DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

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

Current Human Exposures Under Control

RCRA RECORDS CENTER
FACILITY General Data Co
I.D. NO. CTD072142052
FILE LOC. R-13
OTHER 4782

Facility Name: General Data Co.
Facility Address: 400 Captain Neville Drive, Waterbury, CT
Facility EPA ID #: CTD07214205

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

RDMS Doc ID 4782

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).

SITE BACKGROUND

The site being evaluated for this EI is an approximately 36 acre property formerly owned and operated by Robertshaw Controls Company. The property is now divided into two separately owned properties, Parcel A and Parcel B, which are both approximately 18 acres in size. The eastern property, Parcel B, consists of a heavily wooded lot with small unpaved access roads and rock outcrops. A small parcel of undeveloped land borders Parcel B to the east. The developed western portion of the site, Parcel A (also referred to as 400 Captain Neville Drive), contains a 208,000 square foot building with parking lots and landscaped areas. A 1,200 square foot garage is located southeast and adjacent to the building. Adjacent properties include a residential housing project to the west, Interstate Highway 84 to the north, and commercial/industrial properties to the south. Topography slopes fairly steeply toward the north. Beaver Pond Brook flows north through the middle of the site, forming the boundary between Parcels A and B. Storm drains located throughout Parcel A discharge to the brook which eventually discharges to the Naugatuck River.

Prior to 1965, the property (Parcels A and B) was undeveloped. From 1965 until 1981, the property was owned and operated by Robertshaw Controls, Lux Time Division. Production included manufacture of parts for clocks, timing devices, and appliances, as well as the manufacture of electric circuit boards. Manufacturing included electroplating, which produced a waste water stream which was directed to a plant treatment system. After treatment, a dilute metal hydroxide sludge was pumped to an on-site settling lagoon for solids settling. After settling, the clear top waters were discharged to the Waterbury sewerage system, and the solids were periodically pumped to two sludge drying beds, located east of the brook on the "undeveloped" portion of the property (now Parcel B), prior to off-site disposal. Available information indicates that the two metal hydroxide sludge drying beds on Parcel B ceased receiving waste in the fall of 1980, and the beds were excavated, along with some underlying soil, prior to November 1980. Available information indicates that Parcel B has remained vacant since the fall of 1980. Robertshaw filed a Part A in November 1980 for operation of a TSDF. According to an April 29, 1981 letter from Robertshaw to CTDEP, all manufacturing operations had ceased at the site and Robertshaw was pursuing closure of the RCRA waste management units by that date. In May 1981, the settling lagoon on Parcel A was excavated and all sludge was reportedly removed.

The property was sold to General DataComm in June 1981. General DataComm used Parcel A to assemble telecommunication devices such as assembly and heat treatment of circuit boards from June 1981 until August 1988. General DataComm was listed as a large quantity generator producing waste Freon and solder flux.

On December 9, 1983 ownership of Parcels A and B was transferred to Dan-War Associates. Connecticut Technology Buildings Limited Partnership (CTB) bought Parcel A on September 13, 1985. On that same date, CTB leased Parcel B from Dan-War Associates.

From August 1988 until 1996, the facility on Parcel A was inactive, although General DataComm continued to lease it. In 1996, Voltarc began manufacturing specialty lighting products, including fluorescent and mercury vapor gas discharge lamps and related accessories. In 1999, Voltarc was purchased by Perkin Elmer, which sold the business back to Voltarc in 2001. Voltarc is a large quantity generator with mercury and lead wastes. The signing of a new lease by Perkin Elmer triggered the CT Transfer Act for Parcel A, and a form III was submitted in 1998. On May 20, 2003, Parcel A was sold to Malrich Realty, LLC. Parcel B was sold in late 2003 to Seventeen Acre Captain Neville Drive LLC. An ECAF/Form III for the site was submitted to CTDEP in December 2003. At the time of the completion of this EI, Parcel B was being readied for commercial development.

Bedrock consists of the Taine Mountain gneiss, which in the northwestern portion of Parcel A is overlain by overburden consisting of coarse-grained stratified drift (sand and gravel) with a saturated thickness of 10 feet or greater. Overburden at the rest of the site consists of glacial till and stratified drift with less than 10 feet of saturated thickness and areas of exposed bedrock. The water table is shallow; in some areas it is only a few feet below grade. Shallow groundwater generally flows to the north, and locally flows toward the brook. On Parcel B, the boring for MW-1D was performed to a depth of 50 feet bgs between and hydrologically upgradient of the two former sludge drying beds. The boring log shows only 2 feet of overburden (silty sand with cobbles) overlying bedrock. Water bearing fractures were reported at 14 feet and 31.5 feet.

The facility is serviced by municipal water and sewer. However, there are numerous private wells within a mile of the site. The nearest private well is reportedly located approximately 0.2 miles south (upgradient) of the facility. Groundwater beneath the facility is classified as GA. Beaver Pond Brook, which is classified as B/A, flows north through the facility property, and then westerly adjacent to Route 84 for approximately 5 miles before reaching the Naugatuck River.

AREAS OF CONCERN

The 1992 PA Plus Report prepared for EPA identified five "Original" AOCs on the site (parcels A and B which are described below. Several years later, Dames and Moore (D&M) conducted investigation and remedial activities on Parcel A which are discussed in the August 9, 1996 Phase A Site Assessment Report. The Phase A investigation included the collection and analysis of soil, sediment, and groundwater samples to evaluate environmental impact from seven "Current AOCs". The seven "Current AOCs" did not match the five "Original AOCs" discussed in the PA Plus, although some of the Original and Current AOCs do overlap. The following is a summary of the Original and Current AOCs.

Original AOC 1, the former 100 foot by 150 foot settling lagoon located on Parcel A, was closed and decommissioned according to an approved closure plan. The lagoon was used from 1971 to 1981 to allow metal hydroxide sludge to settle out of the wastewater stream. In May 1981, the settling lagoon was excavated and all sludge was removed. Limited confirmatory sampling conducted after removal of the sludge showed low to non detect levels of metals. The closure did not include the installation or sampling of a groundwater monitoring system. According to the 1995 Phase II Environmental Site Assessment prepared by D&M, three borings were performed in the former lagoon area. Orange discoloration was found in boring B-6, located at the downgradient side of the former lagoon. A groundwater sample collected from this area resulted in the detection of numerous metals above CT RSR GWPC (antimony, arsenic, beryllium, chromium, copper, lead, thallium, and nickel). The metals with the highest exceedences were 15 ppm of chromium (GWPC = 50 ppb), and 10 ppm of nickel (GWPC = 100 ppb). The study concluded that groundwater and soils around the former settling lagoon have been impacted by metals. More recent groundwater samples collected downgradient from the lagoon have detected much lower concentrations of chromium and cadmium.

Original AOC 2, according to the PA-Plus Report, the two sludge evaporation beds located east of the brook on Parcel B were decommissioned and sludge was removed prior to November 1980. However, as described below, additional investigation and removal of contaminated soils took place in this area in 1999. Groundwater continues to be monitored on Parcel B.

Original AOC 3 consists of former wastewater treatment tanks. Original AOC 3 has been incorporated into the study of "Current AOCs" 4 and 5, which are discussed below.

Original AOC 4 is a possible former above ground storage tank. This area consisted of two concrete footings located within a fenced enclosure. During a 1995 investigation, one surficial soil sample was collected and analyzed for TPH. None was detected. D&M concluded that no additional investigation or actions are required in this area.

Original AOC 5 is the former manufacturing area that housed the metal plating operation. This area has been addressed to some degree by investigations into Current AOCs 6 and 7.

In 1996, D&M conducted investigation and remedial activities which are discussed in the Phase A Site Assessment Report, dated August 9, 1996, and the Phase B Site Assessment Report, dated December 10, 1996. These investigations focused on the following "Current AOCs":

Current AOC 1 consists of floor drains located inside the boiler room, a trench drain located outside of the eastern wall of the boiler room, two catch basins located in the parking area east of the building, and a storm drain outfall located at Beaver Pond Brook. D&M visually assessed the trench drain and collected sediment samples from storm

drains. A sediment sample collected from inside the concrete lined trench drain resulted in the detection of 17,132 ppm of TPH, and metals including arsenic, copper, and lead. No deterioration of the concrete lining was noted, and D&M concluded that there were no adverse impact to soils surrounding the trench drain. Results of the storm drain outfall sediment sample did not exceed RSRs. During Phase B, D&M cleaned and removed sediment and debris from the trench drain and the round catch basin, and sealed a pipe which created a conduit between the boiler room and the trench drain.

Current AOC 2 consists of three 12 by 12 foot concrete pads for a former cooling tower and possible sumps along the eastern side of the building. During Phase A, D&M performed test pit excavations to a depth of 4 to 5 feet around the pads, looked for sumps, and collected soil samples. No sumps were found. A total of 10 soil samples were collected and analyzed. Metals were detected below the CT RSR DEC criteria. However, TCLP results detected concentrations above the PMC for cadmium, copper, lead, silver, and nickel. During Phase B, D&M performed soil borings around the pads to delineate TCLP metal contamination, and excavated approximately 20 cubic yards of soil from five locations around the cooling tower pads.

Current AOC 3 consists of a former 10,000 gallon heating oil UST which was located in a concrete vault outside the boiler room area on the eastern side of the building. The tank was emptied and removed by Aaron Environmental in March 1992, who concluded that the tank had not leaked. During Phase A, D&M conducted 3 shallow test pits. No oil or contamination was observed. Results of analysis of soil samples did not identify concentrations above CTRSRs.

Current AOC 4 consisted of a metal frame shed and vapor degreaser located outside the southeast corner of the building. The concrete floor of the shed, which was located on top of a former wastewater treatment tank (Current AOC 5), was curbed to provide secondary containment. During Phase A, D&M conducted five test pits (2 to 4 feet) around the degreaser shed and one in an area of soil staining and stressed vegetation. A five gallon plastic sump was located in the southeast corner of the shed. Low concentrations of chlorofluoroethanes were detected in soil samples. During Phase B, D&M demolished the shed and removed it and the degreaser to a scrap yard.

Current AOC 5 consists of three concrete below grade utility vaults and six additional vaults which are filled with soil. One of the 10 foot deep utility vaults was located beneath the degreaser shed (current AOC 4). The rectangular vaults contained approximately 7 feet of water. During Phase A, D&M collected water samples from the vaults, performed test pits around the vaults, and collected soil samples from the test pits. A brown product and sheen were observed on the water table in several test pits. Results of the analyses of water samples from the vaults detected 8.8 ppb of 1,1 dichloroethane, and 4.3 ppb of 1,1,1-trichloethane. Results of the soils analyses were that relatively low levels (5.9 ppm) of trichlorotrifluoroethane or Freon 113 was detected. The results

indicate that releases from the degreaser impacted soils at the groundwater interface and may have impacted groundwater. During Phase B, D&M pumped water from the tanks and then closed the tanks in place. D&M performed three borings around the west and northern ends of the vault area, collected continuous split spoon samples, and submitted 3 soil samples for analysis from the groundwater interface. Only trace amounts of Freon 113 were detected. D&M also installed two monitoring wells north and west of the tanks. No trichlorotrifluoroethane was detected in the groundwater samples.

Current AOC 6 consists of a former piezometer installed in the boiler room in which 1,2 dichloroethene was detected at 5 ppb, above GA criteria. During Phase A, D&M was unable to sample the piezometer since it had been removed. During phase B, D&M installed a new piezometer (MW-9), and sampled it for 1,2-dichloroethane. No 1,2-dichloroethane was detected.

Current AOC 7 consists of areas where trichlorotrifluoroethane, dichlorodifluoroethane, and chloroethane were detected (wells MW-3, MW-4, and MW-5).

RECENT SITE INVESTIGATIONS AND REMEDIATION

A. Parcel A.

The October 10, 2003 Quarterly Sampling Report No. 1 for 400 Captain Neville Drive, revised on May 21, 2004, discusses sediment, surface water, and groundwater sampling performed in May 2003. Four sediment and surface water samples were collected (one upstream, two midstream, and one downstream) from Beaver Pond Brook and analyzed for metals, VOCs, and Base Neutrals.

Results of sediment sampling were that metals and VOCs concentrations were not elevated. However, two base neutral compounds were detected in sample SD-03 (located downgradient from a catch basin discharging runoff from the parking lot) at concentrations above the I/C DEC criteria. N-Nitroso-di-n-propylamine was detected at a concentration of 1.8 ppm (I/C DEC = 1 ppm) and benzo(a)pyrene was detected at a concentration of 1.4 ppm (I/C DEC = 1 ppm). The report concluded that these compounds may be related to parking lot runoff and not an industrial discharge from the site.

Surface water sample results were compared to the Connecticut Water Quality Criteria (Human Health Criteria for the consumption of Water and Organisms). Zinc was the only metal detected, but was below the criteria. All other metals were non detect, although some had detection limits above the criteria. Of four VOCs detected, three were found in sample SW-02, which is located near the outfall from the parking lot storm drain. Low ppb concentrations of 1,1-dichloroethene, 1,1-dichloroethane, 1,1,1 trichloroethane, and Freon were detected. The only exceedance was for 1,1 dichloroethene which was detected at a concentration of 2.2 ppb, above the criteria of 0.057

ppb. There were no detections of SVOCs.

Twelve monitoring wells were sampled for metals and VOCs. Chromium was detected in two wells (highest concentration was 82.7 ppb in MW-12) above the GWPC of 50 ppb. Cadmium was detected at a concentration of 12.1 ppb in MW-9, above the GWPC of 5 ppb. In addition, 1,1-dichloroethene was detected in MW-11 at a concentration of 20 ppb, above the GWPC of 7 ppb.

The December 12, 2003 Quarterly Sampling Report No. 2 for 400 Captain Neville Drive, revised on May 21, 2004, documents sediment and groundwater sampling performed in September 2003. A sediment sample was collected from Beaver Pond Brook, about 160 feet downgradient from a catch basin discharging runoff from the parking lot, and analyzed for Priority Pollutant Base Neutrals. No PP BN compounds were detected in excess of I/C DEC criteria.

Groundwater samples were collected from 12 monitoring wells and analyzed for VOCs and metals. Cadmium was detected in MW-7 at 26.7 ppb. In addition, 1,1-dichloroethene was detected in well MW-11 at a concentration of 30 ppb (GWPC=7 ppb).

B. Parcel B.

The August 13, 1999 Summary of soil remediation efforts at Dan-War Associates describes the remediation of soils on Parcel B beneath and around the two former unlined sludge drying beds. Leachable nickel was the primary driver of soil remediation. Alta Environmental delineated the extent of soil contamination where leachable nickel exceeded the GA PMC of 0.1 ppm. Soil remediation began in May 1999 and was completed in July 1999. Approximately 6,500 tons of soil were excavated and transported off-site for disposal. Confirmatory soil sampling included the collection and analysis of 59 soil samples at the boundaries of excavations for leachable nickel. Compliance with the CTRSR soil standards was reportedly achieved.

The March 29, 2000 Summary of Recent Groundwater Monitoring Results, Dan War Property provides a summary of August/September 1999 and November 1999 groundwater monitoring on Parcel B. Seven bedrock wells were sampled for metals, cyanide, and VOCs. In general, only nickel and zinc were detected in wells near the beds. Concentrations of nickel were significantly elevated over the GWPC.

A letter dated February 11, 2003 to Thomas Bopp, Dan-War Associates, from Kelly Meloy, Alta Environmental Corp. documents semi-annual post-remediation groundwater monitoring of seven wells in 2000 through 2002. Results indicate that nickel concentrations in shallow bedrock groundwater at MW1 remain above the GWPC of 0.1 ppm. The highest concentrations of nickel were 1.2 ppm in April 2001, dropping to 0.65 ppm and 0.57 ppm in June and November of 2002.

Basis for CA 725 Environmental Indicator Determination.

Since the facility is zoned industrial, EPA compared soil and sediment data to the CT RSR Industrial / Commercial Direct Exposure Criteria (I/C DEC). Groundwater beneath the facility is classified as GA. Although the facility is serviced by municipal water and sewer, there are numerous private wells within a mile of the site. These private wells appear to be hydrologically upgradient and therefore unaffected by groundwater contamination at the site. EPA compared groundwater data to CT RSR Groundwater Protection Criteria (GWPC), Surface Water Protection Criteria (SWPC), and the I/C Volatilization Criteria. Surface water data were compared to Connecticut Water Quality Standards (Numerical Water Quality Criteria, Human Health Criteria for the consumption of Water and Organisms).

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?

   ___**X**_ 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.

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**[1] 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)?

	Yes	No	?	Rationale / Key Contaminants
Groundwater	_X_	___	___	several metals have been detected in groundwater, with chromium and nickel the most elevated above GWPC. 1,1 DCE was also detected above GWPC.
Air (indoors)[2]	___	_X_	___	Although indoor air has not been sampled, based on existing soil and groundwater data, EPA does not reasonably expect indoor air to be significantly impacted.
Surface Soil (e.g., <2 ft)	___	_X_	___	All known contaminated surficial soils have been removed.
Surface Water	_X_	___	___	1,1 Dichloroethene detected in SW-2 at 2.2

ppb, above the CT WQC of 0.057 ppb.

Sediment	_X_	___	___	N-Nitroso-di-n-propylamine and benzo(a)pyrene, have been detected in brook sediment samples slightly above I/C DEC.
Subsurf. Soil (e.g., >2 ft)	_X____		___	A brown product sheen was observed in soils/shallow groundwater while performing test pits around the former underground tanks/vaults. Yellow stained soils beneath former lagoon.
Air (outdoors)	___	_X_	___	EPA does not reasonably expect that outdoor is significantly impacted from contaminated soils or groundwater

_____ 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:

For parcel A, recent groundwater monitoring has detected exceedences of the GWPC for chromium (high of 82.7 ppb, GWPC = 50 ppb), cadmium (26.7 ppb, GWPC=5 ppb), and 1,1-dichloroethene (high of 30 ppb, GWPC = 7 ppb).

For Parcel B, nickel concentrations in one shallow bedrock well remain above the GWPC of 0.1 ppm. The highest concentrations of nickel were 1.2 ppm in April 2001, and 1.1 ppm in MW-1 in October 2001, dropping to 0.65 ppm and 0.57 ppm in June and November of 2002.

Sediment:

In May 2003, sediment samples were collected from 4 locations (upstream, downstream, and 2 adjacent locations) and analyzed for metals, VOCs, and base/neutral compounds. Metals and VOCs were not elevated. Analysis of sample SD-03 (located downgradient

from a catch basin discharging runoff from the parking lot) detected N-Nitroso-di-n-propylamine at a concentration of 1.8 ppm (I/C DEC = 1 ppm) and benzo(a)pyrene at a concentration of 1.4 ppm (I/C DEC = 1 ppm). The SD-03 location was sampled again in September 2003, and no exceedences of base/neutral compounds were detected.

Surface water:

Beaver Pond Brook is classified as B/A (includes potential for use as a drinking water supply, but may not be suitable for one or more uses). Surface water samples were collected from 4 locations (upstream, downstream, and 2 adjacent locations) and analyzed for metals, VOCs, and SVOCs. Results were compared to the Connecticut Water Quality Criteria (Human Health Criteria for the consumption of Water and Organisms). Zinc was the only metal detected, but was below the criteria. Of four VOCs detected, three were found in sample SW-02, which is located near the outfall from the parking lot storm drain. The only exceedence was for 1,1-Dichloroethene which was detected at 2.2 ppb, above the criteria of 0.057 ppb. There were no detections of SVOCs.

Subsurface Soils:

A brown product sheen was observed in soils/shallow groundwater while doing test pits around the former underground tanks/vaults. Yellow stained soils were also found beneath the former lagoon.

Footnotes:

[1] "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).

[2] 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)						
"Contaminated" Media	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food[3]
Groundwater	No	No	No	Yes	No	No	No
~~Air (indoors)~~	—	—	—				
~~Soil (surface, e.g., <2 ft)~~	—	—	—	—	—	—	—
Surface Water	No	Yes	No	Yes	Yes	No	No

Sediment	No	Yes	No	Yes	Yes	No	No
Soil (subsurface e.g., >2 ft)	No	No	No	Yes	No	No	No
~~Air (outdoors)~~	___	___	___	___	___		

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)

Since the site is zoned industrial and there are no houses, daycare, or recreational facilities on-site, these are not complete exposure pathways. Workers are not exposed to groundwater since the facility is serviced by municipal water. However, workers and trespassers could be exposed to surface water and sediments in the brook, and construction workers could be exposed to contaminated groundwater, surface water, sediments, and/or subsurface soils.

[3] 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"**[4] (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):

Workers, trespassers, and construction workers could be exposed to surface water and sediments in the brook.

Surface water data was compared to CT WQC (Human Health Criteria for the Consumption of Water and Organisms). The only exceedence was for 1,1-Dichloroethene which was detected at a concentration of 2.2 ppb, approximately two orders of magnitude above the criteria of 0.057 ppb. However, the CT WQS are conservative standards for comparison since it is unlikely that anyone is drinking the water or eating fish from the brook on a continuing basis. 1,1-DCE is a volatile compound and would likely volatilize out of the surface water relatively quickly. EPA concludes that the magnitude of exposure to surface water for on-site workers, trespassers, and construction workers is likely to be low.

Sediment data was compared to the I/C DEC criteria for soils. As a result of the May 2003 sampling event, two SVOCs were detected above the I/C DEC. N-Nitroso-di-n-propylamine and benzo(a)pyrene were detected at concentrations less than 2 times above the I/C DEC in sediment sample SD-03, located downstream from the storm water outfall and hydraulically downgradient from the former lagoon and evaporation beds. The October 2003 report concludes that the SVOCs detected are commonly found in

pavement, and may be due to runoff from the paved parking lot, and not the result of industrial processes. Sediment sampling conducted in September 2003 did not detect concentrations of SVOCs above criteria. EPA concludes that it is unlikely that workers, trespassers, or construction workers are likely to spend a significant amount of time in the sediments of the brook, and that the magnitude of exposure is likely to be low.

Construction workers could also be exposed to contaminated groundwater and subsurface soils.

In parcel A, recent groundwater monitoring has detected relatively minor exceedences of the GWPC for chromium, cadmium, and 1,1-dichloroethene. In Parcel B, nickel concentrations in one shallow bedrock well remain above the GWPC of 0.1 ppm. EPA concludes that construction workers are unlikely to have significant exposures to the contamination in groundwater because of the relatively minor exceedences of the drinking water standard combined with the minimal time in which a construction worker would be exposed to the groundwater. Regarding subsurface soils, evidence of hydrocarbon contamination was found in subsurface soils found during the performance of test pits in the vicinity of the former vapor degreaser, and metals were detected in soils in the vicinity of the former lagoon. However, EPA concludes that it is unlikely that construction workers would have significant exposures to these contaminated subsurface soils.

[4] 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 <u>and</u> 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

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):

__X_ 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 General Data Co. facility, EPA ID # **CTD07214205**, located at 400 Captain Neville Drive, Waterbury, 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 8/19/04
(print) Robert W. Brackett
(title) RCRA Facility Manager

Supervisor (signature) Matthew R. Hoagland Date 8/2/04
(print) Matthew R. Hoagland
(title) RCRA Corrective Action Section Chief
(EPA Region or State) Region 1

References:

1. Final Preliminary Assessment - Plus Final Report, September 1992, prepared by TRC for EPA.
2. Environmental Site Assessment, General DataComm, Inc., No.1 Captain Neville Drive, November 1994
3. Phase II Environmental Site Assessment, CT Technologies Building L.P., Gen DataCom Inc., 1 Captain Neville Drive, February 13, 1995.
4. Phase A Site Assessment Report, 400 Captain Neville Drive, Waterbury, CT. August 9, 1996
5. Phase B Site Assessment Report, 400 Captain Neville Drive, Waterbury, CT., December 10, 1996.
6. Summary Report - Areas of Concern, Former General DataComm Site, 400 Captain Neville Drive, Waterbury, CT. January 16, 1997.
7. Environmental Condition Assessment Form, December 1997.
8. Phase I Environmental Site Assessment, Site B, Captain Neville Drive & Progress Lane, Waterbury, CT June 1998.
9. Phase II Environmental Site Assessment, Site B, Captain Neville Drive & Progress Lane, Waterbury, CT, June 1998.

10. 8-13-99 Summary of soil remediation efforts at Dan-War Assoc. by ALTA Environmental Corp.
11. Summary of Recent Groundwater Monitoring Results, Dan War Prop., 3-29-00, by Alta.
12. Phase I Environmental Site Assessment of Perkin Elmer, 400 Captain Neville Drive, June 28, 2000.
13. Environmental Indicator Evaluations for Voltarc Technologies, prepared by Tetra Tech EMI, July 28, 2000.
14. Response to EPA comments on QAPP, August 15, 2002.
15. Final QAPP for 400 Captain Neville Drive, Waterbury, CT. September 2002.
16. Letter with Enclosures to L. Jensen, EPA from W. C. Spencer, March 4, 2003.
17. Letter to Thomas Bopp, Dan-War Associates from Kelly Meloy, Alta Environmental Corp., February 11, 2003.
18. Letter with Enclosures to L. Jensen, EPA from W. C. Spencer, March 25, 2003.
19. October 10, 2003 Quarterly Sampling Report No. 1 for 400 Captain Neville Drive in Waterbury, CT. Revised May 21, 2004.
20. December 12, 2003 Quarterly Sampling Report No. 2 for 400 Captain Neville Drive in Waterbury, CT. Revised May 21, 2004.
21. June 4, 2004 email from Paul Liles, Radnor Realty to Bob Brackett, EPA.

Locations where References may be found: References are located in the site file at 1 Congress Street, Boston, MA.

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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.