NMENTAL CONTROL SERIES

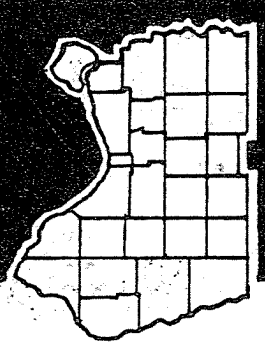
WIDE BEACH

PCB INVESTIGATION SAMPLING REPORT

TOWN OF BRANT
ERIE COUNTY, NEW YORK

NOVEMBER, 1982

DIVISION OF ENVIRONMENTAL CONTROL
SOLID WASTE SECTION.



County of Erie
DEPARTMENT OF
ENVIRONMENT AND PLANNING

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INTRODUCTION

This report will provide a summary of the sample results for all the testing that was performed at the Wide Beach community in the period from August 1981 to October 1982.

Sampling technique and rational for the soil, water and air monitoring program will be discussed as well as what was identified during the investigation. Various maps and charts will be used to show the level of PCB's in the ambient environment at Wide Beach. Interpretation of the results will be compared with the appropriate state and federal standards where available.

It is not the intent of this report to either assess possible health effects or to recommend remedial work that should be performed. The purpose of this summary of data is to show what the conditions are on site and to provide information to the appropriate State and/or federal agencies which may make future decisions or recommendations in regard to this matter.

FOREWARD

The presence of PCB's (polychlorinated biphenyls) in the soil, air and groundwater at the Wide Beach community has been traced to the use of waste oils by residents for road dust control over an extended period of time.

The possible use of waste oil at Wide Beach that may have contained PCB's was first brought to the attention of the Erie County Department of Environment and Planning on July 24, 1981, when a relative of a Wide Beach resident called and reported that the waste oil which was used may have come form a local firm that deals with transformers. After an August 7, 1981 field inspection in which empty drums labeled "Dielectric Coolant" were observed, it was decided that soil and water samples should be gathered to identify the presence of PCB's. On September 3, 17 and October 1, 1981 eight home wells were sampled. The presence of PCB was confirmed at levels ranging from a trace to 4.56 PPB.

During October and November 1981, twenty-two (22) soil samples were taken from twelve (12) locations. PCB's were present at levels ranging from 2 to 1026 ppm. These results were recorded in a February 22, 1982 report entitled "Wide Beach Polychlorinated Biphenyls, Investigation of Groundwater and Soil Contamination, Town of Brant, Erie County" by the Erie County Department of Environment and Planning and Department of Health.

A second more comprehensive sampling program was developed and started in May 1982 to further define the extent of PCB contamination in the Wide Beach community. This program involved the Erie County Department of Environment and Planning, Department of Health and the Erie County Laboratory and included soil, water, air and dust samples.

On July 29, 1982 the initial results were submitted to the New York State Department of Environmental Conservation for a Hazard Ranking Score under the Comprehensive Environmental Response Compensation and Liability Act of 1980 (CERCLA or Superfund). Using the Mitre model, Wide Beach received a Hazard Ranking Score of 56.58. Due to this high ranking, the Wide Beach community is among a number of sites in New York State which are being considered for inclusion on the National Priorities List (NPL) and consequently eligible for funding under CERCLA. The completed Mitre forms and documentation for Wide Beach were submitted by the New York State Department of Environmental Conservation on August 12, 1982 to the United States Environmental Protection Agency for their review.

On December 20, 1982, Wide Beach was included on a list issued by the Environmental Protection agency as a site that may receive remedial action pursuant to CERCLA.

THE WIDE BEACH COMMUNITY

The Wide Beach subdivision is located in Southern Erie County within the Township of Brant. It is bounded on the south by the Cattaraugus Indian Reservation, on the west by Lake Erie, and on the east and north by private property.

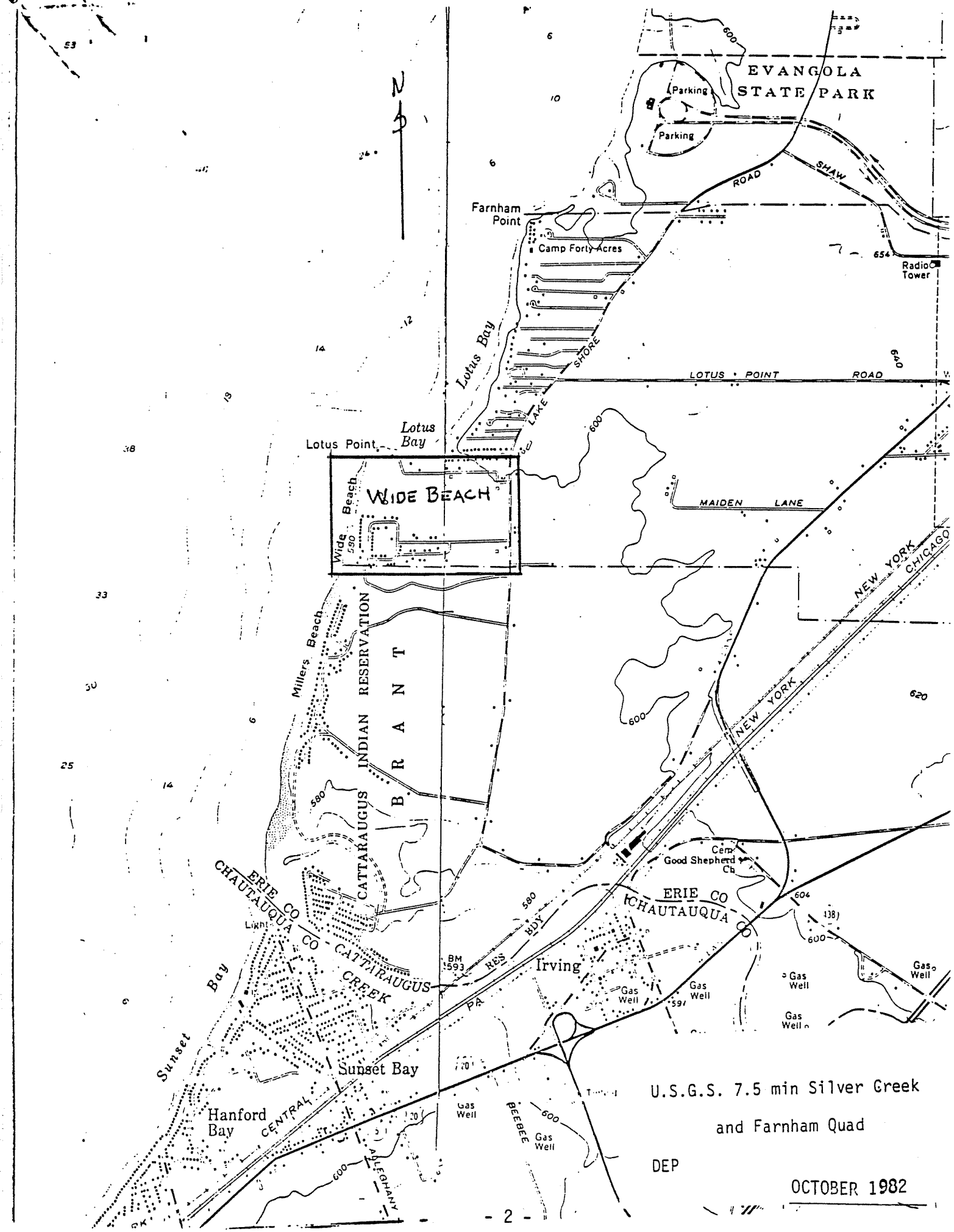
Wide Beach was incorporated in 1920 and presently has sixty-six (66) property owners. Approximately one hundred and twenty (120) people reside there during the summer season and forty-five (45) reside year around. One-third of the people owning property at Wide Beach are retired.

The residents all receive their water supply from individual wells. Sanitary sewers were installed in the subdivision in 1980. Sewage is pumped into the Erie County Sewer District No. 2 system, via Evangola State Park with treatment provided at the Erie County Sewer District No. 2 plant on Big Sister Creek.

During the 1960's and 1970's waste oil was used for road dust control. It was reported that the road was oiled 2-3 times a year with about twenty-five 55 gallon drums used per oiling. Consequently about 75 drums per year were land spread.

Use of oil for dust control at Wide Beach was discontinued approximately four (4) years ago.

Geographic and hydrogeologic conditions at Wide Beach were described in the previous February 22, 1982 report.


EVANGOLA STATE PARK
Parking
Parking
SHAW ROAD
Farnham Point
Camp Forty Acres
654
Radio Tower
Lotus Bay
LAKE SHORE
LOTUS POINT ROAD
649
Lotus Point
Lotus Bay
WIDE BEACH
Wide Beach
590
MAIDEN LANE
NEW YORK CHICAGO
NEW YORK
620
600
Millers Beach
INDIAN RESERVATION
B R A N T
CATTARAUGUS
580
ERIE CO
CHAUTAUQUA CO
CATTARAUGUS CREEK
Light
BM 593
RES
RDY
PA
Irving
Cem
Good Shepherd Ch
ERIE CO
CHAUTAUQUA CO
604
600
Gas Well
Sunset Bay
Sunset Bay
Hanford Bay
CENTRAL
ALLEGHANY
BEEBEE
Gas Well
U.S.G.S. 7.5 min Silver Creek
and Farnham Quad
DEP
OCTOBER 1982

SAMPLING PROGRAM

SOIL SAMPLES

The first round of soil samples was taken by DEP on October 1, 1981. The purpose of these samples was to identify the presence of PCB's. Two (2) samples were taken, one from a swale in front of 90 Wide Beach and the other from an area where soil from the sewer line trenches was spread. Due to the high level of PCB (91.9ppm) in the sample from the swale, a more extensive soil sampling program was conducted on November 19, 1981 when a total of twenty (20) samples were taken. The samples were taken in ten (10) locations and in clusters of two (2). At each location, a shallow sample at a depth of of 6 inches and a deep sample at approximately three (3) feet was obtained. Nine (9) locations were on the Wide Beach property itself and one was from approximately two hundred and thirty-five (235) feet north of the Wide Beach property. All samples were taken in swale areas immediately adjacent to the road.

The November sample results confirmed the presence of PCB's and therefore, a comprehensive soil sampling program of the area was undertaken by the Erie County Department of Environment and Planning, Division of Environmental Control in May 1982. The purpose of the sampling program was to:

(1) Reaffirm previous sampling results in areas where PCB contamination of the soil was at very high levels.

(2) Determine what areas may or may not be contaminated with PCB's.

(3) Determine if there is a relationship between drainage and PCB contamination.

May 14 and 17 were devoted to selecting sampling sites, measuring distance and staking.

Roadway sampling usually involved a series of three (3) samples - one on the road and one approximately ten (10) feet from the edge of the road on each side. Because previous roadside ditch samples were positive for PCB's, some of the areas had a series of four (4) (the additional sample being one in the ditch immediately adjacent to the road). The reason for this was to determine if the PCB's contamination was limited to the road and adjacent ditch areas. It was also the intent to correlate these series of roadside samples with the water well samples of adjacent houses to determine if there is a relationship between the concentration of PCB's in the soil and the concentration in the groundwater.

Only one (1) sample was taken in areas of previously high concentrations in the road ditch area.

Samples were also taken at various backyard locations, creek bottom sediment, areas of fill from the sewer construction project and on the beach.

Actual sampling occurred on May 18 through May 20.

The shallow soil samples were taken not more than 12" from the stake location, were from 4" to 6" in depth, and from a hole drilled by a hand held gasoline power auger which was 3" in diameter.

The deep soil samples were taken not more than 12" from the shallow sample, were 2 feet in depth, and were also drilled by power auger with a 3 inch diameter auger. In sampling the deep samples, the hole was drilled to two (2) feet, the auger was then pulled out of the hole to clean all debris, then resunk and drilled to collect the soil at the bottom of the hole with the tip of the auger.

Road samples were taken by power auger and trowel to the depth of 1 - 2 inches.

Sampling points #51 and #52, which were inaccessible with the power auger, were shallow samples only and taken by trowel.

The auger was cleaned with cold water between sampling sites and new sampling gloves were used after each sample.

In the second round of sampling, a total of 57 sampling points and 98 soil samples taken.

SOIL SAMPLE RESULTS

The PCB Survey Summary - Soil Sampling Program" lists all samples that were taken with their respective concentration of PCB's. Exhibit I (2 sheets) shows the sampling points and amount of PCB's detected and their relationship to the surrounding area.

The current State and Federal disposal requirements for any chemical substance or combination of substances (including soils) are:

(1) Less than 50 ppm - May be disposed of in any approved solid waste management facility.

(2) Greater than or equal to 50 ppm but less than 500 ppm - can be disposed in an EPA approved landfill or in any approved secure landfill.

(3) Greater than or equal to 500 ppm - can only be disposed of in an approved EPA incinerator. No landfilling is permitted.

The New York State Department of Environmental Conservation has the following policy in regard to PCB's in soils:

- under 10 ppm - no concern.

- 10-49 ppm - if removed from site, the receiving municipal landfill must be approved by NYSDEC. Depending on on-site conditions, it may be recommended soils which have 10-49 ppm be covered with fresh soil to preclude direct contact.

- 50 ppm -500 ppm - removal to secure landfill.

- over 500 ppm - incineration

A total of one hundred and twenty-one (121) samples in seventy locations were taken during the soil investigation.

Twenty-eight locations had PCB concetrations of less than 10 ppm. Eighteen had concentrations between 10 and 49 ppm, twenty-three (23) locations had concentrations of 50 to 500 ppm, and one location had a level of over 500 ppm.

FINDINGS

a) Of the 24 locations that have levels above 50 ppm, 20 (83%) are on the roadway or the roadside drainage ditch. The other four locations, nos. 31 and 43 are approximately 10 feet from the roadway, number 46 is

located in an old overland drainage area and number 51 is in an area that receives current drainage from the western sector of Wide Beach. Five (21%) of these 24 locations had PCB's of greater than 50 ppm in both the shallow and deep sample.

b) Sample point 51 indicates the soil contaminated with PCB is being carried off-site by surface drainage and entering the wetland ecosystem that is located to the south of Wide Beach.

c) The western most road of South Wide Beach oval appears to have the highest PCB levels. This area was reported to have received the most road oil.

d) Of the 46 sample locations, 18 (39%) had levels between 10 and 49 ppm. The majority of these locations were in the samples that were taken approximately 10 feet from the road's edge.

e) With the exception of sampling points, numbers 1 and 54, which received fill from the sewer excavations at Wide Beach, all backyard samples were below 10 ppm. Beach samples were also below 10 ppm.

PCB SURVEY SUMMARY

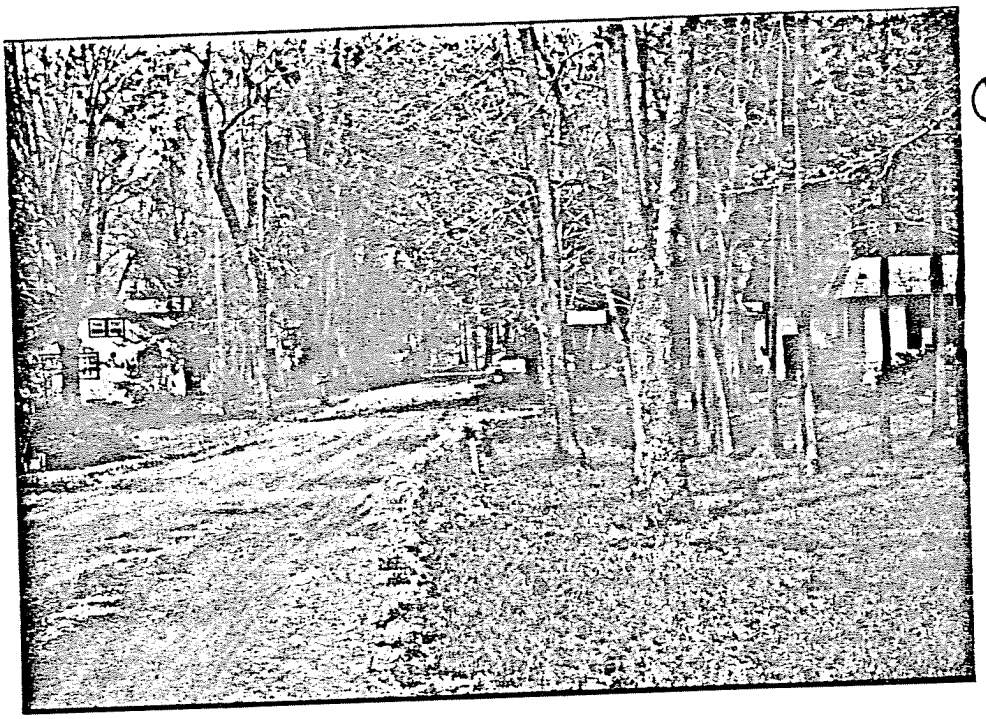
SOIL SAMPLING PROGRAM

WIDE BEACH COMMUNITY

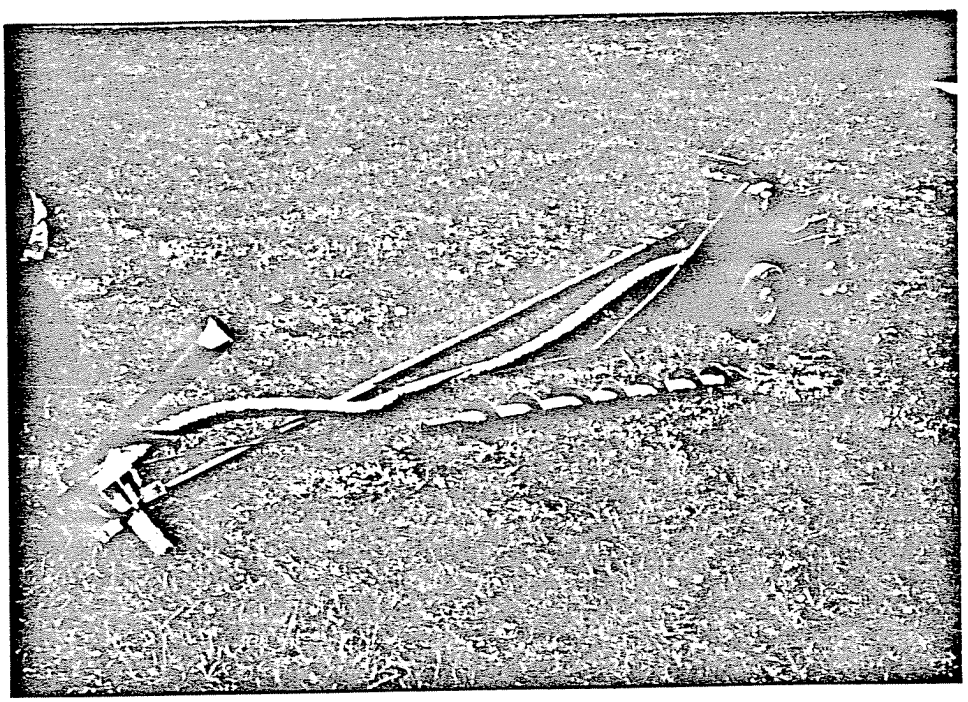
TOWN OF BRANT, ERIE COUNTY

Erie County Department of Environment and Planning
Division of Environmental Control

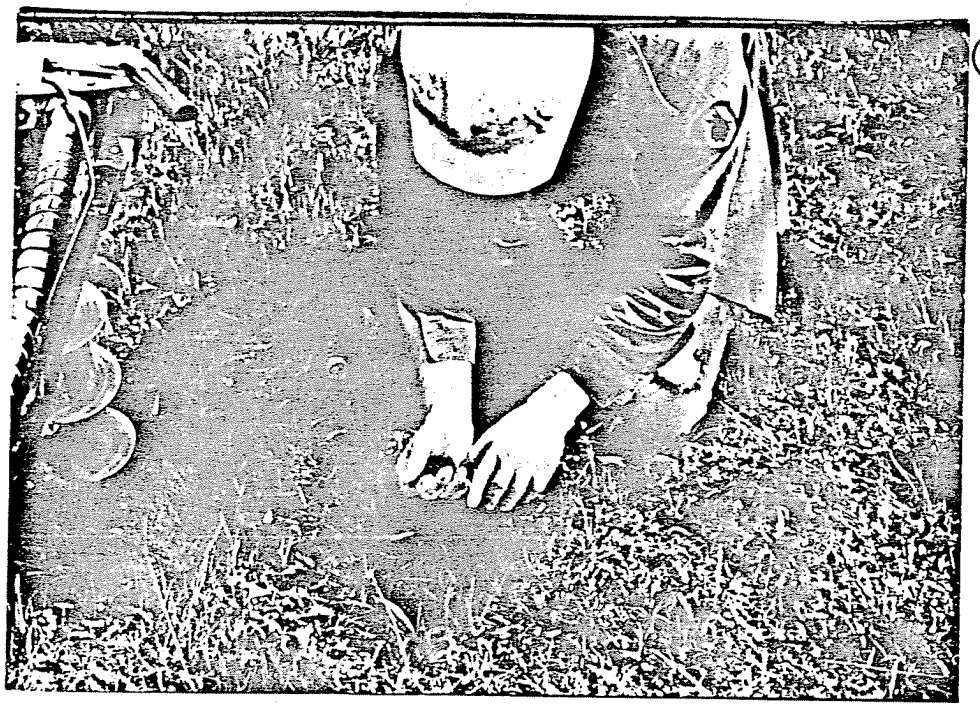
MAY 1982 - SOIL SAMPLING PROGRAM



(1) View of typical roadway at Wide Beach. Road consists of bank-run gravel and earth.



(2) Gasoline power auger used for sampling program.



(3) View of sampling points. The sampling point on the right is shallow, the point with auger is the deep sample. For reporting results this sequence is described as one sampling point with shallow and deep samples taken.

(4) View of sampling area #51 that was located south of Wide Beach and in a freshwater wetland. The stake indicates the location of the culvert which discharges drainage from the western portion of Wide Beach.

SOIL SAMPLES TAKEN BY DEP ON OCOTBER 1, 1981

SAMPLE	DEPTH	LOCATION	SOIL STRUCTURE	RESULTS (ppm)
X[1]	Surface	Drainge ditch in front of 90 Wide Beach	Sand, gravel, clay	91.9
X[2]	Surface	Grove - Fill from soil excavated from sewer construction	Clay (mixed)	5.4
X[3] (taken 3/82)	Surface	Drainage ditch in front of 82 Wide Beach	Silty clay	121.0

SOIL SAMPLES TAKEN BY DEP ON NOVEMBER 19, 1982

All soil samples taken from Roadside Drainage Ditches

SAMPLE	DEPTH	LOCATION	SOIL STRUCTURE	RESULTS (ppm)
A	Shallow Deep	?Drainage ditch in front of 82 Wide Beach	Silty clay Yellow clay soils	1026 ppm 158 ppm
B	Shallow Deep	Drainage ditch in front of Winnert Property	Silty clay Yellow clay soils	162 ppm 8 ppm
C	Shallow Deep	Drainage ditch in front of One Wide Beach	Silty clay Yellow clay and silt	28 ppm 46.4 ppm
D	Shallow Deep	Drainge ditch in front of 9 Wide Beach	Sand and gravel Clay	179 ppm 125 ppm

SAMPLE	DEPTH	LOCATION	SOIL STRUCTURE	RESULTS (ppm)
E	Shallow Deep	Drainage ditch	Clay Clay	25.5 ppm 5 ppm
F	Shallow Deep	Drainage ditch (north side of road) in front of 30 Wide Beach	Clay Sandy clay	25 ppm 22.5 ppm
G	Shallow	Drainge ditch (south of Main Road)	Clay Clay	2 ppm 4.67ppm
H	Shallow Deep	Drainage Ditch	Heavy clay Heavy clay	67.5 ppm 340 ppm
I	Shallow Deep	Drainage ditch in front of 128 Wide Beach	Sand Silty clay	7.9 ppm 217.5 ppm
J Off site Genrach Estate	Shallow Deep	Open field	Clay Clay	0.04 0.05

SOIL SAMPLES TAKEN BY ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING

DIVISION OF ENVIRONMENTAL CONTROL

MAY 18, 1982 - SUNNY, HUMID, 75° F, NO RAIN FOR 1 WEEK PRIOR TO SAMPLING

MAY 19, 1982 - OVERCAST, LIGHT RAIN IN MORNING, 60°, F.

MAY 20, 1982 - PARTLY CLOUDY, HUMID, 60° F.

SAMPLE #	DEPTH	DATE & TIME	LOCATION	SOILS	COMMENTS	RESULTS (ppm)
1	SHALLOW	MAY 18	43 Wide Beach Backyard	Clay soils	Fill from road excavation from sewer installation. This area is also in the vicinity of a filled in steam bed.	5.0
	DEEP		"	"		14.0
2	SHALLOW	MAY 18	43 Wide Beach Backyard - next to fallow garden	Clay soils	This area on thhe property does not contain fill from sewer excavations	1.8
	DEEP	9:30-10:00 AM	"	"		0.4
3	SHALLOW	MAY 18	Stream behind 43 Wide Beach - south of Main Rd.	Clay soils	The original stream bed or sediments were dredged out of this section of the stream.	34.8
	DEEP	10:00-10:30 AM	"	"		4.4
4	SHALLOW	MAY 18	Stream - north of Main Road	Clay soils	NONE	1.8
	DEEP	10:00-10:30 AM	"	"		3.5
5	SHALLOW	MAY 18	Front yard of 30 Wide Beach-north of Main Road	Clay soils	NONE	12.0
	DEEP	10:30-11:00 AM	"	"		3.6

SAMPLE #	DEPTH	DATE & TIME	LOCATION	SOILS	COMMENTS	RESULTS (ppm)
6	SHALLOW	MAY 18	South of Main Rd. (across the road from 30 Wide Beach)	Clay soils		8.1
	DEEP	10:30-11:00 AM	"	Sandy Clay	Deep sample saturated	8.1
7	SHALLOW ONLY	MAY 18 10:30-11:00 AM	Road in front of 30 Wide Beach	Miscellaneous	Oil odor	78.3
8	SHALLOW	MAY 18	South side of Road in front of 30 Wide Beach in drainage ditch.	Clay soils	Saturated	114.0
	DEEP	10:30-11:00 AM	"	Sandy clay with some gravel		1.4
9	SHALLOW	MAY 18	Backyard of 26 South Wide Beach	Silty clay	NONE	0.2
	DEEP	11:00 AM	"	Silty clay mixed with sand		<0.05
10	SHALLOW ONLY	MAY 18	Stream behind 39 Wide Beach	Clay soils	This stream is the same one that was sampled in Sample #3; however, this reach of the stream has not been disturbed.	0.2

SAMPLE #	DEPTH	DATE & TIME	LOCATION	SOILS	COMMENTS	RESULTS (ppm)
11	SHALLOW	MAY 18	Backyard of 21 So. Wide Beach	Silty clay	NONE	<0.05
	DEEP	11:15 AM	"	Yellow clay mixed with sand		0.9
12	SHALLOW	MAY 18	Backyard of 30 Wide Beach	Clay soils	NONE	0.9
	DEEP	11:30 AM	"	Silty Clay		None detected
13	SHALLOW	MAY 18	Roadside drainage ditch-barrel cleanout area.	Muck-clay soils	Both shallow and deep samples had extremely foul odor.	487.0
	DEEP	1:15-1:30 PM	"	Sandy clay		18.4
14	SHALLOW	MAY 18	Barrel storage area	Clay soils	Ground surface was oil stained	23.0
	DEEP	1:15-1:30 PM		Clay soils		2.8
15	SHALLOW	MAY 18	Backyard of 1 Wide Beach Oval	Silty clay	NONE	0.4
	DEEP			Clay soils		<0.05
16	SHALLOW ONLY	MAY 18	Sample taken in "Y" of road	Miscellaneous	Oil Odor	44.4
17	SHALLOW ONLY	MAY 18 1:30 - 2:30 PM	Road in front of One Wide Beach Oval	Miscellaneous	Oil Odor	153.6

SAMPLE #	DEPTH	DATE & TIME	LOCATION	SOILS	COMMENTS	RESULTS (ppm)
18	SHALLOW	MAY 18	Front yard of One Wide Beach Oval	Silty clay	NONE	2.6
	ONLY	1:30 - 2:30 PM		Yellow clay and silt - blocklike structure		<0.05
19	SHALLOW	MAY 18	Wooded area across road from One Wide Beach Oval	Silty clay	NONE	3.6
	DEEP	1:30 - 2:00 PM	"	Yellow clay and silt blocklike structure		0.5
20	SHALLOW	MAY 18	Drainage ditch in front of 2 Wide Beach Oval	Clay soils	NONE	79.0
	DEEP	1:30 - 2:30 PM	"	Yellow clay and silt blocklike structure		2.2
21	SHALLOW	MAY 18	Backyard of 3 So. Wide Beach	Sandy soil	May be fill	.14
	DEEP	2:30-3:00 PM	"	Clay, silt, sand		<0.05
22	SHALLOW	MAY 18	Roadside sample	Fill - sand and Gravel	NONE	115.6
	DEEP	11:30 AM-12:15 PM	"	Fill - sand and Gravel		19.8

SAMPLE #	DEPTH	DATE & TIME	LOCATION	SOILS	COMMENTS	RESULTS (ppm)
23	SHALLOW	MAY 18	Front yard of 20 Wide Beach	Silty Clay	NONE	3.4
	DEEP	11:30 AM-12:15 PM	"	Yellow clay some sand		1.8
24	SHALLOW ONLY	MAY 18 11:30 A.M.-12:15 P.M.	Road in front of 20 Wide Beach	Miscellaneous	Oil odor	258.0
25	SHALLOW	MAY 18	Front yard of 17 Wide Beach	Clay soils	NONE	10.2
	DEEP	11:30 A.M.-12:15 P.M.	"			2.8
26	SHALLOW	MAY 19	Across Road from 29 Wide Beach Oval	Top soil	NONE	7.5
	DEEP	11:00 A.M.-12:00 Noon	"	Yellow clay		1.5
27	SHALLOW ONLY	MAY 19 11:00 A.M. 12:00 Noon	Road in front of 29 Wide Beach Oval	Miscellaenous	Oil Odor	60.5
28	SHALLOW	MAY 19	Front yard of 29 Wide Beach Oval	Silty clay	NONE	30.5
	DEEP	11:00 A.M.-12:00 Noon	"	Yellow clay, blocklike structure		0.4

SAMPLE #	DEPTH	DATE & TIME	LOCATION	SOILS	COMMENTS	RESULTS (ppm)
29	SHALLOW	MAY 19	Front yard of 55 Wide Beach	Silty Clay	NONE	12.4
	DEEP	1:00-2:00 P.M.	"	Silty Clay		0.8
30	SHALLOW ONLY	MAY 19 1:00-2:00 P.M.	Road in front of 55 Wide Beach	Sand and gravel	No odor. This area of of road was recently filled - high sand content.	6.0
31	SHALLOW	MAY 19	Side of yard on Town of Brant Building Inspector's property	Silty clay	NONE	110.6
	DEEP	1:00-2:00 P.M.	"	Silty clay		3.6
32	SHALLOW	MAY 19	Drainage ditch in front of 55 Wide Beach	Silty clay	NONE	4.4
	DEEP	1:00-2:00 P.M.	"	Clay, silt, sand		1.6
33	SHALLOW	MAY	Drainage ditch in front of 60 Wide Beach Oval	Miscellaneous fill	NONE	205.9
	DEEP	2:00-3:30 P.M.				59.1
34	SHALLOW	MAY 19	Backyard of 6 Wide Beach Oval	Silty clay	NONE	0.5
	DEEP	2:00-3:30 P.M.	"	Sandy clay		<0.05

SAMPLE #	DEPTH	DATE & TIME	LOCATION	SOILS	COMMENTS	RESULTS (ppm)
35	SHALLOW	MAY 19	Across road from 82 S.Wide Beach Oval	Silty clay	NONE	25.8
	DEEP	2:00-3:00 P.M.	"	Sandy clay		1.8
36	SHALLOW ONLY	MAY 19 2:00-3:30 P.M.	Road in front of 82 S.Wide Beach Oval	Miscellaneous	Oil Odor	71.5
37	SHALLOW	MAY 19	Front yard of 82 S.Wide Beach Clay	Silty clay	NONE	6.4
	DEEP	2:00-3:30 P.M.	"	Yellow clay soils		1.8
38	SHALLOW	MAY 20	Wideway	Sand	NONE	23.2
	DEEP	9:30-10:30 A.M.	"	Sandy clay		1.0
39	SHALLOW ONLY	MAY 20 9:30-10:30 A.M.	Road in front of 90 Wide Beach	Miscellaenous	Oil Odor	51.0
40	SHALLOW	MAY 20	Drainage ditch in front of 90 Wide Beach	Sand gravel, clay (Fill)	NONE	236.9
	DEEP	9:30-10:30 A.M	"	Dark clay soils		56.0
41	SHALLOW	MAY 20	Front yard of 90 Wide Beach	Sandy	Much off the yard area is and that has been wind blown from beach.	2.2
	DEEP	9:30-10:30 A.M.	"	Sandy clay		<0.05

SAMPLE #	DEPTH	DATE & TIME	LOCATION	SOILS	COMMENTS	RESULTS (ppm)
42	SHALLOW	MAY 20	Backyard of 90 Wide Beach	Dark clay soils	NONE	1.4
	DEEP	9:30-10:30 A.M.	"	Dark clay soils		2.0
43	SHALLOW	MAY20	Across road from 124 Wide Beach (vacant lot)	Silty clay	NONE	77.5
	DEEP	10:30 A.M.- 12:00 Noon	"	Light clay soils		32.5
44	SHALLOW ONLY	MAY 20 10:30 A.M.- 12:00 Noon	Road in front of 124 Wide Beach	Miscellaenous	Oil Odor	8.0
45	SHALLOW	MAY 20	Front yard oo 124 Wide Beach	Silty clay	NONE	46.8
	DEEP	10:30 A.M.- 12:00 Noon	"	Ligh clay soils		3.7
46	SHALLOW	MAY 20	In wooded area northwest of 128 Wide Beach	Silty cly	NONE	56.0
	DEEP	1:00-2:00 P.M.	"	Yellow clay soils		1.45
47	SHALLOW	MAY 20	Across road from 141 Wide Beach	Silty clay	NONE	28.6
	DEEP	1:00-2:00 P.M.	"	Clay, some silt & sand		18.2

SAMPLE #	DEPTH	DATE & TIME	LOCATION	SOILS	COMMENTS	RESULTS (ppm)
48	SHALLOW	MAY 20 1:00-2:00 P.M.	Road in front of 141 Wide Beach	Miscellaneous	Oil Odor	2.37
49	SHALLOW	MAY 20	Front yard of 141 Wide Beach	Silty clay	NONE	7.1
	DEEP	1:00-2:00 P.M.	"	Clay-some silt and sand		1.2
50	SHALLOW	MAY 20	Drainage ditch in front of 128 Wide Beach	Silty clay	NONE	0.3
	DEEP	1:00-2:00 P.M.	"	Silty clay		0.2
51	SHALLOW ONLY	MAY 19 9:30-10:30 A.M.	Discharge pipe in swamp located south of Wide Beach	Clay, silt, organic matter	Discharge pipe discharges drainage from southwestern portion of Wide Beach	155.8
52	SHALLOW ONLY	MAY 19 9:30-10:30 A.M.	Bed stream that runs south of Wide Beach (to beach)	Sand	NONE	<0.05
53	SHALLOW	MAY 19	Beach	Sand	NONE	<0.05
	DEEP	9:30-10:30 A.M.	"	Sand		<0.05

SAMPLE #	DEPTH	DATE & TIME	LOCATION	SOILS	COMMENTS	RESULTS (ppm)
54	SHALLOW	MAY 19	Grove	Clay soils	Fill from soil excavated from sewer construction slay soils. Deep sample to depth of one foot.	11.8
	DEEP	10:30 A.M.- 11:30 A.M.	"			11.2
55	SHALLOW	MAY 19	North side of Main Road 108' west of Old Lakeshore Rd.	Silty clay	NONE	20.5
	DEEP	10:30-11:30 A.M.	"	Yellow clay soils		12.0
56	SHALLOW ONLY	MAY 19 10:30-11:30 A.M.	Main Road Wide Beach, 108' west of Old Lakeshore Road	Miscellaneous	Oil Odor	99.3
57	SHALLOW	MAY 19	South side of Main Wide Beach Road 108'west of Old Lakeshore Road	Silty clay	NONE	37.0
	DEEP	10:30-11:30 A.M.	"	Yellow clay soils		1.1

ppm = parts per million

WATER SAMPLING PROGRAM

In the first round of water samples, samples were taken from eight (8) households and sampled for PCB's. These selections were made so that all areas of Wide Beach were represented. The purpose of these samples was to identify presence of PCB's in the groundwater.

Each well at Wide Beach was sampled three (3) times, (September 3, 1981, September 17, 1981 and October 1981) so that an average could be made. In addition to the sampling of Wide Beach households, background samples were taken south (Snyder Beach) and north (Salzman Genrach Estate) of the Wide Beach property.

All samples were taken by DEP personnel and analysis performed by the Erie County Laboratory.

All the Wide Beach samples as well as the southern Snyder Beach background samples showed positive results for PCB's. (Snyder Beach also used oil for dust control). No PCB's were detected in the northern background sample.

During the May 1982 water sampling, the Erie County Health Department took samples of drinking water supplies of all residents who requested them. As in the first sample program each was sampled three different times, so that an average could be made.

GROUNDWATER QUALITY

The groundwater standard for PCB's as set forth in Part 703 at the Environmental Conservation Law is 0.1 ppb.

In the first round of sampling of the 24 samples taken, 7 or 24% exceeded (range .20 to4.56 ppm) the groundwater standard.

In the second round of sampling of the 131 raw water samples taken, 9 or 7% were at or exceeded (range .10 to 16 ppb) the groundwater standard. (It should be noted that in two cases where a treatment system (softener) for well water was utilized, the sample before treatment had a concentration of less than 0.05 ppb and after treatment the sample result was 0.14 and 0.36 ppb respectively. These two results were not incorporated into the raw water data.)

Correlation between the series of roadside samples with the water well samples of adjacent houses did not show if there was a relationship between the concentration of PCB's in the soil and the concentration in the groundwater.

Daily precipitation thirty days prior to water sampling dates were reviewed. The precipitation data was from the Silver Creek Sewage Treatment Plant which is approximately 4.5 miles from the Wide Beach community. No pattern was evident from the comparison of the 30 day precipitation amount and the groundwater sampling data.

DRINKING WATER QUALITY

First Round - September, October 1981

Four wells at Wide Beach had elevated levels of PCB's and four wells at levels <0.05. In all wells (except one) there was continuous decrease from the September 3, 1981 sample to the October 1, 1981 sample.

Only one home showed a 3 sample average >1 ppb. The New York State Health Department rcommends that when a three-sample test indicates an average of 1.0 ppb or greater the users should be advised to find an alternate source of drinking and cooking water. This was done by the Erie County Health Department (refer to February 22, 1982 report).

Second Round - Summer 1982

Of the 64 structures indicated on the map (Sheet 1), 48 (75%) were sampled during the course of the survey. It is believed that some of the structures shown are garages, tool sheds, or other non-residential sites. Thus it is believed that resident participation was substantially more than 75% indicated above.

Of the 48 residences sampled, 39 were sampled three times each, 5 were sampled twice, and four sampled once. PCB's were detectable in 47 of the 131 samples (35.9%), but in measurable concentrations, i.e. , 0.05 ppb or more in only 18 (13.7%). The highest concentration found was 0.16 ppb.

Four homes west of Wide Beach Oval and at the north end of the survey yielded 11 samples, three samples from each of three homes and two samples from the other. The results are presented in Table I.

TABLE I

PCB Concentrations in Four Homes West of
Wide Beach Oval at North End of Survey Area

Sampling Date	PCB Concentration ppb			
	Home A	Home B	Home C	Home D
5/18/82	<0.05	ND	<0.05	<0.05
7/21/82	ND*	0.16	0.10	0.05
9/15/82	-	ND	0.08	0.16

* ND- None detected

Eight homes south of these four and west of Wide Beach Oval were sampled. Of the 20 samples collected from these homes, only three (15%) contained detectable amounts of PCB's and only one (5%) contained a measurable amount of 0.10 ppb.

A total of 44 samples were collected from 17 homes within and south of Wide Beach Oval. Three samples were obtained from each of 13 of these homes. At seven of these 13, PCB's were not detected in any ofthe three samples. Of the 44 samples in this group, only 9 (22.0%) contained detectable PCB's. Only three (6.8%) contained measurable amounts of PCB's 0.10 ppb being the highest concentration found.

Five premises north of Wide Beach Oval were sampled. The results are presented in Table II.

TABLE II

PCB Concentrations in Five Homes

North of Wide Beach Oval

Sampling Date	Home E	Home F	Home G	Home H	Home I
5/18/82	0.07	<0.05	ND	ND	0.06
7/21/82	ND	ND	0.12	<0.05	ND
9/15/82	ND	ND	-	ND	<0.05

Eight premises north of Wide Beach Drive and between Wide Beach Drive and South Wide Beach Drive yielded a total of 24 samples. Only 8 (33.3%) contained detectable amounts of PCB and only two (8.3%) contained a measurable amount, 0.06 ppb.

Eighteen samples were taken from six homes south of South Wide Beach Drive. Results from these samples are presented in Table III.

TABLE III

PCB Concentrations in Six Homes
South of South Wide Beach Drive

Sampling Date	Home J	Home K	Home L	Home M	Home N	Home O
5/18/82	<0.05	0.10	<0.05	<0.05	0.06	<0.05
7/21/82	0.14	<0.05	<0.05	<0.05	ND	ND
9/15/82	ND	0.11	<0.05	ND	<0.05	ND

SUMMARY AND CONCLUSIONS

The results of this survey indicate intermittent PCB contamination of wells in the Wide Beach area. However, the maximum concentration found is only about 1/6th the concentration calling for an advisory to find an alternate source of water.

The highest concentrations were found, sporadically, in the extreme northwestern portion of the enclave. The most persistent concentrations were found south of South Wide Beach Drive. The areas south of Wide Beach Oval and on both sides of West Wide Beach Oval appeared to be least affected by PCB.

It should be remembered that these samples were taken during the summer, when infiltration would be minimized. Concentrations of PCB's in ground water may be high during periods of heavy ground saturation and excessive infiltration, e.g., during the spring thaw. It is questionable whether PCB concentrations would reach levels such as to bring year-round average levels over the State's advisory guideline of 1.0 ppb. However, some residents may wish to consider an alternate water source, especially when groundwater concentrations are most likely to be high.

The results of all the groundwater samples are listed in Chart II.

PCB SURVEY SUMMARY

WATER SAMPLING PROGRAM

WIDE BEACH COMMUNITY

TOWN OF BRANT, ERIE COUNTY

Erie County Dept. of Environment and Planning
Division of Environmental Control

WATER SAMPLES TAKEN BY ERIE COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING
DIVISION OF ENVIRONMENTAL CONTROL*

OWNER	SOFTENER/ FILTER	DEPTH OF WELL	PIPES	SAMPLE RESULTS - PCB's in ppb		
				September 3, 1981	September 17, 1981	October 1,1981
Mr. Bowen 9 Wide Beach	Water Softener	50 feet	Plastic	<0.05	None detected	<0.05
Mr. Hemlich 21 Wide Beach	None	50 feet	Plastic well casing/galvanized to house	0.66	0.5	<0.05
Frank Plewak 63 Wide Beach	None	50 feet	Galvanized casing/pipes	0.65	None detected	<0.05
Mr. Hockman 90 Wide Beach	Filter not used during sampling	Unknown	Galvanized casing/pipes	4.56	0.69	None detected
Mr. Lojacono 109 Wide Beach	None	30 feet	Plastic well casing/galvanized to house	<0.05	<0.05	None detected
Mr. Pronobis 3 Wide Beach	Charcoal filter	60 feet	Plastic	<0.05	None detected	<0.05
Mr. Hansen 43 Wide Beach	None	50 feet	Plastic	<0.05	0.20	None detected
Mr. Nosbisch 34 Wide Beach	None	50 feet	Plastic	1.32	0.21	<0.05
Salzman- Genrich Estate	-	-	-	-	-	None detected

* Water samples taken from kitchen tap.

Water Samples taken by Erie County Department of Health
Division of Environmental Health

Owner	Water Sample Results - PCB's in ppb		
	May 18, 1982	July 21, 1982	Sept. 15, 1982
Harold Grabenstratter One Wide Beach	None detected (Before filtration) None detected (After filtration)	0.06 (Outside tap)	None Detected None Detected
Herbert Hellman 2 Wide Beach	<0.05	None detected (Outside tap)	None Detected
*Casimer Pronobis 3 Wide Beach	None detected (Before filtration) None detected (After filtration)	None detected <0.05	None Detected None Detected
Peter Mueller 7 Wide Beach	0.06	None detected	<0.05
Charles Roe 11 Wide Beach	None detected	None detected	None Detected
Roger residence 17 Wide Beach	<0.05	<0.05 (Before softener) 0.36 (After softener)	None Detected
Canteline Residence 18 Wide Beach	<0.05 (Before softener) <0.05 (After softener)	0.05 None detected	None Detected None Detected
Frank Militello 20 Wide Beach	None detected (Before softener) <0.05 (After softener)	<0.05 (Outside tap)	None detected

Water Samples Taken by Erie County Department of Health
Division of Environmental Health

Owner	Water Sample Results - PCB's in ppb		
	May 18, 1982	July 21, 1982	Sept. 15, 1982
Dr. Matthew Burke	<0.05	<0.05	<0.05
*Heimlich Property 21 Wide Beach	0.06	None detected	<0.05
Silvio Pirishini 22 Wide Beach	<0.05 (Before treatment) 0.14 (After treatment)	None detected	None Detected
Tom Lewis 26 Wide Beach	None detected (Before treatment) None detected (After treatment)	None detected None detected	None Detected None Detected
Morgante residence 29 Wide Beach	None detected	<0.05	None Detected
Newman residence 30 Wide Beach	<0.05	<0.05	None Detected
Kalenda residence 37 Wide Beach	None detected	No Sample Taken	0.12
Horth residence 38 Wide Beach	0.06	None detected	Before Flushing -<0.05 After Flushing- N.D.

Water Samples Taken by Erie County Department of Health
Division of Environmental Health

Owner	Water Sample	Results - PCB's in ppb	
	May 18, 1982	July 21, 1982	Sept. 15, 1982
Miller residence 39 Wide Beach- South Oval	<0.05	0.1 (Lakefront before filtration) 0.1 (Lakefront after filtration)	None detected
Allan Speck res.	.10	<0.05	0.11
*Fred Hansen 43 Wide Beach	<0.05	0.14	None detected
Robert Franz 48 Wide Beach	None detected	<0.05	None detected
Prince residence 50 Wide Beach	None detected	None detected (lakefront well)	None detected
Miller residence 55 Wide Beach	<0.05	None detected	None detected
Allen residence 59 Wide Beach	0.07	None detected	None detected

Water Samples Taken by Erie County Department of Health
Division of Environmental Health

Owner	Water Sample	Results - PCB's in ppb	
	May 18, 1982	July 21, 1982	Sept. 15, 1982
Angelo Militello 60 Wide Beach	None detected (before softener) <0.05 (after softener)	None detected (drilled well) None detected (beach well)	.10 drilled well
Richard Barton 61 Wide Beach	<0.05	None detected	No Sample taken
*Frank Plewak 63 Wide Beach	None detected	0.16	None detected
Max Schultz 65 Wide Beach	<0.05	<0.05	.16
Robert Grey 82 Wide Beach	<0.05 (Before filtration) <0.05 (After filtration)	None detected None detected	None detected
Arthur Mason 85 Wide Beach	None detected	None detected	None detected
Franklin Gillig 86 Wide Beach	None detected	None detected	None detected
*Earl Hockman 90 Wide Beach	None detected (Before filtration) None detected (After filtration)	None detected	None detected

PCB SURVEY SUMMARY

AIR QUALITY SAMPLING PROGRAM

WIDE BEACH, TOWN OF BRANT

Department of Environment and Planning
Division of Environmental Control
October 1982

AIR QUALITY SAMPLING PROGRAM

INTERIM REPORT

An air quality sampling program in the Wide Beach area was started on March 30, 1982. A hi-volume air quality sampler was set up at the Erie County Sewer District #2 Pump Station serving Wide Beach. This location was chosen as it is generally downwind of the Wide Beach area and dust samples collected there should be representative of the general Wide Beach area. The sampler was operated for twenty-four hours every sixth day, until the end of October.

Through filtration, the hi-volume sampler is capable of collecting any PCB's present in the atmosphere either as aerosol droplets or adhering to road dust particles. Fiberglass filters from this location were delivered to the Erie County Laboratory for analysis.

Hi-volume filters were also collected from an existing air quality monitoring station located at the Erie County Big Sister Creek Sewage Treatment Plant in Angola. This site was considered not to be affected by road dust from the Wide Beach area and served as a control. Samples from this station were also analyzed for PCB concentrations. Results from seven (7) filters analyzed to date, show no detectable PCB's present.

Filtration is an effective method of measuring total suspended particulates. However, any PCB's present as a vapor would

generally pass right through the filter media. As a result, a volatile PCB sampler was assembled with borrowed equipment (pump-rotometer) provided by the New York State Department of Environmental Conservation. Glass tubes for holding the adsorbent media were fabricated by the Erie County Laboratory. The County Lab also prepared the Florisil packed tubes prior to sampling and did the associated extraction and analytical work.

Preliminary Results

There are currently no federal or state health standards for regulating PCB concentration in ambient air. The Occupational Health and safety Administration (OSHA) has; however, established allowable eight (8) hour time weighted average concentration limits (TWA's) for the workplace. These standards are based on health studies with the assumption of a five day - forty hour per week worker exposure. None of the samples collected and analyzed to date approached this limit (500 ug/m^3). The measured peak aerosol PCB concentration for a 24 hour period was 0.0300 ug/m^3. The total amount of suspended dust on that day was 144 ug/m^3. This was the second highest suspended dust level measured at the Wide Beach site.

The main roadways at Wide Beach had dust control treatment during the last week in May. From reviewing measured dust levels just prior to, and after that time, the dust control measures appeared to have both reduced the amount and suspended particulates (TSP) and the amount of PCB present.

New York State Department of Environmental Conservation has established acceptable ambient air levels (AAL's) for toxic substances. These values are primarily used when reviewing stack emissions from new or existing sources. These levels take into consideration possible 24 hour exposures every day of the week (rather than a 40 hour work week). AAL's are annual average limits. Where previous health studies have established safe ambient limits and such limits have been certified by the New York State Health Department, these values can be assigned as an AAL. Where no such level has clearly been documented, the TWA divided by a safety factor (300 for PCB) can be used. This procedure establishes an AAL for PCB's at 1.67 ug/m^3. The annual average for samples analyzed to date for aerosol PCB's is 0.0052 ug/m^3 while the samples analyzed to date for volatile PCB's show an average is 0.0051 ug/m^3.

Considering that PCB could be present in both the volatile and particulate form, a worst case condition (with available data) may be approached by adding the average aerosols (0.0052 ug/m^3)to volatiles (0.0051 ug/m^3) and comparing the result (0.010 ug/m^3) to the AAL (1.67 ug/m^3).

Because preliminary analytical results showed a presence of PCB's in airborne dust, it was decided to collect samples of dust vacuumed from rugs within certain homes at Wide Beach. The results

were positive; however, not all the material accumulated in the carpet could be assumed to have been airborne. Some may have been carried onto rugs and floors by resident's shoes. There were no PCB's detected in the Williamsville vacuum cleaner control dust sample.

Not all the air sampling results are available at this time. A final report on this aspect of the Wide Beach study will be forthcoming after receipt of the remaining analytical results.

AIR SAMPLING SUMMARY

Sampling Date 1982	WIDE BEACH ECSD #2 Suspended Particulates (ug/m^3)	WIDE BEACH Pump Station PCB Aerosol (ug/m^3)	WIDE BEACH Pump Station Volatile (ug/m^3)	ANGOLA Big Sister Creek STP Suspended Particulates (ug/m^3)	ANGOLA Big Sister Creek STP PCB Aerosol (ug/m^3)	Comment
3/30	*	*	*	*	*	Unexposed filter - none detected
3/30	34	0.0093	*	*	*	
4/05	32	0.0130	*	25	-	
4/11	18	0.0085	*	19	-	
4/17	46	PCB present, but not reported	*	21	-	
4/23	50	0.0035	*	42	-	
4/29	144	0.0300	*	50	-	
5/05	160	0.0240	*	45	-	
5/11	85	0.0075	*	51	-	
5/23	24	0.0047	*	25	*	Dust control applied
5/29	36	-	*	30	*	
6/04			*	32	*	
6/10	72	0.0005	*	34	*	
6/16	24	-	*	24	*	
6/22	20	-	*	21	*	
6/28	64	-	*	73	*	
7/04	59		*	*	*	

Sampling Date 1982	WIDE BEACH ECSD #2 Pump Station Suspended Particulates (ug/m^3)	PCB Aerosol (ug/m^3)	PCB Volatile (ug/m^3)	ANGOLA Big Sister Creek STP Suspended Particulates (ug/m^3)	PCB Aerosol (ug/m^3)	Comment
7/10	44	-	*	39	*	
7/16	65	-	*	65	*	
7/22	38	-	*	43	*	
7/28	22	-	*	19	*	
8/03	24	-	*		*	
8/09	42	-	0.0072		*	
8/15	50		*		*	
8/~~15~~21	20		*		*	
8/27	31		0.0050		*	
9/02	19		0.0045		*	
9/08	29		0.0037		*	
9/14	49	-	*		*	
9/20	29				*	
9/26	41				*	
10/02	33				*	
10/08	32				*	
10/14	20				*	
10/20	37				*	
10/26	53				*	

- No PCB's detected in sample.
* No sample taken or analysis requested.
Blank indicates analytical results not yet received.

DUST SAMPLES TAKEN FROM VACUUM CLEANERS

HANSEN RESIDENCE 43 WIDE BEACH	-	36.0 ug/g
LYFORD RESIDENCE 10870 OLD LAKE SHORE	-	4.0 ug/g
GILLIG RESIDENCE 86 WIDE BEACH	-	41.0 ug/g
OFF-SITE SAMPLE 63 OAKGROVE DRIVE WILLIAMSVILLE (T) AMHERST	-	NONE DETECTED

SUMMARY AND CONCLUSIONS

The use of waste oil containing PCB's has caused soil contamination in the Wide Beach Area.

Soils containing PCB's at regulated levels (greater than 50 ppm) are found along the entire 1.5 mile roadway and along the drainage network adjacent to the roadway. PCB's are migrating off-site via this drainage sytem. In addition the PCB contminated soil apparently is a reservoir for intermittent contamination of groundwater as well as the presence of PCB's in airborne dust in the area.

WIDE BEACH
Town of Brant

SOIL SAMPLES

N

MATCH LINE A

Prevailing Wind to West

BEACH

ACCESS TO BEACH #1

#3
S-LT 0.5
D-LT 0.05

TO LAKE ERIE

BEACH

#2
S-LT 0.25

MATCH LINE A

MATCH LINE B

#1
S-1.2
D-3.5

#3
S-3.4
D-4.4

#2
S-1.8
D 0.4

HANSEN (49)
Monitor stuck
Sample taken

#1
S-C
D 1.2

FLOW OF DRAINAGE

#10
S-0.2

MATCH LINE B

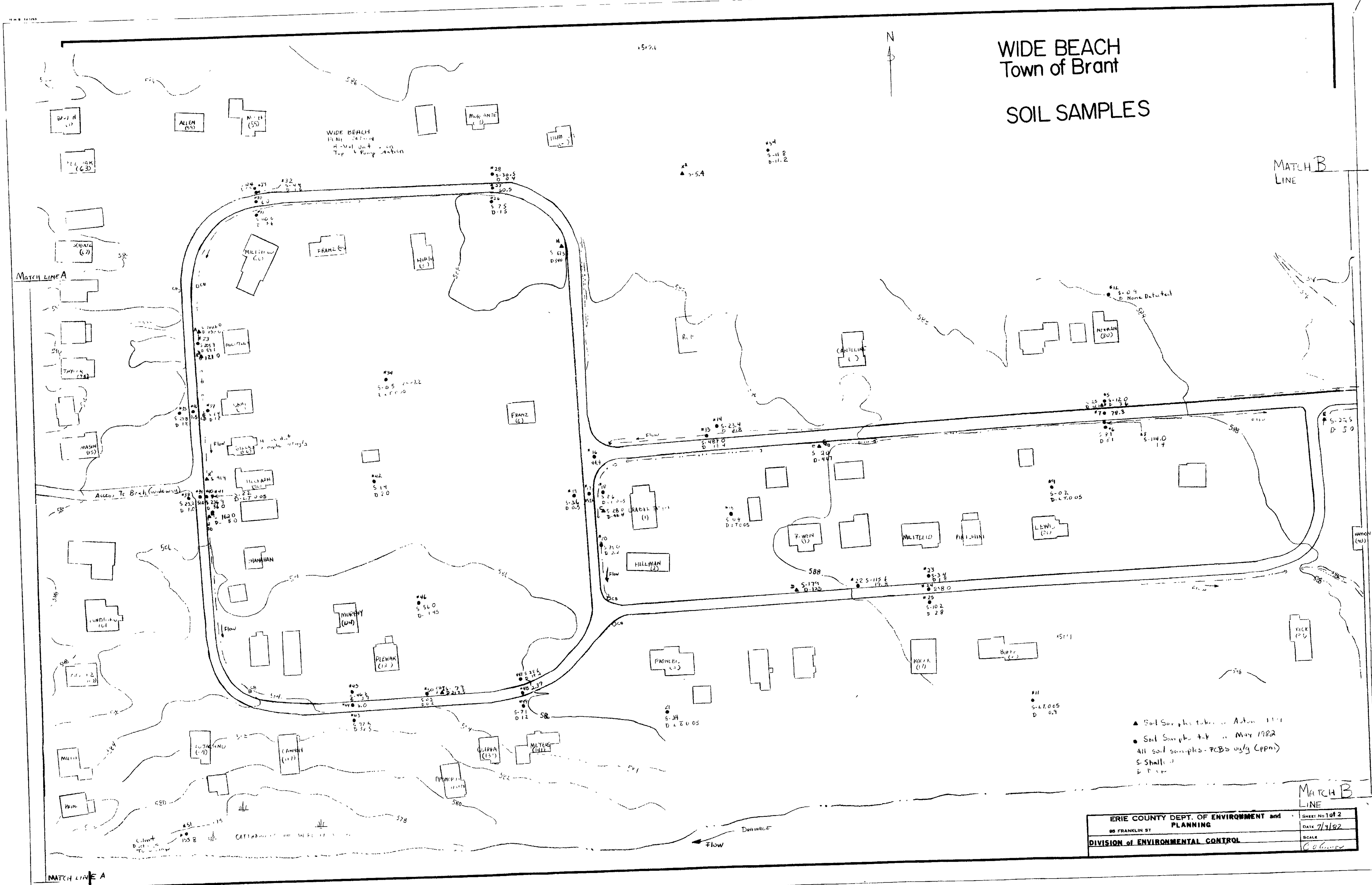
OLD LAKESHORE ROAD

#3
S-LT 0.5
D-LT 0.5

LYF

* Soil Samples Taken in May 1982
All soil samples were ug/g (ppm)
S-Shallow
D-Deep

ERIE COUNTY DEPT of ENVIRONMENT and PLANNING DIVISION of ENVIRONMENTAL CONTROL	2 of 2 7/11/83



WIDE BEACH
Town of Brant
SOIL SAMPLES
N
MATCH LINE B
MATCH LINE A
ALLEN
FRANZ
HILLMAN
MURPHY
PLEWAK
HANAHAN
WHITFIELD
LEWIS
NEWMAN
CANTILLION
MEYERS
GUERRA
CANNON
Access To Beach (walkway)
Flow
Drainage
588
None Detected
Soil Samples taken in May 1982
All soil samples - PCBs ug/g (ppm)
ERIE COUNTY DEPT. OF ENVIRONMENT and PLANNING
95 FRANKLIN ST
DIVISION of ENVIRONMENTAL CONTROL
SHEET No 1 of 2
DATE 7/9/82
SCALE