufacturing building) are generally areas where the depth to groundwater is 20 feet or more, making it unlikely that construction workers would come into contact with groundwater. In areas where the water table is more shallow and construction workers are more likely to directly contact groundwater, total VOC concentrations are in the 100-500 ppb range. EPA concludes that construction workers are likely to have only limited exposures to relatively minor concentrations of VOCs in groundwater, and that these exposures are not reasonably expected to be significant.

**Indoor Air:** The primary VOC source area appears to be beneath or near the southern end of the manufacturing building. According to the Supplemental RFI, chlorinated solvents were used at the facility from the 1940's to the 1970's, and the most likely source is condensation from a vapor degreaser. Manufacturing ceased in the 1980's. Thus, it appears that the source is more than 30 years old.

Workers and construction workers could be exposed to contaminants in indoor air, which has not been directly sampled. Groundwater, soil, and soil gas samples have been collected from below and/or near the southern end of the former manufacturing building. Although the CTDEP RSR I/C VC for groundwater are not applicable for groundwater greater than 15 feet below buildings (depth to groundwater under the building is approximately 20 to 25 feet), the monitoring well closest to the building (RFW-20 is located in a courtyard approximately 20 feet from the building) did not contain VOCs above the I/C VC criteria. Monitoring wells downgradient from the building do, however, contain levels of VOCs above the I/C VC criteria.

In 1995, Timex conducted a passive soil gas survey in the vicinity of the southwest corner of the building, including areas beneath the building. The results provided relative concentrations only, with the highest levels of TCE detected beneath the building, and the highest levels of vinyl chloride and 1,2 DCE west of the building. These areas were then further investigated by performing borings and collecting soil samples, including six locations under the building. Only moderate concentrations of VOCs were detected in soils (the maximum concentration of TCE in soil beneath the building was 0.22 ppm).

EPA concludes that exposures to indoor air are not reasonably expected to be significant for the following reasons. First, groundwater is located 20 to 25 feet below the building, and concentrations measured in groundwater closest to the building were below the RSR I/C VC criteria. Second, soil samples collected from “hot spot” locations under the building identified in the soil gas survey did not contain elevated VOC concentrations. Third, the VOC source is likely to be more than 30 years old, and concentrations in any source areas beneath the building have likely decreased overtime due to volatilization. Likewise, concentrations of VOCs in soil gas and indoor air have likely decreased over time.

EPA believes that there remains some uncertainty regarding indoor air concentrations in buildings at the site (primarily the southern end of the former manufacturing building). EPA believes that indoor air sampling should be conducted to verify that exposure to indoor air is not a significant risk to workers.

**Surface Water:** On-site workers, construction workers, and trespassers could be expected to occasionally be exposed to surface water at the site. However, concentrations of VOCs in surface water are in the low ppb range, and no one is known to use the surface waters in the vicinity of the site as a drinking water source or for the consumption of organisms. EPA concludes that exposures to surface water are not reasonably expected to be significant.

<sup>4</sup> If there is any question on whether the identified exposures are “significant” (i.e., potentially “unacceptable”) consult a human health Risk Assessment specialist with appropriate education, training and experience.

5 Can the “significant” exposures (identified in #4) be shown to be within acceptable limits?

\_\_\_\_\_ If yes (all “significant” exposures have been shown to be within acceptable limits) - continue and enter “YE” after summarizing and referencing documentation justifying why all “significant” exposures to “contamination” are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

\_\_\_\_\_ If no (there are current exposures that can be reasonably expected to be “unacceptable”)- continue and enter “NO” status code after providing a description of each potentially “unacceptable” exposure.

\_\_\_\_\_ If unknown (for any potentially “unacceptable” exposure) - continue and enter “IN” status code

Rationale and Reference(s): \_\_\_\_\_

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

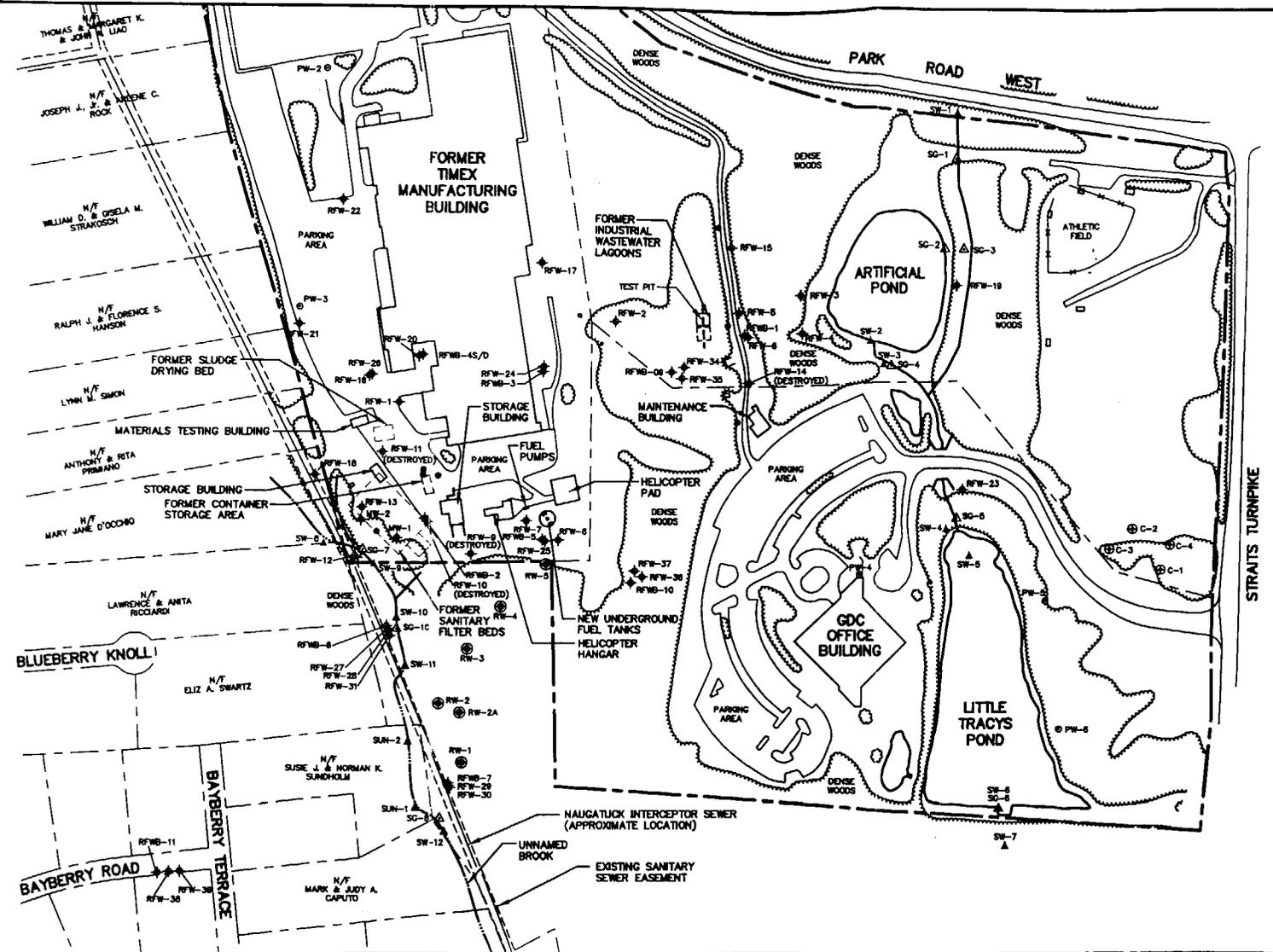
YE YE - Yes, “Current Human Exposures Under Control” has been verified. Based on a review of the information contained in this EI Determination, “Current Human Exposures” are expected to be “Under Control” at the Former Timex Manufacturing facility, EPA ID # CTD001165208, located at Park Road Extension, Middlebury, CT under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

\_\_\_\_\_ NO - “Current Human Exposures” are NOT “Under Control.”

\_\_\_\_\_ IN - More information is needed to make a determination.

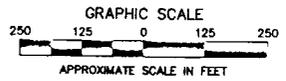
Completed by (signature) Robert W. Brackett Date 9/13/02  
(print) Robert W. Brackett  
(title) RCRA Facility Manager

Supervisor (signature) Matthew R. Hoagland Date 9/17/02  
(print) Matthew R. Hoagland  
(title) RCRA Corrective Action Section Chief  
(EPA Region or State) EPA New England, Region I



**LEGEND**

- RFWB-2 ◆ BEDROCK MONITOR WELL
- RFW-8 ◆ OVERBURDEN MONITOR WELL
- PW-2 ○ PRODUCTION WELL
- RW-1 ⊕ GROUNDWATER EXTRACTION WELL
- SG-5 ▲ STAFF GAUGE LOCATION
- SW-5 ▲ SURFACE WATER SAMPLING STATION
- SITE BOUNDARY
- - - PROPERTY LINE
- ~~~~~ TREE LINE



**NOTE:**  
 PROPERTY BOUNDARIES, MONITOR WELL, STAFF GAUGE AND RECOVERY WELL LOCATIONS WERE SURVEYED BY MEYERS & ASSOCIATES, 8/97, 2/98 AND 11/00. BORING LOCATIONS WERE APPROXIMATE.

**SITE PLAN**  
 FORMER TIMEX MANUFACTURING FACILITY  
 PARK ROAD EXTENSION  
 MIDDLEBURY, CONNECTICUT

ROY F. WESTON, INC.  
**WESTON**  
 MANAGERS DESIGNERS/CONSULTANTS

DRAWN	BEG	DATE	OCT 2001	DES. ENG.	DATE	W. G. NO.	06152.001.011
CHECKED				APPROVED		DWG. NO.	1-2

Locations where References may be found:

References are located in the site file

Contact telephone and e-mail numbers

(name) Robert W. Brackett  
(phone #) 617-918-1364  
(e-mail) Brackett.bob@epa.gov

**FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.**