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BCP - C

NYS DEC
Env. Site Assessment
Kozdranski Property

March 1990

[rev. Nov. 1990
rev. June 1993]

ENVIRONMENTAL SITE ASSESSMENT FOR THE

KOZDRANSKI PROPERTY

TOWN OF WHEATFIELD, NIAGARA COUNTY, NEW YORK

Prepared by:
NYSDEC Region 9
March 1990
Revised November 28, 1990
Revised June 14, 1993

INTRODUCTION

The Kozdranski site is located on a triangular piece of property between River, Liberty, Williams, Jagow and Witmer roads in the Town of Wheatfield, Niagara County, New York (Figure 2-1). The property is immediately south of the Niagara Mohawk right-of-way and approximately 300 feet east of the Conrail right-of-way. Until recently, the surrounding properties to the north and west were utilized for agricultural purposes, however, these properties are now planned for subdivision development. Black Creek lies approximately 400 feet north of the site while a designated wetland (TW-26) lies approximately 1000 feet to the west. The Summit Park lakes are being constructed to the southeast and east. Aerial photographs suggest a possible disposal area covering 840,000 square feet (19.3 acres), which also includes land south of the Kozdranski property.

The objective of this assessment report is to detail the history of the site, and to make an evaluation as to the possible disposal of hazardous waste. Any hazardous wastes present at this site have the potential to impact Black Creek, the designated wetland, the Summit Park lakes, and current and proposed development in the area.

SITE OWNERSHIP

Information concerning site ownership was obtained from Niagara County tax maps, review of aerial photographs, and interviews conducted with individuals familiar with this area. Most of this information was obtained from the files of the Niagara County Health Department (NCHD). According to property tax map number 175-1-3 the property was owned by the Wheatfield Farm Association (WFA) prior to 1944. It is not known how long the WFA owned the property prior to that time or whether they owned the adjacent land south of the site. On October 11, 1944 Mr. Walter S. Kozdranski, who is now deceased, purchased this property. The property is currently owned by the Wheatfield Partnership Inc.

A 1970 tax map obtained from the Town of Wheatfield Niagara County Planning Board (Figure 2) shows that 352.4 acres of land southeast of the disposal area (lots 66, 67 and 68) were owned by Messrs. Daniel Cowin and Paul Lipman. This property is currently owned by the Wheatfield Properties Company.

SITE USAGE

The land surrounding the Kozdranski property to the north, east and west, until recently, was utilized almost exclusively for agricultural purposes. The names of individuals, with properties

farmed, are summarized as follows:

1. Prior to 1943 - Kozdranski property:

   Mr. Gorenbien
   Address Unknown

2. 1943 to 1953 - fields south and west of the Kozdranski property:

   Mr. Albert Saddleberg
   3016 Kruger Road
   North Tonawanda
   692-3295

3. 1953 to ? - fields south and west of the Kozdranski property:

   Mr. Joe Sy (deceased)
   Mr. Demler
   Address Unknown

4. 1958 to ? - field southwest of the Kozdranski property:

   Mr. Alan Devantier
   2654 Niagara Falls Blvd.
   Wheatfield
   731-4068

5. 1986 to ? - fields south and west of the Kozdranski property:

   Mr. Wilbert Melvil
   2112 Cayuga Drive Extension
   Wheatfield
   731-9618

The property southeast of the Kozdranski property is currently being developed as the Summit Park Lakes project (Figure 2-1). On July 3, 1986 the NYSDEC issued a permit to the Wheatfield Properties Company and Shevlin-Manning, Inc. for a multiphased drainage improvement project. Due to the presence of waste materials observed on Dold's Hill (Figure 2.1) a Special Condition was placed on the permit requiring sample collection and analysis if wastes were encountered during excavation. Samples of this waste were collected for analysis (see Site Investigation section for details) and on December 15, 1986, the Special Permit Condition was rescinded because the analytical results indicated that the waste did not represent a significant environmental problem that would affect the mine site.

The initial phase of this drainage improvement project included the excavation of approximately

600,000 cubic yards of clay to depths of 14 to 16 feet from a single pit covering an area of 24 acres (Figure 4). The clays meeting 6 NYCRR Part 360 criteria were sold locally for use in landfill construction. In 1988 a draft Environmental Impact Statement was prepared by Pentad Project Management, Inc. for the expansion of the clay excavation project to create two large drainage retention basins covering a total area of 124 acres, which would subsequently be reclaimed as lakes. The impact statement was approved and this phase of the project is well underway. Recently the Wheatfield Properties Company has developed conceptual plans for the development of the surrounding property for commercial and residential usage.

AERIAL PHOTOGRAPHS

Mr. Paul Dicky from the NCHD has reviewed historical aerial photographs pertaining to the Kozdranski property. The aerial photographs reviewed were obtained from the Cooperative Extension and include photos from 1951, 1958, 1966 and 1977. The interpretation of the aerial photographs is as follows:

1951 - Aerial Photograph (Figure 3)

The eastern portion of the subject property is heavily vegetated while the western half shows evidence of disturbed land. Most of the land adjacent to the property is under active cultivation. Access roads are visible north and south of the suspected disposal area but are difficult to delineate. A loop in the access road is clearly visible south of the northernmost disturbed area. Mr. Paul Dicky suggests that the principal access to the site was from River Road to the south (personal communication, March, 1990). The areas of disturbed land identified from this aerial photograph are interpreted in Figure 4.

1958 - Aerial Photograph (Figure 5)

The areal extent of disturbed land is much larger than in 1951 and extends to the land south of the Kozdranski property. Several access roads are now visible. One access road leads north of the known disposal area toward Jagow Road. A second access road leads to the area of disturbed land south of the Kozdranski property and then farther south toward River Road. A third access road leads east from the Kozdranski property along the Niagara Mohawk right-of-way toward Witmer Road. The loop in the access road is now quite pronounced. The areas of disturbed land identified from this aerial photograph are interpreted in Figure 4.

1966 - Aerial Photograph (Figure 6)

The areal extent of the disturbed land identified in the 1958 aerial photograph has generally

remained the same. Clearing of trees east of the site, however, is now evident. The area of cleared trees identified from this photograph is shown in Figure 4. The major access road appears to be the one located along the Niagara Mohawk right-of-way, however, the access road leading to River Road is also clearly defined. The access road and loop along the western boundary of the site are now largely overgrown. The Conrail railroad has been constructed and parallels the western boundary of the Kozdranski property.

1977 Aerial Photograph (Figure 7)

There is no new evidence of active land disturbance. Revegetation in the area of cleared trees has occurred. The access road along the Niagara Mohawk right-of-way is still visible and its access from Witmer Road can now be confirmed.

INTERVIEWS

Mr. Paul Dicky has also conducted several interviews and site investigations in an attempt to elucidate the history and nature of the disturbed land observed on the aerial photographs. A review of the site investigations is given in a subsequent section. This section contains a summary of the interviews conducted to date, which generally correlate with the information obtained from the aerial photographs.

Mr. Dicky first gained knowledge of this site through a complaint filed in June, 1986 by a local resident who knew of the existence of this site for approximately 20 years because he had worked for a logging company in the area. While clearing trees in the area of Dold's Hill (see the 1966 aerial photograph) junked automobiles were found within the trees and brush. The complainant also reported observing drums at the site. He was quite positive that an old haul road from Demler's Cider Mill, located on River Road in the Town of Wheatfield, led back to the site.

An interview was conducted on July 30, 1986 with a local resident who had farmed the property south and west of the Kozdranski site. He remembers truck traffic toward the Kozdranski property but could only recall the removal of excavated soil. This resident did not observe any active dumping, but stated that with the number of trucks entering and leaving the site it was certainly possible. He remembers that some trucks belonged to the Kozdranski Company.

On the same day Mr. Dicky also interviewed another local resident who farmed in the area.

This resident remembers trucks dumping loads of "hot lime" at the site, but did not know who generated the waste or the name of the hauler. He recalled that the soil removed from the site was used during construction the Conrail Railroad from River Road to Niagara Falls Blvd. This resident further stated that the fields south of the Kozdranski property were drained to the Niagara River by tile pipe. This pipe was later found to be plugged with concrete.

Most recently a lawsuit has been filed against the Estate of the Walter S. Kozdranski Company regarding the Vacant Land Adjacent to 1865 Connecting Road site. As part of this suit, several former Kozdranski employees have given depositions concerning past disposal activities by the company. Two of these employees remembered the Kozdranski property located off a River Road in the Town of Wheatfield. One employee could only recall that top soil was excavated and removed from the site. The other employee, however, stated that material from the Goodyear Tire and Rubber Company was buried at the site and leveled off during the middle 1970's following the closure of Johnson's dump (64th Street site). Access to the site was from Demler's Cider Mill. He also stated that other material was hauled to the site, but could not recall specifically the type of material or its origination. The Goodyear Tire and Rubber Company in a May 27, 1988 letter to the NYSDEC acknowledged that the Walter S. Kozdranski Company was one of the company's waste haulers. This lawsuit is still pending in the courts.

SITE INVESTIGATIONS

The complaint filed in June, 1986 was in response to the proposed Summit Park Lakes drainage project. On June 30, 1986 Mr. Paul Dicky met with the complainant at the Kozdranski property to conduct a site inspection, at which time he outlined the former disposal areas. Several nonvegetated areas were observed that contained a white ash-like material in addition to assorted wood scrap, bottles, etc. The ash-like material was also observed in several locations along the southern portion of Dold's Hill. No drums were observed during this inspection. The NYSDEC was promptly informed of these initial findings.

A follow-up inspection was conducted on July 1, 1986 by Messrs. Paul Dicky and Tony Pasavelichio, the latter also employed by the NCHD. During this inspection the disposal area was estimated as approximately 200 or 300 feet by 600 or 700 feet (2.75-4.8 acres), however, the dense vegetation made it difficult to estimate distances precisely. The observed waste material included a sand-like substance, lime, ash, wood pallets and drum remains, with the highest frequency of drums observed along the east and south portions of the disposal area. At least one drum contained a brittle, black to tan, phenolic-like resin, while other drums

contained a white lime-like material. One drum contained a carbon/charcoal-like gravel. Several samples of different waste types were taken back to the NCHD office for visual inspection by other personnel of that Department.

A third site inspection was conducted on July 3, 1986 by Messrs. Paul Dicky and Tom Zona, the latter also employed by the NCHD. The area searched during this inspection was heavily vegetated and visibility of the ground surface was extremely poor. Additional disposal areas were not observed during this inspection. One area was observed, however, where soil was unnaturally mounded; concrete blocks and broken sewer pipes were extruding from these mounds. This area was estimated to be 400 feet south of the previously observed disposal area.

On August 6, 1986 Messrs. Paul Dicky and David Terry, the latter from Woodward-Clyde Consultants, conducted a general site inspection in connection with the Niachlor brine pipeline excavation proposed along the Niagara Mohawk right-of-way adjacent to the site. A survey of the site with an HNu meter revealed readings at background levels. A sampling plan was prepared and implemented in August 1986 prior to construction of the pipeline in this area. Four centerline and two composite flank samples were collected and analyzed for TCL and TAL parameters. Phenols, detected at 0.1 ppm in two of the samples, were the only compounds detected, exclusive of metals.

Six samples were collected on September 9, 1986 from the northern section of the site with the aid of a backhoe supplied by Rohring Excavation and Contracting, Inc. Sample locations are shown in Figure 8. The samples were collected from a depth of 6 inches to two feet and were analyzed by Advanced Environmental Systems, Inc. for E.P. Toxicity only. The results of these analyses are given in Table 1. Based upon these analytical results, none of the six samples exhibited the characteristics of a hazardous waste.

On September 25, 1986 six additional areas were investigated with a total of 18 test pits. The locations of the six sites, and two additional sites that were not investigated because of access problems, are shown on Figure 9. At all sites except one, either easily identifiable construction material or native soils were encountered. At the other site a large quantity of a white, insoluble powder was encountered. To better delineate this material additional test pits were completed. This investigation revealed that the total area covered by this waste was approximately 0.5 acres (100 feet by 200 feet), with the waste forming a layer 2 to 12 inches

in thickness at a depth of about one foot below grade. The material was visually identified as PVC dust and it was suggested that analytical tests should be conducted to verify this identification. It is not known if such an analysis was ever conducted.

Another site visit was conducted on October 10, 1986 by the NCHD and the Pentad Project Management, Inc. in coordination with Advanced Environmental Systems, Inc. to collect samples from the southwest area of the disposal site. This was an area where a resin-like material, approximately 25 square feet in size, was observed on a previous site inspection. Three composite samples were collected by AES from this location. One composite sample consisted of three samples, each of which was collected one foot from the center of the resin, the second composite sample consisted of three samples, each of which was collected three feet from the center of the resin, and the third composite sample consisted of four samples, each of which was collected seven feet from the center of the resin. In addition, one sample from a gray, solidified material and one sample from a nearby drum were collected. Analytical results from these samples, however, are not contained in NCHD or NYSDEC program files.

On April 12, 1990 Messrs. Kevin Glaser and Glenn M. May, both from the NYSDEC Region 9 office, collected three samples from the northwest disposal area. The approximate locations of these samples are shown on Figure 9. Two samples (nos. 1 and 3) were collected from a black, hard, resin-like material and analyzed only for BNA's. The third sample (no. 2) was collected from a mound of tanish-white, fine granular material. This sample was analyzed for E.P. Toxicity, corrosivity and BNA's. The BNA compounds detected in these samples, with concentrations, are given in Table 2, with the E.P. Toxicity results from sample 2 given in Table 3. The laboratory analytical data sheets are given in Appendix A. Based upon the E.P. Toxicity results the tanish-white granular material did not exhibit the characteristics of a hazardous waste. The corrosivity of this sample (leachable Ph) was 8.21.

In addition to the compounds identified, twenty semivolatile tentatively identified compounds (TICS) were detected in samples 1 and 3, while thirteen semivolatile TICS were detected in sample 2. The total concentrations of these TICS are 88,869 ppm, 80.83 ppm, and 62,486 ppm for samples 1, 2 and 3 respectively. In sample 1, tentatively identified compounds include four methyl phenyl derivatives, one benzenamine isomer and one benzenamine derivative. The remaining TICS were unidentified, as were all of the TICS detected in sample 2. In sample 3, tentatively identified compounds include three methyl phenyl derivatives, with the remaining TICS unidentified.

On August 8, 1990 two additional samples were collected by the NYSDEC from the white, insoluble powder detected during the September 25, 1986 investigation. The approximate locations of these samples are given in Figure 9. Sample 1 was collected from a black-gray sand-like material while sample 2 was collected from a white-gray powder mixed with sand. These samples were analyzed for TCL parameters and E.P. Toxicity. The TCL analytical results are given in Table 4, with the E.P. Toxicity results given in Table 5. The laboratory analytical data sheets are given in Appendix B. Based upon the E.P. Toxicity results neither sample exhibited the characteristics of a hazardous waste.

On Wednesday, May 26, 1993 Messrs. Glenn M. May (NYSDEC), Paul Dicky (NCHD), and Matt Forcucci (New York State Department of Health) conducted a site visit with the express purpose of collecting waste samples for analysis of the Forest Glen Subdivision Indicator Compounds. These compounds include:

Aniline,
Diphenylamine,
2-Mercaptobenzothiazole,
Benzothiazole, and
Phenothiazine.

These compounds are not part of the Target Compound List, which explains why they were not detected during previous sample analyses.

This site visit was prompted by several factors including (1) potential exposure concerns during and after subdivision development, (2) the tie to the Walter S. Kozdranski Company, which has been implicated as a waste hauler to such sites as the Forest Glen Subdivision and Vacant Land Adjacent to 1865 Connecting Road, and (3) the recent investigations at the latter site, where wastes visually and chemically similar to those found at the Forest Glen Subdivision have been identified (see Vacant Land Adjacent to 1865 Connecting Road section for more detail).

Five samples were collected for analysis during this site visit from the locations shown on Figure 9. Samples 1 and 5 were collected from a white powder-like material; samples 2 and 4 were collected from a yellow resin-like material; and sample 3 was collected from a purple powder-like material. Both the yellow resin-like material and the white powder-like material are visually similar to waste material found at the Vacant Land Adjacent to 1865 Connecting Road

site. In addition, the resinous material had a similar odor. The analytical results of these samples should be available in early July, 1993.

During sampling holes were dug through the white powder-like material with a shovel to not only determine the thickness of the waste but to obtain fresh, unweathered samples. This material was approximately 1.5 and 3.0 feet in thickness at sample location 1 and 5 respectively. In addition, approximately 50 drums were observed throughout the site, most of which are largely decayed.

VACANT LAND ADJACENT TO 1865 CONNECTING ROAD SITE

The Vacant Land Adjacent to 1865 Connecting Road site is approximately one acre in size and is located within the southern section of the Town of Niagara, New York (Figure 10). This property was previously owned by the Walter S. Kozdranski Company and is currently owned by the Niagara County Development Corporation. Most of the property has been developed into the Niagara Factory Outlet Mall. The BFI/CECOS Secure Chemical Management Facility is located approximately one-quarter of a mile west of the site, while the Niagara Factory Outlet Mall is located due east.

In October of 1985 a contractor, excavating to construct a storm sewer line, encountered a two to three foot thick layer of a yellow-tan, resinous waste material approximately two feet below grade. The waste material was observed throughout the western portion of the trench for a length of approximately 100 to 120 feet. Also observed was a white powder-like material visually similar to lime, small amounts of wood debris and two crushed (apparently empty) steel drums. A sample of the yellow-tan, resinous waste was collected for organics analysis. The analytical results indicated the presence of 0.040 ppm of 2,4,6-trichlorophenol and 600 ppm of N-nitrosodiphenylamine.

To obtain additional information on the waste material, the PRP completed five hand augered borings on August 19, 1988. Waste material was encountered in two of these borings at depths of 3.5 to 4.0 feet below grade. The waste was "resin-like" with a plastic consistency and a very strong organic odor. Two waste samples were collected and analyzed for TCL and TAL parameters. The analytical results indicated the presence of N-nitrosodiphenylamine at concentrations of 3600 and 130 ppm; 1,2,4-trichlorobenzene at a concentration of 5.7 ppm; several inorganic compounds (arsenic, beryllium, chromium, copper, lead, nickel, silver, and zinc) at trace concentrations; and cyanide and total recoverable phenolics also at trace

concentrations. One sample also contained several pesticides including aldrin, alpha BHC, delta BHC, 4-4'-DDD, 4-4'-DDE, heptachlor, and heptachlor-epoxide.

In July 1989 the PRP collected an additional sample of the resinous material from a depth of approximately three feet below grade. In addition, one groundwater sample was also collected after allowing the borehole to fill with water. The analytical results of the waste sample indicated the presence of a variety of inorganic compounds. The only organic compound detected was N-nitrosodiphenylamine at a concentration of 4,300 ppm. The analytical results of the groundwater sample indicated the presence of a variety of both organic and inorganic compounds. The primary organic compounds detected were N-nitrosodiphenylamine at a concentration of 160 ppb; 1,2,4-trichlorobenzene at a concentration of 3.1 ppb; and 4-methylphenol at a concentration of 17 ppb. Two organic scans were also performed on this sample and indicated the presence of volatile organic compounds at a concentration of 9.2 ppb and volatile halogenated organics at a concentration of 110 ppb.

During the summer of 1991, in accordance with an Order on Consent and approved work plan, the PRP completed an IRM Soil Boring Investigation to characterize further, and better define the areal extent of, the resinous waste material. Samples collected during this investigation were analyzed for TCL, TAL, and Forest Glen Subdivision Indicator Compounds. The Indicator Compounds were included for this investigation because the resinous waste was visually similar to waste observed at the Forest Glen Subdivision site. It was the presence of these indicator compounds that prompted the Environmental Protection Agency to evacuate the subdivision. The analytical results of the 1991 investigation (Appendix C) indicated the presence of N-nitrosodiphenylamine at concentrations of 0.66 to 11,000 ppm; aniline at concentrations of 0.99 to 18,800 ppm; benzothiazole at concentrations of 5.37 to 63,500 ppm; phenothiazine at concentrations of 2.84 to 22,600 ppm; and 2-Mercaptobenzothiazole at concentrations of 25.9 to 312,000 ppm.

In August of 1992 DUNN Engineering Company was retained by the PRP to conduct a Supplemental Investigation Program at the site to answer questions raised by the NYSDEC in response to the 1991 investigation and to address data gaps identified from the prior IRM work. In addition, this program was also developed to provide the information necessary to ensure the accuracy and efficiency of the final remedial alternative selected for the site.

Forty-two test pits were completed throughout the site on August 17 and 18, 1992 and

September 28, 1992. This investigation indicated that the former disposal area was approximately 110 feet wide and 245 feet long, and covered an area of approximately 26,950 square feet or 0.62 acres. In addition, several waste, native soil, and groundwater samples were collected for analysis. The analytical results from this investigation have been summarized and are presented in Tables 3 to 17 of Appendix D.

THE GOODYEAR TIRE AND RUBBER COMPANY

Information contained in NYSDEC Program files (Appendix E) documents the apparent link between the wastes encountered at the Vacant Land Adjacent to 1865 Connecting Road site and the Goodyear Tire and Rubber Company. A NCHD memorandum describes a May 9, 1968 inspection, with a local resident, of the Walter S. Kozdranski property on Connecting Road. This resident stated that the Goodyear Tire and Rubber Company "uses a blue truck to dump a yellow putty-like chemical residue on an earth dump ground located between Kozdranski and McClendon Paving Co." The NCHD contacted Goodyear regarding this dumping and was informed by two company employees that Goodyear had been given permission by Mr. Kozdranski to dump wastes at this site. NYSDEC program files also contain a letter dated May 28, 1968 from Goodyear to the Walter S. Kozdranski Company that included analyses of the heel tars dumped by Goodyear on the Kozdranski property.

On May 27, 1988 the Goodyear Tire and Rubber Company responded to a May 4, 1988 NYSDEC request concerning the Vacant Land Adjacent to 1865 Connecting Road site (Appendix E). This response stated that Goodyear "did not perform service operations at the Factory Outlet Mall site before or after 1972." This letter also describes the Goodyear manufacturing operations, which include the following: (1) the manufacture of polymerized vinyl chloride, which began in 1946; (2) the manufacture of thiazole type rubber chemicals, which began in 1954; and (3) the manufacture of antioxidant-antiozonant chemicals, which began in 1957. As of 1988 these process operations were still being conducted at the Goodyear plant.

The Goodyear response also included a list of the wastes generated by these processes. These wastes include:

Iron catalyst salts,
Accelerator sewer sumps,
PVC berries and skins,

PVC floor sweepings, and

Thiazole polymer blends.

The accelerator sewer sump wastes are described as wet, yellow, soft solids consisting of approximately 60% mercaptobenzothiazole and 40% Kagarax (4-Morpholinyl-2-Benzothiazole Disulfide). The PVC berries and skins are described as wet, hard particles 1/16 to 1/4 inch in size, which could have a residual vinyl chloride monomer content up to 1,600 ppm. The description of the sewer accelerator sump wastes is similar to that of the yellow-tan resinous material, while the description of the PVC berries and skins is similar to that of the white powder-like material, both of which have been identified at the Vacant Land Adjacent to 1865 Connecting Road and Kozdranski sites.

On June 2, 1992 the Goodyear Tire and Rubber Company notified the Department that recent samples of their PVC solid waste failed the TCLP criterion for vinyl chloride (Appendix E). Goodyear further indicated that because of these analytical results, the PVC solid wastes were now being manifested and shipped to Michigan Disposal, Belleville, Michigan, for disposal. As a result, the Department responded to Goodyear by letter dated June 8, 1992 acknowledging that the PVC waste stream had been reclassified from non-hazardous to TCLP hazardous.

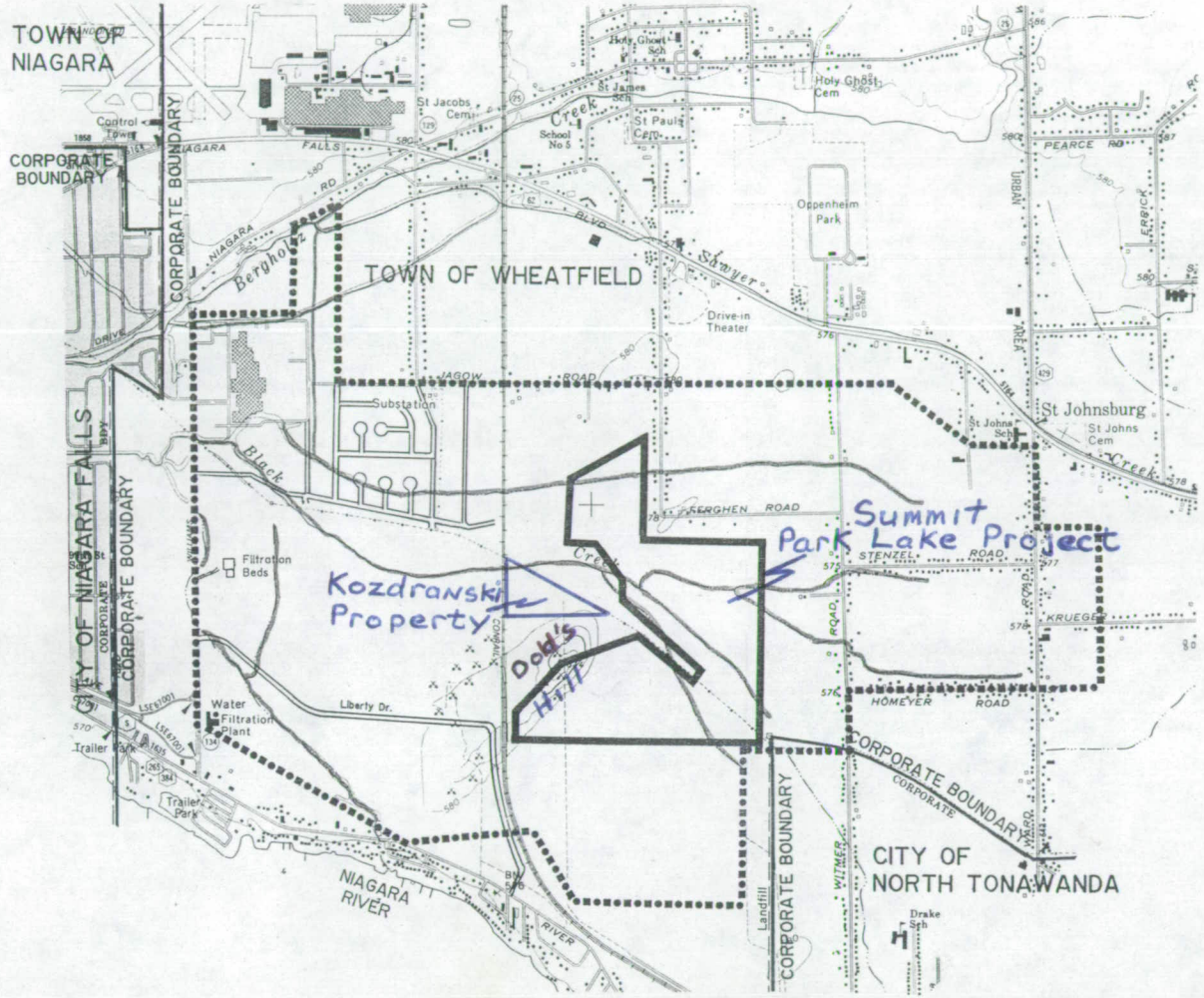
RECOMMENDATIONS

The apparent similarity in waste types between the Kozdranski, Vacant Land Adjacent to 1865 Connecting Road, and Forest Glen subdivision sites suggests a common waste source. Information obtained to date implicates the Goodyear Tire and Rubber Company. Currently these wastes are exposed in an area approximately 5 acres in size. Aerial photographs suggests, however, that there is a large area of this site that has not yet been investigated, and that could contain additional waste materials. This possibility is further supported by a former Kozdranski employee who stated that, once dumped, the wastes were buried and leveled off. Additional investigation is needed to better delineate this disposal area, and to document the presence of hazardous waste throughout the site. The proposed development of the surrounding property for commercial and residential usage may increase the potential for direct contact exposures with the waste.

FIGURE 2.1

LEGEND

- PROJECT LIMIT LINE
- WATERSHED BOUNDARY
- WATER
- POLITICAL BOUNDARIES



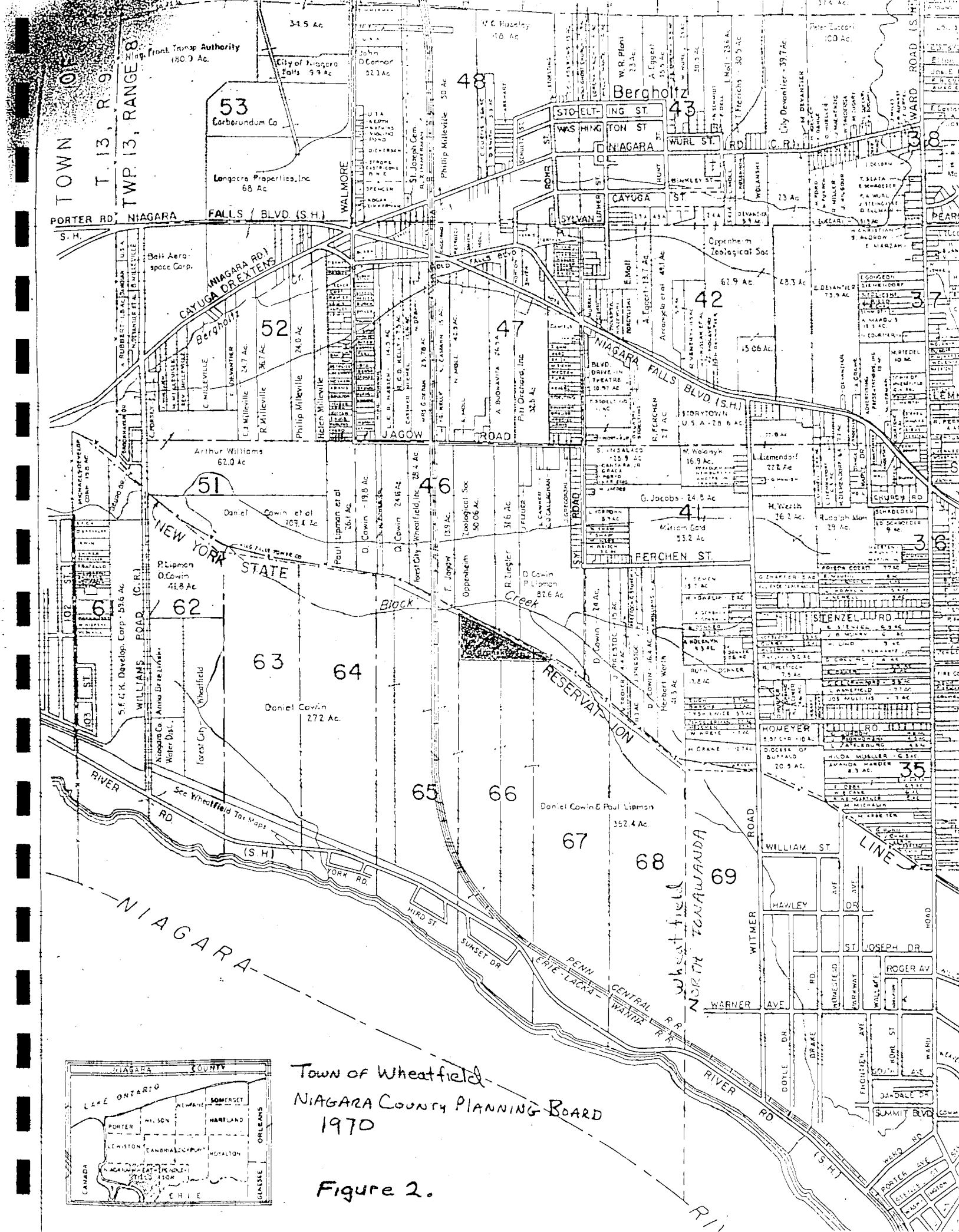
Auld Environmental
Olcott, New York

WHEATFIELD LAKES PROJECT
PROJECT LOCATION MAP

FIGURE 2.1

Tn. of Wheatfield / Niagara Co., New York

APPROVED _____ DATE DEC. 1987



Town of Wheatfield

NIAGARA COUNTY PLANNING BOARD

1970

Figure 2.

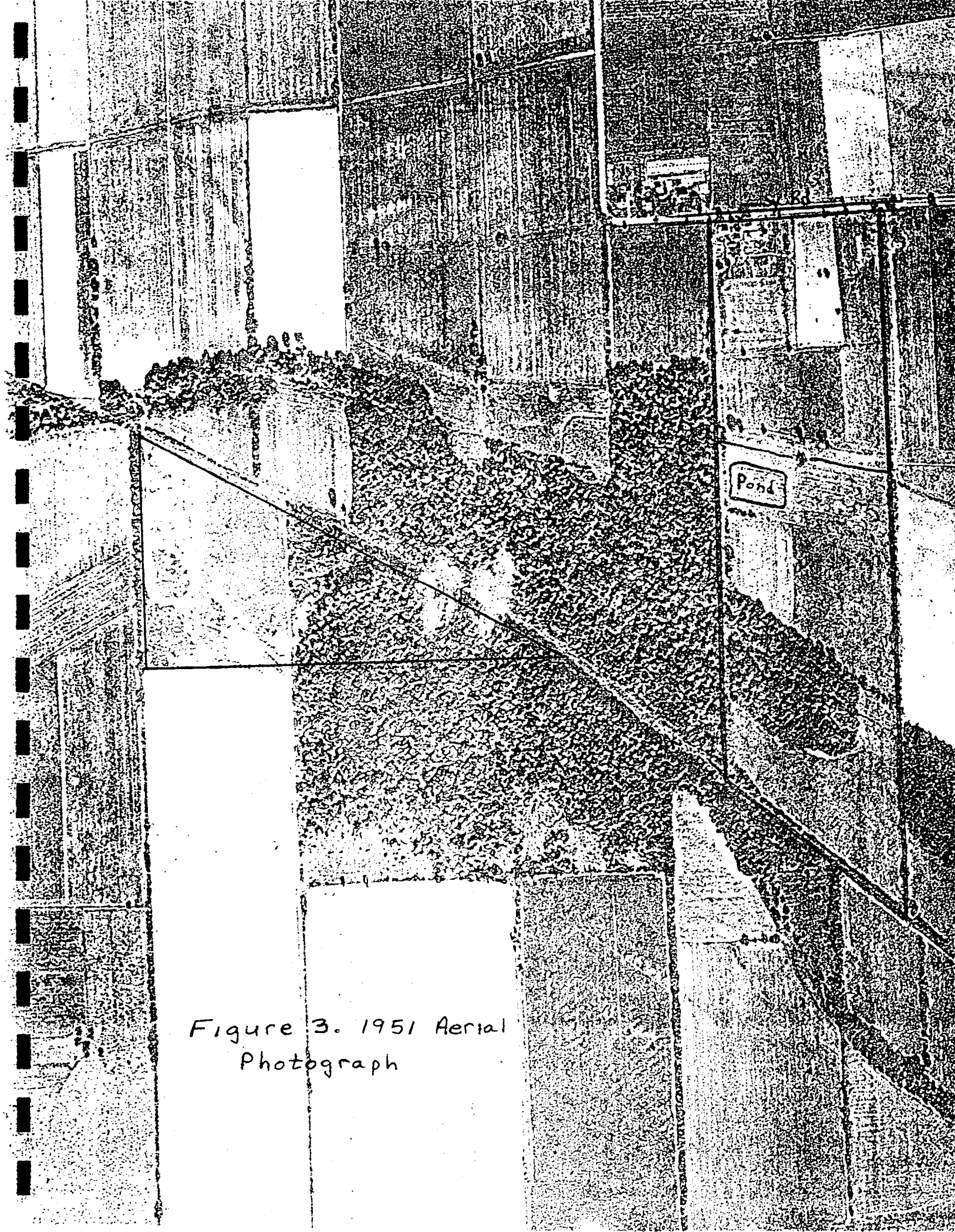


Figure 3. 1951 Aerial Photograph

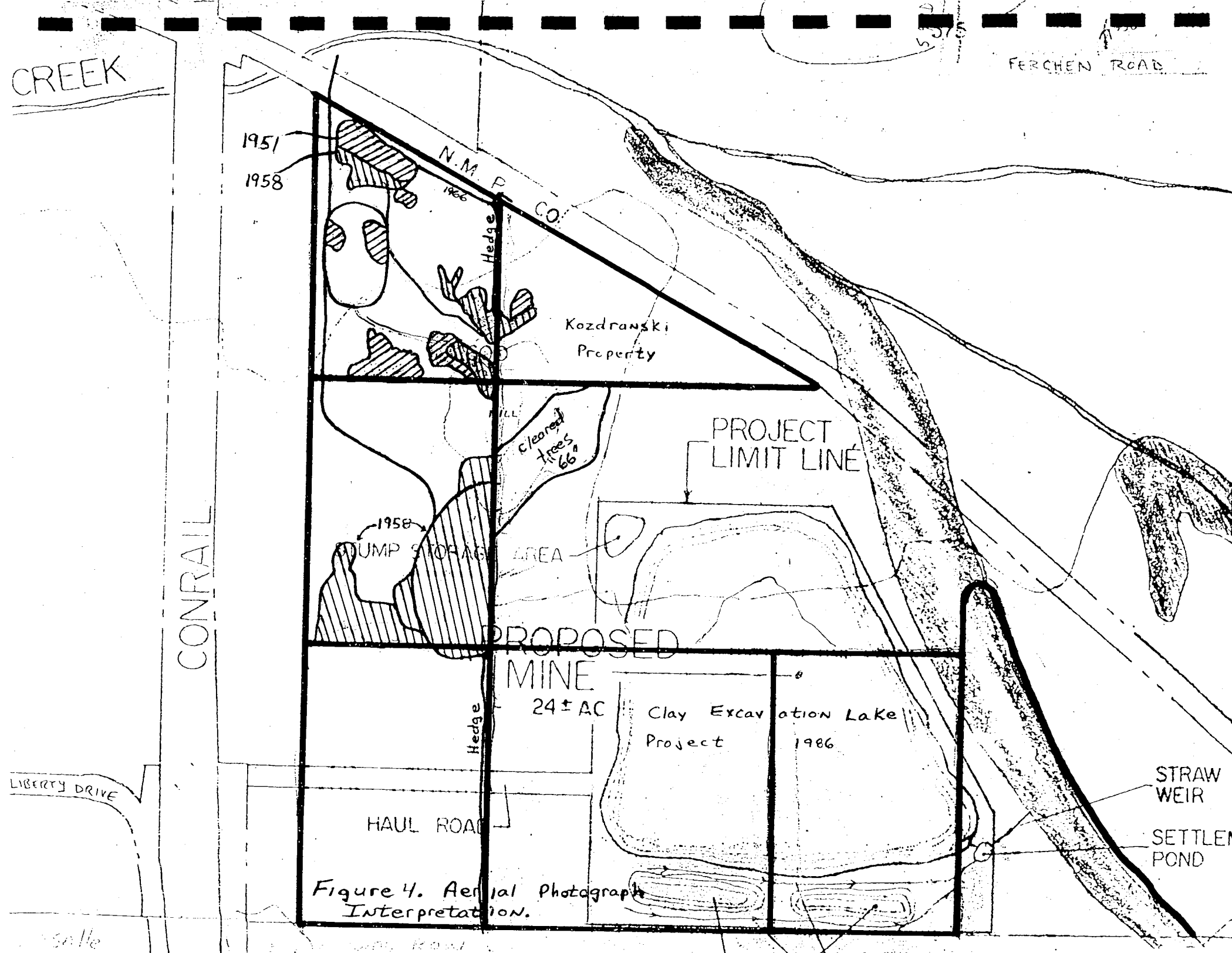


Figure 4. Aerial Photograph Interpretation.

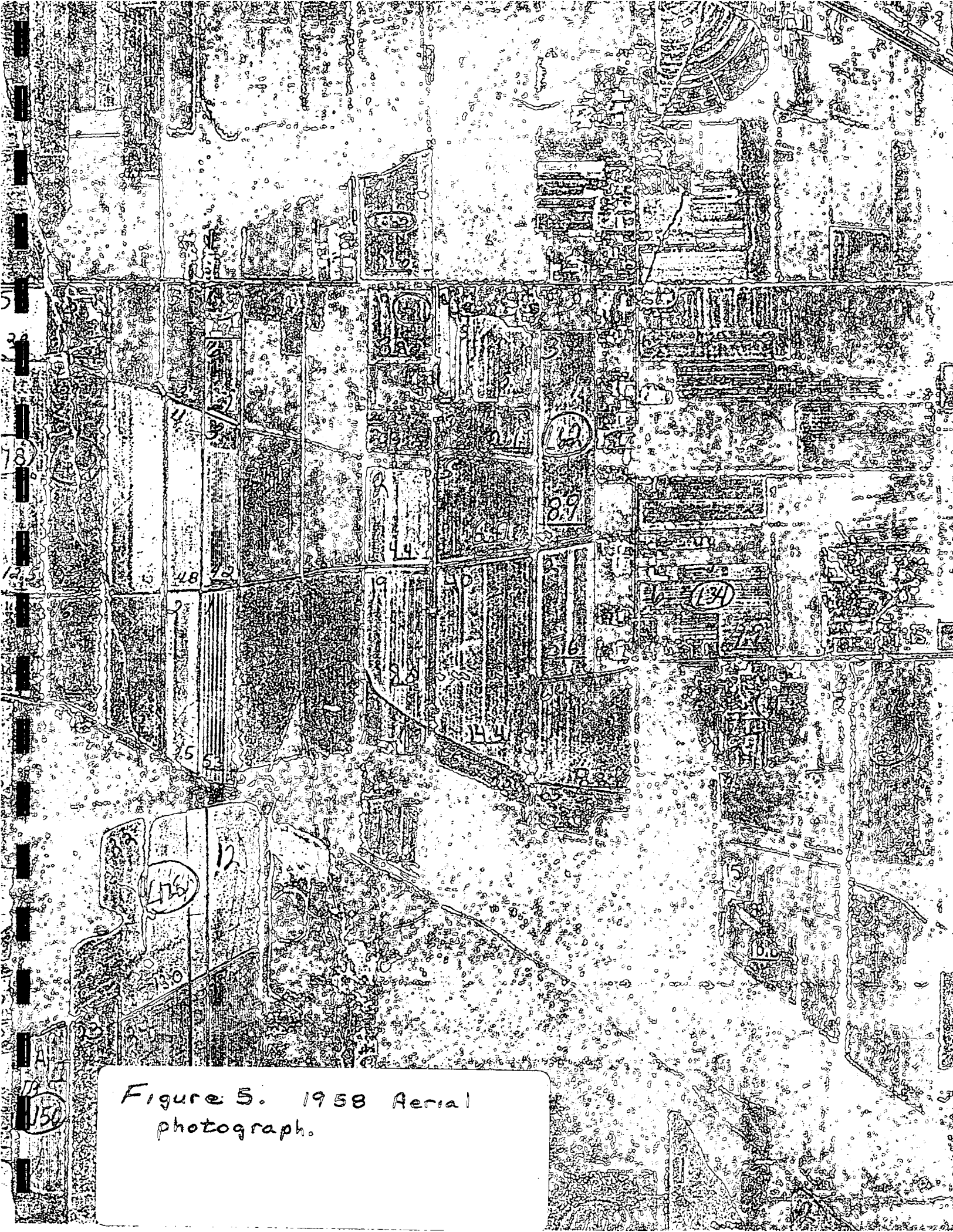


Figure 5. 1958 Aerial photograph.

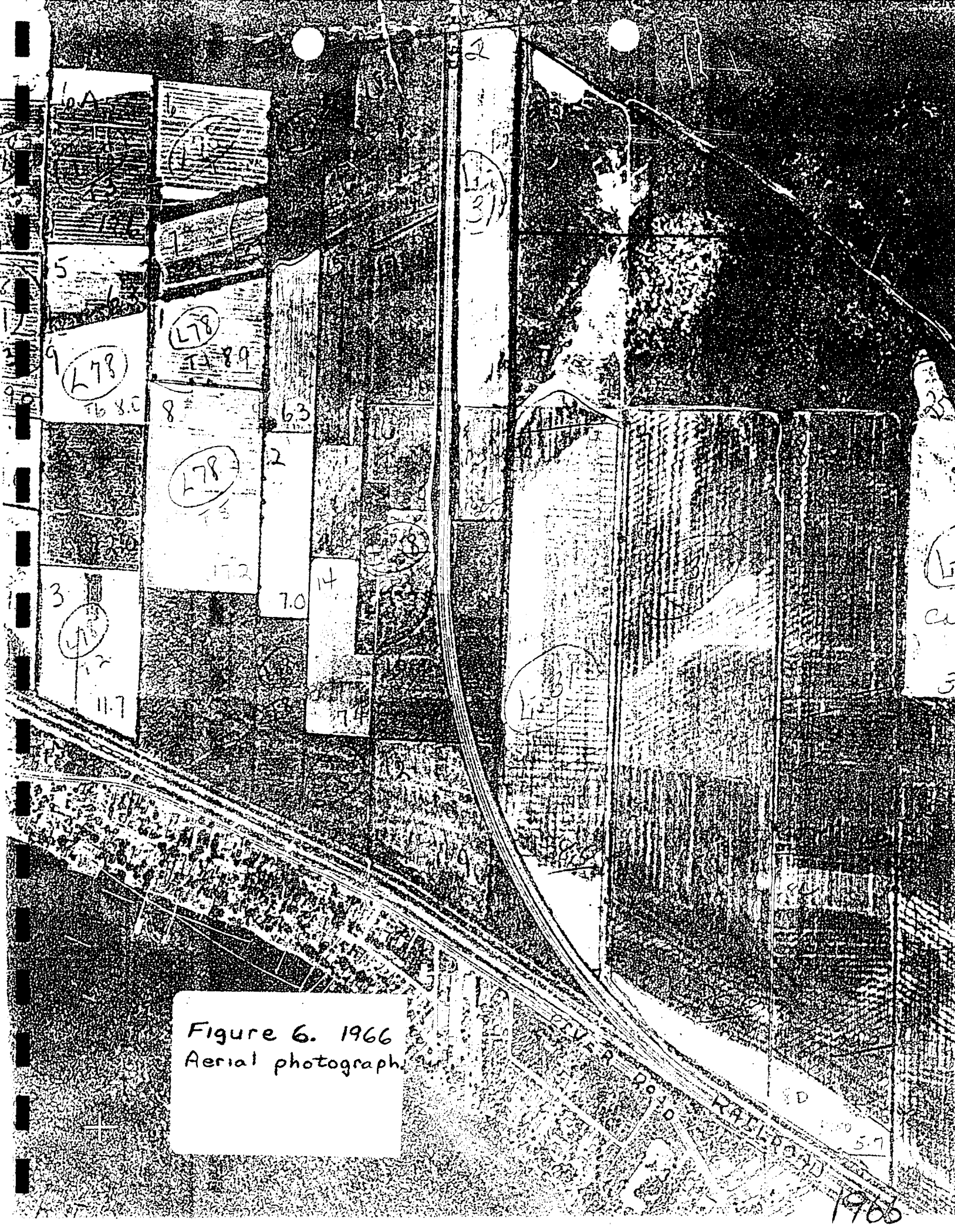


Figure 6. 1966
Aerial photograph

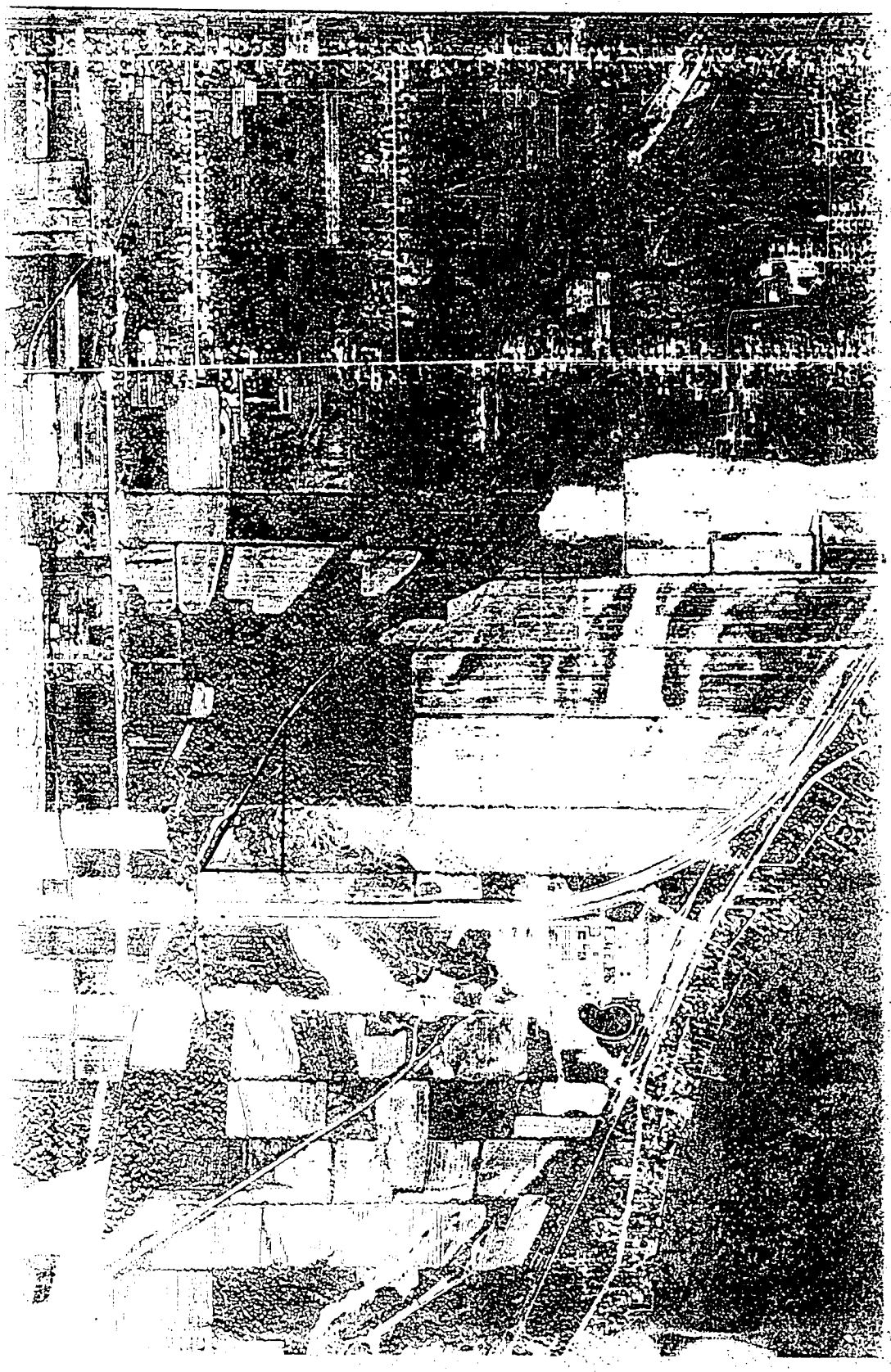


Figure 7. 1977 aerial photograph.

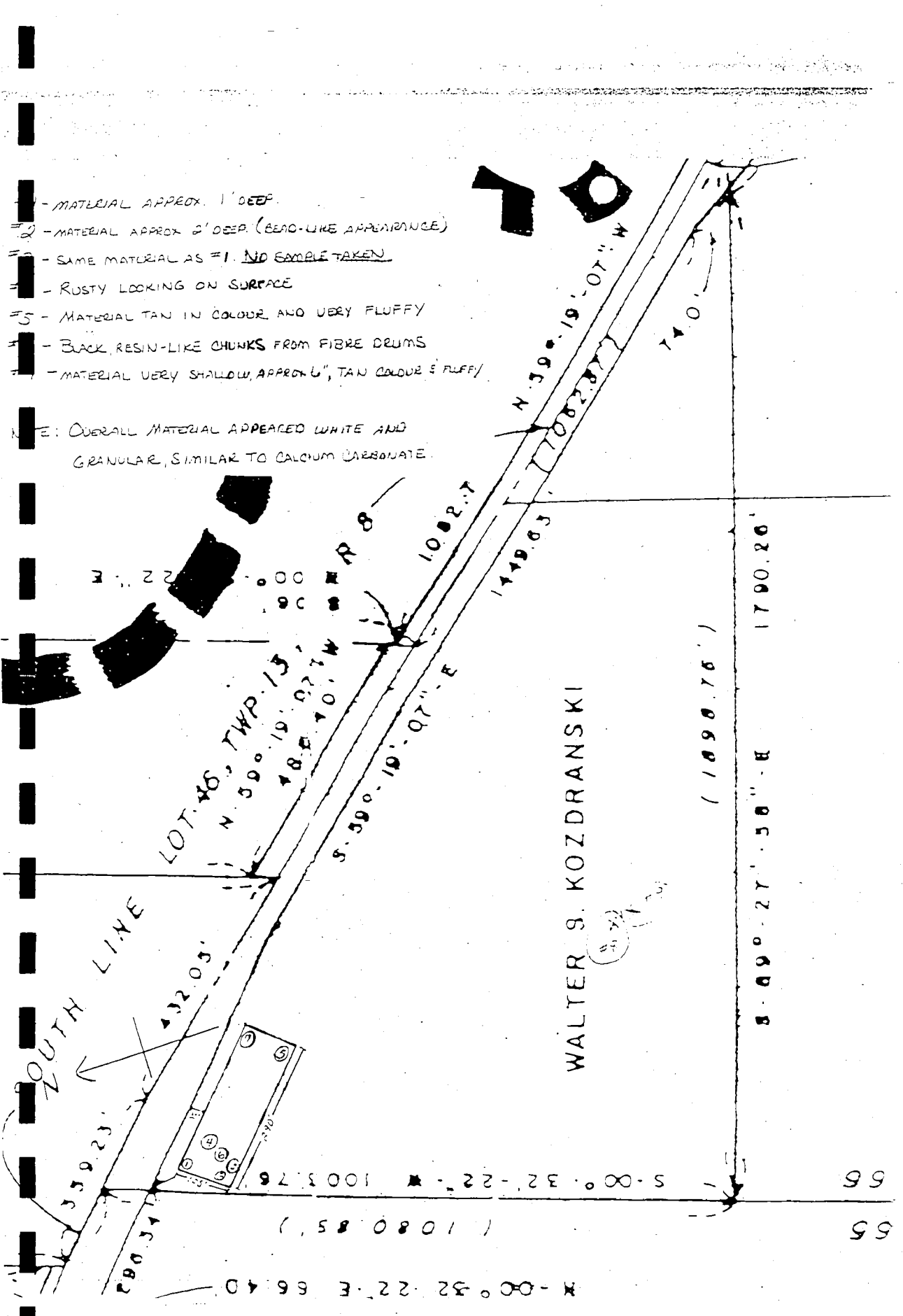


Figure 8. Locations of samples collected on September 9, 1986.

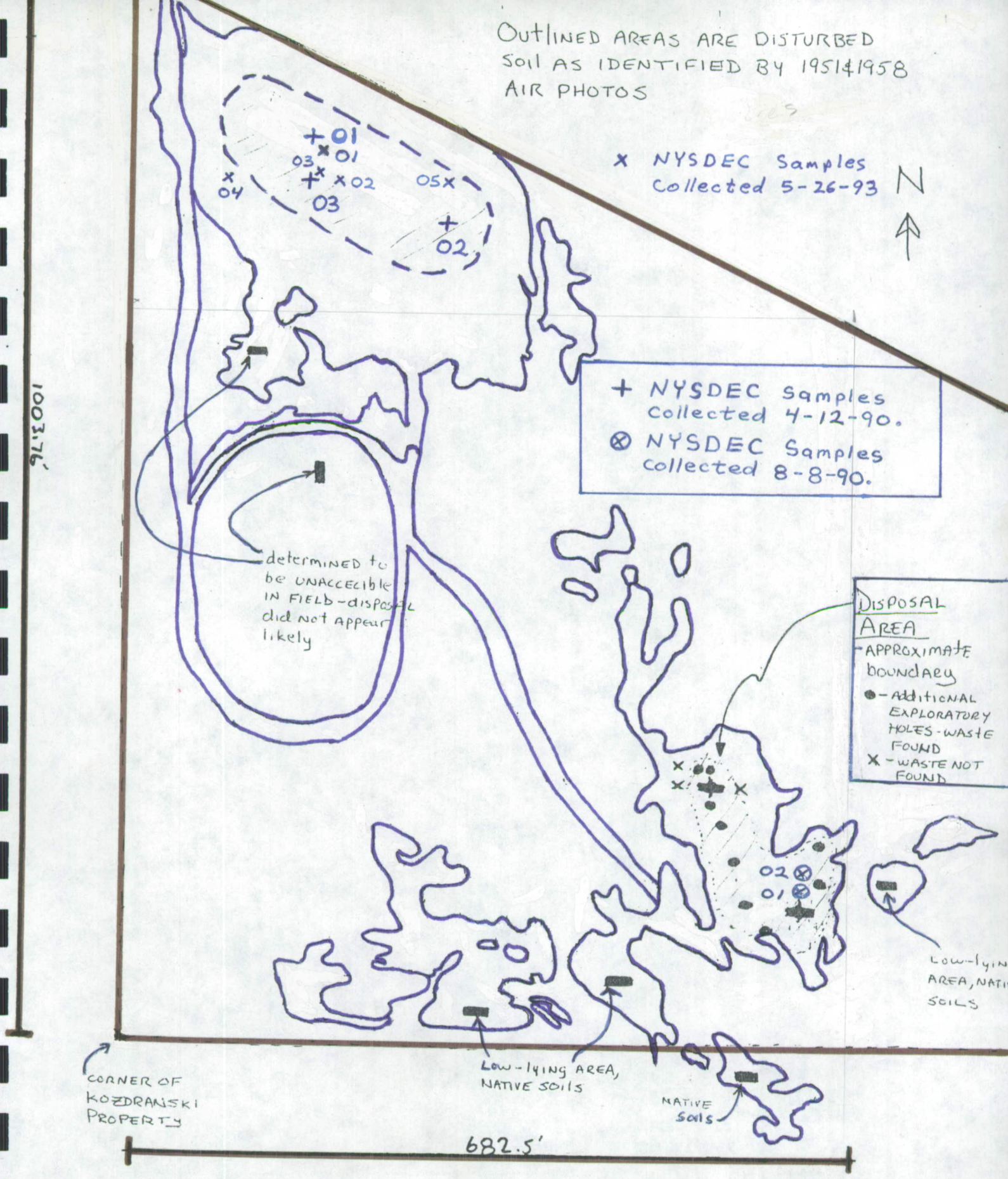
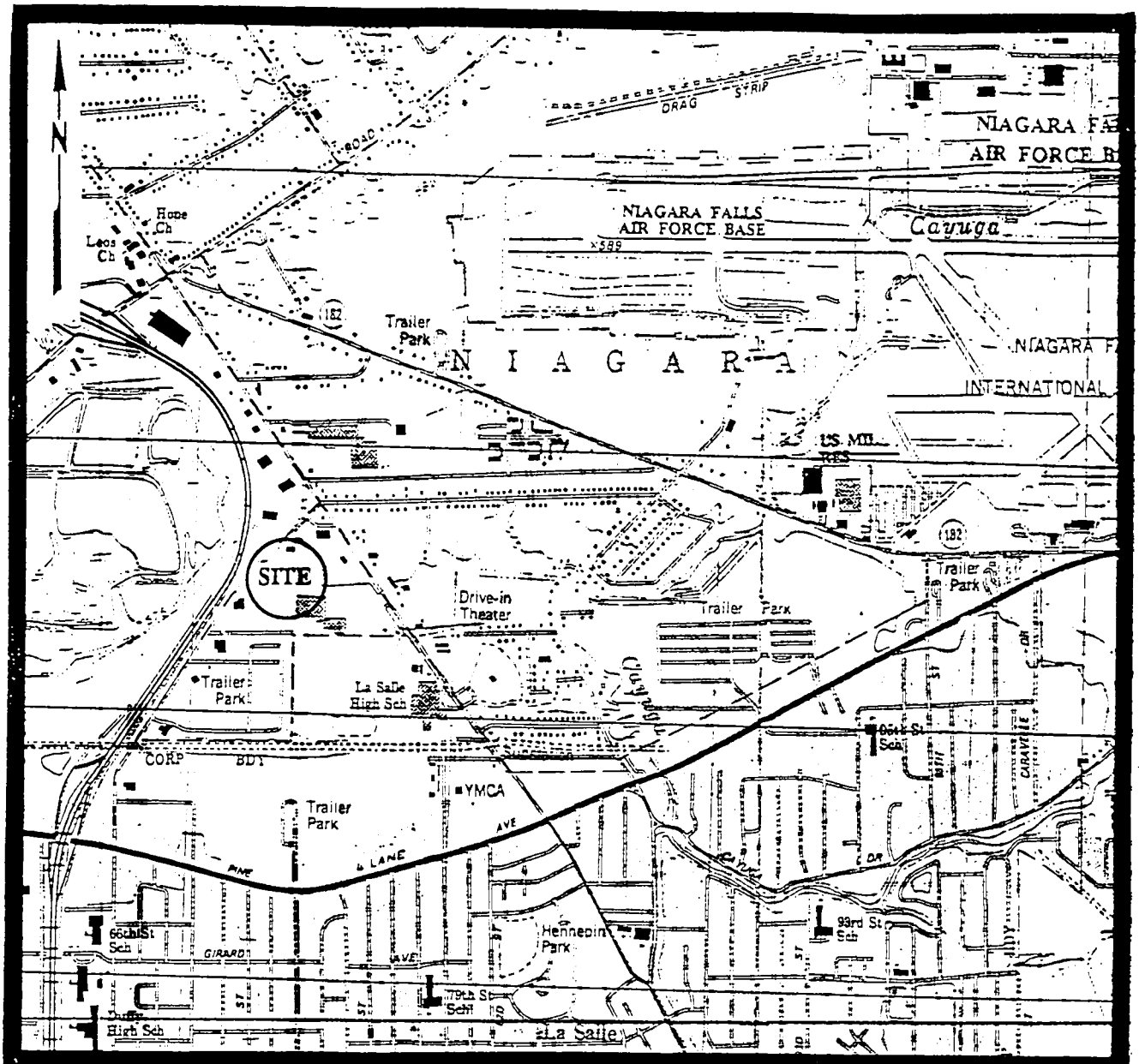


Figure 9. Location of test pits completed on September 25, 1986 and NYSDEC samples collected during 1990 and 1993.



SCALE 1:25 000

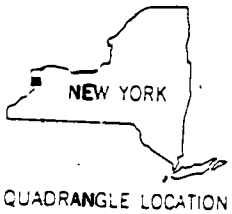
1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 5 FEET

NATIONAL GEODETIC VERTICAL DATUM OF 1929



QUADRANGLE LOCATION

TONAWANDA WEST, N. Y.

FIGURE 10

VACANT LAND ADJACENT TO

1865 CONNECTING ROAD

TOWN OF NIAGARA, NEW YORK

DUNN GEOSCIENCE CORP

Table 1. E.P. Toxicity results from samples collected on September 9, 1986 from the Kozdranski property. Sample nos. 1-5 and 7 were collected from a white lime-like substance. Sample no. 6 was collected from a hard, black resin-like material. All concentrations are in mg/l.

		Sample Number				
Parameter	Standard	1	2	4	5 & 7	6
Arsenic	5.0	-*	0.015	0.020	0.023	0.015
Barium	100.0	-	1.29	-	3.13	-
Cadmium	1.0	-	-	0.07	-	-
Chromium	5.0	-	0.97	0.64	-	-
Mercury	0.2	-	-	0.002	-	-
Silver	5.0	-	-	0.20	-	-

* Compound not detected

Table 2. Analytical results from samples collected by NYSDEC on April 12, 1990 from the Kozdranski property. Sample nos. 1 and 3 were collected from a hard, black resin-like material. Sample no. 2 was collected from a tanish-white, fine granular material. All concentrations are in mg/kg.

Parameter	Sample 1	Sample 2	Sample 3
Phenol	49	-*	15J
Benzoic acid	73J	-	19J
N-nitrosodiphenylamine	330	-	1100E
Butylbenzylphthalate	-	0.29J	-
Bis(2-ethylhexyl)phthalate	-	0.21J	-

* compound not detected

Table 3. E.P. Toxicity results from sample no. 2 collected from a tanish-white, fine granular material by NYSDEC on April 12, 1990 from the Kozdranski property. All concentrations are in mg/l except 2,4-D, which is in ug/l.

Parameter	Standard	E.P. Tox	Total Metals
Arsenic	5.0	-*	7.7
Barium	100.0	-	-
Cadmium	1.0	0.031	5.4
Chromium	5.0	0.052	19.0
Lead	5.0	0.35	67.8
Mercury	0.2	-	-
Selenium	1.0	-	-
Silver	5.0	0.033	6.8
2,4-D	10.0	0.16	N/A

* Compound not detected

Table 4. Analytical results from samples collected by NYSDEC on August 8, 1990 from the Kozdranski property. The samples were collected from a powdery, sand-like material. All concentrations are in mg/kg.

Parameter	Sample 1	Sample 2
Acetone	0.025	-*
Naphthalene	0.077J	0.22J
2-methylnaphthalene	0.082J	-
Phenanthrene	0.092J	4.0
Bis(2-ethylhexyl)phthalate	0.5J	20.0
Acenaphthalene	-	0.33J
Dibenzofuran	-	0.29J
Fluorene	-	0.51J
N-nitrosodiphenylamine	-	0.26J
Anthracene	-	0.84J
Fluoranthene	-	2.7
Pyrene	-	2.6
Benzo(a)anthracene	-	1.4J
Chrysene	-	1.2J
Benzo(b)fluoranthene	-	0.99J
Benzo(k)fluoranthene	-	0.60J
Benzo(a)pyrene	-	0.73J
Indeno(1,2-cd)perylene	-	0.32J
Benzo(g,h,i)perylene	-	0.20J
Aroclor-1254	0.18J	-

* compound not detected

Table 5. E.P. Toxicity results from samples of a powdery, sand-like material collected by NYSDEC on August 8, 1990 from the Kozdranski property. All concentrations are in mg/l.

		Sample 1		Sample 2	
Parameter	Standard	E.P. Tox	Total Metals	E.P. Tox	Total Metals
Arsenic	5.0	-*	8.3	0.015	7.9
Barium	100.0	-	217.0	-	44.2
Cadmium	1.0	-	-	0.028	0.96
Chromium	5.0	-	47.5	-	19.0
Lead	5.0	0.08	63.4	0.36	28.8
Mercury	0.2	-	0.64	-	0.90
Selenium	1.0	-	0.60	-	-
Silver	5.0	-	-	0.033	4.0

* Compound not detected

APPENDIX
A

1B

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

01

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: 0730 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 01

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 4054X

Level: (low/med) LOW Date Received: 04/12/90

% Moisture: not dec. 10 dec. ____ Date Extracted: 04/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/08/90

GPC Cleanup: (Y/N) Y Dilution Factor: 60

CONCENTRATION UNITS:
(ug/L or ug/Kg) UG/KG

CAS NO.	COMPOUND		Q
108-95-2	Phenol	49000	
111-44-4	bis(2-Chloroethyl)Ether	44000	U
95-57-8	2-Chlorophenol	44000	U
541-73-1	1,3-Dichlorobenzene	44000	U
106-46-7	1,4-Dichlorobenzene	44000	U
100-51-6	Benzyl Alcohol	44000	U
95-50-1	1,2-Dichlorobenzene	44000	U
95-48-7	2-Methylphenol	44000	U
108-60-1	bis(2-Chloroisopropyl)Ether	44000	U
106-44-5	4-Methylphenol	44000	U
621-64-7	N-Nitroso-Di-n-Propylamine	44000	U
67-72-1	Hexachloroethane	44000	U
98-95-3	Nitrobenzene	44000	U
78-59-1	Isophorone	44000	U
88-75-5	2-Nitrophenol	44000	U
105-67-9	2,4-Dimethylphenol	44000	U
65-85-0	Benzoic Acid	73000	J
111-91-1	bis(2-Chloroethoxy)Methane	44000	U
120-83-2	2,4-Dichlorophenol	44000	U
120-82-1	1,2,4-Trichlorobenzene	44000	U
91-20-3	Naphthalene	44000	U
106-47-8	4-Chloroaniline	44000	U
87-68-3	Hexachlorobutadiene	44000	U
59-50-7	4-Chloro-3-Methylphenol	44000	U
91-57-6	2-Methylnaphthalene	44000	U
77-47-4	Hexachlorocyclopentadiene	44000	U
88-06-2	2,4,6-Trichlorophenol	44000	U
95-95-4	2,4,5-Trichlorophenol	210000	U
91-58-7	2-Chloronaphthalene	44000	U
88-74-4	2-Nitroaniline	210000	U
131-11-3	Dimethyl Phthalate	44000	U
208-96-8	Acenaphthylene	44000	U
606-20-2	2,6-Dinitrotoluene	44000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

01

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: 0730 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 01

Sample wt/vol: 30.1 (g/mL) G Lab File ID: 4054X

Level: (low/med) LOW Date Received: 04/12/90

% Moisture: not dec. 10 dec. ____ Date Extracted: 04/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/08/90

GPC Cleanup: (Y/N) Y Dilution Factor: 60

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	210000	U
83-32-9	Acenaphthene	44000	U
51-28-5	2,4-Dinitrophenol	210000	U
100-02-7	4-Nitrophenol	210000	U
132-64-9	Dibenzofuran	44000	U
121-14-2	2,4-Dinitrotoluene	44000	U
84-66-2	Diethylphthalate	44000	U
7005-72-3	4-Chlorophenyl-phenylether	44000	U
86-73-7	Fluorene	44000	U
100-01-6	4-Nitroaniline	210000	U
534-52-1	4,6-Dinitro-2-Methylphenol	210000	U
86-30-6	N-Nitrosodiphenylamine (1)	230000	
101-55-3	4-Bromophenyl-phenylether	44000	U
118-74-1	Hexachlorobenzene	44000	U
87-86-5	Pentachlorophenol	210000	U
85-01-8	Phenanthrene	44000	U
120-12-7	Anthracene	44000	U
84-74-2	Di-n-Butylphthalate	44000	U
206-44-0	Fluoranthene	44000	U
129-00-0	Pyrene	44000	U
85-68-7	Butylbenzylphthalate	44000	U
91-94-1	3,3'-Dichlorobenzidine	88000	U
56-55-3	Benzo(a)Anthracene	44000	U
218-01-9	Chrysene	44000	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	44000	U
117-84-0	Di-n-Octyl Phthalate	44000	U
205-99-2	Benzo(b)Fluoranthene	44000	U
207-08-9	Benzo(k)Fluoranthene	44000	U
50-32-8	Benzo(a)Pyrene	44000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	44000	U
53-70-3	Dibenz(a,h)Anthracene	44000	U
191-24-2	Benzo(g,h,i)Perylene	44000	U

(1) - Cannot be separated from Diphenylamine

Total semivolatiles is 452 ppm.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

006

Lab Name: RECRA ENVIRONMENTAL, INC.

Lab Code: RECNY Case No: 0730 SAS No:

Matrix (Soil/Water): SOIL

Sample wt/vol: 30.1 (g/ml): G

Level (low/med): LOW

% Moisture not Dec: 10 Dec:

Extraction: (SepF/Cont/Sonc): SONC

GPC Cleanup: (Y/N): Y

Number TICs Found: 20

EPA Sample No. 01

Contract: C001741

SDG No:

Lab Sample Id: 01

Lab File Id: 4054X

Date Received: 04-12-90

Date Extracted: 04-16-90

Date Analyzed: 05-08-90

Dilution Factor: 60

Concentration Units:

(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		BENZENAMINE ISOMER	8.53	97000	J
2		BENZENAMINE DERIVATIVE	18.83	4800000	J
3		METHYL PHENYL DERIVATIVE	18.97	94000	J
4		METHYL PHENYL DERIVATIVE	19.72	4200000	J
5		UNKNOWN	20.03	2200000	J
6		METHYL PHENYL DERIVATIVE	20.23	4600000	J
7		METHYL PHENYL DERIVATIVE	20.57	1700000	J
8		UNKNOWN	21.35	86000	J
9		UNKNOWN	28.65	92000	J
10		UNKNOWN	29.23	16600000	J
11		UNKNOWN	29.35	5000000	J
12		UNKNOWN	29.68	1400000	J
13		UNKNOWN	29.98	6200000	J
14		UNKNOWN	30.28	3500000	J
15		UNKNOWN	31.45	9200000	J
16		UNKNOWN	32.55	8800000	J
17		UNKNOWN	32.58	6300000	J
18		UNKNOWN	32.82	3300000	J
19		UNKNOWN	34.13	7200000	J
20		UNKNOWN	34.35	3500000	J
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Total semivolatile TIC's is 88,869 ppm

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

02

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: 0730 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4058X

Level: (low/med) LOW Date Received: 04/12/90

% Moisture: not dec. 45 dec. _____ Date Extracted: 04/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/09/90

GPC Cleanup: (Y/N) Y Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1200	U
111-44-4	bis(2-Chloroethyl)Ether	1200	U
95-57-8	2-Chlorophenol	1200	U
541-73-1	1,3-Dichlorobenzene	1200	U
106-46-7	1,4-Dichlorobenzene	1200	U
100-51-6	Benzyl Alcohol	1200	U
95-50-1	1,2-Dichlorobenzene	1200	U
95-48-7	2-Methylphenol	1200	U
108-60-1	bis(2-Chloroisopropyl)Ether	1200	U
106-44-5	4-Methylphenol	1200	U
621-64-7	N-Nitroso-Di-n-Propylamine	1200	U
67-72-1	Hexachloroethane	1200	U
98-95-3	Nitrobenzene	1200	U
78-59-1	Isophorone	1200	U
88-75-5	2-Nitrophenol	1200	U
105-67-9	2,4-Dimethylphenol	1200	U
65-85-0	Benzoic Acid	5800	U
111-91-1	bis(2-Chloroethoxy)Methane	1200	U
120-83-2	2,4-Dichlorophenol	1200	U
120-82-1	1,2,4-Trichlorobenzene	1200	U
91-20-3	Naphthalene	1200	U
106-47-8	4-Chloroaniline	1200	U
87-68-3	Hexachlorobutadiene	1200	U
59-50-7	4-Chloro-3-Methylphenol	1200	U
91-57-6	2-Methylnaphthalene	1200	U
77-47-4	Hexachlorocyclopentadiene	1200	U
88-06-2	2,4,6-Trichlorophenol	1200	U
95-95-4	2,4,5-Trichlorophenol	5800	U
91-58-7	2-Chloronaphthalene	1200	U
88-74-4	2-Nitroaniline	5800	U
131-11-3	Dimethyl Phthalate	1200	U
208-96-8	Acenaphthylene	1200	U
606-20-2	2,6-Dinitrotoluene	1200	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

02

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: 0730 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 02

Sample wt/vol: 30.0 (g/mL) G Lab File ID: 4058X

Level: (low/med) LOW Date Received: 04/12/90

% Moisture: not dec. 45 dec. _____ Date Extracted: 04/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/09/90

GPC Cleanup: (Y/N) Y Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	5800	U
83-32-9	Acenaphthene	1200	U
51-28-5	2,4-Dinitrophenol	5800	U
100-02-7	4-Nitrophenol	5800	U
132-64-9	Dibenzofuran	1200	U
121-14-2	2,4-Dinitrotoluene	1200	U
84-66-2	Diethylphthalate	1200	U
7005-72-3	4-Chlorophenyl-phenylether	1200	U
86-73-7	Fluorene	1200	U
100-01-6	4-Nitroaniline	5800	U
534-52-1	4,6-Dinitro-2-Methylphenol	5800	U
86-30-6	N-Nitrosodiphenylamine (1)	1200	U
101-55-3	4-Bromophenyl-phenylether	1200	U
118-74-1	Hexachlorobenzene	1200	U
87-86-5	Pentachlorophenol	5800	U
85-01-8	Phenanthrene	1200	U
120-12-7	Anthracene	1200	U
84-74-2	Di-n-Butylphthalate	9200	B
206-44-0	Fluoranthene	1200	U
129-00-0	Pyrene	1200	U
85-68-7	[redacted]	[redacted]	[redacted]
91-94-1	3,3'-Dichlorobenzidine	2400	U
56-55-3	Benzo(a)Anthracene	1200	U
218-01-9	Chrysene	1200	U
117-81-7	[redacted]	[redacted]	[redacted]
117-84-0	Di-n-Octyl Phthalate	1200	U
205-99-2	Benzo(b)Fluoranthene	1200	U
207-08-9	Benzo(k)Fluoranthene	1200	U
50-32-8	Benzo(a)Pyrene	1200	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1200	U
53-70-3	Dibenz(a,h)Anthracene	1200	U
191-24-2	Benzo(g,h,i)Perylene	1200	U

(1) - Cannot be separated from Diphenylamine

Total semivolatiles is .5 ppm.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA Sample No. 02

Lab Name: RECRA ENVIRONMENTAL, INC.

Contract: C001741

Lab Code: RECNY Case No: 0730 SAS No:

SDG No:

Matrix (Soil/Water): SOIL

Lab Sample Id: 02

Sample wt/vol: 30.0 (g/ml): G

Lab File Id: 4058X

Level (low/med): LOW

Date Received: 04-12-90

% Moisture not Dec: 45 Dec:

Date Extracted: 04-16-90

Extraction: (SepF/Cont/Sonc): SONC

Date Analyzed: 05-09-90

GPC Cleanup: (Y/N): Y

Dilution Factor: 1.0

Number TICs Found: 13

Concentration Units:

(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		UNKNOWN	4.38	38000	J
2		UNKNOWN	5.47	1500	J
3		UNKNOWN	6.18	7800	J
4		UNKNOWN	6.45	570	J
5		UNKNOWN	7.25	2200	J
6		UNKNOWN	8.45	2800	J
7		UNKNOWN	8.93	2000	J
8		UNKNOWN	9.32	7800	J
9		UNKNOWN	9.52	11000	J
10		UNKNOWN	10.02	590	J
11		UNKNOWN	10.97	720	J
12		UNKNOWN	11.07	550	J
13		UNKNOWN	19.15	5300	J
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Total semivolatiles is 80.83 ppm.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.: 03

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: 0730 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 03

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 4059X

Level: (low/med) LOW Date Received: 04/12/90

% Moisture: not dec. 11 dec. _____ Date Extracted: 04/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/09/90

GPC Cleanup: (Y/N) Y Dilution Factor: 60

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	150000	U
111-44-4	bis(2-Chloroethyl)Ether	44000	U
95-57-8	2-Chlorophenol	44000	U
541-73-1	1,3-Dichlorobenzene	44000	U
106-46-7	1,4-Dichlorobenzene	44000	U
100-51-6	Benzyl Alcohol	44000	U
95-50-1	1,2-Dichlorobenzene	44000	U
95-48-7	2-Methylphenol	44000	U
108-60-1	bis(2-Chloroisopropyl)Ether	44000	U
106-44-5	4-Methylphenol	44000	U
621-64-7	N-Nitroso-Di-n-Propylamine	44000	U
67-72-1	Hexachloroethane	44000	U
98-95-3	Nitrobenzene	44000	U
78-59-1	Isophorone	44000	U
88-75-5	2-Nitrophenol	44000	U
105-67-9	2,4-Dimethylphenol	44000	U
65-85-0	Benzoic Acid	190000	U
111-91-1	bis(2-Chloroethoxy)Methane	44000	U
120-83-2	2,4-Dichlorophenol	44000	U
120-82-1	1,2,4-Trichlorobenzene	44000	U
91-20-3	Naphthalene	44000	U
106-47-8	4-Chloroaniline	44000	U
87-68-3	Hexachlorobutadiene	44000	U
59-50-7	4-Chloro-3-Methylphenol	44000	U
91-57-6	2-Methylnaphthalene	44000	U
77-47-4	Hexachlorocyclopentadiene	44000	U
88-06-2	2,4,6-Trichlorophenol	44000	U
95-95-4	2,4,5-Trichlorophenol	210000	U
91-58-7	2-Chloronaphthalene	44000	U
88-74-4	2-Nitroaniline	210000	U
131-11-3	Dimethyl Phthalate	44000	U
208-96-8	Acenaphthylene	44000	U
606-20-2	2,6-Dinitrotoluene	44000	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

03

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: 0730 SAS No.: _____ SDG No.: _____

Matrix: (soil/water) SOIL Lab Sample ID: 03

Sample wt/vol: 30.4 (g/mL) G Lab File ID: 4059X

Level: (low/med) LOW Date Received: 04/12/90

% Moisture: not dec. 11 dec. _____ Date Extracted: 04/16/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 05/09/90

GPC Cleanup: (Y/N) Y Dilution Factor: 60

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	210000	U
83-32-9	Acenaphthene	44000	U
51-28-5	2,4-Dinitrophenol	210000	U
100-02-7	4-Nitrophenol	210000	U
132-64-9	Dibenzofuran	44000	U
121-14-2	2,4-Dinitrotoluene	44000	U
84-66-2	Diethylphthalate	44000	U
7005-72-3	4-Chlorophenyl-phenylether	44000	U
86-73-7	Fluorene	44000	U
100-01-6	4-Nitroaniline	210000	U
534-52-1	4,6-Dinitro-2-Methylphenol	210000	U
86-30-6	N-Nitrosodiphenylamine (1)	210000	U
101-55-3	4-Bromophenyl-phenylether	44000	U
118-74-1	Hexachlorobenzene	44000	U
87-86-5	Pentachlorophenol	210000	U
85-01-8	Phenanthrene	44000	U
120-12-7	Anthracene	44000	U
84-74-2	Di-n-Butylphthalate	6300	BJ
206-44-0	Fluoranthene	44000	U
129-00-0	Pyrene	44000	U
85-68-7	Butylbenzylphthalate	44000	U
91-94-1	3,3'-Dichlorobenzidine	88000	U
56-55-3	Benzo(a)Anthracene	44000	U
218-01-9	Chrysene	44000	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	44000	U
117-84-0	Di-n-Octyl Phthalate	44000	U
205-99-2	Benzo(b)Fluoranthene	44000	U
207-08-9	Benzo(k)Fluoranthene	44000	U
50-32-8	Benzo(a)Pyrene	44000	U
193-39-5	Indeno(1,2,3-cd)Pyrene	44000	U
53-70-3	Dibenz(a,h)Anthracene	44000	U
191-24-2	Benzo(g,h,i)Perylene	44000	U

(1) - Cannot be separated from Diphenylamine

Total semivolatiles is 1134 ppm.

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA Sample No. 03

Lab Name: RECRA ENVIRONMENTAL, INC. Contract: C001741

Lab Code: RECNY Case No: 0730 SAS No: SDG No:

Matrix (Soil/Water): SOIL Lab Sample Id: 03

Sample wt/vol: 30.4 (g/ml): G Lab File Id: 4059X

Level (low/med): LOW Date Received: 04-12-90

% Moisture not Dec: 11 Dec: Date Extracted: 04-16-90

Extraction: (SepF/Cont/Sonc): SONC Date Analyzed: 05-09-90

GPC Cleanup: (Y/N): Y Dilution Factor: 60

Number TICs Found: 20 Concentration Units:

(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		METHYL PHENYL DERIVATIVE	18.80	4800000	J
2		METHYL PHENYL DERIVATIVE	19.63	2400000	J
3		UNKNOWN	19.70	1800000	J
4		UNKNOWN	19.98	1500000	J
5		METHYL PHENYL DERIVATIVE	20.18	3500000	J
6		UNKNOWN	20.52	1200000	J
7		UNKNOWN	28.15	2700000	J
8		UNKNOWN	28.72	7000000	J
9		UNKNOWN	29.35	9300000	J
10		UNKNOWN	29.43	1400000	J
11		UNKNOWN	29.77	1700000	J
12		UNKNOWN	30.22	3500000	J
13		UNKNOWN	30.53	5000000	J
14		UNKNOWN	30.58	92000	J
15		UNKNOWN	32.08	3200000	J
16		UNKNOWN	32.37	3000000	J
17		UNKNOWN	32.92	5100000	J
18		UNKNOWN	33.22	94000	J
19		UNKNOWN	33.62	3300000	J
20		UNKNOWN	33.82	1900000	J
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Total semivolatile TIC's is 62,486 ppm.

EP TOXICITY TEST EXTRACT - ORGANICS

PARAMETER (Units of Measure = ug/l)	EXTRACTION DATE	ANALYSIS DATE	SAMPLE IDENTIFICATION (DATE) RH990-932901-02 (4/12/90)
Endrin	4/24/90	4/27/90	<0.40
Lindane	4/24/90	4/27/90	<0.20
Methoxychlor	4/24/90	4/27/90	<0.80
Toxaphene	4/24/90	4/27/90	<20
[redacted]	4/24/90	4/27/90	[redacted]
2,4,5-TP	4/24/90	4/27/90	<0.05
Surrogate (% Recovery) Dibutylchlorendate			240 *

EP TOXICITY TEST EXTRACT - ORGANICS

PARAMETER (Units of Measure = ug/l)	EXTRACTION DATE	ANALYSIS DATE	SAMPLE IDENTIFICATION Method Blank
Endrin	4/24/90	4/27/90	<0.1
Lindane	4/24/90	4/27/90	<0.05
Methoxychlor	4/24/90	4/27/90	<0.2
Toxaphene	4/24/90	4/27/90	<5
2,4-D	4/24/90	4/27/90	<0.05
2,4,5-TP	4/24/90	4/27/90	<0.01
Surrogate (% Recovery) Dibutylchlorendate			100

* Surrogate recovery is elevated above the advisory limit.

I.D. #90-0730

EP TOXICITY TEST EXTRACT - METALS

PARAMETER (Units of Measure = mg/l)	ANALYSIS DATE	EPA MAX. CONC.	SAMPLE IDENTIFICATION (DATE) RH990-932901-02 (4/12/90)
Total Arsenic	5/1/90	5.0	<0.005
Total Barium	5/2/90	100.0	<0.06
Total Cadmium	5/1/90	1.0	0.031
Total Chromium	4/24/90	5.0	0.052
Total Lead	5/3/90	5.0	0.35
Total Mercury	4/30/90	0.2	<0.0004
Total Selenium	4/26/90	1.0	<0.005
Total Silver	5/1/90	5.0	0.033

X Standard Addition
___ Non-Standard Addition

WASTE MATRIX
TOTAL METALS

PARAMETER mg/kg (Units of Measure = Dry)	METHOD NUMBER	ANALYSIS DATE	SAMPLE IDENTIFICATION (DATE) RH990-932901-02 (4/12/90)
Total Arsenic	7060	4/25/90	7.7
Total Barium	7080	5/2/90	<11.6
Total Cadmium	7130	5/1/90	5.4
Total Chromium	7190	5/2/90	19.0
Total Lead	7420	5/3/90	67.8
Total Mercury	7470	4/19/90	<0.17
Total Selenium	7740	4/26/90	<0.90
Total Silver	7760	5/1/90	6.8

WASTE MATRIX

PARAMETER	UNITS OF MEASURE	ANALYSIS DATE	SAMPLE IDENTIFICATION (DATE) RH990-932901-02 (4/12/90)
Corrosivity (Leachable pH)	Standard Units	4/27/90	8.21

APPENDIX
B

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 93280101

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: SH990 SAS No.: _____ SDG No.: 0807

Matrix: (soil/water) SOIL Lab Sample ID: 93280101

Sample wt/vol: 5.2 (g/mL) G Lab File ID: 3950G

Level: (low/med) LOW Date Received: 08/08/90

% Moisture: not dec. 5 Date Analyzed: 08/10/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	10	U
74-83-9	Bromomethane	10	U
75-01-4	Vinyl Chloride	10	U
75-00-3	Chloroethane	10	U
75-09-2	Methylene Chloride	10	B
67-64-1	Acetone	25	
75-15-0	Carbon Disulfide	5	U
75-35-4	1,1-Dichloroethene	5	U
75-34-3	1,1-Dichloroethane	5	U
540-59-0	1,2-Dichloroethene (total)	5	U
67-66-3	Chloroform	5	U
107-06-2	1,2-Dichloroethane	5	U
78-93-3	2-Butanone	10	U
71-55-6	1,1,1-Trichloroethane	5	U
56-23-5	Carbon Tetrachloride	5	U
108-05-4	Vinyl Acetate	10	U
75-27-4	Bromodichloromethane	5	U
78-87-5	1,2-Dichloropropane	5	U
10061-01-5	cis-1,3-dichloropropene	5	U
79-01-6	Trichloroethene	5	U
124-48-1	Dibromochloromethane	5	U
79-00-5	1,1,2-Trichloroethane	5	U
71-43-2	Benzene	5	U
10061-02-6	trans-1,3-dichloropropene	5	U
75-25-2	Bromoform	5	U
108-10-1	4-Methyl-2-Pentanone	10	U
591-78-6	2-Hexanone	10	U
127-18-4	Tetrachloroethene	5	U
79-34-5	1,1,2,2-Tetrachloroethane	5	U
108-88-3	Toluene	5	U
108-90-7	Chlorobenzene	5	U
100-41-4	Ethylbenzene	5	U
100-42-5	Styrene	5	U
1330-20-7	Total Xylenes	5	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA Sample No. 932801-01

Lab Name: RECRA ENVIRONMENTAL, INC.

Contract: C001741

Lab Code: RECNY Case No: SH990 SAS No:

SDG No: 0807

Matrix (Soil/Water): SOIL

Lab Sample Id: 932801-01

Sample wt/vol: 5.2 (g/ml): G

Lab File Id: 3950G

Level (low/med): LOW

Date Received: 08-08-90

% Moisture not Dec: 5

Date Analyzed: 08-10-90

Column: (pack/cap): PACK

Dilution Factor: 1.0

Number TICs Found: 3

Concentration Units:

(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		UNKNOWN	25.92	53	J
2		ALKYL CYCLOALKANE	27.88	68	J
3		AROMATIC DERIVATIVE	29.75	370	J
4					
5					
6					
7					
8					
9					
10					
11					
12					
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SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 0027

93280101

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: SH990 SAS No.: _____ SDG No.: 0807

Matrix: (soil/water) SOIL Lab Sample ID: 93280101

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 5089Y

Level: (low/med) LOW Date Received: 08/08/90

% Moisture: not dec. 5 dec. ____ Date Extracted: 08/10/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/20/90

GPC Cleanup: (Y/N) Y Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1300	U
111-44-4	bis(2-Chloroethyl)Ether	1300	U
95-57-8	2-Chlorophenol	1300	U
541-73-1	1,3-Dichlorobenzene	1300	U
106-46-7	1,4-Dichlorobenzene	1300	U
100-51-6	Benzyl Alcohol	1300	U
95-50-1	1,2-Dichlorobenzene	1300	U
95-48-7	2-Methylphenol	1300	U
108-60-1	bis(2-Chloroisopropyl)Ether	1300	U
106-44-5	4-Methylphenol	1300	U
621-64-7	N-Nitroso-Di-n-Propylamine	1300	U
67-72-1	Hexachloroethane	1300	U
98-95-3	Nitrobenzene	1300	U
78-59-1	Isophorone	1300	U
88-75-5	2-Nitrophenol	1300	U
105-67-9	2,4-Dimethylphenol	1300	U
65-85-0	Benzoic Acid	6500	U
111-91-1	bis(2-Chloroethoxy)Methane	1300	U
120-83-2	2,4-Dichlorophenol	1300	U
120-82-1	1,2,4-Trichlorobenzene	1300	U
91-20-3	Naphthalene	77	J
106-47-8	4-Chloroaniline	1300	U
87-68-3	Hexachlorobutadiene	1300	U
59-50-7	4-Chloro-3-Methylphenol	1300	U
91-57-6	2-Methylnaphthalene	82	J
77-47-4	Hexachlorocyclopentadiene	1300	U
88-06-2	2,4,6-Trichlorophenol	1300	U
95-95-4	2,4,5-Trichlorophenol	6500	U
91-58-7	2-Chloronaphthalene	1300	U
88-74-4	2-Nitroaniline	6500	U
131-11-3	Dimethyl Phthalate	1300	U
208-96-8	Acenaphthylene	1300	U
606-20-2	2,6-Dinitrotoluene	1300	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93280101

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: SH990 SAS No.: _____ SDG No.: 0807

Matrix: (soil/water) SOIL Lab Sample ID: 93280101

Sample wt/vol: 30.9 (g/mL) G Lab File ID: 5089Y

Level: (low/med) LOW Date Received: 08/08/90

% Moisture: not dec. 5 dec. ____ Date Extracted: 08/10/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/20/90

GPC Cleanup: (Y/N) Y Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	6500	U
83-32-9	Acenaphthene	1300	U
51-28-5	2,4-Dinitrophenol	6500	U
100-02-7	4-Nitrophenol	6500	U
132-64-9	Dibenzofuran	1300	U
121-14-2	2,4-Dinitrotoluene	1300	U
84-66-2	Diethylphthalate	1300	U
7005-72-3	4-Chlorophenyl-phenylether	1300	U
86-73-7	Fluorene	1300	U
100-01-6	4-Nitroaniline	6500	U
534-52-1	4,6-Dinitro-2-Methylphenol	6500	U
86-30-6	N-Nitrosodiphenylamine (1)	1300	U
101-55-3	4-Bromophenyl-phenylether	1300	U
118-74-1	Hexachlorobenzene	1300	U
87-86-5	Pentachlorophenol	6500	U
85-01-8	Phenanthrene	92	J
120-12-7	Anthracene	1300	U
84-74-2	Di-n-Butylphthalate	1300	U
206-44-0	Fluoranthene	1300	U
129-00-0	Pyrene	1300	U
85-68-7	Butylbenzylphthalate	1300	U
91-94-1	3,3'-Dichlorobenzidine	2700	U
56-55-3	Benzo(a)Anthracene	1300	U
218-01-9	Chrysene	1300	U
117-81-7	Bis(2-Ethylhexyl)Phthalate	500	J
117-84-0	Di-n-Octyl Phthalate	1300	U
205-99-2	Benzo(b)Fluoranthene	1300	U
207-08-9	Benzo(k)Fluoranthene	1300	U
50-32-8	Benzo(a)Pyrene	1300	U
193-39-5	Indeno(1,2,3-cd)Pyrene	1300	U
53-70-3	Dibenz(a,h)Anthracene	1300	U
191-24-2	Benzo(g,h,i)Perylene	1300	U

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA Sample No. 93280101

Lab Name: RECRA ENVIRONMENTAL, INC.

Contract: C001741

Lab Code: RECNY Case No: SH990 SAS No:

SDG No: 0807

Matrix (Soil/Water): SOIL

Lab Sample Id: 93280101

Sample wt/vol: 30.9 (g/ml): G

Lab File Id: 5089Y

Level (low/med): LOW

Date Received: 08-08-90

% Moisture not Dec: 5 Dec:

Date Extracted: 08-10-90

Extraction: (SepF/Cont/Sonc): SONC

Date Analyzed: 08-20-90

GPC Cleanup: (Y/N): Y

Dilution Factor: 2.0

Number TICs Found: 3

Concentration Units:

(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		UNKNOWN	6.30	650	J
2		UNKNOWN	6.72	3,400	J
3		ALKYL SUBSTITUTED COMPOUND	7.05	1,800	J
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
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22					
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25					
26					
27					
28					
29					
30					

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 0035

932801-01

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: SH990 SAS No.: _____ SDG No.: 0807

Matrix: (soil/water) SOIL Lab Sample ID: SS2994

Sample wt/vol: 30.9 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 08/08/90

% Moisture: not dec. 4 dec. __ Date Extracted: 08/10/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/22/90

GPC Cleanup: (Y/N) Y Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	16	U
319-85-7	beta-BHC	16	U
319-86-8	delta-BHC	16	U
58-89-9	gamma-BHC(Lindane)	16	U
76-44-8	Heptachlor	16	U
309-00-2	Aldrin	16	U
1024-57-3	Heptachlor epoxide	16	U
959-98-8	Endosulfan I	16	U
60-57-1	Dieldrin	32	U
72-55-9	4,4'-DDE	32	U
72-20-8	Endrin	32	U
33213-65-9	Endosulfan II	32	U
72-54-8	4,4'-DDD	32	U
1031-07-8	Endosulfan sulfate	32	U
50-29-3	4,4'-DDT	32	U
72-43-5	Methoxychlor	160	U
53494-70-5	Endrin ketone	32	U
5103-71-9	alpha-chlordane	160	U
5103-74-2	gamma-chlordane	160	U
8001-35-2	Toxaphene	320	U
12674-11-2	Aroclor-1016	160	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	160	U
53469-21-9	Aroclor-1242	160	U
12672-29-6	Aroclor-1248	160	U
11097-69-1	Aroclor-1254	180	J
11096-82-5	Aroclor-1260	320	U

SOIL MATRIX
TOTAL METALS

PARAMETER ug/g (Units of Measure = Dry)	METHOD NUMBER	ANALYSIS DATE	SAMPLE IDENTIFICATION (DATE) SH990-0807-932801-01 (8/8/90)
Total Aluminum	6010	8/15/90	5,370
Total Antimony	7040	8/23/90	<1.0
Total Arsenic	7060	8/24/90	8.3
Total Barium	6010	8/15/90	217
Total Beryllium	6010	8/15/90	1.4
Total Cadmium	6010	8/15/90	<0.52
Total Calcium	7140	8/17/90	6,090
Total Chromium	7190	8/21/90	47.5
Total Cobalt	6010	8/15/90	7.9
Total Copper	6010	8/15/90	44.2
Total Iron	6010	8/15/90	21,900
Total Lead	6010	8/15/90	63.4
Total Magnesium	6010	8/15/90	1,030
Total Manganese	6010	8/15/90	124
Total Mercury	7470	8/15/90	0.64
Total Nickel	6010	8/15/90	19.5
Total Potassium	6010	8/15/90	686
Total Selenium	7740	8/15/90	0.60
Total Silver	7760	8/24/90	<0.52
Total Sodium	6010	8/15/90	155
Total Thallium	7841	8/16/90	<0.50
Total Vanadium	6010	8/15/90	34.8
Total Zinc	6010	8/15/90	188

I.D. #90-1528

EP TOXICITY TEST EXTRACT - METALS

PARAMETER (Units of Measure = mg/l)	ANALYSIS DATE	EPA MAX. CONC.	SAMPLE IDENTIFICATION (DATE) SH990-0807-932801-01 (8/8/90)
Total Arsenic	8/24/90	5.0	<0.005
Total Barium	8/16/90	100.0	<0.20
Total Cadmium	8/21/90	1.0	<0.005
Total Chromium	8/16/90	5.0	<0.010
Total Lead	8/28/90	5.0	0.08
Total Mercury	8/21/90	0.2	<0.0002
Total Selenium	8/28/90	1.0	<0.005
Total Silver	8/24/90	5.0	<0.005

_X_ Standard Addition
___ Non-Standard Addition

I.D. #90-1528

SOIL MATRIX
WATER QUALITY TESTING

PARAMETER	METHOD NUMBER	UNITS OF MEASURE	ANALYSIS DATE	SAMPLE IDENTIFICATION (DATE) SH990-0807932801-01 (8/8/90)
Total Cyanide	9010	ug/g Dry	8/20/90	0.62

SOIL MATRIX
WATER QUALITY TESTING

PARAMETER	METHOD NUMBER	UNITS OF MEASURE	ANALYSIS DATE	SAMPLE IDENTIFICATION (DATE) SH990-0807932801-02 (8/8/90)
Total Cyanide	9010	ug/g Dry	8/20/90	<0.58

I.D. #90-1528

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93280102

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: SH990 SAS No.: _____ SDG No.: 0807

Matrix: (soil/water) SOIL Lab Sample ID: 93280102

Sample wt/vol: 5.2 (g/mL) G Lab File ID: 3951G

Level: (low/med) LOW Date Received: 08/08/90

% Moisture: not dec. 26 Date Analyzed: 08/10/90

Column: (pack/cap) PACK Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
74-87-3	Chloromethane	13	U
74-83-9	Bromomethane	13	U
75-01-4	Vinyl Chloride	13	U
75-00-3	Chloroethane	13	U
75-09-2	Methylene Chloride	7	B
67-64-1	Acetone	13	U
75-15-0	Carbon Disulfide	6	U
75-35-4	1,1-Dichloroethene	6	U
75-34-3	1,1-Dichloroethane	6	U
540-59-0	1,2-Dichloroethene (total)	6	U
67-66-3	Chloroform	6	U
107-06-2	1,2-Dichloroethane	6	U
78-93-3	2-Butanone	13	U
71-55-6	1,1,1-Trichloroethane	6	U
56-23-5	Carbon Tetrachloride	6	U
108-05-4	Vinyl Acetate	13	U
75-27-4	Bromodichloromethane	6	U
78-87-5	1,2-Dichloropropane	6	U
10061-01-5	cis-1,3-dichloropropene	6	U
79-01-6	Trichloroethene	6	U
124-48-1	Dibromochloromethane	6	U
79-00-5	1,1,2-Trichloroethane	6	U
71-43-2	Benzene	6	U
10061-02-6	trans-1,3-dichloropropene	6	U
75-25-2	Bromoform	6	U
108-10-1	4-Methyl-2-Pentanone	13	U
591-78-6	2-Hexanone	13	U
127-18-4	Tetrachloroethene	6	U
79-34-5	1,1,2,2-Tetrachloroethane	6	U
108-88-3	Toluene	2	BJ
108-90-7	Chlorobenzene	6	U
100-41-4	Ethylbenzene	6	U
100-42-5	Styrene	6	U
1330-20-7	Total Xylenes	6	U

1E

VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA Sample No. 932801-02

Lab Name: RECRA ENVIRONMENTAL, INC.

Contract: C001741

Lab Code: RECNY Case No: SH990 SAS No:

SDG No: 0807

Matrix (Soil/Water): SOIL

Lab Sample Id: 932801-02

Sample wt/vol: 5.3 (g/ml): G

Lab File Id: 3951G

Level (low/med): LOW

Date Received: 08-08-90

% Moisture not Dec: 26

Date Analyzed: 08-10-90

Column: (pack/cap): PACK

Dilution Factor: 1.0

Number TICs Found: 4

Concentration Units:

(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		UNKNOWN	17.25	12	J
2		UNKNOWN	24.75	9	J
3		UNKNOWN	26.40	45	J
4		DICHLORO-METHYLBENZENE ISO.	29.37	180	J
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

93280102

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: SH990 SAS No.: _____ SDG No.: 0807

Matrix: (soil/water) SOIL Lab Sample ID: 93280102

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 5090Y

Level: (low/med) LOW Date Received: 08/08/90

% Moisture: not dec. 31 dec. ____ Date Extracted: 08/10/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/20/90

GPC Cleanup: (Y/N) Y Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
108-95-2	Phenol	1900	U
111-44-4	bis(2-Chloroethyl)Ether	1900	U
95-57-8	2-Chlorophenol	1900	U
541-73-1	1,3-Dichlorobenzene	1900	U
106-46-7	1,4-Dichlorobenzene	1900	U
100-51-6	Benzyl Alcohol	1900	U
95-50-1	1,2-Dichlorobenzene	1900	U
95-48-7	2-Methylphenol	1900	U
108-60-1	bis(2-Chloroisopropyl)Ether	1900	U
106-44-5	4-Methylphenol	1900	U
621-64-7	N-Nitroso-Di-n-Propylamine	1900	U
67-72-1	Hexachloroethane	1900	U
98-95-3	Nitrobenzene	1900	U
78-59-1	Isophorone	1900	U
88-75-5	2-Nitrophenol	1900	U
105-67-9	2,4-Dimethylphenol	1900	U
65-85-0	Benzoic Acid	9200	U
111-91-1	bis(2-Chloroethoxy)Methane	1900	U
120-83-2	2,4-Dichlorophenol	1900	U
120-82-1	1,2,4-Trichlorobenzene	1900	U
91-20-3	Naphthalene	220	J
106-47-8	4-Chloroaniline	1900	U
87-68-3	Hexachlorobutadiene	1900	U
59-50-7	4-Chloro-3-Methylphenol	1900	U
91-57-6	2-Methylnaphthalene	1900	U
77-47-4	Hexachlorocyclopentadiene	1900	U
88-06-2	2,4,6-Trichlorophenol	1900	U
95-95-4	2,4,5-Trichlorophenol	9200	U
91-58-7	2-Chloronaphthalene	1900	U
88-74-4	2-Nitroaniline	9200	U
131-11-3	Dimethyl Phthalate	1900	U
208-96-8	Acenaphthylene	1900	U
606-20-2	2,6-Dinitrotoluene	1900	U

1C

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

93280102

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: SH990 SAS No.: _____ SDG No.: 0807

Matrix: (soil/water) SOIL Lab Sample ID: 93280102

Sample wt/vol: 30.3 (g/mL) G Lab File ID: 5090Y

Level: (low/med) LOW Date Received: 08/08/90

% Moisture: not dec. 31 dec. ____ Date Extracted: 08/10/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/20/90

GPC Cleanup: (Y/N) Y Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
99-09-2	3-Nitroaniline	9200	U
83-32-9	Acenaphthene	330	J
51-28-5	2,4-Dinitrophenol	9200	U
100-02-7	4-Nitrophenol	9200	U
132-64-9	Dibenzofuran	290	J
121-14-2	2,4-Dinitrotoluene	1900	U
84-66-2	Diethylphthalate	1900	U
7005-72-3	4-Chlorophenyl-phenylether	1900	U
86-73-7	Fluorene	510	J
100-01-6	4-Nitroaniline	9200	U
534-52-1	4,6-Dinitro-2-Methylphenol	9200	U
86-30-6	N-Nitrosodiphenylamine (1)	260	J
101-55-3	4-Bromophenyl-phenylether	1900	U
118-74-1	Hexachlorobenzene	1900	U
87-86-5	Pentachlorophenol	9200	U
85-01-8	Phenanthrene	4000	
120-12-7	Anthracene	840	J
84-74-2	Di-n-Butylphthalate	1900	U
206-44-0	Fluoranthene	2700	
129-00-0	Pyrene	2600	
85-68-7	Butylbenzylphthalate	1900	U
91-94-1	3,3'-Dichlorobenzidine	3800	U
56-55-3	Benzo(a)Anthracene	1400	J
218-01-9	Chrysene	1200	J
117-81-7	Bis(2-Ethylhexyl)Phthalate	20000	
117-84-0	Di-n-Octyl Phthalate	1900	U
205-99-2	Benzo(b)Fluoranthene	990	J
207-08-9	Benzo(k)Fluoranthene	600	J
50-32-8	Benzo(a)Pyrene	730	J
193-39-5	Indeno(1,2,3-cd)Pyrene	320	J
53-70-3	Dibenz(a,h)Anthracene	1900	U
191-24-2	Benzo(g,h,i)Perylene	200	J

(1) - Cannot be separated from Diphenylamine

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA Sample No. 93280102

Lab Name: RECRA ENVIRONMENTAL, INC.

Contract: C001741

Lab Code: RECNY Case No: SH990 SAS No:

SDG No: 0807

Matrix (Soil/Water): SOIL

Lab Sample Id: 93280102

Sample wt/vol: 30.3 (g/ml): G

Lab File Id: 5090Y

Level (low/med): LOW

Date Received: 08-08-90

% Moisture not Dec: 31 Dec:

Date Extracted: 08-10-90

Extraction: (SepF/Cont/Sonc): SONC

Date Analyzed: 08-20-90

GPC Cleanup: (Y/N): Y

Dilution Factor: 2.0

Number TICs Found: 6

Concentration Units:

(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1		ALKYL SUBSTITUTED COMPOUND	6.30	900	BJ
2		ALKYL SUBSTITUTED COMPOUND	7.07	5,000	BJ
3		BENZENE AMINE DERIVATIVE	32.42	3,500	J
4		UNKNOWN	32.80	17,000	J
5		UNKNOWN	33.17	20,000	J
6		UNKNOWN	34.03	860	J
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

1D

PESTICIDE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

932801-02

Lab Name: RECRA ENVIRON Contract: C001741

Lab Code: RECNY Case No.: SH990 SAS No.: _____ SDG No.: 0807

Matrix: (soil/water) SOIL Lab Sample ID: SS2995

Sample wt/vol: 30.3 (g/mL) G Lab File ID: _____

Level: (low/med) LOW Date Received: 08/08/90

% Moisture: not dec. 31 dec. __ Date Extracted: 08/10/90

Extraction: (SepF/Cont/Sonc) SONC Date Analyzed: 08/22/90

GPC Cleanup: (Y/N) Y Dilution Factor: 1.00

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
319-84-6	alpha-BHC	23	U
319-85-7	beta-BHC	23	U
319-86-8	delta-BHC	23	U
58-89-9	gamma-BHC(Lindane)	23	U
76-44-8	Heptachlor	23	U
309-00-2	Aldrin	23	U
1024-57-3	Heptachlor epoxide	23	U
959-98-8	Endosulfan I	23	U
60-57-1	Dieldrin	46	U
72-55-9	4,4'-DDE	46	U
72-20-8	Endrin	46	U
33213-65-9	Endosulfan II	46	U
72-54-8	4,4'-DDD	46	U
1031-07-8	Endosulfan sulfate	46	U
50-29-3	4,4'-DDT	46	U
72-43-5	Methoxychlor	230	U
53494-70-5	Endrin ketone	46	U
5103-71-9	alpha-chlordane	230	U
5103-74-2	gamma-chlordane	230	U
8001-35-2	Toxaphene	460	U
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	460	U
11096-82-5	Aroclor-1260	460	U

SOIL MATRIX
TOTAL METALS

PARAMETER ug/g (Units of Measure = Dry)	METHOD NUMBER	ANALYSIS DATE	SAMPLE IDENTIFICATION (DATE) SH990-0807-932801-02 (8/8/90)
Total Aluminum	6010	8/15/90	11,500
Total Antimony	7040	8/23/90	<1.5
Total Arsenic	7060	8/24/90	7.9
Total Barium	6010	8/15/90	44.2
Total Beryllium	6010	8/15/90	0.69
Total Cadmium	6010	8/15/90	0.96
Total Calcium	7140	8/17/90	146,000
Total Chromium	7190	8/21/90	19.0
Total Cobalt	6010	8/15/90	6.1
Total Copper	6010	8/15/90	26.9
Total Iron	6010	8/15/90	14,100
Total Lead	6010	8/15/90	28.8
Total Magnesium	6010	8/15/90	17,400
Total Manganese	6010	8/15/90	608
Total Mercury	7470	8/15/90	0.90
Total Nickel	6010	8/15/90	13.1
Total Potassium	6010	8/15/90	1,080
Total Selenium	7740	8/15/90	<0.69
Total Silver	7760	8/24/90	4.0
Total Sodium	6010	8/15/90	241
Total Thallium	7841	8/16/90	<0.69
Total Vanadium	6010	8/15/90	21.9
Total Zinc	6010	8/15/90	77.3

I.D. #90-1528

EP TOXICITY TEST EXTRACT - METALS

PARAMETER (Units of Measure = mg/l)	ANALYSIS DATE	EPA MAX. CONC.	SAMPLE IDENTIFICATION (DATE) SH990-0807-932801-02 (8/8/90)
Total Arsenic	8/24/90	5.0	0.015
Total Barium	8/16/90	100.0	<0.20
Total Cadmium	8/21/90	1.0	0.028
Total Chromium	8/16/90	5.0	<0.010
Total Lead	8/28/90	5.0	0.36
Total Mercury	8/28/90	0.2	<0.0002
Total Selenium	8/28/90	1.0	<0.005
Total Silver	8/24/90	5.0	0.033

X Standard Addition
___ Non-Standard Addition

I.D. #90-1528

RECRA ENVIRONMENTAL, INC.

APPENDIX
C

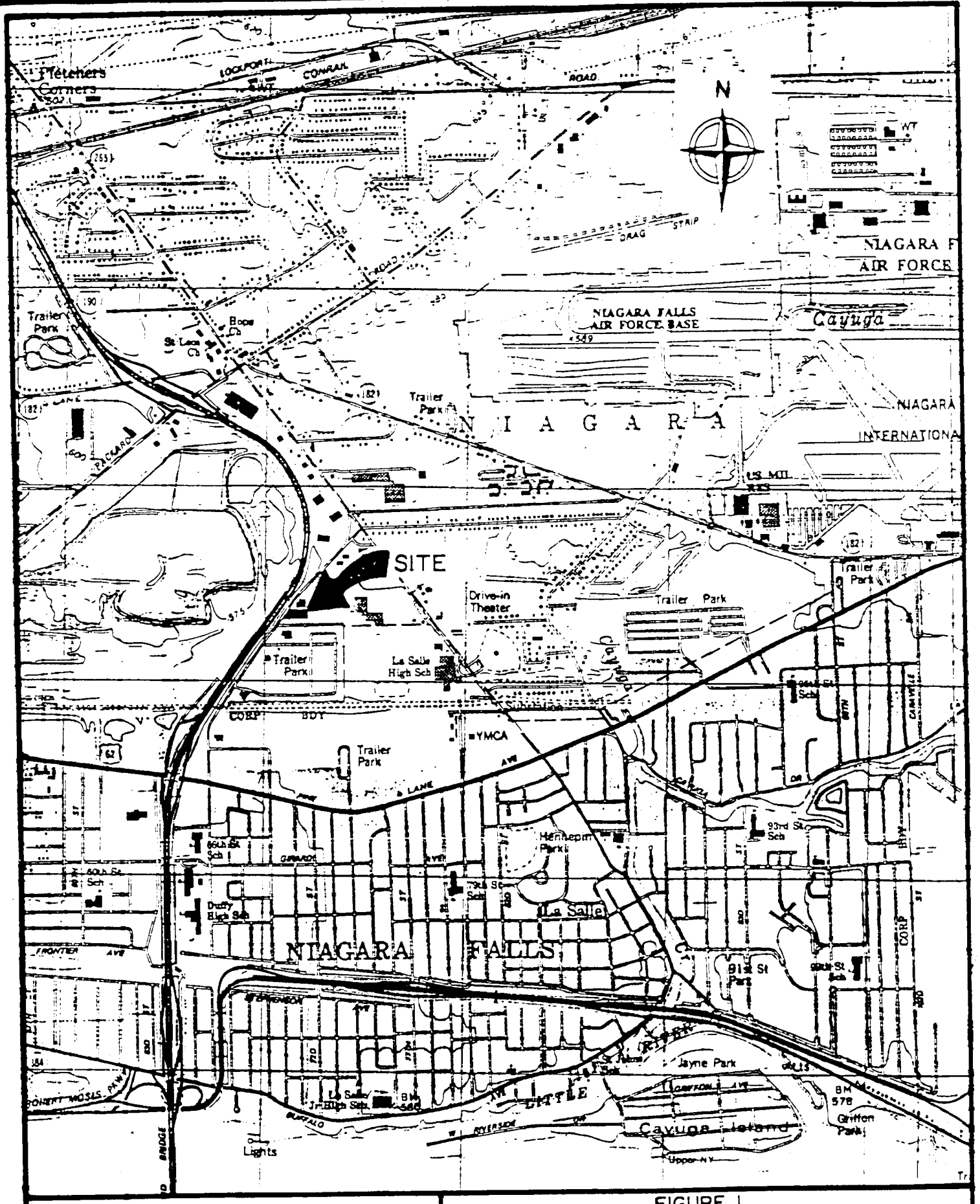


FIGURE 1

SITE LOCATION MAP

2000 0 2000

SCALE IN FEET

Modern Environtech

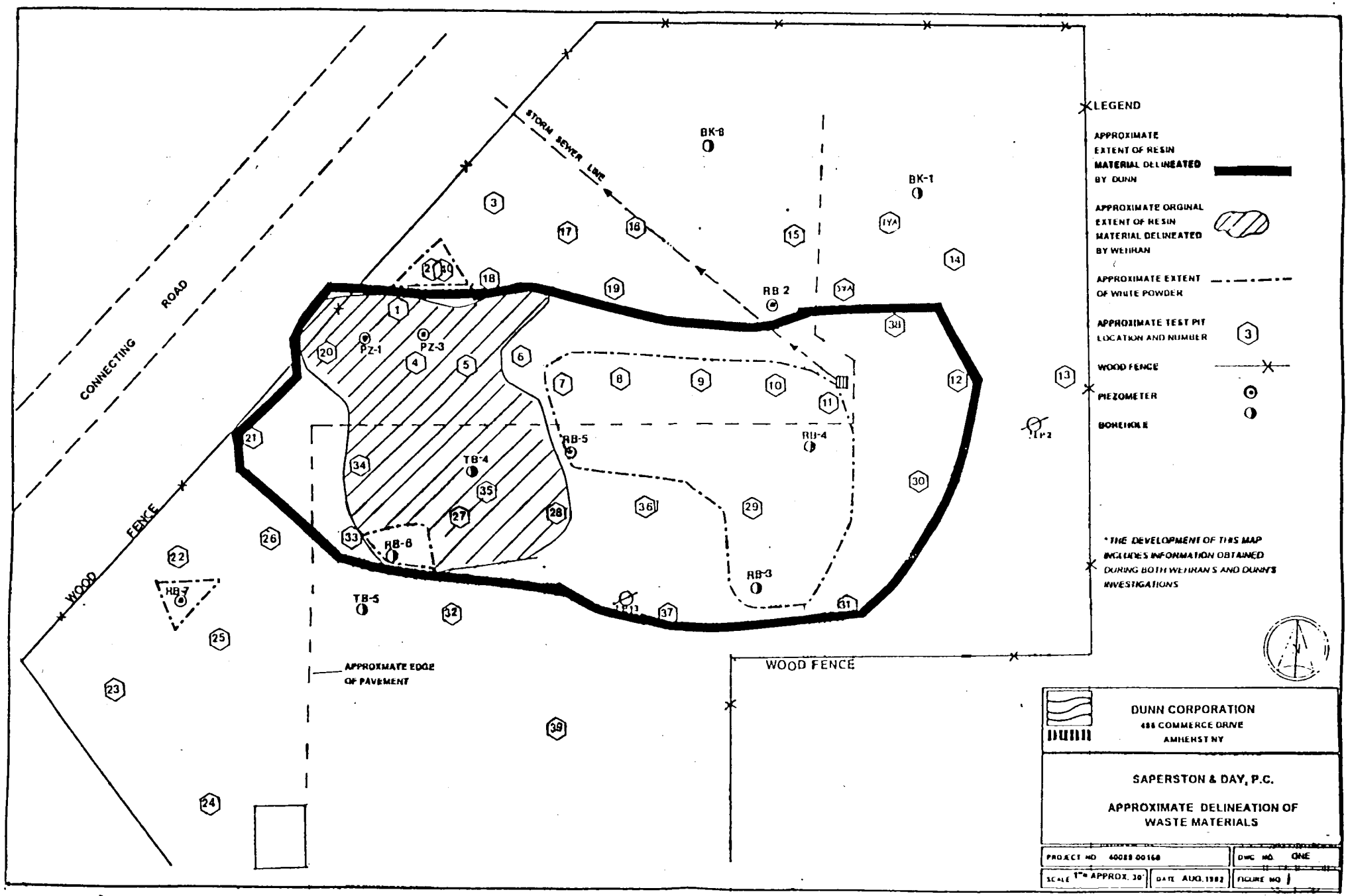

LEGEND
APPROXIMATE EXTENT OF RESIN MATERIAL DELINEATED BY DUNN
APPROXIMATE ORGINAL EXTENT OF RESIN MATERIAL DELINEATED BY WEHRAN
APPROXIMATE EXTENT OF WHITE POWDER
APPROXIMATE TEST PIT LOCATION AND NUMBER
WOOD FENCE
PIEZOMETER
BOREHOLE
* THE DEVELOPMENT OF THIS MAP INCLUDES INFORMATION OBTAINED DURING BOTH WEHRAN'S AND DUNN'S INVESTIGATIONS
STORM SEWER LINE
CONNECTING ROAD
WOOD FENCE
APPROXIMATE EDGE OF PAVEMENT
WOOD FENCE
BK-8
BK-1
RB 2
RB-5
RB-4
RB-3
RB-6
RB-7
TB-4
TB-5
PZ-1
PZ-3
TP2
TP3
DUNN CORPORATION
486 COMMERCE DRIVE
AMHERST NY
SAPERSTON & DAY, P.C.
APPROXIMATE DELINEATION OF WASTE MATERIALS
PROJECT NO 40088 00168
DWG NO ONE
SCALE 1"= APPROX. 30'
DATE AUG. 1982
FIGURE NO 1

TABLE 1

Saperston & Day, P.C.

Interm Remedial Measure – Interim Report

Waste Type and Occurence

WELL	GROUND ELEVATION	TOTAL DEPTH (FT)	TOP OF CLAY DEPTH (FT)	TOP OF CLAY ELEVATION	WASTE TYPE ENCOUNTERED	WASTE OCCURENCE CHARACTERISTICS "Waste occured as .... "
BK-1	577.20	19.10	4.00	573.20	NONE	NONE
PZ-1	576.51	8.00	5.50	571.01	RESINOUS	THIN BEDS AND POCKETS (0'-5.5')
PZ-2	NA	6.00	4.50	NA	RESINOUS	BED (4.0'-4.5')
PZ-3	576.64	6.00	5.00	571.64	RESINOUS	POCKETS AND BEDS (1.0'-4.0')
PZ-4	NA	6.00	4.00	NA	RESINOUS	MIXED, TRACE (1.5'-4.0')
PZ-5	NA	6.00	5.00	NA	RESINOUS	MIXED, TRACE (2.0'-4.0')
PZ-6	NA	6.00	4.00	NA	C+D, SLAG	FILL (1.0'-4.0')
RB-1	NA	4.00	NA	NA	C+D, SLAG	FILL (0.0'-3.4')
RB-2	576.10	6.00	5.00	571.10	C+D	FILL (0.0'-5.0')
RB-3	575.45	6.00	4.50	570.95	RESIN+WTPOWDER	MIXED IN POCKETS (1.0'-4.5')
RB-4	575.99	6.00	4.00	571.99	WTPDR,ASH,SLAG	FILL, MIXED,TRACE (0.0'-4.0')
RB-5	577.00	8.00	5.00	572.00	WTPOWDER, C+D	FILL, MIXED, TRACE (1.0'-5.0')
RB-6	576.86	9.00	8.00	568.86	WTPDR,RESINOUS	FILL, MIXED, RESIN BED (6'-8')
RB-7	578.36	8.00	7.00	571.36	RESINOUS	FILL, TRACE (3.5')
RB-8	577.25	8.00	6.00	571.25	RESIN,WTPOWDER	FILL, SURFACE,MIXED (0.0'-6.0')
TB-1	NA	6.00	6.00	NA	RESIN, C+D	FILL, RESIN (5.0')
TB-2	NA	6.00	NA	NA	RESIN	TRACE (3.5'-4.0')
TB-3	NA	6.00	4.00	NA	RESIN, C+D	TRACE (1.8'-4.0')
TB-4	577.14	8.00	NA	NA	CINDERS,RESIN	MIXED, TRACE (3.0'-6.0')
TB-5	576.62	6.00	5.00	571.62	CINDERS	FILL (0.5'-6.0')

NA – information is not available

Table 3

SAPERSTON & DAY, P.C.

INTERIM REMEDIAL MEASURE - INTERIM REPORT

SUMMARY OF DETECTED PARAMETERS IN SOIL/WASTE SAMPLES

		PIEZOMETER 1				PIEZOMETER 2		
PARAMETER	UNITS	0-2'	2-4'	4-6'	6-8'	0-2'	2-4'	4-6'
8270								
* N-nitrosodiphenylamine	ug/kg	4,560,000	154,000	6010	659	6790		71,900
Aniline	ug/kg	3,010,000		5030		2420		51,600
Benzothiazole	ug/kg	63,500,000	22,500,000	264,000	12,800	111,000	5,740,000	52,300
2-Mercaptobenzothiazole	ug/kg	312,000,000J	40,000,000J	951,000J	25,900J	133,000J	232,000,000J	2,810,000J
Phenothiazine	ug/kg	4,150,000		3120		4420		73,300
* 1,2,4-Trichlorobenzene	ug/kg							
* Benzo(a)anthracene	ug/kg							
* Chrysene	ug/kg							
* Benzo(b)fluoranthene	ug/kg							
* Benzo(k)fluoranthene	ug/kg							
* Benzo(a)pyrene	ug/kg							
* Benzo(g,h,i,)perylene	ug/kg							
8240								
* Acetone	ug/kg	*Location not analyzed for 8240*				*Location not analyzed for 8240*		
* 2-Butanone (MEK)	ug/kg							
* Trichloroethene	ug/kg							
* Benzene	ug/kg							
* Toluene	ug/kg							
* Chlorobenzene	ug/kg							
* Ethylbenzene	ug/kg							
* Styrene	ug/kg							
* Total Xylene (o,m,p)	ug/kg							
* Vinyl Chloride	ug/kg							
* Chloroethane	ug/kg							
* Carbon Disulfide	ug/kg							
* 1,1-Dichloroethene	ug/kg							
* trans-1,2-Dichloroethene	ug/kg							
cis-1,2-Dichloroethene	ug/kg							
* 1,2-Dichloroethane	ug/kg							

Notes: Blanks indicate parameter was not detected above the Contract Required Detection Limit (CRDL)

* = Compounds on TCL

** = Sample does not ignite for BTU analysis.

Table 3

SAPERSTON & DAY, P.C.

INTERIM REMEDIAL MEASURE - INTERIM REPORT

SUMMARY OF DETECTED PARAMETERS IN SOIL/WASTE SAMPLES

		PIEZOMETER 1				PIEZOMETER 2		
PARAMETER	UNITS	0-2'	2-4'	4-6'	6-8'	0-2'	2-4'	4-6'
INORGANICS								
Aluminum	ug/g	*Location not analyzed for Inorganics*				*Location not analyzed for Inorganics*		
Arsenic	ug/g							
Barium	ug/g							
Calcium	ug/g							
Chromium	ug/g							
Cobalt	ug/g							
Copper	ug/g							
Iron	ug/g							
Lead	ug/g							
Magnesium	ug/g							
Manganese	ug/g							
Nickel	ug/g							
Potassium	ug/g							
Silver	ug/g							
Sodium	ug/g							
Vanadium	ug/g							
Zinc	ug/g							
OTHER PARAMETERS								
Ash	%	1.87	64.94	72.38	84.96	51.43	52.7	75.28
Bromine, Total	ppm	1U	1U	1U	1U	1U		
BTU		9373	3989	**	**	**	**	**
Chlorine, Total	ppm	56U	53U	48U	46U	176	48	47
Cyanide, Total	ug/g	0.951U	0.936U	0.949U	0.962U	0.973U	0.861U	0.965U
Fluorine, Total	ppm	8U	8U	15	5	45	34	15
Ignitability	deg. C	>100	>100	>100	>100	>100	>100	>100
Moisture	%	10.7	15.6	9.2	14.0	0.9	19.7	15.0
Phenol, Total	ug/g	0.111	0.412	0.071	0.112	0.065	2.46	0.0752
Sulfur	%	6.64	9.92	0.33	0.31	0.54	0.38	0.45

Notes: Blanks indicate parameter was not detected above the Contract Required Detection Limit (CRDL)

* = Compounds on TCL

** = Sample does not ignite for BTU analysis.

Table 3

SAPERSTON & DAY, P.C.

INTERIM REMEDIAL MEASURE - INTERIM REPORT

SUMMARY OF DETECTED PARAMETERS IN SOIL/WASTE SAMPLES

		RANDOM BORING 5				RANDOM BORING 6				
PARAMETER	UNITS	0-2'	2-4'	4-6'	6-8'	0-2'	2-4'	4-6'	6-7'	7-9'
8270										
* N-nitrosodiphenylamine	ug/kg		4190	6450						
Aniline	ug/kg		986	1140	44,300			1460	18,800,000	
Benzothiazole	ug/kg		5370	15,200	1,280,000			73,900	37,800,000	6590
2-Mercaptobenzothiazole	ug/kg		395,000 J	753,000 J	246,000	75,900 J		360,000J	94,400,000J	62,600
Phenothiazine	ug/kg		2840	5150	182,000			3720	22,600,000	
* 1,2,4-Trichlorobenzene	ug/kg	513		752						
* Benzo(a)anthracene	ug/kg	686		626						
* Chrysene	ug/kg	500		500						
* Benzo(b)fluoranthene	ug/kg	619		539						
* Benzo(k)fluoranthene	ug/kg	972		480						
* Benzo(a)pyrene	ug/kg	739								
* Benzo(g,h,i,)perylene	ug/kg	386								
8240										
* Acetone	ug/kg	*Depth Intervals not analyzed for 8240*			237	*Location not analyzed for 8240*				
* 2-Butanone (MEK)	ug/kg				100					
* Trichloroethene	ug/kg				17.3					
* Benzene	ug/kg									
* Toluene	ug/kg				64.8					
* Chlorobenzene	ug/kg									
* Ethylbenzene	ug/kg				23.2					
* Styrene	ug/kg				37.0					
* Total Xylene (o,m,p)	ug/kg									
* Vinyl Chloride	ug/kg									
* Chloroethane	ug/kg				14.2					
* Carbon Disulfide	ug/kg				10.8					
* 1,1-Dichloroethene	ug/kg				102					
* trans-1,2-Dichloroethene	ug/kg				34.0					
cis-1,2-Dichloroethene	ug/kg				28.6					
* 1,2-Dichloroethane	ug/kg				6.75					

Blanks indicate parameter was not detected above the Contract Required Detection Limit (CRDL)

* = Compounds on TCL

** = Sample does not ignite for BTU analysis.

Table 3

SAPERSTON & DAY, P.C.

INTERIM REMEDIAL MEASURE - INTERIM REPORT

SUMMARY OF DETECTED PARAMETERS IN SOIL/WASTE SAMPLES

		RANDOM BORING 5				RANDOM BORING 6				
PARAMETER	UNITS	0-2'	2-4'	4-6'	6-8'	0-2'	2-4'	4-6'	6-7'	7-9'
INORGANICS										
Aluminum	ug/g	10,700	14,300	965	16,400		13,600	3690	5260	10,800
Arsenic	ug/g	2.93	6.36	0.946	3.46		5.69	5.46	2.75	5.45
Barium	ug/g	104	114	3.10	131		136	24.2	17.5	97.2
Calcium	ug/g	164,000	23,100	23,800	42,200		42,500	49,700	22,800	46,400
Chromium	ug/g	76.2	29.6	7.04	36.5		9.33	13.8	26.0	23.0
Cobalt	ug/g		24.0		8.43		7.06	6.40		6.44
Copper	ug/g	54.3	26.0		26.6		10.8	40.8	212	32.3
Iron	ug/g	7440	32,100	23,700	26,400		10,700	19,200	8060	32,300
Lead	ug/g	55.9	35.4	5.37	29.8		24.0	19.30	10.3	18.5
Magnesium	ug/g	80,400	12,200	4120	8340		9030	9110	9800	8850
Manganese	ug/g	543	1280	13.7	360		671	337	133	338
Nickel	ug/g	26.7	28.2		32.4		7.08	8.97	19.2	23.0
Potassium	ug/g	1120	5670	97.1	4160		2.48	1750	818	2340
Silver	ug/g	4.85	2.50		2.23		289	2.50		2.52
Sodium	ug/g	220	2040	4670	1170		25.8	455	1310	266
Vanadium	ug/g	11.4	69.7	17.9	31.0		10.4	18.8	9.09	23.7
Zinc	ug/g	324	84.9	10.2	130		10.4	59.5	98.1	99.0
OTHER PARAMETERS										
Ash	%	68.21	84.13	75.29	70.36		81.13	78.29	4.71	82.43
Bromine, Total	ppm	9	148	0.01U	0.01U		1U	1U	1U	9
BTU		**	**	**	**		**	**	8269	**
Chlorine, Total	ppm	267	0.35 %	0.58 %	0.71 %		50U	55U	54U	43U
Cyanide, Total	ug/g	0.984U	0.988U	0.994U	0.976U	0.992U	0.956U	0.931U	0.998U	0.958U
Fluorine, Total	ppm	22	21	28	15		18	30	22	11
Ignitability	deg. C	>100	>100	>100	>100		>100	>100	>100	>100
Moisture	%	12.9	17.5	17.3	20.5		17.2	9.0	19.1	22.2
Phenol, Total	ug/g	0.377	0.801	2.82	1.86	0.067U	0.083U	1.68	3.75	0.068U
Sulfur	%	0.20	0.51	0.23	0.83		1.53	2.59	30.49	0.25

Blanks indicate parameter was not detected above the Contract Required Detection Limit (CRDL)

* = Compounds on TCL

** = Sample does not ignite for BTU analysis.

APPENDIX

D

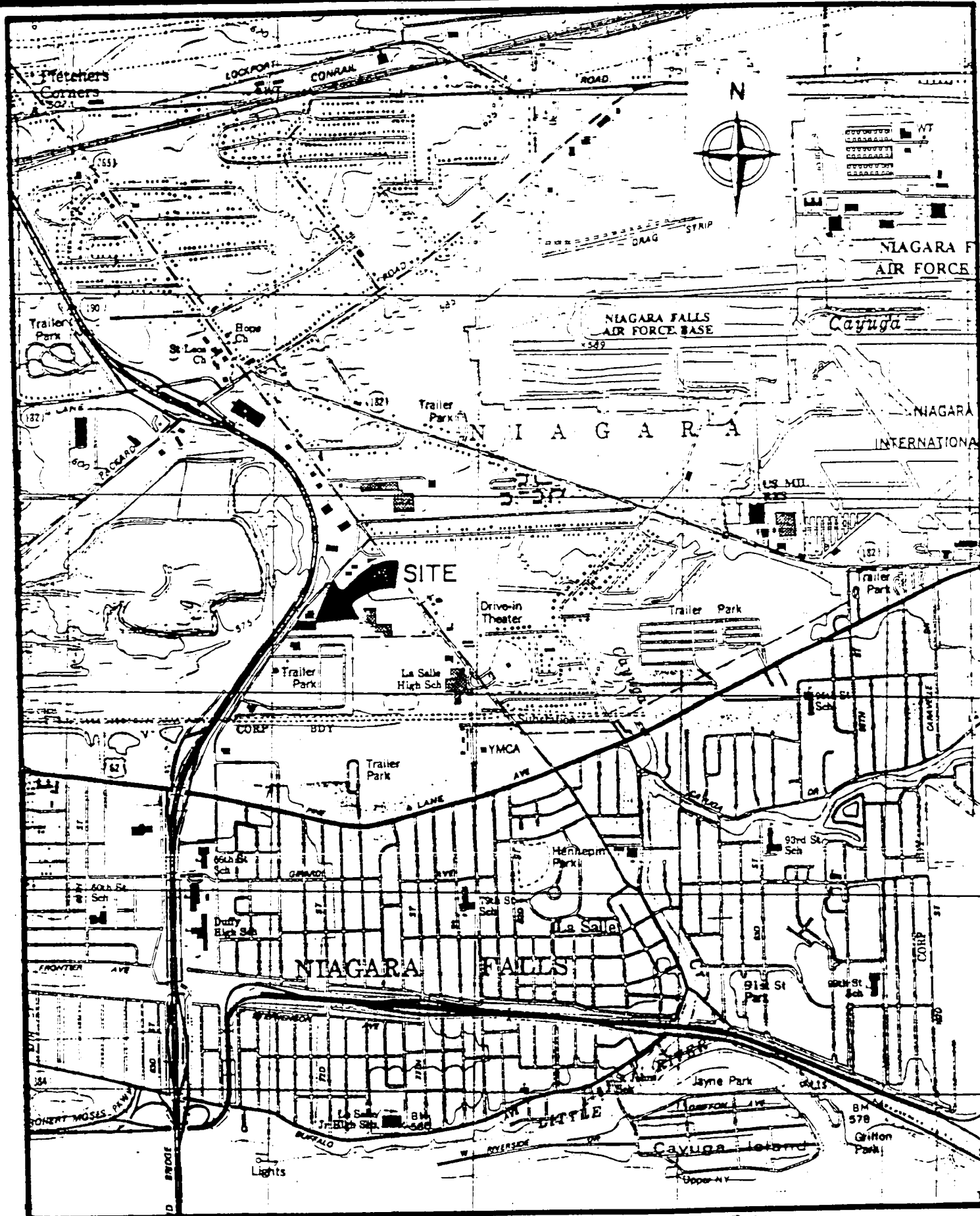


FIGURE 1

SITE LOCATION MAP

2000 0 2000

SCALE IN FEET

Modern Environtech

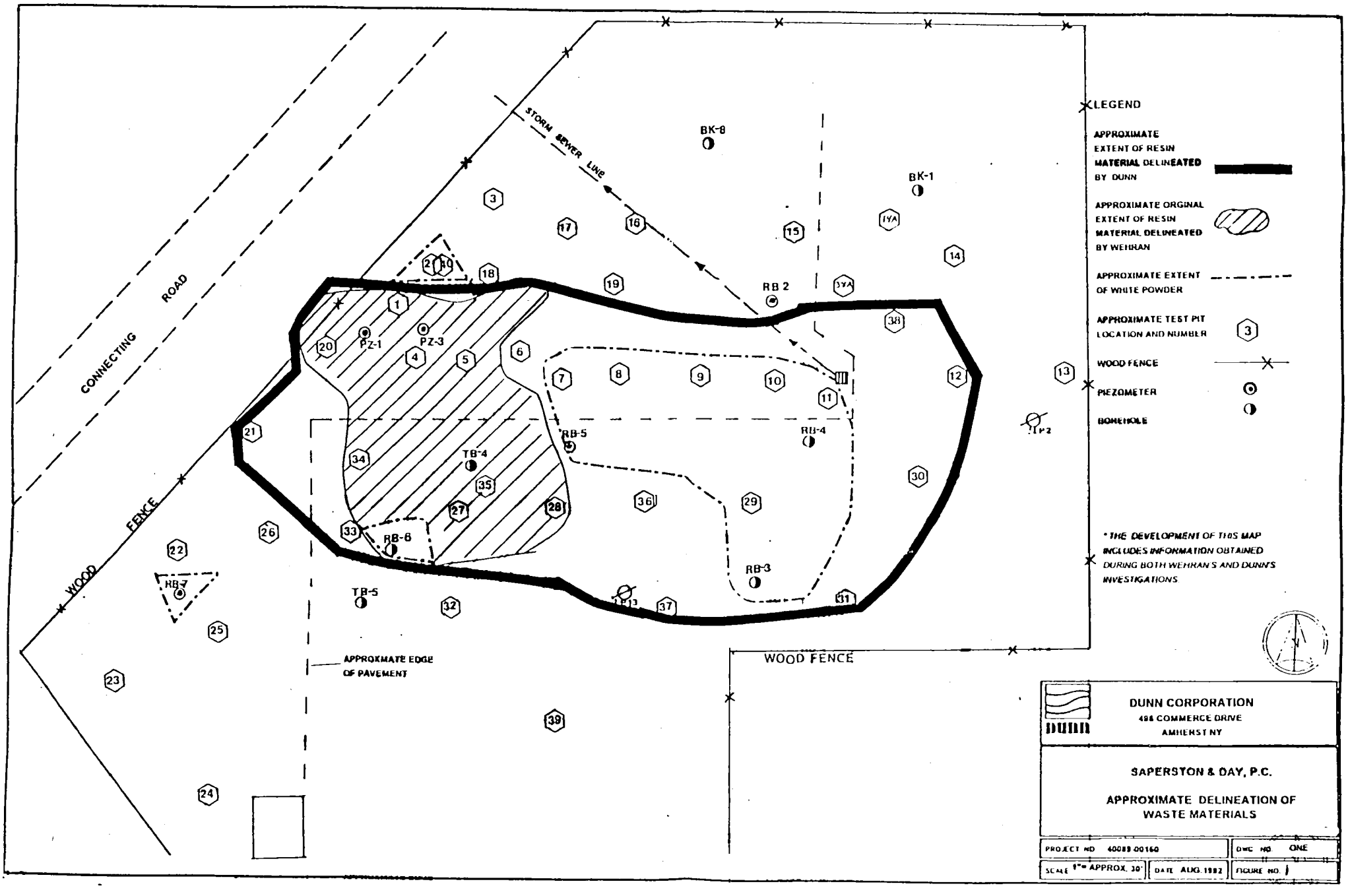

LEGEND
APPROXIMATE EXTENT OF RESIN MATERIAL DELINEATED BY DUNN
APPROXIMATE ORGINAL EXTENT OF RESIN MATERIAL DELINEATED BY WEHRAN
APPROXIMATE EXTENT OF WHITE POWDER
APPROXIMATE TEST PIT LOCATION AND NUMBER
WOOD FENCE
PIEZOMETER
BOREHOLE
* THE DEVELOPMENT OF THIS MAP INCLUDES INFORMATION OBTAINED DURING BOTH WEHRAN'S AND DUNN'S INVESTIGATIONS
STORM SEWER LINE
CONNECTING ROAD
WOOD FENCE
APPROXIMATE EDGE OF PAVEMENT
WOOD FENCE
BK-8
BK-1
RB 2
RB-5
RB-4
RB-3
RB-6
RB-7
TB-4
TB-5
PZ-1
PZ-3
TP2
TP3
DUNN CORPORATION
498 COMMERCE DRIVE
AMHERST NY
SAPERSTON & DAY, P.C.
APPROXIMATE DELINEATION OF WASTE MATERIALS
PROJECT NO 40089.00160
DWG NO ONE
SCALE 1"= APPROX. 30'
DATE AUG. 1982
FIGURE NO. 1

Table 1
Saperston & Day, P.C.
Interim Remedial Measure - Supplemental Investigation Report
Sample Analysis and Location

ANALYSIS REQUIRED	TEST PIT LOCATION	SAMPLE NUMBER	MATRIX/SOURCE
Target Compound List (TCL) BNAs (Method 8270) and the five Indicator Compounds*	TP-4 TP-5 TP-32 TP-40 TP-4	TP-4SB TP-5SR TP-32S TP-40SB TP-4SA	SOIL SOIL SOIL SOIL SOIL
Full RCRA Waste Characterization	TP-9A TP-9A TP-1A TP-1A	TP9A-RSSOIL TP9A-RESIN TP1A-WP TP1A-WPSOIL	SOIL BELOW RESIN RESIN WHITE POWDER (WP) SOIL BELOW WP
Full Target Compound List TCL VOAs,TCL BNAs, TCL Pest/ PCBs,TAL Metals ,Total Cyanide and the five Indicator Compounds	TP-40	TP-40S	SOIL BELOW WP
Full Target Compound List TCL VOAs,TCL BNAs, TCL Pest/ PCBs,TAL Metals ,Total Cyanide and the five Indicator Compounds	TP-2 TP-4R	TP-2WPA TP-4R	WHITE POWDER RESIN
Target Compound List BNAs (Method 8270) and the five Indicator Compounds on the TCLP Extract	TP-9A TP-1A	TP9A-RN TP1A-WPS	SOIL BELOW RESIN SOIL BELOW WP
Full Target Compound List TCL VOAs,TCL BNAs, TCL Pest/ PCBs,TAL Metals, Total Cyanide and the five Indicator Compounds	PZ-1	PZ-1 & PZ-3	WATER

*The five indicator compounds are : aniline,diphenylamine,2-mercaptobenzothiazole, benzothiazole and phenothiazine.

Table 2

Saperston & Day, P.C.

Interim Remedial Measure - Supplemental Investigation Report

Waste Type and Occurence

TEST PIT LOCATION	TOTAL DEPTH (FEET)	TOP OF CLAY DEPTH (FEET)	WASTE TYPE ENCOUNTERED	WASTE OCCURENCE (FEET)	REMARKS
TP-1	3.0	3.0	YELLOW RESIN	0.3-3.0	
TP-2	5.0	5.0	WHITE POWDER	2.0-5.0	
TP-3	5.0	4.0	NONE	-	
TP-4	4.0	3.0	YELLOW RESIN	1.0-3.0	
TP-5	5.0	5.0	YELLOW RESIN	2.0-2.5	Resin not continous
TP-6	4.0	NA	NONE TO 4 FEET	-	TP Caved in
TP-7	5.6	4.7	YELLOW RESIN	2.5	Resin & fill mixed
			WHITE POWDER	2.5-3.5	
TP-8	5.5	5.0	WHITE POWDER	2.5-4.5	
			YELLOW RESIN	4.5-5.0	
TP-9	5.0	4.5	WHITE POWDER	2.0-3.5	
			YELLOW RESIN	3.5-4.5	
TP-10	3.0	-	WHITE POWDER	2.5-3.0	Resin to hard
			YELLOW RESIN	3.0	to complete test pit
TP-11	4.5	4.0	YELLOW RESIN	2.3-3.0	
TP-12	4.0	3.0	YELLOW RESIN	2.0-2.5	
TP-13	3.0	2.0	NONE	-	
TP-14	3.5	2.5	NONE	-	
TP-14A	5.0	3.0	NONE	-	
TP-15	3.5	3.0	NONE	-	
TP-16	3.0	NA	NONE AT 3.0 FEET	-	Storm sewer at 3 feet
TP-17	4.5	4.0	NONE	-	
TP-18	6.5	5.5	NONE	-	
TP-19	6.0	6.0	NONE	-	
TP-20	5.0	5.0	YELLOW RESIN	3.0-4.0	Resin not in layer
TP-21	7.0	7.0	YELLOW RESIN	6.0-7.0	
TP-22	7.5	7.0	NONE	-	
TP-23	7.8	7.0	NONE	-	
TP-24	8.0	7.0	NONE	-	
TP-25	8.0	7.5	NONE	-	
TP-26	7.0	6.5	NONE	-	
TP-27	6.0	5.7	YELLOW RESIN	4.3-5.7	
TP-28	5.0	4.0	YELLOW RESIN	3.0-4.0	
TP-29	4.0	4.0	WHITE POWDER	3.5-4.0	WP in a pocket
TP-30	4.0	4.0	YELLOW RESIN	1.0-3.5	Resin & fill mixed
TP-31	3.5	3.5	YELLOW RESIN	3.0-3.5	Resin & fill mixed
TP-32	6.0	3.0	NONE	-	
TP-33	7.5	6.0	YELLOW RESIN	5.5-6.0	Trace resin 5.5-6.0
TP-34	8.0	7.0	YELLOW RESIN	4.7-7.0	
TP-35	6.5	5.6	YELLOW RESIN	2.0-3.0,5.5	Trace resin at 5.5'
TP-36	5.0	5.0	YELLOW RESIN	3.0-5.0	
TP-37	5.0	4.0	YELLOW RESIN	1.0-4.0	Trace resin in fill 1'-4'
TP-38	4.0	4.0	YELLOW RESIN	3.4-4.0	
TP-38A	5.0	3.5	NONE	-	
TP-39	4.0	2.0	NONE	-	
TP-40	5.0	5.0	WHITE POWDER	2.0-5.0	

TABLE 3
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF VALIDATED ANALYTICAL DATA
RESIN MATERIAL (TP-4R)
(All units in ug/kg - ppb, unless noted otherwise)

PARAMETER/COMPOUND	CONCENTRATION DETECTED
Total Volatile TICs	710 J
Diethylphthalate	52,000 J
N-Nitrosodiphenylamine	6,000,000
Carbazole	29,000 J
Benzothiazole	130,000,000
2-Mercaptobenzothiazole	620,000,000
Aniline	2,600,000
Diphenylamine	3,400,000
Total Semi-Volatile TICs	185,000 J mg/kg
Aluminum	8,470 mg/kg
Arsenic	2.2 B mg/kg
Barium	53.0 mg/kg
Calcium	5,650 mg/kg
Chromium	12.2 mg/kg
Copper	10.4 mg/kg
Iron	11,900 mg/kg
Lead	13.4 mg/kg
Magnesium	3,490 mg/kg
Manganese	237 mg/kg
Mercury	0.06 B mg/kg
Nickel	14.9 mg/kg
Potassium	1,390 mg/kg
Sodium	1,460 mg/kg
Vanadium	21.6 mg/kg
Zinc	71.6 mg/kg

TABLE 4
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
RCRA WASTE CHARACTERIZATION - TCLP
RESIN MATERIAL (IRM-TP9A-RESIN)

PARAMETER	RESULTS (mg/l)	REGULATORY LIMIT (mg/l)
Lindane	D	0.40
Methoxyclor	D	10.0
Barium	1.2	100.0
Lead	0.10	5.0
Selenium	0.14	1.0
Ignitability	>200 F	
Corrosivity	Non-Corros	
pH	7.8	
Reactivity		
cyanide	*	
sulfide	ND	
Cyanide, Total w/ distill.	ND	

* A total cyanide analysis was performed on this sample. The concentration obtained was less than 100 mg/kg. This is well below the reactive cyanide regulatory level of 250 mg/kg. A reactive cyanide analysis was not necessary.

TABLE 5
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
RCRA WASTE CHARACTERIZATION - TCLP
SOIL BELOW RESIN MATERIAL (IRM-TP9A-RSSOIL)

PARAMETER	RESULTS (mg/l)	REGULATORY LIMIT (mg/l)
Vinyl chloride	0.011	0.20
Methoxyclor	D	10.0
Barium	2.6	100.0
Ignitability	>200 F	
Corrosivity	Non-Corros	
pH	8.0	
Reactivity		
cyanide	*	
sulfide	ND	
Cyanide, Total w/ distill	ND	

* A total cyanide analysis was performed on this sample. The concentration obtained was less than 100 mg/kg. This is well below the reactive cyanide regulatory level of 250 mg/kg. A reactive cyanide analysis was not necessary.

TABLE 6
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
LEACHING POTENTIAL -TCLP
SOIL BELOW RESIN MATERIAL (IRM-TP9A-RN)
(All units in ug/l - ppb)

PARAMETER/COMPOUND	CONCENTRATION DETECTED
N-Nitrosodiphenylamine	160
Aniline	ND
Diphenylamine	84
2-Mercaptobenzothiazole	6,400
Benzothiazole	280
Phenothiazine	ND

TABLE 7
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF VALIDATED ANALYTICAL DATA
WHITE POWDER MATERIAL (TP-2WPA)
(All units in ug/kg - ppb, unless noted otherwise)

PARAMETER/COMPOUND	CONCENTRATION DETECTED
Chloromethane	12,000 J
Bromomethane	12,000 J
Vinyl chloride	12,000,000
Chloroethane	14,000 J
Methylene chloride	630,000 J
1,1-Dichloroethane	160,000
1,2-Dichloroethene (Total)	20,000
1,2-Dichloroethane	8,400 J
2-Butanone (MEK)	24,000 J
Total Volatile TICs	1,200,000 J
N-Nitrosodiphenylamine	17,000 J
Di-n-butylphthalate	13,000 J
Bis (2-ethylhexyl) phthalate	28,000 J
Benzothiazole	140,000
2-Mercaptobenzothiazole	320,000
Total Semi-Volatile TICs	327,000
4,4' - DDT	19 JP
Aluminum	373 mg/kg
Calcium	3,000 mg/kg
Copper	5.3 B mg/kg
Iron	835 mg/kg
Lead	5.5 mg/kg
Magnesium	883 B mg/kg
Manganese	32.2 mg/kg
Mercury	0.09 mg/kg
Potassium	178 B mg/kg
Sodium	228 B mg/kg
Zinc	13.4 mg/kg

TABLE 8
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
RCRA WASTE CHARACTERIZATION - TCLP
WHITE POWDER MATERIAL (IRM-TP1A-WP)

PARAMETER	RESULTS (mg/l)	REGULATORY LIMIT (mg/l)
Vinyl chloride	.180	0.20
Lindane	D	0.40
Barium	0.99	100.0
Lead	0.20	5.0
Selenium	0.14	1.0
Ignitability	>200 F	
Corrosivity	Non-Corros	
pH	8.1	
Reactivity		
cyanide	*	
sulfide	ND	
Cyanide, Total w/ distill	ND	

* A total cyanide analysis was performed on this sample. The concentration obtained was less than 100 mg/kg. This is well below the reactive cyanide regulatory level of 250 mg/kg. A reactive cyanide analysis was not necessary.

TABLE 9
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
SOIL SAMPLE BELOW WHITE POWDER MATERIAL (TP-40S)
(All units in ug/kg - ppb, unless noted otherwise)

PARAMETER/COMPOUND	CONCENTRATION DETECTED
1,1-Dichloroethane	7
Trans 1,2-Dichloroethene	11
Cis 1,2-Dichloroethene	8
Trichloroethene	45
Acetone	52*
Bis-(2-ethylhexyl) phthalate	1,800
2-Mercaptobenzothiazole	2,900
Delta-BHC	240
Aluminum	21,100 mg/kg
Barium	120 mg/kg
Calcium	3,790 mg/kg
Chromium	31.9 mg/kg
Cobalt	27.6 mg/kg
Copper	25.7 mg/kg
Iron	45,600 mg/kg
Lead	20.6 mg/kg
Magnesium	10,000 mg/kg
Manganese	2,040 mg/kg
Nickel	45.8 mg/kg
Potassium	2,890 mg/kg
Sodium	497 mg/kg
Vanadium	43.1 mg/kg
Zinc	90.6 mg/kg

* Acetone is a possible laboratory artifact

TABLE 10
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
RCRA WASTE CHARACTERIZATION - TCLP
SOIL BELOW WHITE POWDER MATERIAL (IRM-TP1A-WPSOIL)

PARAMETER	RESULTS (mg/l)	REGULATORY LIMIT (mg/l)
Vinyl chloride	D	0.20
Barium	2.80	100.0
Lead	0.11	5.0
Ignitability	>200 F	
Corrosivity	Non-Corros	
pH	8.0	
Reactivity		
cyanide	*	
sulfide	ND	
Cyanide, Total w/ distill	ND	

* A total cyanide analysis was performed on this sample. The concentration obtained was less than 100 mg/kg. This is well below the reactive cyanide regulatory level of 250 mg/kg. A reactive cyanide analysis was not necessary.

TABLE 11
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
LEACHING POTENTIAL -TCLP
SOIL BELOW WHITE POWDER MATERIAL (IRM-TP1A-WPS)
(All units in ug/l - ppb)

PARAMETER/COMPOUND	CONCENTRATION DETECTED
Aniline	ND
Diphenylamine	ND
2-Mercaptobenzothiazole	ND
Benzothiazole	ND
Phenothiazine	ND

TABLE 12
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
CONFIRMATORY SOIL SAMPLE (TP-4SB)
(All units ug/kg - ppb)

PARAMETER/COMPOUND	CONCENTRATION DETECTED
Aniline	1,500
Diphenylamine	ND
2-Mercaptobenzothiazole	880,000
Benzothiazole	3,400
Phenothiazine	ND

TABLE 13
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
CONFIRMATORY SOIL SAMPLE (TP-5SR)
(All units in ug/kg - ppb)

PARAMETER/COMPOUND	CONCENTRATION DETECTED
Phenanthrene	1,500
Fluoranthene	3,100
Pyrene	3,000
Benzo (a) anthracene	1,700
Chrysene	1,600
Benzo (b) fluoranthene	1,900
Benzo (a) pyrene	1,700
Benzo- (g,h,i,) perlyene	900
Aniline	ND
Diphenylamine	4,300
2-Mercaptobenzothiazole	11,000
Benzothiazole	6,500
Phenothiazine	ND

TABLE 14
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
CONFIRMATORY SOIL SAMPLE (TP-32S)
(All units in ug/kg - ppb)

PARAMETER/COMPOUND	CONCENTRATION DETECTED

No Target Compound List (TCL) Semi-Organic Compounds, including the five indicator compounds, were detected above the PQL (830 ug/kg).

TABLE 15
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
CONFIRMATORY SOIL SAMPLE (TP-40SB)
(All units in ug/kg - ppb)

PARAMETER/COMPOUND	CONCENTRATION DETECTED

No Target Compound List (TCL) Semi-Volatile Organic Compounds, including the five indictor compounds, were deteced above the PQL (830 ug/kg).

TABLE 16
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
CONFIRMATORY SOIL SAMPLE (TP-4SA)
(All units in ug/kg - ppb)

PARAMETER/COMPOUND	CONCENTRATION DETECTED
Aniline	ND
Diphenylamine	ND
2-Mercaptobenzothiazole	520,000
Benzothiazole	870
Phenothiazine	ND

TABLE 17
SAPERSTON & DAY, P.C.
IRM - CONNECTING ROAD SITE
SUMMARY TABLE OF ANALYTICAL DATA
GROUNDWATER SAMPLE (PZ-1)
(All units in ug/l - ppb, unless noted otherwise)

PARAMETER/COMPOUND	CONCENTRATION DETECTED
Chlorobenzene	7
Acetone	14*
Xylene (Total)	15
Aniline	1,020
Diphenylamine	15
2-Mercaptobenzothiazole	15,000
Benzothiazole	13,800
Phenothiazine	68
Aluminum	1.6 mg/l
Antimony	0.17 mg/l
Barium	0.12 mg/l
Calcium	337 mg/l
Copper	0.062 mg/l
Iron	2.1 mg/l
Lead	0.011 mg/l
Magnesium	82.2 mg/l
Manganese	1.9 mg/l
Potassium	32.2 mg/l
Sodium	426 mg/l
Zinc	0.061 mg/l

* Acetone is a possible laboratory artifact

TABLE 18

EXPLANATION OF QUALIFIERS/FOOTNOTES FOR ORGANIC COMPOUND ANALYTICAL RESULTS

J - Indicates that the compound was analyzed for and determined to be present in the sample. The mass spectrum of the compound meets the identification criteria of the method. The concentration listed is an estimated value which is less than the specified quantitation limit but is greater than zero.

D - A result with a "D" means that the result was detected below the Practical Quantitation Limit (PQL), but above the Method Detection Limit (MDL).

B - The analyte is found in the blanks as well as the sample. It indicates possible sample contamination and warns the data user to use caution when applying the results of this analyte.

ND - Not Detected at or above the PQL.

TABLE 19

EXPLANATION OF QUALIFIERS FOR INORGANIC ANALYTE RESULTS

B - Indicates analyte result between Instrument Detection Limit (IDL) and the Contract Required Detection Limit (CRDL).

U- Indicates analyte result less than the IDL.

APPENDIX
E

Mr. Friedman

NIAGARA COUNTY HEALTH DEPARTMENT

MEMORANDUM

DATE: May 27, 1968

TO: Ernest R. Gedeon, Chief, Air Pollution Control

FROM: Michael Popovici, Senior Public Health Sanitarian

SUBJECT: Kozdranski Chemical and Solid Waste Dump Site
1865 - 3rd Ave., Town of Niagara

This site was first brought to our attention by Mr. Collier Biehl, 215 - 58th Street, Niagara Falls, N. Y.

On May 9, 1968 Mr. Clark of this department made an investigation of this site with Mr. Biehl. Mr. Biehl stated that Goodyear Chemical Co. uses a blue truck to dump a yellow putty-like chemical residue on an earth dump ground located between Kozdranski and McClendon Paving Co. It was raining on this date and Mr. Clark noted the yellow material was washed off by the rain into a ditch, which eventually flows into Tuscarora Creek. Mr. Biehl stated that the Tuscarora Creek flows about 450 feet along the side of his property at 1566 Tuscarora Rd. Mr. Biehl claims that the offensive chemical odors from this residue is deteriorating the creek and the value of his property. All of the above is a copy of the report submitted by Mr. Clark.

Upon notification of this condition by Mr. Clark, I had Mr. Caggiano make a follow-up inspection. Mr. Caggiano corroborated Mr. Clark's report. I then had Mr. Maida inquire at Goodyear as to their dumping chemical waste on the Kozdranski property. Mr. Smith and Mr. LeCain, Goodyear personnel, explained to Mr. Maida that they had been given permission by Mr. Kozdranski to dump on this site. Mr. Smith stated that this product was a tar residue. Mr. LeCain requested a week's time to check into the problem and determine whether it was Goodyear material causing the problem, and if so, they would take the necessary steps to stop dumping at this location. Goodyear is not dumping residue material at this site any longer.

A letter was sent to Mr. Kozdranski on May 17, 1968 directing him to cease any further dumping at 1865 - 3rd Ave., Town of Niagara, until he has first obtained the required permit to provide this type of service. Furthermore, all industrial waste presently accumulated on the surface of the ground must be removed and buried at an approved dumping site within 10 days. A copy of Chapter IV of the Niagara County Sanitary Code was sent with this letter.

I called Mr. Kozdranski on May 24, 1968 to check on what progress he had made. Mr. Kozdranski stated he had done nothing at this time because of wet conditions, but he planned to ~~dam~~ Dam off the ditch to stop flow of residue from his property into ditch. Also, he must wait for this material to dry out before he attempts to do anything with it.

On May 27, 1968 Mr. Caggiano made a reinspection of the site at 12:30 P.M. He stated that a small dam had been built across the mouth of the water outlet, blocking off this pool from the ditch, but that dam was not wide enough or high enough to contain any large amount of water build-up from a heavy rain. Nothing else has been done.

MP:Z

The Goodyear Tire & Rubber Company

(A CORPORATION)

Niagara Falls Plant

5408 BAKER AVENUE
NIAGARA FALLS, NEW YORK 14302

2837682

May 28, 1968

W S Kozdranski Co Inc.
1865 - 3rd Avenue
Niagara Falls, New York

Attention: Walter Kozdranski

Dear Walter:

You have asked John Kuca to supply you with an analysis of the heel tars which are being dumped by our Dempster Dumpster on your property on Connecting Road.

The analysis is as follows:

Aromatic Amines	1%
Aromatic Hydrocarbon	1%
Aromatic Thiazoles	60 to 80%
Sulfur (free)	20 to 30%
Inorganic Sulfur Compounds	2 to 5%

N.B. Mixture melts at about 150°C.
When this mixutre is solid state
less than 2% is water extractable.

Yours very truly,

Manager, Purchasing

R. H. LeCain
mrp

cc: John Kuca

June 5, 1968

Mr. Gedeon

Mr. Friedman

Disposal of Chemical and Solid Waste
Goodyear Tire and Rubber Company

I am returning herewith the letter from Mr. Walter S. Kozdranski, dated May 25, 1968, which you indicated should be filed. Before filing, I think we should determine what Goodyear will do with these wastes.

WMF/cs
Attachment

The Goodyear Tire & Rubber Company

(A CORPORATION)
P. O. BOX 460
NIAGARA FALLS, NEW YORK 14302 - 0460

PHONE (716) 236-2600

May 27, 1988

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

New York State
Department of Environmental Conservation
Attn: Ms. Francine Gallego, Engineer
600 Delaware Avenue
Buffalo, New York 14202-1073

Dear Ms. Gallego:

The following answers are provided below as requested in your letter of May 4, 1988 which was received May 9, 1988.

Question 1:) The Goodyear Tire and Rubber Co. Niagara Falls Plant did not perform service operations at the Factory Outlet Mall site before or after 1972. Goodyear's Niagara Falls manufacturing operations are described as follows: A.) The manufacture of polymerized vinyl chloride was started in 1946; B.) The thiazole type rubber chemicals manufacturing were started in 1954 and C.) antioxidant-antiozonant chemical, namely mixed diaryl phenylene-diamines manufacturing was started in 1957. These three basic processes continue to this day.

A.) Polymerization of vinyl chloride monomer (VCM) to polyvinyl chloride (PVC) is accomplished by adding (VCM) to water in a pressure vessel with required emulsifiers, catalyst, initiators and reacting until key ingredients are used up. The batch is degassed with the excess VCM collected for recycle. The finely divided white solids (PVC) are dewatered dried and bagged for sale.

B.) Thiazole accelerators are made by reacting a primary aromatic amine with sulfur and carbon disulfide. The resultant solid thiazole is either dewatered, dried, bagged and sold after purification or converted to one of two other thiazoles which were dewatered dried, bagged and sold.

C.) The antioxidant is made by reacting primary aromatic amines with hydroquinone in the presence of a metallic salt catalyst. The salt catalyst is neutralized the excess reactants collected for recycle and the resultant liquid filtered, flaked and bagged for sale.

Question 2:) Goodyear does not have a record showing the quantities of waste generated prior to 1972.

The types of wastes generated were as follows:

1.) Iron catalyst salts
2.) Accelerator sewer sumps
3.) PVC berries, skins
4.) PVC floor sweepings
5.) Thiazole Polymer blends

In addition industrial waste such as cardboard, papers and rubble were generated.

Question 3:) The waste generated were disposed of as follows:

a.) Olin Mathieson Dump
River Road
Niagara Falls, Near 102nd St.

b.) Name of site is unknown. The owner was Mr. Belden (deceased); adjacent to Olin Mathieson dump River Rd. Niagara Falls, Near 102nd St.

c.) Niagara County Dump - Wheatfield, off River Road
Town of Wheatfield, in Niagara County.

We have no knowledge that specific waste went to specific dumps. We assume all waste went to the dump in use at the time.

Question 4:) A list of haulers is listed below.

a.) The Goodyear Tire & Rubber Co.
5408 Baker Avenue
Niagara Falls, N.Y. 14304

b.) Walter S. Kozdranski Co., Inc.
1865 Third Avenue
Town of Niagara, New York

c.) Modern Disposal Services, Inc.
Model City Road
Model City, New York

We have no information that any of our waste were disposed of at the Factory Outlet Mall.

Question 5:) The report of the Inter Agency Task Force on Hazardous Wastes (1968) show that the Walter S. Kozdranski Co., Inc. Trucking Company hauled waste to the following disposal site:

a.) Olin-Mathieson dump, River Rd. Niagara Falls, near 102nd St.

Question 6:) None of the waste listed in response 2) are hazardous waste. Certain PVC waste may have contained vinyl chloride monomer in trace amounts.

Question 7:) We have no such information for the period 1946 to 1972. However more recent documents that are believed applicable are attached. These are:

a.) AES report on thiazole polymer blends and accelerator sump cleanings dated 10-6-80 for EP toxicity (neither were toxic).
b.) A Newco Waste Product record dated 1/4/79.
c.) Keller and Hechman memo dated 2/27/81 which shows PVC sludge is not a hazardous waste.
d.) Kernaghan to Kruger Niagara Falls Chemical By Products dated 8/17/78.
e.) Report to Inter Agency Task Force on hazardous waste 1978.
f.) NYS DEC approval of Industrial Waste Disposal of accelerator waste 1983.

Question 8:) Please refer to Item E under answer to 7:)

Present addresses:

R. H. LeCain
3853 Lake St. George Dr.
Palm Harbour, Florida 33563

S. H. Kernaghan
3282 Brenner Rd.
Barberton, Ohio 44203

J. M. Gilmore
1055 West River Road
Grand Island, New York 14072

Question 9:) Plant environmental and personnel records and the 1978 IAF reports provided information for these responses.

If you have any additional questions or wish clarification please contact me at (716)-236-2620.

Sincerely,

T. R. Gilmore,
Manager Environmental Control

TRG/lam

Attach.

LAW OFFICES
KELLER AND HECKMAN
1150 17TH STREET, N.W.
SUITE 1000
WASHINGTON, D.C. 20036

TELEPHONE
202 457-1100
CABLE ADDRESS "RELMAN"
WRITER'S DIRECT DIAL NUMBER

(202) 457-1116

JOSEPH E. KELLER
JEROME H. HECKMAN
CHARLES M. MEEHAN
WILLIAM H. BORGHESANI, JR.
ROBERT R. TIERNAN
WAYNE V. BLACK
DAVID L. HILL
MARTIN W. BERCOVICI
JOHN S. ELDRED
CAROLE C. HARRIS
MICHAEL F. MORRONE
LARRY S. SOLOMON
JOHN B. DUBECK
CHRISTINE A. MEAGHER
PETER L. de la CRUZ *
SHIRLEY S. FUJIMOTO
LAWRENCE P. HALPRIN
DEBORAH SHUR TRINKER
C. DOUGLAS JARRETT
EDWARD L. KORWEK
ROBERT L. FLESHNER
JONATHAN P. LEVINE
SHEILA A. MILLAR

* OHIO BAR ONLY

February 27, 1981

Mr. F. C. Betzhold
The Goodyear Tire & Rubber Company
1144 East Market Street
Akron, Ohio 44316

Re: Classification of PVC Sludge Under RCRA

Dear Fred:

Following our conversation of February 26, the material you requested is enclosed. It consists of a letter and memorandum explaining the status of vinyl chloride under the Resource Conservation and Recovery Act (RCRA) and the Environmental Protection Agency's (EPA) implementing regulations, and the comments filed by the Society of the Plastics Industry, Inc. (SPI) with EPA regarding the treatment of vinyl chloride.

As I indicated in our conversation, and as more fully explained in the attachments, the listing of vinyl chloride monomer (VCM) in 40 C.F.R. § 261.33 encompasses VCM only when it is being discarded in a pure or off-specification form. See also § 261.3. Thus, a manufacturing process waste containing VCM would not automatically be deemed a hazardous waste. However, process waste from PVC polymerization operations may still be classified as a hazardous waste if it exhibits the characteristics of ignitiability, corrosivity, reactivity, or extraction procedure (EP) toxicity. Since VCM is not listed under § 261.24, which addresses EP toxicity, and since there is no National Interim Primary Drinking Water Standard (NIPDWS) for VCM, PVC processing waste would not demonstrate EP toxicity based solely on the presence of vinyl chloride.

As you are aware, EPA is still in the process of listing additional substances as hazardous wastes or constituents. A generic listing of chlorinated hydrocarbon wastes would have obvious implications for VCM-containing wastes, and could potentially drag a plant's entire wastewater under RCRA. Obviously, SPI's comments argued against this, the generic listing of wastes, or listing PVC sludge.

I enjoyed talking with you. If you have any further questions or comments, or need additional materials, please feel free to contact me.

Cordially yours,

Peter

Peter L. de la Cruz

Enclosure

cc: Mr. Thomas J. McGrath (w/o encl.)
Mr. John R. Lawrence (w/o encl.)
Dr. A. Ross Adams (w/o encl.)

f)

600 Delaware Avenue, Buffalo, New York 14202-1073

June 23, 1983

Mr. Daniel Colpetzer
Modern Landfill, Inc.
P.O. Box 209
Model City, NY 14107

Dear Mr. Colpetzer:

This office is in receipt of your application #83-21 requesting permission to accept for disposal rubber accelerator waste from Goodyear Tire and Rubber Company in Niagara Falls, New York. The waste is acceptable for disposal at your site and you are required to submit an annual report detailing the volume or tonnage of this waste stream within 30 days of the anniversary date of issuance of your Part 360 Permit.

If you have any questions, feel free to contact this office.

Very truly yours,

Robert J. Mitrey, P.E.
Associate Sanitary Engineer

RCW:vs

August 17, 1978
cc: J. H. Gilmore
M. Trowbridge
S. R. Gilmore
R. H. McCann

To: Mr. G. I. Kruger, Manager
Raw Material Planning & Analysis
Department 826
Goodyear - Akron

From: S. H. Kernaghan

Subject: Niagara Falls Chemical By-Products.

Reference: Your Letter of July 15, 1978.

I. CURRENT PRODUCTION VOLUMES ON AN ANNUAL BASIS:

A.	Mercaptobenzothiazole (MBT) Tars	250,000 Pounds/Year
B.	Iron Catalyst Salts (Nailax Reaction)	650,000 Pounds/Year
C.	Accelerator Sewer Sumps	200,000 Pounds/Year
D.	PVC Emulsion Berries, Skins	600,000 Pounds/Year
E.	PVC Floor Sweepings	250,000 Pounds/Year
F.	Sulfur (Sold)	480,000 Pounds/Year

II. COMPOSITION OF ABOVE MATERIAL AND PHYSICAL FORM:

A. MBT TARS - Semi-solid which is a homogeneous liquid at 105°C.

NOTE: A mixture of 85/15 MBT Tars/Microcel E (Coded P-31,484) has been prepared as a free-flowing powder. Research has evaluated this material as a replacement for CAPTAX in Butyl, Natural Rubber/SBR and EPDM formulations. As yet, we have not found a customer for this material.

B. IRON CATALYST SALTS - From Nailax process. Approximate composition is below:

49%	NaCl	(Sodium Chloride)
26%	$Fe_2O_3 \cdot F_2(OH)_3$	(Iron Oxide and Hydroxide)
15%	Na_2CO_3	(Sodium Carbonate)
10%	Nailax	
100%		

II. COMPOSITION OF ABOVE MATERIAL AND PHYSICAL FORM: (Cont'd)

C. ACCELERATOR SEWER SUMP - Wet yellow soft solids consisting of approximately 60% MBT and 40% Kagarax (4-Morpholinyl - 2-Benzothiazole Disulfide).

D. POLYVINYL CHLORIDE EMULSION BERRIES AND SKINS - Berries are wet hard particles of 1/16 inch to 1/4 inch in size which could have a residual Vinyl Chloride Monomer content up to 1,600 ppm. Weathering would reduce the VCM level. The vinyl skins are approximately 3% of the total.

E. POLYVINYL CHLORIDE RESIN FLOOR SWEEPINGS - White dry powder from broken bags and packaging area. This material has been sold by Chemical Division in the past, but no sales have been made in the last year.

F. SULFUR - Recovered from accelerator off-gas in a Clauss Unit as a molten material with a melting point of approximately 113°C.

III. PERTINENT AVAILABLE CHEMICAL AND PHYSICAL PROPERTIES:

A. MBT TARS:

Chemical properties are similar to "CAPTAX" accelerator. A Goodyear "Special Handling Precautions" sheet is attached for CAPTAX. Also a data sheet for 2-MBT is enclosed.

B. IRON CATALYST SALT:

Chemical properties are typical of the salts as stated in Part II - B.

C. ACCELERATOR SEWER SUMP:

Chemical properties are similar to CAPTAX - Kagarax accelerators. "Special Handling Precautions" sheets are attached for both materials.

D & E. PVC EMULSION BERRIES, SKINS, AND FLOOR SWEEPINGS:

A "Goodyear Chemicals Safety Data" sheet is attached which covers properties of PVC resin. As indicated in II - D, residual VCM could be higher in berries.

F. SULFUR:

Specific Gravity	-	Approximately 2.0
Melting Point	-	113°C
Refractive Index	-	1.957

Insoluble in water; soluble in Carbon Disulfide, Carbon Tetrachloride, and Benzene.

Reference: "Condensed Chemical Dictionary," 6th Edition, Reinhold Publishing Corporation.

IV. CURRENT DISPOSITION:

A. SOLD:

Item I - F. Recovered molten sulfur is currently being sold in tank truck to Ashland Oil, Inc. A copy of Purchasing Orders is attached.

B. IF HAULED AWAY:

1. Modern Disposal Service
P. O. Box 209
Model City, New York 14107

CONTACT: Mr. Washuta

2 & 3. Copy of Purchase Order with cost schedule is attached.

4. Manner of Disposal:

A review with Mr. Washuta of Modern Disposal discloses the following:

a. Up until a year or so ago much of the solid waste hauled from our plant was taken to the County dump at Wheatfield on River Road. This dump was closed about a year ago -- after Modern Disposal had been using it for about five (5) years.

b. Tar buckets have been hauled to Washuta's own dumping property on Model City Road for the past four or five (4 or 5) years. Normal practice is to cover this material soon after dumping.

c. The closest County dump is now one located in Lockport which is too far away to economically use; therefore, all waste is going to Modern Disposal's dump.

d. Mr. Washuta advises that his dump is under constant surveillance by City, County, and State people.

C. BURNED IN PLANT BOILERS:

No chemical waste by-products are burned in plant boilers. However, fugitive VCM emissions are burned in plant boilers to bring the plant into E.P.A. compliance for VCM. This stream being in the parts per million has no fuel value.

V. ADDITIONAL INFORMATION:

A. Mr. J. F. Carraher of Goodyear Chemical Division has been asked to help us move P-31,484 (See Item II - A).

B. Mr. W. P. Fiedler of Goodyear Chemical Division has been asked to aid us in selling PVC residues (See Items I - D and E).

S. H. Kernaghan
Technical Superintendent

SHK:mw

Enclosures

CWCO Chemical Waste Systems Inc.

WASTE PRODUCT RECORD

4626 Royal Avenue
Niagara Falls, N.Y. 143
716 285 6944

THIS SECTION TO BE COMPLETED BY THE WASTE GENERATOR

COMPANY NAME	SITE ADDRESS
THE GOODYEAR TIRE & RUBBER COMPANY	5408 Baker Avenue Niagara Falls, N. Y. 14304
BUSINESS ADDRESS (IF DIFFERENT FROM SITE)	RESPONSIBLE INDIVIDUAL: J. T. Shiah — PHONE NO.: (716) 283-7682

NAME OR DESCRIPTION OF WASTE: Thiazole Polymer Blends — DOT CLASSIFICATION:

QUANTITY: Approx. 110 — ☐ GALS. ☒ TONS ☐ CU. FT. — P ☐ MONTH ☒ YEAR ☐ ONCE

PACKING: ☐ DRUMS ☐ BULK ☒ OTHER: Dumpsters

SHIPPING/STORAGE: ☒ STEEL ☐ STAINLESS ☐ OTHER

PHYSICAL STATE (CIRCLE APPROPRIATE BLOCKS): SOLID | LIQUID | (SEMI-SOLID)

SPECIFIC GRAVITY: < | .8 | .9 | 1 | (1.1) | 1.2 | 1.3 | 1.4 | >

VISCOSITY: LOW | MEDIUM | (HIGH)

FLASH POINT [°F]: < 100 | 100-140 | > 140 | (NONE)

pH (CIRCLE RANGE): < | 1 | 2 | 3 | 5 | 7 | (9) | (11) | >

LAYERING: (NONE) | B 1 | MULTI — TOP ____ % BOTTOM ____ % MID ____ %

SOLIDS: [X] BY WEIGHT [ ] BY VOLUME — 90 % TOTAL — -- % SUSPENDED — -- % DISSOLVED — 1.5% ASH@650°C

BTU/LB (THOUSANDS): <1 | UNKNOWN | 3-6 | 9-12 | >12

ORGANO-CHLORINE: (0-TR) | <1% | >1%

SULFUR: 0-TR | <1% | (>1%)

TOXICITY: (LOW) | MEDIUM | HIGH

REACTIVITY: (LOW) | MEDIUM | HIGH

TOXICITY INFO.: ☐ INGESTION ☐ DERMAL ☐ INHALATION ☐ AQUATIC ☐ BIO-ACCUM. — NONE AVAILABLE — DESCRIBE ON NEXT LINE

Composition (account for 100%)			
10 %	Water	____ %	
90 %	Thiazole Polymer Blends	____ %	
____ %		____ %	
____ %		____ %	
____ %		____ %	
____ %		____ %	
____ %		____ %	

DESCRIBE

PLEASE ATTACH ANY ADDITIONAL HANDLING AND HAZARD INFORMATION, TOXICOLOGY REPORTS, OSHA DATA SHEETS, ETC.

I HEREBY CERTIFY THAT THE ABOVE AND ATTACHED DESCRIPTION IS COMPLETE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND ABILITY TO DETERMINE, THAT NO DELIBERATE OR WILLFULL OMISSIONS OF COMPOSITION OR PROPERTIES EXISTS, AND THAT ALL KNOWN O SUSPECTED HAZARDS HAVE BEEN DISCLOSED.

DATE	TITLE	SIGNATURE
1/4/79	Section Head	J. T. Shiah

THIS SECTION TO BE COMPLETED BY CWCO

SAMPLE LOG NO.	WASTE PRODUCT CODE	PROPOSED DISPOSAL METHOD	APPROVAL REFERENCE

REQUEST FOR APPROVAL NO.	DATE	☐ TRIAL ☐ ONGOING	SIGNATURE

THIS SECTION TO BE COMPLETED BY REGULATORY AGENCY WHEN APPLICABLE

☐ APPROVED ☐ CONDITIONAL APPROVAL ☐ APPROVAL WITHHELD ☐ DISAPPROVED

CONDITIONS/REASONS FOR WITHHOLDING OR DISAPPROVAL

DATE	SIGNATURE	AGENCY NAME AND ADDRESS

REF ITEM III A+C

Original
Revision No. 1

SPECIAL HANDLING PRECAUTIONS

Code: CAPTAX

Chemical Name: MERCAPTOBENZOTHIAZOLE

Area Usage: _____

Threshold Limit Value: _____ PPM
_____ mg/M^3

Class of Hazard

_____. Unknown. No specific toxicological information available.
_____. Non-toxic.

Hazardous by:	Degree of Hazard: None	Low	Moderate	High
x . Inhalation	___	___	x	___
x . Ingestion	___	___	x	___
_____. Absorption	___	___	___	___

x . Irritant to: x skin, ____ eyes, ____ respiratory tract.
_____. Corrosive to: ____ skin, ____ eyes.
x . Sensitizer: x skin, ____ lungs (possible)
_____. Flammable liquid. Class _____
_____. Flammable or explosive solid or powder.
_____. Nuisance dust.

Precautions for Handling

_____. No special precautions required.
_____. Keep away from heat, sparks and open flame.
_____. Store separately or isolated from other materials.
_____. Keep container closed when not in use.
x . Use with adequate ventilation.

x . Avoid breathing x dust, ____ vapor.
_____. Avoid prolonged or repeated contact with skin.
x . Avoid skin contact.
_____. Do not get in eyes.
_____. Wash thoroughly immediately after handling.
x . Do not get on clothing.
_____. Clean up spills immediately.

Protective Equipment

x . Gloves: x cloth, ____ leather, ____ impermeable.
_____. Chemical goggles ____, face shield ____.
x . Respirator NIOSH approved dust respirator.
_____. Clothing _____

Instructions For Emergency Care In Case Of Contact Or Exposure

x . Immediately flush skin or eyes with plenty of water.
_____. If spilled on clothing, remove and launder before re-use.
x . In case of exposure to high concentrations, remove to fresh air.
x . Get medical attention, if ingested.

Medical Surveillance

_____. Required.
x . Not required.

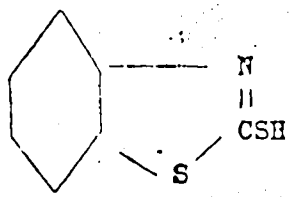
Paul W Bankovich
Industrial Hygiene Section
Occupational Health Services

5-2-76
Date

REF. EM III A & C

2-MERCAPTOBENZOTHIAZOLE, MBT

2-BENZOTHIAZOLE THIOL



$C_7H_5NS_2$ MW 167.25

Commercial Product

Goodyear, "Captax" Mertax, Thiotax

Light yellow powder

M.P. 170 - 175° (3) Captax

Pure Compound (monoclinic needles or leaflets)

M.P. 179° (7) (4) (2)

180.2 - 181.7 (3)

180° avg. value used by RBMA.

Cryoscopic Constant

Calc'd. by RBMA, 0.68 mole % per °C (1)

See attached plot 0.74 (9)

B pt. - decomposes @ 760 mm (7)

204.4°C @ 8.13 mm (9) (or @ 18 mm if bar. was 754 mm).

406°C @ 760 mm RBMA, if entropy vap. = 24

346°C ± 50° @ mm RBMA, from molecular structure

Estimated °C	P atm.	°C	P atm.
200	.0092	300	.167
220	.0180	320	.265
240	.0330	340	.395
260	.059	360	.600
280	.100	see attached plot	

Lat. Ht. Fusion (7)

2.78 kcal/g mole = 16.6 cal/gm = 29.9 Btu/lb.

Lat. Ht. Vaporization

Estd. from Bpts.	15.76	kcal/g mole
by RBMA	94.3	cal/gm
	169.6	Btu/lb.

Specific Heat:

	cal/°C, gm	cal/°C, g mole
Solid (7)	0.248	41.5
Liquid (7)	0.272	45.5
Vapor		

Viscosity

Molten crude @ 200°C — 10 centipoise (7)

Solubility

In water,	20°C	0.02 gm/100 H_2O	(7)
	60°C	0.08 gm/100 H_2O	(7)
In alcohol,	25°C	2 gm/100 ml	(3)
In ether,	25°C	1 gm/100 ml	(3)
In acetone,	25°C	10 gm/100 ml	(3)
In CCl_4,	25°C	<.2 gm/100 ml	(3)
In naphtha,	25°C	<.5 gm/100 ml	(3)
In acetic acid,	cold	soluble	(4)
	hot	very soluble	(4)
In dilute Na_2CO_3, NaOH		soluble	(2), (3)
Goodyear plant practice,		at least 5 wt. % at °C	

REF ITEM III-C

Original
~~Revision No.~~

SPECIAL HANDLING PRECAUTIONS

Code: KACARAX - A Chemical Name: 4-MORPHOLINYL-2-BENZOTHIAZOLE DISULFIDE

Area Usage: _____ Threshold Limit Value: _____ ppm
_____ mg/M^3

Class of Hazard

_____. Unknown. No specific toxicological information available.
_____. Non-toxic.

Hazardous by:	Degree of Hazard: None	Low	Moderate	High
x. Inhalation	___	___	x	___
x. Ingestion	___	x	___	___
x. Absorption	___	x	___	___

x. Irritant to: ___ skin, x eyes, ___ respiratory tract.
_____. Corrosive to: ___ skin, ___ eyes.
x. Sensitizer: x skin, ___ lungs. (possible)
_____. Flammable liquid. Class _____
_____. Flammable or explosive solid or powder.
_____. Nuisance dust.

Precautions for Handling

_____. No special precautions required.
_____. Keep away from heat, sparks and open flame.
_____. Store separately or isolated from other materials.
_____. Keep container closed when not in use.
x. Use with adequate ventilation.

x. Avoid breathing x dust, ___ vapor.
_____. Avoid prolonged or repeated contact with skin.
x. Avoid skin contact.
x. Do not get in eyes.
_____. Wash thoroughly immediately after handling.
x. Do not get on clothing.
_____. Clean up spills immediately.

Protective Equipment

x. Gloves: x cloth, ___ leather, ___ impermeable.
x. Chemical goggles ___, face shield ___, Safety glasses.
x. Respirator NIOSH approved dust respirator.
_____. Clothing _____

Instructions For Emergency Care In Case Of Contact Or Exposure

x. Immediately flush skin or eyes with plenty of water.
_____. If spilled on clothing, remove and launder before re-use.
x. In case of exposure to high concentrations, remove to fresh air.
_____. Get medical attention.

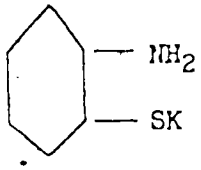
Medical Surveillance

_____. Required.
x. Not required.

Paul W. Bankovich 1-29-76

Solubility (Cont'd.)

In 50% KOH, 190 - 200°C, reacts to form (2)



+ CO_2 + KSH

Density

Solid, 25°C 1.42 g/cc (4) (7) (3)

25°C 1.41 (2)

Liquid

Estimated by RBMA (8) p. 86, LeBas method)

at Bpt, 154.7 ml/g mole

density, 1.08 g/cc temp.,

density, ~ 1.1 g/cc at 180°C

Rec'd 2-11-77

GOODYEAR CHEMICALS

SAFETY DATA

REF ETM 11-D-E

THE GOODYEAR TIRE & RUBBER COMPANY • AKRON, OHIO 44316

PRODUCT
PLIOVIC M Resins

EMERGENCY TELEPHONE NO.
216-794-2121

SECTION I – NOMENCLATURE

CHEMICAL NAME AND SYNONYMS
Poly(vinyl chloride)

CHEMICAL FAMILY

FORMULA

SECTION II – HAZARDOUS INGREDIENTS

MATERIAL	%	TLV	TOXICITY
Vinyl chloride monomer	Trace	1 ppm	

SECTION III – PHYSICAL DATA

BOILING POINT
NA

VAPOR PRESSURE
NA

MELTING POINT
NA

VAPOR DENSITY
NA

SPECIFIC GRAVITY
1.40

% VOLATILE
NA ☐ WT ☐ VOL

SOLUBILITY IN WATER
Insoluble

APPEARANCE AND ODOR
Fine white powder

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

FLASH POINT & METHOD
NA

FLAMMABLE LIMITS
NA

EXTINGUISHING MEDIA
Water, all purpose (ABC) dry chemical

SPECIAL FIRE FIGHTING PROCEDURES
None

UNUSUAL FIRE AND EXPLOSION HAZARDS
None

SECTION V – HEALTH HAZARD DATA

LV (Atmospheric concentration)	CARCINOGENIC
1 ppm for vinyl chloride monomer	Vinyl chloride is a cancer-suspect agent.
OXICITY	**IRRITANT**
Unknown	See below

EFFECTS OF OVEREXPOSURE

For dust, possible irritation of eyes and respiratory tract.
For vinyl chloride monomer, cancer-suspect agent.

EMERGENCY AND FIRST AID PROCEDURES

If inhaled, remove to fresh air. Flush eyes with water.

SECTION VI – REACTIVITY DATA

STABILITY

Stable

HAZARDOUS POLYMERIZATION

Will not occur

INCOMPATIBILITY

None

DECOMPOSITION PRODUCTS

Hydrogen chloride, carbon combustion products

SECTION VII – SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED

Sweep, shovel, or vacuum

WASTE DISPOSAL METHOD

Landfill

SECTION VIII – SPECIAL PROTECTION INFORMATION

RESPIRATORY

See Code of Federal Regulations, Title 29, §1910.1017 (g) regarding vinyl chloride.

VENTILATION

PROTECTIVE GLOVES	EYE PROTECTION

OTHER

All chemicals should be handled so as to prevent eye contact and excessive or repeated skin contact. Appropriate eye and skin protection should be employed. Inhalation of dusts and vapors should be avoided.

SECTION IX – SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Refer to OSHA regulations pertaining to vinyl chloride in the Code of Federal Regulations, Title 29, Part 1910.1017.

SPECIAL LABELING

"CONTAINS VINYL CHLORIDE. VINYL CHLORIDE IS A CANCER-SUSPECT AGENT."

PREPARED BY	DATE
R W Dessent, Material Safety Coordinator	4-28-77

ADVANCED ENVIRONMENTAL SYSTEMS, INC.

MONITORING AND SUPPORT LABORATORY

Location:

Bell Aerospace Textron
Building No. 75
Walmore Road (Gate 6)
Niagara Falls, New York

P.O. Box 165
Niagara Falls, N.Y. 14304
(716) 731-3291

October 6, 1980

Mr. Joseph Shiah
Goodyear Tire & Rubber
5408 Baker Avenue
Niagara Falls, New York 14302

Dear Mr. Shiah:

Here are results of "EP Toxicity" test performed on 2 samples submitted to our laboratory on September 10, 1980. In addition, THO as lindane was performed on the sample extract.

Please note that concentrations for all parameters were well below maximum concentration of contaminants for characteristic of EP Toxicity.

Mercury analysis was not reported due to unacceptable recovery data reported during quality control. This analysis will be performed within five working days and an addendum will be issued to you.

I apologize for the delay in reporting these results; however, instrument malfunctions caused us considerable "down" time these past two weeks. I can promise you better turn around time in the future.

Should you desire any clarification, please contact me at once.

Sincerely,

Robert C. Wojcik

Robert C. Wojcik
Operations Manager

/m
Attachment - Lab Report

Advanced Environmental Systems, Inc.

Monitoring and Support Laboratory

LABORATORY REPORT

SCOPE OF WORK

Analysis of sample for "EP Toxicity" parameters and THC on leachate of two samples submitted to our laboratory on September 10, 1980.

METHODOLOGY

Extraction of samples were performed in accordance with criteria listed in Federal Register, Vol. 45, No. 98, May 19, 1980, Section 261.30, Appendix II.

Analysis of extract for metals were performed in accordance with "Methods for the Analysis of Water and Wastes," U.S. EPA, EMSL, Cincinnati, Ohio, (600/4-79-020, March 1979).

Analysis for endrin, lindane, methoxychlor, toxaphene, 2,4-D and 2,4,5-TP silvex will be performed in accordance with "Methods for Benzidine, Chlorinated Organic Compounds, Pentachlorophenol and Pesticides in Water and Wastewater," U.S. EPA, EMSL, Cincinnati, Ohio, September, 1978.

The method for extraction of 2,4-D and 2,4,5-TP are modified according to the attached EPA Quality Assurance Newsletter.

Analysis for THC in terms of lindane are run in accordance with the procedure outlined in our correspondence to you dated Sept. 5, 1980.

RESULTS

	Sample A(µg/l)	Sample B(µg/l)
Lindane	2	ND
Endrin	ND[1]	ND
Toxaphene	ND	ND
Methoxychlor	ND	ND
2,4-D	ND	55
2,4,5-TP (silvex)	91	24
Arsenic	<5	<5
Barium	<500	<500
Cadmium	<50	<50
Chromium	<50	<50
Lead	<300	<300
Mercury[2]		
Selenium	15	10
Silver	<50	<50

[1] N.D. - Not Detected

[2] Mercury analysis was rejected. Unacceptable recovery data.

Advanced Environmental Systems, Inc.

Monitoring and Support Laboratory

LABORATORY REPORT

Total Halogenated Organics	THO as lindane (µg/l)
Sample A	46
Sample B	47

QUALITY ASSURANCE

Precision

Metals - Sample A	Run 1 (µg/l)	Run 2(µg/l)
Arsenic	<5	<5
Barium	<50	<50
Cadmium	<50	<50
Chromium	<50	<50
Lead	<300	<300
Mercury[2]		
Selenium	15	10
Silver	<50	<50

[2] To be re-run. Unacceptable recovery data.

An EPA test sample for trace metals was run with each analysis. The results of the analysis of this sample is as follows:

	EPA No.	Known(µg/l)	Reported(µg/l)
Cd	476-2	59	50
Cr	476-2	304	300
Se	476-2	48	60
Pb	476-2	383	347
Ag	378-10	24	<50
As	378 10	40	50

An EPA test sample for herbicides was run in parallel with the sample run. The result of this analysis is as follows:

Sample NO.	Parameter	Known	Reported	95%-Confidence Limit
WS778-1	2,4,5-TP silvex	0.85	0.45	0.2-1.4

EPA Newsletter 1 1979

Environmental
Monitoring and
Support Laboratory
Cincinnati, OH 45268

Certified M-Endo Medium for Coliform Analysis

Millipore Corporation, Bedford, Massachusetts, has announced the availability of a new product, liquid, ready-for-use M-Endo Broth (membrane filter medium), which is certified to recover 80 percent to 120 percent coliforms from natural samples compared to freshly prepared broth; produce equivalent colony formation and sheen; have a pH of 7.2 ± 0.1; and have a shelf life of 12 months if stored at 2-6°C. The medium formulation is according to *Standard Methods* and is packaged sterile, ready for use in multiple test vials. Certification is provided with each lot number.
(Robert Bordner, FTS: 684-7319; COML: 513-684-7319)

Analysis of Chlorophenoxy Acid Herbicides

David Payne, Quality Assurance Coordinator, Region 5, has noted that there are some difficulties encountered when using the borontrifluoride-methanol derivatization of chlorophenoxy acid herbicides. Four of six primary state laboratories and the Central Regional Laboratory of Region 5 obtained both methyl and ethyl esters when derivatizing with borontrifluoride-methanol. Only methyl esters were obtained by a state laboratory using diazo-methane procedure.

The problem can be traced to the peroxide inhibitor used in the commercially available diethyl ether. Usually, 2 percent ethanol is added to diethyl ether. There is an available diethyl ether (Merk-EX-190) that contains only 0.05 percent ethanol. One ppm of di-t-butyl cresol is present as the major peroxide inhibitor. EMSL-Cincinnati recommends that this or an equivalent type of diethyl ether be used when extracting aqueous samples for chlorophenoxy acid herbicides—especially when borontrifluoride/methanol is used for derivatization. EMSL also recommends that toluene be substituted for benzene during the derivatization step and that hexane be substituted for benzene during the microcolumn cleanup step. Standards should be made up in diethyl ether rather than diethyl ether/hexane 1:1. If diethyl ether is distilled to improve the purity, add 2 percent methanol, not ethanol, to preserve.
(Denis Foerst, FTS: 684-7311; COML: 513-684-7311)

Teledyne Oil-In-Water Monitor

Teledyne oil-in-water monitor is being investigated at this laboratory. Preliminary testing and calibration has been completed. Further investigation of performance will be made in the laboratory and a site will be selected to evaluate its on-line utility.
(William Averett, FTS: 684-7322; COML: 513-684-7322)

Mathematical Modeling of Samplers

Accuracy of the mathematical models and computer simulation programs for the prediction of the sample cooling process of a selected sampler has been experimentally verified. Experimental measurements of sample temperature in the sampler revealed the models to be within several percent. Development of specifications based on the models for the sampler product design is being studied. Models with modifications are also being applied to a different sampler cooling system. Modifications of its cooling system will also be conducted.
(Philip Lin, FTS: 684-7350; COML: 513-684-7350)

New Edition of Phycovirus Literature Directory

A literature search program was developed for phycoviruses as part of our earlier efforts to achieve in-depth coverage of relevant research on the subject. The compiled information is available through a formal publication which is periodically updated. This upcoming edition is to be submitted to the Bacteriophage Subcommittee of the International Committee on Taxonomy of Viruses where it will serve as a practical guide to viruses of blue-green algae. In keeping with this new role the title "Phycovirus Bibliography" has been changed with the 1979 edition to "The Practical Directory to Phycovirus Literature." Those who have not received prior editions and wish to have their

F-10

From Paul

The Goodyear Tire & Rubber Company

(A CORPORATION)
P. O. BOX 460
NIAGARA FALLS, NEW YORK 14302 - 0460

PHONE (716) 236-2600

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

June 2, 1992

Mr. John Spagnoli
New York State Department of
Environmental Conservation
Region 9
270 Michigan Avenue
Buffalo, New York 14203-2999

Dear Mr. Spagnoli:

By this letter we are notifying you that our PVC (Poly Vinyl Chloride) solid wastes in the most recent analytical test results completed by Alpha Analytical Laboratories, Inc. has changed from non-detectable for TCLP constituents status to TCLP hazardous.

Based on the above referenced hazardous status of our Niagara Falls Chemical Plant's PVC wastes, all such wastes are being shipped to Michigan Disposal, Belleville, Michigan for disposal.

We are attaching the two 1992 test results from Alpha Analytical Laboratories, Inc. and the 1990 test results also from Alpha Analytical Labs. indicating a non detect finding for TCLP constituents. This testing was performed at the request of Modern Landfill as an annual requirement to confirm that the waste is TCLP non-hazardous.

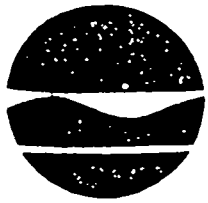
We respectfully request an opportunity to meet with you and your staff to answer any questions that you might have concerning the above matter. Mr. Gary Breg (716)-236-2620, our Environmental Control Manager, will be contacting you for a date and time convenient and acceptable to you for the requested meeting.

Yours truly,

A. H. Olzinger,
Plant Manager

AHO/lam
Attach.

New York State Department of Environmental Conservation
270 Michigan Avenue, Buffalo, New York 14203



Thomas C. Jorling
Commissioner

June 8, 1992

Mr. A. H. Olzinger
Plant Manager
Goodyear Tire and Rubber Company
P.O. Box 460
Niagara Falls, NY 14302

Dear Mr. Olzinger:

PVC Waste Stream

This correspondence is in accordance with the telephone conversation of June 6, 1992, between Mr. Richard Baker, Environmental Engineer, and Mr. Gary Breg, Environmental Control Manager, concerning the above-referenced waste stream.

Based on the laboratory information submitted in your correspondence of June 2, 1992, to this office, the PVC waste stream has been reclassified from non-hazardous to hazardous. It was agreed that the hazardous waste will be handled through the waste manifest system.

If you have any questions concerning this matter, please feel free to contact myself or Mr. Baker at (716)851-7220.

Very truly yours,

Louis Violanti

Louis Violanti, P.E.
Environmental Engineer III

LV:sz

cc: Mr. Frank Shattuck
Mr. Richard Baker

File Nia

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: September 10, 1990
Date Sampled: August 15, 1990
Analysis by: Alpha Analytical, Inc. ELAP# 10961
Analysis for: Goodyear Tire & Rubber Co.
AAL # 1516.05
Sample ID Dept. 145 Lugger VINYL RESINS / BERRIES

Parameter	Detection Limit PPB	Quantity Detected PPB
Benzene	20.0	ND
Carbon tetrachloride	20.0	ND
Chlorobenzene	20.0	ND
Chloroform	20.0	ND
1,4-Dichlorobenzene	60.0	ND
1,2-Dichloroethane	40.0	ND
1,1-Dichloroethylene	40.0	ND
Methyl ethyl ketone	100.0	ND
Tetrachloroethylene	20.0	ND
Trichloroethylene	20.0	ND
Vinyl chloride	100.0	ND

Surrogate Recoveries

1,2-Dichloroethane d4	75.8
Toluene d8	91.5
4-Bromofluorobenzene	92.3

ND=Not Detected DL=Detection Limit

Method of Analysis
SW-846 8240

Released by: Mario R. Montesdeoca
Laboratory Director

ALPHA ANALYTICAL LABORATORIES INC

826 Pine Avenue
Niagara Falls, New York 14301
(716) 284-8011

ELAP # 10961

SAMPLE INFORMATION

Job Number
2721.01-.04

Client
Goodyear Tire & Rubber Co.
5408 Baker Avenue
Niagara Falls, NY 14304

Date
April 24, 1992

Sample Site
Same as above

Chain of Custody
Yes

Sample Disposition
Hold 30 Days

FIELD INFORMATION

Sample ID	Date Sampled	Samp. Mat.	Container	Volume	Preserve.
#1	4/20/92	S	Glass (1)	500 ml	None
#2	4/20/92	S	Glass (1)	500 ml	None
#3	4/20/92	S	Glass (1)	500 ml	None
#2 MS	4/20/92	S	Glass (1)	500 ml	None

ANALYTICAL REQUEST

Sample ID	Method Requested	Extraction Date	Analysis Date
#1	SW-846 1311-TCLP Extraction	4/22/92	N/A
	SW-846 8240-Volatiles-TCLP	4/24/92	4/24/92
#2	SW-846 1311-TCLP Extraction	4/22/92	N/A
	SW-846 8240-Volatiles-TCLP	4/24/92	4/24/92
#3	SW-846 1311-TCLP Extraction	4/22/92	N/A
	SW-846 8240-Volatiles-TCLP	4/24/92	4/24/92
#2 MS	SW-846 1311-TCLP Extraction	4/22/92	N/A
	SW-846 8240-Volatiles-TCLP	*	*

*Result to follow

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: April 24, 1992
Date Sampled: April 20, 1992
Analysis by: Alpha Analytical, Inc. ELAP# 10961
Analysis for: Goodyear Tire & Rubber Co.
AAL#: 2721.01
Sample ID: #1

Parameter	Detection Limit PPB	Quantity Detected PPB
Vinyl chloride	*100.0	<DL

Surrogate Recovery-%	
1,2-Dichloroethane d4	82.2
Toluene d8	83.4
4-Bromofluorobenzene	94.6

Method of Analysis
SW-846 8240

ND=Not Detected

<DL=Below Detection Limit

*High detection limit due to foaming

Released by: Mario R. Montesdeoca
Laboratory Director

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: April 24, 1992
Date Sampled: April 20, 1992
Analysis by: Alpha Analytical, Inc. ELAP# 10961
Analysis for: Goodyear Tire & Rubber Co.
AAL#: 2721.02
Sample ID: #2

Parameter	Detection Limit PPB	Quantity Detected PPB	
Vinyl chloride	20.0	356	0.2 ppm

Surrogate Recovery-%	
1,2-Dichloroethane d4	88.4
Toluene d8	82.9
4-Bromofluorobenzene	87.2

Method of Analysis
SW-846 8240

ND = Not Detected **<DL = Below Detection Limit**

Released by: Mario R. Montesdeoca
Mario R. Montesdeoca
Laboratory Director

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: April 24, 1992
Date Sampled: April 20, 1992
Analysis by: Alpha Analytical, Inc. ELAP# 10961
Analysis for: Goodyear Tire & Rubber Co.
AAL#: 2721.03
Sample ID: #3

Parameter	Detection Limit PPB	Quantity Detected PPB
Vinyl chloride	1,000.0	12,800

Surrogate Recovery-%	
1,2-Dichloroethane d4	112
Toluene d8	100
4-Bromofluorobenzene	108

Method of Analysis
SW-846 8240

ND = Not Detected

< DL = Below Detection Limit

Released by: Mario R. Montesdeoca
Mario R. Montesdeoca
Laboratory Director

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: April 24, 1992
Date Samplod: April 20, 1992
Analysis by: Alpha Analytical, Inc. ELAP# 10961
Analysis for: Goodyear Tire & Rubber Co.
AAI#: 2721.04
Sample ID: #2 MS

Parameter	Quantity Recovered-%
Vinyl chloride	*

Surrogate Recovery-%	
1,2-Dichloroethane d4	
Toluene d8	
4-Bromofluorobenzene	

Method of Analysis
SW-846 8240

ND = Not Detected

<DL = Below Detection Limit

*Result to follow

Released by: Mario R. Montesdeoca
Mario R. Montesdeoca
Laboratory Director

ALPHA ANALYTICAL LABORATORIES INC

826 Pine Avenue
Niagara Falls, New York 14301
(716) 284-8011

ELAP # 10961

SAMPLE INFORMATION

Job Number
2780.01-.08

Client
Goodyear Tire & Rubber Co.
5408 Baker Avenue
Niagara Falls, NY 14302

Date
May 22, 1992

Sample Site
Same as above

Chain of Custody
Yes

Sample Disposition
Hold 30 Days

FIELD INFORMATION

Sample ID	Date Sampled	Samp. Mat.	Container	Volume	Preserve.
#1 5820	N/A	S	Glass (1)	500 ml	4°C
#2 6130	N/A	S	Glass (1)	500 ml	4°C
#3 31	N/A	S	Glass (1)	500 ml	4°C
#4 148	N/A	S	Glass (1)	500 ml	4°C
#5 Green BFI C-2	N/A	S	Glass (1)	500 ml	4°C
#6 9A-136	N/A	S	Glass (1)	500 ml	4°C
#7 1119	N/A	S	Glass (1)	500 ml	4°C
#5 Green BFI C-2 MS	Same container as #5 Green BFI C-2				

Sample Information Continued on Next Page

ANALYTICAL REQUEST

Sample ID	Method Requested	Extraction Date	Analysis Date
#1 5820	SW-846 1311-TCLP	6/18/92	N/A
	SW-846 8240-Volatiles-TCLP	6/22/92	6/22/92
#2 6130	SW-846 1311-TCLP	6/18/92	N/A
	SW-846 8240-Volatiles-TCLP	6/22/92	6/22/92
#3 31	SW-846 1311-TCLP	6/19/92	N/A
	SW-846 8240-Volatiles-TCLP	6/22/92	6/22/92
#4 148	SW-846 1311-TCLP	6/19/92	N/A
	SW-846 8240-Volatiles-TCLP	6/22/92	5/22/92
#5 Green BFI C-2	SW-846 1311-TCLP	6/20/92	N/A
	SW-846 8240-Volatiles-TCLP	6/22/92	6/22/92
#6 9A-136	SW-846 1311-TCLP	6/20/92	N/A
	SW-846 8240-Volatiles-TCLP	6/22/92	6/22/92
#7 31	SW-846 1311-TCLP	6/21/92	N/A
	SW-846 8240-Volatiles-TCLP	6/22/92	6/22/92
#5 Green BFI C-2 MS	SW-846 1311-TCLP	6/20/92	N/A
	SW-846 8240-Volatiles-TCLP	6/22/92	6/22/92

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: May 22, 1992
Date Sampled: N/A
Analysis by: Alpha Analytical, Inc. ELAP# 10961
Analysis for: Goodyear Tire & Rubber Co.
AAL#: 2780.01
Sample ID: #1 5820

Parameter	Detection Limit PPB	Quantity Detected PPB
Vinyl chloride	100.0	1,110

Surrogate Recovery-%	
1,2-Dichloroethane d4	*58.6
Toluene d8	70.5
4-Bromofluorobenzene	107

Method of Analysis
SW-846 8240

ND = Not Detected

<DL = Below Detection Limit

*Foaming

Released by: Mario R. Montesdeoca
Mario R. Montesdeoca
Laboratory Director

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: May 22, 1992
Date Sampled: N/A
Analysis by: Alpha Analytical, Inc. ELAP# 10981
Analysis for: Goodyear Tire & Rubber Co.
AAL#: 2780.02
Sample ID: #2 6130

Parameter	Detection Limit PPB	Quantity Detected PPB
Vinyl chloride	100.0	1,070

Surrogate Recovery-%

1,2-Dichloroethane d4	*85.0
Toluene d8	85.7
4-Bromofluorobenzene	126

Method of Analysis
SW-846 8240

ND=Not Detected

<DL=Below Detection Limit

*Foaming

Released by: Mario R. Montesdeoca
Laboratory Director

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: May 22, 1992
Date Sampled: N/A
Analysis by: Alpha Analytical, Inc. ELAP# 10961
Analysis for: Goodyear Tire & Rubber Co.
AAL#: 2780.08
Sample ID: #3 31

Parameter	Detection Limit PPB	Quantity Detected PPB
Vinyl chloride	100.0	5,260

Surrogate Recovery-%

1,2-Dichloroethane d4	83.8
Toluene d8	92.1
4-Bromofluorobenzene	*81.0

Method of Analysis
SW-846 8240

ND=Not Detected

<DL=Below Detection Limit

*Severe foaming

Released by: Mario R. Montesdeoca

Mario R. Montesdeoca
Laboratory Director

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: May 22, 1992
Date Sampled: N/A
Analysis by: Alpha Analytical, Inc. ELAP# 10961
Analysis for: Goodyear Tire & Rubber Co.
AAL#: 2780.04
Sample ID: #4 148

Parameter	Detection Limit PPB	Quantity Detected PPB
Vinyl chloride	100.0	1,400

Surrogate Recovery-%	
1,2-Dichloroethane d4	85.7
Toluene d8	98.3
4-Bromofluorobenzene	79.3

Method of Analysis
SW-846 8240

ND = Not Detected

<DL = Below Detection Limit

Released by: Mario R. Montesdeoca

Mario R. Montesdeoca
Laboratory Director

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: May 22, 1992
Date Sampled: N/A
Analysis by: Alpha Analytical, Inc. ELAP# 10961
Analysis for: Goodyear Tire & Rubber Co.
AAL#: 2780.05
Sample ID: #5 Green BFI C-2

Parameter	Detection Limit PPB	Quantity Detected PPB
Vinyl chloride	100.0	881

Surrogate Recovery-%	
1,2-Dichloroethane d4	94.3
Toluene d8	86.7
4-Bromofluorobenzene	*181

Method of Analysis
SW-846 8240

ND=Not Detected

<DL=Below Detection Limit

*Severe foaming

Released by: Mario R. Montesdeoca
Laboratory Director

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: May 22, 1992
Date Sampled: N/A
Analysis by: Alpha Analytical, Inc. ELAP# 10981
Analysis for: Goodyear Tire & Rubber Co.
AAL#: 2780.08
Sample ID: #6 9A-136

Parameter	Detection Limit PPB	Quantity Detected PPB
Vinyl chloride	100.0	4,860

Surrogate Recovery-%	
1,2-Dichloroethane d4	76.1
Toluene d8	78.0
4-Bromofluorobenzene	*129

Method of Analysis
SW-846 8240

ND = Not Detected

<DL = Below Detection Limit

*Severe foaming

Released by: Mario R. Montesdeoca
Mario R. Montesdeoca
Laboratory Director

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: May 22, 1992
Date Sampled: N/A
Analysis by: Alpha Analytical, Inc. ELAP# 10961
Analysis for: Goodyear Tire & Rubber Co.
AAL#: 2780.07
Sample ID: #7 1119

Parameter	Detection Limit PPB	Quantity Detected PPB
Vinyl chloride	100.0	9,840

Surrogate Recovery-%	
1,2-Dichloroethane d4	108
Toluene d8	89.5
4-Bromofluorobenzene	*58.0

Method of Analysis
SW-846 8240

ND = Not Detected

<DL = Below Detection Limit

*Severe foaming

Released by: Mario R. Montesdeoca
Laboratory Director

ANALYTICAL REPORT-TCLP VOLATILE ORGANICS

Date Reported: May 22, 1992
Date Sampled: N/A
Analysis by: Alpha Analytical, Inc. ELAP# 10961
Analysis for: Goodyear Tire & Rubber Co.
AAL#: 2780.08
Sample ID: #6 Green BFI C-2 MS

Parameter	Quantity Recovered-%
Vinyl chloride	*84.2

Method of Analysis SW-846 8240

ND = Not Detected

<DL = Below Detection Limit

*Severe foaming; sample spiked at 1,000 PPB.

Released by: Mario R. Montesdeoca

Mario R. Montesdeoca
Laboratory Director