

New York State Department of Environmental Conservation
 Division of Hazardous Waste Remediation
 Bureau of Hazardous Site Control

152158

ADDITIONS/CHANGES TO REGISTRY: SUMMARY OF APPROVALS

158

SITE NAME: PRECISION CONCEPTS

DEC I.D. NUMBER 152

Current Classification _____

Activity: Add as Class 2 Reclassify to _____ Delist Category _____ Modify _____

Approvals:

- | | | | | | |
|---|-----|-------------------------------------|----|--------------------------|-------|
| Regional Hazardous Waste Engineer | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | _____ |
| BEEI of NYSDOH | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | _____ |
| DEE | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | _____ |
| <u>BERA</u> Remediation Action
Bureau Director [Class 2] | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | _____ |
| BHSC: a. Investigation Section | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | _____ |
| b. O&M Section [Class 4] | Yes | <input type="checkbox"/> n/a | No | <input type="checkbox"/> | _____ |
| c. Site Control Section | | | | | _____ |
| d. Director | | | | | _____ |

Robt J. Marini Date 9/9/96
[Signature] Date 9/17/96

Completion Checklist

		Completed By:	
		Initials	Date
OWNER NOTIFICATION LETTER?	<input checked="" type="checkbox"/>	_____	<u>9/26/96</u>
ADJACENT PROPERTY OWNER NOTIFICATION LETTER?	<input checked="" type="checkbox"/>	_____	<u>10/11/96</u>
ENB/LEGAL NOTICE SENT? (For Deletion Only)	<input type="checkbox"/>	_____	_____
COMMENTS SUMMARIZED/PLACE IN REPOSITORY	<input type="checkbox"/>	_____	_____
FINAL NOTIFICATION SENT TO OWNER? (For Deletion Only)	<input type="checkbox"/>	_____	_____

(For proposed Class 2a sites only) Planned investigative activities & dates: _____



SITE INVESTIGATION INFORMATION

1. SITE NAME Precision Concepts, Inc.		2. SITE NUMBER 152-016		3. TOWN/CITY/VILLAGE Shirley		4. COUNTY Suffolk																
5. REGION 1		6. CLASSIFICATION CURRENT PROPOSED 2 MODIFY																				
7. LOCATION OF SITE (Attach U.S.G.S. Topographic Map showing site location) a. Quadrangle Bellport b. Site Latitude <u>40° 50' 49"</u> Site Longitude <u>72° 52' 52"</u> c. Tax Map Numbers Dist 0200, Sect 584, Block 01.00, Lot 4.34 d. Site Street Address 26 Natcon Drive, Shirley, NY 11967																						
8. BRIEFLY DESCRIBE THE SITE (Attach site plan showing disposal/sampling locations) Precision Concepts is a one story industrial building. Industrial activity at the site included metal stamping, punching, light grinding and metal cleaning including the use of organic solvents (ie. 1,1,1 trichloroethane). Soil and sludge samples taken from on site industrial and sanitary pools have shown elevated levels of several metals and volatile organic compounds, including 1,1,1 trichloroethane. A May, 1988 liquid sample from an industrial leaching pool contained 1200 ppb of 1,1,1 trichloroethane. Downgradient private wells have been contaminated by 1,1,1 trichloroethane and 1,1 dichloroethene. a. Area <u>15.9</u> acres b. EPA ID Number NYD030282537 c. Completed (<input type="checkbox"/>)Phase I (<input type="checkbox"/>)Phase II (<input type="checkbox"/>)PSA (<input type="checkbox"/>)RI/FS (<input type="checkbox"/>)PA/SI (<input checked="" type="checkbox"/>)Other																						
9. Hazardous Waste Disposed (Include EPA Hazardous Waste Numbers) F001: 1,1,1 trichloroethane Quantity disposed is unknown.																						
10. ANALYTICAL DATA AVAILABLE a. (<input type="checkbox"/>)Air (<input checked="" type="checkbox"/>)Groundwater (<input type="checkbox"/>)Surface Water (<input checked="" type="checkbox"/>)Sediment (<input checked="" type="checkbox"/>)Soil (<input type="checkbox"/>)Waste (<input type="checkbox"/>)Leachate (<input type="checkbox"/>)EPTox (<input type="checkbox"/>)TCLP b. Contravention of Standards or Guidance Values <table border="1"> <thead> <tr> <th></th> <th><u>downgradient groundwater</u></th> <th><u>NYS Class GA Standard</u></th> </tr> </thead> <tbody> <tr> <td>1,1,1 trichloroethane</td> <td>9300 ppb</td> <td>5 ppb</td> </tr> <tr> <td>1,1 dichloroethene</td> <td>430 ppb</td> <td>5 ppb</td> </tr> <tr> <td>1,1 dichloroethane</td> <td>95 ppb</td> <td>5 ppb</td> </tr> <tr> <td>tetrachloroethene</td> <td>290 ppb</td> <td>5 ppb</td> </tr> </tbody> </table> In leaching pools elevated levels of: 1,1,1 trichloroethane 1200 ug/L Acetone 740 ug/L Carbon tetrachloride 2000 ug/L Cadmium 90 ug/L Chromium 3300 ug/L lead 12000 ug/L									<u>downgradient groundwater</u>	<u>NYS Class GA Standard</u>	1,1,1 trichloroethane	9300 ppb	5 ppb	1,1 dichloroethene	430 ppb	5 ppb	1,1 dichloroethane	95 ppb	5 ppb	tetrachloroethene	290 ppb	5 ppb
	<u>downgradient groundwater</u>	<u>NYS Class GA Standard</u>																				
1,1,1 trichloroethane	9300 ppb	5 ppb																				
1,1 dichloroethene	430 ppb	5 ppb																				
1,1 dichloroethane	95 ppb	5 ppb																				
tetrachloroethene	290 ppb	5 ppb																				
11. CONCLUSION <i>Industrial operations at the site have resulted in soil and groundwater contamination. A significant threat exists because contaminants from this site appear to be impacting on private drinking water wells. Additional investigation is necessary to determine nature and extent of contamination on site and off site.</i>																						
12. SITE IMPACT DATA a. Nearest Surface Water: Distance <u>7400</u> ft. Direction <u>West</u> Classification <u>C(TS)</u> b. Nearest Groundwater: Depth <u>40</u> ft. Flow Direction <u>south</u> (<input checked="" type="checkbox"/>)Sole Source (<input type="checkbox"/>)Primary (<input type="checkbox"/>)Principal c. Nearest Water Supply: Distance <u>7600</u> ft. Direction <u>NW</u> Active (<input checked="" type="checkbox"/>)Yes (<input type="checkbox"/>)No d. Nearest Building: Distance <u>0</u> ft. Direction <u>on-site</u> Use <u>Industrial</u> e. In State Economic Development Zone? (<input type="checkbox"/>)Y (<input checked="" type="checkbox"/>)N i. Controlled Site Access? (<input type="checkbox"/>)Y (<input checked="" type="checkbox"/>)N f. Crops or livestock on site? (<input type="checkbox"/>)Y (<input checked="" type="checkbox"/>)N j. Exposed hazardous waste? (<input type="checkbox"/>)Y (<input checked="" type="checkbox"/>)N g. Documented fish or wildlife mortality? (<input type="checkbox"/>)Y (<input checked="" type="checkbox"/>)N k. HRS Score _____ h. Impact on special status fish or wildlife resource? (<input type="checkbox"/>)Y (<input checked="" type="checkbox"/>)N l. For Class 2: Priority Category <u>1</u>																						
13. SITE OWNER'S NAME Town of Brookhaven Industrial Development Agency			14. ADDRESS 3233 Rte. 112, Bldg. 3 Room 304, Medford, NY 11763			15. TELEPHONE NUMBER (516) 451-6563																
16. PREPARER Signature Date <u>3/26/96</u> Christopher LaFemina, Environmental Engineer I, DHWR, NYSDEC 2/23/96 Name, Title, Organization				17. APPROVED Signature Date <u>9/17/96</u> Name, Title, Organization																		



STATE OF NEW YORK
DEPARTMENT OF HEALTH

Office of Public Health

11 University Place

Albany, New York 12203-3399

Barbara A. DeBuono, M.D., M.P.H.
Commissioner

Karen Schimke
Executive Deputy Commissioner

August 27, 1996

*Tony
Burt*

Mr. Earl Barcomb, P.E.
Director
Bureau of Hazardous Site Control
NYS Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233

RE: Precision Concepts
Site No. 152515
Shirley/Suffolk County

Dear Mr. Barcomb:

My staff have reviewed the Site Investigation Information package for the Precision Concepts site in Shirley, Suffolk County. The site appears to be a source of 1,1,1 trichloroethane (1,1,1-TCA) contamination in the groundwater which has been detected in several private wells immediately downgradient. This plume of 1,1,1-TCA appears to be shallower and separate from the plumes of groundwater contamination containing 1,1,1-TCA which are in a deeper zone of the aquifer and is attributed to Brookhaven National Lab (Site No. 152009). I also understand there is documentation that Precision Concepts used 1,1,1-TCA in past operations. With this information, I concur with the proposal to add the site to the Registry of Inactive Hazardous Waste Sites as a Class 2 site.

If you have any questions, please call Mr. Steve Bates of my staff at 458-6305.

Sincerely,

G. Anders Carlson, Ph.D.
Director
Bureau of Environmental Exposure
Investigation

Imw/96240PRO0039

SITE CODE:

ANALYTICAL DATA AVAILABLE:

Air- Surface Water- Groundwater- X Soil- Sediment-

CONTRAVENTION OF STANDARDS:

Groundwater- X Drinking Water- X Surface Water- Air-

LEGAL ACTION:

TYPE:

STATUS:

State-
Negotiation in Progress-

Federal-
Order Signed-

REMEDIAL ACTION:

Proposed-

Under Design-

In Progress-

Completed-

NATURE OF ACTION:

GEOTECHNICAL INFORMATION:

SOIL TYPE: Sand and gravel

GROUNDWATER DEPTH: 40 feet

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

Groundwater contamination impacting upon the sole source aquifer including residential water supplies.

ASSESSMENT OF HEALTH PROBLEMS:

CLASSIFICATION WORKSHEET

Site: Precision Concepts, Inc. County: Suffolk Region: 1

1. Hazardous waste disposed? Y (to 2) N (Stop) U (Stop)

2. Consequential amount of hazardous waste? Y (to 3) N (Stop) U (to 3)

3. Part 375-1.4(a)(1) applies? N (to 4) U (to 4)
 Y (as checked below; Class 2; to 5)

- a. endangered or threatened species
- b. streams, wetlands or coastal zone
- c. bioaccumulation
- d. fish, shellfish, crustacea or wildlife
- e. fire, spill, explosion or toxic reaction
- f. proximity to people or water supplies

4. Part 375-1.4(a)(2) applies? N (Cl 3; Stop) U (Cl 2a; Stop)
 Y (Class 2; to 5)

5. Factor(s) considered in making this determination: _____

- (1) A sole source aquifer has been impacted by contaminants from this site.
- (2) Private drinking water wells have been impacted by contaminants from this site.

SUMMARY

Consequential Hazardous Waste Yes No Unknown

Significant Threat Yes No Unknown

Proposed Classification 2 Site Number _____

January 26, 1996
Date

Christophe Loh Environmental Engineer I
Signature and Title

NEW YORK STATE DEPARTMENTS OF ENVIRONMENTAL CONSERVATION AND HEALTH
INACTIVE HAZARDOUS WASTE DISPOSAL SITE PRIORITY RANKING WORKSHEET

SITE I.D. _____ SITE NAME Precision Concepts, Inc.

° Priority I - Sites for which remediation should supersede all other Class 2 sites. Priority I can be assigned if any one of the following questions can be answered affirmatively.

- a) Has a public or private water supply which is currently in use been contaminated or threatened?..... X
 - b) Has human exposure to contaminants (or the potential for exposure) been identified which represents a significant health risk as determined by DOH?.....
 - c) Has bioaccumulation of site contaminants in flora or fauna resulted in a health advisory?.....
 - d) Are site contaminants present at levels that are acutely toxic to fish or wildlife or that have caused documented fish or wildlife mortality?.....
 - e) Is there a potentially responsible party or volunteer ready, willing and able to proceed with remediation?.....
- (1)
[If 1 or more boxes are checked, check this box]

° Priority II - Important Sites. Priority II will be assigned if any of the following questions can be answered affirmatively.

- a) Has a Class A or AA surface water body or a primary or principal aquifer been contaminated or threatened without contaminating or threatening an existing water supply?.....
 - b) Has bioaccumulation of site contaminants in flora or fauna resulted in actionable levels (but not a health advisory)?....
 - c) Are contaminants at levels chronically toxic to fish/wildlife?.....
 - d) Have endangered, threatened or rare species, significant habitats, designated coastal zone or regulated wetlands been impacted by releases from the site?.....
- (2)
[If 1 or more boxes are checked, check this box]

° Priority III - will be assigned unless one or more of the site prioritization criteria, specified above, apply to a site. After remedial needs for Priority I and II sites have been accommodated, remediation of sites under this category can be considered. If priority III, check box 3. (3)

Enter the number of the priority box checked 1, 2, or 3 here..... (4)
This is the site's priority rank.

FACTORS

IJC Factor - If the site has been identified by the International Joint Commission (IJC) as a component in a remedial action plan, subtract (1) from the value in box 4 and enter the result in box 5..... (5)

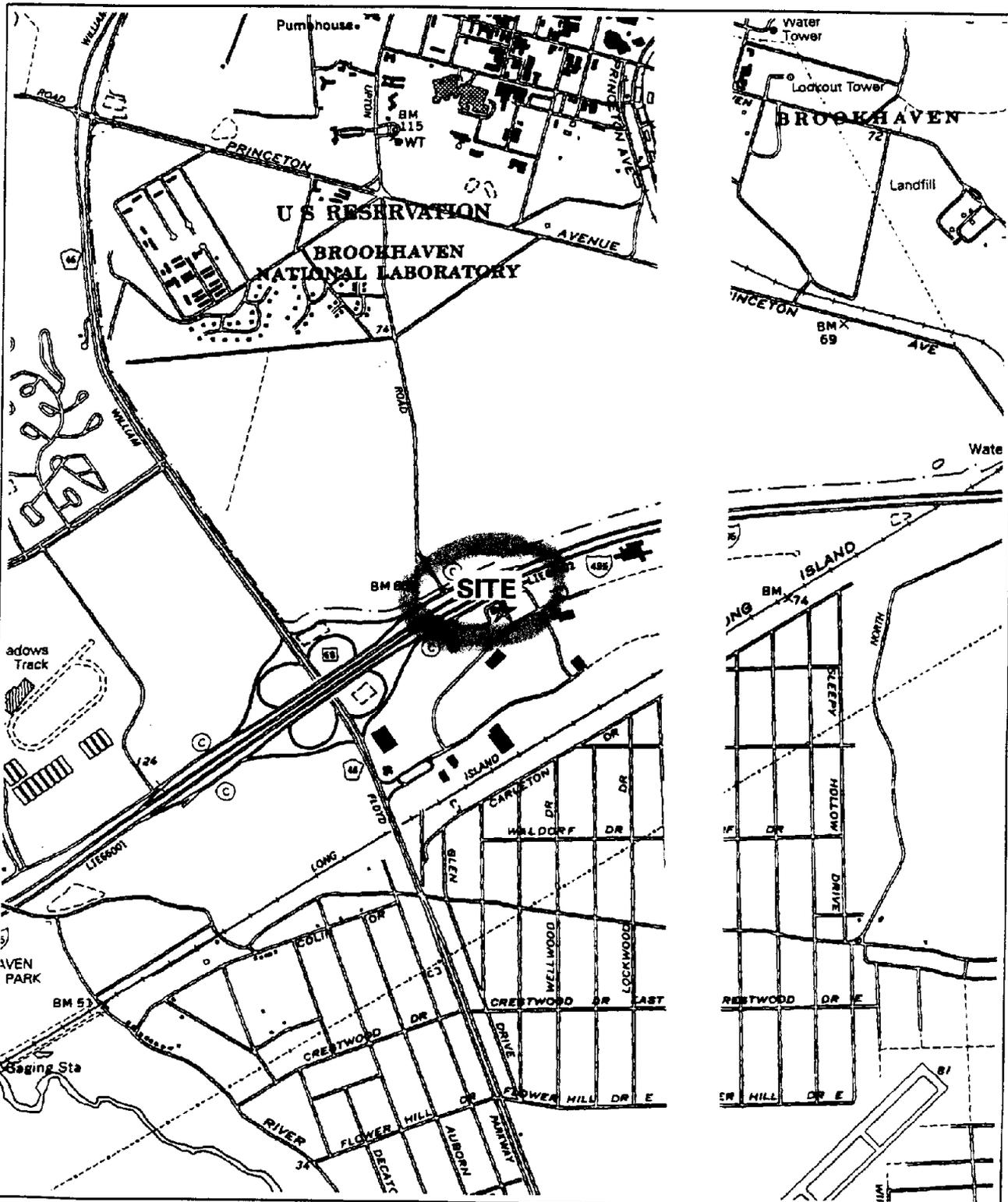
EDZ Factor - If the site is within a New York State designated Economic Development Zone (EDZ) should this fact cause the site priority to be raised?.. Yes No

Community Support Factor - If the site has been targeted for local government-supported development, should this fact cause the site priority to be raised?..... Yes No

If either "yes" box is checked, subtract 1 from the value in box 4 and enter the result into box 6. If "no" is checked, the value in box 6 equals box 4 (or box 5 if applicable). If both IJC and EDZ/Community Support factors apply, only 1 (not 2) will be subtracted from the value in box 4. The resultant value in box 6 will never be less than 1..... (6)
Yes No

IRM NOTE: Should this site be considered a candidate for an Interim Remedial Measure (IRM) as defined by 6NYCRR Part 375-1.3n?..... Yes XX

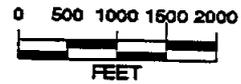
If "yes", please explain why: _____



Site Location Map

152158 Precision Concepts

NYSDOT Planimetric Quadrangle(s):
MORICHES, BELLPORT



Scale 1:24,000
April 09, 1997

LONG ISLAND EXPRESSWAY

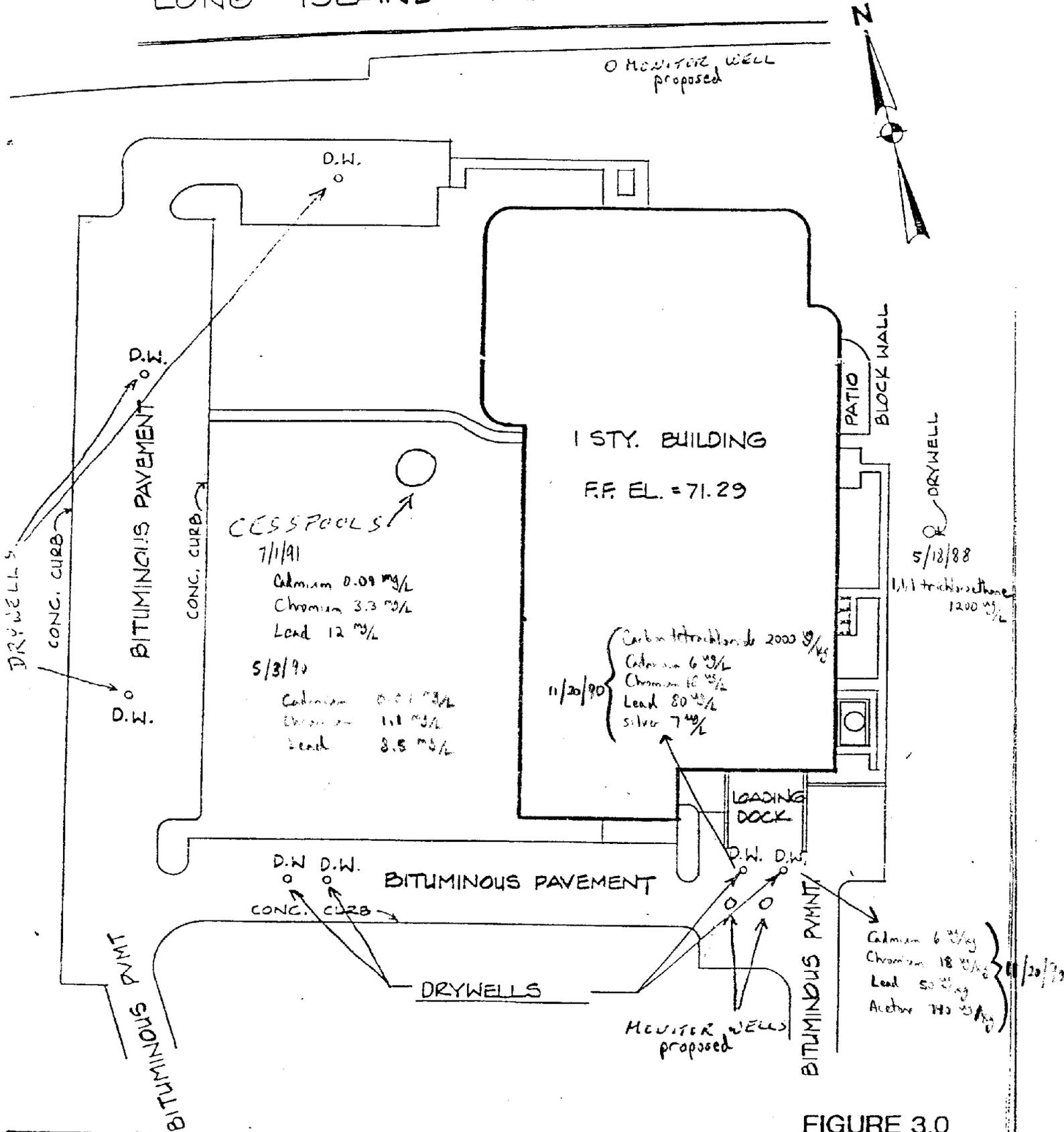


FIGURE 3.0

LOCATION OF DRYWELLS TO BE SAMPLED

SUFFOLK COUNTY
GROUNDWATER INVESTIGATION REPORT:
NORTH SHIRLEY, NEW YORK
OCTOBER - 1990

SUMMARY

Organic contamination in the form of trichloroethane (TCA) and dichloroethane (DCA), affecting the private wells of at least five homes in the area of Carleton Drive East, North Shirley, was found to be confined to a narrow plume with a length of approximately 3100 feet. The plume's source has been identified as emanating from an area of the Brookhaven R & D Plaza industrial park, located just north of the affected homes. Another contributing source of the contamination is the Brookhaven National Lab (BNL), which is located further upgradient (north) of both Brookhaven R & D Plaza and the affected homes, but which contributes low levels of these and other organic chemicals found at much greater depth than the principal plume.

BACKGROUND

In March of 1990, BNL informed the Suffolk County Department of Health Service Bureau of Drinking Water (SCDHS-BDW) that a test well (#130-2), located near the southern boundary of BNL and screened 80 to 90 feet below the water table was contaminated with traces of TCA and DCA (11 and 4 ppb, respectively).

In response to this finding, the SCDHS-BDW initiated a sampling survey of private wells downgradient of the contaminated BNL well. During the time period of March-June 1990, 90 private wells were sampled in an area of North Shirley, Town of Brookhaven, New York, bounded by Carleton Drive East, Wellwood Drive, Crestwood Drive and William Floyd Parkway. These samples were tested by the Suffolk County Department of Health Services' Public Health Laboratory (SCDHS-PHL) for trace organics (Table 1). Five of the private wells were found to be contaminated with the organic solvents 1,1,1-Trichloroethane (TCA) and 1,1-Dichloroethene (DCE). All five of these homeowner wells exceeded the New York State Health Department's drinking water standard of 5 parts per billion (ppb) for principal organic compounds. The concentrations detected ranged from 41 ppb to 340 ppb for the organic solvent TCA, and from 2 ppb to 20 ppb for DCE.

From May to October 1990, twenty groundwater monitoring wells (Fig. 1) were installed by the Suffolk County Department of Health Services' Bureau of Groundwater Resources (SCDHS-BGR). The monitoring program was designed to determine the prevailing groundwater flow direction, and if possible, the origin of the contamination.

SUFFOLK COUNTY GROUNDWATER INVESTIGATION REPORT: NORTH SHIRLEY-2

An additional goal of the program was to map out the impacted area, and secure enough data to support the extension of public water mains under the Federal Superfund Program.

WELL INSTALLATION AND SAMPLE COLLECTION

The SCDHS-BGR's Mobile B-53 hollow stem auger rig was employed to drill the wells. Drilling was done with 3 1/4" I.D. by 6 1/2" O.D. hollow stem augers; the lead auger section was capped with an expendable plug to prevent formation cuttings from entering the augers. The borehole was advanced to the maximum depth deemed safe, i.e., with enough power left to retrieve the augers (typically less than 150 feet, averaging approximately 120 feet). After the desired depth was reached, a 2-foot stainless steel well point attached to two-inch steel casing sections (10 feet or 20 feet long) was lowered inside the hollow stem augers, and the expendable plug punched out. The auger sections were then removed, exposing the screen to the formation.

Water samples were obtained in 10-foot or 20-foot intervals by pumping the deepest setting first, and then pulling the well up either 10 feet or 20 feet and unscrewing the uppermost section of pipe. Since the static water level exceeded 30 feet, a suction pump could not be used. A single pipe jet pump system was employed to obtain samples for screen settings sufficiently below the top of the aquifer, and bailing was used for screen settings near the top of the aquifer. Priming of the jet pump system was accomplished by using clean potable water obtained from a Suffolk County Water Authority (SCWA) approved hydrant. Samples were collected after clear, silt-free formation water was obtained -- usually after pumping the well for 35-45 minutes (at a rate of 5-10 gpm). Bailed samples were collected only after the well was purged an equivalent of three casing volumes to ensure a representative groundwater sample.

WELL LOCATIONS AND SAMPLING STRATEGY

Well locations were selected along four east-west transects that run approximately perpendicular to the prevailing regional groundwater flow direction (approximately due south, Fig. 1). The objective of this strategy was to quickly determine the exact local groundwater flow direction, isolate the industry or industries causing the groundwater contamination, and determine the width, length and depth of the plume. The actual location of the wells were chosen utilizing the existing data on homeowner wells generated by the SCDHS-BDW, in conjunction with data collected by the Suffolk County Department of Health Services' Inspectional Service Section (SCDHS-ISS) from the leaching pool of one of the industries located in the Brookhaven R & D Industrial Park (1200 ppb of TCA were found in May of 1988).

SUFFOLK COUNTY GROUNDWATER INVESTIGATION REPORT: NORTH SHIRLEY-3

The northern-most transect, along the south service road of the Long Island Expressway, was designed to determine groundwater quality upstream of the suspected industry in the Brookhaven R & D Industrial Park (Fig. 1) and to aid in determining groundwater elevations and directions. The second transect, along Natcon Drive in the Brookhaven R & D Industrial Park, was selected to determine if the suspect industry was emitting TCA contamination. The third transect, which was installed along Carleton Drive East, was designed to corroborate the groundwater contamination observed in the homeowners wells. The additional wells installed south of this transect were designed to determine the length of the plume along its spine.

GROUNDWATER DIRECTION

The regional groundwater table map (CONTOUR MAP OF THE WATER TABLE AND LOCATION OF OBSERVATION WELLS IN SUFFOLK COUNTY, NEW YORK MARCH 1990), prepared by the SCDHS-BGR, indicates a groundwater flow direction of due south in the study area. To confirm the accuracy of the regional groundwater flow direction, the SCDHS-BGR installed additional wells in the study area and utilized BNL wells and wells previously installed by the New York State Department of Environmental Conservation (NYSDEC) as part of an investigation of benzene contamination of individual domestic water supply systems just southwest of the study area.

The SCDHS-BRG groundwater wells used to determine the local groundwater flow direction were wells #1 - # 7 (Fig.-1). In addition to being used to determine water table elevations, these wells were also sampled to determine groundwater quality conditions. The BNL wells utilized in constructing the localized water table map were wells 115-01, 122-01, and 130-01; these wells appear on a water-level contour map prepared by Geraghty & Miller, Inc., entitled: BROOKHAVEN NATIONAL LABORATORY SOUTHERN BOUNDARY WATER-LEVEL CONTOURS, JULY 20, 1990 (attached). Some additional BNL wells were leveled in and measured, but due to the large areal coverage, these additional wells were not useful in determining the groundwater flow direction in the study area. The NYSDEC wells that were utilized to construct the local water table map were wells 17, 22, 29, 30, 31, 34, 36, 37, and 38; these wells appear in a report entitled: PRELIMINARY SUBSURFACE INVESTIGATION OF NORTH SHIRLEY, N.Y., -- SP# 87-4055, prepared by Marine Pollution, Inc. -- 16 March, 1988. In addition to these wells, SCDHS-BGR monitoring wells S-47750, S-51980, and S-62404 were employed as control wells (CONTOUR MAP OF THE WATER TABLE AND LOCATION OF OBSERVATION WELLS IN SUFFOLK COUNTY, NEW YORK MARCH 1990).

An accurate local water table map was constructed using the above wells and synoptic water level readings. The due south groundwater flow direction obtained from the regional water table map was confirmed for the study area (Fig. 1). The work done by Geraghty & Miller, Inc., also confirms that the groundwater flow direction is due south in the study area.

SUFFOLK COUNTY GROUNDWATER INVESTIGATION: NORTH SHIRLEY-4

SAMPLING RESULTS

The sampling effort was divided between the SCDHS-BDW and the SCDHS-BGR, with the BDW sampling private domestic wells in the study area, and the BGR installing and sampling groundwater profile wells. The sampling results of the BDW were summarized earlier in this report. The sampling results from the BGR drilling effort follow.

From May to October 1990, 20 groundwater monitoring wells (16 of which were groundwater profile wells) were installed and sampled by the SCDHS-BGR. As previously discussed, the wells were installed along east-west transects to facilitate the isolation of suspected sources of contamination.

The northern-most transect along the south service road of the Long Island Expressway just east of the William Floyd Parkway was designed to be upstream of the suspected industry in the Brookhaven R&D Industrial Park, and downstream of BNL, which was also a suspected source of the contamination found in the homeowner wells. This transect is comprised of groundwater profile wells #12, #21, #1, #20, #2, & #3 (in West to East order - Fig. 1). The data collected from these wells indicates low level organic contamination, (less than 16 ppb for TCA) extending 30 feet-110 feet below the water table, along the entire length of the transect (1500 feet). Other associated contaminants were found to be similarly distributed. Trichloroethene (TCE) and DCE ranged in concentration from non-detect (ND) to 6 ppb. Tetrachloroethene (PCE) was detected in well # 1 in concentrations ranging from 2 ppb to 5 ppb.

The Natcon Drive (also known as Precision Drive) transect is comprised of wells #7, #13, #11 & #10 (in West to East order). This transect was designed to ascertain if groundwater contamination was being caused by Precision Concepts Inc. (Fig. 1). In May of 1988, the SCDHS-ISS found 1200 ppb of TCA in a leaching pool located on the east side of the Precision Concepts building. Subsequent resampling on May 3, 1990 of this leaching pool which is used for non-contact cooling water (personal communication with Brian Robinson of SCDHS-ISS, October 1990), revealed no organic contamination at a detection limit of 40 ppb.

Significant TCA contamination was found at shallow depths in groundwater profile wells #11 & #13, which are located just south of the Precision Concepts building along Natcon Drive (Fig. 1). The contamination was spread out over approximately a 200 foot wide area and ranged in depth from 30 feet to 40 feet below the water table. The TCA concentration observed ranged from ND to 130 ppb in well # 13, and from 3 ppb to 9300 ppb in well # 11. In addition to the high concentration of TCA found at this level, other organics were also detected in significant concentrations.

SUFFOLK COUNTY GROUNDWATER INVESTIGATION REPORT: NORTH SHIRLEY-5

Among these were Vinyl Chloride (1 ppb), 1,1, Dichloroethane (95 ppb) TCE (3 ppb), PCE (290 ppb), Cis 1,2 DCE (0.7 ppb), and 1,1-DCE (430 ppb). Minor concentrations (3 ppb - 7 ppb) of TCE and 1,1, DCE were found deeper in the aquifer (80 - 100 feet below the water table). This deeper contamination is of the same type and concentration as found in the South Service Road transect, and probably originates further upstream from past activities at BNL.

The Ramsey Road transect was mainly used in the determination of the groundwater flow direction. It consists of wells #4, #22, #5, and #6 (in West to East order), with well #22 being a groundwater profile well, and wells #4, #5 and #6 being water table wells (i.e. screened 10 - 20 feet below the water table). No organic contamination was detected in wells #5 and #6, and only traces of TCA (1ppb) and methylene chloride (2ppb) were detected in well #4. Groundwater profile well # 22 was installed to ascertain if the contamination observed in wells #11 & #13 could be found at this site. Relatively low levels (3 ppb) of TCA were detected in the 0-10 foot level, while 29 ppb of TCA was found in the 31 - 40 foot interval below the water table (Fig. 1).

The Carleton Drive East transect was installed to try to corroborate the contamination observed in the homeowner wells along Carleton Drive East near its intersection with Freestate Drive (Table 1 & Fig. 1). As previously indicated, the TCA contamination of the homeowner wells ranged from 41 ppb to 340 ppb at a depth of 40 feet to 60 feet below the water table (based on information provided by homeowners who knew their well depths). Wells #14, #15, and #16 were clean except for traces of chloroform (less than 2 ppb). Well #17 was contaminated with traces of TCA: 1 ppb at the 0-10 foot level, and 5 ppb at the 21-30 foot level. Some additional organic contaminants were found at the 51-60 foot level below the water table: 17 ppb of DCE, 1 ppb of Bromodichloromethane, 0.9 ppb of Chlorodibromomethane, 0.6 ppb of DCE, and 4 ppb of Chloroform.

The final two wells installed, well #18, and #19, comprise the Moriches Middle-Island Road transect. These wells were installed to determine the length of the contamination plume. Well # 18 was found to be clean at all the levels tested (Fig. 1). This was a surprising result, since 41 ppb of TCA was found in a homeowner well directly across the street from well # 18 (Table 1). Well # 19 was also found to be clean, except for traces of chloroform (1ppb) at the 55 foot and 68 foot levels (Fig. 1). These two wells, which are located some 3400 feet downgradient of the suspected source, do not show signs of being impacted, or having been impacted, by the suspected source.

CONCLUSION

The cooperative effort of the SCDHS's BDW, BGR and ISS resulted in the identification of an area north of Natcon Drive and south of the Long Island Expressway, occupied by Precision Concepts, Inc., as the major source of the contamination observed in the homeowner wells. High concentrations of TCA, ranging in value from 130 to 9300 ppb, were found in wells #11 and #13 at depths of 10 to 40 feet below the water table, immediately downgradient of the area occupied by Precision Concepts, Inc. These two wells are located approximately 600 feet downgradient of a dry well (located just east of the Precision Concepts, Inc. building) that had 1200 ppb of TCA contamination in May of 1988 (Fig. 1).

The local groundwater flow direction was found to be due South, which has created a narrow (less than 300 feet wide) plume approximately 3100 feet long, emanating from the major source. The regional groundwater flow velocity ranges from 1.5 to 2.0 feet per day. As it moves south the plume is spreading slightly and sinking slowly with minimal dilution. The ultimate fate of the contamination is to move deeper in the flow system, and ultimately discharge to saltwater at the south shore groundwater boundary.

A contributing source of contamination of the deeper parts of the aquifer is BNL. Ubiquitous TCA and DCA contamination of less than 20 ppb has been observed along a 1500 foot wide transect just south of the LIE at depths of 60 to 110 feet below the water table.

RECOMMENDATIONS

The SCDHS-BRG's initial investigation found that the major source of TCA contamination in the homeowner wells is located south of the Long Island Expressway and north of Natcon Drive, an area occupied by Precision Concepts for the last eight years. A consulting firm should be hired by this company to continue the investigation on site and to carry out the following recommendations:

1. Inventory all chemicals employed at this facility since its occupation by Precision Concepts to determine storage, usage, disposal, and haulage histories.
2. Determine why TCA was found in 1988 in a leaching pool that was supposed to be used only for non-contact cooling water.
3. Drill additional on site wells to determine the actual area from which the contamination originated.

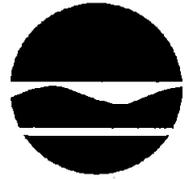
SUFFOLK COUNTY GROUNDWATER INVESTIGATION REPORT: NORTH SHIRLEY-7

4. Remove any active source that is found, and modify the responsible process or processes to comply with the Suffolk County Sanitary Code.
5. Prepare a report on the findings and certify to the satisfaction of the SCDHS-ISS that all activities associated with manufacturing processes comply with the Suffolk County Sanitary Code.
6. Remediate the effects of the contamination on the private homeowner wells by paying the cost of watermain extension and hook-up of the affected homes.

In addition to the above recommendations BNL should initiate the following steps to deal with the low level of ubiquitous contamination emanating from their property:

1. BNL should have their consultant Geraghty & Miller Inc. do a review of past to present chemical usage and disposal practices. All ongoing activities should be brought in compliance with the Suffolk County Sanitary Code.
2. BNL should install additional wells along their southern boundary to determine the width of the observed contamination; more wells should then be installed to determine the areal on-site extent and, if possible, the source(s) of this contamination. If found to be active they should be removed.
3. A report should be prepared by the consultant outlining their findings and recommendations and submitted to the SCDHS for review.

New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233 - 7010



Michael Zagata
Commissioner

OCT 11 1996

Town Clerk
Town of Brookhaven
205 S. Ocean Avenue
Patchogue, New York 11772

Dear Sir/Madam:

The Department of Environmental Conservation (DEC) maintains a Registry of sites where hazardous waste disposal has occurred. Property located at 26 Natcon Drive in the Town of Brookhaven and County of Suffolk and designated as Tax Map Number Dist. 200, Section 584, Block 01.00, Lot 4.34 was recently added as a Class 2 in the Registry. The name and site I.D. number of this property as listed in the Registry is Precision Concepts, Inc., Site #152158.

The Classification Code 2 means that a significant threat exists to the public health or environment -- action required.

We are sending this letter to you and others who own property near the site listed above, as well as the county and town clerks. We are notifying you about these activities at this site because we believe it is important to keep you informed.

If you currently are renting or leasing your property to someone else, please share this information with them. If you no longer own the property to which this letter was sent, please provide this information to the new owner and provide this office with the name and address of the new owner so that we can correct our records.

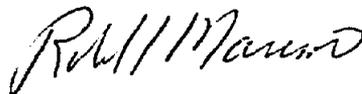
The reason for this recent classification decision is as follows:

- Industrial operations at the site have resulted in soil and groundwater contamination. A significant threat exists because contaminants from this site have been detected in residential drinking water wells downgradient of the site requiring the homes that they serve to be provided with an alternative water supply. Additional investigation is necessary to fully determine the nature and extent of contamination on site and off site.

If you would like additional information about this site or the inactive hazardous waste site remedial program, call:

DEC's Inactive Hazardous Waste Site Toll-Free Information Number 1-800-342-9296 or
New York State Health Department's Health Liaison Program (HeLP) 1-800-458-1158, ext.
402.

Sincerely,

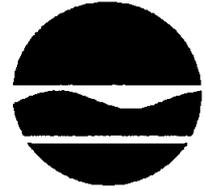


Robert L. Marino
Chief
Site Control Section
Bureau of Hazardous Site Control
Division of Environmental Remediation

bcc: R. Marino
J. Swartwout
J. Epstein
A. Sylvester
A. Carlson
L. Ennist

AS/srh

A. Sylvester
New York State Department of Environmental Conservation
50 Wolf Road, Albany, New York 12233-7010



Michael D. Zagata
Commissioner

SEP 26 1996

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Town of Brookhaven
Industrial Development Agency
3233 Route 112
Building 3 Room 304
Medford, New York 11763

Dear Sir/Madam:

As mandated by Section 27-1305 of the Environmental Conservation Law (ECL), copy enclosed, the New York State Department of Environmental Conservation (NYSDEC) must maintain a registry of all inactive disposal sites suspected or known to contain hazardous wastes. The ECL also mandates that this Department notify, by certified mail, the owner of all or any part of each site or area included in the Registry of Inactive Hazardous Waste Disposal Sites.

Our records indicate that you represent the owner or part owner of the site listed below. Therefore, this letter constitutes notification of the inclusion of such site in the Registry of Inactive Hazardous Waste Disposal Sites in New York State.

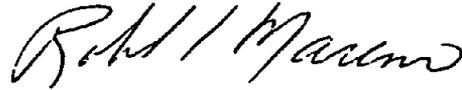
DEC Site No.: 152158
Site Name: Precision Concepts, Inc.
Site Address: 26 Natcon Drive, Shirley, New York 11967
Site Classification: 2

Enclosed is a copy of the New York State Department of Environmental Conservation, Division of Hazardous Waste Remediation, Inactive Hazardous Waste Disposal Site Report form as it appears in the Registry and Annual Report, and an explanation of the site classifications. The Law allows the owner and/or operator of a site listed in the Registry to petition the Commissioner of the New York State Department of Environmental Conservation for deletion of such site, modification of site classification, or modification of any information regarding such site, by submitting a written statement setting forth the grounds of the petition. Such petition may be addressed to:

Mr. Michael D. Zagata
Commissioner
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-1010

For additional information, please contact me at (518) 457-0747.

Sincerely,



Robert L. Marino
Chief
Site Control Section
Bureau of Hazardous Site Control
Division of Environmental Remediation

Enclosures

bcc: w/o Enc.
E. Barcomb
R. Marino
J. Swartwout
~~A. Sylvester~~

w/Enc. (Copy of Site Report form only)
R. Dana
G. Anders Carlson, NYSDOH
J. Sama
L. Riley, R/1
R. Becherer, R/1
S. Ervolina

AS/srh

BELOW THE WATER TABLE

DEPTH*	12	21	1	20	2	3
0-10	--	ND	--	--	--	--
11-20	--	--	ND	ND	--	ND
21-30	ND	--	ND	--	ND	--
31-40	--	ND	ND	ND	--	1
41-50	ND	--	--	--	1	--
51-60	--	ND	2	--	--	11
61-70	3	--	7	5	9	--
71-80	--	15	11	--	--	7
81-90	8	--	ND	10	7	--
91-100	--	8	7	8	--	--
101-110	9	--	2	--	4	--
111-120	--	--	ND	--	--	--

DEPTH*	7	13	11	10
0-10	ND	--	11	--
11-20	--	7	--	ND
21-30	--	130	120	ND
31-40	--	--	9300	--
41-50	--	ND	--	ND
51-60	--	--	3	--
61-70	--	ND	--	ND
71-80	--	ND	--	--
81-90	--	--	4	9
91-100	--	--	8	--
101-110	--	--	--	--
111-120	--	--	--	--

DEPTH*	4	22	5	6
0-10	--	--	--	--
11-20	--	3	--	ND
21-30	1	--	ND	--
31-40	--	29	--	--
41-50	--	--	--	--
51-60	--	ND	--	--
61-70	--	ND	--	--

DEPTH*	14	17	15	16
0-10	ND	1	--	--
11-20	ND	--	ND	ND
21-30	--	5	--	ND
31-40	ND	--	ND	ND
41-50	--	--	--	--
51-60	--	ND	ND	ND
61-70	--	--	--	--
71-80	--	--	ND	--

DEPTH*	18	19
0-10	--	--
11-20	ND	ND
21-30	--	--
31-40	--	ND
41-50	ND	--
51-60	--	ND
61-70	ND	ND
71-80	--	--

SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES PROFILE WELL
 SUFFOLK COUNTY DEPARTMENT OF HEALTH SERVICES GROUNDWATER

TABLE OBSERVATION WELL

* DEPTH OF 2' SCREEN BELOW STATIC WATER LEVEL

ND - NONE DETECTED (LESS THAN 0.5 PPB)

-- INTERVAL NOT SAMPLED

ALL CONCENTRATIONS IN PPB

PRIVATE WELL RESULTS

1,1,1, TRICHLOROETHANE (≥ 50 PPB)

1,1,1, TRICHLOROETHANE (< 50 PPB)

NO DETECTION (< 0.5 PPB)

LINE OF EQUAL WATER-LEVEL ELEVATION IN FEET ABOVE MEAN SEA LEVEL

FIG. 1 TCA CONCENTRATIONS: NORTH SHIRLEY INVESTIGATION