5. PHASE I INVESTIGATION, 10/88

ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES

PHASE 1 INVESTIGATION

Schatz Plant
Site No. 314074
Poughkeepsie, Dutchess County
Final - October, 1988

Prepared for:
New York State
Department of
Environmental Conservation

50 Wolf Road, Albany, New York 12233
Thomas C. Jorling, Commissioner

Division of Hazardous Waste Remediation
Michael J. O'Toole, P.E., Director

Prepared by:
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CONTENTS

1. EXECUTIVE SUMMARY

The Schatz Plant site (New York I.D. No. 314074, EPA I.D. No. NYD 982531246) is an abandoned automobile bearing manufacturing company located at 70 Fairview Avenue, in the Town of Poughkeepsie, Dutchess County, New York, (See Figure 1). The Schatz building is situated within a complex of buildings including N.Y. Telephone, Rehabilitation Programs. Inc., Pleasant Valley Finishing Company, Fairview Lithographic Company, and ACME Castor Company (See Figure 2).

The Schatz Federal Bearing Company was founded in 1915 and went bankrupt in 1980. The current owner of the property is 1929 Associates, 319 Main Mall, Poughkeepsie, New York, a group of investors who purchased the property around 1982. At the time of purchase the property was abandoned and had fallen into disrepair. In May 1986, the site was inspected by the NYSDEC and 100 unmarked, unlabeled 55-gallon drums and 14 open pits were discovered [A-1-1-3 (Appendix A, Reference 1), Photo. #1].

This discovery initiated testing of the contents of the drums by the property owner. More than 60 of these drums were found to contain oil and water. The remaining drums were found to contain detergents, alkaloids, fungicides and chemical solvents. In December 1986, the contents of the 60 drums containing oil and water were pumped out and removed from the site. Further testing and cleanup activities were delayed due to winter weather, which brought about freezing of the materials. In April 1987, composite samples from the 14 open pits were tested and results showed the presence of PCB's. By May 1987, 30 drums containing detergents, alkaloids, fungicides and chemical solvents were repacked and shipped off site. Also, at this time, 60 empty 55-gallon drums, which had contained oil and water were shipped off site by a scavenger. As of the date of the G&H site inspection, ten 55-gallon drums remained [A-1-1&2 of 3, Photo #2,3&4] and the open pits contained various amounts of liquid.

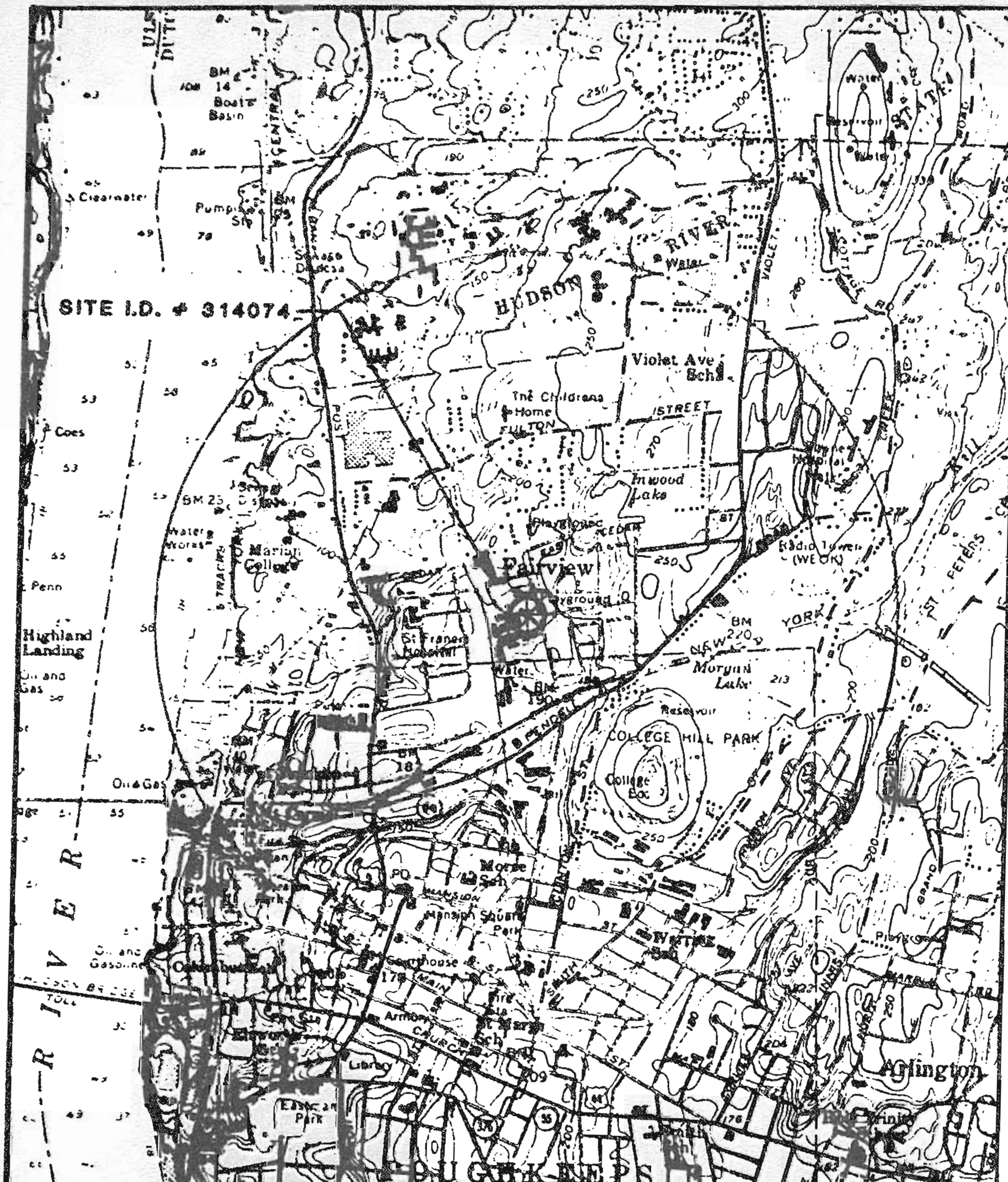
The preliminary HRS scores for this site are as follows: Migration Score, S_M = 26.79, Fire & Explosion Score, S_{FE} = 21.88 Direct Contact, S_{DC} = 00.0. The ground water route score, S_{GW} = 45.59 and the surface water route score, S_{SW} = 8.31, S_a = 0.00

Since the Schatz Plant is classified as Class 2 site according to NYS DEC, it is recommended that a Remedial Investigation and Feasibility Study (RI/FS) be performed at the Schatz Plant.

This can be substantiated by very poor housekeeping inside and outside of the plant, the evidence of chemical and oil spillage on the floor, presence of PBC, heavy metals in the pits, potential fire and explosion threat to the surrounding occupied commercial buildings due to continued presence of chemical and oil in open pits and possible vandalism. The site history also revealed numerous fire code violations. Immediate clean-up of fourteen (14) pits of oil and chemicals inside the plant is also recommended.

FIGURE NO. 1

SCHATZ PLANT



N

COORDINATES:

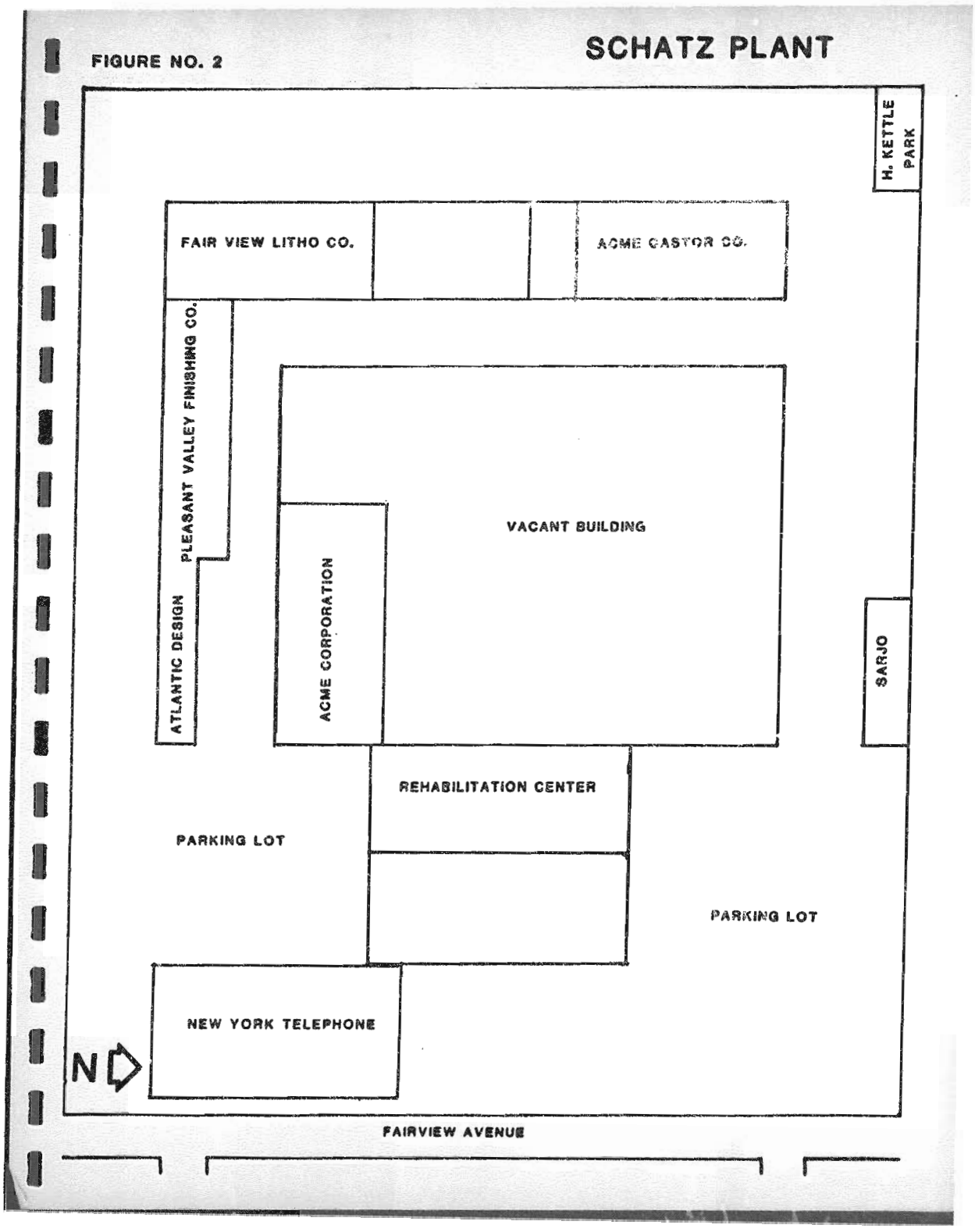
LAT. 41 43, 00"
LONG. 73 55' 20"

0 1000 2000
SCALE (FEET)

MAP SOURCE:
U.S.G.S. POUGHKEEPSIE QUAD
NEW YORK - DUTCHESS CTY.
7.5 MINUTE SERIES (TOPOGRAPHIC)
1957 EDITION

FIGURE NO. 2

SCHATZ PLANT



2. PURPOSE

The Schatz Plant site is listed in the Registry of "Inactive Hazardous Waste Disposal Sites in New York State" as a structure containing more than 100 unmarked and unlabeled drums. In addition, there are fourteen open pits with a rust colored liquid with an oil sheen. Some of the pits contain transformers.

The Phase I investigation at the Schatz Plant provides a preliminary characterization of any hazardous substances at this site, establishes possible migration route of pollutants, determines the population or resources which could be affected by pollutants from the site, investigates how the site was used and operated and determines who might be the party responsible for wastes at the site.

This Phase I investigation consists of the following:

A. The compilation of existing information about the site including:

   1) Records on site history from local, county, state, and federal agencies.

   2) Information on site topography, geology, surface and groundwater and local demographics.

   3) Interviews of site operators and other individuals and parties with knowledge of the site.

B. The inspection of the site to:

   1) Observe current conditions.

   2) Verify information, where possible.

C. The review of all available data

D. The preparation of a Phase I report containing:

1) A summary of findings

2) The computation of a preliminary Hazard Ranking System (HRS) score

3. SCOPE OF WORK

The Phase I investigation of the Schatz Plant site involved a site inspection by Gibbs & Hill, Inc., interviews and record searches.

The following individuals and agencies were contacted:

Contact	Information Received
Donn Courselle Robert-Mark Managing Agents P.O. Box 308 Hopewell Junction, N.Y. 12533	Interview about Schatz Plant
David Ruff Dutchess County Department of Health 22 Market Street Poughkeepsie, N Y 12601 (914) 431-2044	Site File
Lawrence J. Alden Michael J. Komoroske Marsden Chen, P.E. N.Y. State Dept. of Environmental Conservation Bureau of Hazardous Site Control Div. of Hazardous Waste Remediation 50 Wolf Road Albany, N Y 12233-0001 (518) 457-0639	NYSDEC Central Office Files
Mark Moroukian N.Y. State Dept. of Environmental Conservation Bureau of Eastern Remedial Action Div. of Hazardous Waste Remediation 50 Wolf Road Albany, N Y 12233-0001 (518) 457-0639	NYSDEC Central Office Files
Ramanand Pergadia, P.E. Senior Sanitary Engineer N.Y. State Dept. of Environmental Conservation Div. of Hazardous Waste Remediation 21 South Putt Corners Road New Paltz, N Y 12561 (914) 255-5453	NYSDEC Region 3 Files

Contact	Information Received
N.Y. State Department of Health Division of Environmental Protection Bureau of Public Water Supply Protection Empire State Plaza Corning Tower Building Albany, N Y 12237 (518) 457-4408	NYS Atlas of Community Water System Sources 1982
N.Y. State Dept. of Transportation 1220 Washington Ave. - Bldg. F Albany, N Y 12224	NYSDOT Quad Maps
Bruno Nemikus USGS 5 Aerial Way Syosset, N.Y. (516) 938-8830	Published Information on Geology, Topography, Groundwater, and Wells
Fred Gilbert State Soil Scientist U.S. Dept. of Agriculture Soil Conservation Service U.S. Courthouse & Federal Building 100 So. Clinton Street Syracuse, N.Y. 13260 (315) 423-5521	County Soil Borings
Jerard S. Hankin Hankin, Hanig, Stall & Shafran 319 Main Mall Rear P.O. Box 911 Poughkeepsie, N.Y. 12602	Site Water Information
Alison Silkworth Dutchess County Environmental Management Council P.O. Box 259 Millbrook, N.Y. 12545 (914) 677-3488	No Information Available
William Buskey RCRA Inspector NYSDEC, Region III 21 South Putt Corners Road New Paltz, N.Y. 12561 (914) 255-5453	Information about the Schatz Plant

Contact	Information Received
Ms. Geen Sabo EPA 26 Federal Plaza New York, N.Y 10278	EPA I.D. No. of the site
Norman Benson Soil & Water Conservation District P.O. Box 37 Millbrook, N.Y. 12595 (914) 677-8011	No land/farms irrigated within 3 miles of the site
Robert Kennedy Kramer Environmental 935 Allwood Road Clifton, N.J. 07012	Information about the Schatz Plant
John Ozard Lands & Waters Wildlife Resources Center Delmar, N.Y. 12054 (518) 439-7486	Critical habitat Information
Edward Fahrenkopf N.Y. State Dept. of Health 2 University Place - 2nd Floor Albany, N.Y. 12203 (518) 458-6310	Dimension of the pits

4. SITE ASSESSMENT

4.1 Site History

In 1915, the Schatz family organized the Schatz Federal Bearing Company to manufacture ball bearings for automobiles. A two story building was built in 1916. The company continued to grow from 1920 to 1956, with additional buildings and a laboratory constructed during this time along with the installation of three industrial groundwater wells for cooling purposes. Employment ultimately grew to a high of 1,400 people. The company began to decline in 1967, filed for bankruptcy in 1980 and closed in 1981. Various structures, located on 70 Fairview Avenue, Poughkeepsie, which originally comprised the Schatz Plant are now owned by 1929 Associates, the Pleasant Valley Finishing Company, and the Fairview Lithographic Company. Some of the original structures are currently vacant while others are rented out to Rehabilitation Programs, Inc. and ACME Company by 1929 Associates represented by Robert Mark Realty, Route 52, Hopewell Junction, N.Y. (914) 221-3700.

On May 7, 1986, a portion of the property owned by 1929 Associates was inspected by D. Slingerland of the NYSDEC. The inspection identified more than 64 55-gallon drums, more than one dozen electrical transformers, pits of oil, grease and contaminated water, contaminated soil outside of the building, and metal shavings and oil in 12 bins outside the building, [A-2-1-2]. A site tour on May 14, 1986 by the Dutchess County Environmental Management Council revealed the facility as a potential hazardous waste site, [A-3-1-1].

As a result of these inspections, 1929 Associates tested all the drums at the site utilizing their consultant, Kramer Environmental. Approximately 60 of these drums were found to contain oil and water. On December 3, 1986 the contents of these 60 drums, equal to 1,123 gallons, was pumped out and removed from

the site [A-4-1-2, Item #2; A-5-1-1]. The remaining 30 drums were found to contain detergents, alkaloids, fungicides, and chemical solvents. 1929 Associates received an estimate for the cost of the removal and disposal of these drums on December 9, 1986 [A-6-3-3].

Various correspondence during the period December 17, 1986 to March 19, 1987 between NYSDEC and 1929 Associates concerned a requested workplan and sampling plan under which 1929 Associates would proceed with cleanup at the site. The cleanup would include pit sampling and the removal of more than 30 drums which contained detergents, alkaloids, fungicides, and chemical solvents [A-7-6-6]. Letters dated February 12, 1987 and February 19, 1987 indicate that cleanup and sampling activities were delayed due to the winter weather, which brought about freezing of the materials [A-8-1&2 of 2].

On April 20, 1987 Kramer Environmental sampled the transformers and 14 open pits at the site. Results of these analyses were forwarded to 1929 Associates through Robert-Mark Realty, the property manager for the owner. The sampling included sludge, oil and water composites of the materials in the pits. The results showed concentrations of PCB's in the composite samples ranged from 4.4 ppm to 264.4 ppm. This required that further individual sampling of the pits be conducted to further isolate PCB levels [A-9].

By May 1987, the 30 drums containing detergents, alkaloids, fungicides and chemical solvents were repacked and shipped off-site. On May 18, 1987, 72 empty, 55-gallon drums which had contained oil and water were shipped off-site by Storonske N. Cooperage Company, Inc. Five 55-gallon drums and a few five and one-gallon containers remained at the site either due to residue remaining in the drums or lack of room on the transport truck. Several of these drums remained at the site were put to miscellaneous uses by tenants in the area [A-1-3-3, Photo #5; A-10-1-1].

It should be noted that during this entire period, beginning on approximately May 19, 1985, the Fairview Fire District and the Town of Poughkeepsie had repeatedly expressed concern as to the safety at the site due to numerous fire and building code violations [A-11-1-6]. In response, 1929 Associates had one building boarded up [A-12-1-12] and, according to Donn Courselle of Robert-Mark Realty, the owner began to have the pits in the foundry building filled in with soil, bricks and concrete. However, this process was halted until investigations of the materials within the pits could be completed.

The G&H site visit of June 17, 1987 verified the existence, in the covered alleyway outside the foundry building, of five 55-gallon drums (open, unlabeled and some rusting and bulging), four 5-gallon gas tanks, and 16 5-gallon pails. Two of the 55-gallon drums contained small amounts of liquid. The 14 open pits in the foundry building contained water, oil, wood and refuse. Some of the pits were partially filled with soil, gravel, bricks and concrete. The foundry building and surrounding areas are very accessible to the public, as there is no fencing barrier or security.

4.2 Site Topography

The ground surface of Dutchess County is moderately irregular, consisting of an almost continuous alternation of hills and valleys. The county is divided, on the basis of topography, into two relatively distinct parts: 1) numerous small irregular shaped hills, and 2) numerous regular shaped hills and low mountains. The topographic section characterized by numerous small irregular shaped hills is located west of Wappinger Creek and longitude 73° 45' W. [A-13-2-14, p. 6]. The Schatz Plant site is located in this topographic region. Most of the small irregular shaped hills range in height from about 20 to 100 feet above intervening valleys. The Schatz Plant has an elevation of approximately 175 feet and is located on a level area northwest of College Hill.

The site is entirely paved and has a slope of less than three percent. The nearest river is the Hudson River, 4,700 feet west, and the nearest lake is the College Hill Park Reservoir which is topographically upgradient of the site and located, 2,000 feet southeast of the site. The site does not lie in a flood plain zone.

4.3 Site Hydrogeology

The climate of Dutchess County is humid continental and is characterized by long, cold winters, short, warm summers, and abundant rainfall. The mean monthly temperature is approximately 49°F and the mean annual precipitation is about 45 inches (see Figure 4-1). The mean annual lake evaporation is 31 inches, thus net precipitation is 14 inches. The one-year 24-hour rainfall is approximately 2.85 inches.

Groundwater occurs in all geologic formations in Dutchess County. The two principal water bearing formations or groups are: 1) the consolidated rocks that range in age from Precambrian to Ordovician, and 2) unconsolidated deposits of Pleistocene and Recent Age [A-13 p. 12]. The principal bedrock units within the county are the undifferentiated granite and gneiss (Precambrian), the Cheshire Quartzite (Early Cambrian), the Stockbridge limestone (Ordovician and Cambrian), and the Hudson River formation (Ordovician). The Hudson River formation is the most extensive bedrock unit in the county and underlies the Schatz Plant site. This formation is chiefly composed of slate and phyllite in the site area (see Table 4-1). The lower part of the unit contains much sandstone and is locally called bluestone. Depth to bedrock at the site is 26 feet based on a site boring log for well Du 498. For the first 225 feet, bedrock alternates from a shale to a "bluestone" [A-13-4-14 pp.15-20].

The structure of the Hudson River formation changes progressively from the northwest to southeast. In the relatively

unmetamorphosed rocks between the valleys of Wappinger Creek and Fishkill Creek small closely spaced subparallel joints resulting from slaty cleavage are numerous. The spacing of these joints ranges from a fraction of an inch to several inches, and spacings are wider in the more sandy parts of the formation. Openings of the bedding-plane type can be recognized in this area [A-13-9-15, p.20].

Unconsolidated material mantling the bedrock was chiefly deposited by glaciers and glacial melt water in Pleistocene time. Well Du 670, 4/10 of a mile northwest of the site (see Table 4-2), identifies a loam blanketing the area. However, the site lies at an interface between stratified deposits of sand and gravel and glacial till [A-13, Plate 3]. Because the site is paved, only an inference (based on available data) can be made to site soils. Sites soils are believed to consist of medium compact stratified drift consisting of mixtures of sand and gravel having a permeability probably between 10^{-3} cm/sec and 10^{-4} cm/sec. This is supported by on-site well yields.

Table 4-2
Drillers' Log of Selected Wells in Dutchess County
Du 670: 15Y, 15.5N, 9.3W

	Thickness (ft)	Depth (ft)
Loam.....	2	2
Shale.....	24	26
"Bluestone".....	199	225
Shale.....	10	235
"Bluestone".....	15	250

Source: Reference A-13, p. 76

As of 1961, three industrial wells had been drilled on the site, Du 498, Du 633, and Du 106, and were used for cooling purposes [A-13-11-4, pp. 63-72,75]. Depth to bedrock varied from 18 to 27 feet and well yields from 11 to 50 gpm. Well Du 106 was drilled to a depth of 55 feet, well Du 498 to 1,196 feet and well

Du 633 to 550 feet. Area groundwater flow within the overburden is west, towards the Hudson River.

Bedrock well yields are directly related to the surficial deposits. Low bedrock yield (13 gpm) is associated with till surface deposits, and higher yields (30 gpm) are associated with sand and gravel surface deposits, thus indicating that recharge to bedrock is affected by surficial deposits [A-13 p.35]. Therefore, since well yields vary from 11 to 50 gpm, published literature suggests that groundwater in the unconsolidated deposits at the site directly recharges the site bedrock aquifer.

The primary aquifer of concern is the bedrock aquifer. Based on Table 13 of Reference A-13, depth to groundwater in well Du 498 at the site was 4 feet in 1949. During pumping, drawdown of 166 feet was recorded at a discharge rate of 50 gpm. This data suggests the well has a capacity of 0.3 gal/ft drawdown, indicating a relatively impermeable bedrock aquifer.
Well Du 670, located 4/10 miles northwest, has a depth to groundwater of 24 feet and is likely to be representative of site conditions.

The three bedrock wells drilled on site may provide a pollutant migratory pathway into the bedrock aquifer as deep as 1,200 feet below surface. Given that bedrock structure in the site area is known to have numerous joints, and bedrock is only 27 feet below grade, site pollutants can migrate along the annulus space and within the joints downward.

4.4 Site Contamination

Waste Types and Quantities

In the past, the Schatz Plant had generated drums of detergents, alkaloids, fungicides and chemical solvents. About 30 55-gallon drums of these materials were discovered in 1986. Some residual

material may remain as a result of spillage over the years. The site also contained over 60 55-gallon drums of waste cutting oil and water. Most of these drums and their contents were also removed. However, some drums remain and residual material may be present. Currently at the site, 14 open pits located within the foundry building contain water, oil and sludge. The materials in these pits were tested and PCB's in concentrations from 4.4 ppm to 264.4 ppm were detected [A-9].

Ground Water

No data available [B-1-8-14].

Surface Water

No data available for surface water outside of the structure [B-1-8-14].

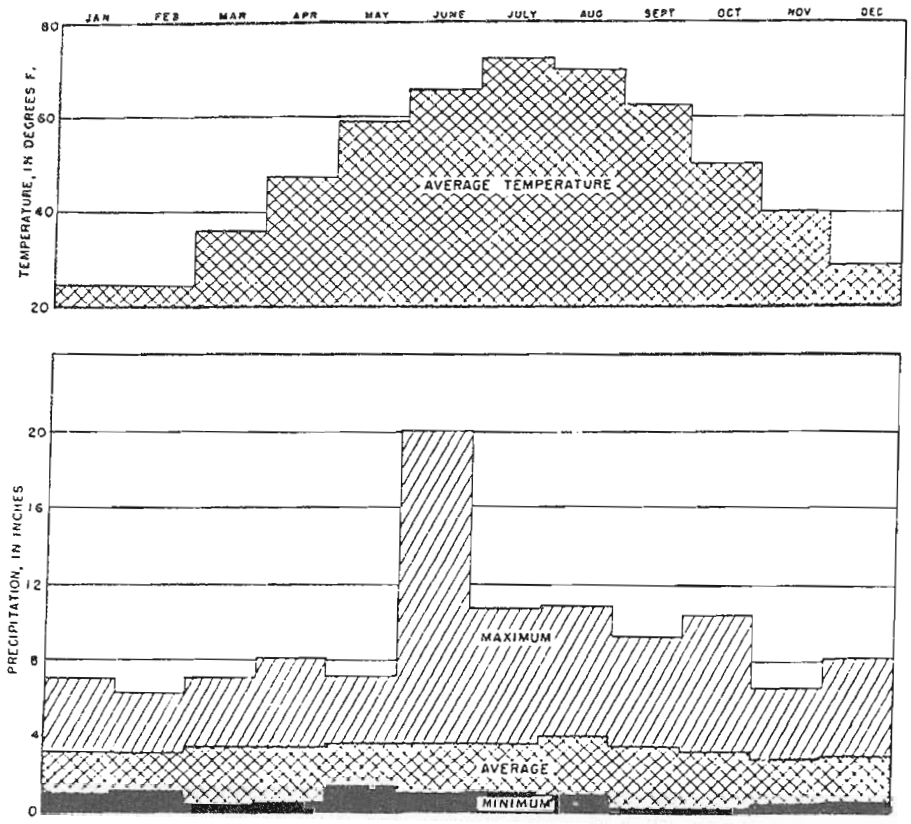
Soil

Contaminated soil was identified outside of the building during May 7, 1986 inspection by NYDEC. However, no soil analysis was performed [B-1-8-14].

Air

No data available.

Figure 4-1



Average monthly temperature and maximum, average, and minimum monthly precipitation at Wappingers Falls for the period 1893-1950.

Source: Reference A-13 pg. 11

Table 4-1

Class	Age	Geologic Unit		Maximum thickness (feet)	Character of material	Water-bearing properties
Unconsolidated deposits	Recent	Alluvium		30±	Clay, silt sand, and gravel deposited by present-day streams in lakes, swamps, and on flood plains.	Not important as source of water because of limited thickness and restriction to discontinuous areas adjacent to streams. Potentially important, however, in larger valleys where coarse-grained material permits induced infiltration from nearby streams.
	Pleistocene	Stratified drift	Sand and gravel	200	Irregularly interbedded and interlensing sand and gravel formed by glacial melt-water streams.	Most productive source of ground water in county, though restricted in areal extent to portions of main stream valleys. Yields moderate to large supplies from properly constructed wells. Water moderately hard in parts of the valleys underlain by Stockbridge limestone.
			Lacustrine deposits	200	Clay and silt deposited in glacial lakes.	Yields little water. Generally acts as a confining bed where underlain by permeable deposits.
		Unstratified drift	Till	150	Heterogeneous mixture of boulders and clay deposited by glacial ice. In places, contains small lenses of sand and gravel. Locally called "hardpan."	Generally thin and impermeable but yields small supplies to wells of large diameter.
Consolidated rocks	Late (?) and Middle Ordovician	Hudson River formation		3,000+	Shale or slate, chiefly gray or black but locally red, purple, and green. Contains beds of grit, limestone, limestone conglomerate, and black chert. Metamorphosed to phyllite and in east to schist.	Most extensive bedrock formation in county. Yields average 16 gpm. Water moderately soft and fairly low in dissolved solids, but hydrogen sulfide reported in some wells.
	Ordovician and Cambrian	Stockbridge limestone		1,000±	White, blue, and gray limestone and dolomite metamorphosed to marble in east. Veins of calcite and quartz common.	Chiefly restricted to valley areas. Most productive bedrock formation; yields average 22 gpm and range widely from 0 to 220 gpm. Water moderately hard and relatively high in dissolved solids.
	Early Cambrian	Cheshire quartzite		600±	Strong, compact rock composed almost entirely of quartz. Generally white except locally, where impurities result in buff or pink color.	Unimportant as a source of ground water because of small areal extent. Yields of five wells in southern part of county average 10 gpm.
	Precambrian	Undifferentiated granite and gneiss		Unknown	Banded black and white gneiss and gray or pink granite. Chief minerals feldspar and quartz. Locally contains basic dikes, quartz veins, and minor amounts of schist and marble.	Principally restricted to southern part of county. Yields of wells average 11 gpm. Water generally soft and low in dissolved solids.

Source: Reference A-13 pg. 14

SECTION V

NARRATIVE

5. PRELIMINARY HRS

5.1 Narrative Summary

The Schatz Plant site is a structure housing 14 open pits which have been determined to contain over 50 ppm of PCB's in standing liquid. The site is located in the Town of Poughkeepsie, Dutchess County, New York.

The site and some of the surrounding commercial properties are owned by 1929 Associates. The site is an abandoned automobile bearing manufacturing company which was founded in 1915 and went bankrupt in 1980. The site was inspected by the NYSDEC, in May 1986, at which time 100 unmarked, unlabeled 55-gallon drums and the 14 open pits were discovered. Cleanup efforts were undertaken by the owner beginning in December 1986. At the time of the G&H site inspection, all but five of the 55-gallon drums had been removed. The condition of the pits remained unchanged from the time of the NYSDEC inspection

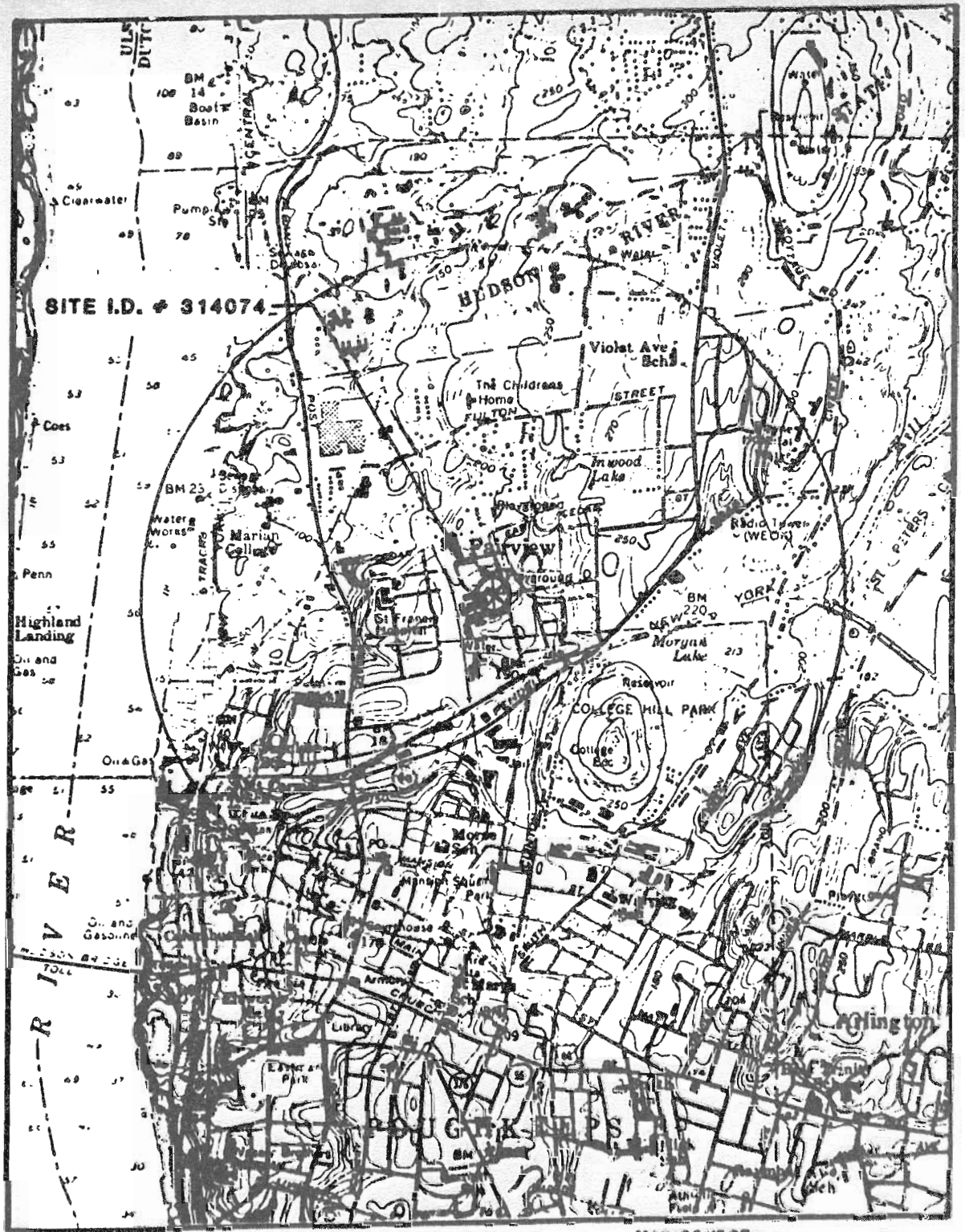
The potential for direct contact is curtailed to the public by installing wooden enclosure properly secured with doors and locks. Ground water is not used for drinking in the area. However, the Hudson River is located 4,700 feet west of the site with the surface water intake for the City of Poughkeepsie.

LOCATION

5.2 Location

FIGURE NO. 1

SCHATZ PLANT



5.3 HRS Worksheets

Facility name: Schatz Plant

Location: 70 Fairview Avenue, Poughkeepsie, NY 12601

EPA Region: II

Person(s) in charge of the facility: 1929 Associates

319 Main Mall, Poughkeepsie, NY 12602

Name of Reviewer: Propersi/Radko Date: 8/25/87

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

The Schatz Plant is an abandoned facility located in the City of Poughkeepsie. The site had been owned by Schatz Federal Bearing Company which filed for bankruptcy in 1981. Various hazardous materials have been identified at the site. Materials are located in 14 pits housed by the existing structure

Scores: $S_M = 26.79$ ($S_{gw} = 45.59$ $S_{sw} = 8.31$ $S_a = 0.00$)

$S_{FE} = 21.88$

$S_{DC} = 0.00$

FIGURE 1
HRS COVER SHEET

Ground Water Route Work Sheet							Max. Score
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)		
1 Observed Release	(0) 45	1	0	45	3.1		45
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.							
2 Route Characteristics					3.2		
Depth to Aquifer of Concern	0 1 (2) 3	2	4	6			
Net Precipitation	0 1 (2) 3	1	2	3			
Permeability of the Unsaturated Zone	0 1 (2) 3	1	2	3			
Physical State	0 1 2 (3)	1	3	3			
Total Route Characteristics Score			11	15			
3 Containment	0 1 2 (3)	1	3	3	3.3		
4 Waste Characteristics					3.4		
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18			
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1	4	8			
Total Waste Characteristics Score			22	26			22
5 Targets					3.5		
Ground Water Use	0 1 (2) 3	3	6	9			
Distance to Nearest Well/Population Served	0 4 6 8 10 / 12 16 18 20 / 24 (30) 32 35 40	1	30	40			
Total Targets Score			36	49			36
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			23,136	57,330			35,640
7 Divide line 6 by 57.330 and multiply by 100	S_{gw} = 45.59						62.17

FIGURE 2
GROUND WATER ROUTE WORK SHEET

Surface Water Route Work Sheet							
Rating Factor	Assigned Value (Circle One)		Multi-plier	Score	Max. Score	Ref. (Section)	Max. Score
1 Observed Release	(0) 45		1	0	45	4.1	45
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.							
2 Route Characteristics						4.2	
Facility Slope and Intervening Terrain	(0) 1 2 3		1	0	3		
1-yr. 24-hr. Rainfall	0 1 (2) 3		1	2	3		
Distance to Nearest Surface Water	0 1 (2) 3		2	4	6		
Physical State	0 1 2 (3)		1	3	3		
Total Route Characteristics Score				9	15		
3 Containment	0 1 2 (3)		1	3	3	4.3	
4 Waste Characteristics						4.4	
Toxicity/Persistence	0 3 6 9 12 15 (18)		1	18	18		
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8		1	4	8		
Total Waste Characteristics Score				22	26		22
5 Targets						4.5	
Surface Water Use	0 1 2 (3)		3	9	9		
Distance to a Sensitive Environment	(0) 1 2 3		2	0	6		
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 12 16 18 20 24 30 32 35 40		1	0	40		
Total Targets Score				9	55		9
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5				5,346	64,350		8,910
7 Divide line 6 by 64,350 and multiply by 100		S_{SW} = 8.31					13.85

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multiplier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	5.1
Date and Location:	No Samples Taken				
Sampling Protocol:	No Samples Taken				
If line 1 is 0, the S_a = 0. Enter on line 5. If line 1 is 45, then proceed to line 2.					
2 Waste Characteristics					5.2
Reactivity and Incompatibility	(0) 1 2 3	1	0	3	
Toxicity	0 1 2 3	3	9	9	
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1	4	8	
Total Waste Characteristics Score			13	20	
3 Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 (18) 21 24 27 30	1	18	30	
Distance to Sensitive Environment	(0) 1 2 3	2	0	6	
Land Use	0 1 2 (3)	1	3	3	
Total Targets Score			21	39	
4 Multiply 1 x 2 x 3			0	35,100	
5 Divide line 4 by 35,100 and multiply by 100		S_a = 0.00			

FIGURE 9
AIR ROUTE WORK SHEET

	S	S^2
Groundwater Route Score (S_{gw})	45.59	2078.4
Surface Water Route Score (S_{sw})	8.31	69.06
Air Route Score (S_a)	0.00	0.00
$S_{gw}^2 + S_{sw}^2 + S_a^2$		2147.46
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		46.34
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		26.79

FIGURE 10
WORKSHEET FOR COMPUTING S_M

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	1 (3)	1	3	3	7.1
2 Waste Characteristics					7.2
Direct Evidence	(0) 3	1	0	3	
Ignitability	(0) 1 2 3	1	0	3	
Reactivity	0 (1) 2 3	1	1	3	
Incompatibility	(0) 1 2 3	1	0	3	
Hazardous Waste Quantity	0 1 2 3 (4) 5 6 7 8	1	4	8	
Total Waste Characteristics Score			5	20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 (5)	1	5	5	
Distance to Nearest Building	0 1 2 (3)	1	3	3	
Distance to Sensitive Environment	(0) 1 2 3	1	0	3	
Land Use	0 1 2 (3)	1	3	3	
Population Within 2-Mile Radius	0 1 2 3 4 (5)	1	5	5	
Buildings Within 2-Mile Radius	0 1 2 3 4 (5)	1	5	5	
Total Targets Score			21	24	
4 Multiply 1 x 2 x 3			315	1,440	
5 Divide line 4 by 1,440 and multiply by 100		S_{FE} =	21.88		

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	(0) 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	(0) 1 2 3	1	0	3	8.2
3 Containment	0 (15)	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 (3)	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 3 4 (5)	4	20	20	
Distance to a Critical Habitat	(0) 1 2 3	4	0	12	
Total Targets Score			20	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			0.00	21,600	
7 Divide line 6 by 21,600 and multiply by 100	S_{DC} = 0.00				

FIGURE 12
DIRECT CONTACT WORK SHEET

5.4 HRS Documentation

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

INSTRUCTIONS: As briefly as possible summarize the information you used to assign the score for each factor (e.g., "Waste quantity = 4,230 drums plus 800 cubic yards of sludges"). The source of information should be provided for each entry and should be a bibliographic-type reference. Include the location of the document.

FACILITY NAME: Schatz Plant

LOCATION: 70 Fairview Ave., Poughkeepsie, NY 12601

DATE SCORED: 8/25/87

PERSON SCORING: Propersi/Kazemi

PRIMARY SOURCE(S) OF INFORMATION (e.g. EPA region, state, FIT, etc.):

Site visit, site representative interview, Town of Poughkeepsie Planning Department, NYSDEC, Dutchess County Department of Health.

FACTORS NOT SCORE DUE TO INSUFFICIENT INFORMATION:

Sa - no air sample data available.

COMMENTS OR QUALIFICATIONS:

None.

GROUND WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected (5 maximum):

No release observed.

Rationale for attributing the contaminants to the facility:

Test data from private and observation wells. [1,2]

N/A
Score = 0

* * *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern

Name/description of aquifers(s) of concern:

Bedrock aquifer. [1]

Depth(s) from the ground surface to the highest seasonal level of the saturated zone [water table(s)] of the aquifer of concern:

26 feet. [1]

Depth from the ground surface to the lowest point of waste disposal/storage:

Depth of the pits is not known [B-1-14-14].
Score = 2

Net Precipitation

Mean annual or seasonal precipitation (list months for seasonal):

45 inches [2]

Mean annual lake or seasonal evaporation (list months for seasonal):

31 inches [2]

Net precipitation (subtract the above figures):

14 inches
Score = 2

Permeability of Unsaturated Zone

Soil type in unsaturated zone:

Sand and gravel. [1]

Permeability associated with soil type:

10^{-3} to 10^{-4} cm/sec. [1]
Score = 2

Physical State

Physical state of substances at time of disposal (or at present time for generated gases):

Liquid and sludge [A-4-2-2].
Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Fourteen unlined pits open to the air. The structure of the pits is concrete. [B-1-12-14]

Method with highest score:

Fourteen unlined open pits.
Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated:

P.C.B. and heavy metals. [A-9]

Compound with highest score:

P.C.B.
Score = 18

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

167 cubic yard (estimate).

Basis of estimating and/or computing waste quantity:

Nine pits contain oil, liquids and sludge. Total volume of nine pits with assumed 2-ft liquid depth plus 5,000 gallons chemical in adjacent building. Sixty 55-gallon drums contained 1,123 gallons of oil/water mixture and thirty 55-gallon frozen chemical/oil drums. [B-1-14-14] [A-5-1-1] and [A-4-1-2]
Score = 4

* * *

5 TARGETS

Ground Water Use

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

Drinking water - the alternate source of water is the City of Poughkeepsie's water supply system fed by Hudson River.
Score = 2

Distance to Nearest Well

Location of nearest well drawing from aquifer of concern or occupied building not served by a public water supply:

North-northwest of site. [3]

Distance to above well or building:

1.8 miles [3]
Score = 2

Population Served by Ground Water Wells Within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

Eight non-municipal community wells serving 1,382 people.[3]

#82 - 50	#157 - 30	#152 - 60	#62 - 600
#110 - 108	#100 - 70	#73 - 450	#148 - 14

Population served by private wells = 12,533 persons. [6]

Computation of Land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius, and conversion to population (1.5 people per acre):

No farmland is irrigated by groundwater within 3 miles of the site. [B-1-13-14]

Total population served by ground water within a 3-mile radius:

13,915 persons.
Score = 5
Matrix Score = 30

SURFACE WATER ROUTE

1 OBSERVED RELEASE

Contaminants detected in surface water at the facility or downhill from it (5 maximum):

No release observed.

Rationale for attributing the contaminants to the facility:

N/A
Score = 0

* * *

2 ROUTE CHARACTERISTICS

Facility Slope and Intervening Terrain

Average slope of facility in percent:

Less than 3 percent. [4]

Name/description of nearest downslope surface water:

Hudson River 4,700 feet. [4]
West of site.

Average slope of terrain between facility and above-cited surface water body in percent:

Less than 3 percent. [4]

Is the facility located either totally or partially in surface water?

No.

Is the facility completely surrounded by areas of higher elevation?

No, the area to the south of the site is at a slightly lower elevation. [4]
Score = 0

1-Year 24-Hour Rainfall in Inches

2.85 inches. [2]
Score = 2

Distance to Nearest Downslope Surface Water

2,750 feet (south). [4]
Score = 2

Physical State of Waste

Liquid and sludge. [A-4-2-2]
Score = 3

* * *

3 CONTAINMENT

Containment

Method(s) of waste or leachate containment evaluated:

Contaminated soil outside the building, and spillage of oil and chemical on the floor. [A-2-1-2]

Method with highest score:

Contaminated soil outside the building and direct spillage of oil and chemical on the floor. [A-2-1-2]
Score = 3

4 WASTE CHARACTERISTICS

Toxicity and Persistence

Compound(s) evaluated

P.C.B. and heavy metals. [A-9]

Compound with highest score:

P.C.B.
Score = 18

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (Give a reasonable estimate even if quantity is above maximum):

167 cubic yards (estimate).

Basis of estimating and/or computing waste quantity:

Nine pits contain oil, liquids and sludge. Total volume of nine pits with assumed 2-ft liquid depth plus 5,000 gallons chemical in adjacent building. Sixty 55-gallon drums contained 1,123 gallons of oil/water mixture and thirty 55-gallon frozen chemical/oil drums. [B-1-14-15]
Score = 4

* * *

5 TARGETS

Surface Water Use

Use(s) of surface water within 3 miles downstream of the hazardous substance:

Recreation. [B-1-13-14]
Score = 3

Is there tidal influence?

Yes, there is a tidal influence on the Hudson River.

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

N/A

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

1.42 miles west of plant. [7]

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

Greater than one mile.
Score = 0

Population Served by Surface Water

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substances and population served by each intake:

All static water bodies are recreational (population served is not known). The only free flowing body, the Hudson River, has no intakes within three miles downstream of the site (recreational population served is not known). [3]

Computation of Land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

None. [B-1-13-14]

Total population served:

Zero

Name/description of nearest of above water bodies:

N/A

Distance to above-cited intakes, measured in stream miles.

There are no intakes within three miles (downstream) of the site.
Score = 0

AIR ROUTE

1 OBSERVED RELEASE

Contaminants detected:

No observed release.

Date and location of detection of contaminants

No samples taken.

Methods used to detect the contaminants:

N/A

Rationale for attributing the contaminants to the site:

P.C.B.'s have been detected in the pit waste, as documented by laboratory sampling records. [A-9]
Score = 0

* * *

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

P.C.B. [A-9]

Most incompatible pair of compounds:

None.

Toxicity

Most toxic compound:

P.C.B.
Score = 3

Hazardous Waste Quantity

Total quantity of hazardous waste:

167 cubic yards (estimated).

Basis of estimating and/or computing waste quantity:

Nine pits contain oil, liquids and sludge. Total volume of nine pits with assumed 2-ft liquid depth plus 5,000 gallons in adjacent building. Sixty 55-gallon drums contained 1,123 gallons of oil/water mixture and thirty 55-gallon frozen chemical/oil drums. [B-1-14-14] [A-5-1-1] and [A-4-1-2].
Score = 4

* * *

3 TARGETS

Population Within 4-Mile Radius

Circle radiu used, give population, and indicate how determined:

0 to 4 mi | 0 to 1 mi | 0 to 1/2 mi | 0 to 1/4 mi

8,834 persons (based on 351 buildings assumed to house 3.8 persons each, and 25 percent of the city of Poughkeepsie (pop. 30,000)). [3,4]
Score = 18

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

N/A.

Distance to 5-acre (minimum) fresh-water wetland, if 1 mile or less:

1.42 miles west of the site. [7]

Distance to critical habitat of an endangered species, if 1 mile or less:

Greater than one mile.
Score = 0

Land Use

Distance to commercial/industrial area, if 1 mile or less:

Adjacent to the site.
Score = 3

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

1 mile south and south-west of the site. [4]
Score = 1

Distance to residential area, if 2 miles or less:

150 feet.
Score = 3

Distance to agricultural land in production within past 5 years, if 1 mile or less:

N/A

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

No agricultural land within 2 miles. [B-1-13-14]

Is a historic or landmark site (National Register of Historic Places and National Natural Landmarks) within the view of the site?

None

FIRE AND EXPLOSION

1 CONTAINMENT

Hazardous substances present:

P.C.B. and heavy metals.

Type of containment, if applicable:

Fourteen unlined pits contain oil, liquids and sludge.
Score = 3

* * *

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

No measurements taken.
Score = 0

Ignitability

Compound used:

P.C.B., oil.
Score = 0

Reactivity

Most reactive compound:

None
Score = 1

Incompatibility

Most incompatible pair of compounds:

None
Score = 0

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

167 cubic yards (estimate).

Basis of estimating and/or computing waste quantity:

Nine pits contain oil, liquids and sludge. Total volume of nine pits with assumed 2-ft liquid depth plus 5,000 gallons in adjacent building. Sixty 55-gallon drums contained 1,123 gallons of oil/water mixture and thirty 55-gallon frozen chemical/oil drums. [B-1-14-14], [A-5-1-1] and [A-4-1-2].
Score = 4

* * *

3 TARGETS

Distance to Nearest Population

20 feet (0.004 miles).
Score = 5

Distance to Nearest Building

20 feet (0.004 miles).
Score = 3

Distance to Sensitive Environment

Distance to wetlands:

1.42 miles west of the site. [7]
Score = 0

Distance to critical habitat:

Greater than one mile.
Score = 0

Land Use

Distance to commercial/industrial area, if 1 mile or less:

The site is located within a heavily populated and built-up residential, commercial, industrial area.
Score = 3

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

N/A

Distance to residential area, if 2 miles or less:

The site is located within a heavily populated and built-up residential, commercial, industrial area.

Distance to agricultural land in production within past 5 years, if 1 mile or less:

N/A

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

No agricultural land within 2 miles. [B-1-13-14]

Is a historic or landmark site (National Register of Historic Places and National Natural Landmarks) within the view of the site?

None

Population Within 2-Mile Radius

29,024 persons based on 1,322 buildings assumed to house 3.8 persons each and 80 percent of the city of Poughkeepsie (pop. 30,000). [3,4]
Score = 5

Buildings Within 2-Mile Radius

7,638 based on 29,024 persons and 3.8 persons per building.
Score = 5

DIRECT CONTACT

1 OBSERVED INCIDENT

Date, location, and pertinent details of incident:

No incident observed or reported.
Score = 0

* * *

2 ACCESSIBILITY

Describe type of barrier(s):

The site is boarded up, properly secure with doors and locks. [B-1-8-14]
Score = 0

* * *

3 CONTAINMENT

Type of containment, if applicable:

Fourteen pits open to the air. The structure of the pit is concrete.
Score = 15

* * *

4 WASTE CHARACTERISTICS

Toxicity

Compounds evaluated:

P.C.B. and heavy metals.

Compound with highest score:

P.C.B.
Score = 3

5 TARGETS

Population within one-mile radius

8,834 persons based on 351 buildings assumed to house 3.8 persons each and 25 percent of the city of Poughkeepsie (pop. 30,000). [3,4]
Score = 5

Distance to critical habitat (of endangered species)

Greater than one mile.
Score = 0

REFERENCES

If the entire reference is not available for public review in the EPA regional files on this site, indicate where the reference may be found:

Reference Number	Description of Reference
1	Simmons, E., Groundwater Resources of Dutchess County, NY, USGS Bulletin GW-43, 1961, pp. 6,12, 15-20,35,63,72,75,76.
2	Uncontrolled Hazardous Waste Site Ranking System; A Users Manual, USEPA, 1984.
3	New York State Atlas of Community Water System Sources, New York State Department of Health, 1982, p. 66.
4	Poughkeepsie Quadrangle Map, United States Department of the Interior Geologic Survey, 1957.
5	Robert T. Kennedy (Kramer Environmental), Letter to Donn Courselle (Robert-Mark), May 14, 1987. (see Appendix)
6	U.S.G.S. House Count.
7	Ram Pergadia NYSDEC Region III Wetland Information.

STATE OF NEW YORK

DEPARTMENT OF CONSERVATION

WATER RESOURCES COMMISSION

Ground-Water Resources of Dutchess County, New York

By

E. T. SIMMONS, I. G. GROSSMAN, AND R. C. HEATH

Geologists, U. S. Geological Survey

Prepared by the

U. S. GEOLOGICAL SURVEY

in cooperation with the

NEW YORK WATER RESOURCES COMMISSION

BULLETIN GW-43

ALBANY, N. Y.

1961

GEOGRAPHY

Location and Setting

Dutchess County is in southeastern New York State, about halfway between New York City and Albany. It is one of a row of counties east of the Hudson River that border on the New England States. The county is bordered on the east by the State of Connecticut, on the south by Putnam County, on the west by the Hudson River, and on the north by Columbia County and the Commonwealth of Massachusetts.

Dutchess County is rectangular in outline and has an area of 316 square miles. It extends about 34 miles in a north-south direction and 22 miles in an east-west direction. Most of it lies between meridians 73°30' and 73°59' west longitude and parallels 41°30' and 42°04' north latitude. The population of the county in 1950 was 136,791, about 40 percent of which was concentrated in the cities of Poughkeepsie and Beacon.

Topography

The surface of Dutchess County is moderately irregular, consisting of an almost continous alternation of hills and valleys (pl. 1). Flat areas, though present in most parts of the county, are generally small and occupy a minor proportion of the area. The county is divided on the basis of topography into two relatively distinct parts. The smaller of these consists of the area in the northwestern part of the county west of Wappinger Creek and longitude 73°45'W. This area is characterized by numerous small, irregularly shaped hills, most of which range in height from about 20 to about 100 feet above the intervening valleys. Scattered throughout the area, however, are a few small, regularly shaped hills that rise 200 to 300 feet or more above the adjacent valleys. Altitudes in this area range from about 40 feet above sea level near the Hudson River to about 900 feet above sea level at Old Round Top. Drainage is not so well developed as in the remainder of the county, as indicated by the presence of numerous swamps.

The remainder of the county--that is, east of longitude 73°45' W. in the northern part of the county and east and south of Wappinger Creek in the central and southern parts of the county--is characterized by numerous regularly shaped hills and low mountains. These are larger and generally higher than those in the northwestern part. Many of the hills in this area range in altitude from 500 to 1,000 feet above the floors of the valleys. The highest altitudes generally occur along the southern and eastern boundaries of the county. South Beacon Mountain, near the southwest corner of the county reaches an altitude of 1,602 feet above sea level. Brace Mountain, in the extreme northeast corner, reaches an altitude of 2,311 feet above sea level, the highest point in the county. South Beacon Mountain and the other mountains in the southern part of the county mark the northern limit of the Hudson Highlands, a belt of northeast-trending mountains under-

GEOLOGY

Ground water occurs in all the geologic formations in Dutchess County and most of these are important sources of water. With respect to the principal kinds of openings in which the water occurs, these formations are placed in two major groups: (1) consolidated rocks that range in age from Precambrian to Ordovician, and (2) unconsolidated deposits of Pleistocene and Recent age. The areal extent of the different bedrock formations is shown on plate 2. These rocks underlie the entire county and crop out at the surface principally on hillsides and hilltops. In most of the county, however, the bedrock is overlain by unconsolidated deposits, which range in thickness from less than a foot on steep hills to more than 100 feet in some of the larger valleys. The areal extent of the different types of unconsolidated deposits is shown on plate 3. The principal events leading to the present-day distribution of the consolidated rocks and unconsolidated deposits in the county are described briefly in the following paragraphs. Although this report is a cooperative product of the New York Water Resources Commission and the U. S. Geological Survey, the geologic nomenclature does not necessarily follow that of the U. S. Geological Survey.

Geologic History

The oldest known strata in the county were laid down as clayey and limy mud and sand in a sea which covered the area in Precambrian time, more than 500 million years ago. After deposition, these strata were subjected to great heat and pressure which accompanied the intrusion of extensive masses of granite. The sediments were metamorphosed to a gneiss by the heat and pressure, and the gneiss is now so completely penetrated by the granite that the two look very much alike and hence are referred to on the bedrock map (pl. 2) as "undifferentiated granite and gneiss." The intrusion of the granite was followed by a long period of erosion during which the area was reduced to a low plain.

During the Cambrian, the first period of the Paleozoic era, the sea once again advanced over the area. A thick mass of sediments, consisting chiefly of sand and limy mud, collected on the sea floor. Deposition of limy mud and of clay and sandy clay continued into the succeeding Ordovician period. All these sediments were subsequently consolidated into beds of sandstone, limestone, and shale. At the end of the Ordovician, these beds were folded, metamorphosed, and raised above sea level during an episode of mountain-making known as the Taconic orogeny. During this orogeny the sandstone, limestone, and shale in the southern and eastern parts of the county were converted, through metamorphism, to quartzite, marble, and phyllite and schist. During and following the Taconic orogeny the area was subjected to another long period of erosion. Some deposition may have occurred in the general area during subsequent periods of the Paleozoic era, although no bedrock younger than Ordovician is known to occur. Crustal movements near the end of Devonian time known as the Acadian disturbance, during which rocks in areas to the north and west were faulted, also may have affected the rocks in Dutchess County.

Consolidated Rocks

The bedrock underlying the county is composed of highly metamorphosed rocks of Precambrian age, and partially metamorphosed rocks of Paleozoic age. The older rocks, those of Precambrian age, consist mainly of granite and gneiss. The younger rocks, of Paleozoic age, consist of a larger variety of rock types, including quartzite, limestone, dolomite, marble, shale, phyllite, slate, and schist. Differences in age, degree of metamorphism, and lithology influence the water-bearing properties of the consolidated rocks. Thus, as an aid in understanding the occurrence of ground water in these rocks in different parts of the county, each of the principal types, as differentiated in table 2, is discussed separately in the following paragraphs.

Undifferentiated granite and gneiss.--Almost a tenth of Dutchess County is underlain at or near the surface by masses of northeast-trending igneous and metamorphic rocks of Precambrian age consisting chiefly of granite and gneiss. The largest mass underlies the southern part of the county from the Hudson River to the Connecticut State line. This mass ends abruptly 2 to 3 miles north of the southern border of the county against a series of subparallel major faults (pl. 2). Erosion of less resistant Paleozoic rocks north of the faults has resulted in a row of granite and gneiss spurs which are prominent topographic features in the southern part of the county.

The second largest mass of granite and gneiss underlies the group of prominent hills east of Dover Plains. Smaller bodies of granite and gneiss crop out at Corbin Hill, north of Pawling; at Stissing Mountain, west of Pine Plains; northeast of Beacon; and south of Sprout Creek, a few miles southeast of Poughkeepsie (pl. 2). The elongate mass northeast of Beacon has been called the Matteawan granite (Mather, 1843, pl. 18) and the Glenham gneiss (Gordon, 1911, p. 18). In the southwestern part of the county, the granite was subdivided into the Canada Hill granite and Storm King granite by Berkey and Rice (1921). The gneiss, which contains some schist and limestone, was called "Grenville gneiss and schists" by Berkey and Rice. However, in an earlier study of the southwestern part of the county, Gordon (p. 11) grouped together all the granite and gneiss along the southwestern border of the county under the term "Precambrian gneisses."

Balk (1932 and 1936) mapped the same rocks in the eastern part of the county and made a detailed study of their structure. In his reports, and in a report by Barth (1936), the granite and gneiss were combined into one major group, undifferentiated Precambrian gneiss. Because these rocks have not been further subdivided in the eastern part of the county and because there appear to be no significant differences in their water-bearing properties, the granites and the gneisses are grouped together in this report as "undifferentiated granite and gneiss."

In physical appearance, most of the granite and gneiss consists of light and dark minerals presenting a speckled appearance (granite) or arranged in layers (gneiss). The light minerals consist chiefly of quartz, feldspar, and white mica (muscovite). The dark minerals include black mica (biotite), garnet, and hornblende. Extensive and readily accessible exposures of gneiss can be seen in road cuts along the Taconic State Parkway near the Putnam County line. These rocks are more resistant to weathering than the younger Paleozoic rocks, as is reflected by the more rugged topography and higher altitudes in areas where they crop out. Most of the layers (foliation) in the granite and gneiss strike northeast, approximately parallel to the long axis of the Hudson Highlands, and dip steeply to the southeast. Exceptions occur near thrust faults where the strike and dip of the foliation parallel the faults. Most of the large and prominent spurs underlain by granite and gneiss in the southern part of the county point northeastward, and the long axes of the smaller bodies also are alined in that direction.

Cheshire quartzite.--A compact, strong quartzite, which is so tough that it is deliberately avoided by some drillers, crops out at a few localities in Dutchess County. This quartzite has been called the Poughquag quartzite by Berkey and some other geologists working in New York. It is called the Cheshire quartzite in this report, after its type locality at Cheshire, Berkshire County, Mass. (Emerson, 1917, p. 32-34). The quartzite unconformably overlies the Precambrian granite and gneiss and is the oldest Paleozoic rock in the county. In the southern and eastern parts of the county the quartzite forms the flanks of the higher ridges that are underlain by granite and gneiss. In the east-central part of the county, quartzite underlies several areas along the southern and western borders of the granite and gneiss in the vicinity of Dover Plains. Quartzite is present also in the southern part of Stissing Mountain in the north-central part of the county.

The Cheshire quartzite ranges in thickness from a few feet to about 600 feet. A thickness of about 250 feet has been reported at Stissing Mountain (Knopf, 1956, p. 11). The base of the formation may be conglomeratic and the top contains shaly beds in some places. In general, the quartzite is less strongly metamorphosed in the west than in the east. Some outcrops in the western part of the county still retain original sedimentary features, including bedding, crossbedding, and ripple marks. In the southeast, however, the original bedding has been destroyed by fracturing and recrystallization.

Where the Cheshire quartzite is composed almost entirely of quartz, it is white. Where small amounts of feldspar, mica, and other impurities are mixed with the quartz, it is pink or buff.

The Cheshire is not important as a source of ground water because of its small areal extent and because it underlies steeply sloping hillsides which are sparsely settled. Only five wells in the county are known to tap quartzite; these are listed in table 13.

Stockbridge limestone.--Over the Cheshire quartzite is a thick sequence of carbonate rocks, which underlie a much greater part of the county than the quartzite. In the east, carbonate rocks lie beneath the broad Harlem Valley, which contains Tenmile River and its principal tributaries and which extends almost without interruption from the Putnam County line to the Columbia County line. In the south, the valley of Fishkill Creek is underlain by limestone which extends from Beacon northeastward to the head of the creek. Other areas in the western and central parts of the county also are underlain by elongate masses of carbonate rocks (pl. 2).

Several different names have been applied to the carbonate rocks in different parts of the county, including Barnegat limestone (Mather, 1843, p. 410), Fishkill limestone (Gordon, 1911, p. 70), and Wappinger limestone (Gordon, p. 48). Knopf (1956, p. 1817) found that the carbonate rocks near Stissing Mountain range in age from Early Cambrian to Early Ordovician and divided them into the Stissing dolomite, Pine Plains formation, Briarcliff, dolomite, Halcyon Lake formation, and Rochdale limestone. Because there appear to be no essential differences in the water-bearing properties of the carbonate rocks, all are included in this report under the Stockbridge limestone, after the locality in Massachusetts where they were first described (Emmons, 1842, p. 154-156).

The carbonate rocks range in composition from almost pure calcium carbonate (limestone) to almost pure calcium-magnesium carbonate (dolomite). Limestone is more abundant in the upper part of the sequence and dolomite is more common in the lower part. Table 3 lists an analysis of a typical sample of dolomite from the Stockbridge limestone.

This analysis shows that more than 10 percent of the dolomite consists of impurities, chiefly silica and alumina. In some localities these impurities are abundant enough to form sandy and shaly beds in the Stockbridge.

Table 3.--Chemical composition of dolomite 1/ from the Stockbridge limestone

Determination	Percent by weight
Lime (CaO).....	29.07
Magnesia (MgO).....	16.29
Carbonic acid (H_2CO_3).....	40.76
Alumina (Al_2O_3).....	2.33
Ferric oxide (Fe_2O_3).....	.47
Silica (SiO_2).....	10.17
Total.....	99.09

1/ Collected at the Stoneco quarry of the Clinton Point Stone Co. about 4 miles south of Poughkeepsie. Analysis from Ries (1901, p. 779).

The metamorphism of the Stockbridge limestone generally increases in intensity from northwest to southeast. In the northwest and west, the formation is relatively undisturbed and original bedding is easily visible. Fossils have been found in the formation as far south as Clove Valley. Farther east, however, as in the Valley of Swamp River, the formation has been metamorphosed to a marble and the beds are severely folded. Balk noted that the folding is greater in the thin layers than in the thicker ones and that it is greatest near thrust faults. In the southeastern part of the county, the marble has been so severely deformed by plastic flow that it appears to be wrapped around stronger rocks. South of Pawling, the marble contains masses of schist that are folded and faulted into the limestone.

The deformation of the Stockbridge limestone makes it difficult to determine its thickness. In southwestern Putnam County, where the formation is relatively undisturbed, the thickness is about 1,000 feet. At Stissing Mountain, near Pine Plains in the north-central part of Dutchess County, the thickness of the different limestones and dolomites measured by Knopf (1946, p. 1211) totals 2,800 feet. The thickness of the carbonate rocks is

probably about 1,000 feet in most places in the county. The Stockbridge limestone weathers readily and commonly forms valley and lowland areas. In the valley of Fishkill Creek, solution cavities filled with clay and sand have been reported.

Hudson River formation.--The Hudson River formation is the most extensive bedrock unit in the county. As may be seen from plate 2, it extends from the Hudson River in the west to the Connecticut State line in the east, interrupted by only a few relatively narrow limestone belts. The name "Hudson River slate group" was first used by Mather (1840, p. 212, 256-258) for the slaty rocks in the southeastern part of the State. Gordon (1911) mapped these rocks in the Poughkeepsie quadrangle as the "Hudson River group." Berkey and Rice (1921) mapped the same rocks in southwestern Dutchess County as "Hudson River shales and phyllites." In the southeastern part of the county these rocks are referred to as "Hudson River pelite" in publications by Balk (1936) and Barth (1936). In the Copake quadrangle in southeastern Columbia County, the names Elizaville shale (mainly Cambrian, possibly including some Lower Ordovician), Berkshire schist (Ordovician), and Trenton black slate (Ordovician) have been used by Weaver (1957, pl. 1) for rocks that extend southward into northeastern Dutchess County. Ruedemann (1942) divided the predominantly argillaceous rocks in the Catskill quadrangle, in northwestern Dutchess County, into the Nassau beds and Schodack shale (including Bomoseen grit) of Cambrian age, and the Deepkill shale and Normanskill shale (including the Mount Merino member and the Austin Glen member) of Ordovician age. As used in this report, the Hudson River formation includes all the argillaceous and schistose rocks in Dutchess County.

Although the Hudson River formation is preponderantly argillaceous, it includes a large variety of rock types. The lower part of the unit contains much sandstone ("grit") and is locally called bluestone by some well drillers. The unit also contains chert and beds of sandstone, limestone, and conglomerate. Quartz veins are very abundant. The shale itself is locally black, grey, red, or green.

The metamorphism of the Hudson River formation increases in intensity from northwest to southeast, just as in the Stockbridge limestone. At Red Hook, in the northwestern part of the county, the unit is a shale. The shale grades imperceptibly southeastward into a slate and then into a lustrous phyllite. Between the valley of Wappinger Creek and the headwaters of Fishkill Creek, it is chiefly a phyllite. Farther southeast, between Fishkill Creek and the Harlem Valley it is predominantly a garnet-bearing schist. In the extreme southeastern part of the county, east of Pawling, it is a gneissic schist. The gneissic schist in this area contains amphibolite lenses and pegmatite intrusions.

The change in metamorphism is accompanied by a change in mineral composition. In the relatively unmetamorphosed phases of the formation in the northwestern and central parts of the county, the chief minerals are quartz and mica. In the strongly metamorphosed phase in the southeast, feldspar is an important additional constituent. Table 4 includes chemical analyses of rocks from various parts of the Hudson River formation, ranging from the relatively unmetamorphosed "slate" near Lagrangeville to the highly metamorphosed gneiss east of Pawling. There appear to be no radical chemical differences among the different samples. From the standpoint of mineral composition, however, the gneiss shows a greater percentage of feldspar (plagioclase) and a smaller percentage of white mica (muscovite) than does the slate and phyllite.

The structure of the Hudson River formation, like the mineral composition, changes progressively from northwest to southeast. In the relatively unmetamorphosed rocks between the valleys of Wappinger Creek and Fishkill Creek small closely spaced subparallel joints resulting from slaty cleavage are numerous. The spacing of these joints ranges from a fraction of an inch to several inches, and is wider in the more sandy parts of the formation. Openings of the bedding-plane type can be recognized in this area and to the northwest. In the southeastern part of the county, slaty cleavage is absent and the rocks are massive. Joints that are present are spaced from a few inches to several feet apart, rather than inches or fractions of an inch.

The thickness of the Hudson River formation is unkown because the beds in the southeast and east have been severely folded and faulted and because elsewhere individual beds can not be traced over long distances. The apparent thickness of the formation in Dutchess County ranges from a few feet to several thousand feet. Most wells of average depth drilled in this unit are not likely to penetrate other rocks unless they are drilled near the contact with the underlying limestone.

The type of overlying material has an important effect on the yield of wells in bedrock. Table 7 shows that the average yield of wells tapping bedrock that is overlain by sand and gravel is more than 30 gpm. By contrast, the average yield of bedrock wells where the overlying material consists predominantly of clay or till is only about 13 gpm. Deposits of sand and gravel store large amounts of water and transmit water readily to the underlying bedrock where hydraulic continuity exists between the two materials. However, some of the large yields reported from bedrock wells overlain by sand and gravel may result from leakage of water from the overlying permeable deposits directly into the well. The yield of wells in bedrock where the overlying unconsolidated deposits are absent or are less than 10 feet thick is about the same, or only a little greater, than of wells where the overlying deposits are thicker but consist of impermeable till or clay. Thus, it may be concluded that thick but impermeable deposits which tend to retain the water above the bedrock have about the same effect on yield of bedrock as no overlying material at all.

Topographic location apparently affects the yield of bedrock wells in some areas (Ellis, 1909, p. 101). In Dutchess County, the yield is generally highest from bedrock wells situated in valleys and is lowest on hills. Table 8 shows that the average yield of wells in valleys is about 20 gpm compared to an average of about 16 gpm for wells on hillsides and an average of about 12 gpm for wells on hilltops. The Cheshire quartzite is not included in the table because only a few records of wells drawing from this formation are available. The influence of topography on the yields of wells apparently stems, at least in part, from the fact that the water table is generally closer to the land surface in valleys than on hills. Thus, wells of the same depth penetrate a greater thickness of saturated material in valleys than on hills and yield more water, other things being equal.

It should be emphasized that the factors affecting the yield of wells in bedrock are interdependant and tend to operate in the same direction. Thus, most wells drilled in valleys have comparatively large yields not only because of their favorable topographic location but also because the bedrock there is more permeable and is more likely to be overlain by permeable sand and gravel. Similarly, most wells drilled on hills yield smaller quantities of water not only because of a less favorable topographic situation, but also because the bedrock is less likely to be overlain by permeable deposits.

[illegible]	[illegible]	[illegible]	122	Drl	215	2	12	Hudson River formation	4	--	7	Dom	[illegible]
[illegible]	[illegible]	New York State Dept. of Public Works	[illegible]	Drl	175	2	47	[illegible]	--	--	11	Dom	

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Table 11.--Records of selected wells in Dutchess County (Continued)

Well number	Location	Owner or occupant	Altitude above sea level (feet)	Type of well	Depth below land surface (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing formation	Water level below land surface (feet)	Method of lift	Yield (gallons per minute)	Use	Remarks
[illegible]	[illegible]	Town of Millbrook	600	Dug	20	48	--	Pleistocene gravel	--	Centrifugal	--	PS	Well draws water through bottom and from 2 lines of open-jointed tile 18 inches in diameter. One line extends 75 ft. to the east and the other extends 100 feet to the north. Each tile is surrounded by a layer of gravel.
[illegible]	33Y, 13.5S, 10.0E	Wassaic Water Co.	560	Dug	15	60	--	Pleistocene sand and gravel	7	Suction	26	PS	Well dry in summer.
[illegible]	33Y, 1.9S, 5.0E	Pine Plains Water Co.	600	Dug	15	102	--	do.	--	Centrifugal	50	PS	
[illegible]	33Y, 1.5S, 5.2E	do.	560	Drl	375	8	50	Stockbridge limestone	30	Force	50	PS	(a).
[illegible]	[illegible]	M. M. Leavitt	500	Drl	300	--	--	Hudson River formation	--	do.	55	Dom	Well flowed when drilled. Supplies swimming pool.
[illegible]	[illegible]	Amenia Water Co.	550	Drl	30	8	--	Pleistocene gravel	+1	Turbine	100	PS	Drawdown [illegible] ft after pumping 130 gpm for [illegible] hrs. Average consumption is [illegible],000 gpd. (a) (b).
[illegible]	[illegible]	do.	600	Drl	46	8	--	do.	+1	do.	100	PS	Well is auxiliary supply. Temperature 51°F, June 1956. (a).
[illegible]	[illegible]	Village of Red Hook	227	Drl	277	10	60	Hudson River formation	22	do.	100	PS	Drawdown 80 ft after pumping 100 gpm for 24 hrs. Yield diminished considerably during dry period in [illegible]. Two other similar wells at this location. (c).
[illegible]	[illegible]	F. D. Roosevelt National Historic Site	179	Drl	600	6	81	do.	--	--	15	Dom	(a) (b).
[illegible]	[illegible]	do.	180	Drl	212	6	89	do.	--	Turbine	10	Dom	Well has been pumped at 10 gpm for 24 hrs.
[illegible]	[illegible]	Schatz Manufacturing Co.	200	Drl	555	6	23	do.	--	Force	11	Ind	Temperature 50°F, July 1959.
[illegible]	[illegible]	John Jurasote	520	Drl	60	6	6	do.	20	Jet	12	Dom	
[illegible]	[illegible]	F. W. Harrenfeld & Son	300	Drl	125	6	20	do.	30	do.	3	Dom	
[illegible]	[illegible]	Joseph Chard	313	Drl	60	6	16	do.	0.5	Suction	20	Dom	Well flows during periods of heavy precipitation. Temperature 51°F, May 1958.
[illegible]	[illegible]	Rhinebeck Block Co.	150	Drl	100	6	18	do.	9	Jet	10	Ind	
[illegible]	[illegible]	M. F. Weaver	320	Drv	18	1¼	--	Pleistocene gravel	--	Suction	3	Dom	Temperature 50°F, May 1958. Average consumption is 500 gpd.
[illegible]	[illegible]	Rhinebeck School Dist. 9	320	Drl	90	6	10	Hudson River formation	--	do.	3	Dom	Temperature 50°F, May 1958.
[illegible]	[illegible]	Cyrus McCormick	493	Drl	158	6	--	do.	--	Force	--	Dom	
[illegible]	[illegible]	D. F. Pike	635	Drl	50	6	10	do.	--	do.	--	Dom	Temperature 50°F, May 1958.
[illegible]	[illegible]	W. Arnert	350	Drl	125	5	8	do.	10	--	3	Dom	
[illegible]	[illegible]	R. Nellson	230	Drl	105	6	11	do.	14	Jet	8	Dom	
[illegible]	[illegible]	A. T. Haines	280	Dug	20	36	--	Pleistocene till	16	Suction	1	Farm	Average consumption is 1,000 gpd.
[illegible]	[illegible]	Stewart's Garage	250	Drv	38	1¼	--	Pleistocene sand and gravel	--	do.	3	Com	Average consumption exceeds 500 gpd.
[illegible]	[illegible]	Howard Velte	250	Drv	35	1¼	--	do.	--	do.	2	Dom	
[illegible]	[illegible]	C. [illegible]	260	Drl	90	6	21	Hudson River formation	18	do.	--	Dom	
[illegible]	[illegible]	Edwin DuBois	200	Drl	129	6	90	do.	14	do.	5	Dom	(b).
[illegible]	[illegible]	R. McKinney	600	Drl	45	6	7	do.	18	do.	--	Farm	
[illegible]	[illegible]	R. Campbell	420	Drl	46	6	12	do.	6	--	3	Dom	
[illegible]	[illegible]	Louis [illegible]	200	Drl	71	6	24	do.	10	Suction	15	Dom	
[illegible]	[illegible]	Russell Leavy	200	Drl	93	6	--	Pleistocene gravel	--	--	20	Dom	
[illegible]	[illegible]	[illegible]	190	Drl	116	10 to 8	5	Hudson River formation	--	--	30	Com	Average consumption is 5,000 to 10,000 gpd.
[illegible]	[illegible]	Elmer [illegible]	190	Drl	113	6	60	do.	--	Force	50	Farm	Well supplies water for [illegible].
[illegible]	[illegible]	William [illegible]	535	Drl	169	6	21	do.	--	--	2	Dom	
[illegible]	[illegible]	[illegible]	[illegible]	Drl	60	6	30	do.	--	--	5	Dom	

Table 13.--Records of selected wells in Dutchess County (Continued)

Well number	Location	Owner or occupant	Altitude above sea level (feet)	Type of well	Depth below land surface (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing formation	Water level below land surface (feet)	Method of lift	Yield (gallons per minute)	Use	Remarks
Du 686	15Y, 15.15, 2.2E	W. E. Frost	500	Drl	25	6	5	Granite and gneiss, undiff.	30	Jet	2.5	Dom	
Du 687	15Y, 0.65, 8.9E	Dover Theater	400	Drl	70	8	--	Pleistocene gravel	21	Turbine	250	Com	Drawdown 2.5 ft after pumping 250 gpm for 24 hrs. Temperature 51°F, May 1959. (a) (b).
Du 533	15Y, 7.35, 6.8E	R. Wood	710	Drl	165	6	72	Stockbridge limestone	--	--	--	Dom	Bedrock contains seams of clay.
Du 520	15Y, 2.35, 6.6E	do.	710	Drl	330	6	--	Pleistocene till	--	--	--	None	
Du 590	16Y, 7.15, 11.5E	H. Johnson	370	Drl	203	6	--	Pleistocene sand and gravel	35	Jet	3	Dom	Temperature 56°F, May 1953. (a).
Du 591	16Y, 7.15, 11.5E	do.	370	Drl	50	6	--	Pleistocene gravel	11	Suction	10	Dom	
Du 692	15Y, 6.85, 3.6E	Wingdale Chemical Corp.	500	Drl	567	10	15	Stockbridge limestone	17	Turbine	50	Ind	Drawdown 208 ft after pumping 50 gpm for 25 hrs. (a)
Du 593	15Y, 8.15, 9.3E	Wingdale Diner	530	Drl	135	6	120	do.	16	Suction	8	Com	(b).
Du 676	15Y, 4.55, 10.3E	Lake Ellis Camp Corp.	660	Drl	125	6	10	Granite and gneiss, undiff. or Stockbridge limestone	3	Centrifugal	25	Com	
Du 606	15Y, 4.55, 10.3E	do.	660	Drl	135	6	--	Pleistocene sand and gravel	--	do.	75	Com	Well flows.
Du 605	15Y, 15.25, 9.0E	Federal Bearings Co.	185	Drl	1,196	6	27	Hudson River formation	5	Turbine	50	Ind	Drawdown 166 ft after pumping 50 gpm for 5 hrs. Temperature 53°F, May 1953. (a)
Du 500	16Y, 10.35, 6.1E	W. B. Hall	620	Drl	35	6	8	Stockbridge limestone	4	Suction	--	Dom	
Du 501	16Y, 8.65, 5.9E	Jay Holmes	720	Drl	271	6	162	Hudson River formation	--	Force	10	Dom	(b).
Du 502	15Y, 5.85, 10.7E	Wingdale Country Club	643	Drl	400	6	--	Pleistocene sand	--	--	10	None	
Du 503	16Y, 5.35, 10.6E	Kenneth Progressive Camps Corp.	660	Drl	300	6	5	Stockbridge limestone	--	Turbine	--	Com	Well supplies 600 campers in summer.
Du 505	15Y, 6.85, 2.7E	R. McKinney	460	Drl	300	6	--	Pleistocene gravel	33	Jet	--	Farm	
Du 506	15Y, 6.35, 3.0E	do.	520	Drl	151	6	20	Stockbridge limestone	19	Suction	--	Farm	Well supplies 6 homes.
Du 507	15Y, 6.35, 3.0E	do.	520	Drl	80	6	--	Pleistocene gravel	20	Force	--	Dec	
Du 508	16Y, 2.35, 9.6E	Robert Lennert	330	Drl	117	6	16	Stockbridge limestone	20	Jet	5	Dom	
Du 509	15Y, 5.05, 9.6E	George Murphy	660	Drl	165	6	30	do.	22	Force	5	Farm	
Du 510	15Y, 3.65, 9.9E	do.	610	Dug	21	48	21	Pleistocene gravel	7	None	--	None	
Du 511	15Y, 3.30, 6.2E	H. Saxe	520	Drl	101	6	4	Granite and gneiss, undiff.	--	Jet	6	Dom	Well flows at 1 gpm.
Du 512	16Y, 13.15, 11.9E	Carroll Vacation Club, Inc.	1,190	Drl	600	8	0	Hudson River formation	--	Turbine	--	Dom	
Du 513	16Y, 13.75, 2.3E	Holiday Hills	505	Drl	225	6	8	Stockbridge limestone	13	Jet	5	Dec	Drawdown 137 ft after pumping 5 gpm for 8 hrs.
Du 515	16Y, 13.35, 8.5E	Smith Johnson	500	Drl	210	6	6	do.	--	do.	20	Dom	Driller reported wood at a depth of 100 ft. Temperature 50°F, June 1959.
Du 516	16Y, 12.95, 9.6E	Robert Dumas	600	Drl	300	6	5	Hudson River formation	--	do.	50	Dom	Well has been pumped at 50 gpm for 30 hrs. Temperature 51°F, June 1959. (a).
Du 517	16Y, 1.05, 3.2E	R. Antonio	710	Drl	121	6	8	do.	10	do.	6	Dom	
Du 518	16Y, 3.65, 4.9E	J. E. Mack	620	Dug	25	36	--	Pleistocene gravel	9	Suction	--	Dom	

[illegible]

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Table 13.--[illegible] (Continued)

Well no.	Location	Owner or occupant	Altitude above sea level (feet)	Type of well	Depth below land surface (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing formation	Water level below land surface (feet)	Method of lift	Yield (gallons per minute)	Use	Remarks
[illegible]	[illegible], 6.2S, 6.5E	H. F. Lace	1,150	Drl	395	6	2	Hudson River formation	--	Force	12	Dom	Well flows.
[illegible]	[illegible], 2.3S, 6.1E	E. W. Beck	855	Drl	131	6	16	do.	17	do.	--	Dom	
[illegible]	[illegible], [illegible]S, 6.3E	W. F. Hall	1,000	Dug	10	36	10	Pleistocene till	4	None	--	Farm	Well supplies home by gravity flow.
[illegible]	16Y, 0.2S, 6.0E	Matthew Tracy	1,190	Dug	18	48	17	do.	14	Suction	--	Dom	Water has relatively high iron content.
[illegible]	16Y, 0.1S, 4.6E	F. Jackson	900	Dug	31	48	31	do.	--	Hand	--	Dom	Well supplies two homes.
[illegible]	15Z, 15.2S, 0.6E	Edward Pflueger	780	Drl	51	6	16	Granite and gneiss, undiff.	--	Jet	3	Dom	Temperature [illegible]°F, July 1949.
[illegible]	16Y, 16.4S, 0.5E	H. Stafford	200	Dug	16	36	--	Pleistocene sand	14	Suction	--	Dom	
[illegible]	[illegible], 16.5S, 1.8E	Elias Sprague	400	Dug	22	30	22	Pleistocene till	18	do.	--	Dom	
[illegible]	16Y, 14.2S, 2.0E	C. Greenhaul	100	Drl	190	6	21	Granite and gneiss, undiff.	13	Force	12	Dom	
[illegible]	15Z, 13.8S, 1.6E	Doris Click	920	Dug	31	48	31	Pleistocene till	14	Suction	--	Dom	
[illegible]	16Z, 11.4S, 1.1E	Henry Morris	360	Drl	22	6	26	Stockbridge limestone	24	None	3	None	
[illegible]	16Y, 10.5S, 1.5E	Tyler Hagee	360	Dug	26	48	--	Pleistocene gravel	15	Suction	--	Farm	
[illegible]	16Z, 9.0S, 1.2E	Samuel Kaufman	680	Drl	130	6	5	Hudson River formation	14	Force	5	Dom	
[illegible]	15Y, 14.2S, 3.7E	H. Schlomeyer	700	Dug	16	38	16	Pleistocene till	7	Suction	--	Dom	
[illegible]	15Y, 2.6N, 2.9W	Delmar Erickson	300	Drl	87	6 to 4	2	Stockbridge limestone	35	Jet	10	Farm	Bedrock contains large seams of clay. Temperature [illegible]°F, August 1949.
Du 598	15Y, 4.2N, 2.7W	Foremost Guernsey Assoc.	360	Drl	420	8	21	do.	20	Force	65	Farm	Temperature 51°F, July 1949. Average consumption is 20,000 gpd.
[illegible]	15Z, 2.5S, 2.5E	C. Wackenheimer	500	Drl	125	6	7	Hudson River formation	24	do.	12	Farm	Temperature 50°F, July 1949. (a).
[illegible]	15Y, 0.9S, 0.7E	K. Pearce	460	Dug	16	48	15	Pleistocene till	12	--	--	None	
[illegible]	15Y, 5.6N, 4.2W	Cashman Farm	250	Drl	200	6	--	Stockbridge limestone	19	Force	45	Farm	Temperature 52°F, July 1949.
Du 632	15Y, 0.1N, 6.1W	Herald Tribune Fresh Air Camp	900	Drl	104	6	30	Granite and gneiss, undiff.	--	Suction	30	Dom	Well flows at 4 gpm. Temperature 49°F, July 1949. (a).
[illegible]	15Y, 3.5N, 7.2W	George Kamke	300	Drl	65	6	54	Stockbridge limestone and Pleistocene deposits	--	Force	10	Dom	Bedrock contains large seams of clay. (a).
Du 626	15Y, 1.6N, 8.5W	City of Beacon	200	Drl	89	6	83	Pleistocene sand	--	None	--	None	Test hole for City of Beacon. (b).
[illegible]	15Y, 1.6N, 8.5W	do.	200	Drl	130	16 to 8	160?	Pleistocene gravel and Stockbridge limestone	7±	--	1,300	None	Well finished with 67 ft of 12-inch screen. (a) (b).
[illegible]	15Y, 14.2N, 9.0W	Schatz Manufacturing Co.	200	Drl	550	6	18	Hudson River formation	--	Force	25	Ind	Total of three similar wells on property, all supply water for cooling.
[illegible]	15Y, 8.3S, 11.2E	Siwanoy Boy Scout Camp	500	Drl	351	6	60	do.	19	do.	6	Dom	Drawdown 231 ft after pumping 6 gpm for 12 hrs. Temperature 50°F, July 1949.
[illegible]	15Y, 8.5S, 11.1E	Canopus Hollow Inn	[illegible]	Drl	237	6	50	do.	31	Jet	7	Dom	Lake water also used. Temperature 53°F, July 1949.
[illegible]	15Y, 8.6S, 10.7E	Sacajawea Girl Scout Camp	[illegible]	Drl	255	6	17	do.	6	Force	5	Dom	Drawdown [illegible] ft after pumping 5 gpm for 2 hrs.
[illegible]	15Z, 8.2S, 11.2E	H. Stewart	720	Dug	18	42	18	Pleistocene till	15	Suction	--	Dom	
[illegible]	15Z, 1.5N, 7.2W	Lewis [illegible]	210	Drl	65	6	16	Hudson River formation	6	--	20	Dom	Temperature [illegible]°F, July 1949.

1-13-14

Table 13.--Records of selected wells in Dutchess County (Continued)

Well number	Location	Owner or occupant	Altitude above sea level (feet)	Type of well	Depth below land surface (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing formation	Water level below land surface (feet)	Method of lift	Yield (gallons per minute)	Use	Remarks
Du [illegible]	[illegible]Y, 11.2N, 6.1W	Robert McGinnis	520	Drl	170	6	96	Hudson River formation	--	--	6	Dom	Temperature 56°F, July 1959.
Du [illegible]	15Y, 1.3S, 3.[illegible]	Gert's Cabin Camp	560	Drl	76	6	16	do.	--	Jet	5	Dom	Well supplies camp.
Du [illegible]	15Y, 3.5N, 2.0W	Theodore Thackery	360	Drl	155	6	6	do.	16	Force	--	Dom	
Du [illegible]	15Y, 3.5N, 2.0W	do.	360	Drl	400	6	10	do.	19	None	5	None	Yield inadequate.
Du [illegible]	15Y, 8.1N, 2.3W	Tony Leo	200	Drl	112	6	40	do.	--	Jet	7	Dom	Temperature 51°F, July 1959. (b)
Du [illegible]	15Y, 1.5S, 5.1W	F. D. Roosevelt High School	230	Drl	200	8	23	do.	--	Turbine	50	Dom	Well supplies 650 students. Temperature 52°F, 1959. (a).
Du [illegible]	15Y, 6.6N, 4.5W	W. E. Dorn	350	Drl	88	6	26	Cheshire quartzite	4	Suction	2	Farm	(a) (b).
Du [illegible]	15Y, 3.7N, 10.3W	Beacon Oil Co.	220	Drl	15	6	3	Hudson River formation	12	do.	22	Com	Temperature 60°F, July 1959. (a).
Du [illegible]	15Y, 4.5S, 9.6E	Old Drovers Inn	620	Drl	130	6	11	Stockbridge limestone	26	Force	9	Com	
Du [illegible]	15Y, 10.7S, 9.6W	International Business Machines Corp.	100	Drl	463	6	16	do.	21	--	10	--	
Du [illegible]	15Y, 10.0S, 9.5W	do.	100	Drl	600	6	--	do.	--	--	60	Ind	
Du [illegible]	15Y, 10.6S, 9.6W	do.	100	Drl	625	--	--	do.	--	--	28	--	
Du [illegible]	15Y, 5.5S, 3.0E	Bessie Hicks	620	Drl	162	6	0	Hudson River formation	--	--	11	Dom	Yield 6 gpm when well was 15 ft deep and 11 gpm when well was 20 ft deep.
Du [illegible]	[illegible], 0.2S, 8.6E	Carl Seno	400	Drl	166	6	--	Pleistocene gravel	7	Jet	60	Dom	Well finished with 6 ft of 25-slot screen. Temperature 50°F, August 1959. (a) (b).
Du [illegible]	15Y, 15.5N, 9.3W	Fairview Heights Improvement Co.	260	Drl	250	6	2	Hudson River formation	26	Turbine	12	PS	(b).
Du [illegible]	15Y, 6.2S, 3.3W	Louis Parbieri	260	Drl	155	6	12	Stockbridge limestone	21	Jet	5	Dom	Temperature 52°F, August 1959
Du [illegible]	15Y, 1.6S, 5.1E	Green School	950	Drl	215	8 to 6	36	Hudson River formation	42	do.	27	Dom	Drawdown 106 ft after pumping 27 gpm for 24 hrs. Temperature 51°F, August 1959. (b).
Du [illegible]	15Y, 16.5S, 7.7E	Carl Tobias	950	Drl	138	6	38	do.	15	do.	16	Dom	Drawdown 60 ft after pumping 12 gpm for 24 hrs. Temperature 53°F, August 1959. (a).
Du [illegible]	15Y, 1.7S, 6.2E	Sprout Lake Camp	500	Drl	186	6	6	do.	30	--	15	Dom	Drawdown 125 ft after pumping 15 gpm for 8 hrs.
Du [illegible]	15Y, 0.7N, 0.9W	W. P. Masten	520	Drl	165	6	6	do.	15	Jet	10	Farm	Drawdown 65 ft after pumping 10 gpm for 1 hr.
Du [illegible]	15Y, 1.0S, 5.8E	Pine Plains Water Co.	465	Drl	228	6	101	Stockbridge limestone	16	Turbine	220	PS	Drawdown about 60 ft after pumping 220 gpm for 22 hrs. (a) (b).
Du [illegible]	15Y, 7.2N, 2.9W	Frank Tompkins	230	Drl	177	6	67	Hudson River formation	21	Jet	10	Dom	Temperature 52°F, August 1959
Du [illegible]	15Y, 2.1N, 9.2W	Children's Aid Society Camp	320	Drl	318	[illegible]	47	Stockbridge limestone	12	Force	20	Com	Drawdown 123 ft after pumping 20 gpm for 24 hrs. (a) (b).
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6	23	Hudson River formation	35	Jet	11	[illegible]	Drawdown [illegible] ft after pumping [illegible] gpm for [illegible] hrs.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	315	[illegible]	17	Stockbridge limestone	[illegible]	[illegible]	[illegible]	[illegible]	Drawdown [illegible] ft after pumping [illegible] gpm for [illegible] hrs.
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	31	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

1-14-14

REF. 2-1-1

Uncontrolled Hazardous Waste Site Ranking System

A Users Manual
(HW-10)

Originally Published in
the July 16, 1982, *Federal Register*

United States
Environmental Protection
Agency

1984

New York State Atlas of Community Water System Sources 1982

NEW YORK STATE DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF PUBLIC WATER SUPPLY PROTECTION

DUTCHESS COUNTY

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
	Municipal Community		
1	Amenia Water District #1	1000	Wells
2	[illegible] Water Company	1000	Wells
3	Arlos Water Company	1300	Wells
4	Beacon City (See also No. 3 Putnam Co.)	9000	Mt. Beacon & Melzingah Reservoirs, Wells
5	Beekman Country Club	300	Wells
6	Brettview Acres Water Company	920	Wells
7	Brinkerhoff Water Company	3500	Wells
8	Central Wappinger Improvement Area	1800	Wells
9	Deerfield Estates Water District	900	Wells
10	[illegible] Knolls	600	Wells
11	Dover Plains Water Company	1500	Wells
12	Dover Ridge Estates	60	Wells
13	[illegible] Estates Inc.	700	Wells
14	Fishkill Village	6000	Wells
15	Fleetwood Manor Water District	850	Wells
16	Grandview Water District	160	Wells
17	Greenfield Water District	1250	Wells
18	Greenmeadow Park Water Company	350	Wells
19	Harwood Hills Water Company Inc.	900	Wells
20	[illegible], Inc.	275	Wells
21	[illegible] Services Inc.	900	Wells
22	Hyde Park Fire & Water District	4000	Crum Elbow Creek, Wells
23	Kensington Park Water Company	65	Wells
24	La Grange Club Estates	120	Wells (Infiltration Gallery)
25	Little Switzerland Water Company	600	Wells
26	Millbrook Village	1735	Wells
27	Millerton Village	1600	Wells
28	[illegible] Knolls Water District	250	Wells
29	[illegible] Knolls	310	Wells
30	Pawling Village	2000	Pawling Reservoir, Wells
31	Pine Plains Water Company	1000	Wells
32	[illegible] Knolls	765	Wells
33	Poughkeepsie City	30000	Hudson River
34	Quaker Hill Estates Water District	624	Wells
35	Red Hook Village	2000	Wells
36	[illegible] Park Water Company	560	Wells
37	Rhinebeck Village	6700	Hudson River
38	Rockingham Farms	3000	Wells
39	[illegible] Homes, Inc.	184	Wells
40	Schreiber Water Works	110	Wells
41	Shorehaven Civic Association	300	Wells
42	South Cross Road Water Company Inc.	372	Wells (Infiltration Gallery)
43	Staatsburgh Water Company	1072	Indian Hill Reservoir, Wells
44	Taconic Estates	185	Wells
45	Tall Trees	250	Wells
46	Titusville Water District	700	Wells
47	Tivoli Village	713	Wells
48	Valley Dale Water Company	300	Wells
49	Wappinger Park Homes	600	Wells
50	Wappingers Falls Village	5300	Wells
51	Willow Lake Water Company	126	Wells
52	[illegible] Highlands	375	Wells
	Non-Municipal Community		
53	[illegible] Trailer Park	40	Wells
54	Arbor Arms Apartments	50	Wells
55	[illegible] Mobile Court #1	72	Wells
56	Bard College	NA	Sawkill Creek
57	[illegible] Trailer Park	26	Wells
58	[illegible] Mobile Home Park	137	Wells
59	[illegible] Mobile Home Park	62	Wells
60	[illegible] Mobile Home Park	25	Wells
61	[illegible] Trailer Park	16	Wells
62	Canterbury Garden Apartments	600	Wells
63	Cedar Hollow Mobile Home Park	90	Wells
64	Cedar Lane Mobile Home Park #2	28	Wells
65	[illegible] Green Mobile Trailer Park	110	Wells
66	[illegible] Hyde Park Home for Adults	120	Wells
67	Chelsea Ridge Apartments	1000	Wells
68	Clove Branch Apartments	19	Wells
69	Colonial Maples Trailer Park	20	Wells
70	[illegible] Trailer Park	35	Wells
71	[illegible] Apartments	68	Wells
72	[illegible] Village	70	Wells
73	Dutch Garden Apartments	850	Wells
74	Dutchess Trailer Park	30	Wells
75	East Mountain Trailer Park	28	Wells
76	[illegible]	300	Wells
77	[illegible] Apartments	34	Wells
78	[illegible] Mobile Home Park	92	Wells
79	[illegible] Trailer Court	60	Wells
80	[illegible] Apartments	30	Wells
81	Fishkill Park Apartments	200	Wells
82	[illegible] Villas	50	Wells
83	[illegible] Hospital	30	Wells
84	Green Haven Correctional Facility	NA	Reservoir
85	Green Meadow Trailer Court	44	Wells
86	Greer School	300	Wells
87	Harlem Valley Psychiatric Center	1200	Swamp River
88	[illegible] Apartments	100	Wells
89	[illegible] Home Park #1	64	Wells
90	[illegible] Home Park #2	29	Wells

ID NO	COMMUNITY WATER SYSTEM	POPULATION	SOURCE
	Non-Municipal Community		
91	Hi Vu	50	Wells
92	Hickory Hill Mobile Home Park	250	Wells
93	Hidden Hollow Apartments	850	Wells
94	Hidden Valley Mobile Court	30	Wells
95	High Meadows Park Inc.	196	Wells
96	Hoffman Trailer Park	26	Wells
97	Hudson River Psychiatric Center	2000	Hudson River
98	Hudson View Water Works	1800	Wells
99	Hyde Park Mobile Manor Estates	NA	Wells
100	Hyde Park Terrace Apartments	70	Wells
101	Kent Hollow Apartments	24	Wells
102	[illegible] Trailer Park	20	Wells
103	Lake Ellis Mobile Home Park	81	Wells
104	Lake Lodges Apartments	28	Wells
105	Lake Walton Park	67	Wells
106	Lakeview Mobile Home Park	NA	Wells
107	Lamplight Court Mobile Estates	23	Wells
108	Lodges Apartments	460	Wells
109	Little Falls Trailer Park	163	Wells
110	M and D Mobile Home Park	108	Wells
111	Maple Lane Trailer Park	150	Wells
112	May Lane Mobile Park	30	Wells
113	Maynards Mobile Manor	101	Wells
114	McCarthe's Trailer Park	42	Wells
115	Mobile Home Gardens	30	Wells
116	Montclair Townhouse Apartments	660	Wells
117	Mountain View Mobile Estates	55	Wells
118	Northeastern Conference Nursing Home	120	Wells
119	Northern Dutchess Mobile Home Park	31	Wells
120	Odells Trailer Park	19	Wells
121	Osborne Trailer Park	15	Wells
122	Palmer Apartments	27	Wells
123	Parkway Apartments	16	Wells
124	Partridge Hill Apartments	150	Wells
125	Phillips Trailer Park	45	Wells
126	Pine Grove Mobile Home Park	39	Wells
127	Powell Road Mobile Park	115	Wells
128	Ramsey's Trailer Park	28	Wells
129	Red Church Trailer Park	12	Wells
130	Rhinebeck Country Village	100	Wells
131	Rhinebeck Mobile Court	120	Wells
132	Roberts Running Creek Trailer Park	88	Wells
133	Route 82 Trailer Park	26	Wells
134	Royal Crest Apartments	158	Wells
135	Sabo Trailer Park	45	Wells
136	Smith Mobile Home Park	26	Wells
137	Scenic Apartments	432	Wells
138	Scenic View Mobile Home Park	27	Wells
139	Shady Acres Trailer Park	26	Wells
140	Shady Homes Trailer Park	42	Wells
141	Shady Lane Trailer Park	13	Wells
142	Simpson Mobile Home Site	27	Wells
143	Springhill Mobile Home Park	NA	Wells
144	Sunset Farms Mobile Home Park	35	Wells
145	Sunset Knolls	50	Wells
146	Taconic Motor Lodge	22	Wells
147	Telly Ho Mobile Estates	NA	Wells
148	Tel Apartments	16	Wells
149	The Lodge at Rhinebeck	NA	Wells
150	Unification Theological Church	150	Wells
151	Val Kill Park East	72	Wells
152	Valley Forge Mobile Home Park	60	Wells
153	Venture Lake Estates	44	Wells
154	Village Crest Apartments	600	Wells
155	Wappingers Falls Trailer Park	50	Wells
156	Wassaic Developmental Center	2300	Wells
157	Willow Tree Park	30	Wells
158	Wingdale Village Park	72	Wells
159	Woodcrest Manor Adult Home	NA	Wells
160	Woodfield Apartments	7	Wells

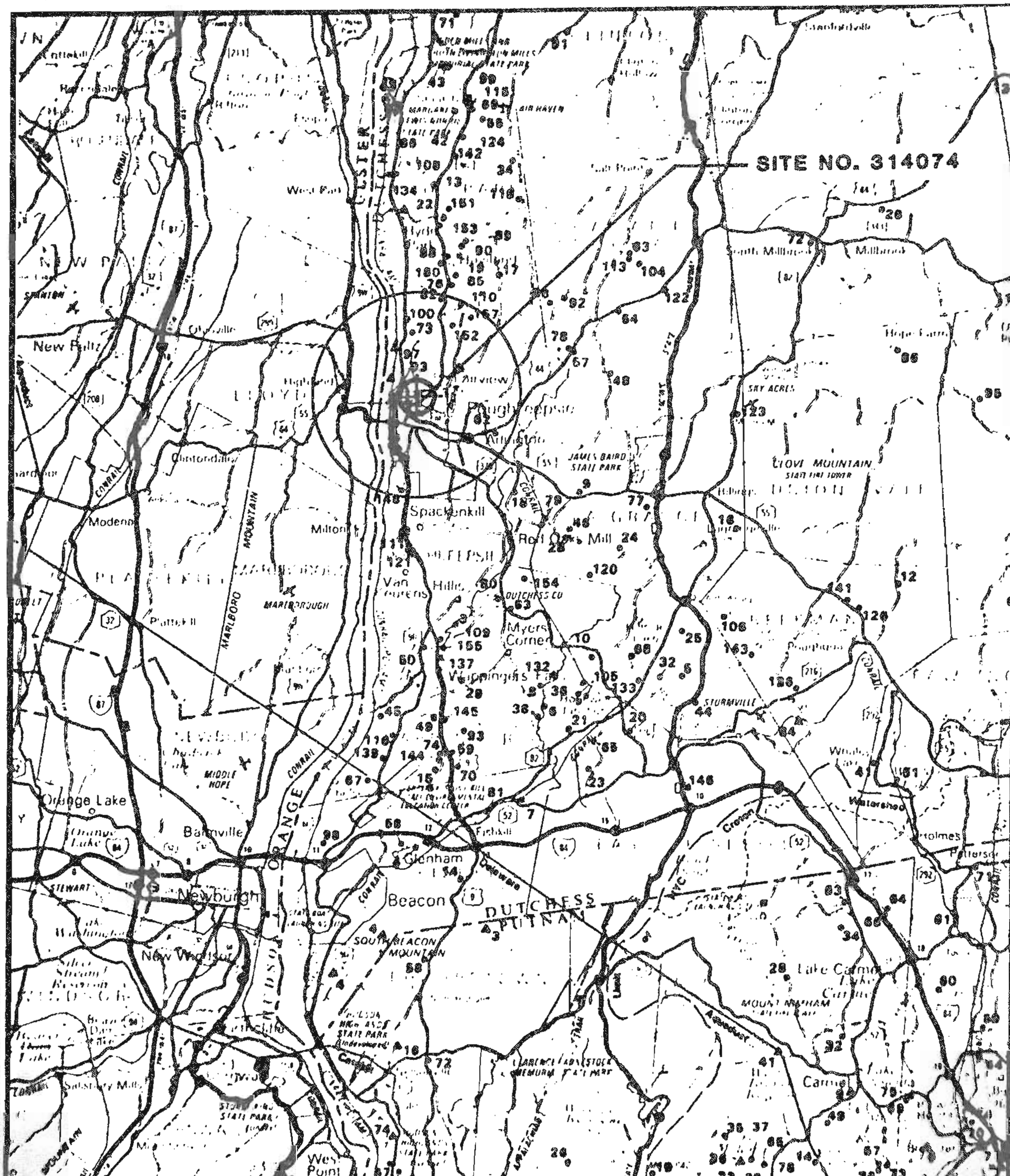
NEW YORK STATE DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF PUBLIC WATER SUPPLY PROTECTION

3-2-3

NEW YORK STATE DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL PROTECTION
BUREAU OF PUBLIC WATER SUPPLY PROTECTION

LOCATION OF COMMUNITY WATER SYSTEM SOURCES-1982

3-3-3



SCALE 1:250,000

MILES

NORTH

DUTCHESS COUNTY

FIGURE NO. 1

SCHATZ PLANT

N

COORDINATES:

LAT. 41 42, 00"
LONG. 73 56' 30"

0 1000 2000
SCALE (FEET)

MAP SOURCE
U.S.G.S. POUGHKEEPSIE QUAD.
NEW YORK - DUTCHESS CTY.
7.5 MINUTE SERIES (TOPOGRAPHIC)
1957 EDITION

REF. 5-1-1

RECEIVED
MAY 27 1987
REGION 3

Kramer
Environmental
DIVISION OF
KRAMER INDUSTRIES
[illegible]

NEW JERSEY [illegible]
609 AREA CODE ONLY - [illegible]
N.Y., PA., CT., MD., DE., - [illegible]

May 14, 1987

Mr. John Iurbello
Robert-Mark
P.O. Box 308, Rt. 52
Hopewell Junction, NY 12533

Dear Donn:

Enclosed you will please find the laboratory reports on the pit and transformer samples taken on April 20, 1987 by our field team at the 1929 Associates facility in Poughkeepsie, New York.

As per my quote of April 13, 1987, two oil, two water and two sludge composites were made of the materials in the 14 on-site pits in order to reduce analytical laboratory costs. Included in our quote was the provision that should any composite test positive for PCB's, all individual samples in the composite would have to be tested.

As indicated by the reports, both pit composites (A and B) came up positive with levels exceeding 50 ppm of PCB's, the allowable non-hazardous landfill limit.

All pits must now be sampled and tested individually to determine if they are contaminated.

The attached proposal is for the complete testing of all individual pits.

After this information has been obtained, we will issue a quote for the total site clean-up.

REF. 6-1-2

GIBBS & HILL, INC.
SITE: SCHATZ PLANT

U.S.G.S. House Count
(See Attached Diagram)

	1 Mile (A)	2 Miles (B)	3 Miles (C)
I.	119	473	430
II.	111	160	633
III.	33	114	394
IV.	88	224	519
	351	971	1976
	x 3.8	x 3.8	x 3.8
	1334	3690	7509

	1 Mile	2 Miles	3 Miles
Total Population	1334	5024	12533

Population Count

6-2-2

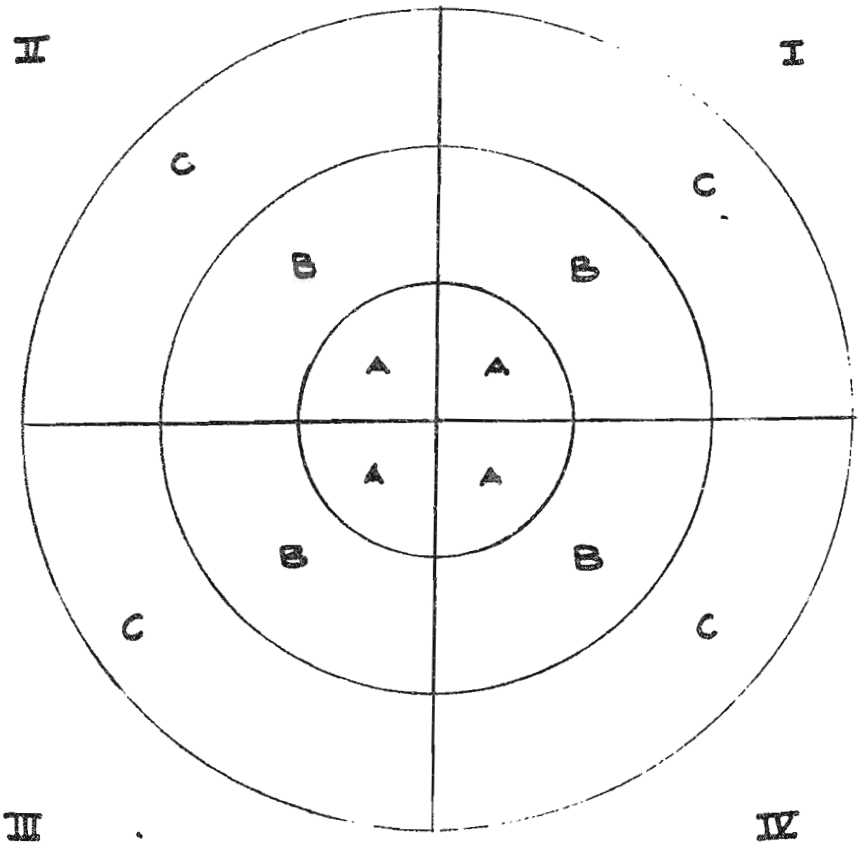
Population within 3 mile radius of each Phase I site is determined using the coordinates system illustrated below. The number of residences for each quadrant and section is determined by overlaying this pattern onto a USGS 7.5 minute topographic map. A multiplier of 3.8 persons per residence is used to determine population in accordence with Mitre Model 1985.

A = 1 Mile radius

B = 2 Mile radius

C = 3 Mile radius

(Figure not To Scale)



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
REGION 3
21 SOUTH PUTT CORNERS ROAD
NEW PALTZ, NY 12561
914-255-5453

SPEED MEMO

REF. 7-1-2

TO: AMIN KAZEMI, GIBBS & HILL DATE: May 31, 88

SUBJECT: 5 Hectare Wetlands near Superfund site

FROM: RAM PERSAD

Regulated Wetlands near the following site are marked up on copies of spread sheets for your information as requested

336030 Middletown Coal Gas
344026 North Ford Plant
336007 Orange County L.F.
314002 Pawling Rubber
344031 Grant Hardware
314074 Schatz Plant
344027 Re-Asp L.F.
336004 Star Expansion
~~PB~~.

The information on critical habitats near these sites ~~so~~ may be obtained from Mr. John Ozard of the Natural Heritage Office in Albany at (518) 439-7486.

Please note that ~~X~~ such information gathering tasks consume a lot of regional staff time and you are urged to keep it to a minimum.

cc - Marsden Chen, Albany 4010

7-2-2


HYDE PARK
HYDE PARK
ULSTER CO
DUTCHESS CO
WEST DORSEY
Trailer Park
Water
Reservoir
Boat Basin
Clearwater
Pumping Sta
Sewage Disposal
HUDSON RIVER
Trailer Park
Violet Ave Sch
Dutchess County Community College
The Childrens Home
FULTON STREET
Junk Yard
Coes
Highland
Sewage Disposal
Water Works
Marist College
Inwood Lake
Playground
EAST CEDAR
WEST CEDAR
Fairview
Radio Tower (WEOK)
Junk Yard
Penn
Highland Landing
Oil and Gas
St Francis Hospital
Water
Pulaski Park
Morgan Lake
Reservoir
COLLEGE HILL PARK
College
R R Sta
Oil & Gas
Bridge
Substation
RIVER
Morse Sch
Cornell
North Base
Oil and Gasoline
MID-HUDSON BRIDGE
Courthouse
Armory
Library
South Base
Arlington
POUGHKEEPSIE URBAN AREA BOUNDARY IS DEFINED AS FOLLOWING THE SHORELINE
Eastman Park
POUGHKEEPSIE
Vassar Brothers
Bartlett Park
Holy Trinity Sch

5.5 EPA 2070-13

Site Inspection Report

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NYD	982531246

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Schatz Plant	70 Fairview Avenue				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Poughkeepsie	NY	12601	Dutchess		

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
41° 43' 00.0	73 55 20.0	☒ A. PRIVATE ☐ B. FEDERAL _____ ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER _____ ☐ G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION	02 SITE STATUS	03 YEARS OF OPERATION
6 17 87 (MONTH DAY YEAR)	☐ ACTIVE ☒ INACTIVE	1910± (BEGINNING YEAR) 1981± (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR _____ (Name of firm) ☐ C. MUNICIPAL ☐ D. MUNICIPAL CONTRACTOR _____ (Name of firm)
☐ E. STATE ☒ F. STATE CONTRACTOR Gibbs & Hill, Inc. (Name of firm) ☐ G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Leah Radko	Assistant Engineer	G&H	(212) 216-6107

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
			( )
			( )
			( )
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Donn Courselle	Robert Mark Mang. Agents	P.O Box 308 Hopewell Jt., NY 12533	(914) 221-3700
			( )
			( )
			( )
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
☒ PERMISSION ☐ WARRANT	10:30 AM	Hot, Humid, Sunny

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Gibbs & Hill, Inc.		( )

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Leah Radko		G&H	212-216-6107	6 17 87 (MONTH DAY YEAR)

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NYD	982531246

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- ☐ A. SOLID
- ☐ B. POWDER, FINES
- ☒ C. SLUDGE
- ☐ D. OTHER _____ (Specify)
- ☐ E. SLURRY
- ☒ F. LIQUID
- ☐ G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

- TONS _____
- CUBIC YARDS 54
- NO. OF DRUMS 5

03 WASTE CHARACTERISTICS (Check all that apply)

- ☒ A. TOXIC
- ☒ B. CORROSIVE
- ☐ C. RADIOACTIVE
- ☒ D. PERSISTENT
- ☐ E. SOLUBLE
- ☐ F. INFECTIOUS
- ☒ G. FLAMMABLE
- ☐ H. IGNITABLE
- ☐ I. HIGHLY VOLATILE
- ☐ J. EXPLOSIVE
- ☐ K. REACTIVE
- ☐ L. INCOMPATIBLE
- ☐ M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	Not Known		At Bottom of Pits.
OLW	OILY WASTE			In Pits.
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			In Pits.
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			In Pits.

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
Oil	Transformer Oil	PCB-1254&	Storage Pit	122	mg/l
Oil	Transformer Oil	1260	"	4.4	"
Oil	Oil A&B	PCB-1254	"	150-264	"
Sludge	Sludge A&B	Heavy Metals	"	0.0019-14.7	"
Oil-A	Heavy Metals	"	"	0.0013-28.4	"
Oil-B	Heavy Metals	"	"	0.06-26.79	"
	Aqueous A	"	"	0.019-0.44	"
	Aqueous B	"	"	0.0034-0.51	"

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analyses, reports)

- Kramer Environmental
- DEC File
- Environmental Profile Laboratories

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: NYD | 02 SITE NUMBER: 982531246

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 13,915
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

There are eight (8) non-municipal community wells within 2 and 3 mile radius and private wells serving a total population of 13,915 persons.

01 ☐ B. SURFACE WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: None
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

All chemicals and oil drums were removed and disposed of properly to a nearby landfill. The remaining 14 pits of oil and chemicals inside the Schatz Plant were boarded up all around and secured with doors and locks.

01 ☐ C. CONTAMINATION OF AIR
03 POPULATION POTENTIALLY AFFECTED: Unknown
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No incident reported.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS
03 POPULATION POTENTIALLY AFFECTED: 8,834
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The plant is secured with wooden enclosure, doors and locks and no access to the public. However, due to presence of flammable oils and chemicals in the pits and unpredictable spark, the potential of fire and explosion still remains.

01 ☐ E. DIRECT CONTACT
03 POPULATION POTENTIALLY AFFECTED: None
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The area is secured with enclosure, doors and locks. No access to the public.

01 ☐ F. CONTAMINATION OF SOIL
03 AREA POTENTIALLY AFFECTED: Unknown (Acres)
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

The depth and structure of the pits is not known.

01 ☐ G. DRINKING WATER CONTAMINATION
03 POPULATION POTENTIALLY AFFECTED: 13,915
02 ☐ OBSERVED (DATE: _____) ☒ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

There are 13,915 persons served by groundwater within 3-mile radius and there is a possible migration of contaminants to groundwater.

01 ☐ H. WORKER EXPOSURE/INJURY
03 WORKERS POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported.

01 ☐ I. POPULATION EXPOSURE/INJURY
03 POPULATION POTENTIALLY AFFECTED: _____
02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None reported.

NYD 982531246

None evident.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None evident.

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

No farmland within 3 miles of the site.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES — 02 ☐ OBSERVED (DATE 6/17/87) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED 8,834 — 04 NARRATIVE DESCRIPTION

There are fourteen (14) unlined concrete pits filled with chemicals and oil. There is a possible migration of contaminants to groundwater due porous nature of concrete.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Commercial buildings surrounding the plant will be damaged tremendously due to possible fire and explosion. Threat remains with the presence of oil and chemicals in the pits.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) — ☒ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

Sewer/storm drain location undetermined.

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
04 NARRATIVE DESCRIPTION

None.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

None.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 13,915

IV. COMMENTS

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

G&H Site Inspection, USGS Quad Poughkeepsie, NYS Atlas of Community Water System Sources 1982, City & Town of Poughkeepsie Planning Departments.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NYD	982531246

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify)				
☐ I. OTHER (Specify)				
☒ J. NONE				

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
☐ A. SURFACE IMPOUNDMENT		
☐ B. PILES		
☒ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☒ I. OTHER (Specify) Open Pits	Unknown	(standing liquid)

04 TREATMENT (Check all that apply)

- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER _____ (Specify)

05 OTHER

☒ A. BUILDINGS ON SITE

2

06 AREA OF SITE

1/4 (Acres)

07 COMMENTS

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☐ B. MODERATE ☐ C. INADEQUATE, POOR ☒ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC.

There are fourteen (14) unlined open chemical and oil concrete pits.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

The plant is boarded up all around and properly secure with doors and locks. However, the pits are open.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

- Site Visit.

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EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NYD	982531246

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY	SURFACE	WELL	02 STATUS	ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☒	B. ☐		A. ☐	B. ☐	C. ☒	A. 0.89 (mi)
NON-COMMUNITY	C. ☐	D. ☒		D. ☐	E. ☐	F. ☒	B. 0.07 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY

☐ A. ONLY SOURCE FOR DRINKING ☒ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☐ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER	03 DISTANCE TO NEAREST DRINKING WATER WELL
13,915 persons	(mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
24 (ft)	West	26 (ft)	72,000 (gpd)	☐ YES ☒ NO

09 DESCRIPTION OF WELLS (including useage, depth, and location relative to population and buildings)

Three industrial wells are on-site and have been closed down. The site is on public water.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Surficial deposits permit recharge to bedrock aquifer	☐ YES ☒ NO	COMMENTS

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Hudson River		0.89 (mi)
Morgan Lake	☐	0.61 (mi)
Inwood Lake	☐	0.34 (mi)
College Hill Park Reservoir	☐	0.38 (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	02 DISTANCE TO NEAREST POPULATION
A. 8,834 NO. OF PERSONS	B. 29,024 NO. OF PERSONS	C. 32,533 NO. OF PERSONS	0.004 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
7,638	0.004 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

Site is located in a heavily developed area, including residential, commercial and industrial portions.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION
01 STATE: NYD | 02 SITE NUMBER: 982531246

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☒ C. $10^{-4} - 10^{-3}$ cm/sec ☐ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH	
26 (ft)	Unknown (ft)	Unknown	

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
14 (in)	2.85 (in)	Less than 3 %	Leveled	Less than 3 %

09 FLOOD POTENTIAL: N/A
SITE IS IN _____ YEAR FLOODPLAIN

10 ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY
N/A

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE	OTHER
A. 1.42 (mi)	B. _____ (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)
N/A _____ (mi)
ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AG LAND
A. 0.004 (mi)	B. 0.03 (mi)	C. N/A (mi)	D. N/A (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

Site has an elevation of 175 feet above sea level and is located on a level area north west of College Hill. The site is entirely paved and has a slope of less than 3%.

VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

- USGS Bull. GW-43.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NYD	982531246

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	None		
SURFACE WATER	None		
WASTE	8	Environmental Profile Laboratories	4/22/87
AIR	None		
RUNOFF	None		
SPILL	None		
SOIL	None		
VEGETATION	None		
OTHER	None		

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Distance	

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Gibbs & Hill, Inc.
(Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Gibbs & Hill, Inc.

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

None.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)

- Field visit
- Environmental Profile Laboratories

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NYD	982531246

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
1929 Associates		319 Main Mall		Poughkeepsie	NY	12602

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER	10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE	12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE
Schatz Federal Bearing Co.						

IV. REALTY OWNER(S) (If applicable, list most recent first)

01 NAME	02 D+B NUMBER	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NYD	982531246

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
Schatz Federal Bearing Co.			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		
01 NAME	02 D+B NUMBER	10 NAME	11 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	14 CITY	15 STATE / 16 ZIP CODE
08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD		

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Realty Agents for Property: Robert Mark Managing Agents
P.O. Box 308
Hopewell Jt., NY 12533

Attorney for Owners: Hankin, Hanig, Stall & Shafrin
319 Main Mall Rear
P.O. Box 911
Poughkeepsie, NY 12602

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NYD	982531246

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A			
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE
01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
05 CITY	06 STATE / 07 ZIP CODE	05 CITY	06 STATE / 07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NYD	982531246

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None reported.

01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None reported.

01 ☐ C. PERMANENT WATER SUPPLY PROVIDED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None reported.

01 ☐ D. SPILLED MATERIAL REMOVED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None reported.

01 ☐ E. CONTAMINATED SOIL REMOVED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None reported.

01 ☒ F. WASTE REPACKAGED — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION Date of contracting for removal of 72 55-gal. drums containing chemicals, drums containing oil & water were emptied (waste removed) and most were shipped out.

01 ☐ G. WASTE DISPOSED ELSEWHERE — 02 DATE 5/16/87 — 03 AGENCY Private
04 DESCRIPTION

01 ☒ H. ON SITE BURIAL — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION none reported

01 ☐ I. IN SITU CHEMICAL TREATMENT — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None

01 ☐ J. IN SITU BIOLOGICAL TREATMENT — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None

01 ☐ K. IN SITU PHYSICAL TREATMENT — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None

01 ☐ L. ENCAPSULATION — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None

01 ☐ M. EMERGENCY WASTE TREATMENT — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None

01 ☐ N. CUTOFF WALLS — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None

01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None

01 ☐ P. CUTOFF TRENCHES/SUMP — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None

01 ☐ Q. SUBSURFACE CUTOFF WALL — 02 DATE ____ — 03 AGENCY ____
04 DESCRIPTION
None

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NYD	982531246

II PAST RESPONSE ACTIVITIES (Continued)

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

01 ☒ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION
None

01 ☒ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE 4/20/87 — 03 AGENCY _____
04 DESCRIPTION
Kramer Environmental collected and analyzed waste samples from site.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

Site Inspection, DEC Files.

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NYD	982531246

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

Site owner, 1929 Associates, was issued numerous fire code violations by the City of Poughkeepsie Fire Department.

III. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

DEC Files, Site Visit.

EPA FORM 2070-13 (7-81)

6. RECOMMENDATION

6.1 Adequacy of Existing Data

The available data on soil and groundwater quality are considered incomplete to prepare a final HRS score for this site. However, existing data, showing the presence of PCB's, the site history, spills general poor housekeeping, and non-compliance with RCRA closure warrants an investigation to determine the extent of contamination and any possible migration off-site.

6.2 Recommendations

Since the Schatz Plant is classified as Class 2 site according to NYS DEC, it is recommended that a Remedial Investigation and Feasibility Study (RI/FS) be performed at the Schatz Plant.

This can be substantiated by very poor housekeeping inside and outside of the plant, the evidence of chemical and oil spillage on the floor, presence of PBC, heavy metals in the pits, potential fire and explosion threat to the surrounding occupied commercial buildings due to continued presence of chemical and oil in open pits and possible vandalism. The site history also revealed numerous fire code violations. Immediate clean-up of fourteen (14) pits of oil and chemicals inside the plant is also recommended.

APPENDIX A

Appendix A
Bibliography

A-1 Site Photographs.

A-2 D. Slingerland (NYS DEC) memo to P. Doshna, 5/7/86; NYS DOT Regional Oil/Hazardous Substances Spill Report, 5/5/86.

A-3 B. Reiner (Dutchess County Environmental Management Council) Letter to S. Singh (NYS DEC), 6/25/86.

A-4 D. Courselle (Robert-Mark Realty, Inc.) Letter to S. Singh (NYS DEC), 3/20/87.

A-5 Poughkeepsie Journal Article, "Cleanup Continues at Schatz Waste Site", 12/5/86.

A-6 R. Kennedy (Kramer Environmental) Letter to D. Courselle (Robert-Mark Realty, Inc.) 12/9/86.

A-7 S. Singh (NYS DEC) Letters to J. Hanig (Hankin, Hanig & Stall) 3/19/87, 1/28/87; J. Hanig (Hankin, Hanig & Stall). Letter to R. Pergadia (NYS DEC), 1/9/87 with Attachment; Schatz Plant Meeting Summary, NYS DEC, 12/17/86.

A-8 D. Courselle (Robert-Mark Realty, Inc.) Letter to R. Pergadia (NYS DEC) 2/19/87 with Attachment.

A-9 R. Kennedy (Kramer Environmental) Letter to D. Courselle (Robert-Mark Realty, Inc.) 5/14/87; Sampling Results.

A-10 D. Courselle (Robert-Mark Realty, Inc.) Letter to A. Vasques (NYS DEC) 5/21/87.

A-11 V. Sammarco Letter to NYS Department of State, Uniform Fire Prevention and Building Code Division, 3/31/87.

A-12 J. Hankin (Hankin, Hanig & Stall) Letter to V. Sammarco, 4/9/87.

A-13 Simmons, E., Ground-Water Resources of Dutchess County, New York, USGS Bulletin GW-43, 1961.

A-14 R. Kennedy (Kramer Environmental) Letter to A. Kazemi (Gibbs & Hill, Inc.) and Waste Removal Manifests 6/30/88.

APPENDIX A

A-1-2-1

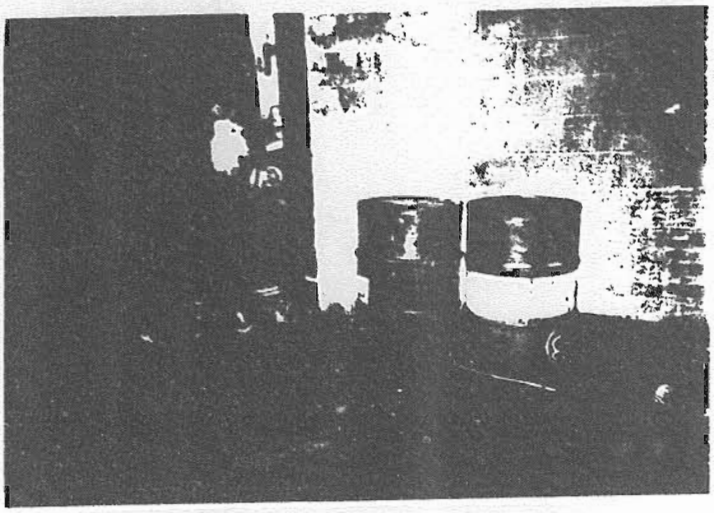


PHOTO # 3

Unlabeled 55-gallon Drums

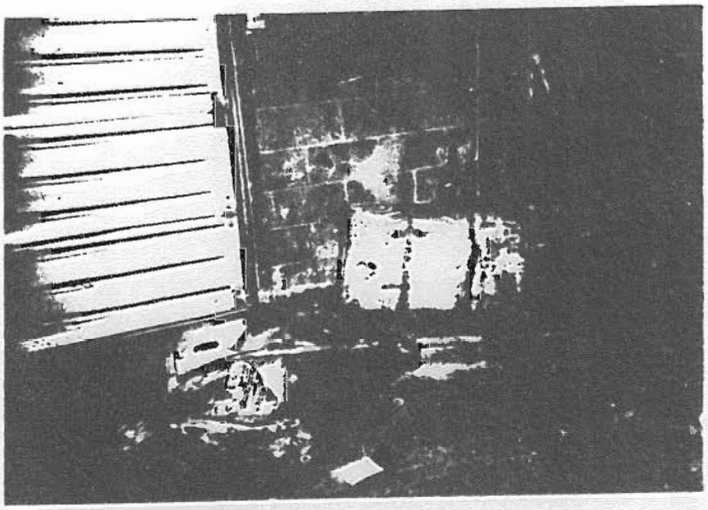


PHOTO # 4

Empty Drum and Garbage

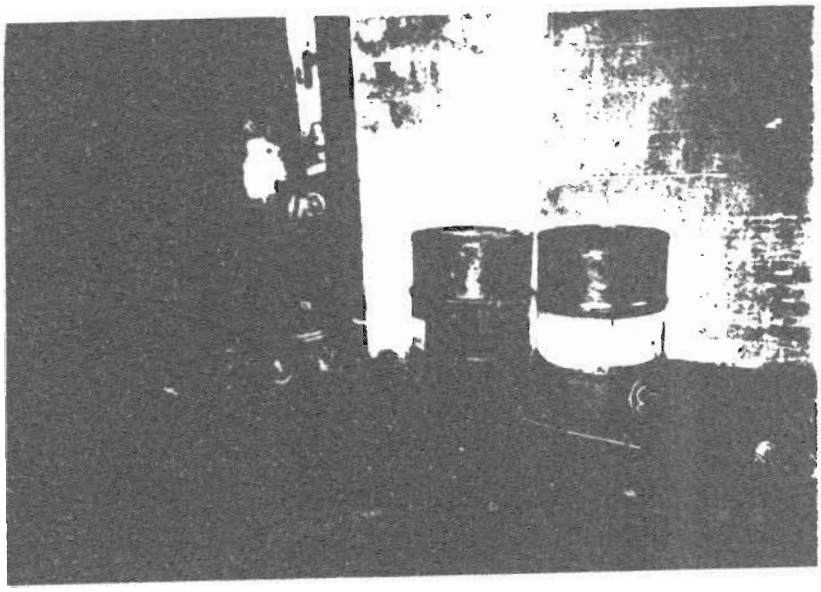


PHOTO # 3

Unlabeled 55-gallon Drums

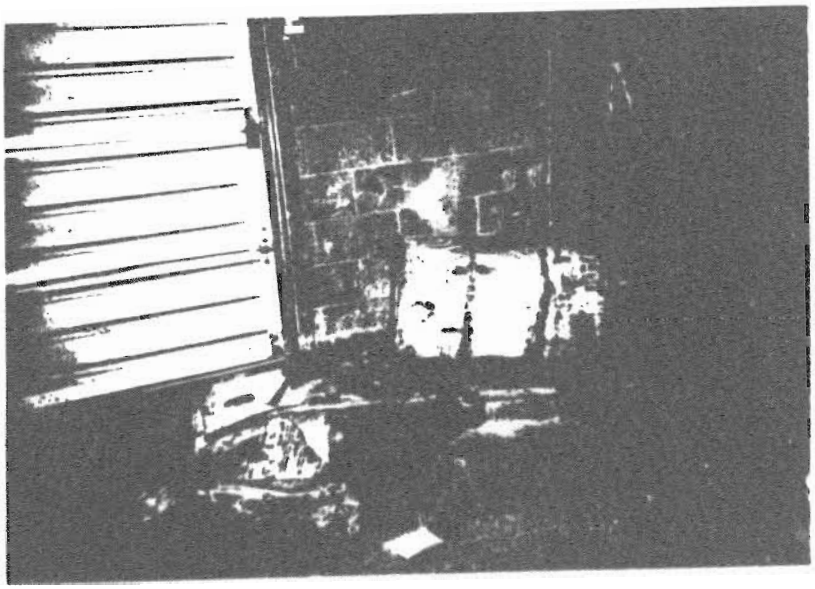


PHOTO # 4

Empty Drum and Garbage

PHOTO # 5

View of Empty Drums with Abandoned Vehicle

REF. A-2-1-2

New York State Department of Environmental Conservation

MEMORANDUM

TO: P. DOSHNA
FROM: D. SLINGERLAND
SUBJECT: SCHATZ BEARING, POUGHKEEPSIE
DATE: 5/7/86

FOUND ON PREMISIS: *64+ DRUMS (58 IN ONE AREA BETWEEN BLDG
MANY FILLED, SOME LABELED - BP ENERGOL RA
- METAL WORKING FLUID
- MAINTENANCE CLEANER
- NUTMEG CHEMICAL CORP. NE-87
- KENDALL SUPERB MOTOR OIL

* METAL SHAVING / OIL IN ~1CY. BINS (12) OUTSIDE BLDG.
* 100Z+ DISCARDED ELECTRICAL TRANSFORMERS IN SIDE AND OUT SIDE OF BLDGS.
*20-25 DRUMS INSIDE BUILDING - RUSTY - CONTENTS UNKNOWN
* 3 DRUMS UNKNOWN CRYSTALLINE SOLID POWDER.
* INSIDE BUILDINGS ARE PITS OF OIL, GREASE, CONTAMINATED WATER - PITS CONTAIN 100-200 GAL LIQUID.
* CONTAMINATED SOIL ON OUTSIDE OF BUILDING, SHEEN IN WATER RUNNING OFF.

ENTIRE AREA IS POORLY KEPT. NO APPARENT CLEAN UP WAS DONE WHEN BUILDING WAS ABANDONED

A-2-2-2

SPILL NO. 60

REGION 3

NEW YORK STATE
DEPARTMENT OF TRANSPORTATION

REGIONAL OIL/HAZARDOUS SUBSTANCES SPILL REPORT

DATE ONGOING Time of Spill ___ AM PM Time Region Notified 5/5/86 3:30 AM (PM)

CALLER'S NAME D. SUNDERLAND Notifier's Name SHAMINDER SINGH

CALLER'S AGENCY NYSDEC Notifier's Agency NYSDEC.

CALLER'S PHONE 914-255-5453 Notifier's Phone 914-255-5453

MATERIAL SPILLED OIL, GREASE, MACHINE OIL ETC ALSO TRANSFORMERS + ASST CH

AMOUNT SPILLED UNK

LOCATION (Town & County) POUGHKEEPSIE, DUTCHESS

(Street, Road, or Route) 70 FAIRVIEW AVE

WATERSBODY AFFECTED NONE Or ☒ Groundwater POSSIBLE

SOURCE OF SPILL 50-60 DRUMS Name of Spiller SCHATZ FED. BEARI

CAUSE OF SPILL LEAKAGE - SLOPPY HOUSEKEEPING - COMPANY HAS

ACTION TAKEN BEEN ABANDONED FOR 25 YRS.

DEC TO INVESTIGATE

Name of Person Contacted: TIM PLESNARSKI

TO BE COMPLETED BY DOT REPRESENTATIVE AT SCENE OF SPILL

Date	Time	Spiller		Investigated by
5/7/84	10:30	SCHATZ		[signature]
Location of Spill	Material Spilled	Amount Spilled / Recovered		Resources Affected
POUGHKEEPSIE	ASST OILS	Spilled UNK / Recovered NONE		GROUND (POSS ONLY)

☐ Initial Report ☐ Follow-up Report

Cleanup by
☐ SPILLER
☐ STATE GOVERNMENT PERSONNEL
☐ LOCAL GOVERNMENT PERSONNEL
☐ Contractor hired by spiller
☐ Contractor hired by Coast Guard or EPA
☐ Contractor hired by DOT

NAME OF CONTRACTOR ___

ESTIMATED STARTING DATE OF CLEANUP ___

ESTIMATED COMPLETION DATE OF CLEANUP ___

ESTIMATED COST OF CLEANUP ___

REMARKS: SITE IS ABANDONED METAL MILLING FACILITY - ON SITE [illegible] BINS (12-EIGHTY) METAL SHAVINGS [illegible] ; 64 DRUMS OF ASST OILS, GREASE CLEANERS ETC, OLD TRANSFORMERS, ENTIRE AREA IS OIL STAINED AND ODOR OF PETROLEUM IS PREVALENT. [illegible] TO CONTACT DEC WITH [illegible] ETC

[signature]
Signature of Person Preparing Report

REF. A-3-1-1
SCHATZ PLANT
314073

RECEIVED
JUL 2 1986
NYSDEC
New Paltz

Dutchess County Environmental Management Council

P.O. Box 259
Farm & Home Center, Millbrook, N.Y. 12545
(914) 677-3488

June 25, 1986

Shaminder Singh
NYS Dept. of Environmental Conservation
Divison of Solid & Hazardous Wastes
21 South Putt Corners Road
New Paltz, NY 12561

Dear Shaminder:

The Closed Landfill Committee of the Dutchess County Environmental Management Council believes that the former plant site of the Schatz Federal Bearing Co., Fairview Ave., Poughkeepsie, warrants inquiry as a potential hazardous waste site. A site tour (May 14, 1986) revealed at least four areas in question.

1. The wooden flooring in the former plant still retains a saturated oily surface. A number of renovated office rentals now occupy the site, although a portion still remains vacant.

2. Barrels of unknown contents and quantity and carts of metal tailings are found stored in a rear causeway. The barrels are not enclosed and sit in puddles of water or other substance. Similar tailings are found produced by a current manufacturing operation on site.

3. The Foundry Building contains original pits with thick ash and burner bricks left behind. At the right immediately inside the rear door, a number of electric transformers are piled. Bryan Doyle, an individual who helped develop the renovated office space on the site, referenced finding PCB labels scattered on the floor in this area as well as batteries stacked in the rear corner of the building.

4. Tanks and old machinery are found in various locations around the remainder of the site.

Additionally, two persons have expressed concern about this site by calling the EMC office. Bryan Doyle is one and the other caller wishes to remain anonymous. The concern expressed is for those people who work in the renovated office space. Do the remnants of the manufacturing process warrant an investigation? These interests cannot be severed from the sister site - the Schatz dumpsite, Van Wagner Road, Poughkeepsie, DEC code #314003, which is currently under remedial investigation.

An early reply on your course of action would be appreciated. If you have any further questions, please do not hesitate to call Alison Silkworth (677-3488-EMC office). Slides of the particular areas discussed are available at the EMC.

Bill Reiner, Chairman
Closed Landfill Committee

cc: Charles Goddard, DEC
Scott Daniels, DOH

REF. A-4-1-2

314

Robert-Mark Realty, Inc.
COMMERCIAL DIVISION

914-221-3700

March 20, 1987

New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561

Attn: Shaminder Singh
Assistant Engineer, Region 3

RE: Former Schatz Property
Fairview Avenue, Poughkeepsie

Dear Mr. Singh:

On February 19, 1987 I sent a letter to Ramanand Pergadia, P.E., Senior Sanitary Engineer (copy attached) which informed D.E.C. of the fact that Kramer Environmental, our consultant handling the above matter inspected the site on January 29, 1987 and determined that due to the freezing weather, the pits could not be sampled as per the approved program, nor could the remaining contents of the 30+/- drums on the site be transferred to proper storage containers in their frozen state.

Here is a summary of our efforts on this matter:

1. Various chemicals in former Schatz laboratory - all items completely removed, last shipment out March 3, 1987.

2. 60+/- 55 gallon drums of water/oil mixtures - 1,123 gallons of material pumped out and transported to approved facility December 3, 1986. Regarding the remaining empty drums, Storonske N. Cooperage Co., Inc. of Schodack Center, NY has been contacted and will pick these up at such time as all barrels on the site are empty and ready for removal.

3. 30+/- drums of assorted materials not compatible with category (2) above - Kramer's letter of February 12, 1987 addresses the problem of recontainerizing the material while in a frozen state. It is anticipated that mid-to-late April, this item will be done.

A-4-2-2

4. Sampling of liquids and sludge in pits - various locations within buildings - also addressed in Kramer's letter, prevented from being done while material is in frozen state.

I would like to suggest that the owners of the subject property have made progress with the situation at the former Schatz plant, and they have real plans to proceed with further clean up activities, as soon as the weather permits. In my opinion, there has been a true spirit of cooperation between the owners, D.E.C., town officials and other parties involved. I would like to see this continued.

Sincerely,

ROBERT-MARK REALTY, INC.

Donn Courselle
Assistant to President
Commercial Division

DC:tlh

Attachment

REF. A-5-1-1

88—Poughkeepsie Journal Friday, December 5, 1986

Cleanup continues at Schatz waste site

A cleanup of toxic waste continues at the sprawling Schatz Federal Bearings Co. plant in the Town of Poughkeepsie, six years after the maker of ball bearings went out of business.

There are about 100 metal drums in a vacant area of the plant, and Wednesday a tanker truck pumped 1,123 gallons of cutting oil and other fluids from 72 drums on the site, according to Don Courselle of Robert-Mark Realty, which has been hired to manage the cleanup.

Town officials have ordered that vacant areas be sealed. Courselle said the emptied barrels should be gone by Dec. 12, and the building should be closed with plywood boards by then.

About 26 remaining barrels contain detergents, alkaloids, fungicides and chemical solvents, according to town Fire Inspector Don Murphy. Courselle said a waste-management firm from New Jersey must determine where to take the chemicals before they can be removed.

Murphy cited the owners, a partnership called 1929 Associates, for several fire code violations June 17. The town also cited it for non-working sprinklers in 15 buildings, three of which are occupied. Lawyer Jerard Hankin, one of the owners, has said they will be repaired.

REF. A-6-1-3

Kramer
Environmental
DIVISION OF
KRAMER INDUSTRIES
135 ALLWOOD RD
CLIFTON, NJ 07012

NEW JERSEY: 201- 471-9500
609 AREA CODE ONLY - 800-522-4135
N.Y., P.A., CT., MD., DE., - 800-631-8316

Dec. 9. 1986

Mr. Donn Courselle
Robert-Mark
P.O. Box 308, Rt. 52
Hopewell Junction, NY 12533

Dear Mr. Courselle:

Kramer Environmental is pleased to offer the following proposal regarding the disposal of approximately 30 drums of corrosives, detergents, grease and oil sludges, gels, and one drum of a fungicide at the 1929 Associates facility in Poughkeepsie, New York.

This is a not-to-exceed quote since we believe many of the similar materials can be composited to reduce the total number of drums for disposal.

We have also quoted costs for using all new drums but will use as many of the waste drums on site as possible. We expect the actual costs to be significantly below our quote.

This quotation is based on the inventory of materials and field screening evaluations performed by our Technical Services Group.

Our Technical Services Group will provide necessary manpower and material as indicated in Proposal Number RK120902.

All work will be done in a professional manner and resultant waste will be containerized and transported according to Department of Transportation rules and regulations. Waste will be transported to approved waste facilities for disposal according to EPA and disposal regulations. KE can not accept unknown or unidentified chemicals.

Once material is containerized it will be staged on generators property prior to final approval and scheduling. Site security is the responsibility of generator. All scheduling is contingent upon necessary approvals from disposal site(s). Waste designated for specific disposal site will be picked up separately from other disposal site specific waste.

A-6-2-3

Hourly rates are portal-to-portal. KE will supply only those materials as indicated in proposal. Miscellaneous material handling equipment will be on case-by-case basis. Unless otherwise indicated, customer is responsible for any and all containers as a result of KE field work.

ALL QUOTATIONS ARE BASED ON UNIT PRICES AND/OR TIME AND MATERIAL RATES ONLY. ESTIMATES LISTED ON ATTACHED FORM HERE, BUT ARE GIVEN AS AN INDICATOR ONLY. BILLING IS BASED ON ACTUAL HOURS WORKED AND NUMBER OF DRUMS FOR DISPOSAL. MINIMUM BILLING: 4 HOURS PER PERSON PER DAY. MANPOWER RATES OF TIME AND ONE-HALF WILL APPLY AFTER 8 HOURS/DAY. NEW JERSEY'S SALES TAX WILL BE CHARGED ON TAXABLE ITEMS.

This proposal is valid for thirty (30) days and subject to change without notice thereafter. KE will require 1-2 weeks advance notice for scheduling. Purchase order number must be assigned to project and given to KE before scheduling. Credit terms for this order will be set at time of scheduling and are subject to standard credit approval.

If you have any technical questions regarding this proposal, do not hesitate to call Mr. Robert Kennedy at (201) 471-9500.

Thank you for your interest in Kramer Environmental.

Very truly yours,

KRAMER ENVIRONMENTAL

Robert T. Kennedy

Robert Kennedy, Ph.D.
Manager of Technical Services

RK/lf

00/01/30/64/77/88/89/100

A-6-3-3

Kramer Environmental
Technical Services Proposal
For
1929 Associates

JOB DESCRIPTION: disposal of various 55 gal. drums of hazardous materials
PROPOSAL NO. RK120902 DATE: 12/09/86

CHARGE CATEGORY	NO.	UNIT	ITEM	UNIT PRICE	EXTENDED PRICE
1. Labor: (Portal-to-Portal)					
	20	hour	field chemist	50	$1000
	20	hour	field chemist	35	700
2. Equipment:					
	2	day	field vehicle	75	150
3. Miscellaneous:					
	20	drum	55 gal., DOT approved	30	600
	4	person	personnel protection gear	25	100
4. Disposal:					
	1	55 gal. drum	fungicide	600	600
	30	55 gal. drum	acids, bases, detergents, grease & oil sludge, gels	240	7200
5. Transportation:					
	1	load	55 gal. drums of hazardous waste	300	300

Prepared by: Robert Kennedy Total Estimate: $10,650

REF. A-7-1-6

New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, New York 12561-1696
(914) 255-5453

Henry G. Williams
Commissioner

March 19, 1987

Mr. Joel D. Hanig
Hankin, Hanig & Stall
Attorneys at Law
319 Main Mall Rear
P. O. Box 911
Poughkeepsie, NY 12602-0911

Re: Property of 1929 Associates
Former Schatz Plant

Dear Mr. Hanig:

This is a follow-up to my letter of January 28, 1987, whereby I requested you to submit a work plan for Phase II type investigations for the above site by March 15, 1987.

Please inform me about the progress on the work plan and be advised that in the absence of a work plan and signed consent agreement, your site will be put onto the New York State Inactive Hazardous Waste Disposal Sites Registry, effective April 15, 1987.

Should you have questions on this, please do not hesitate to contact me.

Sincerely,

S. Singh

Shaminder Singh
Assistant Sanitary Engineer
Region 3

SS:ls

cc: A. Klauss
R. Gardineer/R. Pergadia
G. Peck
D. Murphy

A-7-2-6

New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561-1696
(914) 255-5453

Henry G. Williams
Commissioner

January 28, 1987

Joel D. Hanig
Hankin, Hanig & Stall
Attorneys at Law
319 Main Mall Rear
P.O. Box 911
Poughkeepsie, N.Y. 12602-0911

Re: Property of 1929 Associates
former Schatz Property

Dear Mr. Hanig:

I have following comments to your letter of January 07, 1987 addressed to Mr. Ram Pergadia:

Sampling plan for the 11 pits by Kramer Environmental is alright, but the overall proposal for site investigation is not acceptable. As you will recall in our meeting with you and Mr. Dan Corselle on Dec. 17, 1986 at New Paltz office, I gave you a generic Consent Agreement and a copy of generic work plan for phase II type investigations.

Please submit a work plan in accordance to the generic work plan/consent order (duplicate copy enclosed) to this office by March 15, 1987. In the mean time you may go ahead with the sampling of pits. Please bear in mind that DEC will not approve any work done without a Consent Agreement.

Contact me if you need any further information or clarification for the work plan.

Sincerely,

Shaminder Singh
Assistant Engineer
Region 3

SS/jo
Enc.
cc: Al Klauss
Rich Gardineer/Ram Pergadia
Gary Peck
Bill Busky

A-7-3-6

Hankin, Hanig & Stall
Attorneys at Law

JERARD S. HANKIN
JOEL D. HANIG
TODD S. STALL*

ROBERT G. SHORT

*MEMBER N.Y. & CT. BARS

LEGAL ASSISTANTS
LISA PECCHIA
RUTH FARRELL
KAREN VERONESI
SANDRA DESMEDT
CHRISTINE CUTLER

ADDRESS REPLY TO:
☒ 319 MAIN MALL REAR
P.O. BOX 911
POUGHKEEPSIE, NEW YORK 12602-0911
(914) 471-7177

☐ EAST FISHKILL OFFICE:
ROUTE 52
P.O. BOX 127
HOPEWELL JUNCTION, NEW YORK 12533
(914) 221-2424

☐ DANBURY, CONNECTICUT OFFICE:
30 MAIN STREET
SUITE 202
DANBURY, CONNECTICUT 06810-6046
(203) 792-3203

January 9, 1987

New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, N.Y. 12561

Att: Ramanand Pergadia, P.E.
Senior Sanitary Engineer

Re: Property of 1929 Associates- former Shatz property.

Dear Mr. Pergadia:

In accordance with the meeting that we had at your office on December 17, 1986 this letter is to verify that the property owner accepts responsibility to determine whether or not any hazardous waste exists that the premises of 1929 Associates in the areas detailed by you at the time of our meeting.

I enclose a letter dated December 18, 1986 from Kramer Environmenta detailing their suggested sample plan for the property. I would ask that you review this letter to determine whether the extent of the program suggested by them is suitable to you. If it is not, we will accept from you any suggestions as to a revision of their sampling plan which would be satisfactory to you.

Obviously, my client is ready to accept the proposal of Kramer Environmental and make the necessary financial arrangements for paying for their program.

I enclose, for your information the earlier letter of Kramer Environmental dated December 9, 1986 regarding the removal of the drums of material located at the premises. I understand that this removal is almost complete.

If you feel that a further meeting to discuss what is necessary will be required, please contact me and we will schedule same.

Sincerely,

HANKIN, HANIG & STALL

JOEL D. HANIG

JDH:jmf
Encs.

A-7-4-6

Kramer
Environmental
DIVISION OF
KRAMER INDUSTRIES
935 ALLWOOD RD
CLIFTON, NJ 07012

NEW JERSEY: 201-
609 AREA CODE ONLY - 800-
N.Y., P.A., CT., MD., DE., - 800-

December 18, 1986

Mr. Don Courselle
1929 Associates
c/o Robert Mark Agency
Rt. 52, PO Box 306
Hopewell Junction, N.Y 12533

Subject: Sampling of your 11 (approximate) pits

Dear Don:

Per our previous telephone conversations, including the one today, I will outline a suggested sampling plan.

It is Kramer Environmental's opinion that eleven total samples should be taken with all eleven going through our Option 5 sampling program which includes:

Physical Properties (physical State, Layering, Color, Odor, Clarity)
Radiation Screening
pH
Water Solubility/Reactivity
Hexane Solubility
Flammability
Specific Gravity
Cyanide
Sulfide
Oxidizing/Reducing Potential

In addition, approximately six pits containing oil should be checked for PCB's.

Eleven sludge samples should be taken and subjected to our Option 5 program as outlined above, as well as six should be analyzed for PCB 's.

We further suggest that a 601/602 solvent scan be run to identify any potential aromatics and/or ketones being present. The cost for performing our suggested plan is $9500.

A-7-5-6

In accordance with our telephone conversation today, I indicated that I have assumed two days to accomplish this task. If this can be done in a lesser time, such as one day, we will eliminate the labor portions associated with the additional day. By doing it in one day, it would also eliminate the additional cost associated with per diem for our two men.

If you or the N.Y. DEC require additional testing once we have gathered the samples, we will be able to perform this additional work by retaining the samples for a period of thirty days.

This quotation will be held firm for thirty days from the above date and we will assume that a Purchase Order will be sent to us as well as our Credit Department may require a portion of this amount in advance. As you well know, Don, most of our business has been performed with payment in full prior to commencement. This may become the mechanism that will be required on this task.

If I can be of assistance to you, please do not hesitate to contact me and if you have any questions about the aforementioned information, please call.

Very truly yours,

James L. Margolin
Director, Remedial Action

JLM:ams

A-7-6-6

SCHATZ PLANT MEETING

PLACE: DEC, New Paltz

DATE: December 17, 1986 1:30 p.m.

ATTENDEES:

Shaminder Singh	(914) 255-5453
Ram Pergadia	(914) 255-5453
Bill Buskey	(914) 255-5453
Dan Corselle	(914) 221-3700
Joel Hanig	(914) 221-2424

PURPOSE: To discuss the Schatz Plant Site.

SUMMARY: I informed Dan Corselle that DEC is putting Schatz Plant property on the State's In-Place Hazardous Waste Sites Registry and he requested for this meeting.

Bill Buskey explained what they (1929 Associates - the property owner) are doing at the site ie. removal of hazardous waste drums, pumping oil/water out of 60+ drums and identifying the left over 30+ drums. Ram Pergadia explained to them what is required under ECL Article 27, Title 13.

It is decided in the meeting that we will hold onto the site for the time being, provided 1929 Associates show in good faith to do sub-surface investigations (equivalent Phase II). Pleasant Valley Finishing Company (contact Mr. Turitsky) is another owner of the adjacent site. 1929 will also contact them. A generic Phase II Consent Order and generic Phase II Work Plan was handed over to them.

1929 Associates will write to DEC about their intentions of when and how to do equivalent Phase II Investigations. Until then we will not put this site on the In-Place Registry.

cc: A. Klauss
R. Gardineer/R. Pergadia
B. Buskey

S Singh

REF. A-8-1-2

Robert-Mark Realty, Inc.
COMMERCIAL DIVISION

914-221-3700

February 19, 1987

New York State Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, New York 12561

Attn: Ramanand Pergadia, P.E.
Senior Sanitary Engineer

Re: Former Schatz Property
Fairview Avenue, Town of Poughkeepsie

Dear Mr. Perendia:

Attached please find a copy of a letter received by me from the Manager of Technical Services of Kramer Environmental, Mr. Robert T. Kennedy, Ph. D.

In such letter he advises that due to the frozen condition of the material in the drums which are to be handled, we must wait until the end of the cold weather to be able to do the work properly.

Also, Kramer's sampling of the pits can not be done while the material is frozen.

I will keep you advised of our progress on those matters.

Sincerely,

Donn Courselle
Assistant to President
Commercial Division

Attachment

A-8-2-2

Kramer
Environmental
DIVISION OF
KRAMER INDUSTRIES
935 ALLWOOD RD
CLIFTON, NJ 07012

NEW JERSEY 201-47
609 AREA CODE ONLY • 800-[illegible]
N.Y., P.A., CT., MD., DE., • 800-[illegible]

February 12, 1987

Mr. Donn Courselle
Robert-Mark
P.O. Box 308, Rt, 52
Hopewell Junction, NY 12533

Dear Mr. Courselle:

Based on a site inspection conducted on January 29, 1987 by Robert Mourterot and myself, I believe it is best to wait approximately four to six weeks before completing the final phase of the drum removal at 1929 Associates in Poughkeepsie, New York.

The various chemical wastes were all frozen and could not be transferred from the damaged and rusted drums to new drums for proper shipment to a treatment facility.

We will contact you during the week of March 16 to discuss when the project can be resumed.

If you, or anyone connected with this project, have any questions concerning the delay in completion, please feel free to contact me.

Very truly yours,

Robert T. Krennedy

Robert T. Krennedy, Ph.D.
Manager of Technical Services

cc: R. Mourterot

REF. A-9-1-38

RECEIVED
MAY 27 1987
NYS DEC
REGION 3

Kramer
Environmental
DIVISION OF
KRAMER INDUSTRIES
93 ALLWOOD RD
CLIFTON, NJ 07012

NEW JERSEY: 201-
609 AREA CODE ONLY - 800-
N.Y., P.A., CT., MD., DE., - 800-

May 14, 1987

Mr. Donn Courselle
Robert-Mark
P.O. Box 308, Rt. 52
Hopewell Junction, NY 12533

Dear Donn:

Enclosed you will please find the laboratory reports on the pit and transformer samples taken on April 20, 1987 by our field team at the 1929 Associates facility in Poughkeepsie, New York.

As per my quote of April 13, 1987, two oil, two water and two sludge composites were made of the materials in the 14 on-site pits in order to reduce analytical laboratory costs. Included in our quote was the provision that should any composite test positive for PCB's, all individual samples in the composite would have to be tested.

As indicated by the reports, both pit composites (A and B) came up positive with levels exceeding 50 ppm of PCB's, the allowable non-hazardous landfill limit.

All pits must now be sampled and tested individually to determine if they are contaminated.

The attached proposal is for the complete testing of all individual pits.

After this information has been obtained, we will issue a quote for the total site clean-up.

Sincerely,

Bob Kennedy

Robert T. Kennedy
Director - Field Operations

A-9-2-38

Kramer Environmental
Technical Services Proposal
For

1929 Associates
JOB DESCRIPTION: sampling of pits for pcb contamination
PROPOSAL NO. rk05148701 DATE: 5-14-87

CHARGE CATEGORY	NO.	UNIT	ITEM	UNIT PRICE	EXTEND PRICE
1. Labor: (Portal-to-Portal)	10	hour	Supervisor	55	55
	10	hour	Technician	40	40
2. Materials:					
		ea.(DOT)	labels	.75	
		ea.(EPA)	labels-pre-printed	1	
3. Equipment:					
	2	person	personnel protection gear (LEVEL C)	50	100
	1	days	field vehicle	90	90
4. Laboratory:	14	sample	for PCBS	150	2100
5. Disposal:					
6. Transportation:					

Prepared by: Bob Kennedy Total Estimate: $3240

A-9-3-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

TRANSFORMER-

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 476 (Transformer-

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012.

These samples were analyzed by Gas Chromatography (EPA method 608). This system is equipped with an electron capture detector.

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
Organic Analyses ug/L (ppb)		
PCB's	122000. = 122.0 PPM	.05

This sample was found to contain a concentration of 122000. ug/L of mixed aroclors 1254 & 1260.

nd: none detected

LABORATORY DIRECTOR

CONTAINS PCBs
122 PPM is above the limit

A-9-4-38

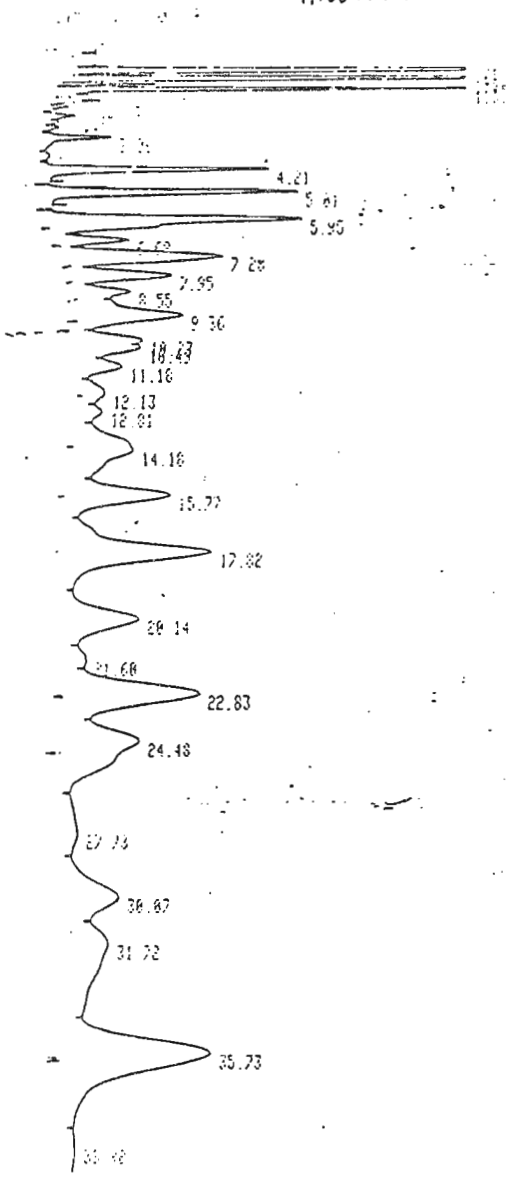
EPL #4476
1:100 in Hexane

SAMPLE # 1 PCBs in oil

AREA PT	AREA	TYPE	AR/HT	AREA%
0.35	223480	BP	0.455	0.113
0.65	1.4832E+07	SPB	0.067	7.513
0.93	4843600	BV	0.057	2.150
1.00	1435100	O VV	0.048	0.727
1.17	401300	VP	0.058	0.203
1.33	4345000	PB	0.075	2.201
1.75	281620	BP	0.096	0.143
1.96	96790	PP	0.083	0.049
2.27	284800	PV	0.144	0.144
2.46	119770	VV	0.140	0.061
2.69	119040	VV	0.133	0.060
3.06	801290	VP	0.162	0.406
3.70	49494	PP	0.153	0.025
4.21	2953400	PB	0.176	1.496
5.01	3758700	PB	0.201	1.905
5.95	6415000	BV	0.338	3.250
6.68	1763300	VV	0.296	0.893
7.28	5995000	VV	0.460	3.037
7.95	3997100	VV	0.432	2.025
8.55	2579100	VV	0.420	1.307
9.36	7009100	VV	0.694	3.551
10.23	2730000	VV	0.386	1.383
10.49	2848400	VV	0.411	1.443
11.18	3336800	VV	0.599	1.690
12.13	3469000	VV	0.386	1.757
12.81	2563000	VV	0.620	1.298
- 14.18	9465700	VV	1.469	4.795
- 15.77	7546100	VV	0.817	3.823
- 17.82	1.3304E+07	VV	1.675	6.739
- 20.14	7999200	VV	1.142	4.052
21.60	2391200	VV	0.784	1.211
- 22.83	1.2392E+07	VV	1.071	6.278
- 24.48	1.2160E+07	VV	1.710	6.160
- 27.73	4927900	VV	1.957	2.496
- 30.87	9266600	VV	1.628	4.694
- 31.72	1.3752E+07	VV	2.798	6.966
- 35.73	2.3378E+07	VV	1.852	11.842
38.98	4165000	I VH	1.642	2.110

TOTAL AREA= 1.9741E+08
MUL FACTOR= 1.0000E+00

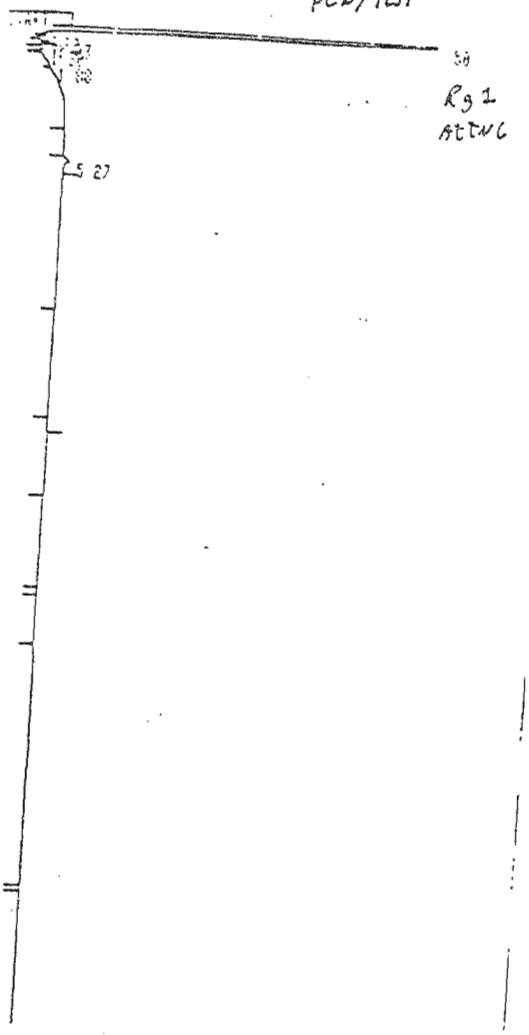
Ar. #'s 1254 + 1260



A-9-5-38

STOP TIME 4 5 #

Solvent blank for PCB/PCT



Rg 1
Attn C

RUN # 116
WORKFILE ID: C
WORKFILE NAME:
SAMPLE # 1

AREA%

RT	AREA	TYPE	AR/HT	AREA%
0.50	7743900	BBB	0.057	95.47
0.82	23765	BP	0.056	0.293
1.03	48415	PB	0.063	0.597
1.30	63128	BP	0.136	0.778
1.88	154740	PB	1.287	1.907
5.27	79997	BB	0.289	0.986

TOTAL AREA= 8114080
MUL FACTOR= 1.0000E+00

A-9-6-38

SAMPLE # 1

AREA%

RT	AREA	TYPE	AR/HT	AREA%
0.50	3.1005E+07	†SPB	0.062	27.591
0.82	18252	BP	0.078	0.016
1.03	144540	PV	0.102	0.129
1.29	161700	VP	0.171	0.144
1.75	605040	PV	0.418	0.538
2.86	1917300	VV	0.398	1.706
3.23	856960	VV	0.398	0.763
3.66	1089600	VV	0.469	0.970
4.02	660700	VV	0.300	0.588
4.30	434840	VV	0.200	0.387
4.55	1375400	VV	0.580	1.224
5.26	1577500	VV	0.559	1.404
7.10	3163500	VV	0.834	2.815
7.82	2606600	VV	0.687	2.320
8.53	1144700	VV	0.568	1.019
9.89	2618800	VV	1.176	2.331
10.92	4642700	VV	1.092	4.132
12.13	3828500	VV	0.643	3.407
13.72	6790100	VV	0.924	6.043
15.51	4691900	VV	0.935	4.175
17.57	7142800	VV	0.992	6.357
18.85	6308600	VV	1.303	5.614
21.37	2483900	VV	1.515	2.210
23.13	4288000	VV	1.207	3.816
24.35	3989700	VV	1.631	3.551
27.51	9078500	VV	1.310	8.072
32.07	1851100	VV	1.965	0.935
35.77	7786400	VV	2.115	6.929
43.12	193000	BP	2.048	0.172
48.39	724070	I PP	1.861	0.644

TOTAL AREA= 1.1237E+08
MUL FACTOR= 1.0000E+00

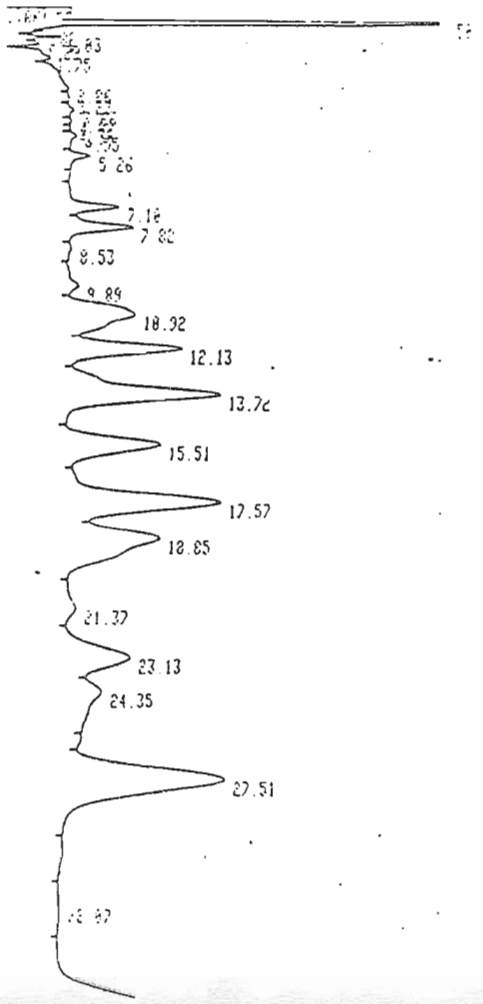
STOP

LIST: LIST
PEAK CAPACITY: 996

ZERO = 10,-0.24
ATT 2^ = 5
CHT SP = 0.5
PK WD = 0.04
THRSH = 2
AR REJ = 1000

LIST: ZERO = 10, 0.00

500ppb 1260 R:1 ATN 5



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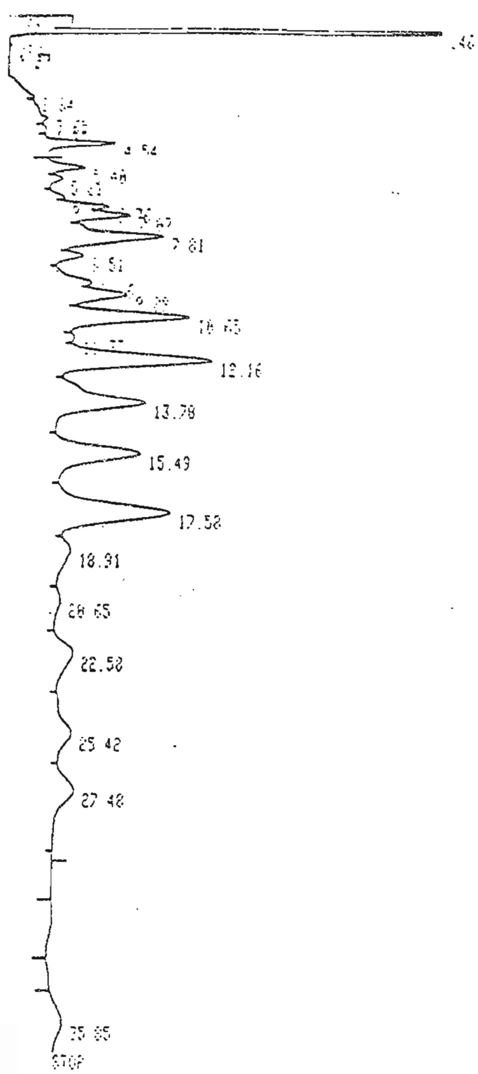
CHT SP = [illegible]
PK WD = [illegible]
THRSH = 4
AR REJ = 1000

500PPb 1254 STD = TO 100uL/10mL 50PPM



[illegible]

WORKFILE ID: C
WORKFILE NAME:

AREA%

RT	AREA	TYPE	AR/HT	AREA%
0.46	4.3356E+07	↑SBB	0.086	39.6[illegible]
1.01	189870	↓ BV	0.101	0.1[illegible]
1.27	310230	↓ VP	0.158	0.2[illegible]
2.64	3907400	↓ PV	1.260	3.5[illegible]
3.65	2290400	VV	0.848	2.0[illegible]
4.02	633850	VV	0.343	0.5[illegible]
4.54	1781400	VB	0.288	1.6[illegible]
5.40	713600	BV	0.243	0.6[illegible]
5.81	312770	VV	0.367	0.2[illegible]
6.44	308540	VV	0.232	0.2[illegible]
6.76	1259400	VV	0.265	1.1[illegible]
7.07	1969100	VV	0.311	1.7[illegible]
7.81	4600300	VV	0.520	4.2[illegible]
8.51	1039200	VV	0.371	0.9[illegible]
9.46	1444500	VV	0.416	1.3[illegible]
9.89	2918300	VV	0.478	2.6[illegible]
10.65	5095200	VV	0.472	4.6[illegible]
11.37	763580	VV	0.360	0.6[illegible]
12.16	7161500	VV	0.574	6.54[illegible]
13.70	5588100	VV	0.756	5.1[illegible]
15.49	5038000	VV	0.719	4.6[illegible]
17.58	7537600	VV	0.813	6.8[illegible]
18.91	2081300	VV	1.175	1.90[illegible]
20.65	1032100	VV	1.122	0.94[illegible]
22.58	2356500	VV	1.261	2.15[illegible]
25.42	2350000	VV	1.453	2.14[illegible]
27.48	2180100	VV	1.230	1.99[illegible]
35.85	1248100	I BH	1.287	1.14[illegible]

TOTAL AREA= 1.0947E+08
MUL FACTOR= 1.0000E+00

A-9-8-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

TRANSFORMER

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 477 Transformer

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

These samples were analyzed by Gas Chromatography (EPA method 608).
This system is equipped with an electron capture detector.

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
Organic Analyses ug/L (ppb)		
PCB's	4400. = 4.4 PPM	.05

This sample was found to contain a concentration of 4400. ug/L of aroclor 1260.

nd: none detected

Gary M. Lobik
LABORATORY DIRECTOR

ACCEPTABLE LEVEL (BELOW 50 PPM)

A-9-9-38

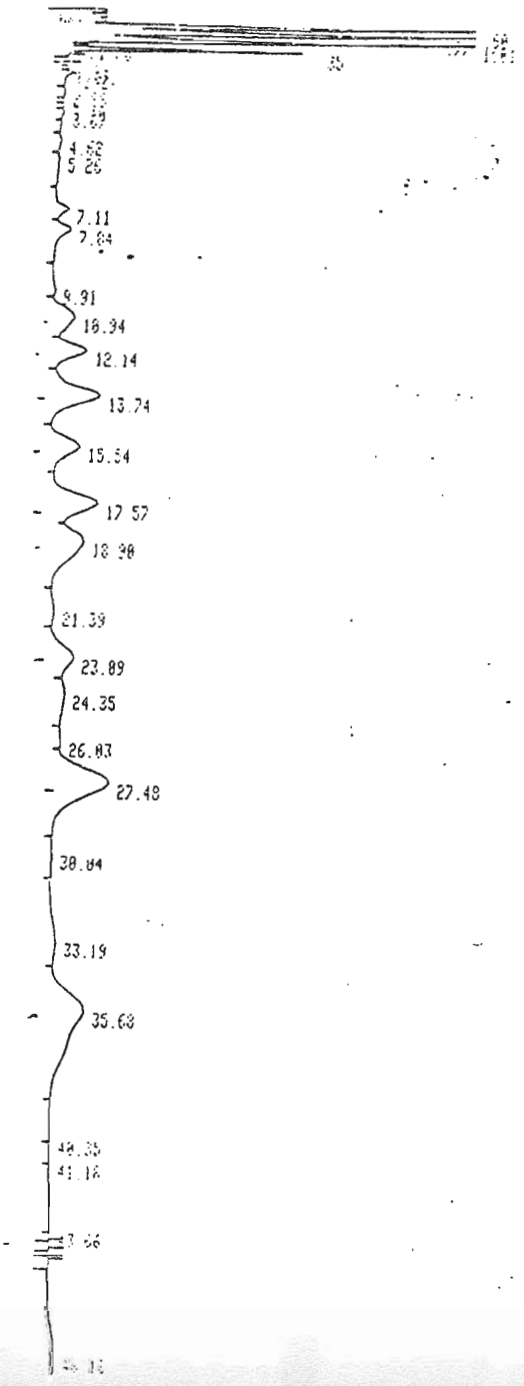
RUN # 83
WORKFILE ID: C
WORKFILE NAME:
SAMPLE # 1

Ac. #1260

AREA%

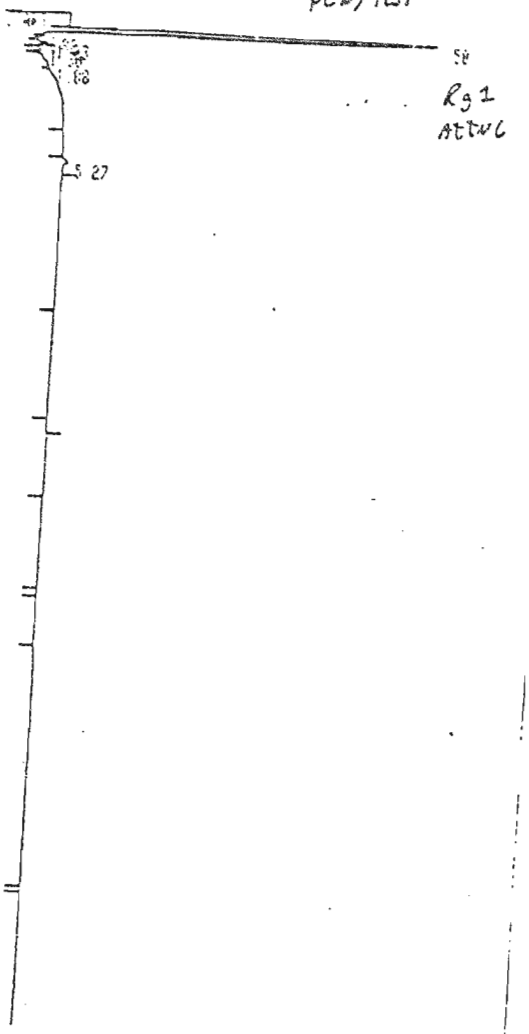
FT	AREA	TYPE	AR/HT	AREA%
0.50	6700200	SPB	0.066	14.072
0.72	2172600	TBV	0.051	4.563
0.77	1236300	DTVV	0.053	2.597
0.90	112650	TVV	0.040	0.237
1.01	4086000	TVB	0.065	8.582
1.20	59870	BV	0.070	0.126
1.35	1331000	VB	0.078	2.796
1.91	7402	BV	0.097	0.016
2.07	22612	VV	0.120	0.048
2.24	107970	VP	0.140	0.227
2.88	32783	PV	0.264	0.069
3.49	22614	VV	0.195	0.048
3.67	43366	VV	0.219	0.091
4.62	49721	PV	0.353	0.104
5.26	35281	VP	0.431	0.074
7.11	374710	PV	0.385	0.787
7.84	583200	VP	0.468	1.225
9.91	66313	PV	0.448	0.139
10.94	1423500	VV	0.858	2.990
12.14	1550100	VV	0.683	3.256
13.74	2754000	VP	0.758	5.786
15.54	1618400	PV	0.765	3.399
17.57	2985000	VV	0.855	6.269
18.90	2931600	VV	1.133	6.157
21.39	185200	VV	0.803	0.389
23.09	1688100	VV	1.001	3.529
24.35	1443100	VV	1.385	3.031
26.83	622810	VV	0.847	1.308
27.48	5588400	VV	1.283	11.737
30.04	141190	VV	1.286	0.297
33.19	610040	VV	1.585	1.281
35.68	5369300	VV	2.892	11.278
40.35	78568	VV	3.031	0.165
41.18	7552	VP	2.838	0.016
43.66	65293	PV	2.674	0.137
48.18	1512700	I BH	2.359	3.177

TOTAL AREA= 4.7613E+07
MUL FACTOR= 1.0000E+00



A-9-10-38

TIME 4 5 6 PCB/Pest



Rg 1
Attn

RUN # 116
WORKFILE ID: C
WORKFILE NAME:
SAMPLE # 1

AREA%

RT	AREA	TYPE	AR/HT	AREA%
0.50	7743900	SBB	0.057	95.4[illegible]
0.82	23765	BP	0.656	0.29[illegible]
1.03	48415	PB	0.063	0.59[illegible]
1.30	63128	BP	0.136	0.77[illegible]
1.88	154740	PB	1.287	1.90[illegible]
5.27	79997	BB	0.209	0.98[illegible]

TOTAL AREA= 8114000
MUL FACTOR= 1.0000E+00

A-9-11-38

SAMPLE # 1

AREA%

RT	AREA	TYPE	AR/HT	AREA%
0.50	3.10052E+07	†SPB	0.862	27.591
0.82	18252	BP	0.078	0.016
1.03	144540	PV	0.102	0.129
1.29	161700	VP	0.171	0.144
1.75	605040	PV	0.418	0.538
2.86	1917300	VV	0.890	1.706
3.23	856960	VV	0.336	0.763
3.66	1039600	VV	0.469	0.978
4.02	660700	VV	0.300	0.588
4.30	434840	VV	0.200	0.387
4.55	1375400	VV	0.586	1.224
5.26	1577500	VV	0.559	1.404
7.10	3163500	VV	0.834	2.815
7.82	2606600	VV	0.607	2.320
8.53	1144700	VV	0.568	1.019
9.89	2618800	VV	1.176	2.331
10.92	4642700	VV	1.092	4.132
12.13	3828500	VV	0.643	3.407
13.72	6790100	VV	0.924	6.043
15.51	4691900	VV	0.935	4.175
17.57	7142800	VV	0.992	6.357
18.85	6300600	VV	1.303	5.614
21.37	2483900	VV	1.515	2.210
23.13	4288000	VV	1.207	3.816
24.35	3989700	VV	1.631	3.551
27.51	9870500	VV	1.318	8.872
32.07	1051100	VV	1.965	0.935
35.77	7786400	VV	2.115	6.929
43.12	193000	BP	2.048	0.172
48.39	724070 I	PP	1.861	0.644

TOTAL AREA= 1.1237E+08
MUL FACTOR= 1.0000E+00

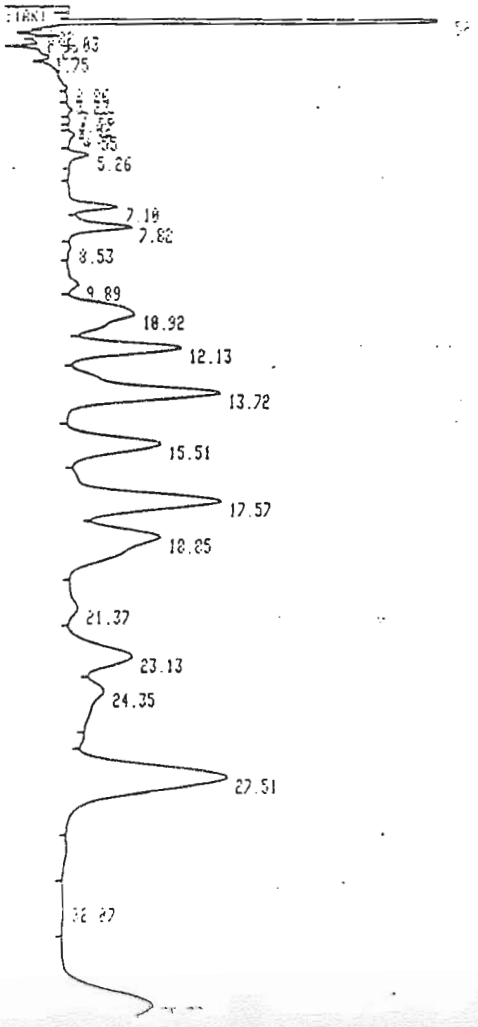
STOP

LIST: LIST
PEAK CAPACITY: 996

ZERO = 10,-0.24
ATT 2↑ = 5
CHT SP = 0.5
PK WD = 0.04
THRSH = 2
AR REJ = 1000

LIST: ZERO = 10, 0.00

500ppb 1260 RS 1 ATN 5



A-9-12-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn., NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 478 (Sludge-)
SAMPLE RCD. 04/22/87
ANALYSIS COMP. 05/12/87

IDENTIFICATION: Kramer Environmental
PO Box 1299, Clifton, NJ 07012

These samples were analyzed by Atomic Absorption Spectrophotometry.
This method included direct aspiration and grafite furnace techniques.

TEST PARAMETERS:		RESULTS:	DETECTION LIMITS:
Metals Analyses mg/Kg (ppm)			
Arsenic	(As)	0.55	.001
Barium	(Ba)	8.82	.05
Cadmium	(Cd)	0.37	.005
Chromium	(Cr,T)	2.18	.002
Chromium	(Cr, Hex)	N/A	.001
Lead	(Pb)	11.16	.08
Mercury	(Hg)	.0019	.0001
Selenium	(Se)	0.69	.001
Silver	(Ag)	0.39	.001

LABORATORY DIRECTOR

A-9-13-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jnct. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 178 (Sludge-A)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
RCRA Analyses		
Reactivity mg/L (ppm)		
Cyanide (T)	< 0.5	0.5
Sulfide (T)	119.	.006
Corrosivity (units)		
pH	6	
Ignitability (Deg F)		
Flash Point	> 212 F	

LABORATORY DIRECTOR

A-9-14-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 478 (Sludge)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012.

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
Physical Analyses		
% Solids	90 %	

<= less than

Mary M. Lehrk
LABORATORY DIRECTOR

A-9-15-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn., NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 979/Sludge-1

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/12/87

IDENTIFICATION: Kramer Environmental
PO Box 1299, Clifton, NJ 07012

These samples were analyzed by Atomic Absorption Spectrophotometry.
This method included direct aspiration and grafite furnace techniques.

TEST PARAMETERS:		RESULTS:	DETECTION LIMITS:
Metals Analyses mg/Kg (ppm)			
Arsenic	(As)	4.66	.001
Barium	(Ba)	14.7	.05
Cadmium	(Cd)	3.06	.005
Chromium	(Cr,T)	3.71	.002
Chromium	(Cr, Hex)	N/A	.001
Lead	(Pb)	11.48	.08
Mercury	(Hg)	.0043	.0001
Selenium	(Se)	0.028	.001
Silver	(Ag)	0.35	.001

LABORATORY DIRECTOR

A-9-16-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jnct. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 479 (Sludge - 2)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
RCRA Analyses		
Reactivity mg/L (ppm)		
Cyanide (T)	< 0.5	0.5
Sulfide (T)	7.7	.006
Corrosivity (units)		
pH	7	
Ignitability (Deg F)		
Flash Point	> 212 F	

LABORATORY DIRECTOR

A-9-17-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 479 (Sludge-1)

SAMPLE RCD: 04/22/87

ANALYSIS COMP: 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
Physical Analyses		
% Solids	75 %	

<= less than

LABORATORY DIRECTOR

A-9-18-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jnct. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 480 (Oil-A)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
RCRA Analyses		
Reactivity mg/L (ppm)		
Cyanide (T)	1.1	0.5
Sulfide (T)	2.3	.006
Corrosivity (units)		
pH	7	
Ignitability (Deg F)		
Flash Point	> 212 F	

LABORATORY DIRECTOR

A-9-19-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6276

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

COMPOSITE A

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn., NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 480 (Oil-A)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/12/87

IDENTIFICATION: Kramer Environmental
PO Box 1299, Clifton, NJ 07012

These samples were analyzed by Atomic Absorption Spectrophotometry.
This method included direct aspiration and grafite furnace techniques.

Metals Analyses mg/Kg (ppm)

TEST PARAMETERS:		RESULTS:	DETECTION LIMITS:
Arsenic	(As)	0.58	.001
Barium	(Ba)	28.4	.05
Cadmium	(Cd)	2.18	.005
Chromium	(Cr,T)	1.82	.002
Chromium	(Cr, Hex)	N/A	.001
Lead	(Pb)	14.35	.08
Mercury	(Hg)	.0013	.0001
Selenium	(Se)	0.54	.001
Silver	(Ag)	0.39	.001

LABORATORY DIRECTOR

CONTAINS PCBs
SEE 4th PAGE
ALL SAMPLES IN COMPOSITE
MUST BE TESTED.

A-9-20-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6276

CERTIFICATE OF ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 306 Rt. 52
Hopewell Jnct. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 490 (01-A)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
RCRA Analyses		
Reactivity mg/L (ppm)		
Cyanide (T)	1.1	0.5
Sulfide (T)	2.3	.006
Corrosivity (units)		
pH	7	
Ignitability (Deg F)		
Flash Point	> 212 F	

LABORATORY DIRECTOR

A-9-21-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 480 (Oil-A)
SAMPLE RCD. 04/22/87
ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
Physical Analyses		
% Ash	52 %	
% Water	41 %	
BTU	8390.8 BTU/Lb	
Inorganic Analyses mg/Kg (ppm)		
Chloride	10278.	1.0

LABORATORY DIRECTOR

A-9-22-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt.52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 480 (Oil-A)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

These samples were analyzed by Gas Chromatography (EPA method 608).
This system is equipped with an electron capture detector.

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
	COMPOSITE A of 7 PITS	
Organic Analyses ug/L (ppb)		
PCB's	264400. = 264.4 PPM	.05

This sample was found to contain a concentration of 264400. ug/L of aroclor 1254.

nd: none detected

LABORATORY DIRECTOR

A-9-23-38

RUN # 102
WORKFILE ID: C
WORKFILE NAME:
SAMPLE # 1

AREA%

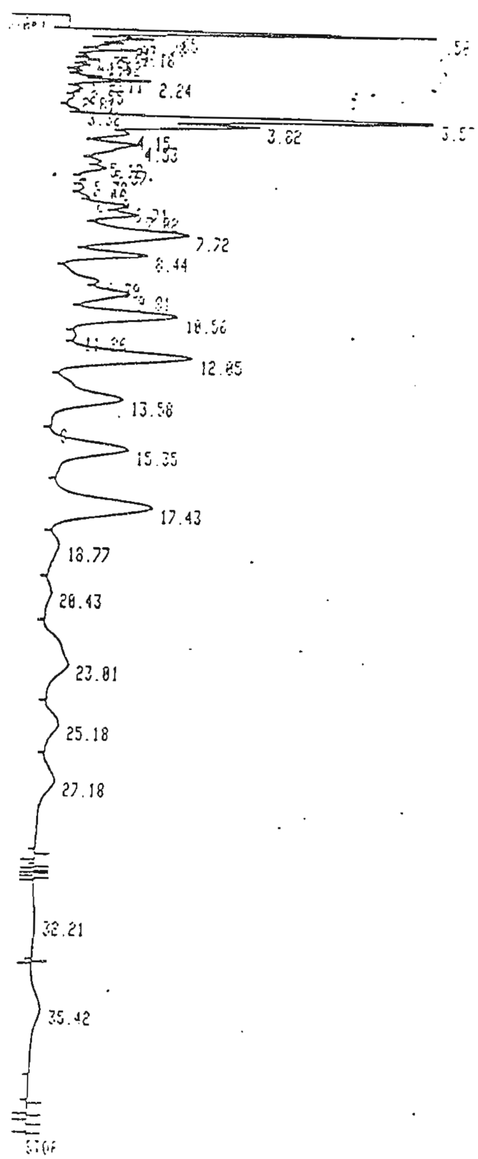
RT	AREA	TYPE	AR/HT	AREA%
0.50	1.0045E+07	SBB	0.065	13.433
0.65	177360	TBP	0.047	0.237
0.78	395760	TPV	0.092	0.529
0.93	156730	TVV	0.070	0.210
1.01	82479	TVV	0.053	0.110
1.18	238460	TPV	0.068	0.319
1.35	15715	TVV	0.061	0.021
1.52	122549	TPV	0.032	0.164
1.71	102440	TVP	0.039	0.137
1.91	58700	TPV	0.031	0.079
2.11	235130	TVV	0.101	0.315
2.24	696810	TVV	0.115	0.932
2.55	157200	TVV	0.162	0.210
2.81	83415	TVP	0.191	0.112
3.32	133590	TPV	0.134	0.179
3.57	5803000	TVV	0.163	7.761
3.82	2863300	TVV	0.194	3.829
4.15	1354100	TVV	0.200	1.811
4.53	2196500	TVV	0.401	2.937
5.12	731240	TVV	0.254	0.978
5.37	890290	TVV	0.273	1.191
5.78	478750	TVV	0.273	0.640
6.06	428590	TVV	0.259	0.573
6.40	469500	TVV	0.229	0.628
6.71	1408000	TVV	0.237	1.883
7.02	1798400	TVV	0.311	2.405
7.72	5295400	TVV	0.541	7.063
8.44	2074200	TVV	0.311	2.774
9.39	1255600	TVV	0.402	1.679
9.81	2594600	TVV	0.470	3.470
10.56	4172100	TVV	0.450	5.579
11.26	611330	TVV	0.375	0.818
12.05	5594300	TVV	0.532	7.481
13.58	3533600	TVB	0.658	4.726
15.35	3824300	BV	0.647	5.114
17.43	5847100	VV	0.743	7.820
18.77	960790	VV	0.980	1.285
20.43	413010	VV	0.787	0.552
23.01	2936700	VV	1.473	3.927
25.19	1617500	VV	1.133	2.163
27.18	1535500	VP	1.224	2.053
32.21	204660	PP	1.295	0.274
35.42	1193200	BV	1.515	1.596

TOTAL AREA= 7.4777E+07
MUL FACTOR= 1.0000E+00

STOP

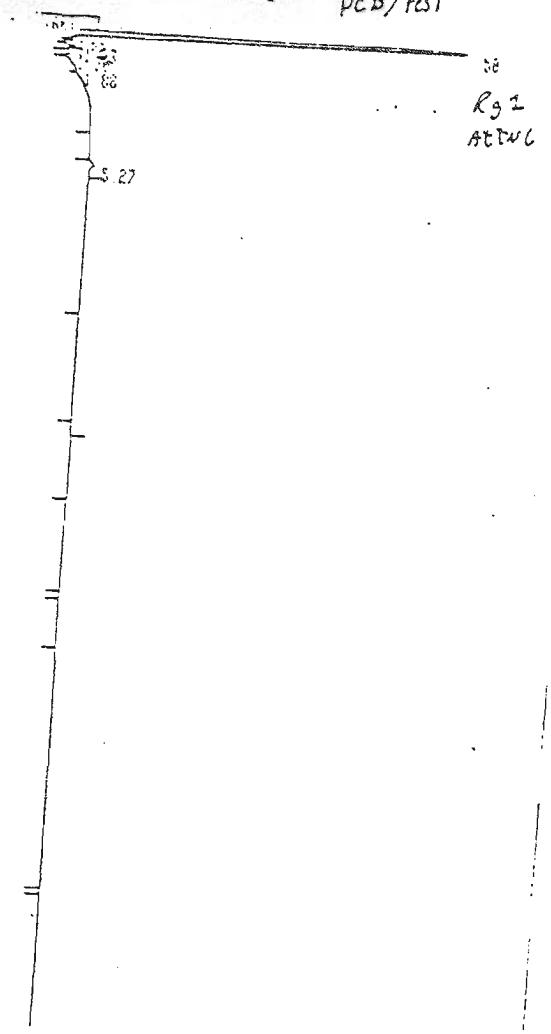
480 20uL/10mL

RS 1
ATTN: 6



A-9-24-38

PCB/PCST



RUN # 116
WORKFILE ID: C
WORKFILE NAME:
SAMPLE # 1

AREA%

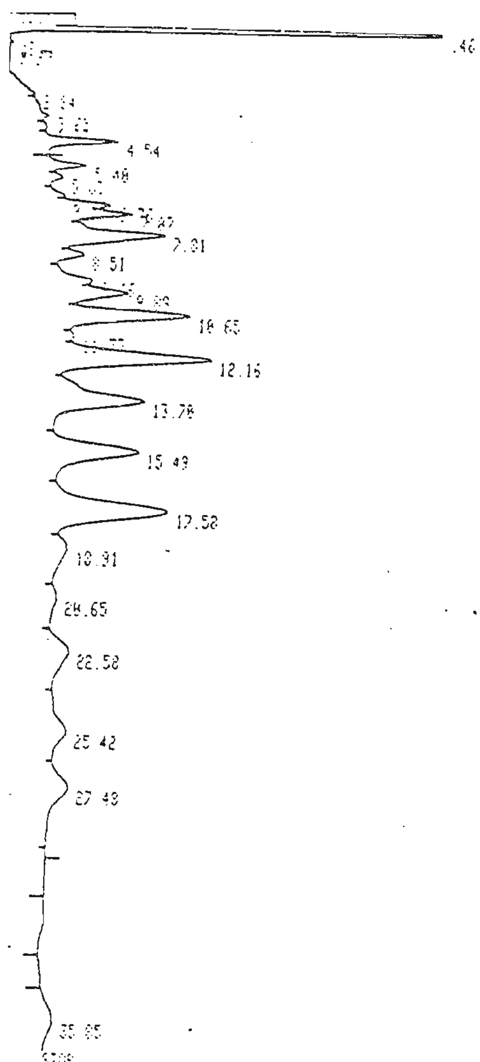
RT	AREA	TYPE	AP/HT	AREA%
0.58	7743900	BBB	0.052	95.42
0.82	23765	BP	0.056	0.29
1.03	48415	PB	0.063	0.59
1.30	63128	BP	0.135	0.77
1.88	154740	PB	1.287	1.90
5.27	79997	BB	0.289	0.98

TOTAL AREA= 8114080
MUL FACTOR= 1.0000E+00

A-9-25-38

[illegible]
[illegible]
PK WD = 0.04
THRSH = 4
AR REJ = 1000

5ОPPL 1254 STD = TO 100μL/10mL 50PPM



WORKFILE ID: C
WORKFILE NAME:

AREA%

RT	AREA	TYPE	AR/HT	AREA%
0.46	4.3356E+07	↑SBB	0.086	[illegible]
1.01	109870	↓ BV	0.101	[illegible]
1.27	310230	↓ VP	0.158	[illegible]
2.84	3907400	↓ PV	1.260	[illegible]
3.65	2290400	VV	0.848	[illegible]
4.02	633850	VV	0.343	[illegible]
4.54	1781400	VB	0.288	[illegible]
5.40	713680	BV	0.243	[illegible]
5.81	312770	VV	0.267	[illegible]
6.44	308540	VV	0.232	[illegible]
6.76	1259400	VV	0.265	[illegible]
7.07	1969100	VV	0.311	[illegible]
7.81	4680300	VV	0.520	[illegible]
8.51	1039200	VV	0.371	[illegible]
9.46	1444500	VV	0.416	[illegible]
9.89	2918300	VV	0.478	[illegible]
10.65	5095200	VV	0.472	[illegible]
11.37	763580	VV	0.360	[illegible]
12.16	7161500	VV	0.574	[illegible]
13.70	5588100	VV	0.756	[illegible]
15.49	5038000	VV	0.719	[illegible]
17.58	7537600	VV	0.813	[illegible]
18.91	2081300	VV	1.175	[illegible]
20.65	1032100	VV	1.122	[illegible]
22.58	2356500	VV	1.261	[illegible]
25.42	2350000	VV	1.453	[illegible]
27.48	2100100	VV	1.230	[illegible]
35.85	1248100	I BH	1.287	[illegible]

TOTAL AREA= 1.0947E+08
MUL FACTOR= 1.0000E+00

A-9-26-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6276

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

COMPOSITE B

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn., NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 481 (21-B)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/12/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

These samples were analyzed by Atomic Absorption Spectrophotometry. This method included direct aspiration and grafite furnace techniques.

TEST PARAMETERS:		RESULTS:	DETECTION LIMITS:
Metals Analyses mg/Kg (ppm)			
Arsenic	(As)	0.46	.001
Barium	(Ba)	8.53	.05
Cadmium	(Cd)	12.87	.005
Chromium	(Cr,T)	3.16	.002
Chromium	(Cr, Hex)	N/A	.001
Lead	(Pb)	26.79	.08
Mercury	(Hg)	.0023	.0001
Selenium	(Se)	0.157	.001
Silver	(Ag)	<0.06	.001

LABORATORY DIRECTOR

CONTAINS PCBs
SEE 4th PAGE
ALL SAMPLES IN COMPOSITE
MUST BE [illegible]

A-9-27-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jnct. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 481 (oil-B)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
RCRA Analyses		
Reactivity mg/L (ppm)		
Cyanide (T)	1.5	0.5
Sulfide (T)	.79	.006
Corrosivity (units)		
pH	7	
Ignitability (Deg F)		
Flash Point	> 212 F	

Gary M. Black
LABORATORY DIRECTOR

A-9-28-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 481 (Oil-B)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
Physical Analyses		
% Ash	68%	
% Water	20%	
BTU	14740. BTU/Lb	
Inorganic Analyses mg/Kg (ppm)		
Chloride	8470.	1.0

LABORATORY DIRECTOR

A-9-29-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 481 (Oil-B)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

These samples were analyzed by Gas Chromatography (EPA method 608).
This system is equipped with an electron capture detector.

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
	COMPOSITE B of 7 PITS	
Organic Analyses ug/L (ppb)		
PCB's	150000. = 150 PPM	.05

This sample was found to contain a concentration of 150000 ug/L of aroclor 1254.

nd: none detected

LABORATORY DIRECTOR

A-9-30-38

ABORTED

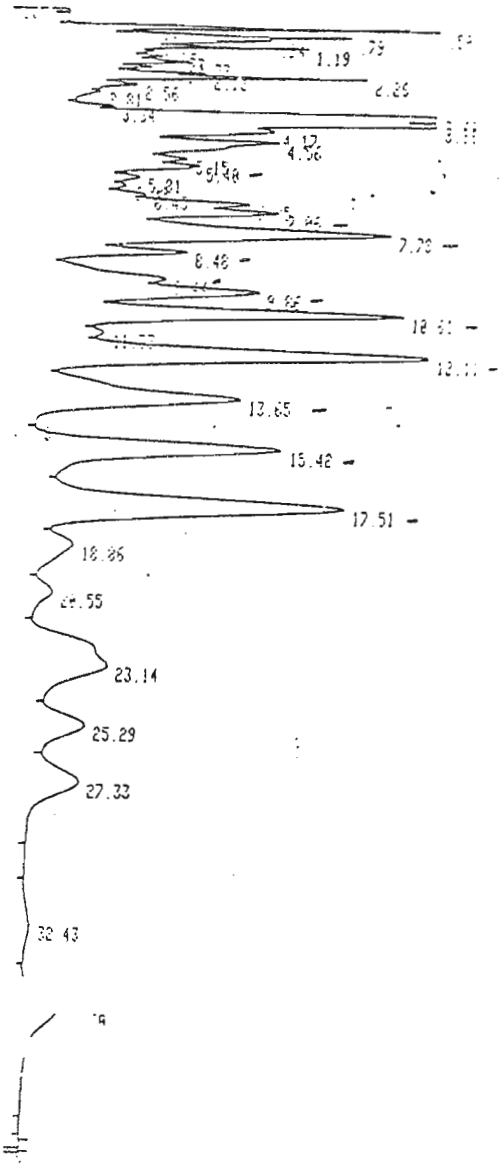
#421 .1/10 (1:100) RS1 ATTN 6

NAME:
1

AREA RT	AREA	TYPE	AR/HT	AREA%
0.53	2.0731E 07	SFB	0.178	9.653
0.85	59019	TBP	0.061	0.028
	2094600	TPV	0.121	0.981
0.94	155	TVV	0.134	0.729
1.19	13	TVV	0.094	0.639
1.35	465300	TVV	0.139	0.218
1.53	472610	TVV	0.113	0.221
1.73	1088400	TVV	0.170	0.510
1.92	466130	TVV	0.115	0.218
2.13	884020	TVV	0.196	0.414
2.46	2562800	TVV	0.125	1.200
2.56	737600	TVV	0.194	0.345
2.81	245810	TVP	0.177	0.115
3.34	388930	TPV	0.129	0.182
3.60	1.7075E+07	TVV	0.168	7.994
3.86	8738400	TVV	0.213	4.087
4.17	4091800	TVV	0.268	1.915
4.56	6794300	TVV	0.432	3.180
5.15	2256200	TVV	0.253	1.061
5.48	2793700	TVV	0.285	1.308
5.81	1652700	TVV	0.295	0.774
6.09	1135200	TVV	0.243	0.531
6.43	1479200	TVV	0.236	0.692
6.75	4093300	TVV	0.291	1.916
7.06	5216700	TVV	0.319	2.442
7.78	1.3618E+07	TVV	0.546	6.375
8.48	3042700	TVV	0.309	1.424
9.44	3429900	TVV	0.400	1.596
9.86	7219800	TVV	0.462	3.380
10.61	1.1842E+07	TVV	0.444	5.543
11.33	1615100	TVV	0.369	0.756
12.11	1.6107E+07	TVV	0.546	7.540
13.65	1.0444E+07	TVB	0.687	4.889
15.42	1.2193E+07	BV	0.653	5.708
17.51	1.7875E+07	VV	0.767	8.367
18.86	3029100	VV	0.968	1.418
20.55	1282900	VV	0.788	0.601
23.14	9502500	VV	1.685	4.449
25.29	4752800	VV	1.091	2.225
27.33	4820400	VV	1.203	2.256
32.43	554390	PV	1.321	0.260
35.60	3980300	VV	1.508	1.863

TOTAL AREA= 2.1363E+08
MUL FACTOR= 1.0000E+00

STOP

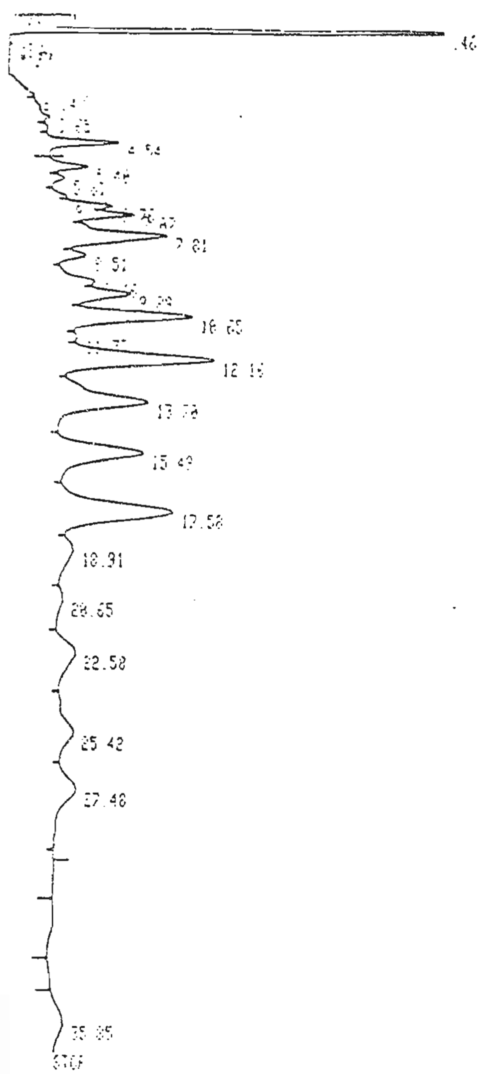


A-7-32-3P

WORKFILE NAME

ATT 2^ = [illegible]
CHT SP = [illegible]
PK WD = [illegible]
THRSH = 4
AR REJ = 1000

500PPB 1254 STD
=TO 100μL/10mL
50PPM



AREA%

RT	AREA	TYPE	AR/HT	AREA%
0.46	4.3356E+07	↑SBB	0.086	39.[illegible]
1.01	189870	↓ BV	0.101	0.1[illegible]
1.27	310230	↓ VP	0.158	0.2[illegible]
2.84	3907400	↓ PV	1.260	3.5[illegible]
3.65	2290400	VV	0.848	2.0[illegible]
4.02	633850	VV	0.343	0.5[illegible]
4.54	1781400	VB	0.288	1.[illegible]
5.40	713600	BV	0.243	0.[illegible]
5.81	312770	VV	0.267	0.[illegible]
6.44	308540	VV	0.232	0.[illegible]
6.76	1259400	VV	0.265	1.1[illegible]
7.07	1969100	VV	0.311	1.[illegible]
7.81	4600300	VV	0.520	4.[illegible]
8.51	1039270	VV	0.371	0.9[illegible]
9.46	1444500	VV	0.416	1.[illegible]
9.89	2918300	VV	0.478	2.[illegible]
10.65	5095200	VV	0.472	4.[illegible]
11.37	763500	VV	0.360	0.[illegible]
12.16	7161500	VV	0.574	6.54[illegible]
13.70	5588100	VV	0.755	5.1[illegible]
15.49	5030000	VV	0.719	4.6[illegible]
17.58	7537600	VV	0.813	6.8[illegible]
18.91	2081300	VV	1.175	1.9[illegible]
20.65	1032100	VV	1.122	0.94[illegible]
22.58	2356500	VV	1.261	2.15[illegible]
25.42	2350000	VV	1.453	2.14[illegible]
27.48	2180100	VV	1.230	1.9[illegible]
35.85	1248100	I BH	1.287	1.14[illegible]

TOTAL AREA= 1.0947E+09
MUL FACTOR= 1.0000E+00

A-9-33-37

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753 .
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn., NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 482 (Aqueous)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/12/87

IDENTIFICATION: Kramer Environmental
PO Box 1299, Clifton, NJ 07012

These samples were analyzed by Atomic Absorption Spectrophotometry.
This method included direct aspiration and grafite furnace techniques.

TEST PARAMETERS:		RESULTS:	DETECTION LIMITS:
Metals Analyses mg/Kg (ppm)			
Arsenic	(As)	0.019	.001
Barium	(Ba)	0.44	.05
Cadmium	(Cd)	0.44	.005
Chromium	(Cr,T)	0.30	.002
Chromium	(Cr, Hex)	N/A	.001
Lead	(Pb)	0.36	.08
Mercury	(Hg)	.0034	.0001
Selenium	(Se)	0.046	.001
Silver	(Ag)	0.029	.001

Gary M. Lesnik
LABORATORY DIRECTOR

A-9-34-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 482 Aqueous-1

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/02/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
Physical Analyses		
Suspended Solids (T)	1680. mg/L	
Corrosivity (pH)	6	
Inorganic Analyses mg/L (ppm)		
Chloride	75.0	1.0
Cyanide (T)	0.29	.05
Phosphate	0.6	.05
Sulfate	25.0	5.0

Gary M. Feldt
LABORATORY DIRECTOR

A-9-35-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 482 Aqueous

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
Organic Analyses mg/L (ppm)		
Organic Carbon (T)	265.	1.0
COD	1800.	10.0
BOD (5 day)	106.	1.0

LABORATORY DIRECTOR

A-9-36-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn., NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 483 (Aqueous)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/12/87

IDENTIFICATION: Kramer Environmental
PO Box 1299, Clifton, NJ 07012

These samples were analyzed by Atomic Absorption Spectrophotometry.
This method included direct aspiration and grafite furnace techniques.

Metals Analyses mg/Kg (ppm)

TEST PARAMETERS:		RESULTS:	DETECTION LIMITS:
Arsenic	(As)	0.018	.001
Barium	(Ba)	0.51	.05
Cadmium	(Cd)	0.33	.005
Chromium	(Cr,T)	0.19	.002
Chromium	(Cr, Hex)	N/A	.001
Lead	(Pb)	0.36	.08
Mercury	(Hg)	.0034	.0001
Selenium	(Se)	0.055	.001
Silver	(Ag)	0.029	.001

LABORATORY DIRECTOR

A-9-37-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 483 (Aqueous)
SAMPLE RCD. 04/22/87
ANALYSIS COMP. 05/02/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
Physical Analyses		
Suspended Solids (T)	1452. mg/L	
Corrosivity (pH)	7	
Inorganic Analyses mg/L (ppm)		
Chloride	100.0	1.0
Cyanide (T)	0.5	.05
Phosphate	2.0	.05
Sulfate	50.0	5.0

LABORATORY DIRECTOR

A-9-38-38

ENVIRONMENTAL PROFILE LABORATORIES

ROUTE 37 BUSINESS PARK
TOMS RIVER, NJ 08753
201-244-6278

CERTIFICATE OF
ANALYSIS

NJ DEP CERTIFIED LAB NO. 15526

CLIENT: Robert Mark
PO Box 308 Rt. 52
Hopewell Jctn. NY 12533
EPA ID# NYD 981557747

SAMPLE NO. 483 (Aqueous)

SAMPLE RCD. 04/22/87

ANALYSIS COMP. 05/01/87

IDENTIFICATION: Kramer Environmental
PO Box 1299 Clifton, NJ 07012

TEST PARAMETERS:	RESULTS:	DETECTION LIMITS:
Organic Analyses mg/L (ppm)		
Organic Carbon (T)	300.	1.0
COD	3000.	10.0
BOD (5 day)	120.	1.0

LABORATORY DIRECTOR

REF. A-10-1-1

Robert-Mark Realty, Inc.
COMMERCIAL DIVISION

914-221-3700

May 21, 1987

Ms. Aida Vasquez, Assistant Sanitary Engineer
Attention Mr. William Buskey, Inspector
NYS Department of Environmental Conservation
21 South Putt Corners Road
New Paltz, NY 12561

RE: Hazardous Waste Compliance Inspection Date: October 31, 1986
Location of Handler: 1929 Associates
Fairview Avenue
Poughkeepsie, NY 12601

EPA Identification Number: NYD001220672

This letter is in reply to the letter from David Mafrici, P.E., dated May 5, 1987 with regard to the above subject.

On Monday, May 18, 1987, Storonske Cooperage Company of Schodack Center, New York picked up 72 empty 55 gallon drums and removed them from the premises. This was the maximum number that could be transported in a load. There were five 55 gallon empty drums and a few 5 and 1 gallon empty containers left behind. Several of the emptied 55 gallon drums have been put to miscellaneous uses by tenants at the premises. Arrangements will be made shortly for the removal of the remaining empty drums and containers.

Enclosed please find the laboratory reports which we received from Kramer Environmental pertaining to the pits at the subject facility. Pending review of the reports, a remedial action program shall be developed.

If you have any questions, please feel free to contact me.

Sincerely,

ROBERT-MARK REALTY, INC.

Donn Courselle, Assistant to President
Commercial Division

jac

Enclosures

cc Mr. David Blackman, P.E.
Mr. Jerard Hankin, Esq.

REF. A-11-1-6

3/4074

VALENTINO T. SAMMARCO, ESQ.
Route 9 & Kessler Drive
P.O. Box 681
Hyde Park, NY 12538
Tel: (914) 229-8888

March 31, 1987

State of New York Department of State
Uniform Fire Prevention and Building
Code Division
162 Washington Avenue
Albany, NY 12231

ATTN: Carl R. Sager, Director

Re: Fairview Fire District with
Town of Poughkeepsie

Dear Mr. Sager:

I have been requested by the Board of Fire Commissioners of the Fairview Fire District of the Towns of Hyde Park and Poughkeepsie to request that your agency, or the appropriate division of the Department of State, undertake immediately an investigation into the Fire Code and Building Code enforcement practices of the Town of Poughkeepsie relative to the following owned properties contained within the Fairview Fire District and Town of Poughkeepsie:

A. Schatz Federal Bearing Complex
60 - 70 Fairview Avenue
Poughkeepsie, New York

1. There are several buildings located in this complex which are believed owned by 1929 Associates, 319 Main Mall Rear, Poughkeepsie, New York. Several businesses rent space in the complex including Pleasant Valley Finishing Co., Inc., P.O. Box 5100, 60 Fairview Ave., Poughkeepsie, New York; Atlantic Design, Inc.; Acme Caster; Sargio Industries; Fairview Lithographic; Schatz Manufacturing; and Rehabilitation Programs.

2. The Town of Poughkeepsie has not adequately enforced the fire and building codes at this complex thereby exposing users of the complex, firemen, and the public to the risk of death, serious bodily injury, or property damage. The Fairview Fire District has sought the intervention of the Officials of the Town of Poughkeepsie to enforce the law, and compel the numerous occupants of the buildings to correct

the numerous code violations. Good cooperation was received from the Town of Poughkeepsie Fire Inspector, Don A. Murphy. However, other officials have not adequately supported Mr. Murphy in his endeavors to have the codes enforced. The following information and copies of correspondence are provided in chronological order to give background and support for this application now being made for a state investigation.

a) May 19, 1985 - interdepartmental memo from Chief of department to firemen regarding hazardous conditions at site.

b) November 20, 1985, letter, Don A. Murphy, fire inspector to Pleasant Valley Finishing Co., concerning sprinkler systems.

c) April 10, 1986, letter from City of Poughkeepsie Fire Chief to Fairview Fire District Chief containing copy of April 10, 1986 letter from Poughkeepsie Fire Chief to Mr. Murphy concerning fire and code violations at Pleasant Valley Finishing Co., Inc.

d) April 16, 1986, letter, Fire Inspector Murphy to Pleasant Valley Finishing Co., Inc., regarding a fire and the inoperable sprinkler systems.

e) April 24, 1986, reply letter, Pleasant Valley Finishing Co., Inc., to Mr. Murphy regarding functioning of sprinkler system.

f) May 14, 1986, internal memo, Deputy Chief, City of Poughkeepsie Fire Department to the officers of the fire department, setting down safety procedures for the building complex due to code violations.

g) May 16, 1986, letter, Chief Dormeyer to Mr. Murphy regarding a fire and continued violation at building complex.

h) May 28, 1986, letter, Mr. Murphy to Pleasant Valley Finishing Co., Inc. commending the company on work done since October 9, 1985, but listing the present violations.

i) June 17, 1986, letter, Mr. Murphy to 1929 Associates setting forth code violations and requiring compliance in 30 days.

j) July 11, 1986, letter, Fairview Fire District to the Town of Poughkeepsie Building Inspector requesting certificates of occupancy, list of reported zoning and building code violations, and copy of the Fire Inspector's report concerning the Schatz building

as well as buildings used by Marist College. (To date, the requested information has not been provided).

k) July 14, 1986, letter, Town of Poughkeepsie Fire Inspector to owner, 1929 Associates.

l) September 2, 1986, letter, Fairview Fire District to Town of Poughkeepsie Building Inspector requesting a response to July 11, 1986 letter. (To date there has been no response).

m) September 2, 1986, letter, Fairview Fire District to Town Board of the Town of Poughkeepsie requesting to be put on the agenda of a Town Board meeting regarding matters raised in the July 11 1986, letter to the Town Buildng Inspector.

n) September 5, 1986, Notice of Violation and Order to Abate from City of Poughkeepsie Fire Inspector regarding 8 - 10 Fairview Avenue building located in City of Poughkeepsie and owned by 1929 Associates.

o) September 16, 1986, letter, to Fairview Fire District from Town of Poughkeepsie Supervisor indicating that the Town directed the Building Inspector to provide information requested by the Fire District. (To date, no information has been provided).

p) September 26, 1986, letter with Order to Remedy Violation, from Town of Poughkeepsie Fire Inspector to Pleasant Valley Finishing Co., Inc., regarding fires at complex and problems with sprinkler system, and other violations previously reported but not corrected.

q) Town of Poughkeepsie Order to Remedy Violation dated October 29, 1986, issued to Acme Casters for open burning at 70 Fairview Avenue.

3. Rehabilitation Programs, Inc., has installed a drop ceiling which prevents access to the sprinkler system.

4. There is every reason to believe that certificates of occupancy have not been issued by the Town of Poughkeepsie for occupancy of the buildings at the Schatz complex. There presently exist approximately 90 barrels of an unidentified chemical substance. The Department of Environmental Conservation had removed six barrels. Within the complex there are open pits containing chemicals into which anyone could fall, including firemen attempting to perform their firematic duties. The buildings at the Schatz complex do not meet the building and fire codes of the State or Town of Poughkeepsie and should be immediately closed

down for operation unless compliance can be obtained at once. The public including firemen should not have to bear a substantial risk to life and limb because of the failure of a municipality to enforce the building and fire code.

5. The fire inspector in the Town of Poughkeepsie apparently reports directly to the Town Building Inspector and not to the Town Board. The fire inspector has done an excellent job in making his inspections and reporting the violations. However, action has not been taken by the building inspector or Town to enforce the removal of the violations. It is recommended that new legislation be drafted to mandate that the fire inspector of each municipality be responsible for fire code enforcement, and be given the direct authority to enforce the fire codes. The fire inspector should report directly to the Town Board.

B. McCann Center, located at Marist College Campus
North Road
Poughkeepsie, New York

6. On March 5, 1987, Fire Inspector Murphy along with Deputy Fire Chief Richard Dormeyer, conducted an inspection of the McCann Center which has a principal use as a gymnasium. Based upon the square footage of the building and the number of exits, Mr. Murphy determined that the seating capacity should be approximately 1,993 people. The building was completed in 1976. The building may or may not have been issued a certificate of occupancy. Attached hereto as item "R" is a copy of Mr. Murphy's rough notes supporting his computation of the 1,993 maximum seating occupancy. Mr. Murphy determined that the building's principal use was as a gymnasium.

7. On March 6, 1987, the Town of Poughkeepsie Building Inspector Authur La Pan had posted a sign at the center indicating that the seating capacity is 4,271 people. Attached hereto as item "S" is a photo sheet containing copies of a photograph of the sign and of a Fairview Fire District "NO SMOKING" sign. Upon information and belief, more than 4,000 people did in fact occupy the McCann center for a basketball game on the evening of March 6, 1987. There is every reason to believe that Mr. La Pan classified the principal use of the center as a multi-purpose room or auditorium rather than as a gymnasium. Also, he may have counted as an exit in his computations, a doorway leading through a storage room. This doorway does not comply with the codes. On the night of March 6, 1987, the storage room was filled with news camera people and reporters, blocking the doorway.

8. The town building inspector in fact overruled the town fire inspector by posting the seating capacity at 4,271 rather than 1,993. The building on the evening of March 6, 1987, was overcrowded and the existing exits could not possibly handle the number of people to be evacuated in the event of a fire.

9. The Marist College personnel are amenable to providing more exits at the center. However, the Town Building inspector has not made such a request. There should be a state investigation: to determine the validity of the building inspector's determination; and to determine the legal relationship between a municipal building inspector, and the municipal fire inspector.

C. THE WESTERN PUBLISHING CO. BUILDING COMPLEX (MID-HUDSON BUSINESS PARK)
Route 9
Poughkeepsie, New York

10. This complex houses several businesses, and also classrooms for Marist College. Upon information and belief, there are few, if any, certificates of occupancy issued for the present users of the building. In addition the building contains flagrant building and fire code violations placing students and other users of the building at risk.

CONCLUSION

11. The Fairview Fire District has a duty to safeguard the residents of the fire district from the risk of personal injury and property damage resulting from fire. Also, the Fire District provides emergency ambulance service. When members of the public and members of the fire department enter a building they should be assured that the building complies with the state and municipal building and fire codes. The present Town of Poughkeepsie Fire Inspector has made every effort to enforce the fire codes. However, as set forth in this letter, the codes are not being enforced by the Town of Poughkeepsie. The Fairview Fire District requested of the Town Building inspector copies of certificates of occupancy and copies of reported building and fire code violations by letter dated July 11, 1986. (item j). The information was never produced.

It is requested that an investigation be conducted by the appropriate state agency to determine whether the Town of Poughkeepsie

is following proper procedure in the conduct of building and fire code inspections and in the enforcement of the codes. It is further requested that inquiry be made into the advisability of passing legislation which would give a town fire inspector the authority to make inspections and enforce building and fire code rules and laws directly, rather than being required to act under the direction and control of the town building inspector.

Thank you for your anticipated cooperation. I shall await your written response.

Very truly yours,

VALENTINO T. SAMMARCO
Attorney to the Fairview
Fire District

VTS/jeh

cc: Hon. Gail Shaffer, Secretary of State
Hon. Gordon Ambach, NYS Commissioner of Education
Hon. Jay P. Rolison, Jr.
Hon. Stephen M. Saland
Director - McCann Center of Marist College
Dr. Dennis Murray, President of Marist College
Hon. Ann Bucholz, Supervisor, Town of Poughkeepsie
Town Board of the Town of Poughkeepsie
Hon. Arthur La Pan, Zoning & Building Inspector
Hon. Donald Murphy, Fire Inspector, Town of Poughkeepsie
New York State Department of Environmental Conservation
Pleasant Valley Finishing Company, Inc.
1929 Associates
Fire Chief James C. Davison, City of Poughkeepsie
Fire Inspector William Wagler, Arlington Fire Department
Atlantic Design Company
Acme Casters, Inc.
Sarjo Industries Hardware
Rehabilitation Programs, Inc.
Fairview Lithographics
Schatz Manufacturing Company
Mid-Hudson Business Park

REF. A-12-1-2

3/YO 74

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ADDRESS REPLY TO:
☐ 319 MAIN MALL REAR
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(914) 471-7177

☒ EAST FISHKILL OFFICE
ROUTE 52
P.O. BOX 127
HOPEWELL JUNCTION, NEW YORK 12533
(914) 221-2424

☐ DANBURY, CONNECTICUT OFFICE
30 MAIN STREET
SUITE 202
DANBURY, CONNECTICUT 06810-8046
(203) 792-3203

April 9, 1987

Valentino T. Sammarco, Esq.
Route 9 & Kessler Drive
PO BOX 681
Hyde Park New York 12538

RE: Fairview Fire District with Town of Poughkeepsie

Dear Mr. Sammarco:

This office represents Schatz 1929 Associates, Inc. and I am the President of this corporation which owns the property on Fairview Avenue, in the Town of Poughkeepsie. The group of investors purchased this property approximately four or five years ago, for One Million Dollars. It was a group of buildings that had been built in the early 1900's through the 1940's. At the time of the purchase this was a plant that had been abandoned and had fallen into disrepair. Unbeknownst to the purchaser, it had inherited numerous old barrels that allegedly contained cutting oil. As it now turns out these barrels contain chemicals.

The owners have been working very diligently with the Department of Environmental Conservation to have all of the barrels removed and all of the required testing performed. As a matter of fact, a substantial number of barrels have already been removed and arrangements have been made to remove the balance of the materials and the testing to be performed. This is a very expensive proposition that was never anticipated however it is being undertaken.

I believe that Mr. Donald Murphy, the Fire Inspector, for the Town of Poughkeepsie, has been very diligent in the performance of his duties. I have been in contact with him on numerous occasions on behalf of the owner and have tried to comply with as many of his requests as possible. As a matter of fact we have had one entire building boarded up as per his latest request.

I believe that there has to be a balancing of the equities when you take a building or buidings of this age. I believe that the Building Inspector of the Town of Poughkeepsie probably is looking at the overall picture and fully understands that you have to comply with those items that

A-12-2-2

are most critical as soon as possible and the other items have to be negotiated between all the parties as to the implementation. There is no doubt in my mind that if these were all implemented immediately that we would have to close up the buildings and walk away from the site. However this does not change the fact that we are ready, willing and able to work with all of the requirements of the municipality providing they are reasonable in their request and the timing.

I firmly believe that probably any building that has not been built in the last two years has many, many violations. I would venture to guess that if Mr. Murphy went into any of the IBM buildings, owned by IBM, he could probably have a whole list of violations.

As far as Rehabilitation Programs, Inc. is concerned, this is a new facility which was designed by state architects and I believe complies with all of the necessary codes and provisions.

We certainly do not want to endanger the firemen in any way, but to give you some idea, during the first year alone it cost in excess of one Hundred Thousand Dollars to heat the vacant buildings in order to have the sprinkler system operational. Then we find out that the sprinkler system had been hooked up to the domestic water supply and this was totally unacceptable. As far as I know the main complaint is the lack of sprinkler systems in buildings that are unoccupied. I do not believe that this creates a threat to the firemen, and I do believe once the chemicals are removed from the premises that we should be in major compliance with the ordinances. Please advise.

Sincerely,
HANKIN, HANIG, STALL & SHAFRAN

GERARD S. HANKIN

JSH:ig

STATE OF NEW YORK
DEPARTMENT OF CONSERVATION
WATER RESOURCES COMMISSION

Ground-Water Resourses of Dutchess County, New York

By

E. T. SIMMONS, I. G. GROSSMAN, AND R. C. HEATH
Geologists, U. S. Geological Survey

Prepared by the
U. S. GEOLOGICAL SURVEY
in cooperation with the
NEW YORK WATER RESOURCES COMMISSION

BULLETIN GW-43
ALBANY, N. Y.
1961

GEOGRAPHY

Location and Setting

Dutchess County is in southeastern New York State, about halfway between New York City and Albany. It is one of a row of counties east of the Hudson River that border on the New England States. The county is bordered on the east by the State of Connecticut, on the south by Putnam County, on the west by the Hudson River, and on the north by Columbia County and the Commonwealth of Massachusetts.

Dutchess County is rectangular in outline and has an area of 816 square miles. It extends about 34 miles in a north-south direction and 22 miles in an east-west direction. Most of it lies between meridians 73°30' and 73°59' west longitude and parallels 41°30' and 42°04' north latitude. The population of the county in 1950 was 136,781, about 40 percent of which was concentrated in the cities of Poughkeepsie and Beacon.

Topography

The surface of Dutchess County is moderately irregular, consisting of an almost continous alternation of hills and valleys (pl. 1). Flat areas, though present in most parts of the county, are generally small and occupy a minor proportion of the area. The county is divided on the basis of topography into two relatively distinct parts. The smaller of these consists of the area in the northwestern part of the county west of Wappinger Creek and longitude 73°45'W. This area is characterized by numerous small, irregularly shaped hills, most of which range in height from about 20 to about 100 feet above the intervening valleys. Scattered throughout the area, however, are a few small, regularly shaped hills that rise 200 to 300 feet or more above the adjacent valleys. Altitudes in this area range from about 40 feet above sea level near the Hudson River to about 900 feet above sea level at Old Round Top. Drainage is not so well developed as in the remainder of the county, as indicated by the presence of numerous swamps.

The remainder of the county--that is, east of longitude 73°45' W. in the northern part of the county and east and south of Wappinger Creek in the central and southern parts of the county--is characterized by numerous regularly shaped hills and low mountains. These are larger and generally higher than those in the northwestern part. Many of the hills in this area range in altitude from 500 to 1,000 feet above the floors of the valleys. The highest altitudes generally occur along the southern and eastern boundaries of the county. South Beacon Mountain, near the southwest corner of the county reaches an altitude of 1,602 feet above sea level. Brace Mountain, in the extreme northeast corner, reaches an altitude of 2,311 feet above sea level, the highest point in the county. South Beacon Mountain and the other mountains in the southern part of the county mark the northern limit of the Hudson Highlands, a belt of northeast-trending mountains under-

GEOLOGY

Ground water occurs in all the geologic formations in Dutchess County and most of these are important sources of water. With respect to the principal kinds of openings in which the water occurs, these formations are placed in two major groups: (1) consolidated rocks that range in age from Precambrian to Ordovician, and (2) unconsolidated deposits of Pleistocene and Recent age. The areal extent of the different bedrock formations is shown on plate 2. These rocks underlie the entire county and crop out at the surface principally on hillsides and hilltops. In most of the county, however, the bedrock is overlain by unconsolidated deposits, which range in thickness from less than a foot on steep hills to more than 100 feet in some of the larger valleys. The areal extent of the different types of unconsolidated deposits is shown on plate 3. The principal events leading to the present-day distribution of the consolidated rocks and unconsolidated deposits in the county are described briefly in the following paragraphs. Although this report is a cooperative product of the New York Water Resources Commission and the U. S. Geological Survey, the geologic nomenclature does not necessarily follow that of the U. S. Geological Survey.

Geologic History

The oldest known strata in the county were laid down as clayey and limy mud and sand in a sea which covered the area in Precambrian time, more than 500 million years ago. After deposition, these strata were subjected to great heat and pressure which accompanied the intrusion of extensive masses of granite. The sediments were metamorphosed to a gneiss by the heat and pressure, and the gneiss is now so completely penetrated by the granite that the two look very much alike and hence are referred to on the bedrock map (pl. 2) as "undifferentiated granite and gneiss." The intrusion of the granite was followed by a long period of erosion during which the area was reduced to a low plain.

During the Cambrian, the first period of the Paleozoic era, the sea once again advanced over the area. A thick mass of sediments, consisting chiefly of sand and limy mud, collected on the sea floor. Deposition of limy mud and of clay and sandy clay continued into the succeeding Ordovician period. All these sediments were subsequently consolidated into beds of sandstone, limestone, and shale. At the end of the Ordovician, these beds were folded, metamorphosed, and raised above sea level during an episode of mountain-making known as the Taconic orogeny. During this orogeny the sandstone, limestone, and shale in the southern and eastern parts of the county were converted, through metamorphism, to quartzite, marble, and phyllite and schist. During and following the Taconic orogeny the area was subjected to another long period of erosion. Some deposition may have occurred in the general area during subsequent periods of the Paleozoic era, although no bedrock younger than Ordovician is known to occur. Crustal movements near the end of Devonian time known as the Acadian disturbance, during which rocks in areas to the north and west were faulted, also may have affected the rocks in Dutchess County.

Consolidated Rocks

The bedrock underlying the county is composed of highly metamorphosed rocks of Precambrian age, and partially metamorphosed rocks of Paleozoic age. The older rocks, those of Precambrian age, consist mainly of granite and gneiss. The younger rocks, of Paleozoic age, consist of a larger variety of rock types, including quartzite, limestone, dolomite, marble, shale, phyllite, slate, and schist. Differences in age, degree of metamorphism, and lithology influence the water-bearing properties of the consolidated rocks. Thus, as an aid in understanding the occurrence of ground water in these rocks in different parts of the county, each of the principal types, as differentiated in table 2, is discussed separately in the following paragraphs.

Undifferentiated granite and gneiss.--Almost a tenth of Dutchess County is underlain at or near the surface by masses of northeast-trending igneous and metamorphic rocks of Precambrian age consisting chiefly of granite and gneiss. The largest mass underlies the southern part of the county from the Hudson River to the Connecticut State line. This mass ends abruptly 2 to 3 miles north of the southern border of the county against a series of subparallel major faults (pl. 2). Erosion of less resistant Paleozoic rocks north of the faults has resulted in a row of granite and gneiss spurs which are prominent topographic features in the southern part of the county.

The second largest mass of granite and gneiss underlies the group of prominent hills east of Dover Plains. Smaller bodies of granite and gneiss crop out at Corbin Hill, north of Pawling; at Stissing Mountain, west of Pine Plains; northeast of Beacon; and south of Sprout Creek, a few miles southeast of Poughkeepsie (pl. 2). The elongate mass northeast of Beacon has been called the Matteawan granite (Mather, 1843, pl. 18) and the Glenham gneiss (Gordon, 1911, p. 18). In the southwestern part of the county, the granite was subdivided into the Canada Hill granite and Storm King granite by Berkey and Rice (1921). The gneiss, which contains some schist and limestone, was called "Grenville gneiss and schists" by Berkey and Rice. However, in an earlier study of the southwestern part of the county, Gordon (p. 11) grouped together all the granite and gneiss along the southwestern border of the county under the term "Precambrian gneisses."

Balk (1932 and 1936) mapped the same rocks in the eastern part of the county and made a detailed study of their structure. In his reports, and in a report by Barth (1936), the granite and gneiss were combined into one major group, undifferentiated Precambrian gneiss. Because these rocks have not been further subdivided in the eastern part of the county and because there appear to be no significant differences in their water-bearing properties, the granites and the gneisses are grouped together in this report as "undifferentiated granite and gneiss."

In physical appearance, most of the granite and gneiss consists of light and dark minerals presenting a speckled appearance (granite) or arranged in layers (gneiss). The light minerals consist chiefly of quartz, feldspar, and white mica (muscovite). The dark minerals include black mica (biotite), garnet, and hornblende. Extensive and readily accessible exposures of gneiss can be seen in road cuts along the Taconic State Parkway near the Putnam County line. These rocks are more resistant to weathering than the younger Paleozoic rocks, as is reflected by the more rugged topography and higher altitudes in areas where they crop out. Most of the layers (foliation) in the granite and gneiss strike northeast, approximately parallel to the long axis of the Hudson Highlands, and dip steeply to the southeast. Exceptions occur near thrust faults where the strike and dip of the foliation parallel the faults. Most of the large and prominent spurs underlain by granite and gneiss in the southern part of the county point northeastward, and the long axes of the smaller bodies also are aligned in that direction.

Cheshire quartzite.--A compact, strong quartzite, which is so tough that it is deliberately avoided by some drillers, crops out at a few localities in Dutchess County. This quartzite has been called the Poughquag quartzite by Berkey and some other geologists working in New York. It is called the Cheshire quartzite in this report, after its type locality at Cheshire, Berkshire County, Mass. (Emerson, 1917, p. 32-34). The quartzite unconformably overlies the Precambrian granite and gneiss and is the oldest Paleozoic rock in the county. In the southern and eastern parts of the county the quartzite forms the flanks of the higher ridges that are underlain by granite and gneiss. In the east-central part of the county, quartzite underlies several areas along the southern and western borders of the granite and gneiss in the vicinity of Dover Plains. Quartzite is present also in the southern part of Stissing Mountain in the north-central part of the county.

The Cheshire quartzite ranges in thickness from a few feet to about 600 feet. A thickness of about 250 feet has been reported at Stissing Mountain (Knopf, 1956, p. 11). The base of the formation may be conglomeratic and the top contains shaly beds in some places. In general, the quartzite is less strongly metamorphosed in the west than in the east. Some outcrops in the western part of the county still retain original sedimentary features, including bedding, crossbedding, and ripple marks. In the southeast, however, the original bedding has been destroyed by fracturing and recrystallization.

Where the Cheshire quartzite is composed almost entirely of quartz, it is white. Where small amounts of feldspar, mica, and other impurities are mixed with the quartz, it is pink or buff.

A-13-6-14

The Cheshire is not important as a source of ground water because of its small areal extent and because it underlies steeply sloping hillsides which are sparsely settled. Only five wells in the county are known to tap quartzite; these are listed in table 13.

Stockbridge limestone.--Over the Cheshire quartzite is a thick sequence of carbonate rocks, which underlie a much greater part of the county than the quartzite. In the east, carbonate rocks lie beneath the broad Harlem Valley, which contains Tenmile River and its principal tributaries and which extends almost without interruption from the Putnam County line to the Columbia County line. In the south, the valley of Fishkill Creek is underlain by limestone which extends from Beacon northeastward to the head of the creek. Other areas in the western and central parts of the county also are underlain by elongate masses of carbonate rocks (pl. 2).

Several different names have been applied to the carbonate rocks in different parts of the county, including Barnegat limestone (Mather, 1843, p. 410), Fishkill limestone (Gordon, 1911, p. 70), and Wappinger limestone (Gordon, p. 48). Knopf (1956, p. 1817) found that the carbonate rocks near Stissing Mountain range in age from Early Cambrian to Early Ordovician and divided them into the Stissing dolomite, Pine Plains formation, Briarcliff, dolomite, Halcyon Lake formation, and Rochdale limestone. Because there appear to be no essential differences in the water-bearing properties of the carbonate rocks, all are included in this report under the Stockbridge limestone, after the locality in Massachusetts where they were first described (Emmons, 1842, p. 154-156).

The carbonate rocks range in composition from almost pure calcium carbonate (limestone) to almost pure calcium-magnesium carbonate (dolomite). Limestone is more abundant in the upper part of the sequence and dolomite is more common in the lower part. Table 3 lists an analysis of a typical sample of dolomite from the Stockbridge limestone.

This analysis shows that more than 10 percent of the dolomite consists of impurities, chiefly silica and alumina. In some localities these impurities are abundant enough to form sandy and shaly beds in the Stockbridge.

Table 3.--Chemical composition of dolomite 1/ from the Stockbridge limestone

Determination	Percent by weight
Lime (CaO).....	29.07
Magnesia (MgO).....	16.39
Carbonic acid (H_2CO_3).....	40.76
Alumina (Al_2O_3).....	2.33
Ferric oxide (Fe_2O_3).....	.47
Silica (SiO_2).....	10.17
Total.....	99.09

1/ Collected at the Stoneco quarry of the Clinton Point Stone Co. about 4 miles south of Poughkeepsie. Analysis from Ries (1901, p. 779).

The metamorphism of the Stockbridge limestone generally increases in intensity from northwest to southeast. In the northwest and west, the formation is relatively undisturbed and original bedding is easily visible. Fossils have been found in the formation as far south as Clove Valley. Farther east, however, as in the Valley of Swamp River, the formation has been metamorphosed to a marble and the beds are severely folded. Balk noted that the folding is greater in the thin layers than in the thicker ones and that it is greatest near thrust faults. In the southeastern part of the county, the marble has been so severely deformed by plastic flow that it appears to be wrapped around stronger rocks. South of Pawling, the marble contains masses of schist that are folded and faulted into the limestone.

The deformation of the Stockbridge limestone makes it difficult to determine its thickness. In southwestern Putnam County, where the formation is relatively undisturbed, the thickness is about 1,000 feet. At Stissing Mountain, near Pine Plains in the north-central part of Dutchess County, the thickness of the different limestones and dolomites measured by Knopf (1946, p. 1211) totals 2,800 feet. The thickness of the carbonate rocks is

probably about 1,000 feet in most places in the county. The Stockbridge limestone weathers readily and commonly forms valley and lowland areas. In the valley of Fishkill Creek, solution cavities filled with clay and sand have been reported.

Hudson River formation.--The Hudson River formation is the most extensive bedrock unit in the county. As may be seen from plate 2, it extends from the Hudson River in the west to the Connecticut State line in the east, interrupted by only a few relatively narrow limestone belts. The name "Hudson River slate group" was first used by Mather (1840, p. 212, 256-258) for the slaty rocks in the southeastern part of the State. Gordon (1911) mapped these rocks in the Poughkeepsie quadrangle as the "Hudson River group." Berkey and Rice (1921) mapped the same rocks in southwestern Dutchess County as "Hudson River shales and phyllites." In the southeastern part of the county these rocks are referred to as "Hudson River pelite" in publications by Balk (1936) and Barth (1936). In the Copake quadrangle in southeastern Columbia County, the names Elizaville shale (mainly Cambrian, possibly including some Lower Ordovician), Berkshire schist (Ordovician), and Trenton black slate (Ordovician) have been used by Weaver (1957, pl. 1) for rocks that extend southward into northeastern Dutchess County. Ruedemann (1942) divided the predominantly argillaceous rocks in the Catskill quadrangle, in northwestern Dutchess County, into the Nassau beds and Schodack shale (including Bomoseen grit) of Cambrian age, and the Deepkill shale and Normanskill shale (including the Mount Merino member and the Austin Glen member) of Ordovician age. As used in this report, the Hudson River formation includes all the argillaceous and schistose rocks in Dutchess County.

Although the Hudson River formation is preponderantly argillaceous, it includes a large variety of rock types. The lower part of the unit contains much sandstone ("grit") and is locally called bluestone by some well drillers. The unit also contains chert and beds of sandstone, limestone, and conglomerate. Quartz veins are very abundant. The shale itself is locally black, gray, red, or green.

The metamorphism of the Hudson River formation increases in intensity from northwest to southeast, just as in the Stockbridge limestone. At Red Hook, in the northwestern part of the county, the unit is a shale. The shale grades imperceptibly southeastward into a slate and then into a lustrous phyllite. Between the valley of Wappinger Creek and the headwaters of Fishkill Creek, it is chiefly a phyllite. Farther southeast, between Fishkill Creek and the Harlem Valley it is predominantly a garnet-bearing schist. In the extreme southeastern part of the county, east of Pawling, it is a gneissic schist. The gneissic schist in this area contains amphibolite lenses and pegmatite intrusions.

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The change in metamorphism is accompanied by a change in mineral composition. In the relatively unmetamorphosed phases of the formation in the northwestern and central parts of the county, the chief minerals are quartz and mica. In the strongly metamorphosed phase in the southeast, feldspar is an important additional constituent. Table 4 includes chemical analyses of rocks from various parts of the Hudson River formation, ranging from the relatively unmetamorphosed "slate" near Lagrangeville to the highly metamorphosed gneiss east of Pawling. There appear to be no radical chemical differences among the different samples. From the standpoint of mineral composition, however, the gneiss shows a greater percentage of feldspar (plagioclase) and a smaller percentage of white mica (muscovite) than does the slate and phyllite.

The structure of the Hudson River formation, like the mineral composition, changes progressively from northwest to southeast. In the relatively unmetamorphosed rocks between the valleys of Wappinger Creek and Fishkill Creek small closely spaced subparallel joints resulting from slaty cleavage are numerous. The spacing of these joints ranges from a fraction of an inch to several inches, and is wider in the more sandy parts of the formation. Openings of the bedding-plane type can be recognized in this area and to the northwest. In the southeastern part of the county, slaty cleavage is absent and the rocks are massive. Joints that are present are spaced from a few inches to several feet apart, rather than inches or fractions of an inch.

The thickness of the Hudson River formation is unkown because the beds in the southeast and east have been severely folded and faulted and because elsewhere individual beds can not be traced over long distances. The apperent thickness of the formation in Dutchess County ranges from a few feet to several thousand feet. Most wells of average depth drilled in this unit are not likely to penetrate other rocks unless they are drilled near the contact with the underlying limestone.

A-13-10-14

The type of overlying material has an important effect on the yield of wells in bedrock. Table 7 shows that the average yield of wells tapping bedrock that is overlain by sand and gravel is more than 30 gpm. By contrast, the average yield of bedrock wells where the overlying material consists predominantly of clay or till is only about 13 gpm. Deposits of sand and gravel store large amounts of water and transmit water readily to the underlying bedrock where hydraulic continuity exists between the two materials. However, some of the large yields reported from bedrock wells overlain by sand and gravel may result from leakage of water from the overlying permeable deposits directly into the well. The yield of wells in bedrock where the overlying unconsolidated deposits are absent or are less than 10 feet thick is about the same, or only a little greater, than of wells where the overlying deposits are thicker but consist of impermeable till or clay. Thus, it may be concluded that thick but impermeable deposits which tend to retain the water above the bedrock have about the same effect on yield of bedrock as no overlying material at all.

Topographic location apparently affects the yield of bedrock wells in some areas (Ellis, 1909, p. 101). In Dutchess County, the yield is generally highest from bedrock wells situated in valleys and is lowest on hills. Table 8 shows that the average yield of wells in valleys is about 20 gpm compared to an average of about 16 gpm for wells on hillsides and an average of about 12 gpm for wells on hilltops. The Cheshire quartzite is not included in the table because only a few records of wells drawing from this formation are available. The influence of topography on the yields of wells apparently stems, at least in part, from the fact that the water table is generally closer to the land surface in valleys than on hills. Thus, wells of the same depth penetrate a greater thickness of saturated material in valleys than on hills and yield more water, other things being equal.

It should be emphasized that the factors affecting the yield of wells in bedrock are interdependent and tend to operate in the same direction. Thus, most wells drilled in valleys have comparatively large yields not only because of their favorable topographic location but also because the bedrock there is more permeable and is more likely to be overlain by permeable sand and gravel. Similarly, most wells drilled on hills yield smaller quantities of water not only because of a less favorable topographic situation, but also because the bedrock is less likely to be overlain by permeable deposits.

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								Hudson River formation	6	--	4	Dom	Drawdown [illegible] ft after pumping 5 gpm for 2 hrs.
[illegible]	15Y, 4.9W, 0.9W	New York State Dept. of Public Works	622	Dri	199	8	67	Stockbridge limestone	--	200	25	Dom	

Table 19.--Records of selected wells in Dutchess County (Continued)

Well number	Location	Owner or occupant	Altitude above sea level (feet)	Type of well	Depth below land surface (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing formation	Water level below land surface (feet)	Method of lift	Yield (gallons per minute)	Use	Remarks
[illegible]	13Y, 16.5S, 4.4E	Town of Millbrook	660	Dug	20	40	--	Pleistocene gravel	--	Centrifugal	--	PS	Well draws water through bottom and from 2 lines of open-jointed tile 18 inches in diameter. One line extends 75 ft. to the east and the other extends 100 feet to the north. Each tile is surrounded by a layer of gravel.
[illegible]	13Y, 11.5S, 10.0E	Wassaic Water Co.	460	Dug	19	60	--	Pleistocene sand and gravel	7	Suction	26	PS	Well dry in summer.
[illegible]	13Y, 1.9S, 5.0E	Pine Plains Water Co.	680	Dug	15	108	--	do.	--	Centrifugal	50	PS	
[illegible]	13Y, 1.3S, 5.7E	do.	550	Drl	375	8	90+	Stockbridge limestone	30	Force	50	PS	(a).
[illegible]	13Y, 5.5S, 1.6E	R. R. Leavitt	500	Drl	300	--	--	Hudson River formation	--	do.	55	Dom	Well flowed when drilled. Supplies swimming pool.
[illegible]	13Y, 10.8S, 10.1E	Amenia Water Co.	540	Drl	70	8	--	Pleistocene gravel	+1	Turbine	180	PS	Drawdown [illegible] ft after pumping 130 gpm for 8 hrs. Average consumption is 100,000 [illegible] (a) (c).
[illegible]	13Y, 10.9S, 10.2E	do.	600	Drl	46	8	--	do.	+1	do.	100	PS	Well is auxiliary supply. Temperature 51°F, June 1945. (a).
[illegible]	14Y, [illegible], 6.3W	Village of Red Hook	227	Drl	227	10	40	Hudson River formation	22	do.	110	PS	Drawdown 84 ft after pumping 100 gpm for 24 hrs. Yield diminished considerably during dry period in 1949. Two other similar wells at this location. (a).
[illegible]	14Y, 1.3Y, 9.6W	F. D. Roosevelt National Historic Site	178	Drl	600	6	83	do.	--	--	15	Dom	(a) (b).
[illegible]	14Y, 1.3Y, 9.6W	do.	180	Drl	212	6	88	do.	--	Turbine	10	Dom	Well has been pumped at 10 gpm for 24 hrs.
[illegible]	15Y, 15.7Y, 8.3W	Schatz Manufacturing Co.	260	Drl	555	6	23	do.	--	Force	11	Ind	Temperature [illegible], July 1949.
[illegible]	14Y, 16.1Y, 3.4W	John Juranio	570	Drl	60	6	4	do.	20	Jet	12	Dom	
[illegible]	14Y, 15.1Y, 3.3W	F. V. Bettenfeld & Son	380	Drl	125	6	20	do.	30	do.	3	Dom	
[illegible]	15Y, 15.5Y, 7.5W	Joseph Chard	163	Drl	60	6	16	do.	0.5	Suction	20	Dom	Well flows during periods of heavy precipitation. Temperature 51°F, May 1948.
[illegible]	15Y, 15.5Y, 7.6W	Rhinebeck Bleach Co.	160	Drl	100	6	18	do.	9	Jet	10	Ind	
[illegible]	15Y, 13.9Y, 5.6W	H. R. Weaver	320	Drv	18	1¼	--	Pleistocene gravel	--	Suction	3	Dom	Temperature [illegible], May 1948. Average consumption is 500 gpd.
[illegible]	14Y, 13.6Y, 5.7W	Rhinebeck School Dist. 9	320	Drl	90	6	10	Hudson River formation	--	do.	3	[illegible]	Temperature [illegible], May 1948.
[illegible]	15Y, [illegible], 3.2W	Cyrus McCormick	490	Drl	158	6	--	do.	--	Force	--	Dom	
[illegible]	15Y, 15.2Y, 2.7W	V. F. Pink	415	Drl	50	6	10	do.	--	do.	--	Dom	Temperature [illegible], May 1948.
[illegible]	15Y, [illegible], 6.7W	V. Aebert	380	Drl	175	6	0	do.	10	--	3	Dom	
[illegible]	15Y, [illegible], 2.7W	P. Wellson	380	Drl	105	6	11	do.	14	Jet	8	[illegible]	
[illegible]	[illegible], 2.7W	A. T. Haines	380	Dug	20	36	--	Pleistocene till	16	Suction	1	Farm	Average consumption is 1,000 gpd
[illegible]	15Y, [illegible], 8.1W	Stewart's Garage	250	Drv	18	1¼	--	Pleistocene sand and gravel	--	do.	3	Com	Average consumption exceeds 500 gpd.
[illegible]	15Y, [illegible], 8.5W	Howard Volte	240	Drv	15	1¼	--	do.	--	do.	2	Dom	
[illegible]	14Y, 3.0Y, 8.6W	C. Wrenn	240	Drl	90	6	21	Hudson River formation	19	do.	--	Dom	
[illegible]	15Y, 16.0Y, 7.1W	Edwin DuBois	300	Drl	129	6	90	do.	14	do.	5	Dom	(b).
[illegible]	15Y, 7.1S, 2.5E	R. McGinnes	480	Drl	69	6	2	do.	18	do.	--	Farm	
[illegible]	15Y, 0.1S, 1.0W	P. Campbell	430	Drl	45	6	17	do.	6	--	3	Dom	
[illegible]	15Y, 16.5Y, 7.6W	Louis Wagner	300	Drl	73	6	24	do.	10	Suction	15	Dom	
[illegible]	15Y, 16.9Y, 7.0W	Russell Leavy	300	Drl	91	6	--	Pleistocene gravel	--	--	20	Dom	
[illegible]	15Y, 15.1Y, 7.5W	Ralph Pitcher	180	Drl	155	10 to 8	9	Hudson River formation	--	--	30	Com	Average consumption is 5,000 to 10,000 gpd
[illegible]	15Y, 15.7Y, 7.6W	Elmer Wilbur	180	Drl	110	6	40	do.	--	Force	10	Farm	Well supplies water for irrigation.
[illegible]	15Y, 15.5Y, 5.7W	William Brandt	405	Drl	160	6	21	do.	--	--	2	Dom	
[illegible]	15Y, 15.1Y, 9.5W	Vincent Astor	150	Drl	60	6	10	do.	--	--	5	Dom	

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Table 13.--Records of selected wells in Dutchess County (continued)

Well number	Location	Owner or occupant	Altitude above sea level (feet)	Type of well	Depth below land surface (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing formation	Water level below land surface (feet)	Method of lift	Yield (gallons per minute)	Use	Remarks
[illegible]	14Y, 16.1S, 2.9E	W. L. Prout	800	Dr	86	6	5	Granite and gneiss, undiff.	30	Jet	2.5	Dom	
[illegible]	15Y, 0.6S, 8.9E	Dover Theater	400	Dr	70	8	--	Pleistocene gravel	[illegible]	Suction	[illegible]	[illegible]	Drawdown 2.5 ft after pumping 250 gpm for 20 hr. Temperature 51°F, May 1949. (a) (b).
[illegible]	14Y, 2.3S, 4.8E	R. Ward	710	Dr	165	6	77	Stockbridge limestone	--	--	--	Dom	Bedrock contains seams of clay.
[illegible]	14Y, 2.3S, 4.8E	do.	710	Dr	330	6	--	Pleistocene till	--	--	--	None	
[illegible]	14Y, 7.1S, 11.5E	H. Johnson	370	Dr	203	6	--	Pleistocene sand and gravel	33	Jet	1	Dom	Temperature [illegible], May 1949. (a).
[illegible]	14Y, 7.1S, 11.5E	do.	370	Dr	59	6	--	Pleistocene gravel	11	Suction	10	Dom	
[illegible]	14Y, 4.0S, 8.6E	Wingdale Chemical Corp.	440	Dr	547	10	15	Stockbridge limestone	17	Turbine	50	[illegible]	Drawdown 208 ft after pumping 50 gpm for [illegible] hrs
[illegible]	14Y, 8.1S, 9.3E	Wingdale Diner	430	Dr	135	6	120	do.	16	Suction	[illegible]	Com	(b).
[illegible]	14Y, 4.5S, 10.8E	Lake Ellis Camp Corp.	660	Dr	125	6	10	Granite and gneiss, undiff. or Stockbridge limestone	3	Centrifugal	25	Com	
[illegible]	14Y, 4.5S, 10.8E	do.	400	Dr	135	6	--	Pleistocene sand and gravel	--	do.	25	Com	Well flows.
Du 498	15Y, 15.2N, 9.0W	Federal Bearings Co.	180	Dr	1,196	6	27	Hudson River formation	[illegible]	Turbine	50	Ind	Drawdown [illegible] ft after pumping 50 gpm for 5 hrs. Temperature 51°F, May 1949. (a)
Du 500	14Y, 10.1S, 4.1E	W. B. Hall	420	Dr	35	6	8	Stockbridge limestone	8	Suction	--	Dom	
Du 501	14Y, 8.4S, 4.8E	Jay Holmes	770	Dr	271	6	142	Hudson River formation	--	Force	10	Dom	(b).
Du 502	14Y, 4.8S, 10.7E	Wingdale Country Club	400	Dr	400	6	--	Pleistocene sand	--	--	10	None	
Du 503	14Y, 5.1S, 10.6E	Kenmosh Progressive Camps Corp.	440	Dr	300	6	5	Stockbridge limestone	--	Turbine	--	Com	Well supplies 500 campers in summer.
Du 505	14Y, 6.0S, 2.7E	R. McKinney	460	Dr	100	6	--	Pleistocene gravel	35	Jet	--	Farm	
Du 506	14Y, 6.0S, 3.0E	do.	560	Dr	161	6	20	Stockbridge limestone	19	Suction	--	Farm	Well supplies 4 homes.
Du 507	14Y, 6.5S, 3.0E	do.	520	Dr	80	6	--	Pleistocene gravel	20	Force	--	Dom	
Du 508	14Y, 2.3S, 9.4E	Robert Leinert	380	Dr	117	6	14	Stockbridge limestone	20	Jet	5	Dom	
Du 509	14Y, 4.0S, 9.6E	George Murphy	440	Dr	145	6	10	do.	22	Force	5	Farm	
Du 510	14Y, 3.4S, 9.4E	do.	410	Dug	21	48	21	Pleistocene gravel	7	None	--	None	
Du 511	15Y, 1.3N, 6.2W	H. Sass	520	Dr	101	6	4	Granite and gneiss, undiff.	--	Jet	4	Dom	Well flows at 1 gpm.
Du 512	14Y, 11.3S, 11.4E	Carroll Vacation Club, Inc.	1,100	Dr	600	8	0	Hudson River formation	--	Turbine	--	Dom	
Du 513	14Y, 11.7S, 7.3E	Holiday Hills	505	Dr	225	6	8	Stockbridge limestone	13	Jet	5	Dom	Drawdown 137 ft after pumping 5 gpm for 8 hrs.
Du 514	14Y, 13.3S, 8.5E	Smith Johnson	560	Dr	210	6	6	do.	--	do.	10	Dom	Driller reported mud at a depth of 180 ft. Temperature 50°F, June 1949.
Du 515	14Y, 12.9S, 9.0E	Robert Ducos	660	Dr	300	6	5	Hudson River formation	--	do.	50	Dom	Well has been pumped at 50 gpm for 36 hrs. Temperature 51°F, June 1949. (a).
Du 517	14Y, 1.0S, 3.2E	R. Antinio	710	Dr	111	6	8	do.	18	do.	6	Dom	
Du 519	14Y, 3.0S, 4.0E	J. C. Hack	420	Dug	26	54	--	Pleistocene gravel	9	Suction	--	Dom	

Table 13.--Records of selected wells in Dutchess County (continued)

Table 19.—Records of selected wells in Putnam County (Continued)

Well	Location	Owner or occupant	Altitude above sea level (feet)	Type of well	Depth below land surface (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing formation	Water level below land surface (feet)	Method of lift	Yield (gallons per minute)	Use	Remarks
[illegible]	[illegible]	H. E. Lapp	1,140	Drl	385	6	2	Hudson River formation	--	Force	12	Dom	Well flows.
[illegible]	[illegible]	E. V. Mark	845	Drl	131	6	16	do.	17	do.	--	Dom	
[illegible]	[illegible]	V. E. Hall	1,070	Dug	10	36	10	Pleistocene till	4	None	--	Farm	Well supplies home by gravity flow.
[illegible]	[illegible]	Matthew Tracy	1,190	Dug	18	48	17	do.	14	Suction	--	Dom	Water has relatively high iron content.
[illegible]	[illegible]	E. Jackson	960	Dug	31	48	31	do.	--	Hand	--	Dom	Well supplies two homes.
[illegible]	[illegible]	Edward Pflueger	780	Drl	51	6	16	Granite and gneiss, undiff.	--	Jet	3	Dom	Temperature 49°F, July 1949.
[illegible]	[illegible]	H. Stafford	700	Dug	16	36	--	Pleistocene sand	14	Suction	--	Dom	
[illegible]	[illegible]	Elias Sprague	900	Dug	22	10	22	Pleistocene till	18	do.	--	Dom	
[illegible]	[illegible]	C. Greenhouf	100	Drl	100	6	21	Granite and gneiss, undiff.	13	Force	12	Dom	
[illegible]	[illegible]	Doris Click	920	Dug	31	48	31	Pleistocene till	14	Suction	--	Dom	
[illegible]	[illegible]	Henry Morris	360	Drl	72	6	26	Stockbridge limestone	24	None	3	Dom	
[illegible]	[illegible]	Tyler Magee	360	Dug	24	48	--	Pleistocene gravel	15	Suction	--	Farm	
[illegible]	[illegible]	Samuel Kaufman	680	Drl	130	6	5	Hudson River formation	14	Force	5	Dom	
[illegible]	[illegible]	H. Schlamaver	770	Dug	14	38	14	Pleistocene till	7	Suction	--	Dom	
[illegible]	[illegible]	Delmar Erickson	700	Drl	87	6 to 4	2	Stockbridge limestone	35	Jet	10	Farm	Bedrock contains large seams of clay. Temperature 54°F, August 1949.
[illegible]	[illegible]	Foremost Guernsey Assoc.	360	Drl	420	8	21	do.	20	Force	65	Farm	Temperature 51°F, July 1949. Average consumption is 20,000 gpd.
[illegible]	[illegible]	C. Wachenheimer	590	Drl	125	6	7	Hudson River formation	24	do.	12	Farm	Temperature 50°F, July 1949. (a).
[illegible]	[illegible]	K. Pearce	560	Dug	16	48	15	Pleistocene till	12	--	--	Dom	
[illegible]	[illegible]	Cashman Farm	380	Drl	200	6	--	Stockbridge limestone	19	Force	45	Farm	Temperature 52°F, July 1949.
[illegible]	[illegible]	Herald Tribune Fresh Air Camp	900	Drl	104	6	30	Granite and gneiss, undiff.	--	Suction	30	Dom	Well flows at 6 gpm. Temperature 49°F, July 1949. (a).
[illegible]	[illegible]	George Rambo	300	Drl	65	6	54	Stockbridge limestone and Pleistocene deposits	--	Force	10	Dom	Bedrock contains large seams of clay. (b).
[illegible]	[illegible]	City of Beacon	200	Drl	89	6	89	Pleistocene sand	--	None	--	None	Test hole for City of Beacon. (b).
[illegible]	[illegible]	do.	200	Drl	530	16 to 8	1401	Pleistocene gravel and Stockbridge limestone	9±	--	1,400	None	Well finished with 67 ft of 12-inch screen. (a) (b).
[illegible]	[illegible]	Schatz Manufacturing Co.	260	Drl	558	6	18	Hudson River formation	--	Force	25	Ind	Total of three similar wells on property; all supply water for cooling.
[illegible]	[illegible]	Sleepy Boy Scout Camp	580	Drl	351	6	40	do.	19	do.	6	Dom	Drawdown 211 ft after pumping 6 gpm for 12 hrs. Temperature 50°F, July 1949.
[illegible]	[illegible]	Quaal Hollow Inn	600	Drl	237	6	90	do.	31	Jet	7	Dom	Lake water also used. Temperature 53°F, July 1949.
[illegible]	[illegible]	Sabajewa Girl Scout Camp	660	Drl	255	6	17	do.	6	Force	5	Dom	Drawdown 119 ft after pumping 5 gpm for 2 hrs.
[illegible]	[illegible]	M. Stewart	670	Dug	18	42	18	Pleistocene till	15	Suction	--	Dom	
[illegible]	[illegible]	Lewis Medares	330	Drl	45	6	14	Hudson River formation	6	--	20	Dom	Temperature 50°F, July 1949.

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Table 11.--Records of selected wells in Dutchess County (continued)

Well	Location	Owner or occupant	Altitude above sea level (feet)	Type of well	Depth below land surface (feet)	Diameter (inches)	Depth to bedrock (feet)	Water-bearing formation	Water level below land surface (feet)	Method of lift	Yield (gallons per minute)	Use	Remarks
[illegible]	15Y, 11.7N, 6.1W	Robert McGinnis	520	Drl	170	6	94	Hudson River formation	--	--	6	[illegible]	Temperature [illegible], July 19[illegible]
[illegible]	14Y, 1.3S, 3.9E	Gent's Cabin Camp	560	Drl	76	6	14	do.	--	Jet	5	[illegible]	Well supplies camp.
[illegible]	14Y, 3.5N, 7.0W	Theodore Thackery	360	Drl	156	6	6	do.	14	Force	--	Dom	
[illegible]	14Y, 3.5N, 7.0W	do.	360	Drl	400	6	10	do.	19	None	5	None	Yield inadequate.
[illegible]	15Y, 8.1N, 2.3W	Tony Lee	200	Drl	112	6	40	do.	--	Jet	7	Dom	Temperature 51°F, July 19[illegible]. (b)
[illegible]	14Y, 1.5N, 8.1W	F. D. Roosevelt High School	230	Drl	200	8	23	do.	--	Turbine	50	[illegible]	Well supplies 650 students. Temperature 52°F, 1949. (a).
[illegible]	15Y, 0.6N, 4.5W	W. E. Dare	360	Drl	88	6	24	Cheshire quartzite	4	Suction	2	Farm	(a) (b).
[illegible]	15Y, 3.7N, 10.3W	Beacon Oil Co.	220	Drl	15	6	3	Hudson River formation	12	do.	22	[illegible]	Temperature 60°F, July 19[illegible]. (a).
[illegible]	15Y, 4.4S, 9.6E	Old Drovers Inn	430	Drl	130	6	11	Stockbridge limestone	26	Force	9	[illegible]	
[illegible]	15Y, 10.0N, 9.6W	International Business Machines Corp.	100	Drl	468	6	16	do.	21	--	10	--	
[illegible]	15Y, 10.0N, 9.6W	do.	100	Drl	400	6	--	do.	--	--	60	[illegible]	
[illegible]	15Y, 10.0N, 9.6W	do.	100	Drl	525	--	--	do.	--	--	28	--	
[illegible]	13Y, 9.5S, 3.0E	Bessie Hicks	420	Drl	142	6	0	Hudson River formation	--	--	11	[illegible]	Yield [illegible] gpm when well was 15 ft deep and 11 gpm when well was 20 ft deep.
[illegible]	[illegible], 0.7S, 8.6E	Carl Sahe	400	Drl	164	6	--	Pleistocene gravel	7	Jet	60	[illegible]	Well finished with 4 ft of [illegible] screen. Temperature [illegible], August 19[illegible]. (a) (b).
[illegible]	15Y, 15.5N, 9.3W	Fairview Heights Improvement Co.	260	Drl	250	6	2	Hudson River formation	24	Turbine	12	PS	(b).
[illegible]	15Y, 4.2N, 3.3W	Louis Barbieri	260	Drl	145	6	12	Stockbridge limestone	21	Jet	3	[illegible]	Temperature [illegible]°F, August 19[illegible].
[illegible]	14Y, 1.4S, 4.1E	Greer School	810	Drl	215	8 to 6	36	Hudson River formation	42	do.	27	[illegible]	Drawdown 106 ft after pumping 27 gpm for 24 hrs. Temperature 51°F, August 19[illegible]. (b).
[illegible]	13Y, [illegible]S, 7.7E	Carl Tobias	810	Drl	138	6	38	do.	15	do.	14	[illegible]	Drawdown 60 ft after pumping 13 gpm for 24 hrs. Temperature [illegible], August 19[illegible]. (a)
[illegible]	14Y, 1.7S, 0.7E	Sprout Lake Camp	500	Drl	186	6	4	do.	30	--	15	Dom	Drawdown 125 ft after pumping 15 gpm for 8 hrs.
[illegible]	14Y, 0.7N, 0.7W	W. P. Rosten	520	Drl	145	6	4	do.	15	Jet	10	Farm	Drawdown 65 ft after pumping 10 gpm for 1 hr.
[illegible]	13Y, 1.9S, 4.8E	Pine Plains Water Co.	465	Drl	228	6	101	Stockbridge limestone	16	Turbine	220	PS	Drawdown about 40 ft after pumping 220 gpm for 72 hrs. (a) (b).
[illegible]	15Y, 7.2N, 2.7W	Frank Tompkins	190	Drl	177	6	67	Hudson River formation	21	Jet	10	Dom	Temperature 52°F, August 19[illegible]
[illegible]	15Y, 7.3N, 9.8W	Children's Aid Society Camp	120	Drl	318	8	67	Stockbridge limestone	12	Force	20	[illegible]	Drawdown 172 ft after pumping 20 gpm for 24 hrs. (a) (b).
[illegible]	13Y, 1.8N, 6.7W	G. Reggeo	260	Drl	68	6	23	Hudson River formation	30	Jet	11	[illegible]	Drawdown 15 ft after pumping [illegible] gpm for 3 hrs.
[illegible]	15Y, 6.7S, 10.9W	[illegible] Portatola	660	Drl	315	6	28	Stockbridge limestone	15	do.	11	[illegible]	Drawdown 2[illegible] ft after pumping [illegible] gpm for 8 hrs. (a).
[illegible]	[illegible], 10.3S, 1.1[illegible]	[illegible]	[illegible]	Dug	[illegible]	[illegible]	[illegible]	Pleistocene sand	[illegible]	Suction	--	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	--	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Hudson River formation	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]

REF. A-14-1-11

Kramer
Environmental
DIVISION OF
KRAMER INDUSTRIES
935 ALLWOOD RD
CLIFTON, NJ 07012

NEW JERSEY 201-
609 AREA CODE ONLY -
N.Y., P.A., CT., MD., DE., -

June 30, 1988

Mr. Aminullah Kazemi
Gibbs & Hill, Inc.
11 Penn Plaza
New York, N.Y. 10001-2059

Dear Mr. Kazemi:

As per our recent telephone conversations, enclosed you will find copies of manifests of all wastes removed from the 1929 Associates' site in Poughkeepsie, N.Y. by Kramer Environmental.

Please note that the last materials were removed in May of 1987 and that no work was done by Kramer Environmental in 1988.

If you have any questions or require any additional information, please feel free to contact me.

Very truly yours,

Robert T. Kennedy(ams)
Robert T. Kennedy
Director of Field Operations

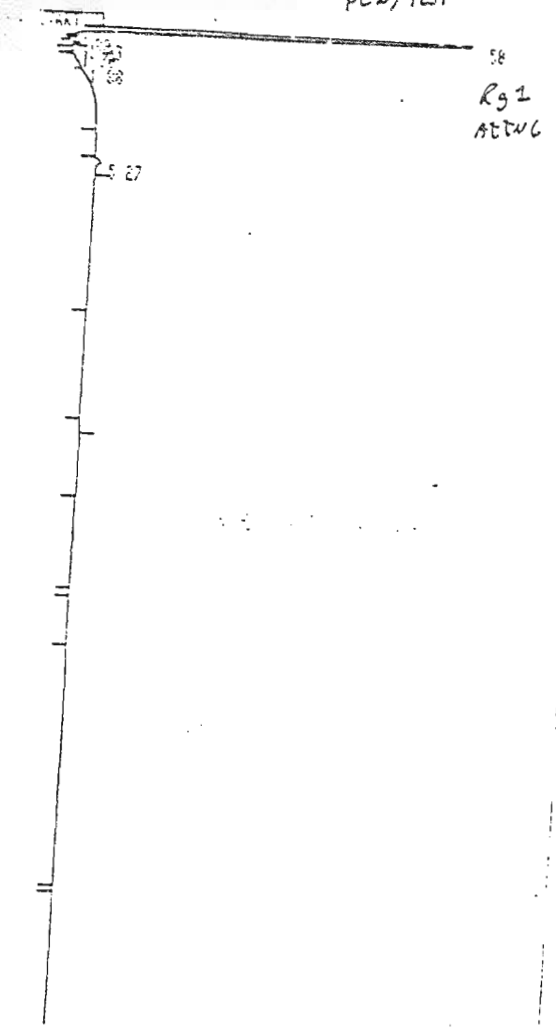
cc: Stan Schutzman- Lot Six Realty

Enc.
RTK:ams

Via: Federal Express

A-9-31-38

PCB/Pest



RUN # 116
RSP FILE ID: C
WORKFILE NAME:
SAMPLE # 1

AREA%

RT	AREA	TYPE	AR/HT	AREA%
0.50	7743900	SBB	0.052	95.4[illegible]
0.88	23765	BP	0.053	0.2[illegible]
1.03	48415	PB	0.063	0.5[illegible]
1.30	63128	BP	0.136	0.7[illegible]
1.88	154748	PB	1.287	1.9[illegible]
5.27	79997	BB	0.209	0.9[illegible]

TOTAL AREA= 8114000
MUL FACTOR= 1.0000E+00

IMAGEMAX

THE FOLLOWING DOCUMENTS ARE PHOTOCOPIES

CONDITION CANT' BE IMPROVED DUE TO:

1. OVERLAPPING DOCUMENTS
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MINOLTA

4-1 (4/85)

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

A-14-2-11

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type.

Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA No. / Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal Law.
	NYD981557147 / 02517		

3. Generator's Name and Mailing Address: 1929 ASSOCIATES, FARMINGDALE P.O. BOX 308, HOPEWELL JCT. N.Y. 12533	A. State Manifest Document No.: NYA 3502517
4. Generator's Phone (914) 221-3700	B. Generator's ID: FARMINGDALE, ROUGHKEEPSIE NY 12601
5. Transporter 1 (Company Name): PRICE TRUCKING	6. US EPA ID Number: NYD046765574 / C. State Transporter's ID: 97-025 / D. Transporter's Phone: (716) 822-2414
7. Transporter 2 (Company Name)	8. US EPA ID Number / E. State Transporter's ID / F. Transporter's Phone
9. Designated Facility Name and Site Address: RADIAC RESEARCH CORP. 261 KENT AVE. BROOKLYN, N.Y. 11211	10. US EPA ID Number: NYD049178296 / G. State Facility's ID / H. Facility's Phone: 718-963-2233

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE CORROSIVE LIQUID, N.O.S. CORROSIVE MATERIAL UN 1760	002	DM	00400	P	D002
b. WASTE POISON B, LIQUID, N.O.S. POISON B UN 2810	001	DM	00200	P	D008
c. WASTE CORROSIVE SOLID, N.O.S. CORROSIVE MATERIAL UN 1759	001	DM	00200	P	D002
d. WASTE OXIDIZER OXIDIZER UN 1479	002	DM	00400	P	D001

J. Additional Descriptions for Materials Listed Above: K. Handling Codes for Wastes Listed Above

a. PACKARD LAB CHEMICALS, C / b. PACKARD LAB CHEMICALS, C / c. / d.

b. PACKARD LAB CHEMICALS, EP / d. PACKARD LAB CHEMICALS, I / a. / b. / c. / d.

15. Special Handling Instructions and Additional Information

a) TECH # 4143 DRUMS C-1 & A-1 c) TECH # 4143 DRUM # B-1 NJ. PERMIT # S-8424 TRAILER # U-55

b) TECH # 4143 DRUM EM-2 d) TECH # 4143 DRUMS # SEO-1 & EO-2

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002 (b) of RCRA, I also certify that I have a program in place to reduce volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Mo.	Day	Year
DONALD R COURSELLE	Donald R Courselle	11	07	86

17. Transporter 1 (Acknowledgement of Receipt of Materials)

Printed/Typed Name	Signature	Mo.	Day	Year
~~BETH~~ KENNETH GAGER	Kenneth Gager	11	07	86

18. Transporter 2 (Acknowledgement of Receipt of Materials)

Printed/Typed Name	Signature	Mo.	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Mo.	Day	Year

NYA 3502517

Form 8700-22 (Rev. 4-85) Previous edition is obsolete.

COPY 1—Disposer State—Mailed by TSD Facility

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

A-14-3-11

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type.

Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA No. NYD981557A7	Manifest Document No. 012512B	2. Page 1 of 1	Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address: 1929 ASSOCIATES ~~FAIRVIEW AVE~~ PO BOX 908 HOPEWELL JCT. NY 12533

4. Generator's Phone (914) 221-3700

A. State Manifest Document No. NYA 3502528

B. Generator's ID ~~FAIRVIEW AVE~~ POUGHKEEPSIE 1960

5. Transporter 1 (Company Name): PRICE TRUCKING

6. US EPA ID Number: NYD046765574

C. State Transporter's ID: 9A-025

D. Transporter's Phone (716) 822-1414

7. Transporter 2 (Company Name)

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: RADIAC RESEARCH CORP. 261 KENT AVE, BROOKLYN, N.Y. 11211

10. US EPA ID Number: NYD049178296

G. State Facility's ID

H. Facility's Phone: 718 963-2230

11. US DOT Description (including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	Waste No.
a. WASTE POISON B, SOLID, N.O.S. POISON B UN 2811	002	D.M	400	P	D008
b. HAZARDOUS WASTE SOLID, N.O.S. ORM-E NA 9189	001	D.M	200	P	D008
c. WASTE FLAMMABLE LIQUID, N.O.S. FLAMMABLE LIQUID, UN 1993	001	D.M	200	P	D001
d. WASTE ACID, N.O.S. CORROSIVE MATERIAL NA 1760	001	DM	200	P	D002

J. Additional Descriptions for Materials Listed Above: a. PACKAGED LAB CHEMICALS - POISON SOLID - S.E. b. PACKAGED LAB CHEMICALS c. PACKAGED LAB CHEMICALS d. PACKAGED LAB CHEMICALS

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
a) TECH # 4143 - 1 DRUM ZM-1
TECH # 4150 - 1 DRUM CLASS + MUTOL
b) TECH # 4143 - 1 DRUM C-2
c) TECH # 4143 - 1 DRUM - D-1
d) TECH # 4149 - ACID TECH
NJ - S.8424
RE-U-53253

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002 (b) of RCRA, I also certify that I have a program in place to reduce volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name	Signature	Mo.	Day	Year
DONALD R COURSELLE	Donald R Courselle	11	07	86

17. Transporter 1 (Acknowledgement of Receipt of Materials)

Printed/Typed Name	Signature	Mo.	Day	Year
KENNETH GOJER	Kenneth Gojer	11	07	86

18. Transporter 2 (Acknowledgement of Receipt of Materials)

Printed/Typed Name	Signature	Mo.	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Mo.	Day	Year

EPA Form 8700-22 (Rev. 4-85) Previous edition is obsolete. COPY 1—Disposer State—Mailed by TSD Facility

A-14-A-11

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type.

Form Approved. OMB No. 2000-0404. Expires 7-31-86

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No.: NYD981557747 — Manifest Document No.: 02552
2. Page 1 of 1
Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address: 1929 ASSOCIATES, ~~FAIRVIEW AVE~~ P.O. BOX 308, HOPEWELL JCT., NY. 12533
4. Generator's Phone (914) 221-3700

A. State Manifest Document No.: NY-A-3502552
B. Generator's ID: FAIRVIEW AVE POUGHKEEPSIE, NY 12601

5. Transporter 1 (Company Name): PRICE TRUCKING
6. US EPA ID Number: NYD046765574
C. State Transporter's ID: 9A025
D. Transporter's Phone: (718) 822-1414

7. Transporter 2 (Company Name)
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address: RADIAC RESEARCH CORP. 261 KENT AVE BROOKLYN, N.Y. 11211
10. US EPA ID Number: NYD049178296
G. State Facility's ID
H. Facility's Phone: 718 963-2233

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE SODIUM DICHROMATE ORM-A NA 1479	001	DM	00200	P	D007
b. WASTE NITRIC ACID, RQ 1000/454 OXIDIZER UN 2031	001	DM	00025	P	D002
c. WASTE SODIUM AZIDE ~~POISON B~~ UN-1687	001	DM	00001	P	P105
d.					

J. Additional Descriptions for Materials Listed Above: a) PACKAGED LAB CHEMICALS; b) PACKAGED LAB CHEMICALS; c) PACKAGED LAB CHEMICALS

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
a) TECH # 4143 - (SODIUM DICHROMATE) c) TECH # 4148 - (SODIUM AZIDE) 5 GAL PAIL B-4
TRAILER # 4-53253
b) TECH # 4143 - EO-3 5 GAL PAIL (NITRIC ACID) NJ PERMIT #: S-8424

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002 (b) of RCRA, I also certify that I have a program in place to reduce volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: DONALD R. COURSELLE — Signature: [signature] — Mo. Day Year: 11 07 86

17. Transporter 1 (Acknowledgement of Receipt of Materials)
Printed/Typed Name: KENNETH GAGER — Signature: Kenneth Gager — Mo. Day Year: 11 07 86

18. Transporter 2 (Acknowledgement or Receipt of Materials)
Printed/Typed Name — Signature — Mo. Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name — Signature — Mo. Day Year

EPA Form 8700-22 (Rev. 4-85) Previous edition is obsolete.

COPY 1—Disposer State—Mailed by TSD Facility

11-7-86

State of New Jersey
Department of Environmental Protection
Division of Waste Management
CN 028, Trenton, NJ 08625

A-14-5-11

Please print or type. (Form designed for use on elite (12 pitch) typewriter.)

Form Approved. OMB No. 2000-0404. Expires 7-31-

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.
2. Page 1 of 1

3. Generator's Name and Mailing Address: H&M Associates, Fairview Ave., Poughkeepsie, N.Y. 12601

4. Generator's Phone

A. State Manifest Document Number: NJA0234130

B. State Gen. ID: Same

5. Transporter 1 Company Name: Mahl Trucking

6. US EPA ID Number

C. State Transporter's ID: 12071

D. Transporter's Phone: (201) 566-3000

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: Mapiel Inc., 127 Factory Lane, [illegible] NJ 08846

10. US EPA ID Number

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No. / Type

13. Total Quantity

14. Unit Wt/Vol

I. Waste No.

a. Waste Oil, NOS, Combustible Liquid NA 1270

b.

c.

d.

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name | Signature | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month Day Year

EPA Form 8700-22

B - TRANSPORTER 1 COPY

12-3-86

A-14-6-11

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type.

Form Approved. OMB No. 2050-0039. Expires 9-30-88

In c[redacted] or [redacted] the [redacted]nal [redacted]se C[redacted]800) [redacted]2 an[redacted]N.Y. [redacted]ment [redacted]nspor[redacted](518) [redacted]2.

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA No. / Manifest Document No.: NYD988A557 ~~1947~~ 10499	2. Page 1 of 1	Information in the shaded areas is not required by Federal Law.
3. Generator's Name and Mailing Address: 1129 ASSOCIATES, P.O. BOX 308, HOPEWELL JCT, NY 12533		A. State Manifest Document No.: NY A 554049 9	
4. Generator's Phone (9)		B. Generator's ID: FAIRVIEW AVE. POUGHKEEPSIE, N.Y.	
5. Transporter 1 (Company Name): PRICE TRUCKING	6. US EPA ID Number: NYD04676557?	C. State Transporter's ID: 677-633	
		D. Transporter's Phone ([illegible]	
7. Transporter 2 (Company Name)	8. US EPA ID Number	E. State Transporter's ID	
		F. Transporter's Phone	
9. Designated Facility Name and Site Address: RADIAC RESEARCH CORP. 261 KENT AVE BROOKLYN, N.Y. 11211	10. US EPA ID Number: NYD948178296	G. State Facility's ID	
		H. Facility's Phone: 718 963-2233	

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE PICRIC ACID, WET WITH NOT LESS THAN 10% WATER FLAMMABLE SOLID NA 1344	001	DM	25	P	D001
b. WASTE FLAMMABLE SOLID, N.O.S. FLAMMABLE SOLID UN1325	001	DM	225	P	D001
c. WASTE POISON B LIQUID, N.O.S. POISON B UN2810	001	DM	225	P	P030
d.					

J. Additional Descriptions for Materials Listed Above	K. Handling Codes for Wastes Listed Above
a. PACKAGED LAB CHEMICALS L, I	a. L
c. PACKAGED LAB CHEMICALS L, T	c. T
b. PACKAGED LAB CHEMICALS S, I	b. L
d.	d.

15. Special Handling Instructions and Additional Information

a) TECH NO. 4148 EXC-D-2 (5 GAL PAIL)
b) TECH NO. 4143 B-2
c) TECH NO. 4143 B-3
* NJDEPS 8424/81304

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.

If I am a large quantity generator, I certify that I have program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Mo. Day Year
[illegible] COURSELLE	[signature] /RTK	03 05 87

17. Transporter 1 (Acknowledgement of Receipt of Materials)

Printed/Typed Name	Signature	Mo. Day Year
Charles Elkin	[signature]	[illegible]

18. Transporter 2 (Acknowledgement or Receipt of Materials)

Printed/Typed Name	Signature	Mo. Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Mo. Day Year
GLENN TRIVIATELLI	[signature]	03 06 87

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

COPY 5—Transporter copy—retained by transporter

A-14-7-11

Division of Waste Management
CN 028, Trenton, NJ 08625

UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.: NYD98155774 / 791659

Page 1 of 1

Manifest Document Number: NJA 0291659

Generator's Name and Mailing Address:
1727 Associates
P.O. Box 308
Hopewell Jct., NY 12533

Generator's Phone: 914 221-3700

State Generator's ID: Fairview Av., Poughkeepsie, NY

Transporter 1 Company Name: Perretti Freight Services — US EPA ID Number: NJD000692343

State Transporter's ID: NJDEP1 - 7067 - 2063

Transporter's Phone: (201) 935-451..

Designated Facility Name and Site Address:
Marisol Inc.
125 Factory Lane
Middlesex, N.J. 08846 — US EPA ID Number: NJD002454544

Facility's Phone: (201) 469-5100

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

	Description	Containers No.	Type	Total Quantity	Unit Wt/Vol	Waste No.
a.	Waste Flammable Liquid, N.O.S. Flammable Liquid UN1993	004	DM	22016		D001
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above: a) Kerosene/Methyl Ethyl Ketone L, I

K. Handling Codes for Wastes Listed Above: a) T04 Recovery

15. Special Handling Instructions and Additional Information: a) H6101

16. GENERATOR'S CERTIFICATION: ... according to applicable international and national government regulations.

Printed/Typed Name: Donald R. Coursell... — Signature: Donald R. Coursell... — Month/Day/Year: 04 20 ..

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] — Month/Day/Year: 04 20 ..

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: — Signature: — Date:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: Gregory A Pi... — Signature: Gregory A. ...

SIGNATURE AND INFORMATION MUST BE ...

5 – TRANSPORTER 1 COPY

H-14-8-11

DNR
MICHIGAN DEPARTMENT OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE
ATT. ☐ DIS. ☐ REJ. ☐ PR ☐

Failure to file is punishable under section 299.548 MCL or Section ... Act 136, PA 1969

Please print or type

Form Approved OMB No. 2050-0039 Expires ...

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. WND981557747 Manifest Document No. 47688
2. Page 1 of 1

Information in the shaded areas is not required by Federal law

3. Generator's Name and Mailing Address: 1929 ASSOCIATES, P.O. BOX 309, HOPWELL JCT. NY 12533
4. Generator's Phone (914) 221-3700

A. State Manifest Document Number MI 1061752
B. State Generator's ID FAIRVIEW POUGHKEEPSIE, NY

5. Transporter 1 Company Name: PERRETTI FREIGHT SERVICES
6. US EPA ID Number: NJD000693415
C. State Transporter's ID (201) 935-4...
D. Transporter's Phone NJ-450-TL

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address: CHEM MET SERVICES, 18550 ALLEN ROAD, WYANDOTTE, MI 48192
10. US EPA ID Number: MID096963194
G. State Facility's ID
H. Facility's Phone 313 283 9250

	HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID NUMBER)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.		WASTE CHEMICALS, N.O.S. DOT NON-REGULATED	013	DM	1165	G	018L
b.	X	WASTE ALKALINE LIQUID, N.O.S. CORROSIVE MATERIAL NA 1719	017	DF	3885	G	D002
c.	X	HAZARDOUS WASTE LIQUID, N.O.S. ORM-E NA 9189	1	DM	55	G	013K
d.							

J. Additional Descriptions for Materials Listed Above
a) METAL WORKING LIQUID L
b) ALKALINE (NaOH) CLEANER LC
c) FUNGICIDE L.T.

K. Handling Codes for Wastes Listed Above
a/ b/ c/ d/

15. Special Handling Instructions and Additional Information
a) 6102
b) 6104
c) 6105
NJDEPS 7067-206...
LIC AGT. NO. 450-TL

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: DONALD R COUSELLE | Signature: Donald R Couselle | Date (Month Day Year): 04 20 ...

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] | Signature: [illegible] | Date (Month Day Year): [illegible]

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Date (Month Day Year)

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: JAMES HERVEY | Signature: [illegible] | Date (Month Day Year): 0422...

ALL SPILLS MUST BE REPORTED TO THE MICHIGAN POLLUTION EMERGENCY ALERTING SYSTEM, IN MICHIGAN AT 1-800-292-4706 OR OUT OF STATE AT 517-373-7660 AND THE NATIONAL RESPONSE CENTER AT 1-800-424-8802 24 HOURS PER DAY.

EPA Form 8700-22 (Rev. 9/86)

TRANSPORTER COPY

A-14-9-11

Please print or type

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Form Approved OMB No. 2000-0404 Expires 7-31-...

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA No. NYD 7 3 1 5 5 7 7 4 7 W1 K5B — Manifest Document No.
2. Page 1 of 1

Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address: KJ 2 9 ASSOCIATES, P.O. BOX 308, HOPEWELL JCT. NY 12533
4. Generator's Phone ( )

A. State Manifest Document No. NY A 374165 8

B. Generator's ID FAIRVIEW AVE POUGHKEEPSIE NY

5. Transporter 1 (Company Name): PERRITTI FREIGHT SERVICES
6. US EPA ID Number: NJD 0 0 0 6 9 2 3 4 8

C. State Transporter's ID

D. Transporter's Phone

7. Transporter 2 (Company Name)
8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address: RADIAC RESEARCH CORP. 261 KENT AVENUE BROOKLYN, N.Y. 11211
10. US EPA ID Number: NYD 0 0 4 9 1 7 8 2 9 6

G. State Facility's ID

H. Facility's Phone (718) 963-2233

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. WASTE CHEMICALS, N.O.S. DOT NON REGULATED	0 0 9	DM	4400	P	NY910
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

a. [illegible] b. c. d.

K. Handling Codes for Wastes Listed Above

a. b. c. d.

15. Special Handling Instructions and Additional Information: [illegible] *NJDEPS 7067/200[illegible]

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name: Donald R. [illegible] — Signature: [signature] — Mo. Day: 04 [illegible]

17. Transporter 1 (Acknowledgement of Receipt of Materials)

Printed/Typed Name: [illegible] — Signature: [signature] — Mo. Day

18. Transporter 2 (Acknowledgement of Receipt of Materials)

Printed/Typed Name — Signature — Mo. Day

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: [illegible] — Signature: [signature] — Mo. 04

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the N.Y. Department of Transportation 457-...

EPA Form 8700-22 (Rev. 4-85) Previous edition is obsolete

COPY 5—Transporter copy—retained by transporter

[redacted]

65-14-1 (9/86)—71

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

A-14-10-11

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type.

Form Approved. OMB No. 2050-0039. Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA No. / Manifest Document No. NY0993357747935??	2. Page 1 of 1	Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address 1929 ASSOCIATES, P.O. Box 328, HOPEWELL JUNCTION, N.Y. 125??

4. Generator's Phone (914) 221-3720

5. Transporter 1 (Company Name) FREEHOLD CARTAGE INC. 6. US EPA ID Number NJD05412????

7. Transporter 2 (Company Name) FREEHOLD CARTAGE INC. 8. US EPA ID Number NJD05412????

9. Designated Facility Name and Site Address RADIAC RESEARCH CORP. 261 KENT AVENUE BROOKLYN, N.Y. 11211 10. US EPA ID Number NYD049178296

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. WASTE ACID LIQUID, N.O.S. CORROSIVE MATERIAL NA1760	1	DM	125	P
b. WASTE OXIDIZER, N.O.S. OXIDIZER UN1479	1	DM	120	P
c. WASTE HYDROGEN PEROXIDE SOLUTION 30% OXIDIZER UN2014	1	DM	10	P
d.				

15. Special Handling Instructions and Additional Information
a) 5711 ?-4-?? (S?? P??) and 5711 ?-?-? (S?? P??)
b) 5711 LL-2-4-?? (S?? A??)
\# NJDEPS 2265/2265? NJ XK-8/XX

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and state laws and regulations.

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Printed/Typed Name	Signature	Mo. Day Year
DONN COYASILLE	[signature]	10 15 ??

17. Transporter 1 (Acknowledgement of Receipt of Materials)

Printed/Typed Name	Signature	Mo. Day Year
[illegible]	[signature]	[illegible]

18. Transporter 2 (Acknowledgement of Receipt of Materials)

Printed/Typed Name	Signature	Mo. Day Year
PAUL Colucci	[signature]	10 ?? ??

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Mo. Day Year
GLENN TRAMATCH	[signature]	10 ?? ??

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

COPY 5—Transporter copy—retained by transporter

A-14-11-11

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE

HAZARDOUS WASTE MANIFEST

P.O. Box 12820, Albany, New York 12212

Please print or type.

Form Approved OMB No. 2050-0039 Expires 9-3

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator's US EPA No. NY0790557744 Manifest Document No. 91364	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address: 1724 Associates, Hopewell Junction, N.Y. 12533			A. State Manifest Document No. NY A [redacted]
4. Generator's Phone (914) 221-3700			B. Generator's ID
5. Transporter 1 (Company Name) Perretti Freight Service	6. US EPA ID Number NJD000887343		C. State Transporter's ID
			D. Transporter's Phone
7. Transporter 2 (Company Name)	8. US EPA ID Number		E. State Transporter's ID
			F. Transporter's Phone
9. Designated Facility Name and Site Address: Radiac Research Corp. 261 Kent Avenue, Brooklyn, N.Y. 11211	10. US EPA ID Number NYD049178296		G. State Facility's ID
			H. Facility's Phone 718 963 2533

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Waste Sodium Cyanide, Solid, RQ 1/1.54 Poison B UN1689	1	DM	1	P	P106
b.					
c.					
d.					

J. Additional Descriptions for Materials listed Above

a. Packaged Lab Chemicals ... S.H

b.

K. Handling Codes for Wastes Listed Above

a.

b.

15. Special Handling Instructions and Additional Information

5711-85-1-4-23 [illegible]

* NJRPS 7067/25416

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Printed/Typed Name	Signature	Mo. Day Yr.
David Caruselle	David Caruselle	05 26

TRANSPORTER

17. Transporter 1 (Acknowledgement of Receipt of Materials)

Printed/Typed Name	Signature	Mo. Day Yr.
[illegible]	[illegible]	052691

18. Transporter 2 (Acknowledgement of Receipt of Materials)

Printed/Typed Name	Signature	Mo. Day Yr.

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Mo. Day Yr.
Ed Ritter	Ed Ritter	052695

EPA Form 8700-22 (Rev. 9-86) Previous edition is obsolete.

COPY 5—Transporter copy—retained by transporter

In case of emergency or spill immediately call the National Response Center (800) 424-8802 and the N.Y. Department of Transportation (518) 457-7362.

IMAGEMAX

MINOLTA

END

POOR

QUALITY

DOCUMENTS

APPENDIX B

REF. 8-1-1-14

INTERVIEW ACKNOWLEDGEMENT FORM

Site Name: Schatz Plant

I.D. Number: 314074

Date: 6/17/87

Person Contacted: Donn Courselle

Title: Agent

Affiliation: Robert - Mark Managing Agents

Address & Phone No.: Robert - Mark Managing Agents
P.O. Box 308
Hopewell Jt., NY 12533
914-221-3700

Type of Contact: In person

Person(s) Making Contact: L. Radko

Interview Summary:

The Schatz Plant went out of business in 1981.

In the past, approximately 30 55-gallon drums containing detergent, alkaloids, fungicides and chemical solvents were located in front of Henry Kettle Blacktopping, by the fence along the ball park. The drums were put into containers and shipped out. In the covered alley, there were approximately 60 55-gallon drums which contained oil and water. Their contents were pumped out and later the empty drums were removed. The removal of the drums took place around May 1987.

At present, some of the drums remain in the covered alley. This is because there was no more room on the truck which removed the drums or the drums contained small amounts of fluid, probably rainwater. The haulers would only take empty drums.

The building in question had been a heat treatment equipment room. The liquid in the pits, in the building, have been tested and metal traces and PCB's were found. Each pit will be tested individually. The NYS DEC has test results in Albany and New Paltz. The testing included the water, oil and sludge in the pits. Some of the pits had been filled in with bricks and concrete as requested by the Fire Depatrmaent. The DEC had this stopped. This building will be secured in the near future.

Winter delayed all clean up work at the site. Bob Kennedy of Kramer Environmental in Clifton, NJ coordinated the clean up activities.

Acknowledgement:

I have read the above transcript and I agree that it is an accurate summary of the information verbally conveyed to Gibbs & Hill, Inc. interviewers, or as I have revised below, is an accurate account.

Revisions (please write in corrections to above transcript):

Signature: Donald Mouzelle Date: 1-28-88

B-1-3-14

Telephone Conversation Record

Date: 8/12/87

Time: 3:40

Call by: Richard Barbour (Name) of Gibbs & Hill, Inc. (Company)

Answer by: Jerard S. Hankin (Name) of Hankin, Hanig, Stall & Shafra- (Company)
(914) 471-7177

Contract No: 5019-209

Subject discussed: Industrial Wells (Du 106, 498 and 633)
at Former Schatz Plant Site

SUMMARY OF DISCUSSION, DECISIONS AND COMMITMENTS.

R. Barbour called Jerard S. Hankin of Hankin, Hanig, Stall & Shafram, Attorneys for Schatz 1929 Corp.

R. Barbour informed Mr. Hankin that published literature (GW-4~~8~~3) identified 3 industrial wells at the former Schatz Plant site. R. Barbour asked if these wells, installed in the late 40's early 50's were still in use. Mr. Hankin stated that they are no longer in use and that the present facility is on public water supply.

RBar:aaf

F-424, 10-68

B-1-4-14

Telephone Conversation Record

Date: 6/7/88

Time: 9:25 AM

Call by: Aminullah Kazemi (Name) of Gibbs & Hill, Inc. (Company)

Answer by: Robert Kennedy (Name) of Kramer Environmental (Company)
(201) 471-9500

Contract No: 5019-209

Subject discussed: Any information including analytical data on Schatz Plant

---

SUMMARY OF DISCUSSION, DECISIONS AND COMMITMENTS.

Mr. Robert Kennedy responded as follows:

"We would like to receive a letter from Gibbs & Hill, Inc. and an authorization letter from NYSDEC to that effective to release the pertaining information about the Schatz Plant".

F-424, 10-68

GIBBS & HILL, INC.

11 Penn Plaza
New York, New York 10001-2059
212 216-
Telex. 177199

A Dravo Company

B-1-5-14

June 7, 1988

Mr. Robert Kennedy
Manager of Technical Services
Kramer Environmental
Division of Kramer Industries
935 Allwood Road
Clifton, N.J. 07012

Re: NYSDEC Inactive Hazardous Waste Site Investigation
(Site No. 314074)

Dear Mr. Kennedy:

Gibbs & Hill is under contract with the New York State Department of Environmental Conservation, for the purpose of performing a Phase I Investigation at the Schatz Plant. A copy of our authorization is attached.

We hope you can provide us with the following information which will satisfy DEC comments made on the Phase I Investigation draft report.

1. The results of analytical data performed at Schatz Plant, including soil, groundwater and surface water analyses.

2. The clean-up process including the number of chemical and oil drums removed in accordance with EPA requirements and their final disposal destination.

3. All other information in your view seemed to be crucial for Phase I Investigation.

B-1-6-14

GIBBS & HILL, INC.

We are required to incorporate these additional data in the final report before the submission date of June 15, 1988.

We appreciate your prompt response in writing and should you have any questions or concerns, please contact me at (212) 216-6108.

Yours truly,

GIBBS & HILL, INC.

Aminullah Kazemi

Aminullah Kazemi
Environmental Engineer

AK:aaf
Attachment

cc: Lawrence J. Alden
N.Y. State Department of Environmental Conservation
Division of Hazardous Waste Remediation
50 Wolf Road
Albany, N.Y. 12233

B-1-7-14

Telephone Conversation Record

Date: 6/9/88

Time: 9:35

Call by: Aminullah Kazemi (Name) of Gibbs & Hill, Inc. (Company)

Answer by: Alison Silkworth (Name) of Dutchess County Environmental Management Facility (Company)
(914) 677-3488

Contract No: 5019-209 (Schatz Plant)

Subject discussed: Any information available in EMF File about the Schatz Plant

SUMMARY OF DISCUSSION, DECISIONS AND COMMITMENTS.

"No information is available about Schatz Plant in our office". She suggested to call NYSDEC Region III.

F-424, 10-68

B-1-8-14

Telephone Conversation Record

Date: 6/9/88

Time: 9:35 AM

Call by: Aminullah Kazemi (Name) of Gibbs & Hill, Inc. (Company)

Answer by: William Buskey (Name) of RCRA Inspector of NYSDEC Region III (Company)
(914) 255-5453

Contract No: 5019-209 (Schatz Plant)

Subject discussed: Information and analytical data available about Schatz Plant

SUMMARY OF DISCUSSION, DECISIONS AND COMMITMENTS.

Mr. William Buskey responded as follows:

- All oil and chemical drums were removed under the witness of RCRA inspector to his satisfaction.
- The manifest is available in central file in Albany.
- The plant was properly boarded up and provided with doors and locks. No access is available to the public.
- No split sampling has been performed at each individual pit. The new owner refused to do that because of the high cost associated with sampling process and its analysis.
- In early May of 1988, one of the pits was pumped out and cleaned appropriately to the satisfaction of RCRA inspector.
- No soil, groundwater, and surface water analysis were performed as yet. They will be done under separate program and jurisdiction in the future.

B-1-9-14

Telephone Conversation Record

Date: 6/10/88

Time: 10:30 AM

Call by: Aminullah Kazemi (Name) of Gibbs & Hill, Inc. (Company)

Answer by: Geen Sabo (Name) of Environmental Protection Agency (EPA) of New York (Company)
(212) 264-8356

Contract No: 5019-209 (Schatz Plant)

Subject discussed: Obtaining the EPA Identification Number of Schatz Plant

SUMMARY OF DISCUSSION, DECISIONS AND COMMITMENTS.

Ms. Sabo responded as follows:

The EPA Identification of Schatz Plant is NYD 982531246.

F-424, 10-68

GIBBS & HILL, INC.

11 Penn Plaza
New York, New York 10001-2059
212 216-6108
Telex 177199

A Dravo Company

B-1-10-14

June 20, 1988

Mr. John Ozard
Lands & Waters
Wildlife Resources Center
Delmar, N.Y. 12054

Re: NYSDEC Inactive Hazardous Waste Site Investigation
(Site No. 314074)

Dear Mr. Ozard:

Gibbs & Hill is under contract with the New York State Department of Environmental Conservation, for the purpose of performing a Phase I Investigation at the Schatz Plant located in Dutchess County, 70 Fairview Avenue, Poughkeepsie, N.Y. 12601.

Attached please find a 8 1/2"x11" copy of U.S.G.S Poughkeepsie quadrangle which indicates the location of the Schatz Plant. A copy of our authorization is also enclosed.

Please provide us the following information:

1. Distance to critical habitat of an endangered species on national wildlife refuge if one mile or less of the site.

2. Distance to 5-acre (minimum) fresh-water wetland, if one mile or less of the site.

We appreciate your prompt response by phone or in writing. Should you have any questions or concerns, please contact me at (212) 216-6108.

Yours truly,

GIBBS & HILL, INC.

Aminullah Kazemi

Aminullah Kazemi
Environmental Engineer

AK:aaf
Attachment

Dravo

B-1-11-14

Telephone Conversation Record

Date: 6/24/88

Time: 4:35 PM

Call by: Aminullah Kazemi (Name) of Gibbs & Hill, Inc. (Company)

Answer by: Robert Kennedy (Name) of Kramer Environmental (Company)
(201) 471-9500

Contract No: 5019-209 (Schatz Plant)

Subject discussed: Soil, surface water and ground water analyses

SUMMARY OF DISCUSSION, DECISIONS AND COMMITMENTS.

Mr. Kennedy responded in reference to Gibbs & Hill, Inc. letter of June 7, 1988 sent to Kramer Environmental as follows:

- No soil, surface and ground water analyses were performed at the Schatz Plant.
- No cleanup of oil and chemical pits was performed by Kramer Environmental.
- Mr. Kennedy will send the manifests of chemical drums removal.

F-424, 10-68

B-1-12-14

Telephone Conversation Record

Date: 6/27/88

Time: 11:05 AM

Call by: Aminullah Kazemi (Name) of Gibbs & Hill, Inc. (Company)

Answer by: William Buskey (Name) of RCRA Inspector of NYSDEC Region III (Company)

(914) 255-5453

Contract No: 5019-209 (Schatz Plant)

Subject discussed: Obtaining additional information about Schatz Plant

---

SUMMARY OF DISCUSSION, DECISIONS AND COMMITMENTS.

Mr. Buskey responded as follows in reference to our inquiries:

- All chemicals and oil drums were removed.
- The pits have no linings. They are made of concrete with various configuration.
- No size and dimension of the pits are available.
- No cracks were noticed in one of the pits pumped out during the early May of 1988. However, due to relatively porous nature of concrete, there is a possibility of oil or chemical leakage into the underlaying soil and ground water.
- No sprinkler system is available at the abandoned Schatz Plant in case of a fire eruption.

F-424. 10-68

Telephone Conversation Record

B-1-13-14 Date 6/30/88

Time 11:45

Call by: Aminullah Kazemi (Name) of Gibbs & Hill, Inc. (Company)

Answer by: Norman Benson (Name) of Soil & Water Conservation District (Company)
(914) 677-3194

Contract No: 5019-209 (Schatz Plant)

Subject discussed: Land irrigated by supply wells or surface water within 3-mile radius of Schatz Plant

SUMMARY OF DISCUSSION, DECISIONS AND COMMITMENTS.

Mr. Benson responded that there is no farmland irrigated by ground water or surface water within 3-mile radius of the Schatz Plant. Most of the surface waters within the area are used for recreation.

F-424, 10-68

B-1-14-14

Telephone Conversation Record

Date: 6/30/88

Time: 11:45 AM

Call by: Aminullah Kazemi (Name) of Gibbs & Hill, Inc. (Company)

Answer by: Edward Fahrenkopf (Name) of NYS Department of Health (518) 458-6310 (Company)

Contract No: 5019-209 (Schatz Plant)

Subject discussed: Depths and surface dimensions of fourteen (14) pits at the Schatz Plant

SUMMARY OF DISCUSSION, DECISIONS AND COMMITMENTS.

The dimensions of the pits are as follows:

- Depths of the pits are not known and the following pits are located in building No. 1

Length	Width
20'	10'
18'	10'
40'	20'
10'	8'
20'	8'
12'	8'
20'	10'
22'	10'
4'	2'

Pit 20 feet by 21 feet with 5,000 gallons chemical is located in another building.
Average depth is assumed to be 4 feet

F-424, 10-68

APPENDIX C

REF. C-1-1-2

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SOLID AND HAZARDOUS WASTE
INACTIVE HAZARDOUS WASTE DISPOSAL REPORT

CLASSIFICATION CODE: 2 REGION: 3 SITE CODE: 314074

EPA ID: NYD98253124

NAME OF SITE: Schatz Plant
STREET ADDRESS 70 Fairview Ave.
TOWN/CITY: Poughkeepsie
COUNTY: Dutchess
ZIP: 12601

SITE TYPE: Open Dump___ Structure_X Lagoon___ Landfill___ Treatment Pond___

ESTIMATED SIZE: Acres

SITE OWNER/OPERATOR INFORMATION:
CURRENT OWNER NAME....: 1929 Associates
CURRENT OWNER ADDRESS.: 319 Main Mall, Poughkeepsie, NY 12602
OWNER(S) DURING USE...: Schatz Federal Bearing Company
OPERATOR DURING USE...: Not applicable
OPERATOR ADDRESS.....:
PERIOD ASSOCIATED WITH HAZARDOUS WASTE: From 1910 To 1981

SITE DESCRIPTION:

Part of this property is occupied by a Rehabilitation Center and Acme Corporation. Other structures were sold to Pleasant Valley Finishing Company. There were more than 100 unmarked and unlabeled drums on the property. The owner tested all the drums and pumped out 60-80 drums containing oil and water. The left-over drums were found to contain detergents, alkaloids, fungicides, and chemical solvents. There are several large pits (below floor grade). Some of the pits contain rust colored liquid with an oil sheen, and one of the pits has transformers in it. 14 drums of hazardous waste were removed from the site in Nov. of 1986. NYSDEC Region III in response to Gibbs & Hill recent inquiries about Schatz Plant revealed that all chemical and oil drums were removed by the owner under the supervision of RCRA Inspector and the content of one of the pits was also pumped out. They also informed that the plant was provided with wooden enclosure all around secured with doors and locks. A Remedial Investigation and Feasibility Study (RI/FS) is recommended.

RECOMMEND:
HAZARDOUS WASTE DISPOSED: Confirmed____ Suspected__X__

TYPE	QUANTITY (units)
Detergents, Alkaloids, Fungicides, Chemical Solvents	Unknown

ANALYTICAL DATA AVAILABLE:
Air___ Surface Water___ Groundwater___ Sediment___ None X

CONTRAVENTION OF STANDARDS: Not determined
Groundwater___ Drinking Water___ Surface Water___ Air___

LEGAL ACTION: None

TYPE..: State___ Federal___
STATUS: Progress___ Order Signed___

REMEDIAL ACTION: All drums full of oil and chemicals were removed. The plant was securely boarded up.
Proposed___ Under design___ In Progress___ Completed___
NATURE OF ACTION: None

GEOTECHNICAL INFORMATION:
SOIL TYPE: Sand and gravel
GROUNDWATER DEPTH: 26 feet

ASSESSMENT OF ENVIRONMENTAL PROBLEMS:

ASSESSMENT OF HEALTH PROBLEMS:

Medium	Contaminants Available	Migration Potential	Potentially Exposed Population	Need for Investigation
Air	Likely	Likely	-	Yes
Surface Soil	Likely	Very Likely	Yes	Yes
Groundwater	Possible	Possible	Yes	Yes
Surface Water				

Health Department Site Inspection Date"

MUNICIPAL WASTE ID:

ICS ID:

SPDES iD: