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SUMMARY OF EXISTING DATA IN THE VICINITY OF THE INDUSTRIAL LATEX SITE, WALLINGTON BOROUGH, NEW JERSEY

Prepared by

U.S. Geological Survey
New Jersey District
810 Bear Tavern Road
West Trenton, NJ 08628
May, 1986

Questions regarding the material in the summary should be addressed to Joseph Hochreiter, Project Chief, at (609) 771-3900.

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INTRODUCTION

The location of the former Industrial Latex Company is at 350 Mount Pleasent Avenue, Borough of Wallington, Bergen County, New Jersey. Municipalities adjacent to Wallington include Wood-Ridge, Garfield, Lodi, Carlstadt, and East Rutherford. Latex adhesives were manufactured at this 10-acre facility from 1953 to 1982.

Figure 1 shows the Industrial Latex facility. During its period of operation, Industrial Latex received its water from Wallington's public supply system. The facility was not, however, connected to the public sewer system (Robert J. Siery, Superintendent of Public Works, Borough of Wallington, oral comm., 1986). Its wastewater was discharged to a septic tank located near its northeastern property boundary. Additionally, floor drains appear to discharge to the soil between buildings 1 and 2 and the railroad tracks (Kang Kong, USEPA, oral comm., 1986).

Under the direction of USEPA, the site is now being cleaned up and cleared of potential surface pollution sources. Several hundred fifty-five gallon drums containing process waste materials, stored above ground on the north and west sides of the main building, have been sampled and moved into building 1. They will eventually be transported off the site for appropriate disposal. An unknown number of fifty-five gallon drums are believed to be buried in two areas along the Conrail railroad tracks (formerly the Erie-Lackawanna railroad). Some of these drums at the surface have been damaged and spillage onto the soil has occurred. Interviews conducted by USEPA of former plant employees revealed that batches of product that did not meet specifications were often dumped on the ground (John Witkowski, USEPA, oral comm., 1986). Underground storage tanks on the site also contain toxic materials, and they are being drained and tested to determine if they have discharged contaminants to the subsurface. Two above-ground storage tanks that contain fuel oil are being drained and the contents are being transported off-site (John Witkowski, USEPA, oral comm., 1986).

A geohydrologic investigation is planned and remedial actions will be taken after the above-ground clean up is complete. The U.S. Geological Survey has been requested to conduct the geohydrologic study (William Librizzi, USEPA, written comm., 1986). Prior to submitting a work plan for this study, USEPA requested that the U.S. Geological Survey prepare a brief summary of existing information on Industrial Latex and the surrounding area. This summary presents information with regard to the area's:

1. land use
2. topography and drainage
3. geology
4. hydrology

5. ground-water quality
6. soil quality and
7. existing potable water supplies.

The data summary is intended to serve as a first step to the development of a work plan to characterize and determine the extent of groundwater contamination beneath the Industrial Latex facility.

LAND USE

Land use within a 4000 foot radius of the Industrial Latex facility is both residential and industrial. Industries to the northeast of the site include the Curtiss-Wright Corporation (a defense contractor since the early 1940's), Farmland Dairies, and Johnson Machinery. A large paved area just to the north of Industrial Latex site is used for the storage of tractor trailers. Industries located to the southeast include Hackensack Steel Corporation, Ganes Chemical, David Weber Oil Company, and Tec Metals Incorporated. Residential areas are located within a few hundred feet south, west, and east of the Industrial Latex site.

TOPOGRAPHY AND DRAINAGE

Wallington Borough is located in the Piedmont Lowland physiographic province (Wolfe, 1977). The Piedmont Lowland terrain in general consists of a gently rolling surface that varies in altitude from one to three hundred feet. The Lowland is underlain by igneous and sedimentry rocks of Jurassic and Triassic age, respectively. The bedrock surface is highly irregular, as it was formed by preglacial and interglacial streams and was modified further by glacial scour (Carswell, 1976). The more resistant beds of sandstone and conglomerate form low, elongated, northward-trending hills.

The site of the Industrial Latex facility is located on the eastern side of one of these northward-trending hills on the Wallington-Wood-Ridge border (See fig. 2). The hill is approximately 120 feet in altitude. To the east, another hill rises to an approximate altitude of 200 feet. The intervening valley has an altitude of 50-70 feet.

The site of the facility is in the Passaic River basin near the boundary with the Hackensack River basin. Locally, drainage is into the Saddle River (fig. 2).

The Boroughs of Wallington and Wood-Ridge currently separate their storm drainage from their municipal sewage. Wallington does not have any storm drainage lines on or near the Industrial Latex site (Robert J. Siery, Superintendent of Public Works, Borough of Wallington, oral comm., 1986). Wood-Ridge has a storm drain along the railroad tracks on the Wallington-Wood-Ridge border (Ellsworth Klotzbier, Superintendent of Public Works, Borough of Wood-Ridge, oral comm., 1986) The drain follows a path of what used to be an open ditch in the Borough's ten-foot wide easement located east of the Conrail railroad tracks. It directs runoff north, under the Curtiss-Wright plant and into the Saddle River (Joseph Neglia, Borough of Wood-Ridge engineer, oral comm., 1986). This route appears to be coincident with the location of a historic stream identified on a 1902 U.S. Geological Survey topographic map and shown on figure 2 (Merril and others, 1902). The storm drain is constructed of eight-feet long sections that are five feet in diameter. These interconnected sections are not sealed at the joints, so water may move into or out of the pipe. Exact information on the location and condition of this drainage pipe is not available.

GEOLOGY

The rocks of Triassic age that underlie the Lowlands are part of a downfaulted basin known as the Newark Basin. The basin was formed during the Late Triassic Epoch when downfautling produced a series of northeastward-trending basins in the Piedmont Plateau from North Carolina to Nova Scotia (Carswell, 1976). The rocks of the Newark Basin has been divided into several formations on the basis of distinctive lithology; the unit known as the Brunswick Formation underlies the Industrial Latex site.

Surficial deposits of Quaternary age cover most of the bedrock near the Industrial Latex site. These deposits are largely the result of several major advances of the continental glaciers across the area during the Pleistocene Epoch.

Brunswick Formation

The Brunswick Formation consists of thin-bedded shales, mudstones, and sandstones which range in color from reddish-brown to gray. The reddish-brown color originates from reworked hematite which comprises 5 to 10 percent of the formation (Nemickas, 1976). Other minerals include quartz, illite, muscovite, feldspar, and small amounts of calcite and gypsum. Rock exposures north of the site along Interstate 80 show interbedded red feldspathic sandstone and siltstone with small-to-large-scale cross-bedding, abundant bioturbation structures and some beds of caliche (Markewicz and Dalton, 1980).

The thickness of the Brunswick Formation varies from 6000 to 8000 feet (Nemickas, 1976). According to a New Jersey Department of Environmental Protection Geologic Overlay (no. 26), the Industrial Latex site is located near the center of the nine mile-wide band where the Brunswick crops out without faults or other formations evident. Figure 3 shows the elevation of bedrock near the site.

The beds strike north to northeast and dip west to northwest at 10 degrees. A prominent set of joints parallel the strike of the beds; a less prominent set parallels the direction of dip of the beds. Both sets of joints have a vertical dip (Carswell and Rooney, 1976).

On May 6, 1986, geophysical logs were run on a well adjacent to Spring Street, just south of the site (fig. 3). The well was located on a 1938 Works Projects Administration (WPA) map on file with the Borough of Wallington. The WPA well was found to be 892 feet deep with casing down to only 32 feet and bedrock beginning at a depth of approximately 25-32 feet. The caliper log showed major fracture zones at depths of 36-40 and 53-66 feet with numerous small fractures down the rest of the well (Allan Brown, USGS, written comm., 1986).

Quaternary Deposits

In the Piedmont Lowlands, surficial deposits are generally thick in the valleys and relatively thin or absent on the ridges. They are the result of several major advances of continental glaciers across the area. The movement of glacial ice generally corresponds to the direction of strike of the Brunswick Formation (Merril and others, 1902).

Figure 4 shows the areal distribution of the surficial deposits around the Industrial Latex site (Salisbury, 1902). The deposits are subdivided on the basis of whether they are stratified or unstratified. The unstratified deposits (till) are not sorted, contain rock fragments from clay size to boulders, and were deposited directly from the glacier (Carswell, 1976). Generally, till thickness averages 25 feet in the county. Assuming that the well casing does not extend more than 10 feet below the bedrock surface, the thickness of the sediments at the WPA well is probably 25-30 feet (Allan Brown, USGS, oral comm., 1986).

Stratified deposits are layered and are moderately to well sorted as a consequence of their having been transported in meltwater and deposited in streams or lakes. At a Wallington public supply well west of the site on Kossuth Street (location shown on fig. 5), stratified drift is 118 feet thick (New Jersey Department of Environmental Protection well permit record, 1981).

Unpublished soil maps obtained from the U.S. Department of Agriculture, Soil Conservation Service, support the delineation of a till zone on the west side of the railroad tracks near Industrial Latex and a stratified drift deposit on the east side of the tracks (fig. 4). The till, placed in the Boonton soil series, is characterized as well drained, with a very firm and brittle fragipan at the 30-60 inch depth. The infiltration rate of the fragipan is less than two inches per hour. It is possible that the fragipan would reduce infiltration and ground-water recharge in places where it is still intact.

The Dunellen soil series corresponds to the location of stratified drift. This well-drained soil has a loamy sand substratum. The infiltration rate at a depth of 30-60 inches is greater than six inches per hour, facilitating infiltration and recharge to the ground-water system.

HYDROGEOLOGY

Ground water is present in both the consolidated and unconsolidated material in Bergen County. Both the occurrence and availability of ground water vary considerably according to the geologic materials present in the area.

Brunswick Formation

Ground water in the Brunswick Formation occurs in a network of interconnected openings formed along joints and fractures. The intervening unfractured rock, whether it is sandstone or shale, has negligible capacity to store or transmit ground water.

Openings which contain ground water decrease in size and number with increasing depth below the land surface. The zone of most abundant and largest water-bearing joints and fractures occurs generally within 200 feet of the land surface in lowland areas of major streams and within 400 to 500 feet of land surface in upland areas (Carswell, 1976) The median yield of industrial and public supply wells tapping the Brunswick in Bergen County is 100 gpm and the median specific capacity is 1.5 gpm per foot of drawdown (Carswell, 1976).

Since most fractures are planar and developed in a direction parallel to strike of the Brunswick, directional, rather than isotropic flow through the aquifer occurs (Spayd, 1985). As some beds within the Brunswick Formation contain more openings than others, the ground-water system consists of a series of tabular water-bearing zones several tens of feet thick and dipping to the northwest at 10 degrees. The water-bearing fractures in each tabular water-bearing zone are more or less continuous, but hydraulic connection between individual tabular water bearing zones is poor (Carswell and Rooney, 1976). These tabular water bearing zones generally extend downdip for a few hundred feet and are continuous along strike for thousands of feet.

Most wells in the Brunswick Formation penetrate more than one tabular water-bearing zone. Internal flow observed in these wells under nonpumping conditions results from each tabular water-bearing zone having different hydraulic gradients. The observed water level in such a well is characteristically a composite head and does not indicate the hydraulic head of any single water-producing zone (Carswell and Rooney, 1976). Flow through the borehole therefore is a short-circuiting of the natural flow system. One result of this short-circuiting can be a change in the rate of recharge. In an area where downward flow exists in a number of well, a substantial water-table decline may result (Carswell, 1976).

Limited information on deep wells is available north of the Industrial Latex facility. Two Borough of Wallington municipal wells that are approximately 400 feet deep are located south of the Industrial Latex site (Dul and WPA wells as shown on fig. 5). They are only cased in the top 32 feet. It is not known what effect they may have had on the ground-water flow system. Princeton Aqua Science (1985) has conducted a study in accordance with the Environmental Cleanup Responsibility Act (ECRA) at the Curtiss-Wright facility. A total of 14 wells were installed, six of which are bedrock wells. Based on measurements made in these rock monitoring wells, flow in the Brunswick is moving in a westerly direction (Princeton Aqua Science, 1985).

Quaternary Deposits

One of the chief hydrologic characteristics of Quaternary deposits is to absorb precipation and subsequently transmit water downward to the underlying rock aquifer or laterally to streams. Where the saturated thickness of these deposits and their permeability are sufficiently large, they serve as aquifers.

Unstratified deposits like till are not important sources of ground water in Bergen County. Infiltrating water will generally move laterally on top of the fragipan or on top of bedrock at the till-bedrock contact in upland areas where slopes are steep.

Unlike till, stratified drift deposits are important sources of ground water for public, domestic, and industrial supply. Thick drift deposits along the Passaic and Hackensack Rivers provide an abundant source of water, with reported yields ranging from 4 to 920 gpm (Carswell and Rooney, 1976). The thickness of the stratified drift deposits adjacent to Industrial Latex site is not known. The storm drainage system in Wood-Ridge may reduce recharge to these deposits by funneling recharge into the pipe network and subsequently into the Saddle River. At the Curtiss-Wright facility, Princeton Aqua Science (1985) determined ground-water flow in the stratified drift to be in an west-northwesterly direction.

PROCESS DESCRIPTION AND WASTEWATER CHARACTERIZATION

Latex is a water emulsion of either synthetic or natural rubber where the elastomer is the disperse phase and water is the continuous phase (Wake, 1969). Synthetic latexes are typically based on butadiene/styrene copolymers, and specialized latexes include neoprene (polychloroprene and butadiene/acrylonitrile copolymers) (Madge, 1962). Latexes are used as coatings (such as paint), foam rubber, and adhesives. As an adhesive, latex possesses the useful property of being adherent to nothing but itself when dry, and as such, has been commonly used in products such as the self-seal envelope (Wake, 1969).

The adhesive strength of latexes are commonly improved by a variety of industrial processes, including the addition of resins, involatile oils or softeners, or emulsified solvents. A suggested solvent emulsion preparation adds oleic acid to the solvent which is then stirred into an ammoniacal solution of casein. Methanol is typically added to destabilize the latex and thereby assist the mixing of the solvent and rubber particles in the water emulsion (Wake, 1969). Other synthetic materials are added to the latex formulation as thickeners, and these include methylcellulose, polyvinylacetate, or formaldehyde resins (Wake, 1969).

To retard microbial decomposition of latexes, Madge (1962) lists four main types of preservatives commonly used. They consist of 0.2 percent ammonia in combination with one of the following:

1. sodium or ammonium pentachlorophenate
2. zinc dialkyl dithiocarbamate
3. sodium ethylene diamine tetracetate
4. ammonium borate

Formaldehyde can also be added to latex prior to ammoniation to serve as a preservative (Madge, 1962).

Although little information was found with regard to wastewaters specifically generated from the latex adhesive manufacturing process, descriptions of wastewaters resulting from the manufacture of latex rubbers and paint have been reported to contain a variety of anthropogenic compounds and trace elements. Table 1 itemizes the processes employed in the manufacture of latex rubber and briefly describes the nature and source of generated wastewaters. Organic compounds that have been detected in wastewaters from latex rubber production are phenol (31 ppb), pentachlorophenol (31 ppb), bis(2-ethylhexyl)phthalate (100 ppb), and ethylbenzene (1,500 ppb) (USEPA, 1980). Trace metals such as chromium are also commonly present due to their use as corrosion inhibitors in cooling waters. Table 2 documents the median concentrations of contaminants identified in the untreated wastewaters of paint plants that produce both water-base (latex) and oil-base paints. Organic compounds that have been identified with wastewaters from the manufacture of latex adhesives include trichloroethane, trichlorethylene, acetone, hexane, methyl ethyl ketone, naphthol, and toluene (Christopher Gould, USEPA, oral comm., 1986; Verschueren, 1983).

In order to safely dispose of the process waste materials from Industrial Latex, chemical analyses are currently being performed on the material found in the drums and the above- and below-ground tanks. Preliminary results have detected significant concentrations of the following toxic chemicals (Roy F. Weston, Inc., written comm., 1986). Values in parentheses indicate the chemical's maximum detected concentration in parts-per-million:

toluene (61,000)	chloroethane (8.0)
phenols (6.19)	cyanide (1.1)
xylene (10,000)	lead (0.11)
ethylbenzene (2,200)	benzene (1,600)

Since many drums were ruptured and leaking their contents onto the soil at Industrial Latex, some or all of the above-mentioned chemicals may be contaminating soil and/or groundwater at the site.

GROUND-WATER QUALITY

Ground-water quality data has been obtained for a well adjacent to the Industrial Latex site, the public supply wells in the Borough of Wallington, monitoring wells at the Curtiss-Wright Corporation in Wood-Ridge, and supply wells at Farmland Dairies in the Borough of Wallington.

A group of four wells were installed several hundred feet just to the south of the Industrial Latex property boundary by the Borough of Wallington (Robert J. Siery, Superintendent of Public Works, Borough of Wallington, written comm., 1986). Although three of the wells have not been located, a grab sample was obtained from the fourth well (shown as the WPA well on Fig. 5) and analyzed for organic contaminants. The results of the analysis are presented below (Robert Pfeiffer, New Jersey Department of Environmental Protection, oral comm., 1986):

Compound	Concentration, ppb
Bromodichloromethane	1.2
1,1-dichloromethane	1.03
1,2-dichloropropane	1.19
tetrachloroethylene	7.2
1,1,1-trichloroethane	1.66
1,1,2-trichloroethane	0.86
trichloroethylene	6.02
chloroform	3.88
Cl	67 ppm
TOC	3.6 ppm
COD	<5 ppm

The water sample was taken with a bailer from a depth of approximately 25 feet below the water level in the well. The well was not pumped prior to sampling. Despite the non-representative sampling technique used, the concentrations of volatile organic contaminants (VOCs) are relatively low, with total VOCs being less than 30 ppb.

Water-quality data for the five public supply wells in the Borough of Wallington (Main, Lester, Dul, #5, and #8) indicate much higher levels of contamination. Table 3 summarizes the results of the most recent (January, 1986) analyses of water samples taken from these wells. The location of the wells is presented in fig. 5, with the exception of the Lester well, which is located about 1,500 feet northwest of wells #5 and #8. The Main Avenue well has been closed since 1976. Well #5 was closed last year due to contamination. As a result of the most recent water-quality analysis, the Lester Street well, the Dul well, and well #8 have also been closed. At present, the Borough of Wallington is buying 100 percent of its water from the Passaic Valley Water Authority (Robert J. Siery, Superintendent of Public Works, Borough of Wallinton, oral comm., May, 1986).

Water-quality data was also available from observation wells located on the property of Curtiss-Wright. In compliance with state regulations that prohibit the sale of commercial property without accounting for environmental impact, the Curtiss-Wright Corporation has financed an assessment of ground-water quality in both the unconsolidated and consolidated material underlying their property (William Altoff, New Jersey Department of Environmental Protection, oral comm., 1986).

Ground water from both the stratified drift and bedrock is grossly contaminated with VOCs. Water samples obtained from wells screened in the stratified drift contain total VOC concentrations ranging from 26 to 42,872 ppb, total petroleum hydrocarbon concentrations ranging from 3 to 18 ppm, and unspecified concentrations of phthalate esters. Water samples taken from the bedrock aquifer beneath the site contain total VOC concentrations ranging from 77 to 108,365 ppb. Total petroleum hydrocarbon residues in the bedrock aquifer are even higher, with concentrations ranging from 4 to 19 ppm (Princeton Aqua Science, 1985).

Farmland Dairies

Water-quality analyses of samples taken from two wells located on the property owned by Farmland Dairies also revealed contamination by VOCs. Total VOC concentrations for the two wells are 213 ppb and 211 ppb. For both wells, the principal contaminant is 1,2-dichloroethene, with concentrations of 150 and 130 ppb. These water-quality data were determined from samples taken in June of 1984 (New Jersey Department of Environmental Protection, written comm., 1984). More recent water-quality analyses of the Farmland Dairy wells could not be located.

The existing water-quality data summarized above indicates that ground water in both the unconsolidated and consolidated subsurface materials in areas adjacent to the Industrial Latex site are highly contaminated with volatile organic contaminants, petroleum hydrocarbons, and phthalate esters.

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SOIL QUALITY

Only sparse data was available with regard to soil contamination, and almost all of the data pertains to the samples taken from the Curtiss-Wright facility.

As part of the assessment performed by Curtiss-Wright Corporation, soil samples were collected for analysis from a variety of locations and depths. All soil samples were highly contaminated with petroleum hydrocarbons (87 to 110,000 ppm) and lead (120 to 2,400 ppm), and concentrations typically decreased with depth. Significant soil residues of mercury, copper, zinc, and cadmium were also detected.

At the Industrial Latex facility, only one soil sample has been analyzed. The sample was taken from the drainage ditch adjacent to the railroad tracks (see fig. 1) and analyzed for chlorinated insecticides and polychlorinated biphenyls. No insecticides were detected in the sample, but the concentration of total polychlorinated biphenyls was 57 ppm.

PROBLEM STATEMENT

Available evidence indicates that improper disposal of process chemicals at the former Industrial Latex facility has adversely impacted the area's soil and ground-water quality. To assess the extent of environmental contamination, the localized hydrogeology and soil and ground-water quality must be investigated.

As part of the characterization of the hydrogeology in the vicinity of the Industrial Latex site, the direction and rate of ground-water flow in the glacial sediments must be determined and the hydraulic connection between the glacial sediments and the bedrock formation should be investigated. The type of sediments above the bedrock must be characterized. Finally, the direction and rate of ground-water flow in the bedrock aquifer must be determined.

Once the hydrogeology underlying the facility is understood, a comprehensive sampling and analysis of ground water can attempt to determine background (upgradient) and downgradient water quality in both glacial sediments and bedrock flow systems. Soil samples taken at various depths will indicate the extent to which low solubility contaminants may be leaching to shallow ground water. Based on this information, additional sampling may result in the determination of the aqueous plume(s) of contamination. However, due to the numerous industries that may be discharging chemicals to the ground water in the vicinity of the Industrial Latex site and the generally poor water quality found in the Borough of Wallington's public supply wells, it may be difficult to identify the origins of ground-water contamination detected off-site from Industrial Latex site. Wells around the perimeter of the site in both the shallow ground system (glacial sediments) and bedrock may be required.

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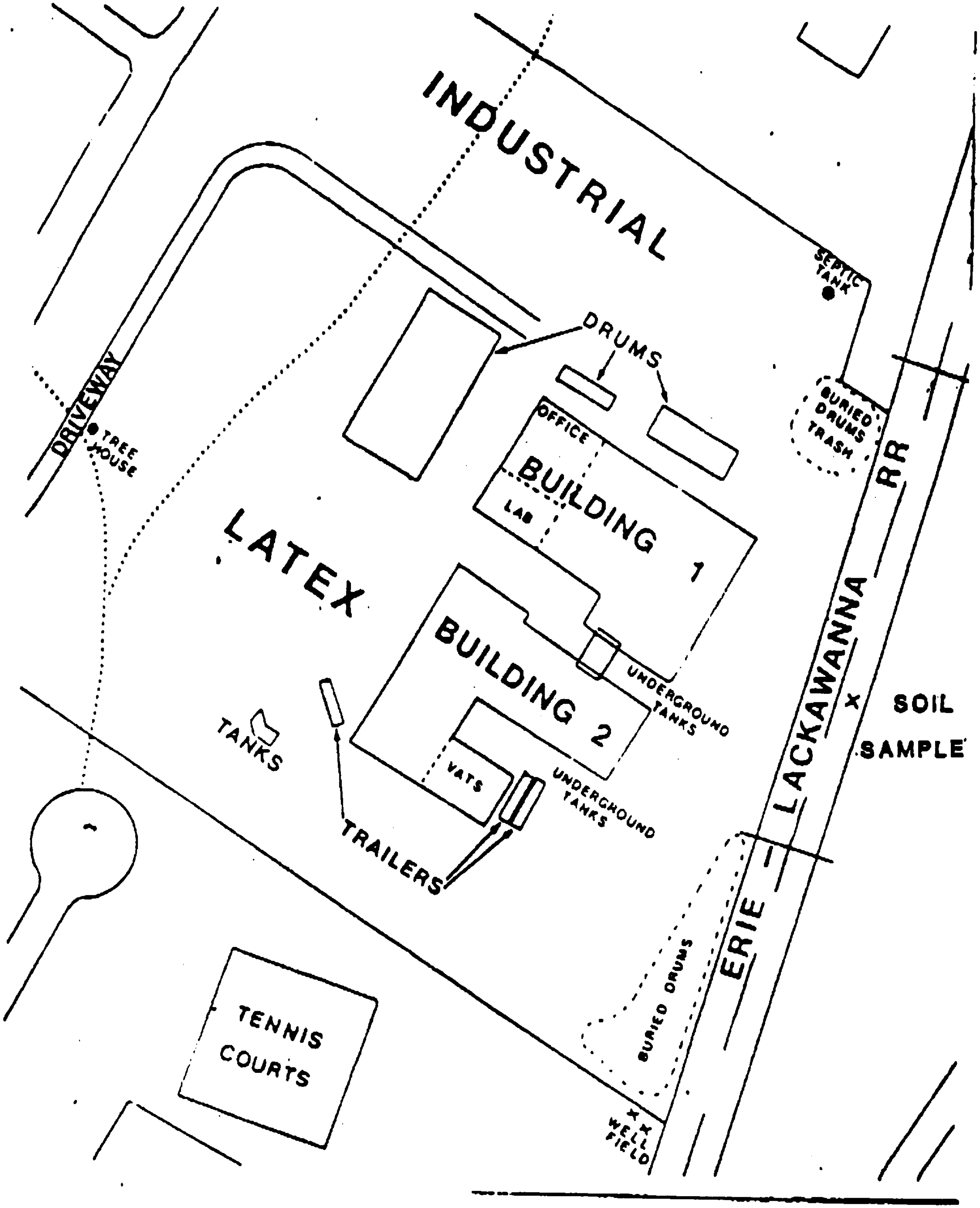
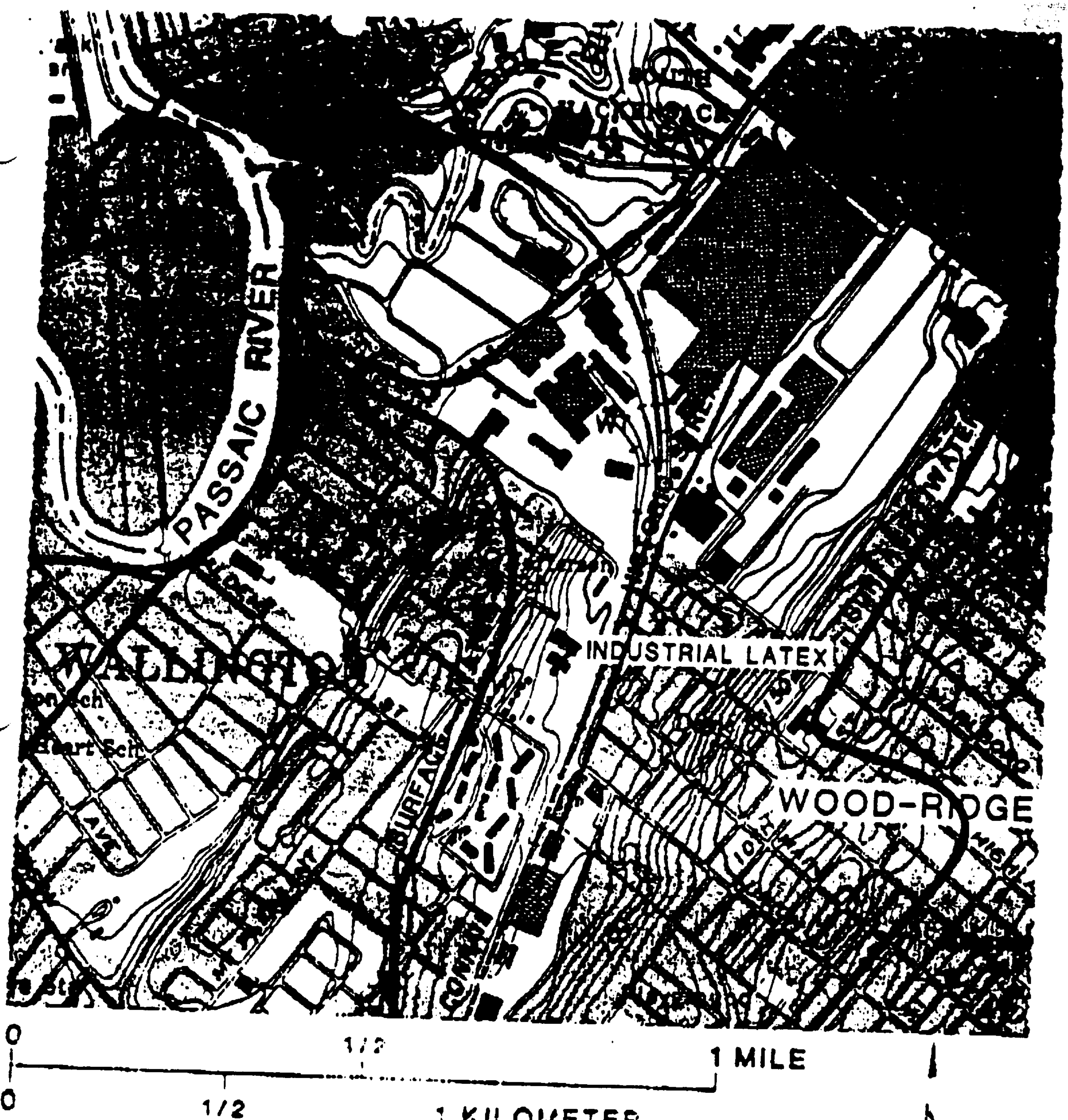


Figure 1.--Industrial Latex site



contour interval 10 feet

Base from U.S. Geological Survey 1:24000 topographic quadrangle

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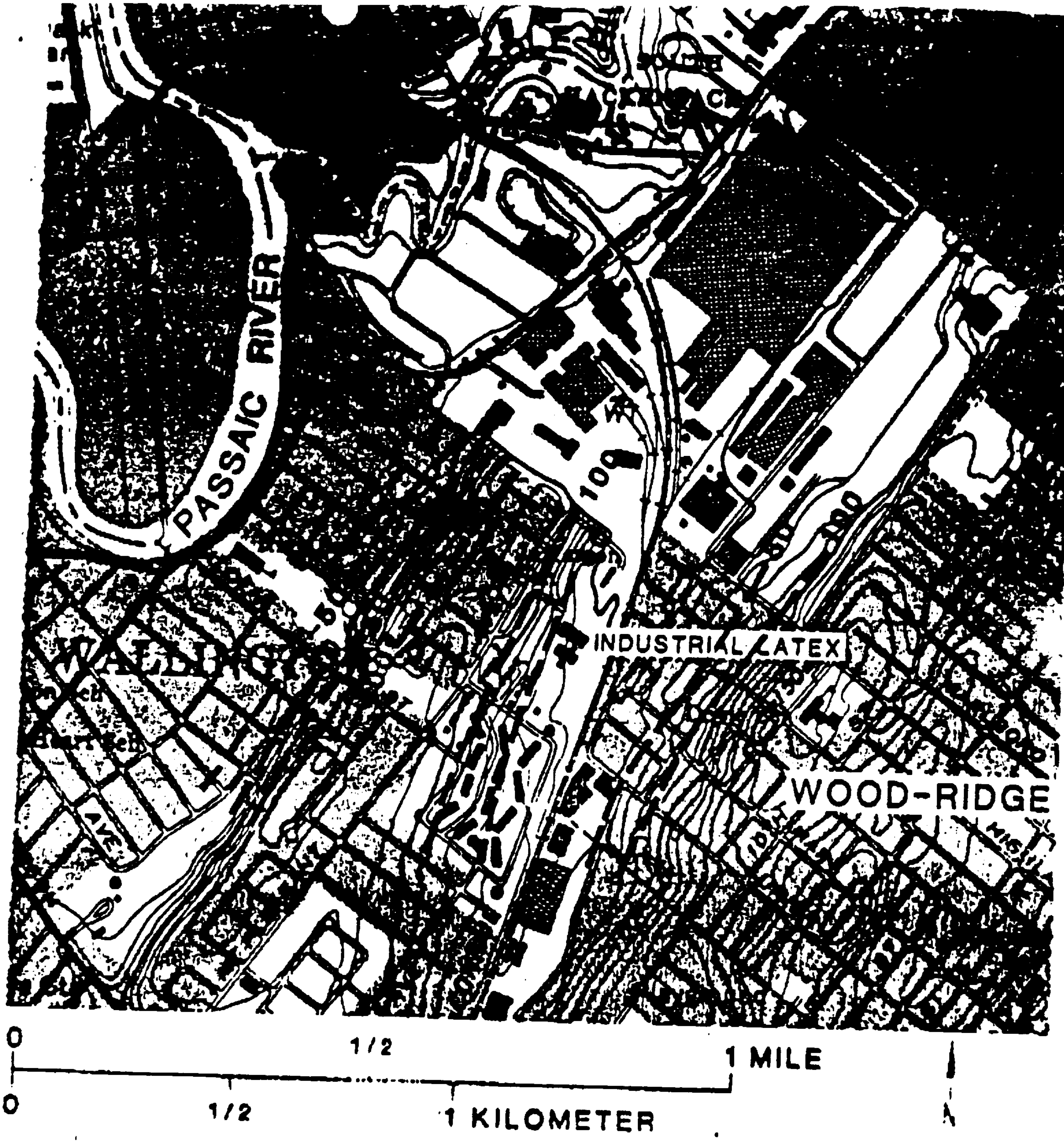
Figure 2.—Map of historic drainage and surface water divides.

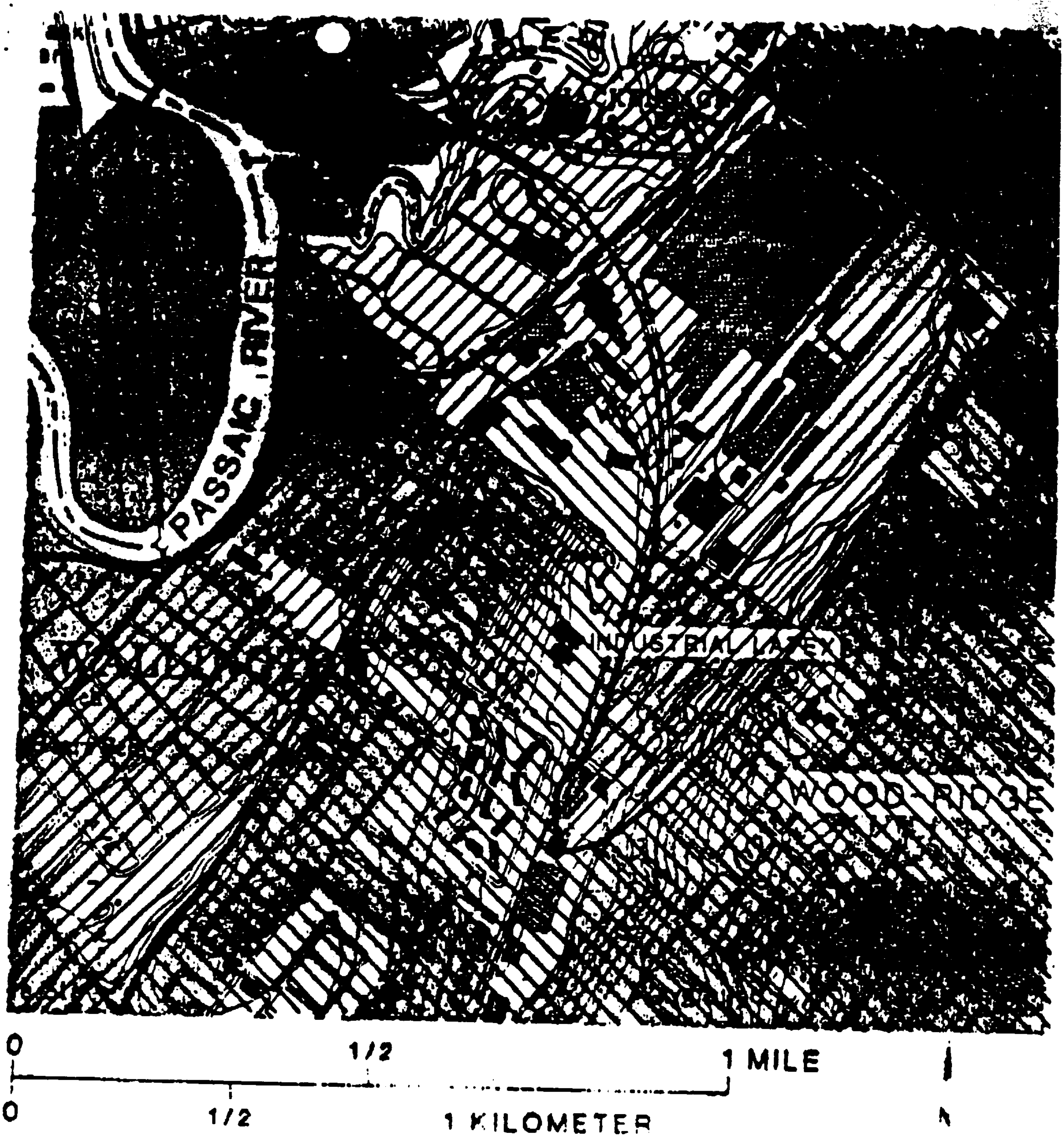


EXPLANATION

• WELL USED TO DETERMINE BEDROCK ALTITUDE

— 50 — APPROXIMATE ALTITUDE OF BEDROCK

Figure 3.--Generalized bedrock surface map.

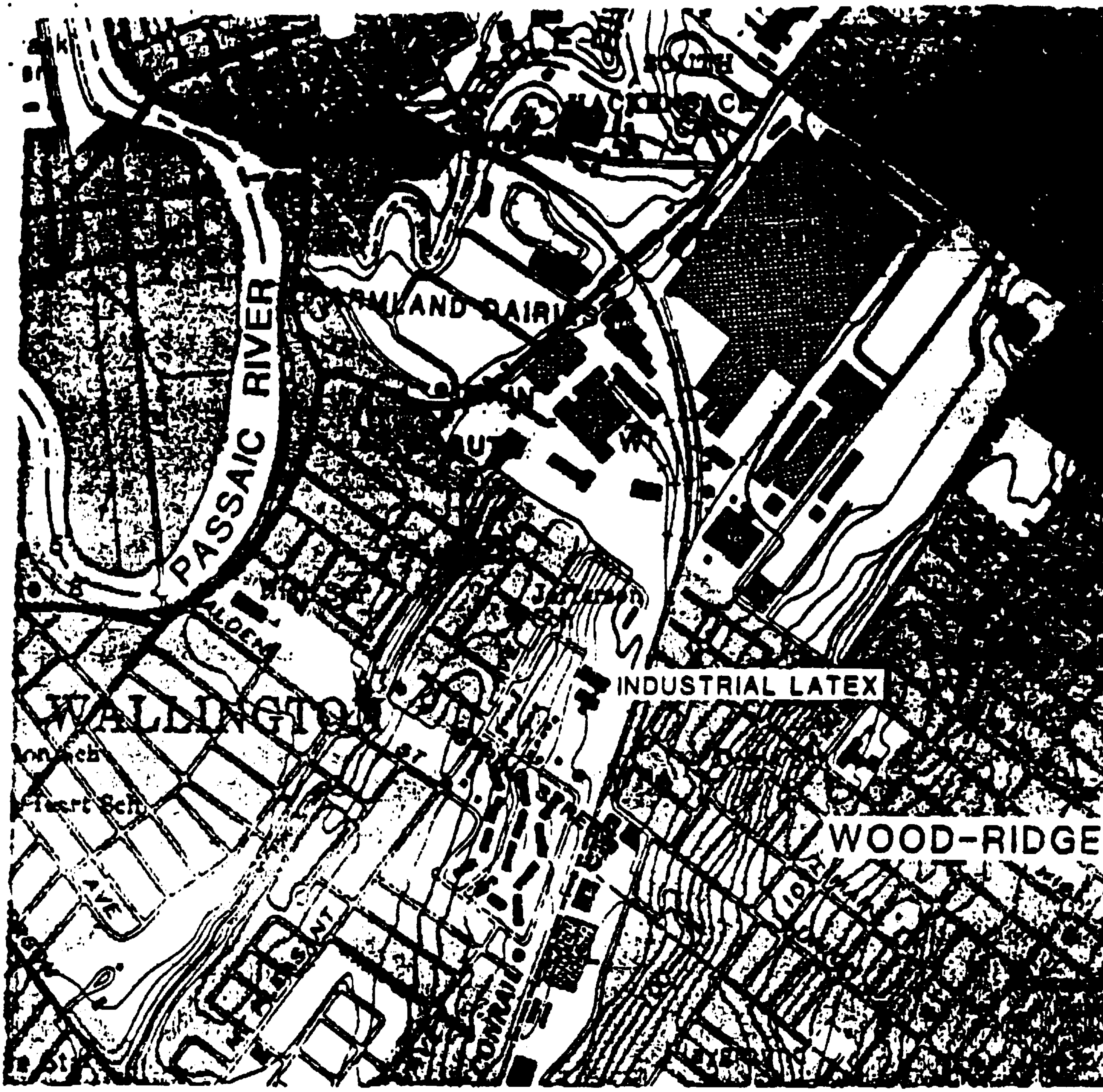


EXPLANATION

TILL

STRATIFIED DRIFT

Figure 4.--Generalized surficial geologic map.



0 1/2 1 MILE

0 1/2 1 KILOMETER

EXPLANATION

• WALLINGTON BOROUGH WELL

Figure 5.--Location of major industries and selected wells.

Table 1. Sources and nature of wastewaters generated from individual processes during the manufacture of latex rubbers (U.S. EPA, 1980).

Processing unit	Source	Nature of wastewater contaminant
Caustic soda scrubber	Spent caustic solution	High pH, alkalinity, and color. Extremely low average flow rate.
Excess monomer stripping	Decant water layer	Dissolved and separable organics.
Latex evaporators	Water removed during latex concentration	Dissolved organics, suspended and dissolved solids. High amounts of uncoagulated latex.
Tank cars and tank trucks	Cleanout rinse water	Dissolved organics, suspended and dissolved solids. High amounts of undissolved latex.
All plant areas	Area washdowns	Dissolved and separable organics; dissolved and suspended solids.

Table 2. Concentrations of toxic contaminants detected in untreated paint plant wastewaters. All concentrations are in parts-per billion (U.S. EPA, 1980).

Contaminant	Number of samples analyzed	Number of times detected	Median of detected values
Antimony	49	49	25
Arsenic	41	41	52
Beryllium	51	51	<10
Cadmium	51	51	20
Chromium	51	51	200
Copper	51	51	500
Cyanide	54	54	20
Lead	51	51	800
Mercury	50	50	1,100
Nickel	51	51	50
Silver	51	51	<10
Thallium	51	51	<10
Zinc	51	51	10,000
Bis(2-ethylhexyl)phthalate	27	9	140
Di-n-butylphthalate	27	18	260
Pentachlorophenol	27	6	750
Phenol	27	8	110
Benzene	27	17	440
Ethylbenzene	27	21	1,200
Nitrobenzene	27	3	110
Toluene	27	23	2,500
Naphthalene	27	9	54
Carbon tetrachloride	27	8	14
Chloroform	27	14	110
Dichlorobromomethane	27	1	27
1,2-Dichloromethane	27	5	33
1,1-Dichloroethylene	27	5	23
1,2-trans-Dichloroethylene	27	2	130*
1,2-Dichloropropane	27	3	12
Methylene chloride	27	17	790
Tetrachloroethylene	27	17	230
1,1,1-Trichlorethane	27	15	82
1,1,2-Trichloroethane	27	5	<10
Trichloroethylene	27	13	52

* mean of two concentrations.

Table 3. Results of the water-quality analysis of Wallington Borough Water Department's public supply wells. ND indicates that the contaminant was not detected. All concentrations are in parts-per-billion.

	Wells				
Compound	Main	Lester	Dul	#5	#8
Trichloroethylene	-	20	38	126	48
Tetrachloroethylene	-	12	44	ND	ND
Trans-1,2-dichloroethylene	-	39	10	1,023	333
Vinyl chloride	-	ND	-	18	3
Benzene	-	ND	-	1	ND
Bromoform	5.6	-	-	-	-
Bromodichloromethane	10	-	-	-	-
Dibromochloromethane	6.2	-	-	-	-
1,1-Dichloroethylene	-	-	-	17	ND
Chloroform	24	-	ND	-	65
1,1-Dichloroethane	2.7	-	ND	-	5.6
1,1-Dichloroethene	-	-	2.0	-	4.4
1,2-Dichloroethene	220	-	-	-	-
1,2-Dichloropropane	-	-	23	-	ND
1,1,2,2-Tetrachloroethane	-	-	2.5	-	160
Tetrachloroethene	2.1	-	ND	-	35
1,1,1-Trichloroethane	-	-	5.9	-	2.0
Trichloroethene	20	-	35	-	55

- indicates no data available.

ICF/BRW Associates

SUBJECT: Groundwater Level at ON-site and OFF-site Monitoring wells — Industrial Latex, Wallington, NJ   PROJECT NO. 38012-003-00

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MADE BY: Maresca / Finke   DATE: 9/27/90   CHECKED BY: ________   DATE: ________

Well #	Wet Chalk Water Level (Ft)	Electronic Water Level Water Level (Ft)	TOIC	TIME (HR)
MW-1A		11.11	8.93	
1B		13.35	11.[illegible]	
1C		12.25	11.11	
2B		24.19	22.[illegible]	
2C		30.54	[illegible]	
3A		23.13	20.33	1335
3B		23.81	[illegible].21	1339
3C		24.60	22.69	1342
4A		13.48	11.50	
4B		13.74	11.71	1420
4C		14.41	13.53	
5A		14.58	12.16	
5B		16.38	13.[illegible]	
6A		9.65	7.53	
6B		13.91	11.53	
7B		22.46	20.40	
8S		12.98		1130
10S		13.28		1135
11D		7.19		1140