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R-585-4-9-13

SITE INSPECTION USING AVAILABLE INFORMATION OF DUBLIN WATER SUPPLY PREPARED UNDER

TDD NO. F3-8901-23
EPA NO. PA-2201
CONTRACT NO. 68-01-7346

FOR THE

HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

AUGUST 9, 1989

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY	REVIEWED BY	APPROVED BY
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PLATES

SECTION 1

ORIGINAL
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1.0 INTRODUCTION

1.1 Authorization

NUS Corporation performed this work under Environmental Protection Agency Contract No. 68-01-7346. This specific report was prepared in accordance with Technical Directive Document No. F3-8901-23 for the Dublin Water Supply site (Thompson Property) located in Dublin, Pennsylvania.

1.2 Scope of Work

NUS FIT 3 was tasked to conduct a site inspection using available information of the subject site.

1.3 Summary

The Dublin Water Supply site is located within the corporate limits of Dublin Borough, Bucks County, Pennsylvania and is currently owned by John H. Thompson, of Doylestown, Pennsylvania. The site consists of approximately 4.8 acres of property situated north of and adjacent to Mill Street.

During a routine drinking water sampling survey by the Bucks County Health Department (BCHD), elevated levels of trichloroethylene (TCE), 1,1,1-trichloroethane (1,1,1-TCEA), and tetrachloroethene (PCE) were detected in area wells. Subsequent sampling efforts by the Pennsylvania Department of Environmental Resources (PA DER) confirmed the BCHD results. Wells sampled on the Thompson property (Thompson plant well no. 1 and Thompson plant well no. 2) contained some of the highest TCE concentrations (up to 10,000 ppb). Several wells located north of the property also indicated elevated levels of TCE [i.e., Whistlewood Apartment Complex (420 ppb to 500 ppb)]. As a result of the elevated levels, BCHD requested assistance from EPA Region III. On September 3, 1986, the EPA Region III Emergency Response Section visited the site. (Refer to appendices A and B for BCHD and PA DER sample analysis results, respectively.)

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A potentially responsible party search was completed on the Thompson property by Techlaw, Incorporated for EPA. The report states that past industrial operations by Kollsman Motor Corporation (1959 to 1971) and Dudly Sports, Division of Athlone Industries, Incorporated (1973 to 1986) utilized TCE and related solvents. Furthermore, the report states that questionable waste-handling procedures may have been instituted by both Kollsman Motor and Athlone Industries. Unknown quantities of TCE waste may have been disposed on the ground surface and the macadam behind the site buildings, according to depositions provided to Techlaw personnel by former employees of each facility and a life-long neighbor of the subject site.

Mr. Thompson officially entered into a Consent Agreement and Order with EPA on June 8, 1987. To date, Mr. Thompson has satisfied the requirements set forth in the agreement. The general requirements were as follows:

- Retain a qualified contractor (BCM Eastern, Incorporated).
- Provide and maintain adequate treatment systems to all residents and commercial employees exposed to TCE levels greater than 5 ppb.
- Conduct periodic monitoring of wells for all residents at risk.

Refer to appendix C (Consent Agreement and Order, paragraphs 20 through 28).

A hydrogeologic investigation plan was prepared by BCM (July 1987) to further delineate groundwater conditions beneath the site and to determine the need for remedial measures. The hydrogeologic investigation plan was approved by PA DER on August 27, 1987. As outlined in this plan, on-site soil samples were obtained, and two on-site monitoring wells (MWs) were installed and later sampled. Elevated levels of TCE were identified in on-site soils. Analysis of the two on-site MWs indicated levels of 17,500 ppb TCE in MW-1 and 313 ppb TCE in MW-2. Also found at elevated levels in MW-1 were PCE and 1,1,1-TCEA. Quarterly monitoring of two on-site production wells by BCM commenced in November 1987.

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Roy F. Weston and Geraghty and Miller, Incorporated were retained by the Whistlewood Apartment Complex and the residents of Dublin, respectively. Both firms were contracted to assist in determining the source of contamination on behalf of their clients. Geraghty and Miller installed a total of eight MWs within the site vicinity. Sample analysis of the wells confirmed TCE contamination of area groundwater. A report by Weston attempted to define the source of contamination based upon available information. Additionally, on-site drums and soils sampled by Weston personnel indicated the presence of TCE.

Residents within a three-mile radius of the subject site utilize groundwater for potable water. The total population using groundwater has been determined to be 10,118.

SECTION 2

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2.0 THE SITE

2.1 Location

The site is located along Mill Street within the corporate limits of Dublin Borough, Bucks County, Pennsylvania (see figure 2.1, page 2-2). According to the United States Geological Survey (U.S.G.S.) Doylestown, Pennsylvania quadrangle map, the site's coordinates are 40° 22" 10' north latitude and 75° 12" 20' west longitude. As measured from the northwestern corner of the Doylestown quadrangle, the site is 6.25 inches east and 0.75 inch south.[1]

2.2 Site Layout

The site consists of approximately 4.8 acres of land situated adjacent to Mill Street. Four on-site buildings encompass approximately 1.8 acres of the 4.8-acre property (see figure 2.2, page 2-3). Each of the buildings is connected to the others and is currently occupied by Thompson Racing (building nos. 1, 2, and 3) and Laboratory Testing, Incorporated (LTI) (building no. 4).[2,3]

A large percentage of the northwestern portion of the property is paved and utilized for parking and storage. A small metal shed is located northwest of building no. 2, approximately 65 feet from the chain-link fence.[2]

The northern corner of the property is occupied by a large fire tower that is maintained by Mr. Thompson.[2]

Two on-site monitoring wells, installed by BCM engineers, are located northwest and east of building no. 1. Two underground storage tanks containing fuel oil are located between building nos.1 and 2 and Mill Street.[2]

The property is bordered to the northwest by a large fruit orchard and to the southwest and southeast by residential homes. To the northeast, the property is bordered by the Farm Bureau of Pennsylvania.[2]

Access to the property is provided via Mill Street by two driveways located west of building no. 1. There are no access restrictions to the subject site.[2]

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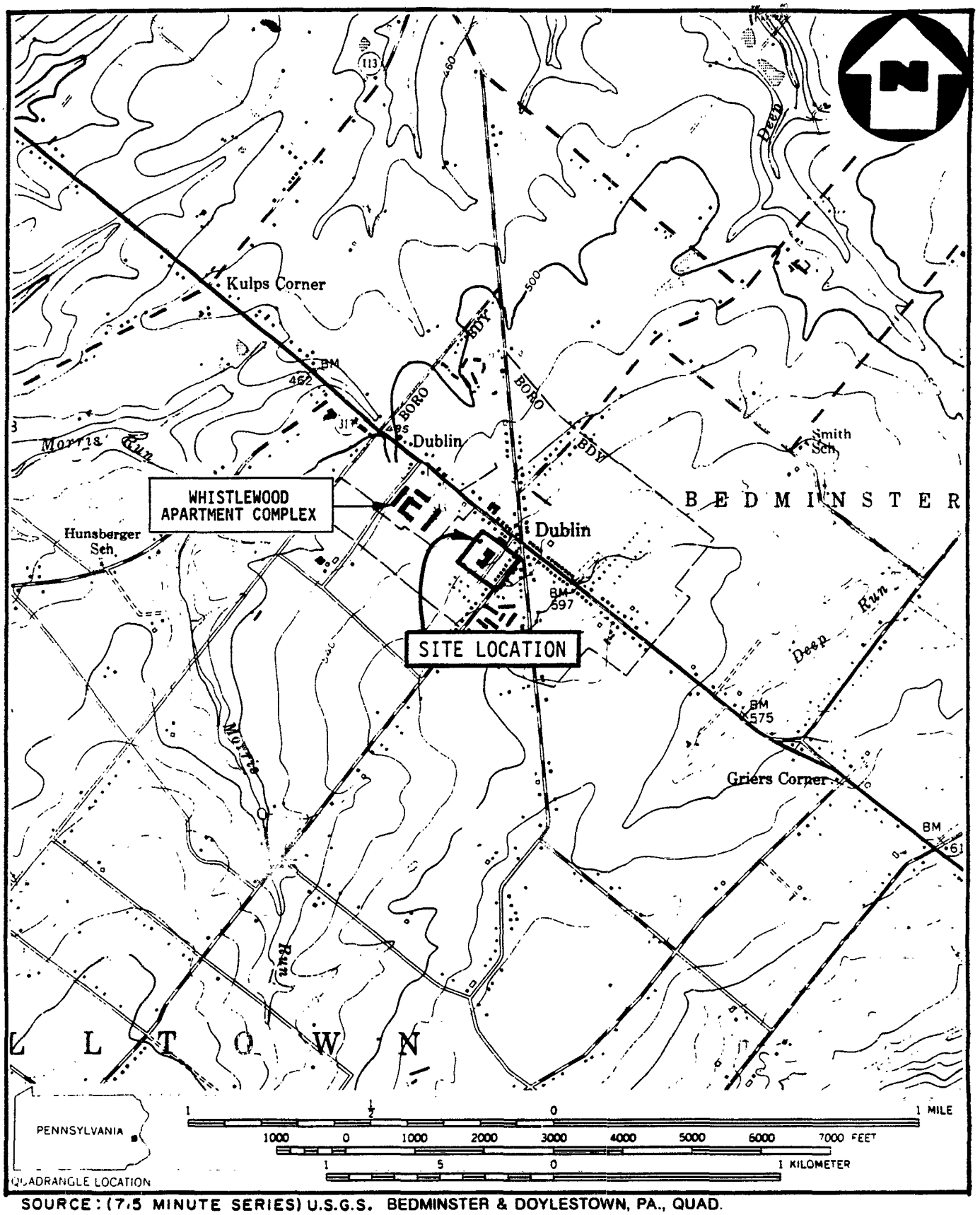

SOURCE: (7.5 MINUTE SERIES) U.S.G.S. BEDMINSTER & DOYLESTOWN, PA., QUAD.

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SITE LOCATION MAP
DUBLIN WATER SUPPLY
SCALE 1:24000

FIGURE 2.1

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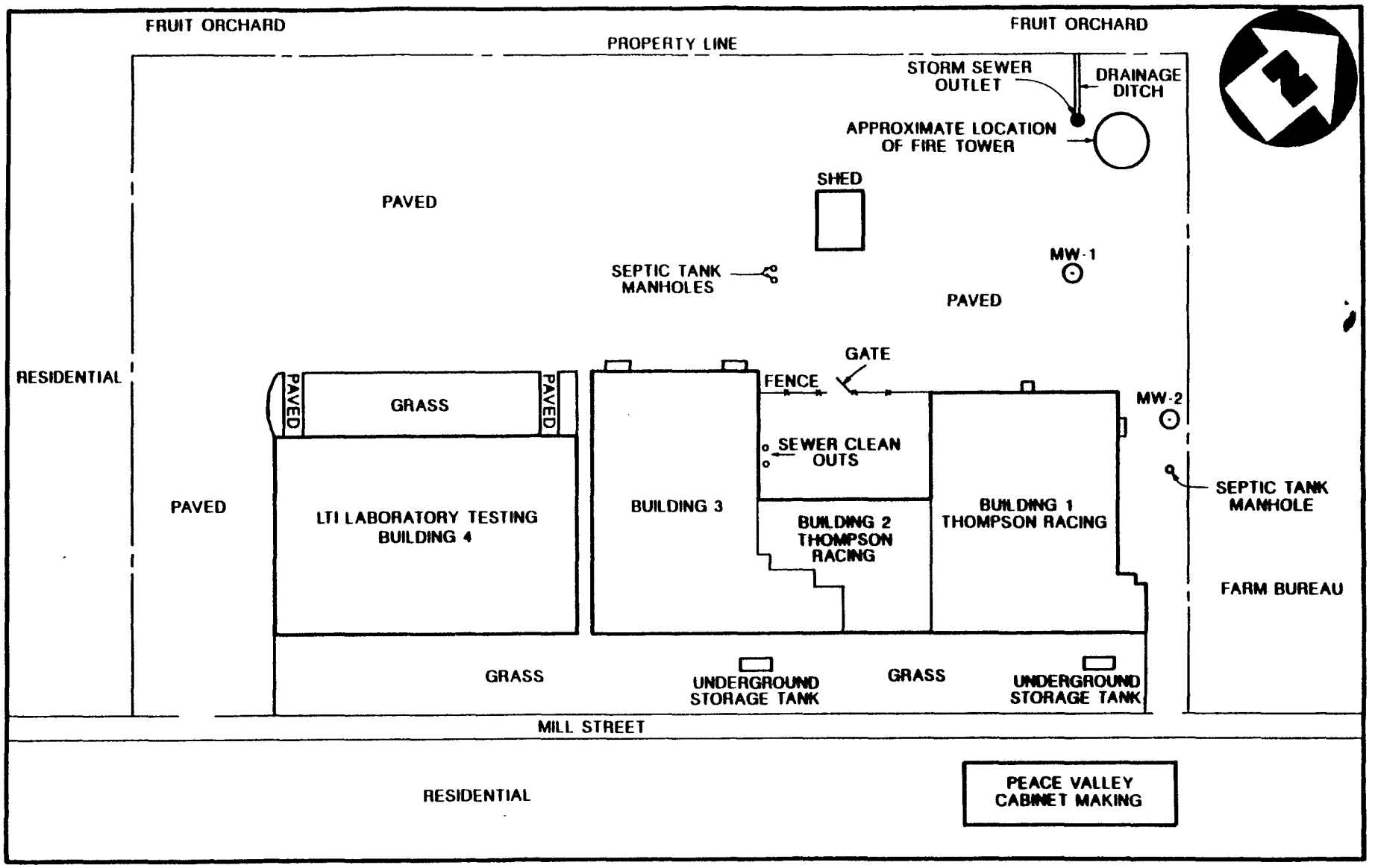

FIGURE 2.2

SITE SKETCH

DUBLIN WATER SUPPLY

(NO SCALE)

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2.3 Ownership History

Over the past four decades, the site has been owned by the following individuals and/or companies: Ernest A. Flach (April 25, 1945 to November 13, 1945); Dublin Hosiery Mill (November 13, 1945 to March 15, 1956); Home Window Company of Pennsylvania, Incorporated (March 15, 1956 to April 9, 1959); Kollsman Motor Corporation (April 9, 1959 to December 31, 1971); Sun Chemical Corporation, successor to Kollsman Instrument Corporation (December 31, 1971 to August 28, 1973); Bucks County Industrial Development Authority and Athlone Industries, Incorporated (August 28, 1973 to January 30, 1986); and John H. Thompson (January 30, 1986 to present).[4]

2.4 Site Use History

The property was utilized as a hosiery mill from the 1930s until 1945 under different ownerships. Home Window Company of Pennsylvania, Incorporated manufactured aluminum doors and windows at the property from 1956 to 1959. Kollsman Motors Corporation manufactured small precision electric motors and instruments for aircraft and the aerospace industry from 1959 to 1971. Dudly Sports (division of Athlone Industries) began operations at the property in 1973. The facility processed baseballs and softballs. Mr. Thompson acquired the property in 1986. Antique race cars are restored in the main building by Mr. Thompson's organization.[4] Additionally, part of the property, including a building, is being leased to LTI, a government contractor. It is currently unknown what type of work is conducted by LTI.[3,4]

2.5 Permit and Regulatory Action History

Initial groundwater sampling by BCHD in the summer of 1986 revealed TCE contamination of private wells within the Dublin Borough area (see appendix A for BCHD sample analysis results). Subsequent sampling by PA DER confirmed BCHD sample results (see appendix B for PA DER sample analysis results). Based upon these sample results and further investigation by BCHD and PA DER, it was determined by both agencies that the likely point source of the TCE contamination was the Thompson property.[5,6]

BCHD officially requested assistance from EPA Region III Emergency Response Section to evaluate the site. On September 3, 1986, a preliminary assessment was conducted by the on-scene coordinator (OSC) with the assistance of the Roy F. Weston Technical Assistance Team (TAT).[7]

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On June 8, 1987, John H. Thompson officially entered into a Consent Agreement and Order with EPA. Mr. Thompson retained the services of BCM Eastern, Incorporated to satisfy requirements described in the draft Consent Agreement and Order. On March 27, 1987, BCM submitted to EPA a draft work plan designed to satisfy stipulations set forth in paragraph nos. 20 to 28 of the Consent Order (see appendix D). The plan describes the means by which treated water has been provided to private well owners, based upon EPA-established tiers. Each tier addresses a TCE concentration range, appropriate corrective actions, and follow-up sample monitoring. The work plan was finalized on May 21, 1987. Implementation occurred on June 29, 1987 when EPA Region III Administrator James M. Seif signed the Consent Agreement and Order. To date, Phase I (identification of contaminated wells and respective TCE concentrations) and Phase II (installation of appropriate treatment systems) have been completed. Phase III, which involves periodic sampling of the contaminated wells before and after treatment, the continued provision of bottled water, and the recording of flow rates of wells during each sampling period, is currently being implemented. The most recent sample results associated with Phase III may be found in appendix E.[7,8,9]

A revised hydrogeologic investigation plan was submitted to PA DER on July 9, 1987 by BCM and was approved on August 27, 1987 (see appendix F). The plan, which consists of three phases (Phase I - Existing Data Review, Phase II - Site Characterization, and Phase III - Site Monitoring), is designed to further characterize groundwater conditions beneath the site and to determine the need for remedial measures. To date, Phases I and II have been completed. Phase II consisted of performing an on-site soil vapor survey and obtaining on-site soils. Results of the soil vapor survey revealed elevated levels of TCE (up to 43.1 mg/l) directly behind building no. 1 (see appendix G). On-site subsurface soil samples revealed trace levels of TCE up to 0.98 mg/kg (see appendix H). Two on-site monitoring wells were also installed per Phase II specifications. Sample results from monitoring well nos. 1 and 2 indicated elevated levels of TCE (17,500 ppb and 313 ppb, respectively). Phase III of the plan (Site Monitoring) is being implemented based upon a review of data collected from Phases I and II.[10,11,12]

The Whistlewood Apartment Complex retained the services of Roy F. Weston to determine the point source of contamination of the complex's drinking water well. Roy F. Weston conducted a site visit to 120 Mill Street to determine the source of contamination of the Whistlewood well on January 21, 1988. The Weston final report, submitted on February 15, 1988, interpreted available hydrogeologic data to determine the source of contamination. Containers of waste solvent left by Athlone Industries, Incorporated, as well as on-site soils, were sampled by Weston personnel. Results indicated the presence of TCE and other related solvents within one of the containers. Soil analysis results revealed trace amounts of TCE, 1,1,1-TCEA, toluene, and xylene (see appendix I).[13]

Area residents affected by the TCE contaminant plume retained the services of Geraghty and Miller, Incorporated to determine the source of the TCE contamination. Geraghty and Miller installed eight monitoring wells within the vicinity of the Thompson property. Sample analysis results from the monitoring wells indicated TCE contamination downgradient of the Thompson property (see appendix J).[14]

On July 14, 1988 NUS FIT 3 conducted a preliminary assessment to determine if further action was deemed necessary for the subject site. NUS FIT 3 recommended that a site inspection/Hazard Ranking System (HRS) be performed on the subject site.

2.6 Remedial Action to Date

There has been no remedial action completed at the subject site.[3]

SECTION 3

3.0 ENVIRONMENTAL SETTING

3.1 Water Supply

Groundwater is the sole source of drinking water within the three-mile-radius study area.

The Dublin Borough Municipal Water System provides potable water to approximately 327 people located within Dublin.[15] Source water is obtained from two wells located approximately 1/4 mile south-southeast of the site. Well no. 1 is utilized on a regular basis and has a total depth of 350 feet (pump depth: 230 feet). Well no. 2 is primarily used as a backup and has a total depth of 240 feet. The pump depth is unknown for well no. 2.[16] Both of these wells are expected to draw from the Brunswick and/or the Lockatong lithofacies.[17]

The remainder of the Dublin Borough residents (1,473 people) utilize private supply wells. This includes the population served by the Whistlewood Apartment Complex well and all other Dublin Borough residents. All private supply wells are expected to draw from the Brunswick and/or the Lockatong lithofacies.[15,18]

High Hope Orchard maintains an irrigation well for a 20-acre tract of land northwest of and adjacent to the subject site. The population served by this well is 30 persons.[19,20]

The Stonebridge housing development, located 1/2 mile north of the site and outside of the borough of Dublin, has its own well, which is maintained by Bedminster Township. The well serves as a potable water supply for 1,140 persons. The depth and yield of the well are unknown; however, the well is expected to draw from the Brunswick and/or Lockatong lithofacies.[1,21,22]

The Whistlewood Apartment Complex, situated approximately 1/4 mile northwest of the site, maintains a well on the complex property. A total of 142 apartments are provided water from this well. This well is most likely tapping the Brunswick lithofacies, although limited construction information is available.[17,23,24]

Based upon a routine house count (3.8 persons per household) utilizing U.S.G.S. maps, approximately 10,118 people use groundwater within a 3-mile radius of the site. This figure reflects populations serviced by the Dublin Borough wells, the Whistlewood Apartment Complex well, the Stonebridge Housing Development well, all borough residents utilizing private supply wells, and the population using the High Hope Orchard irrigation well.[1,16,24]

These domestic wells draw from the Brunswick and the Lockatong lithofacies. Supporting well information for the townships within the study area is provided in appendix L.[17,23]

Population	Source
327	Dublin Borough Municipal Water System (86 connections times 3.8 people per connection)
933	Dublin Borough residents (1,800 population minus 327 municipally supplied)
540	Whistlewood Apartment Complex residents (142 times 3.8 persons per household equals 540 persons)
1,140	Stonebridge Housing Development (300 times 3.8 persons per household)
7,148	House count outside Dublin Borough limits, not including Stonebridge Housing Development
30	High Hope Orchard irrigation well (20 acres times 1.5 persons per acre)
10,118	Total population

3.2 Surface Waters

Site surface water drainage is expected to flow in a northwestward direction via street drainage because the majority of the property is currently paved with asphalt.[2]

Drainage not absorbed by the fruit orchard is collected by a drainage ditch situated on the northern corner of the property near the fire tower. The ditch traverses in a northwestward direction and is believed to discharge into an unnamed perennial tributary of Morris Run, located approximately 1/2 mile northwest of the site. The confluence of this tributary and Morris Run is located approximately 1.5 stream miles northwest of the site. Morris Run flows in a general northwestward direction for approximately six stream miles before discharging into Perkiomen Creek.[1,2]

Palustrine wetlands border the site approximately 0.25 mile north and south of the site.

Based upon available information, Morris Run is not actively stocked by the Pennsylvania Fish Commission and is not utilized for drinking water purposes.[26]

During the NUS FIT 3 inspection, a storm sewer outlet was observed at the origin of the drainage ditch. According to BCHD, floor drains from building nos. 1 and 3 and the boiler room are connected to the storm sewer system and ultimately discharge via the outlet to the drainage ditch.[2,4,13]

3.3 Hydrogeology

The geologic and hydrogeologic conditions in the study area were researched as part of the site inspection. A preliminary literature review was conducted to determine surface and subsurface geologic conditions, soil character, and the status of groundwater transport and storage.

3.3.1 Geology

The three-mile-radius study area surrounding the Dublin Water Supply site lies entirely within the Triassic Lowlands Section of the Piedmont Physiographic Province. This section is distinguished as a broad intermontane basin that extends from southeastern New York, across New Jersey, southeastern Pennsylvania, and central Maryland, into northern Virginia. The maximum width of this basin is approximately 32 miles in Bucks County, Pennsylvania. This basin consists of thick, interbedded sequences of Late Triassic age red shale and sandstone with subordinate conglomerate, arkose, and argillite of the Newark Group. The exact origin of the sediments has been debated; however, most sources indicate that they are the product of erosion from the highlands to the north and south of the present outcrop area. In general, the arkose and the conglomerate were derived from Cambrian and Precambrian rocks that border the basin to the south. The parent material for the shale and sandstone was apparently the Silurian, Devonian, and Mississippian age sediments to the north. As a result of differential weathering, a sub-trellis drainage pattern dominates the study area. Palustrine wetlands, many of which exceed five acres in size, are mapped within the study area. The larger areas are located along Morris Run to the northwest of the site.[1,17,27,28,29]

Following deposition, the strata of the Newark Group were intruded locally by diabase sills and dikes and then normal faulted and tilted into their present position. The Newark Group within the study area strikes generally northeast-southwest and dips between 5 and 20 degrees to the northwest. According to site-specific field work, performed by Roy F. Weston, Incorporated in 1988, the strike of the bedding in the study area ranges from north 55 to 80 degrees east, and the dip ranges from 9 to 16 degrees to the northwest. The dominant fracture pattern is reportedly oriented north 45 degrees east, and the dip is nearly vertical. A subordinate fracture pattern was also noted during this field work, and it was oriented north 87 degrees east and dipping 82 degrees to the northeast.[13,27,28]

The Newark Group has been subdivided into three lithologic units. In ascending order, they are the Stockton sandstone, the Lockatong black argillite, and the Brunswick red shale (see figure 3.1, page 3-5). These units, especially the Lockatong and Brunswick Formations, are interfingered in the study area, which is believed to represent either rapidly changing depositional conditions or deposition from different sources. Estimates of the total thickness of the Newark Group in Bucks County range from 2,000 to more than 12,000 feet.[17,28]

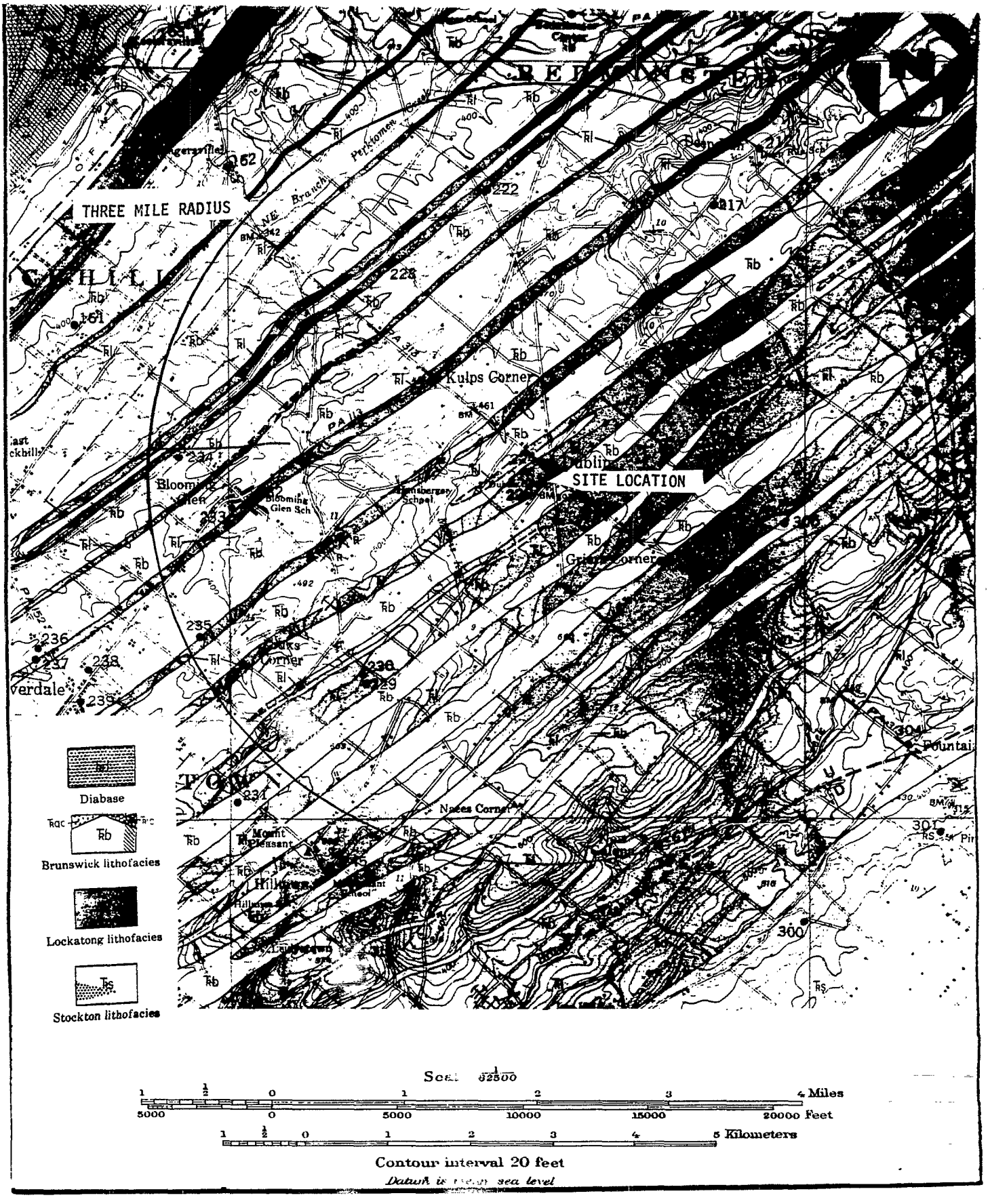

Figure 3.1

GEOLOGIC MAP

Dublin Water Supply Site
Bucks County, Pennsylvania

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Source: Groundwater Resources of Bucks County, Pennsylvania, 1955

In general, the Brunswick lithofacies stratigraphically overlies the Lockatong, which is conformably underlain by the Stockton lithofacies. However, in the study area, the upper red beds of the Lockatong lithofacies are believed to be contemporaneous with the lower and middle beds of the Brunswick lithofacies; therefore, the two units are interfingered. Under these conditions, these units are found in alternating layers under the site to an estimated combined thickness of 9,000 feet above the Stockton.[17,28]

The Lockatong Formation is mapped directly beneath the site and is exposed as several narrow, strike-parallel outcrops throughout the study area. The total stratigraphic thickness of the Lockatong ranges between 2,150 and 3,800 feet within Bucks County. This unit generally consists of dark gray to black, thick-bedded argillite (or mudstone) with occasional zones of thin-bedded black shale. Locally, thin layers of impure limestone and calcareous shale can be present. The upper beds of gray argillite are extensively interbedded with dark red argillite. Based upon a structural cross section through Dublin, well no. 5, located 400 feet along strike to the northeast, shows a thickness for the remaining uneroded Lockatong to be 100 feet. MW-1, located approximately 100 feet to the northeast (also along strike), encountered a decreasing percentage of gray shale and a concomitant increasing percentage of red shale 76 feet beneath the surface. This boundary probably delimits the top of the underlying Brunswick Formation. Based upon this information, the thickness of the Lockatong beneath the site is probably between 76 and 100 feet.[13,17,28,30]

The Brunswick Formation is encountered between 76 and 100 feet directly beneath the site and is exposed approximately 280 feet northwest and 120 feet southeast of the site. The Brunswick is generally less resistant than the Lockatong and consists of soft red argillaceous shale interbedded locally with fine-grained red sandstone. The Brunswick Formation does not display prominent cleavage; however, it does contain numerous joints and fractures that are commonly inclined at a high degree to the bedding plane. The true vertical thickness of the Brunswick Formation may exceed 6,000 feet within Bucks County. This layer of the Brunswick is underlain by a second layer of the Lockatong that is approximately 300 feet thick.[13,17,28,30]

The Stockton lithofacies conformably underlies the Lockatong lithofacies and is encountered at a broadly estimated depth of 6,000 feet beneath the site. The Stockton is not exposed within the study area. This unit consists of light colored, coarse-grained, arkosic sandstone and conglomerate to fine-grained siliceous sandstone and red shale. The estimated stratigraphic thickness of the Stockton is 3,000 feet.[17,28]

3.3.2 Soils

According to the Soil Conservation Service, there are no strictly native soils on the site. The soils on the site are classified entirely within the Urban land - Abbottstown Complex (Uc), which consists of approximately 60 percent Urban land, 35 percent Abbottstown silt loam, and 5 percent included soils (see figure 3.2, page 3-8). Urban land is defined as land that is highly developed, in which large portions are paved or covered with buildings or the soils are highly variable and mixed with foundation material. The Abbottstown Complex is described as a poorly drained silt loam and is generally underlain by shale bedrock. The pH of the upper layer of the Abbottstown Complex is very strongly to moderately acidic (4.5 to 6.0). The permeability of this layer ranges from 4.45 X 10^{-4} to 1.41 X 10^{-3} cm/sec.[31]

Site-specific information collected during soil boring completed by BCM, Incorporated indicates that the on-site soils generally consist of brown silt with a trace of clay, sand, and some shale fragments. The depth to bedrock, according to the borings, ranges from 5.5 to more than 9.8 feet (see appendix K). The drilling logs for MW-1 and MW-2 report that bedrock was encountered at 20 and 13 feet, respectively, beneath the surface.[28]

3.3.3 Groundwater

Both the Brunswick and the Lockatong lithofacies provide adequate supplies of water to wells for most domestic uses. However, the Brunswick is more often tapped to provide water to higher producing municipal and industrial wells. The permeability, transmissivity, and well yield figures of the Brunswick in the study area are, on the average, higher than those of the Lockatong.[17,27]

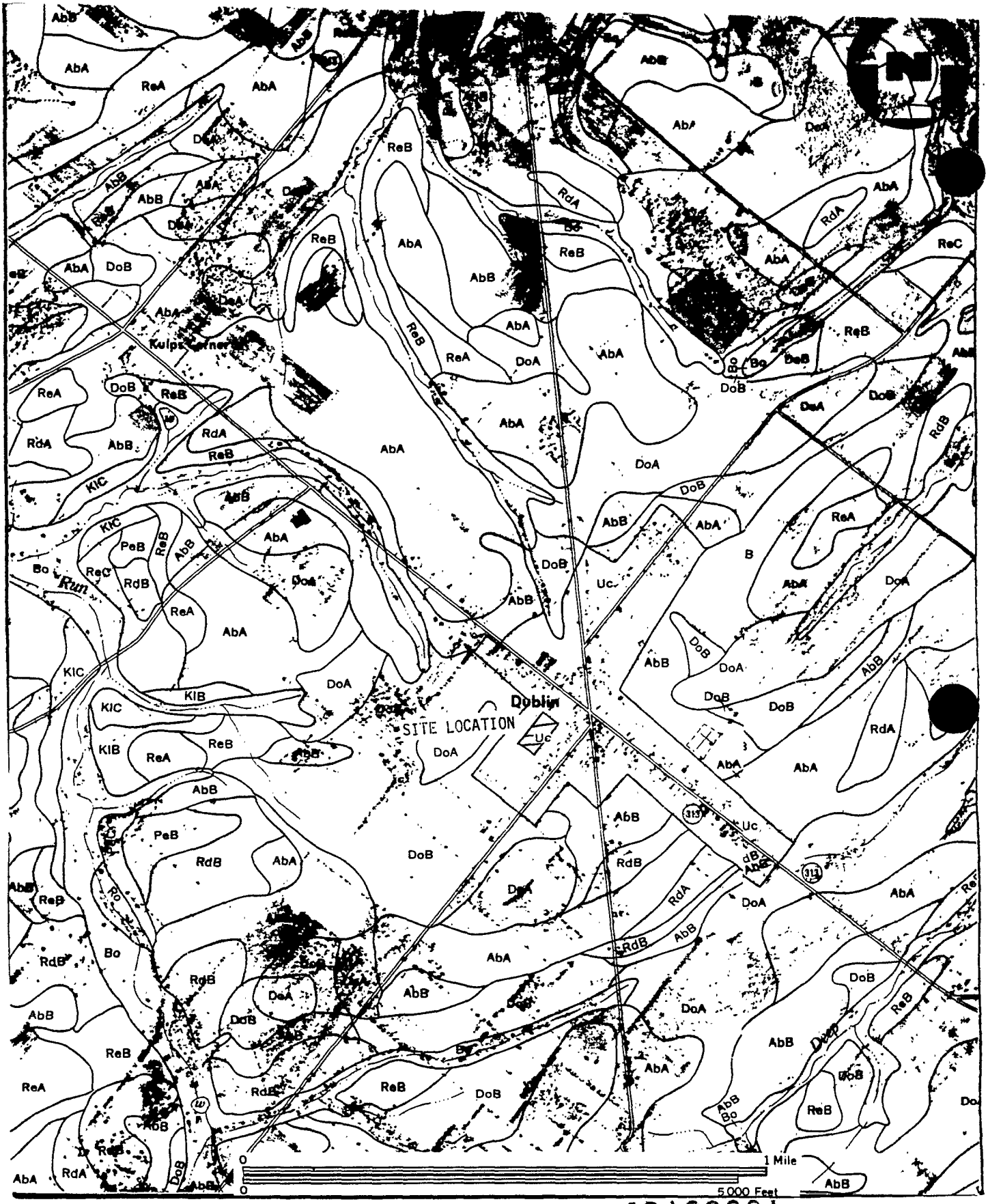

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Figure 3.2

SOILS MAP

Dublin Water Supply Site
Bucks County, Pennsylvania

Source: Soil Survey of Bucks and Philadelphia Counties, Pennsylvania, 1975

Within the Brunswick, groundwater is available under both water-table and semi-artesian conditions within the weathered and highly fractured zone, which may extend to depths up to 600 feet. Below 600 feet, void space is limited and the formation is essentially impermeable. The water-table aquifer is contained in the highly weathered zone to depths of approximately 250 feet. This zone is of low permeability compared to the underlying semi-artesian aquifer. The lower permeability of the upper zone is due to the weathered material filling the void space and thereby restricting groundwater flow and storage. The semi-artesian aquifer extends from approximately 250 to 600 feet below the surface. This water-bearing zone receives recharge from the overlying water-table aquifer. Most municipal and industrial wells in the Brunswick tap both the unconfined and semi-confined zones; therefore, it is difficult to assess the hydrologic characteristic of each of the aquifers individually. According to the Groundwater Inventory System, 52 Bucks County wells tapping the Brunswick have yields from less than 2 to 260 gallons per minute (gpm); the average is reported to be 40 gpm (see appendix L).[17,23]

The hydrologic characteristics of the Lockatong lithofacies have been compared with those of crystalline rocks. The Lockatong displays both fracture and solution porosity due to faulting and weathering. Like the Brunswick, groundwater in the Lockatong occurs in water-table and semi-artesian conditions. The depth of the weathered zone, or the top of the consolidated bedrock, according to the Pennsylvania Groundwater Inventory System and on-site monitoring well drilling, ranges from approximately 4 to 22 feet below the surface. The reported yields of 42 Bucks County wells within the Lockatong range from 2 to 25 gpm. The average yield is 10 gpm. The specific capacity of five Bucks County wells for which information is available range from 0.10 to 1.88 gpm per foot of drawdown. Well yields within the Lockatong range from approximately 2 to 22 gpm.[17,23]

Within the study area, the water-bearing zones of the Brunswick and Lockatong lithofacies should be considered interconnected, because of their fractured nature and the extent of interfingering. There are no documented continuous groundwater barriers within the study area. It is possible, however, that a hydraulic gradient may exist between the Brunswick and the Lockatong because of their differences in permeabilities.[17,23,28]

On June 7, 1988, at monitoring well nos. 1 and 2, the water table was encountered at 31.17 and 35.21 feet beneath the surface, respectively. Recharge to the area is most likely derived from a shallow knoll located approximately 0.25 mile to the southeast of the site. Groundwater flow direction in the site vicinity, as indicated by area monitoring wells and the extent of the contamination plume, is apparently to the northwest in the approximate direction of the surface slope and structural dip.[1,13,17,30]

3.4 Climate and Meteorology

The average annual temperature of Allentown, Pennsylvania, the closest meteorological data station to the site, is 51.1°F. The coldest month is January, with an average annual temperature of 27.4°F. The warmest month is July, with an average annual temperature of 74.0°F. The average annual precipitation for Allentown, Pennsylvania is 43.89 inches. The mean annual lake evaporation is 34.0 inches. As a result, the net annual precipitation for the area is 9.89 inches. The 1-year, 24-hour rainfall value is 2.7 inches.[32,33]

3.5 Land Use

The site is situated in an area dominated by residential and light commercial land usage. To the southeast and southwest, residential dwellings exist. A large fruit orchard is located adjacent to and northwest of the subject site.[2]

3.6 Population Distribution

The population within one, two, and three miles of the subject site was calculated by using U.S.G.S. 7.5 minute series quadrangle maps (routine house-count method: 3.8 persons per household) and 1980 census data for the borough of Dublin.[1]

1-mile radius = 3,777
2-mile radius = 6,341
3-mile radius = 10,118

3.7 Critical Environments

According to the United States Department of the Interior, Fish and Wildlife Service, there are no federally listed endangered or threatened species within the three-mile-radius study area.[34]

SECTION 4

4.0 WASTE TYPES AND QUANTITIES

An EPA contractor, Techlaw, Incorporated, was tasked to conduct research on potentially responsible parties associated with the subject site. A potentially responsible party search final report was submitted to EPA on August 21, 1987. Information concerning the use, storage, and/or disposal of TCE was collected by contacting public officials, obtaining and reviewing EPA, state, and local documents, and interviewing individuals possessing knowledge of the site (see appendix M).[4]

The Kollsman Motor Instrument Company utilized solvents, including TCE, as degreasing agents. A degreasing machine was operated to clean small motors and motor parts and contained approximately 20 to 30 gallons of TCE. The solvent was changed approximately every two to three weeks. A former employee of Kollsman Motors stated that "wastes were taken to 55-gallon drums kept outside, behind the main building." The employee indicated that the waste was probably transported off site; however, he was not sure.[4]

A life-long neighbor of the subject property recalled that, in the early 1960s, when Kollsman occupied the property, employees carried five-gallon pails from the plant and dumped the liquid contents of those pails outside on the ground on two occasions. The liquid was oily looking and killed grass where it was disposed.[4]

Additionally, employees in the Kollsman machine shop disposed small quantities of TCE on the macadam outside behind the main building.[4]

Under the operation of Athlone Industries, Incorporated, Safety Solvent No. 2 was utilized in an electrical degreaser. Some of this solvent remains at the property and is contained in a drum marked as "Safety Solvent #2 Electrical Degreaser." A sample collected from this drum by Roy F. Weston, consultants retained by the Whistlewood Apartment Complex, revealed concentrations of 1,1,1-TCEA, TCE, and PCE.[4]

A former employee of Athlone Industries initially stated that wastes were put on the parking lot or in sewers, but he later stated that the waste was put in barrels and transported to an unknown destination.[4]

No conclusive evidence was collected concerning the amount of waste solvents generated by either facility.[4]

ORIGINAL
(Red)

SECTION 5

F3-8901-23

EPA

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

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2201

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Dublin Water Supply Site	120 Mill Street				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG. DIST**
Dublin	PA	18917	Bucks	017	PA08

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
40° 22' 10"	75° 12' 20"	[X] 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	
N/A	[X] ACTIVE [ ] INACTIVE	1885 (BEGINNING YEAR)	present (ENDING YEAR) ___ UNKNOWN

04 AGENCY PERFORMING INSPECTION (Check all that apply)

[ ] A. EPA [X] B. EPA CONTRACTOR NUS Corporation (Name of firm) [ ] C. MUNICIPAL [ ] D. MUNICIPAL CONTRACTOR _____ (Name of firm)

[ ] E. STATE [ ] F. STATE CONTRACTOR _____ (Name of firm) [ ] G. OTHER _____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Joseph Marchesani	Geologist	NUS FIT 3	(215) 687-9510
09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
[ ] PERMISSION [ ] WARRANT N/A	N/A	N/A

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Paul Racette	U.S. EPA	(215) 597-1

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE
Joseph Marchesani	NUS	FIT 3	687-9510	3/27/89

AR100807

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
PA	2201

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 unknown
NO. OF DRUMS _____

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			
OLW	OILY WASTE			
SOL	SOLVENTS	unknown	N/A	On-site and off-site
PSD	PESTICIDES			TCE-contaminated groundwater and
OCC	OTHER ORGANIC CHEMICALS			on-site TCE-contaminated soils
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

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
SOL	trichloroethene (TCE)	79-01-6	sloppy housekeeping	17,500	ug/l
SOL	trans-1,2-dichloroethene		and/or spills	240	ug/l
	* Sample results are from an on-site monitoring well. Analysis of several area wells				
	indicated elevated levels of TCE in excess of drinking water standards.				

IV. FEEDSTOCKS (See Appendix for CAS Numbers) N/A

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 analysis, reports)

NUS FIT 3. Preliminary assessment. July 14, 1988.
BCM Engineers. Laboratory results. September 27, 1988.

AR100808

EPA

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

I. IDENTIFICATION	
01 STATE: PA	02 SITE NUMBER: 2201

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 [X] OBSERVED (DATE: 6/27/86) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 10,118 — 04 NARRATIVE DESCRIPTION

Initial sampling by BCHD in the summer of 1986 revealed TCE contamination in area wells. Subsequent off-site and on-site soil and groundwater sampling by PA DER, BCM Engineers, Weston, and Geraghty and Miller, Incorporated confirmed TCE contamination of area groundwater.

01 ☐ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

According to the Dublin Borough code enforcement officer, the property is not a fire or explosion threat.

01 [X] E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) [X] POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 3,898 — 04 NARRATIVE DESCRIPTION

The site is accessible; no barriers surround the site. Hazardous materials were sloppily handled and/or spilled onto the ground. The population potentially affected resides within one mile of the site.

01 [X] F. CONTAMINATION OF SOIL — 02 [X] OBSERVED (DATE: 9/87) ☐ POTENTIAL ☐ ALLEGED

03 AREA POTENTIALLY AFFECTED: 4.8 (Acres) — 04 NARRATIVE DESCRIPTION

An on-site soil vapor survey was performed by BCM Engineers. Results indicated elevated levels of TCE (43.1 mg/l). Subsequent sampling showed trace levels of TCE.

01 [X] G. DRINKING WATER CONTAMINATION — 02 [X] OBSERVED (DATE: 6/27/86) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 10,118 — 04 NARRATIVE DESCRIPTION

Initial sampling by BCHD in the summer of 1986 revealed TCE contamination in area wells. Subsequent off-site and on-site soil and groundwater sampling by PA DER, BCM Engineers, Weston, and Geraghty and Miller, Incorporated confirmed TCE contamination of area groundwater.

01 [X] H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) [X] POTENTIAL ☐ ALLEGED

03 WORKERS POTENTIALLY AFFECTED: unknown — 04 NARRATIVE DESCRIPTION

There is a high potential for worker exposure and/or contact with on-site contaminated soils.

01 [X] I. POPULATION EXPOSURE/INJURY — 02 [X] OBSERVED (DATE: 6/27/86) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: 10,188 — 04 NARRATIVE DESCRIPTION

Initial sampling by BCHD in the summer of 1986 revealed TCE contamination in area wells. Subsequent off-site and on-site soil and groundwater sampling by PA DER, BCM Engineers, Weston, and Geraghty and Miller, Incorporated confirmed TCE contamination of area groundwater. During a routine drinking water survey, BCHD discovered levels of TCE up to 1,000 ppb in 23 tap water samples. Also, subsequent sampling by Weston indicated elevated levels of TCE in a nearby apartment complex. Approximately 170 homes, apartments, and businesses are affected.

EPA

POTENTIAL HAZARDOUS WASTE SITE (Region)
SITE INSPECTION REPORT (Fed)
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE: PA	02 SITE NUMBER: 2201

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☒ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☒ ALLEGED

04 NARRATIVE DESCRIPTION

A life-long neighbor of 120 Mill Street, Wilmer Moyers, was interviewed. Mr. Moyers recalled an incident in the early 1960s (when Kollsman owned the property) when men dumped the contents of five-gallon buckets on the ground, killing the grass.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION (Include name(s) of species)

None reported or observed.

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills, Runoff, Standing liquids, Leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED

03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

During the NUS FIT 3 preliminary assessment site visit on July 14, 1988, there was no unstable containment of wastes.

01 ☒ N. DAMAGE TO OFF-SITE PROPERTY — 02 ☒ OBSERVED (DATE: 6/27/86) ☐ POTENTIAL ☐ ALLEGED

04 NARRATIVE DESCRIPTION

There is TCE contamination of off-site drinking water wells.

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

04 NARRATIVE DESCRIPTION

None reported or observed.

01 ☒ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: early 1960s) ☐ POTENTIAL ☒ ALLEGED

04 NARRATIVE DESCRIPTION

Wilmer Moyers, a neighbor of the site, allegedly witnessed the dumping of an "oily-looking substance" on site.

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

None reported or observed.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 10,118 (3 miles)

IV. COMMENTS

None

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

AR100810

NUS FIT 3. Preliminary assessment. July 14, 1988; BCM Engineers laboratory results, September 27, 1988; PA DER Files; EPA Files; Geraghty and Miller laboratory results, June 27, 1986; Weston source contamination study, February 15, 1988; Techlaw Potentially Responsible Party Search, August 21, 1987; Versar, Incorporated sample results, November 30, 1987.

EPA

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

I. IDENTIFICATION	
01 STATE: PA	02 SITE NUMBER: 2201

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	unknown	
☐ D. TANK, ABOVE GROUND		
☒ E. TANK, BELOW GROUND	2	unknown
☐ F. LANDFILL		
☐ G. LANDFARM		
☐ H. OPEN DUMP		
☒ I. OTHER spills (Specify)	unknown	

04 TREATMENT (Check all that apply)

- ☐ A. INCINERATION
- ☐ 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

four buildings are on site

06 AREA OF SITE

4.8 (Acres)

07 COMMENTS

Athlone Industries (Dudley Sports Division) stored drums of hazardous waste on site without obtaining a federal or state hazardous waste permit. The storage time was more than 90 days.

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.

Floor drains in two buildings lead to a storm sewer, which drains into a swale that runs toward the northwest.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☒ YES ☐ NO

02 COMMENTS

Drums inside a Quonset hut were sampled by Weston.

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

Weston Source Contamination Study. February 15, 1988.
NUS FIT 3. Preliminary assessment. August 14, 1988.

EPA

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

I. IDENTIFICATION	
01 STATE: PA	02 SITE NUMBER: 2201

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)	SURFACE	WELL	02 STATUS: ENDANGERED	AFFECTED	MONITORED	03 DISTANCE TO SITE
COMMUNITY	A. ☐	B. ☒	A. ☒	B. ☐	C. ☒	A. 0.57 (mi)
NON-COMMUNITY	C. ☐	D. ☒	D. ☒	E. ☐	F. ☒	B. 0.25 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☒ 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, UNUSABLE

02 POPULATION SERVED BY GROUNDWATER: 10,118

03 DISTANCE TO NEAREST DRINKING WATER WELL: 0.057 (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
31 to 35 (ft)	northwest	13 (ft)	14,400 (gpd)	☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)

Groundwater wells surround the site at varying distances. The nearest well is located 300 feet (0.057 mile) to the northeast. A well supplying the Whistlewood Apartment Complex is located 0.25 mile northwest (downgradient) and is contaminated with TCE. Wells are commonly drilled to depths of approximately 200 to 250 feet.

10 RECHARGE AREA		11 DISCHARGE AREA	
☒ YES ☐ NO	COMMENTS: Recharge is derived from a knoll 0.25 mile to the southeast.	☒ YES ☐ NO	COMMENTS: Discharge to Morris Run is located 0.5 mile to the northwest.

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
N/A	☐	(mi)
	☐	(mi)
	☐	(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
A. 3,777 NO. OF PERSONS	B. 6,341 NO. OF PERSONS	C. 10,118 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION: 0.057 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	04 DISTANCE TO NEAREST OFF-SITE BUILDING
1,219	0.057 (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)

Many of the Dublin Borough residents live in apartment complexes served by potable supply wells. An irrigation well lies within 0.057 mile of the site, serving the agricultural land of High Hope Orchard.

AR100812

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
PA	2201

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one) 10^{-3} - 10^{-5} cm/sec

☐ 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) 10^{-3} - 10^{-5} cm/sec

☐ 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	
5.5 to 20 (ft)	5.5 to 20 (ft)	4.5 to 6.0	

06 NET PRECIPITATION	07 ONE-YEAR 24-HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
9.89 (in)	2.7 (in)	3.75 %	northwest	2.4 %

09 FLOOD POTENTIAL

SITE IS IN N/A YEAR FLOODPLAIN

10

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

11 DISTANCE TO WETLANDS (5-acre minimum)

ESTUARINE: A. > 2 (mi) OTHER: B. > 2 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

> 1 (mi)

ENDANGERED SPECIES: none

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. 0.25 (mi)	B. 0.057 (mi)	C. unknown (mi)	D. 0 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site is located on gently sloping land. The slope is southeast to northwest.

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

Pennsylvania Geological Survey. Groundwater Resources of Bucks County, Pennsylvania. Bulletin W11, 1955.

Roy F. Weston, Incorporated. Assessment of Source Contamination in Whistlewood Apartment Complex Water Supply Well, Dublin, Pennsylvania. February 15, 1988.

AR100813

EPA

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

I. IDENTIFICATION	
01 STATE: PA	02 SITE NUMBER: 2201

II. SAMPLES TAKEN N/A

ORIGINAL

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL			
SOIL			
VEGETATION			
OTHER			

III. FIELD MEASUREMENTS TAKEN N/A

01 TYPE	02 COMMENTS

IV. PHOTOGRAPHS AND MAPS N/A

01 TYPE ☐ GROUND ☐ AERIAL

02 IN CUSTODY OF _____
(Name of organization or individual)

03 MAPS
☐ YES
☐ NO

04 LOCATION OF MAPS _____

V. OTHER FIELD DATA COLLECTED (Provide narrative description) N/A

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

AR100814

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
PA	2201

II. CURRENT OWNER(S) / PARENT COMPANY (if applicable)

CURRENT OWNER(S)			PARENT COMPANY (if applicable)		
01 NAME: John H. Thompson	02 D+B NUMBER:		08 NAME: N/A	09 D+B NUMBER:	
03 STREET ADDRESS (P.O. Box, RFD #, etc.): 120 Mill Street	04 SIC CODE:		10 STREET ADDRESS (P.O. Box, RFD #, etc.):	11 SIC CODE:	
05 CITY: Dublin	06 STATE: PA	07 ZIP CODE:	12 CITY:	13 STATE:	14 ZIP CODE:
01 NAME: John H. Thompson	02 D+B NUMBER:		08 NAME: Thompson Toyota	09 D+B NUMBER:	
03 STREET ADDRESS (P.O. Box, RFD #, etc.): 122 Swamp Road	04 SIC CODE:		10 STREET ADDRESS (P.O. Box, RFD #, etc.): 122 Swamp Road	11 SIC CODE:	
05 CITY: Doylestown	06 STATE: PA	07 ZIP CODE: 18901	12 CITY: Doylestown	13 STATE: PA	14 ZIP CODE: 18901
01 NAME:	02 D+B NUMBER:		08 NAME: N/A	09 D+B NUMBER:	
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:		10 STREET ADDRESS (P.O. Box, RFD #, etc.):	11 SIC CODE:	
05 CITY:	06 STATE:	07 ZIP CODE:	12 CITY:	13 STATE:	14 ZIP CODE:
01 NAME:	02 D+B NUMBER:		08 NAME: N/A	09 D+B NUMBER:	
03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:		10 STREET ADDRESS (P.O. Box, RFD #, etc.):	11 SIC CODE:	
05 CITY:	06 STATE:	07 ZIP CODE:	12 CITY:	13 STATE:	14 ZIP CODE:

III. PREVIOUS OWNER(S) (list most recent first) / IV. REALTY OWNER(S) (if applicable, list most recent first)

III. PREVIOUS OWNER(S)			IV. REALTY OWNER(S)		
01 NAME: Athlone Industries	02 D+B NUMBER:		01 NAME: N/A	02 D+B NUMBER:	
03 STREET ADDRESS (P.O. Box, RFD #, etc.): 200 Webro Road	04 SIC CODE:		03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:	
05 CITY: Parsippany	06 STATE: NJ	07 ZIP CODE: 07054	05 CITY:	06 STATE:	07 ZIP CODE:
01 NAME: Bucks County Industrial Development Authority	02 D+B NUMBER:		01 NAME: N/A	02 D+B NUMBER:	
03 STREET ADDRESS (P.O. Box, RFD #, etc.): Two East Court Street	04 SIC CODE:		03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:	
05 CITY: Doylestown	06 STATE: PA	07 ZIP CODE: 18901	05 CITY:	06 STATE:	07 ZIP CODE:
01 NAME: Sun Chemical Corporation	02 D+B NUMBER:		01 NAME: N/A	02 D+B NUMBER:	
03 STREET ADDRESS (P.O. Box, RFD #, etc.): 200 Park Avenue	04 SIC CODE:		03 STREET ADDRESS (P.O. Box, RFD #, etc.):	04 SIC CODE:	
05 CITY: New York	06 STATE: NY	07 ZIP CODE: 10166	05 CITY:	06 STATE:	07 ZIP CODE:

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

Techlaw Potentially Responsible Party Search. August 21, 1987.

AR100815

EPA

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

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
PA	2201

II. CURRENT OWNER(S) / PARENT COMPANY (if applicable)

01 NAME	02 D+B NUMBER	08 NAME	09 D+B NUMBER
		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS (P.O. Box, RFD #, etc.)**	**11 SIC CODE**
05 CITY / 06 STATE	**07 ZIP CODE**	**12 CITY / 13 STATE**	**14 ZIP CODE**
01 NAME	**02 D+B NUMBER**	**08 NAME**	**09 D+B NUMBER**
		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS (P.O. Box, RFD #, etc.)**	**11 SIC CODE**
05 CITY / 06 STATE	**07 ZIP CODE**	**12 CITY / 13 STATE**	**14 ZIP CODE**
01 NAME	**02 D+B NUMBER**	**08 NAME**	**09 D+B NUMBER**
		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS (P.O. Box, RFD #, etc.)**	**11 SIC CODE**
05 CITY / 06 STATE	**07 ZIP CODE**	**12 CITY / 13 STATE**	**14 ZIP CODE**
01 NAME	**02 D+B NUMBER**	**08 NAME**	**09 D+B NUMBER**
		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**10 STREET ADDRESS (P.O. Box, RFD #, etc.)**	**11 SIC CODE**
05 CITY / 06 STATE	**07 ZIP CODE**	**12 CITY / 13 STATE**	**14 ZIP CODE**

III. PREVIOUS OWNER(S) (list most recent first) / IV. REALTY OWNER(S) (if applicable, list most recent first)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Kollsman Motor Corporation		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS (P.O. Box, RFD #, etc.)**	**04 SIC CODE**
120 Mill Street			
05 CITY / 06 STATE	**07 ZIP CODE**	**05 CITY / 06 STATE**	**07 ZIP CODE**
Dublin / PA	18917		
01 NAME	**02 D+B NUMBER**	**01 NAME**	**02 D+B NUMBER**
Home Window Company of Pennsylvania		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS (P.O. Box, RFD #, etc.)**	**04 SIC CODE**
16 Susquehanna Avenue			
05 CITY / 06 STATE	**07 ZIP CODE**	**05 CITY / 06 STATE**	**07 ZIP CODE**
Lansdale / PA	19446		
01 NAME	**02 D+B NUMBER**	**01 NAME**	**02 D+B NUMBER**
Dublin Hosiery Mills, Incorporated		N/A	
03 STREET ADDRESS (P.O. Box, RFD #, etc.)	**04 SIC CODE**	**03 STREET ADDRESS (P.O. Box, RFD #, etc.)**	**04 SIC CODE**
Not available			
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)

Techlaw Potentially Responsible Party Search. August 21, 1987.

AR100816

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2201

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D + B NUMBER
Laboratory Testing, Incorporated	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
P.O. Box 249	

05 CITY	06 STATE	07 ZIP CODE
Dublin	PA	18917

08 YEARS OF OPERATION	09 NAME OF OWNER
5/86 to present	

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)

01 NAME	02 D + B NUMBER
Dudley Sports	

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

05 CITY	06 STATE	07 ZIP CODE
Dublin	PA	18917

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
8/73 to 1986	Alan Show

PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)

10 NAME	11 D + B NUMBER
Athlone Industries	

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

14 CITY	15 STATE	16 ZIP CODE
Parsippany	NJ	07054

01 NAME	02 D + B NUMBER
Sun Chemical Corporation	

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

05 CITY	06 STATE	07 ZIP CODE
New York	NY	10166

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
12/71 to 8/73	R.E. Davis

10 NAME	11 D + B NUMBER
N/A	

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

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D + B NUMBER
Kollsman Motor Corporation	

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

05 CITY	06 STATE	07 ZIP CODE
Dublin	PA	18917

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
4/59 to 12/71	

10 NAME	11 D + B NUMBER
Standard Kollsman Industries, Inc.	

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

14 CITY	15 STATE	16 ZIP CODE

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

Techlaw Potentially Responsible Party Search. August 21, 1987.

AR100817

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
PA	2201

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D + B NUMBER	04 SIC CODE

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	13 SIC CODE
N/A		

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)

01 NAME	02 D + B NUMBER	04 SIC CODE
Home Window Company of Pennsylvania		

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

05 CITY	06 STATE	07 ZIP CODE
Lansdale	PA	19446

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
3/56 to 4/59	

PREVIOUS OPERATORS' PARENT COMPANIES (if applicable)

10 NAME	11 D + B NUMBER	13 SIC CODE
N/A		

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

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D + B NUMBER	04 SIC CODE
Dublin Hosiery Mills		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
Not available	

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DUR[illegible] PERIOD
11/45 to 3/56	A Pennsyl[illegible] Corporation

10 NAME	11 D + B NUMBER	13 SIC CODE
N/A		

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

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D + B NUMBER	04 SIC CODE

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 DURING THIS PERIOD

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

Techlaw Potentially Responsible Party Search. August 21, 1987.

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SECTION 6

6.0 REFERENCES FOR SECTIONS 1.0 THROUGH 5.0

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