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SITE INSPECTION
OF
BLACK AND DECKER, INCORPORATED
PREPARED UNDER

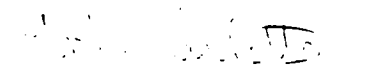
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FOR THE
HAZARDOUS SITE CONTROL DIVISION
U.S. ENVIRONMENTAL PROTECTION AGENCY

OCTOBER 9, 1991

NUS CORPORATION
SUPERFUND DIVISION

SUBMITTED BY



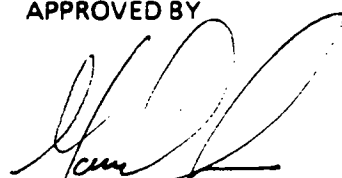
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SECTION 1

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. F3-9101-19 for the Black and Decker, Incorporated site, located in Hampstead, Carroll County, Maryland.

1.2 Scope of Work

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

1.3 Summary

The 286-acre Black and Decker facility is located directly south of Hampstead, Carroll County, Maryland. The major environmental concern at the site is contamination of groundwater by trichloroethene (TCE) and tetrachloroethene (PCE).

The plant, which is owned by Black and Decker (U.S.), Incorporated, currently functions as the principal distribution center on the East Coast for Black and Decker tools and appliances. A small portion of the on-site activities involves steel sintering using heat-treating furnaces and degreasing tool components utilizing TCE, 1,1,1-trichloroethane (1,1,1-TCEA), and other solvents. On-site sewage and wastewater treatment plants discharge effluent into two on-site lagoons.

From 1952 until 1987, the Black and Decker facility manufactured power hand tools. Numerous oils and solvents utilized in the manufacturing processes were stored on site in above-ground and underground storage tanks. Allegedly, several areas on the subject property were used for disposal of waste materials and off-specification tool products.

In April 1984, TCE and PCE contamination was detected in the groundwater at the Black and Decker facility during a sampling investigation of a local gasoline spill. The Maryland Department of Health and Mental Hygiene (MD DHMH) inspected the facility and conducted sampling several times in 1984. On September 17, 1984, Black and Decker entered into a Consent Order with MD DHMH. In compliance with this order, the company performed an investigation of groundwater conditions at the facility. Twenty-one monitoring wells were installed on Black and Decker's property by Geraghty and Miller (consultants) in April 1985. Further evaluation of the contaminated groundwater was recommended by the consultant. MD DHMH conducted home well sampling in the area surrounding the subject facility. Varying levels of PCE and TCE contamination were detected in several wells.

As a result of PCE contamination, Black and Decker installed filters in a downgradient dairy barn well in 1987.

A soil investigation was requested by MD DHMH and performed by BCM Eastern, Incorporated in August 1986. BCM installed an air stripper for on-site potable water treatment in December 1986.

Black and Decker contracted Roy F. Weston, Incorporated (consultants) in 1987 to perform an environmental investigation of the facility. Weston installed 17 monitoring wells on the property as part of this investigation. Seven areas were identified as possible sources of groundwater and/or soil contamination: the previous storage tank areas, a past plant landfill area, two past heat-treating residue and waste deposition areas, a past off-specification product disposal area, an area of past used-product burning, and the on-site lagoons. An underground storage tank area was determined to be a continuing source of groundwater contamination. The investigation also identified separate plumes of groundwater contamination: TCE was determined to be the primary groundwater contaminant in the eastern half of the plant, and PCE was the predominant groundwater contaminant in the western section of the plant. A work plan for soil and groundwater remediation was submitted to Maryland Department of the Environment, Hazardous and Solid Waste Management Administration (MDE HSWMA) in December 1989 by Weston. Information indicates that this work plan has not yet been approved by MDE.

Residents within a four-mile radius of the facility obtain their drinking water from a public supplier or domestic wells. The City of Hampstead Water Department obtains its potable supply from 10 wells located around the city and within the study area. The supplier serves about 2,800 people. Residents not served by the public supplier are assumed to maintain private domestic wells. Approximately 750 employees at Black and Decker depend on 5 on-site production wells for their potable water supply. These wells are connected to an air stripper for groundwater treatment. A total population of about 9,475 people depends on groundwater from within the study area for its potable supply. The nearest home well is about 100 feet northeast of the site.

Surface water drainage from the site is mainly toward a tributary of Deep Run west and southwest of the facility. Deep Run enters the North Branch of the Patapsco River. A small northeastern portion of the site drains eastwardly into a tributary of Piney Run. Piney Run flows southeastwardly into Western Run. Piney Run and Western Run are natural trout streams; Deep Run and the North Branch of the Patapsco River are recreational stocked trout streams.

FIT 3 conducted a site inspection of Black and Decker on February 26 and 27, 1991. Activities included sampling on-site soils, sediment, groundwater, and surface water and off-site groundwater, surface water, and sediment. A detailed Quality Assurance Review and a Toxicological Evaluation of the sample results from this inspection can be found in sections 7.0 and 8.0, respectively.

SECTION 2

2.0 THE SITE

2.1 Location

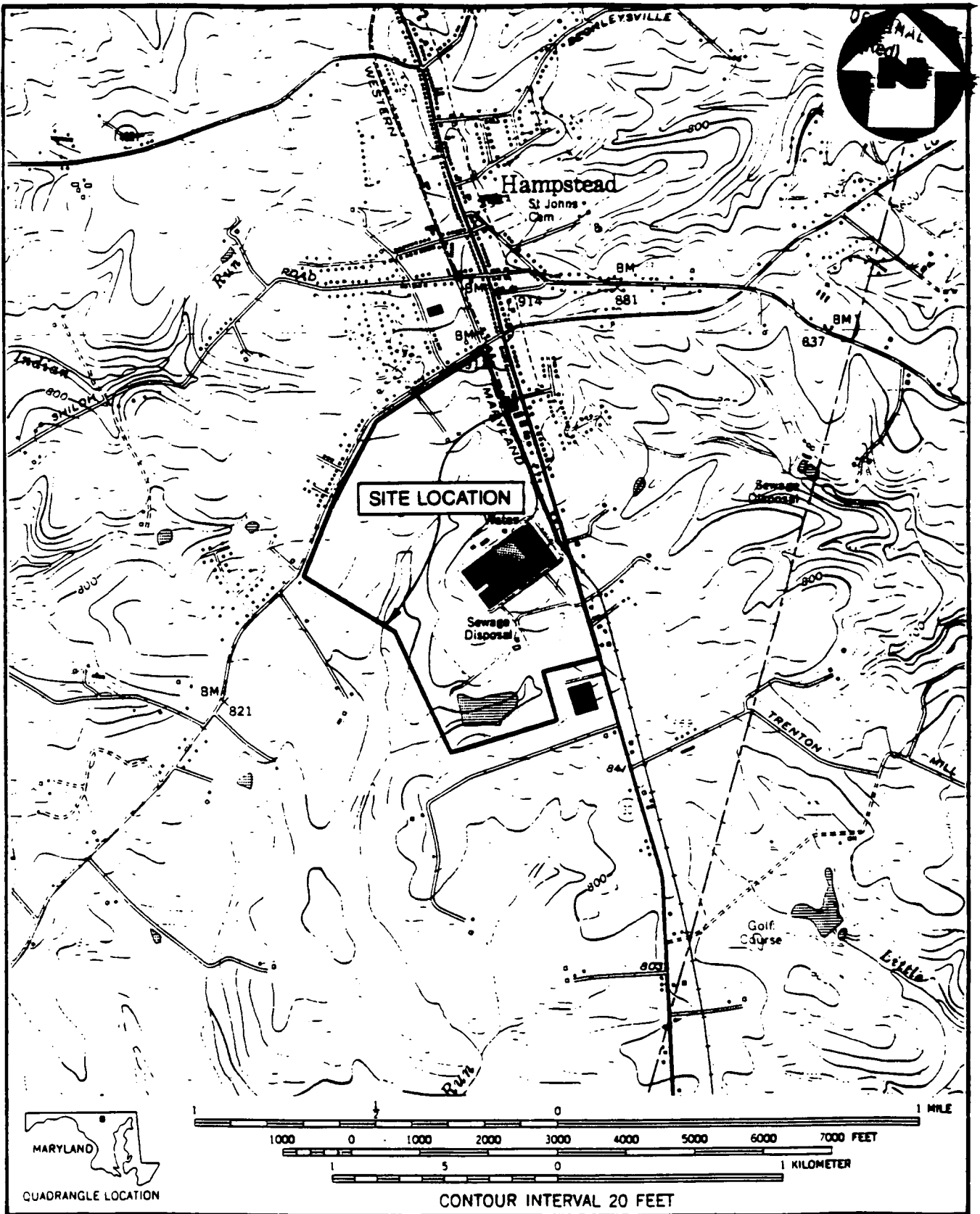
The Black and Decker site is located in Carroll County, Maryland (see figure 2.1, page 2-2). The site can be found at the intersection of 39° 35' 36" north latitude and 76° 50' 58" west longitude on the Hampstead, Maryland 7.5 minute series United States Geological Survey (U.S.G.S.) topographic quadrangle map. As measured from the northwestern corner of the Hampstead, Maryland topographic map, the site is 3.56 inches east and 5.75 inches south.¹

2.2 Site Layout

The 286-acre Black and Decker property is located directly south of the town of Hampstead, Maryland, directly west of Route 30. Approximately 140 acres of the northern and western sections of the property are leased to local dairy farmers for pasture land. The main facility is situated on the remaining 146 acres.^{1,2}

The major feature of the main facility is a 17-acre rectangular building; its length is oriented in a northeastern to southwestern direction (see figure 2.2, page 2-3). It is secured by fencing and guarded gate. Hanover Road (Route 30) is directly east of the building. Access to the facility is through the monitored gate that is off Hanover Road and southeast of the building. Parking areas are also within the fenced portion of the property, immediately south and southeast of the building. A railroad leads into the northernmost corner of the building.^{1,2,3}

Several significant areas are located around the Black and Decker building. The former location of tank farm no. 1 is adjacent to the northwestern edge of the building. The tank farm consisted of 13 underground storage tanks that contained oils and solvents. Tank farm no. 2 was east of the northernmost corner of the building and consisted of five underground storage tanks that contained various oils used in Black and Decker's manufacturing process. An above-ground tank farm is west of the northernmost corner of the building. A liquid nitrogen storage tank and a methanol storage tank can be found in this tank farm. TCE storage tanks were previously located in this area; all of these tanks have been removed. A hazardous waste storage area is located southwest of tank farm no. 1, along the northwestern edge of the building, according to LaVere Grimes, Black and Decker's facilities manager. An area of possible past disposal of heat-treating residues is adjacent to the westernmost corner of the building. An air-stripping tower is located northwest of the building.^{1,2,3,4,5,6,7}



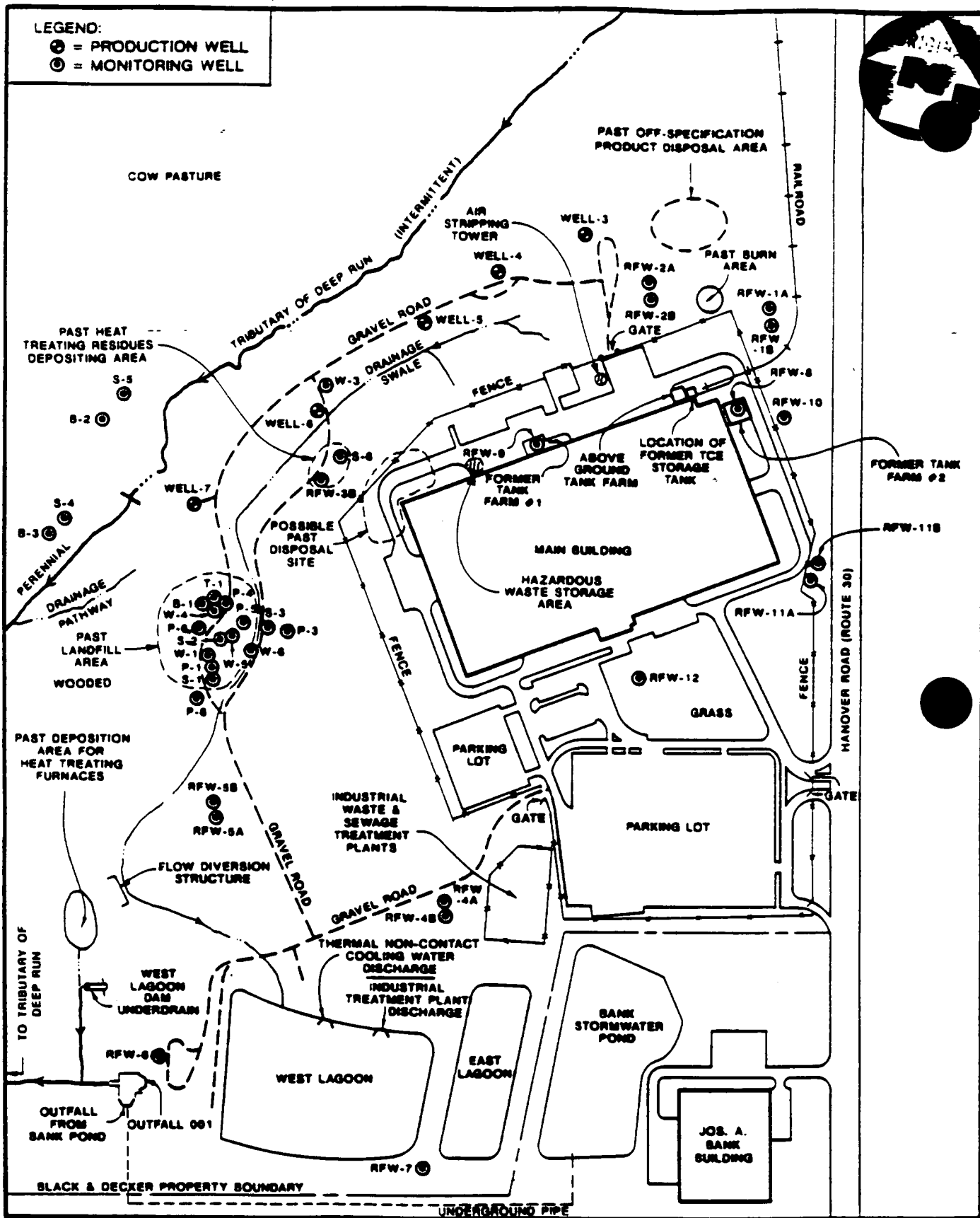
SOURCE: (7.5 MINUTE SERIES) U.S.G.S. HAMPSTEAD, MD., QUAD.

SITE LOCATION MAP
BLACK & DECKER

SCALE 1: 24000

FIGURE 2.1





SITE SKETCH
BLACK & DECKER
 (NO SCALE)

FIGURE 2.2



Wooded land surrounds the Black and Decker main facility on the northern, western and southwestern sides. Access to these areas is unrestricted. A gravel road, exiting from a gate northwest of the facility building, travels through the wooded areas and re-enters the fenced portion of the property through a gate south of the building. Five water supply wells (nos. 3, 4, 5, 6, and 7) are located at intervals along the northwestern section of the road. Well nos. 1 and 2 are sealed and no longer used by the facility. Black and Decker's industrial waste and sewage treatment plants are located within a fenced area directly south of the entry point of the gravel road into the southern gate and several hundred feet south of the facility building.^{2,3,5}

Two lagoons are located about 1/4 mile south of the main facility; access to the lagoons is unrestricted. The easternmost lagoon (east lagoon) is approximately two acres in size and six feet deep. The westernmost lagoon (west lagoon) is about 8 acres in size and 13 to 14 feet deep. Effluent from the industrial treatment plant and thermal non-contact cooling water from the facility discharge into the west lagoon via two separate discharge pipes. The east lagoon is clay lined, and the west lagoon is partially clay lined. A clay liner is between the two lagoons; an overflow pipe that is continuously open connects the east lagoon to the west lagoon. Effluent from the west lagoon flows into a concrete culvert via outfall no. 001. An underdrain for the west lagoon dam is located northwest of the culvert; the underdrain releases seepage coming through the west lagoon dam. An area previously used for the deposition of heat-treating furnaces is directly north of the dam underdrain. Surface water runoff from this area joins drainage from the underdrain; the resulting stream flows into the outfall discharge stream coming from the concrete culvert.^{2,3,4,5,6}

Several other significant features are located on Black and Decker's property outside the restricted main building area. Two areas of concern are several hundred feet north of the building: an area used in the past for burning off-specification products, plastic parts, and other materials and a second area used for disposal of off-specification products. Heat-treating residues were allegedly buried in an area between the building and water supply well no. 6. In the past, off-specification products were disposed in a landfill located west of the facility building in addition to the disposal areas mentioned previously.^{2,3,4,5,6}

A drainage swale originates directly north of the Black and Decker building and flows in southwestward direction. The swale continues west of the facility, flowing southwardly. The swale then makes a 90-degree angle at a flow diversion structure and flows southeastwardly into the west lagoon. The flow diversion structure controls the direction of water flow in the swale toward the west lagoon.^{2,3,4,5,6,7,8}

Thirty-eight monitoring wells are on Black and Decker's property at various locations.2.3.4

A tributary of Deep Run flows in a southwestward direction northwest and west of the main facility. A drainage pathway, several hundred feet in length, flows from the past landfill area into this tributary.2.3

A clothier warehouse, the Joseph A. Bank building, is located off the southeastern corner of the Black and Decker property on Hanover Road. A storm water pond located behind this building discharges via an underground pipe into the concrete culvert below the west lagoon. This effluent combines with the outfall no. 001 discharge (which is in the same culvert) to form a small stream.2.3.4.5

2.3 Ownership History

The subject site is solely owned by Black and Decker (U.S.), Incorporated. The northern and western sections of the property (140 acres) are leased to dairy farmers for pasture land.4.5

Black and Decker purchased the property in separate tracts at various times. The first tract of property, 185 acres, was purchased in 1951 from Charles J. Miller. A second tract was purchased in 1952 from Herbert R. Wooden, and a third tract was bought from Ada and Nellie B. Wooden in 1960. According to Mr. Grimes, the second and third purchases were probably small parcels of land northeast of the facility between the railroad tracks and Hanover Road. A fourth purchase was made in 1967 of 138 acres north of the facility. This tract was purchased from Olin Henry Hoffman, according to the Maryland preliminary assessment report.4.5.9

The Black and Decker facility building was built on the first tract of land in 1952. Several other buildings were constructed on this tract after 1952. Thirty-nine acres of the original 185 acres, a building, and a storm water pond were sold to Joseph A. Bank in 1986.4.5.9

Information concerning ownership before Mr. Miller, the Woodens, and Mr. Hoffman is unavailable.4.5

2.4 Site Use History

The subject facility currently functions as the principal distribution center on the East Coast for Black and Decker, Incorporated. About 80 percent of the activities at the Hampstead facility relate to the distribution of Black and Decker products (i.e., power hand tools and small electrical appliances). A small portion of the activities involves light assembly packaging and the manufacture of gears, according to Mr. Grimes. Heat-treating furnaces are used in the sintering of steel to form gear components. Cleaning and treatment of power tool accessories for rust prevention are also conducted at the plant. TCE, 1,1,1-TCEA, and various other solvents are used as degreasers in manufacturing and cleaning processes.^{4,5}

The Black and Decker facility was originally constructed in 1952 for the manufacture of power hand tools. Additions to the main building and several other buildings were built in later years. Numerous oils, solvents, and paints utilized in Black and Decker's manufacturing processes were stored on site in above-ground and underground storage tanks. MDE information from the early to mid-1980s indicates that waste products from the manufacturing processes were shipped off site as hazardous waste during this specific time period (see appendix M for hazardous waste reports). Waste disposal practices before 1982 are unknown. The use of most of these oils and solvents was discontinued when the facility changed its emphasis from manufacturing to distribution. The underground tanks have been excavated, cleaned, and filled with sand. The above-ground tanks are no longer used; TCE and 1,1,1-TCEA are stored in drums on site, according to Mr. Grimes.^{4,5,6,9}

A phase-out of tool manufacturing began in 1983 at the facility. Plant activities were refocused on product distribution; the conversion from manufacturing to distribution was completed in July 1987.⁶

According to a report by Roy F. Weston, Incorporated, Black and Decker's consultant, Black and Decker employees recall that several areas on the subject property were used for disposal of debris and off-specification tool products during the history of manufacturing operations. The manufacturing processes involved the utilization of numerous paints, solvents, and oils.⁶

Two lagoons on Black and Decker's property have been used by the facility since 1978 for wastewater treatment. The east lagoon is currently utilized as a surge basin for contact cooling water from manufacturing processes at the facility. Boiler blow-down water and effluent from the sewage treatment plant are also discharged into this lagoon. An overflow pipe that is continuously open connects the east lagoon to the west lagoon. When the level reaches a certain depth in the east lagoon, the wastewater is pumped into the industrial chemical treatment plant. Effluent from this plant is discharged into the west lagoon. Thermal non-contact cooling water and drainage from the on-site swaleway also flow into the west lagoon. Water from the west lagoon is recycled for use as non-contact cooling water in the Black and Decker facility, according to the Weston report. The west lagoon also functions as a source of fire-protection water for the facility in emergencies. Excess water from the west lagoon is discharged via NPDES-permitted outfall no.001.4.5.6

In the past, industrial sewage from various manufacturing operations was piped into the east lagoon for subsequent treatment. These operations included cleaning and etching aluminum castings with phosphoric acid, paint stripping using a caustic solution (pH, 12), metal treating with an acid solution, application of a dry coating with heat treatment, and metal grinding using a water-soluble lubricant.¹⁰

Information concerning wastewater disposal before 1978 is unavailable.

Sludge produced from sewage and industrial treatment processes is currently removed off site as nonhazardous waste. The sludge was generated as hazardous waste in the past; modifications to the treatment system enabled the facility to classify the sludge as nonhazardous. Sludge in the lagoons has not reached a level necessitating removal, according to Mr. Grimes.^{4.5}

The storm water pond, located south of the facility on the Bank property, receives surface runoff from the surrounding area, in addition to rainwater from Black and Decker's southern roof drains and surface runoff from Black and Decker's parking areas and driveways. The pond currently functions as a water source for fire protection for the Bank property. Black and Decker constructed the pond sometime after 1978 to prevent overflow of the west lagoon due to storm runoff.^{4.5}

Before Black and Decker's purchases, the site was utilized as dairy farming land.^{4.5}

2.5 Permit and Regulatory Action History

Black and Decker filed a Notification of Hazardous Waste Activity in September 1980 listing the following as the wastes handled: F001 (halogenated solvents), F010 (bath residues from heat-treating operations with cyanide used in the process), F011 (spent cyanide solutions), F012 (wastewater treatment sludge from heat-treating operations with cyanide used in the process), F017, F018, U002 (acetone), U054, U080 (dichloromethane), U123 (methanoic acid), U220 (toluene), U226 (1,1,1-TCEA), U228 (TCE), and U239 (xyliene).¹⁰

Several of these waste codes have been deleted from the hazardous waste listing; substance descriptions for these codes are unavailable in recent editions of the CFR. The facility was assigned EPA I.D. No. MDD003065877 (see appendix C).^{11,12}

Black and Decker submitted a Part A Hazardous Waste Permit Application to EPA in November 1980. A complete description of the facility's water recycle system was included with this application (see appendix C). Process codes S04 (surface impoundment) and T04 (treatment other than tank, surface impoundment, or incinerator) were listed on the application at capacities of 4,000,000 gallons and 1,000,000 gallons, respectively. The facility's NPDES Permit No. MD-0001881, Oil Operations Permit No. 79-OP-0185, and Water Appropriation Permit No. CL66GAP029 were also listed on the application. No waste codes were identified on the application. On June 4, 1981, EPA informed Black and Decker that the Part A application did not demonstrate that the facility required a federal permit and returned the application. Information indicates that the company kept its generator I.D. No. MDD003065877.^{13,14}

A Notice of Violation and corrective order were issued to Black and Decker by MD DHMH in February 1978 for minor air emission violations. According to Mr. Grimes, the company developed a line of water-based paints to use on its products within the following year in order to comply with the order.^{5,15}

On November 16, 1978, MD DHMH issued an order to Black and Decker requesting information concerning the facility's waste disposal methods and emergency plans. According to Mr. Grimes, Black and Decker provided a Preparedness, Prevention, and Contingency (PPC) Plan to MD DHMH in compliance with this order.^{5,16,17}

In July 1979, Metcalf and Eddy, Incorporated, environmental consultants for Black and Decker completed a report concerning the sludge generated in the facility's wastewater treatment system. Analysis of the sludge indicated chromium levels up to 4,380 ppm and lead levels up to 13,500 ppm. Sampling of water mixed with bottom sludge from one of the Black and Decker lagoons in December 1979 revealed concentrations of chromium at 18.9 ppm and lead at 93.3 ppm (see appendix D for report and analysis results). Metcalf and Eddy recommended modification of the treatment system producing the sludge. Available information indicates that modifications were made, enabling the facility to dispose the sludge as nonhazardous waste.^{18,19}

In April 1984, the Carroll County Health Department sampled the five production wells at Black and Decker to determine the impact of a gasoline spill at a Hampstead service station. Elevated levels of TCE (up to 72 ppb), PCE (up to 1900 ppb), and other chlorinated hydrocarbons were detected in the groundwater at the facility (see appendix E). As a result, MD DHMH inspected the facility on May 2, 1984 and filed a site complaint against Black and Decker for water pollution and controlled hazardous substances violations including leaking hazardous waste containers, lack of a hazardous waste containment structure, and potential drainage of hazardous wastes into surface runoff. MD DHMH also conducted a compliance monitoring inspection on May 7, 1984. Sampling was conducted by state representatives during each of these May inspections. Analysis results indicated volatile organic compound (VOC) contamination in soils and surface water at various locations on the Black and Decker property, including concentrations of PCE at 72 ppb in underdam drainage from the west lagoon (see appendix F for MD DHMH reports and appendix G for the Geraghty and Miller, Incorporated consultant report, which includes MD DHMH sampling results).^{7,20,21}

Sampling of the wells at several residences downgradient of the subject facility was conducted in May and November 1984 by county representatives. The Leister dairy barn well, which is about 110 feet deep, was found to contain up to 4 ppb PCE. The Richards dairy farm well was found to contain 15 ppb 1,2-dichloroethane (1,2-DCEA). Several nearby homes and a shallow dug well (60 feet deep) used in the Leister farmhouse contained no significant levels of VOCs (see appendix H).^{22,23}

In June 1984, samples collected from potable water supplies for employees at the Black and Decker facility revealed up to 6ppb TCE and 3ppb PCE, in addition to several other VOCs (see appendix I).²⁴

22-21-32
10/1

On September 17, 1984, Black and Decker entered into a Consent Order with MD DHMH. In compliance with the order, the company performed an investigation of groundwater conditions at its Hampstead facility. Phase I of this investigation, completed by Geraghty and Miller, Incorporated in March 1985, involved a compilation of past sampling data and included a summary of the geology and hydrogeology at the facility and the construction details of the production wells (see appendices G and J).^{22,25}

A RCRA Compliance Evaluation Inspection was conducted at the facility on August 16, 1985. A containment structure for hazardous waste storage had been constructed since the MD DHMH inspection. RCRA inspectors noted storage of hazardous waste over 90 days in an inspection report (see appendix K). The report included November 1984 sludge sample results from Black and Decker's holding pond revealing lead concentrations of 330 ppm.²⁶

In September 1985, Phase II of the groundwater investigation was completed by Geraghty and Miller. The investigation focused primarily on the area south of PW-7 as a source of PCE contamination. Information collected from Black and Decker employees indicated that this area was used by the company as a disposal area in the past. Three source areas of buried substances (allegedly off-specification equipment) were identified utilizing geophysical surveys (see appendix L for report). Twenty-one monitoring wells were installed by Geraghty and Miller in April 1985 on Black and Decker's property. The majority of the wells were located in the vicinity of the three identified source areas (see appendix L, figure 4). Groundwater sampling of the wells revealed levels of PCE up to 1,400 ppb in MW B-1 and W-4; PCE concentrations were found to increase with the groundwater depth. Geraghty and Miller also collected samples from three seeps west of the landfill disposal area. PCE levels up to 310 ppb were detected. Further evaluation of the source areas and a recovery system for contaminated groundwater were recommended by Geraghty and Miller.²⁷

On September 5, 1985, MD DHMH performed an inspection at Black and Decker to determine compliance with Toxic Substances Control Act (TSCA) regulations. Three non-leaking transformers with PCB-contaminated oils were identified at the facility. Information from Mr. Grimes and from 1988 and 1989 hazardous waste reports indicates that the electrical transformers were drained of PCB-contaminated oil and replaced with non-PCB oil (see appendix M for hazardous waste reports).^{5,28,29,30}

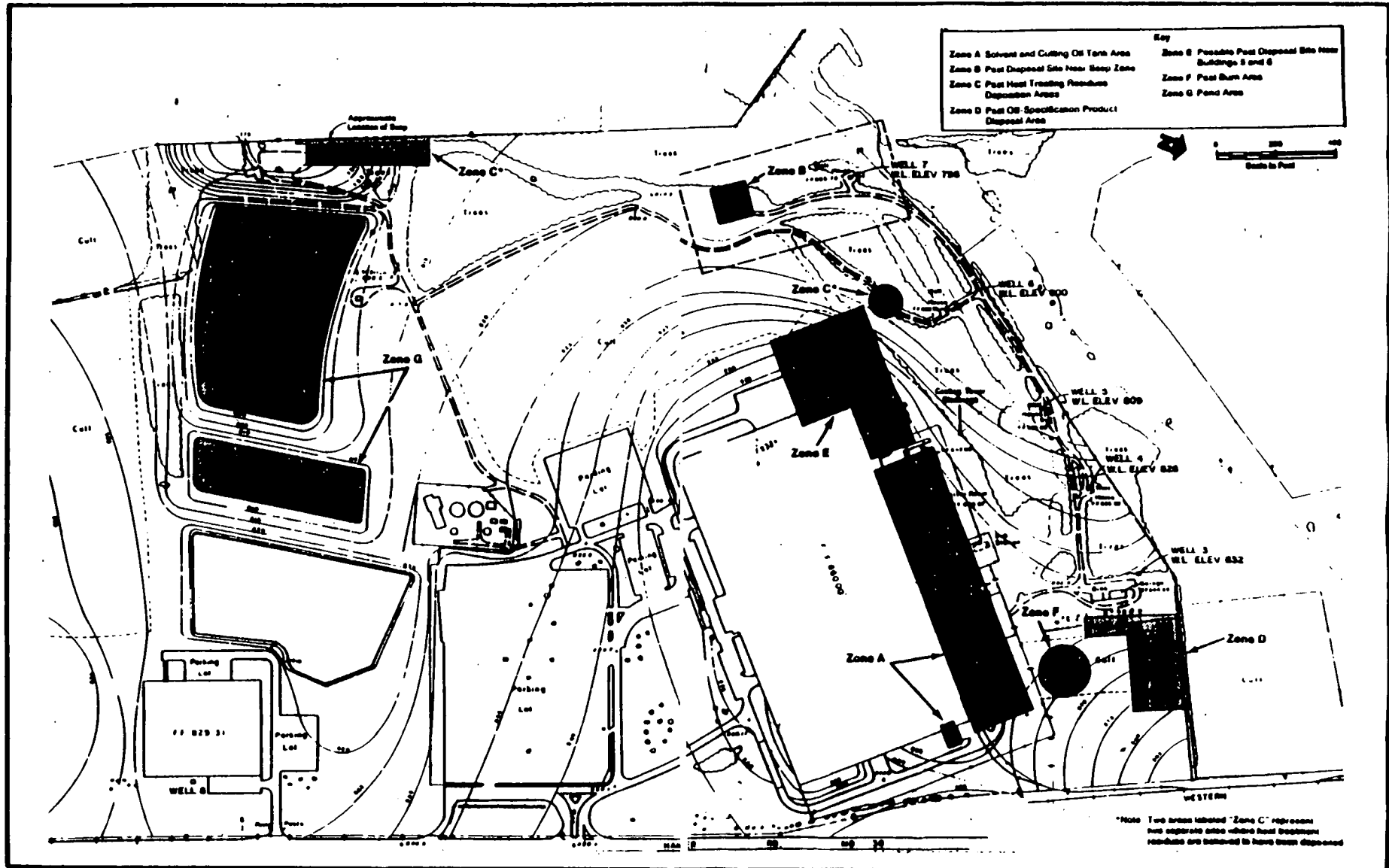
MD DHMH conducted home well sampling in the areas surrounding Black and Decker on several occasions in 1985 and 1986 (see appendix N). Varying levels of PCE and TCE were detected in several wells. The Leister dairy barn contained up to 9 ppb PCE. A TCE level of 2 ppb was detected in wells at 4321 Hampshire Road and at the Mosner and Harner residences. MD DHMH also collected surface water samples downstream of the subject facility on Deep Run; no contaminants were identified (see appendix O).^{31,32,33}

In August 1986, BCM Eastern, Incorporated (consultants) performed a soil boring investigation at Black and Decker; the investigation was requested by MD DHMH. The purpose of the study was to determine whether contaminant sources could be detected in the source areas identified by Geraghty and Miller in 1985 and whether groundwater remediation could be expedited by excavation and/or treatment of the soil in the landfill source areas. Soil borings and subsurface sampling were conducted in each of the three source areas identified by Geraghty and Miller and verified by BCM with geophysical surveys. No significant levels of TCE or PCE contamination were found in any of the areas (see appendix P for report and results). BCM installed an air-stripper tower at the facility in December 1986.^{34,35}

Black and Decker contracted Weston in 1987 to perform an environmental investigation of the subject facility. The first phase was conducted in November and December 1987 and utilized environmental sampling, test pit excavations, and geophysical surveying in an effort to identify potential sources of groundwater contamination.^{6,9}

According to an April 1989 Weston report, seven areas were identified as possible sources of groundwater and/or soil contamination based on discussions with Black and Decker employees and previous investigations (see figure 2.3, page 2-12, and appendix Q).⁶

Zone A, the storage tank areas, consisted of tank farm no. 1, tank farm no. 2, and the above-ground storage tank area. Tank farm no. 1 consisted of 13 underground tanks containing oils and solvents; tank farm no. 2 consisted of 5 underground tanks that contained processing oils and waste oils (see appendix Q, table 3-1, for inventories of tank farm nos. 1 and 2). The above-ground storage tank area consisted of two 5,000-gallon above-ground tanks containing TCE and a solvent called UCAR. The underground tanks in the tank farms were excavated, cleaned, and backfilled, according to the Weston report. No further information is available on the closure of the underground tanks. The old TCE storage tank was also removed; a new diked TCE storage tank and tanks for methanol and liquid nitrogen were located in this area at the time of the Weston investigation.⁶



SOURCE: ROY F. WESTON, INC. ENVIRONMENTAL INVESTIGATION REPORT, BLACK & DECKER, INC., HAMPSTEAD, MARYLAND FACILITY, APRIL, 1989.

WESTON PHASE 1 AREAS OF INVESTIGATION MAP

BLACK & DECKER

(SCALE ABOVE)

FIGURE 2.3



Zone B was identified in the western portion of the property as an alleged site of past plant refuse disposal. Fill material was found during Weston's test pit excavations in this area.⁶

Zone C consisted of two areas. The northern area may have received residues from the heat-treating furnaces. The southern area received debris from the furnaces in addition to furnace fragments and brick.⁶

Zone D was identified as an area of past off-specification product disposal. Fill material, including power tool parts, was encountered during Weston's excavations in this zone.⁶

Zone E was allegedly used for deposition of heat-treating residues. This area has been filled and regraded several times during construction at the plant. No fill material was found during soil borings in Zone E.⁶

Zone F was possibly used in the past as a burn area for off-specification products, plastic parts, and other materials before their disposal. Fill material was not encountered in Weston's excavations in Zone F.⁶

Zone G included the east lagoon, which serves as a surge-detention basin for wastewater, and the west lagoon, a receiving pond for treated wastewater and noncontact cooling water.⁶

Analytical results from each of these seven areas indicated that zones B, C, D, E, F and the above-ground storage tank area in zone A were not current sources of groundwater contamination at the Black and Decker facility. Significant levels of TCE (up to 2.4 ppm), PCE (up to 380 ppm), and petroleum hydrocarbons (TPH) (up to 150,000 ppm) were detected in soils from underground tank farm nos. 1 and 2. Sampling of sediment and surface water in the lagoons revealed elevated levels of VOCs, including TCE (up to 480 ppb), PCE (up to 16 ppb), and toluene (up to 8,300 ppb). Elevated levels of several inorganic compounds were also detected (see table 3-13, appendix Q). Further characterization of the lagoons and the underground tank farms was recommended by Weston.⁶

Weston's Phase II investigation attempted to further characterize the extent of organic contaminants in the Zone A underground storage tank areas, evaluate the local hydrogeology to identify the probable contaminant migration pathways, and assess the groundwater quality at the Black and Decker facility. A total of 17 monitoring wells were installed: 13 on the western half of the property and 4 on the eastern half (see appendix Q).⁶

Sampling of tank farm no. 1 soils revealed elevated concentrations of TPH (up to 14,000 ppm), toluene (up to 4,600 ppm), ethylbenzene (up to 120 ppm), xylene (up to 310 ppm), PCE (up to 1 ppm), and TCE (up to 0.03 ppm) (see appendix Q, table 4-1). According to Weston, these results, in addition to TCLP results, indicated that TPH and VOCs were present below concentrations necessary to significantly impact groundwater on site. However, a preliminary report prepared by MDE HSWMA in February 1990 states that these contaminants are present in significant quantities in the soil to affect groundwater and should be remediated.^{6,9}

TPH, PCE, TCE, 1,1,1-TCEA, and benzene were detected in soils from tank farm no. 2 at concentrations up to 93,000 ppm, 70 ppm, 1.6 ppm, 0.52 ppm, and 1.5 ppm, respectively. Weston concluded that contaminants were present at significant concentrations and quantities to potentially migrate into groundwater on site. Soil remediation was recommended for this area. According to the Weston report, the lagoons did not present a source of continuing groundwater contamination.⁶

The Phase II groundwater quality investigation confirmed that the major contaminants of concern in groundwater at Black and Decker are PCE and TCE. Concentrations of PCE up to 3,100 ppb and TCE up to 1,700 ppb were detected during groundwater sampling in late 1988. Separate plumes of PCE and TCE contamination were identified; TCE was determined to be the primary groundwater contaminant in the eastern half of the plant, and PCE was the predominant groundwater contaminant in the western section of the plant. A groundwater recovery plan was recommended by Weston to treat contaminated groundwater on site and to prevent off-site migration of contaminated groundwater.⁶

A work plan for soil and groundwater remediation was submitted to MDE HSWMA in December 1989 by Weston. At the time of the FIT 3 site visit, this plan had not yet been approved by MDE.^{4,9}

MD DHMH sampled several area home wells in 1988. TCE was detected up to 2 ppb; various other volatile organic compounds were also identified (see appendix R). Sampling of the Leister barn well indicated PCE contamination at 5 ppb in August 1989 and 4 ppb in May 1990 (see appendix R).³⁵

In January 1990, MD DHMH conducted a generator/treatment, storage, or disposal (TSD) facility inspection at Black and Decker. Several violations were noted, including lack of hazardous waste storage area inspections, lack of an updated spill plan and compliance with the current spill plan, and lack of personnel training.³⁶

MDE HSWMA sampled two recently constructed production wells in the town of Hampstead's well field during July 1990. The closest well is located 1,350 feet east of the subject site. No contamination was detected in either well. Installation of two monitoring wells between Black and Decker's property and the well field was proposed by Weston under MDE's guidance. MDE information indicates that installation of these wells has been postponed due to access problems.^{1,37,38,39,40}

MDE HSWMA conducted surface water and outfall discharge sampling at Black and Decker in July and August 1990. TCE levels of 1,300 ppb and 7 ppb were detected in the contaminated waste holding basin and in the discharge stream, respectively. A PCE concentration of 63 ppb was also detected in the stream (see appendix S).^{41,42}

Groundwater sampling by Weston at Black and Decker in August 1990 indicated continued elevated TCE and PCE levels. TCE was detected at 12,000 ppb in MW RFW-12 and 40 ppb in PW-6. PCE concentrations of 1,600 ppb in MW B-1 and 3,100 ppb in PW-7 were detected (see appendix T).⁴³

Black and Decker holds NPDES Permit No. MD0001881 and state discharge permit no. 88-DP-0022 for effluent from the west lagoon. Information concerning the original date of issue of the NPDES permit is unavailable; the current permit expires on March 7, 1993. Two other outfalls are noted in the permit (see appendix U). These outfalls are for storm water discharge only.⁴⁴

According to MDE Air Management Administration information, Black and Decker holds registrations for two boilers, the on-site air stripper, and the heat-treating furnace. The respective registration permit numbers are 4-0063, 4-0062, 9-0049, and 6-0119.^{45,46}

2.6 Remedial Action to Date

In May 1977, Black and Decker informed the Department of Natural Resources of Maryland of a spill that occurred at its facility on March 15, 1977. Mechanical failure of a process water transfer pump caused an uncontrolled discharge to Deep Run of about 40,000 gallons of process water. Flow was diverted into the on-site lagoon, and the pump was repaired. A sample of the process water discharge was collected, it was within the discharge permit limitations (see appendix V for results).⁸

In May 1984, Black and Decker installed carbon filters on the facility potable water supply system as a result of VOC groundwater contamination detected in the plant's on-site production wells. An air stripper was installed by BCM engineers in December 1986 and connected to the five on-site production wells. The treated water is the plant's sole potable water supply.⁵

Black and Decker installed four in-line granular-activated charcoal filter (GAC) units in the Leister dairy barn in October 26, 1987 under MDE direction. The filter installation was a result of an agreement with Black and Decker to provide potable water to the farm due to PCE contamination.⁴⁷

Eighteen underground storage tanks were excavated, cleaned, and backfilled in the early to mid-1980s, according to Mr. Grimes. Further information concerning closure of these tanks is unavailable. An old TCE storage tank was also removed; a new diked TCE storage tank was constructed in its place.^{4,6}

In 1988 and 1989, PCB-contaminated oil was drained from non-leaking electrical transformers on site and removed as hazardous waste.^{5,28,29,30}

SECTION 3



3.0 ENVIRONMENTAL SETTING

3.1 Water Supply

Residents in the study area are served by municipal and private water supplies. The City of Hampstead Water Department (CHWD) is the only public water supplier in the study area. This system serves a population of approximately 2,800 people within the corporate limits of the city of Hampstead. Water is obtained from 10 wells that are located around the city. Eleven other wells are not currently in use. The yields for these wells range from 21 to 80 gallons per minute (gpm). The locations of these wells in relation to the site are given in the following table.^{1,48,49}

Well	Distance (feet)	Direction	Depth (feet)
TW-N-3	3,000	east	161
TW-L	2,800	east-northeast	161
PW no. 23	2,100	northeast	102
PW no. 22	1,350	northeast	132
PW no. 15	1,800	north-northeast	not available
PW-C-2	3,000	west-northwest	162
PW-1	4,800	northwest	203
PW-A3	3,400	northwest	200
PW-13	3,000	north-northeast	not available
TW-7	5,300	northwest	123
TW-5	5,500	northwest	223
TW-3	5,500	northwest	115
PW-25	6,500	north-northwest	148.5
PW no. 24	6,400	north-northwest	173.5
PW no. 12	8,400	north-northwest	not available
PW no. 11	8,700	north-northwest	not available
PW no. 10	8,800	north-northwest	not available
PW no. 21	9,900	northwest	not available
PW no. 20	9,800	northwest	not available
18	12,900	northwest	not available
19	12,800	northwest	not available

Apportionment data for these sources are unavailable. The state of Maryland does not collect the production data for individual wells in the CHWD system. The total production for 6 of the wells that CHWD is permitted to draw from was 237,717 gallons per day (gpd) for the year 1990. No other production data are currently available from the state. The 10 wells that are currently producing are nos. PW-7, 11, 12, 13, 18, 19, 20, 21, 22, and 23. CHWD has no interconnections and does not sell or purchase water from any other source. 1.48.49

The remainder of the population within the study area (approximately 5,925 people) is assumed to rely on private wells for drinking water. This figure is based on a count of homes outside public water service, multiplied by 3.02 persons per home. The nearest home well is about 100 feet northeast of the site. The private wells range in depth from hand-dug wells, which are most likely less than 50 feet deep, to drilled wells approximately 200 feet deep (see appendix Z). These wells produce from the Wissahickon Formation; the median yield of wells in this unit is 16 gpm. No surface water intakes are located within 15 downstream miles of the site. 1.48.50.51

The total population dependent on groundwater within the study area is approximately 9,475 people. This figure includes the population utilizing private wells, the population served by CHWD, and the employees at the Black and Decker plant. The populations dependent on groundwater sources for potable supply within the study area are as follows: 1.4.48.49.51

<u>Radius from Site</u>	<u>Population</u>
0 to 1/4 mile	0 residents, 750 Black and Decker employees
1/4 to 1/2 mile	297
1/2 to 1 mile	1,855
1 to 2 miles	1,848
2 to 3 miles	2,140
3 to 4 miles	2,585

3.2 Surface Waters

The direction of surface water drainage varies in different portions of the site. Surface water runoff from the northeastern corner of the property drains in an eastward direction for 0.6 stream mile into an intermittent tributary of Piney Run. The stream becomes perennial and joins Piney Run 0.3 stream mile downstream. Piney Run flows southeastwardly approximately 7.6 stream miles into Western Run. Piney Run and Western Run are classified by the state of Maryland as Class III streams (natural trout streams).^{1,4,52}

Surface water runoff from the remainder of the Black and Decker property eventually flows into a tributary of Deep Run. Storm water drains collect runoff from the area immediately surrounding the main building. The drains north of the main building empty into the facility's drainage swale (see figure 2.2, page 2-3), which flows into the west lagoon. Most of the drains south of the main building lead to the east lagoon. The Bank building storm water pond receives rain water from Black and Decker's southern roof drains and surface runoff from Black and Decker's parking areas and driveways. Water from the east lagoon is pumped into the facility's industrial waste treatment plant and is discharged into the west lagoon after treatment is complete. The west lagoon discharges via outfall no. 001, forming a stream, which flows about 0.2 stream mile into a tributary of Deep Run west of the facility. Effluent from the Bank building storm water pond discharges via an underground pipe into the concrete culvert below the west lagoon; it combines with the outfall no. 001 discharge to form a small stream.^{1,4}

Surface water from the remainder of the property flows into the on-site drainage swale, the stream formed by outfall discharge, or a tributary of Deep Run. The drainage swale leads to the west lagoon. A flow diversion structure in the swale controls the direction of water flow in the swale. In normal situations, overflow in the swale would flow to the ground surface near the former deposition area for heat-treating furnaces. The stream formed by the outfall discharge is described above. The tributary of Deep Run, which is intermittent northwest of the facility and becomes perennial west of the facility, flows in a southward direction, joining Deep Run 1.7 stream miles downstream. Deep Run flows in a southward direction approximately five stream miles before entering the North Branch of the Patapsco River.^{1,4}

Deep Run and the North Branch of the Patapsco River are classified by MDE as Class IV streams (recreational stocked trout streams).⁵²

No wetlands more than five acres in size exist within one stream mile downstream of the site. Several wetland areas less than five acres can be found within this distance.⁵³

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

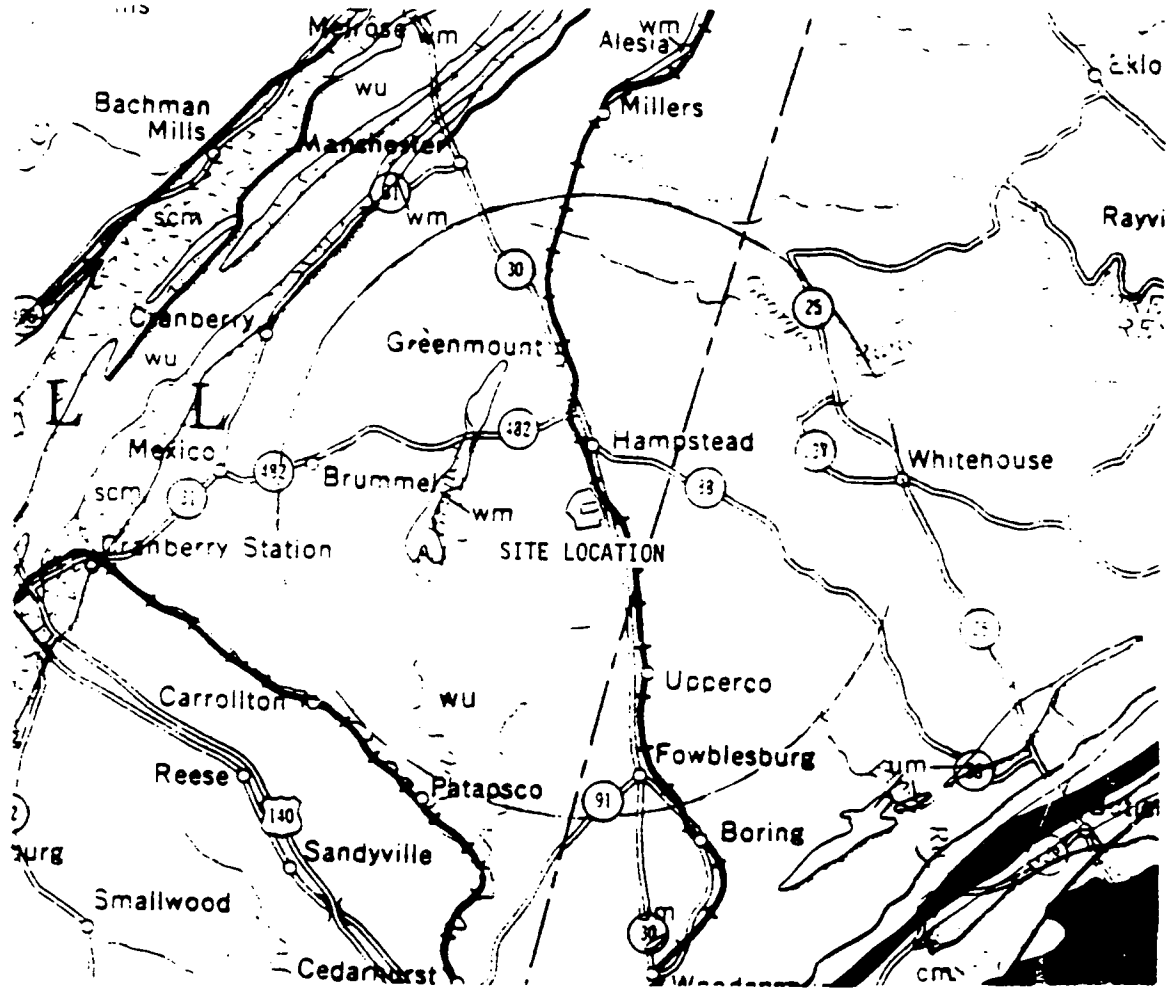
The site is located in the Eastern Division of the Piedmont Upland Physiographic Province of northeastern Maryland (see figure 3.1, page 3-5). The Piedmont Upland Province is characterized by gently rolling hills drained by many small perennial streams that form a dendritic drainage pattern. The maximum relief in the study area is approximately 550 feet. The geological units beneath the site are of late Precambrian age. The stratigraphic relationships of these units and other Piedmont metamorphic units in the region are complex and not well understood.^{1,54,55}

Underlying the site is the late Precambrian age Wissahickon Formation (undivided). This unit is composed of muscovite-chlorite-albite schist, muscovite-chlorite schist, chloritoid schist, and quartzite. The Wissahickon is intensely folded and cleaved. The cleavage pattern is platy, highly abundant, and well developed. Bedding is fissile to thin and steeply dipping. Jointing in this unit is poorly formed, steeply dipping, and irregular, with wide spacing. Cleavage and joints tend to be open. The thickness of this unit is not known.^{54,55}

The Precambrian age Wakefield marble crops out 1.2 miles west-northwest of the site in an elongate, northeast-southwest-trending outcrop approximately 1.3 miles in length. This unit is composed of predominantly white, fine-grained marble consisting of calcite and dolomite; subordinate white, pink, and green variegated marble may also be present. Jointing in this unit is similar to that in the Wissahickon. It is poorly formed, irregular, steeply dipping, and open. Gravel or clay-filled solution cavities may be present.^{54,55}



wm Wakefield marble
wu Wissahickon Fm. (undiv.)



source: Weaver, K.N., Cleaves, E.T., Edwards, J., Glaser, J.D., Maryland Geological Survey. Geologic Map of Maryland. 1968.

FIGURE 3.1

GEOLOGIC MAP
BLACK AND DECKER SITE
Carroll County, Maryland



3.3.2 Soils

The soils that occur at the site belong to six soil series that are typical of the Piedmont Upland in Maryland (see figure 3.2, page 3-7). Site-specific data may be obtained from the soil boring logs (see appendices P and W). The soils at the site appear to be generally undisturbed except for the impact caused during the construction of the facilities. The most prevalent series is the Manor loam, which occurs on slopes ranging from 0 to 15 percent, with moderate to severe erosion. The Manor loam series consists of deep, very well-drained soils of level to steeply sloping uplands. It typically consists of an organic horizon that is a dark brown loam, one to four inches thick. The subsoil is red to yellowish-brown loam and may contain quartzite, mica, or schist fragments and is 17 to 30 inches thick. The substratum is an extremely micaceous, variegated loam saprolite. The permeability of this series is moderately rapid to rapid (two to 6.3 inches per hour) throughout all horizons in the profile. The soil reaction is very strongly acid to strongly acid (pH, 4.0 to 5.5) from 0 to 23 inches below the surface and very strongly acid (pH, 4.0 to 5.0) from 23 to 90 inches below the surface.^{6, 22, 27, 34, 56}

The Glenelg loam is the next most prevalent soil series under the site and occurs on 0 to 15 percent slopes, with moderate to severe erosion. The Glenelg loam series is a deep, well-drained soil of level to steep uplands. The surface organic horizon is brown to dark brown loam, 5 to 11 inches thick. The subsoil is brown to strong brown silty clay loam, 13 to 28 inches thick. The substratum is typically a variegated, micaceous, loam-textured saprolite. The permeability for this series is moderate (0.63 to two inches per hour) throughout the entire profile from 0 to 50 inches below the surface. The soil reaction ranges from strongly acid (pH, 5.1 to 5.5) in the surface layer to very strongly acid (pH, 4.5 to 5.0) in the subsurface horizons.⁵⁶

The Glenville silt loam series (GvB, three to eight percent slopes) occurs on level to gently sloping land in upland depressions and along footslopes of drainageways. It is moderately well drained with a fragipan. The surface layer is dark grayish-brown silt loam, 8 to 10 inches thick. The subsoil is brownish-yellow, light, silty clay loam, 33 to 44 inches thick. A fragipan commonly occurs at a depth of 28 to 48 inches. The substratum is light yellowish-brown, highly micaceous saprolite, with a loam texture. The permeability of this series is moderate (0.63 to two inches per hour) and moderately slow (0.2 to 6.3 inch per hour) in the surface layer and the subsoil, respectively. The fragipan permeability is slow (less than 0.2 inch per hour), and the substratum permeability is moderate (0.63 to two inches per hour). The soil reaction is very strongly acid (pH, 4.5 to 5.0) throughout all the horizons.⁵⁶



G1A Glenelg loam (0-3% slopes)
G1B2 Glenelg loam (3-8% slopes)
G1C2 Glenelg loam (8-15% slopes)
M1B2 Manor loam (0-8% slopes)
M1B3 Manor loam (3-8% slopes)
M1C2 Manor loam (8-15% slopes)
M1C3 Manor loam (8-15% slopes)
GvB Glenville silt loam (3-8% slopes)

CeB2 Chester silt loam (3-8% slopes)
BaA Baile silt loam (3-8% slopes)
CnB Comus silt loam (3-8% slopes)



Source: United States Department of Agriculture. Soil Conservation Service. Soil Survey of Carroll County, Maryland. October, 1969.

SOILS MAP
BLACK AND DECKER SITE
Carroll County, Maryland

FIGURE 3.2



The Chester silt loam series (CeB2, three to eight percent slopes) is a deep, well-drained soil of level to sloping uplands. It commonly occurs at the crests of ridges. The organic surface layer is dark brown silt loam, 8 to 10 inches thick. The subsoil is yellowish-red clay loam that becomes more silty and micaceous with depth. This horizon is 28 to 45 inches thick. The substratum is a variegated loam saprolite. The permeability of this series is moderate (0.63 to two inches per hour), respectively, for the surface layer and the subsoil. The substratum permeability ranges from moderately rapid to rapid (two to 6.3 inches per hour). The soil reaction is strongly acid (pH, 5.1 to 5.5) in the surface layer, very strongly acid to strongly acid (pH, 4.5 to 5.5) in the subsoil, and very strongly acid (pH, 4.5 to 5.0) in the substratum.⁵⁶

The Baile silt loam series (BaA, three to eight percent slopes) consists of poorly drained soils of upland depressions and at the footslopes of drainageways. The surface organic layer is dark gray silt loam, seven to nine inches thick. The subsoil is gray, mottled heavy silt loam, 26 to 39 inches thick. The substratum is greenish-gray, highly micaceous saprolite of loam texture. The permeability of this series is moderately slow to moderate (0.2 to 0.63 in the per hour) in the surface layer and slow (less than 0.2 inch per hour) throughout the remainder of the profile. The soil reaction ranges from very strongly acid to strongly acid (pH, 4.5 to 5.5) in all horizons.⁵⁶

The Comus silt loam series (CnB, local alluvium, zero to three percent slopes) is a deep, well-drained soil of flood plains and depressions. These soils may occasionally flood during wet seasons. The organic surface layer is dark grayish-brown silt loam, 10 to 12 inches thick. The subsoil is yellowish-brown silt loam, 24 to 42 inches thick. The substratum is weakly stratified yellowish-brown silt loam. The permeability is moderate (0.63 to two inches per hour) in the surface layer and moderately rapid to rapid (two to 6.3 inches per hour) in the subsoil. No permeability measurement for the substratum is available. The soil reaction ranges from strongly acid (pH, 5.1 to 5.5) in the surface layer to very strongly acid (pH, 4.5 to 5.0) in the subsoil.⁵⁶

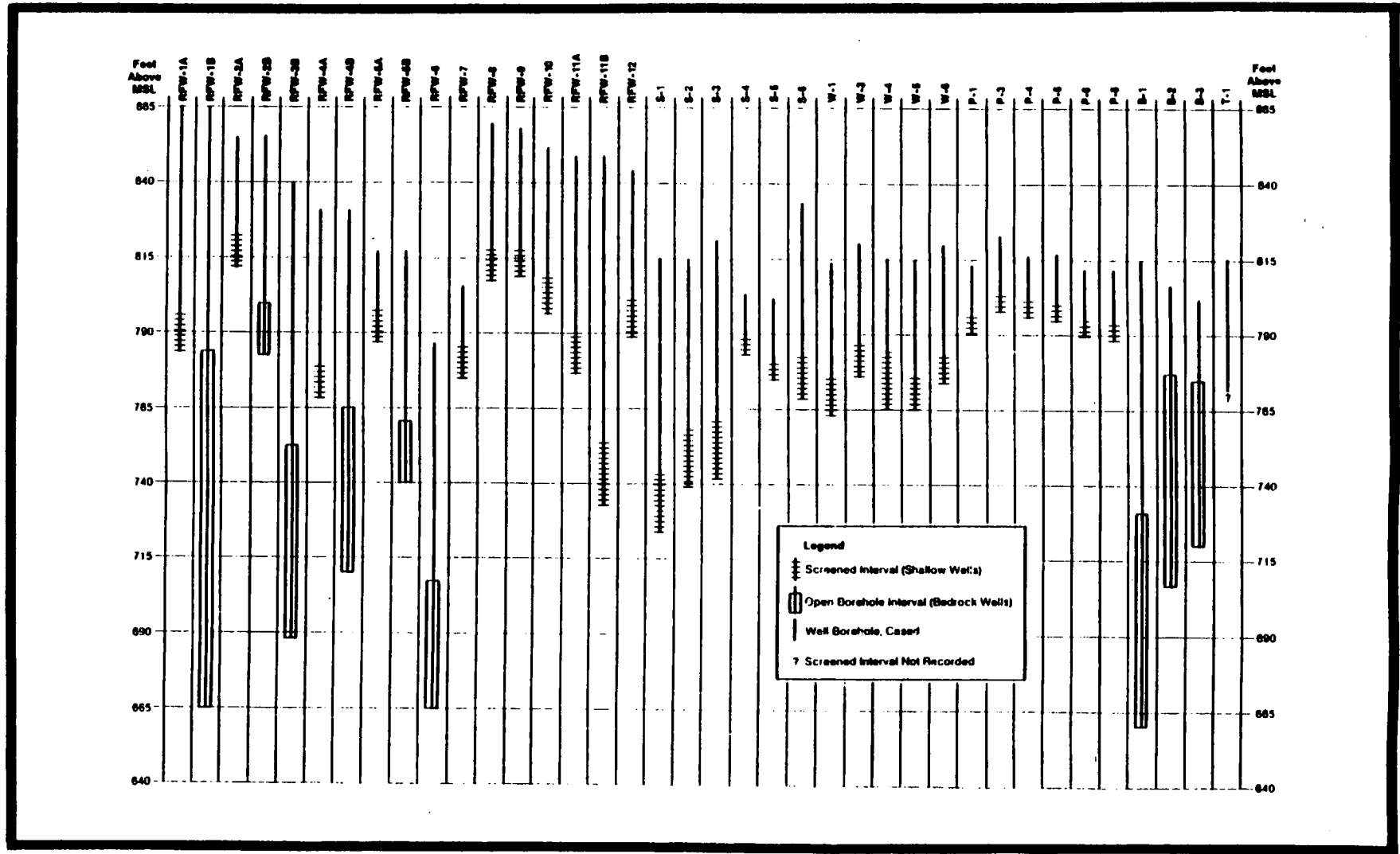
3.3.3 Groundwater

All the lithologic units in the study area are water bearing. Groundwater occurs under water-table conditions. The recharge of groundwater is through the infiltration of precipitation. Precipitation that is not absorbed flows as runoff to streams and wetlands or is returned to the atmosphere through evaporation. No wetlands more than five acres in size are located within three downstream miles of the site. Groundwater discharge is to pumping wells and to the baseflow in streams and rivers. Groundwater storage and movement occur within the fracture-induced secondary porosity of the crystalline rocks and the primary intergranular porosity of the overlying saprolite. Because of the lack of discrete hydrologic units, the geologic units in the study area are considered to be hydrologically interconnected.^{54,55}

The Wakefield marble is an important aquifer despite its small geographic extent. Solution cavities and the widening of joints by dissolution of the marble contribute to greater secondary porosity than in the surrounding Wissahickon Formation. The yields of 27 wells drilled into the Wakefield marble range from 0 to several hundred gpm, with an average of 106 gpm. The maximum reported yield is 575 gpm. The average well depth of 35 wells drilled into this is 139 feet. Specific capacity has been measured as 8.2 gpm per foot of drawdown in one well in this unit. The static water level at the time that these data were collected was 34.0 feet below top of casing in one well.⁵⁵

The Wissahickon Formation is a reliable source of groundwater in small to moderate supplies and is an important aquifer in the region. Yields from 120 wells drilled into this unit range from 0 to 300 gpm, with a median of 16 gpm. The depths of these wells range from 21 to 645 feet and average approximately 100 feet.⁵⁵

A hydrogeologic investigation was conducted at the site in 1988. Monitoring wells were installed such that the potentiometric surface of groundwater in the Wissahickon Formation bedrock and the overlying saprolite mantle could be measured (see figure 3.3, page 3-10). Data from the monitoring wells indicate that the saprolite ranges in depth from 30 to 96 feet below surface.^{6,27,34}



Source: Roy F. Weston, Inc., Environmental Investigation Report, Black and Decker, Incorporated, Hampstead, Maryland Facility. April 1989.

FIGURE 3.3

MONITORING WELL CHARACTERISTICS
 BLACK AND DECKER SITE
 Carroll County, Maryland



ORIGINAL
5-7

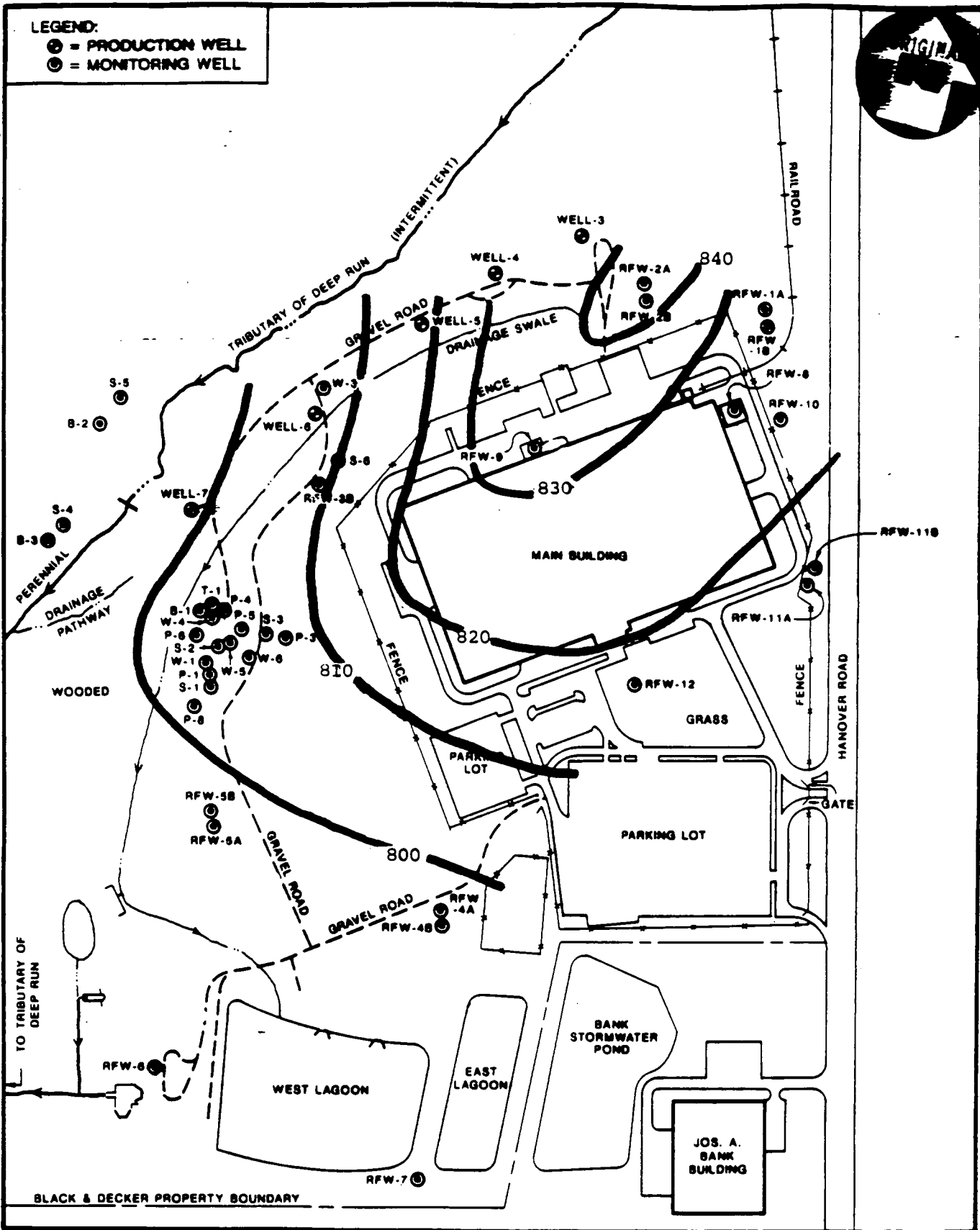
The yields that were obtained from the shallow wells were generally greater than 10 gpm. Within the underlying bedrock, the yields ranged from less than 0.5 to 60 gpm. Typically, groundwater entered these wells from one or two fractures or quartz-filled veins. The fractures commonly occur within 50 feet of the bedrock-saprolite interface. Well logs for all monitoring wells located at the site are located in appendices L and X. Seven production wells are located at the site (see table 1, appendix G). The locations for production well nos. 8 and 9 are unavailable at this time. These wells are cased with open borehole completions. These wells range in depth from 125 to 302 feet. The range of depths of the cased portions of these wells is from 58 to 123 feet.^{6,22,27,34}

Data from monitoring wells were used to construct groundwater contour elevation maps for water obtained from the saprolite zone (see figure 3.4, page 3-12) and from water obtained from the bedrock (see figure 3.5, page 3-13). The results indicate that, in both sets of wells, the groundwater elevation surface tends to mirror the topography of the land surface. Thus, the two units are hydrologically interconnected. In addition, the site appears to occupy a groundwater divide. This groundwater ridge has a northeast-southwest trend that approximates topography at the site. The flow of groundwater under the site is predominantly to the southwest, with an eastward flow direction under a small portion of the northeastern corner of the site. The depth to groundwater, as determined from monitoring wells, is an average of approximately 13.4 feet below ground surface, with a range of 8 to 20 feet.^{6,27,34}

No wetlands more than five acres in size are located within the study area.⁵³

3.4 Climate and Meteorology

The subject site is located within the humid continental climate of the United States. The annual temperature for Baltimore, Maryland, which is located approximately 25 miles southeast of the site, is 55.3°F. The average monthly temperatures range from 33.2°F in December to 78.7°F in July. The average annual precipitation for Baltimore, Maryland is 51.03 inches. The average monthly precipitation ranges from 1.31 inches in July to 6.72 inches in December. The mean annual lake evaporation for the area of the site is approximately 19.03 inches. The net annual precipitation for the site area is approximately 19.03 inches. A 2-year, 24-hour rainfall will produce approximately 3.2 inches of rain.^{57,58,59,60}

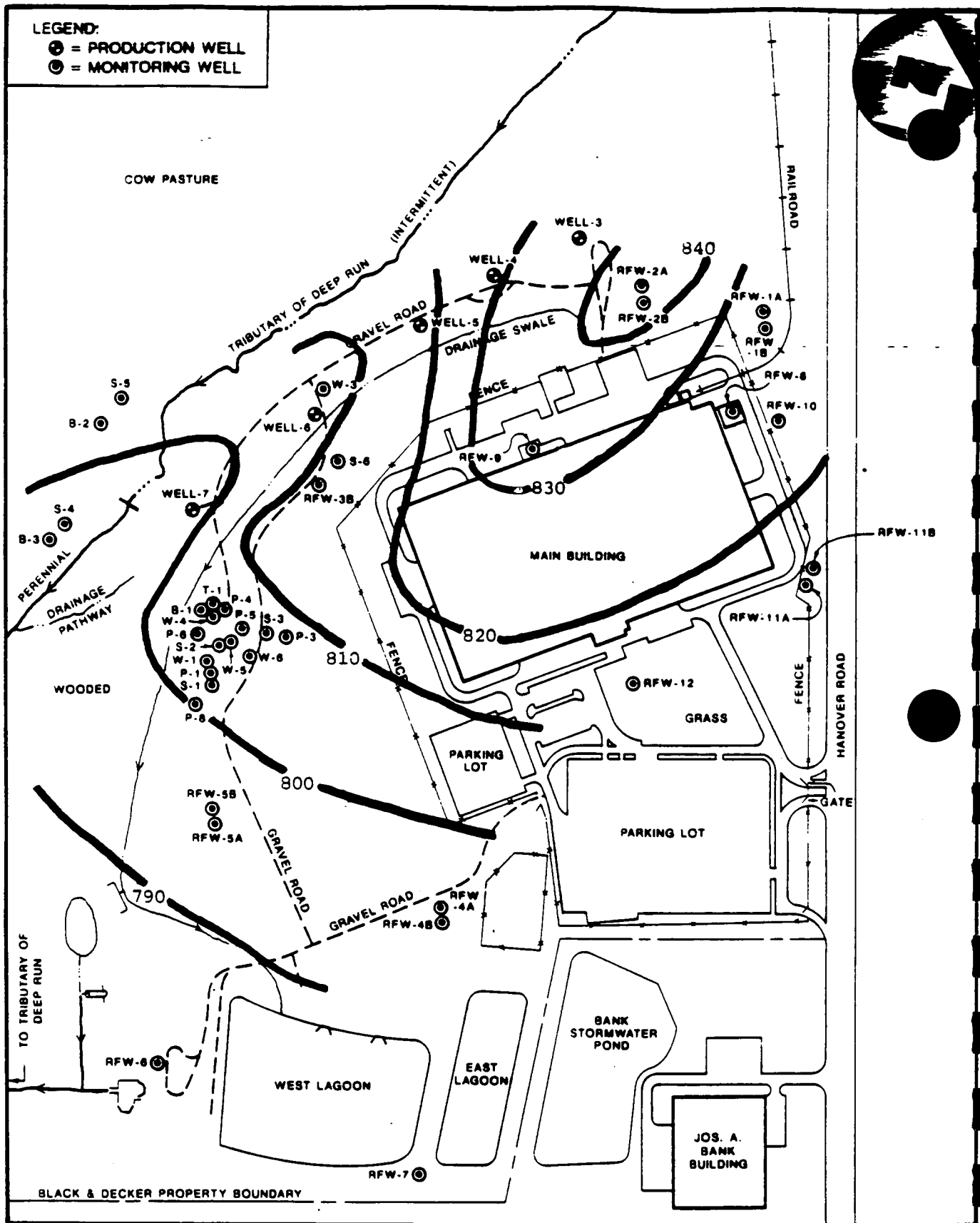


Source: Roy F. Weston, Inc., Environmental Investigation Report, Black and Decker, Incorporated, Hampstead, Maryland Facility. April 1989.

FIGURE 3.4

SHALLOW GROUNDWATER ELEVATION CONTOUR MAP
 BLACK AND DECKER SITE
 Carroll County, Maryland





Source: Roy F. Weston, Inc., Environmental Investigation Report, Black and Decker, Incorporated, Hampstead, Maryland Facility. April 1989.

FIGURE 25

DEEP GROUNDWATER CONTOUR ELEVATION MAP
 BLACK AND DECKER SITE
 Carroll County, Maryland



ORIGINAL
(Red)

3.5 Land Use

The site is surrounded by a combination of residential, commercial, and farming areas. Black and Decker leases the land directly north and west of the facility to local dairy farmers. The town of Hampstead, Maryland lies immediately north of the subject site. A shopping center is located east of the facility. The Joseph A. Bank building, which is adjacent to the southeastern corner of the property, is a clothier warehouse and distribution center. General land use south of the property is primarily rural residential.^{1.4.5}

Dairy and agricultural farming areas surround the site within the three-mile radius. Several small rural towns can also be found in this area. State Route 30 bisects the three-mile radius directly east of the Black and Decker facility and is aligned north to south. State Route 89 runs along the northwestern border of the property in a northeast to southwest direction. The Carroll and Baltimore County line bisects the radius approximately 0.6 mile east of the site.^{1.4.5}

3.6 Population Distribution

The estimated population within a 1/4-mile radius of the site is 0 persons; within a 1/4- to 1/2-mile radius and a 1/2- to 1-mile radius, the estimated populations are 297 and 1,855 persons, respectively. The estimated population within a 1- to 2-mile radius of the subject site is 1,848 persons. Within a 2- to 3-mile radius of the subject site, the population is 2,140 persons; within a 3- to 4-mile radius of the site, the population is 2,585 persons. The total population within a 4-mile radius of the site is approximately 8,725 persons. These figures are based on a house count of homes in the area multiplied by the number of persons per household for Carroll County, Maryland and on information from CHWD.^{1.48.51}

3.7 Critical Environments

Except for occasional transient individuals, no federally listed or proposed endangered or threatened species are known to exist in the study area.⁶¹

SECTION 4

4.0 WASTE TYPES AND QUANTITIES

The subject facility manufactured power hand tools from 1952 to 1987. Numerous paints, oils, and solvents were utilized in Black and Decker's manufacturing processes. In correspondence to MD DHMH, Black and Decker reported using 20,000 gallons per year of TCE and 7,200 gallons per year of 1,1,1-TCEA.^{6.62}

According to reports from several Black and Decker consultants, various waste materials were disposed in scattered areas on the facility property. Off-specification products were buried in an area north of the plant (see figure 2.3, page 2-12, zone D); fill and debris were encountered in excavations in this zone. Heat-treating furnace parts and residues were allegedly deposited in areas west and south of the plant (zones E and C). Plant refuse was landfilled in an area west of the plant (zone B); scrap metal, bricks, and burnt wood were found during test pits excavated in this zone. Another area (zone F) was possibly used as a burn area for waste materials.^{6.22.27}

Two on-site lagoons have been used by the facility for wastewater treatment since 1978. The surge basin or east lagoon is six feet deep and two acres in size; it can hold four million gallons. The west lagoon is 13 to 14 feet deep and 8 acres in size; it can hold 10 to 12 million gallons.^{4.5.6}

Information from recent hazardous waste reports and manifests and a state inspection report indicates that the wastes currently generated include TCE (F001), 1,1,1-TCEA (F001), mineral spirits (D001), and used oils (D001) (see appendices M and Y). These waste codes were derived from recent hazardous waste reports and may not represent all wastes present on site. Waste quantities generated in 1989 were as follows: TCE, 14,950 pounds; 1,1,1-TCEA, 4,000 pounds; solvents, 2,000 pounds; and used oil, 1,200 pounds. According to an MDE report, wastes generated in the past included waste barium compounds, polychlorinated biphenyls, and toluene, in addition to the above-mentioned waste substances. Information concerning waste generation and handling before 1982 is unavailable.^{8.29.30.36.63}

FIT 3 sampling in February 1991 revealed elevated levels of organic compounds in on-site groundwater, including 1,1-dichloroethene (up to 7 ppb), 1,1-dichloroethane (up to 8 ppb), total 1,2-dichloroethene (up to 29 ppb), 1,1,1-TCEA (up to 37 ppb), TCE (up to 12,000 ppb), and PCE (up to 1,800 pb). Sampling of surface water from the west lagoon, outfall no. 001, and the Banks building outfall indicated levels of TCE at 18 ppb, 15 ppb, and 7 ppb, respectively. Elevated levels of TCE and PCE were detected in surface water (TCE, 6 ppb and PCE, 89 ppb) and sediment (TCE, 5 ppb and PCE, 46 ppb) obtained from the west lagoon underdrain. Samples from Deep Run Tributary revealed levels of TCE (7 ppb) and PCE (5 ppb) in surface water and TCE (2 ppb) in sediments.

Sampling of domestic wells east of the subject site indicated elevated levels of 1,1,1-TCEA (4 ppb), TCE (up to 2 ppb), and PCE (0.9 ppb). The Leister dairy barn well was found to contain 4 ppb PCE.

SECTION 8

5.0 FIELD TRIP REPORT

09:G
(Red)

5.1 Summary

On Tuesday and Wednesday, February 26 and 27, 1991, NUS FIT 3 members Linda Ciarletta, Janis Hottinger, Thomas Smith, Steven Sottung, Paul Davis, John Pugh, Ronald Dabravalskie, Thomas Ferrie, and Mary Williams performed a site inspection of the Black and Decker site in Carroll County, Hampstead, Maryland. Weather conditions on both days were partly sunny, with temperatures in the mid-30s. On Tuesday, February 26, 1991, FIT 3 was accompanied by Lynnette Elser, of EPA, and Phyllis Buff, of MDE. FIT 3 was accompanied on both days by J. David Cairns, Black and Decker's consultant from Roy F. Weston, Incorporated. Access to the site and permission to take photographs were granted by LaVere Grimes, the facility manager.

The total number of samples obtained was 34 aqueous, 13 solids, and 8 filtered, including blanks and duplicates (see figures 5.1 and 5.2, pages 5-5 and 5-6). Photographs were taken on site (see figures 5.4 and 5.5, pages 5-10 and 5-11, and the photograph log, section 5.5).

5.2 Persons Contacted

5.2.1 Prior to Field Trip

Lynnette Elser
Site Investigation Officer
U.S. EPA
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, PA 19107
(215) 597-8333

LaVere Grimes
Black and Decker Facility Manager
Black and Decker (U.S.), Incorporated
Facilities Group
626 Hanover Pike
Hampstead, MD 21074
(301) 239-5555

Phyllis Buff
Groundwater Investigation Division
MDE
2500 Broening Highway
Baltimore, MD 21224
(301) 631-3493

Arlene Weiner
Groundwater Investigation Division
MDE
2500 Broening Highway
Baltimore MD 21224
(301) 631-3493

John Riley
Hampstead Water Department
1034 Carroll Street
Hampstead, MD 21074
(301) 374-2761

George Vaughn
Home Owner
511 Houcksville Road
Hampstead, MD 21074
(301) 374-9218

11/11/77
(2)

5.2.1 Prior to Field Trip (continued)

John Vaughn
Home Owner
513 Houcksville Road
Hampstead, MD 21074
(301) 374-1366

Stanley Gilmore
Home Owner
716 Houcksville Road
Hampstead, MD 21074
(301) 374-9218

Nick Scholtes
Home Owner
601 Hanover Road
Hampstead, MD 21074
(301) 374-9282

Carroll County Christian Center, Incorporated
802 South Main Street
Hampstead, MD 21074
(301) 374-2000

Robert Basler
Home Owner
4321 Hampshire Road
Hampstead, MD 21074
(301) 374-6436

Carroll Leister
Home Owner
717 Houcksville Road
Hampstead, MD 21074
(301) 374-9218

5.2.2 At the Site

Lynnette Elser
Site Investigation Officer
U. S. EPA
841 Chestnut Building
Ninth and Chestnut Streets
Philadelphia, PA 19107
(215) 597-8333

J. David Cairns
Geologist
Roy F. Weston, Incorporated
Weston Way
West Chester, PA 19380
(215) 430-7255

LaVere Grimes
Black and Decker Facility Manager
Black and Decker (U.S.), Incorporated
Facilities Group
626 Hanover Pike
Hampstead, MD 21074
(301) 239-5555

Phyllis Buff
Groundwater Investigation Division
MDE
2500 Broening Highway
Baltimore, MD 21224
(301) 631-3493

5.2.3 Water Supply Well Information

The following off-site wells were sampled during the site inspection. For the locations of these wells, see figure 5.3 (page 5-7). Well questionnaires were completed for all the home wells (see appendix Z).

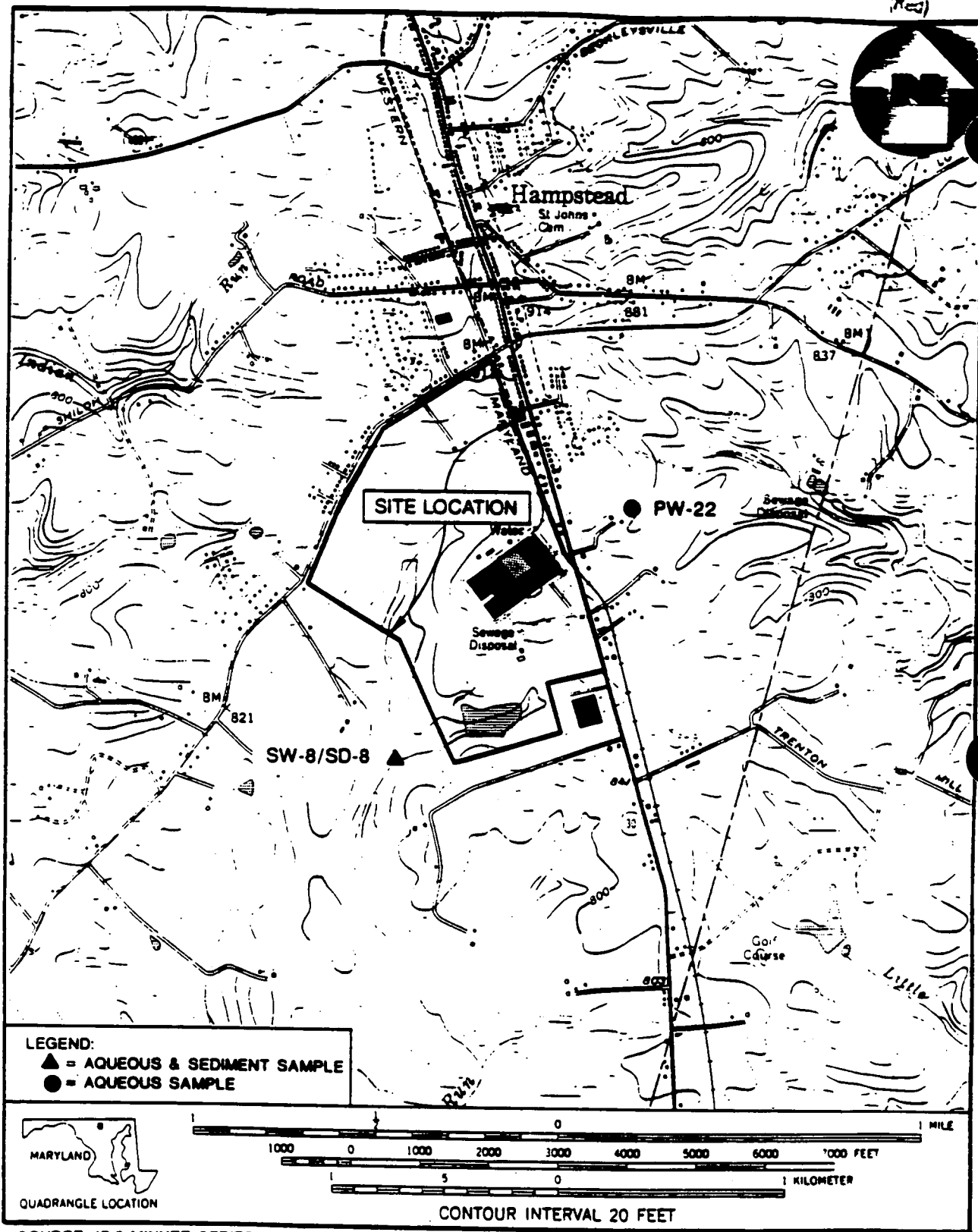
TDD NUMBER F3-9101-19
 EPA NUMBER MD-370

5.3 SAMPLE LOG

SITE NAME Black + Decker

TRAFFIC REPORTS			SAMPLE IDENTIFIER	PHASE	SAMPLE DESCRIPTION	SAMPLE LOCATION	TARGET USE	pH	FIELD MEASUREMENTS
Organic	Inorganic	High Hazard							
CDN24	MCED24	—	MW-2A	AQ	rust colored odorless Depth to water: 13 ft.	RFW-2A, North west of facility; 6" outer casing, 4" inner PVC casing Total Depth: 36 ft.	Area groundwater used as potable supply well locked	—	—
CDN25	MCED25	—	MW-2B	AQ	reddish brown odorless Depth to water: 13 ft.	RFW-2B, North west of facility; 6" metal casing Total Depth: 77 ft.	Area groundwater used as potable supply well locked	—	—
CDN26	MCED26	—	MW-8	AQ	Light brown Depth to water: 31.5 ft. odorless oil sheen on top	RFW-8, Adjacent to north corner of building; 6" outer casing, 4" PVC inner casing to former tank farm #2 area Total Depth: 56 ft.	Area groundwater used as potable supply well locked	—	—
CDN27	MCED27	—	MW-9	AQ	gray/brown with white film odorless Depth to water: 23 ft.	RFW-9, Former Tank Farm #2 area, Adjacent to north western side of building; 6" outer casing, 4" PVC inner casing Total Depth: 52.5 ft.	Area groundwater used as potable supply well locked	—	—
CDN28	MCED28	—	MW-B1	AQ	rust-colored with sediment odorless Depth to water: 13 ft.	B-1, West of building, 6" metal casing Total Depth: 113 ft.	Area groundwater used as potable supply well locked	—	—
CDN29	MCED29	—	MW-12	AQ	clear, odorless Depth to water: 20 ft.	RFW-12, In grassy area outside front door of building; 4" PVC casing Total Depth: 51 ft.	Area groundwater used as potable supply well locked	—	—
CDN30	MCED30	—	MW-10	AQ	Duplicate of MW-8	Same as MW-8	Same as MW-8	—	—
—	MCED31	—	MW-2AF	AQ	Same as MW-2A	Same as MW-2A	Same as MW-2A	—	—
—	MCED32	—	MW-2BF	AQ	Same as MW-2B	Same as MW-2B	Same as MW-2B	—	—

ORIGINAL
F-31



LEGEND:
 ▲ = AQUEOUS & SEDIMENT SAMPLE
 ● = AQUEOUS SAMPLE

MARYLAND
 QUADRANGLE LOCATION

1 0 1000 2000 3000 4000 5000 6000 7000 FEET
 1 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET

SOURCE: (7.5 MINUTE SERIES) U.S.G.S. HAMPSTEAD, MD., QUAD.

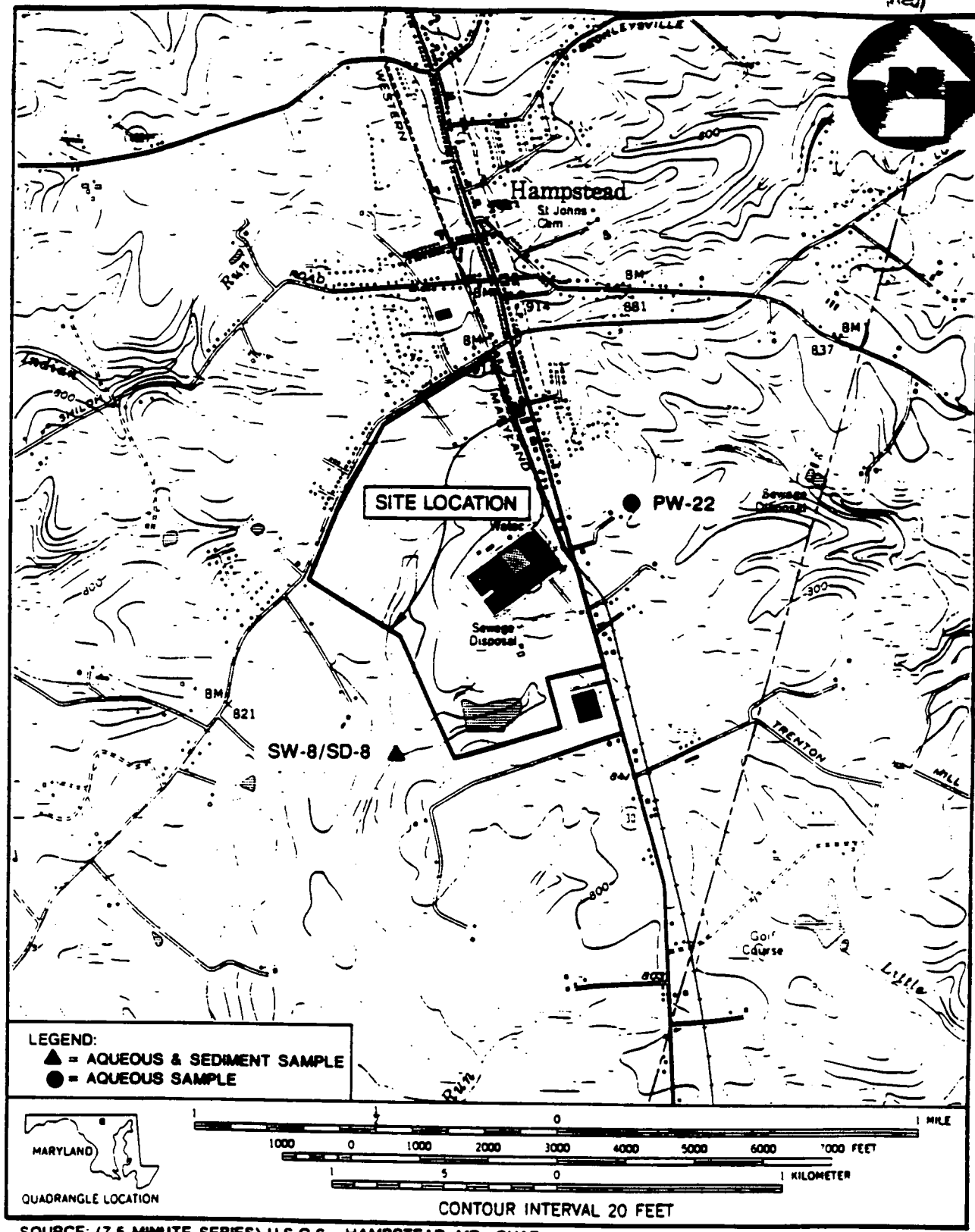
OFF-SITE SAMPLE LOCATION MAP

BLACK & DECKER

SCALE 1: 24000

FIGURE 5.2





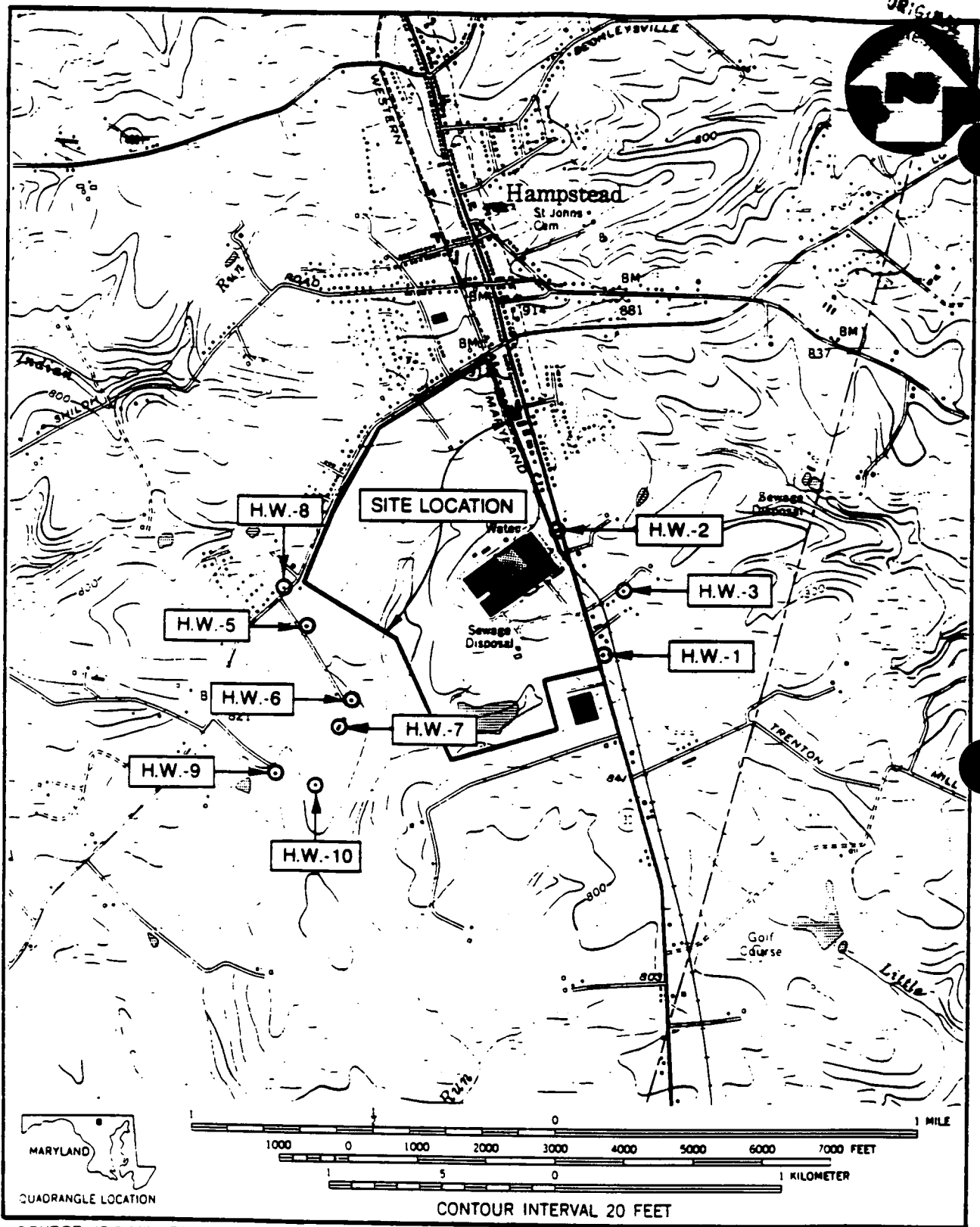
OFF-SITE SAMPLE LOCATION MAP

BLACK & DECKER

SCALE 1: 24000

FIGURE 5.2





SOURCE: (7.5 MINUTE SERIES) U.S.G.S. HAMPSTEAD, MD. QUAD.

HOME-WELL SAMPLE LOCATION MAP

BLACK & DECKER

SCALE 1: 24000

FIGURE 5.3



ORIGINAL
(7)

5.4 Site Observations

- The OVA was set on the X1 scale. The background reading was 1.2 ppm. No readings above background were recorded.
- The HNU was set on the 0 to 20 scale; the 0 to 200 scale was used when necessary. The background reading was 0.2 to 0.4 ppm. A reading of 4.0 to 5.0 ppm above background was recorded at MW-B1. A reading of 120 ppm above background was recorded at MW-12.
- The mini-alert was set on the X1 position; no readings above background were recorded.
- Access to the facility building and the areas immediately surrounding the building was restricted by a six-foot-high fence and a front gate monitored by security personnel.
- Fencing secured the industrial waste and sewage treatment plants.
- Access to the remaining portions of the site was unrestricted. Barbed-wire fencing surrounded these sections; however, the majority of the fenceline was in need of repair.
- A concrete pad was located adjacent to the northern corner of the facility's main building. A TCE storage tank was formerly situated on this pad. The ground sloped downward from the concrete pad to a stormwater drain.
- The treatment plant discharge into the west lagoon was noted to have a strong chlorine odor.
- A drainage swale is located northwest of the main building and flows in a southwestward direction. The swale continues west of the facility, flowing in a southward direction. The swale then makes a 90-degree angle at a flood-control structure and flows southeastwardly into the west lagoon. The swale was dry at the time of the FIT 3 site visit.
- The land immediately surrounding the facility was lightly wooded with some meadows. The outer boundaries of the property consist of dairy pastures.

FINAL
5)

- A concrete culvert in the southwestern corner of the property received effluent from two separate discharge pipes. The discharges from these pipes joined to form a stream that flowed off site and into a tributary of Deep Run.
- Effluent from the west lagoon dam underdrain formed a stream that joined the stream from the outfall discharge approximately 60 feet west of the concrete culvert.
- A tributary of Deep Run flows in a southwestward direction northwest of the subject facility. The tributary is intermittent north of the facility and becomes perennial west of the facility.
- A drainage ditch joined the perennial section of the Deep Run tributary southwest of the facility building.
- The monitoring wells sampled by FIT 3 were located at various points surrounding the facility.
- The monitoring wells were capped and locked. A consultant from Weston unlocked the wells for sampling. The wells had six-inch steel outer casings. Some of the wells had four-inch polyvinyl chloride inner casings. Details of the wells are as follows:

Monitoring Well Identification	Height of Stickup (inches)	Total Depth (feet) (from top of casing)	Depth to Water (feet) (from top of casing)	Inner Casing Diameter (inches)	Volume Purged (gallons)
MW-2A	18	36	12	4	48
MW-2B	24	77	12	none	288
MW-8	24	56	31.5	4	48
MW-9	24	50.5	23	4	55
MW-B1	19	113	12	none	446
MW-12	none	51	20	4	60

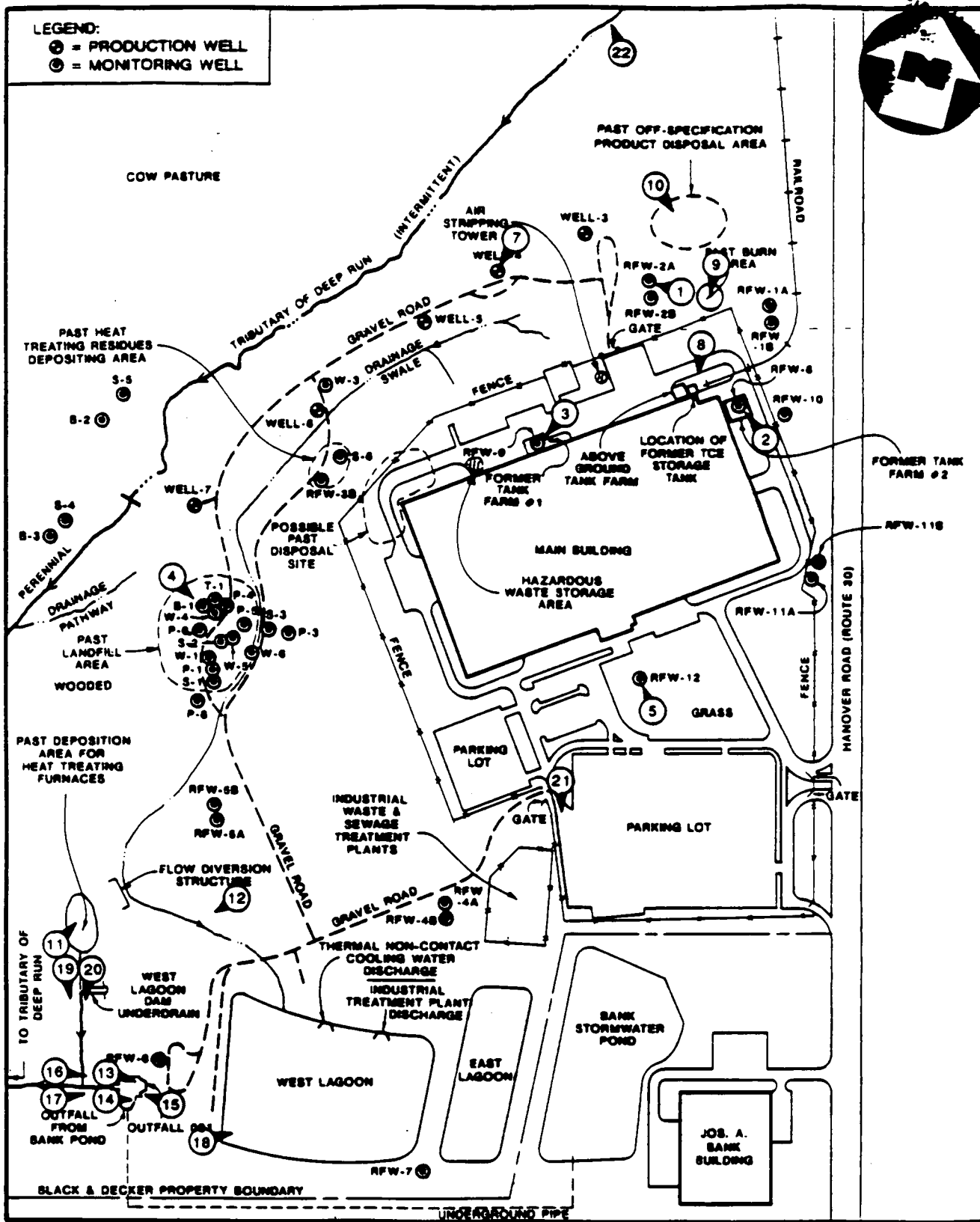


PHOTO LOCATION MAP
BLACK & DECKER
 (NO SCALE)

FIGURE 5.4



TDD NUMBER F3-9101-19
 EPA NUMBER MD-370

5.3 SAMPLE LOG

SITE NAME Black + Decker

TRAFFIC REPORTS			SAMPLE IDENTIFIER	PHASE	SAMPLE DESCRIPTION	SAMPLE LOCATION	TARGET USE	pH	FIELD MEASUREMENTS
Organic	Inorganic	High Hazard							
CDN35	MCED42	—	PW-7	AQ	Clear, colorless	Black + Decker well head no 7 pretreatment	Black + Decker employees' potable supply	—	—
CDN36	MCED43	—	PW 8	AQ	Duplicate of (PW-7)	same location as PW-7	same as PW-7	—	—
—	MCED44	—	Blank-F	AQ	1 litered Blank.	—	—	—	—
CDN37	MCED45	—	AQ-BIK1	AQ	Field blank for first day of sampling	field blank - first day of sampling	—	—	—
CDN39	MCED46	—	S-1 (30")	SOL	subsurface soil. 30". Dry, medium brown, few rocks	30ft from concrete pad of former TCE storage tank.	on-site restricted access	—	—
CDN40	MCED47	—	S-2 (36")	SOL	subsurface soil. 36". Dry, coarse light red	North of facility building in past burn area	on-site unrestricted access	—	—
CDN41	MCED48	—	S-3 (3')	SOL	subsurface soil. 3'. loosely packed clay red with brown	North of facility building in past off-specification product disposal area	on-site unrestricted access	—	—
CDN42	MCED49	—	S-4 (2')	SOL	subsurface soil. Brown/black Must clay	2 ft. into soil embankment in past deposition area for heat-treating furnaces	on-site unrestricted access	—	—
CDN43	MCED50	—	S-Back (2')	SOL	subsurface soil. 2' clay loam, reddish brown no rocks	In wooded area northwest of west logcove	on-site unrestricted access	—	—

FINAL

5.4 Site Observations

- The OVA was set on the X1 scale. The background reading was 1.2 ppm. No readings above background were recorded.
- The HNU was set on the 0 to 20 scale; the 0 to 200 scale was used when necessary. The background reading was 0.2 to 0.4 ppm. A reading of 4.0 to 5.0 ppm above background was recorded at MW-B1. A reading of 120 ppm above background was recorded at MW-12.
- The mini-alert was set on the X1 position; no readings above background were recorded.
- Access to the facility building and the areas immediately surrounding the building was restricted by a six-foot-high fence and a front gate monitored by security personnel.
- Fencing secured the industrial waste and sewage treatment plants.
- Access to the remaining portions of the site was unrestricted. Barbed-wire fencing surrounded these sections; however, the majority of the fenceline was in need of repair.
- A concrete pad was located adjacent to the northern corner of the facility's main building. A TCE storage tank was formerly situated on this pad. The ground sloped downward from the concrete pad to a stormwater drain.
- The treatment plant discharge into the west lagoon was noted to have a strong chlorine odor.
- A drainage swale is located northwest of the main building and flows in a southwestward direction. The swale continues west of the facility, flowing in a southward direction. The swale then makes a 90-degree angle at a flood-control structure and flows southeastwardly into the west lagoon. The swale was dry at the time of the FIT 3 site visit.
- The land immediately surrounding the facility was lightly wooded with some meadows. The outer boundaries of the property consist of dairy pastures.

TDD NUMBER F3-9101-19
 EPA NUMBER MD-370

5.3 SAMPLE LOG

SITE NAME Black + Decker

TRAFFIC REPORTS			SAMPLE IDENTIFIER	PHASE	SAMPLE DESCRIPTION	SAMPLE LOCATION	TARGET USE	pH	FIELD MEASUREMENTS
Organic	Inorganic	High Hazard							
CDN53	MCED60	—	SD-5	SOL	Duplicate of SD-4	Same location as SD-4	Same as SD-4	—	—
CDN54	MCED61	—	SW-6	AQ	Murky brown color in S	Intermittent portion of Deep Run tributary upgradient of site	on-site unrestricted access in dairy pasture	—	—
CDN55	MCED62	—	SD-6	SOL	clayey some small pebbles	Same location as SW-6	on-site unrestricted access in dairy pasture	—	—
CDN56	MCED63	—	SW-7	AQ	clear, colorless	15 ft. downstream of confluence of perennial tributary of Deep Run + on-site drainage pathway	on-site unrestricted access in dairy pasture	—	—
CDN57	MCED64	—	SD-7	SOL	dark silt with organic matter	Some location as SW-7	on-site unrestricted access in dairy pasture	—	—
CDN58	MCED65	—	SW-8	AQ	clear, colorless	20 ft. downstream from confluence of on-site outfall stream + on-site tributary	off-site unrestricted access in dairy pasture	—	—
CDN59	MCED66	—	SD-8	SOL	med. brown some pebbles and organic matter	Same location as SW-8	off-site unrestricted access in dairy pasture	—	—
CDN60	MCED67	—	HW-1	AQ	clear, colorless	Scholtz residence 601 Hanover Rd Hampstead, MD 21074	potable supply	—	—
CDN61	MCED68	—	HW-2	AQ	clear, colorless	Carroll County Christian Center 802 S Main Hampstead, MD 21074	potable supply	—	—

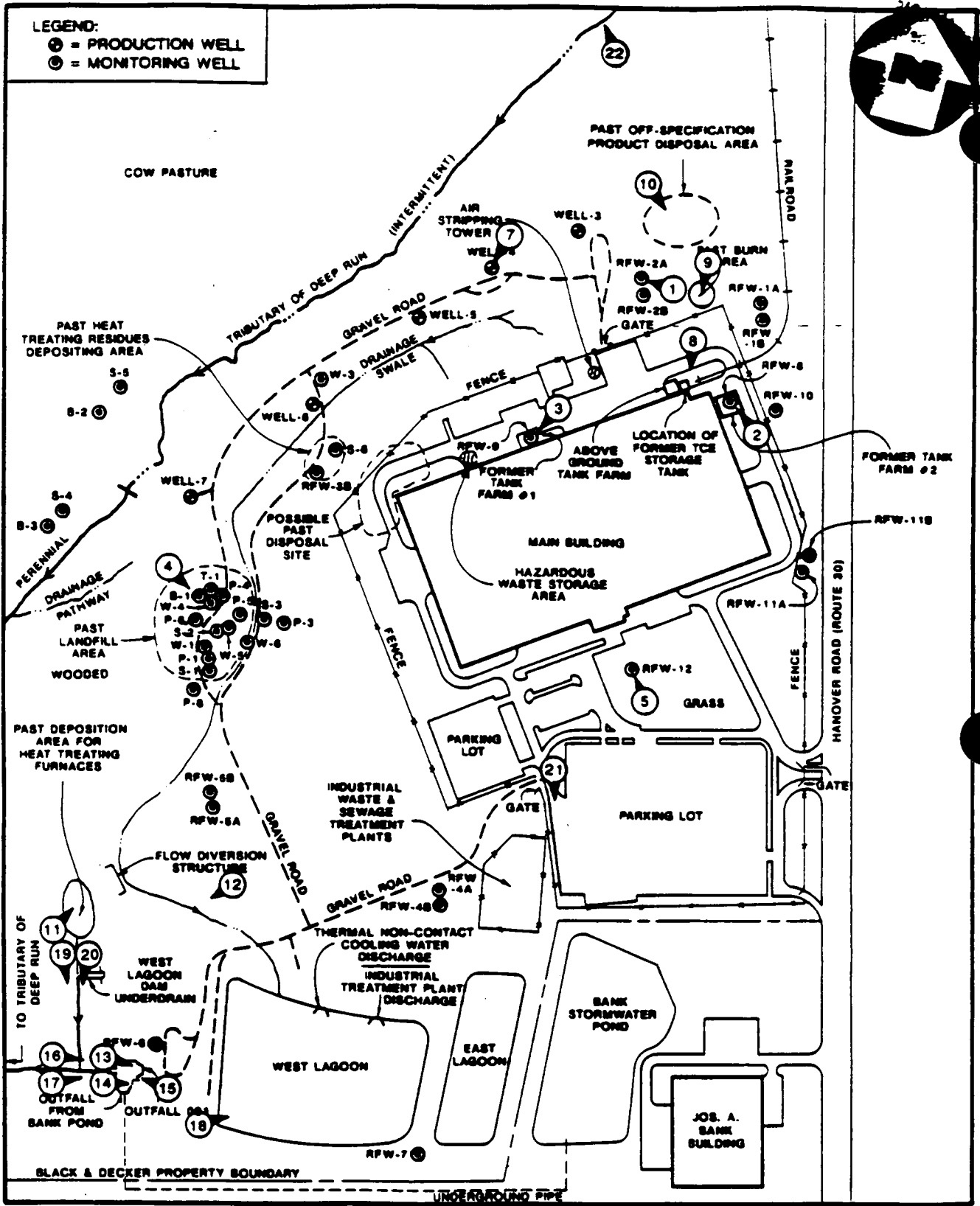
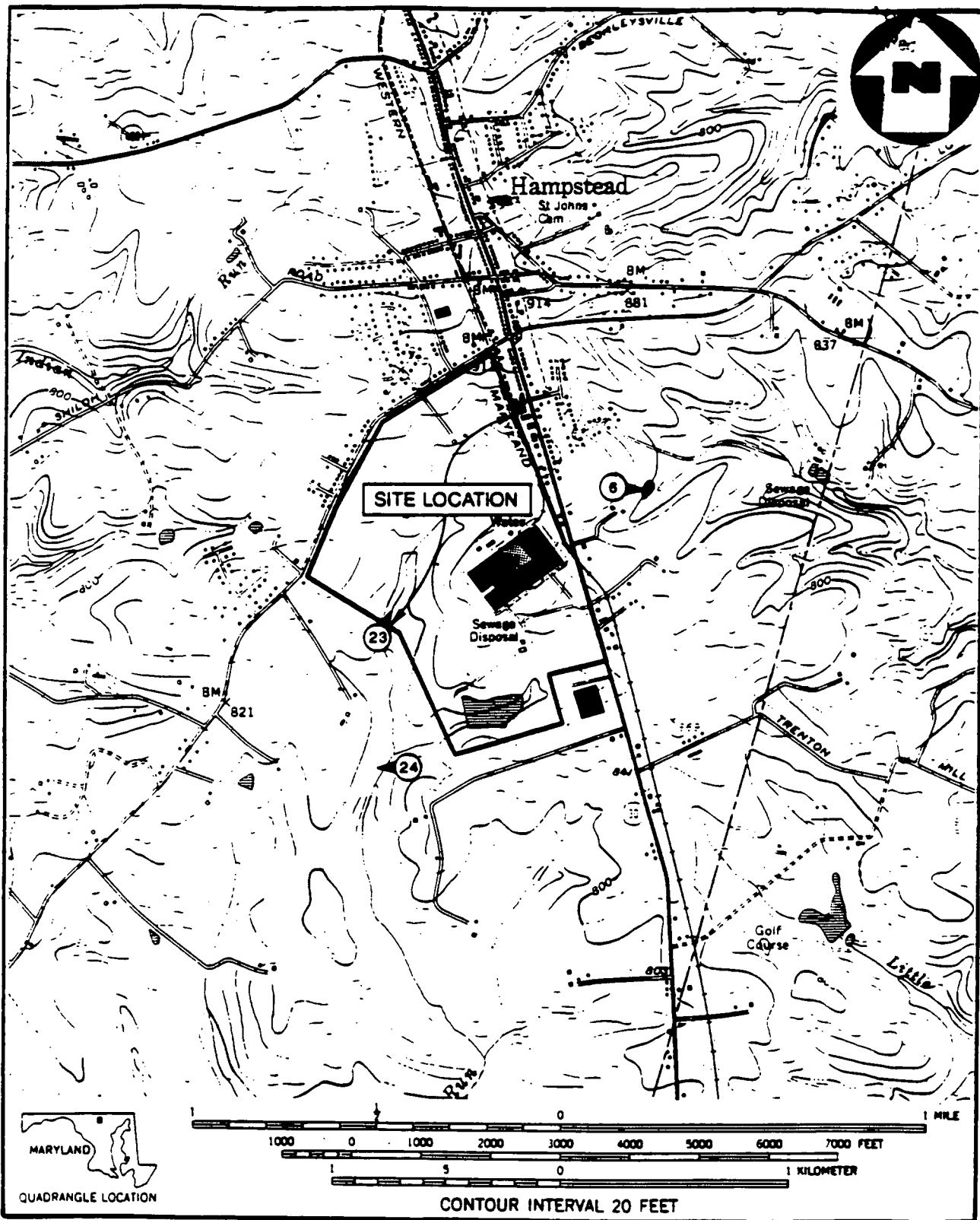


PHOTO LOCATION MAP
BLACK & DECKER
 (NO SCALE)

FIGURE 5.4





SOURCE: (7.5 MINUTE SERIES) U.S.G.S. HAMPSTEAD, MD., QUAD.

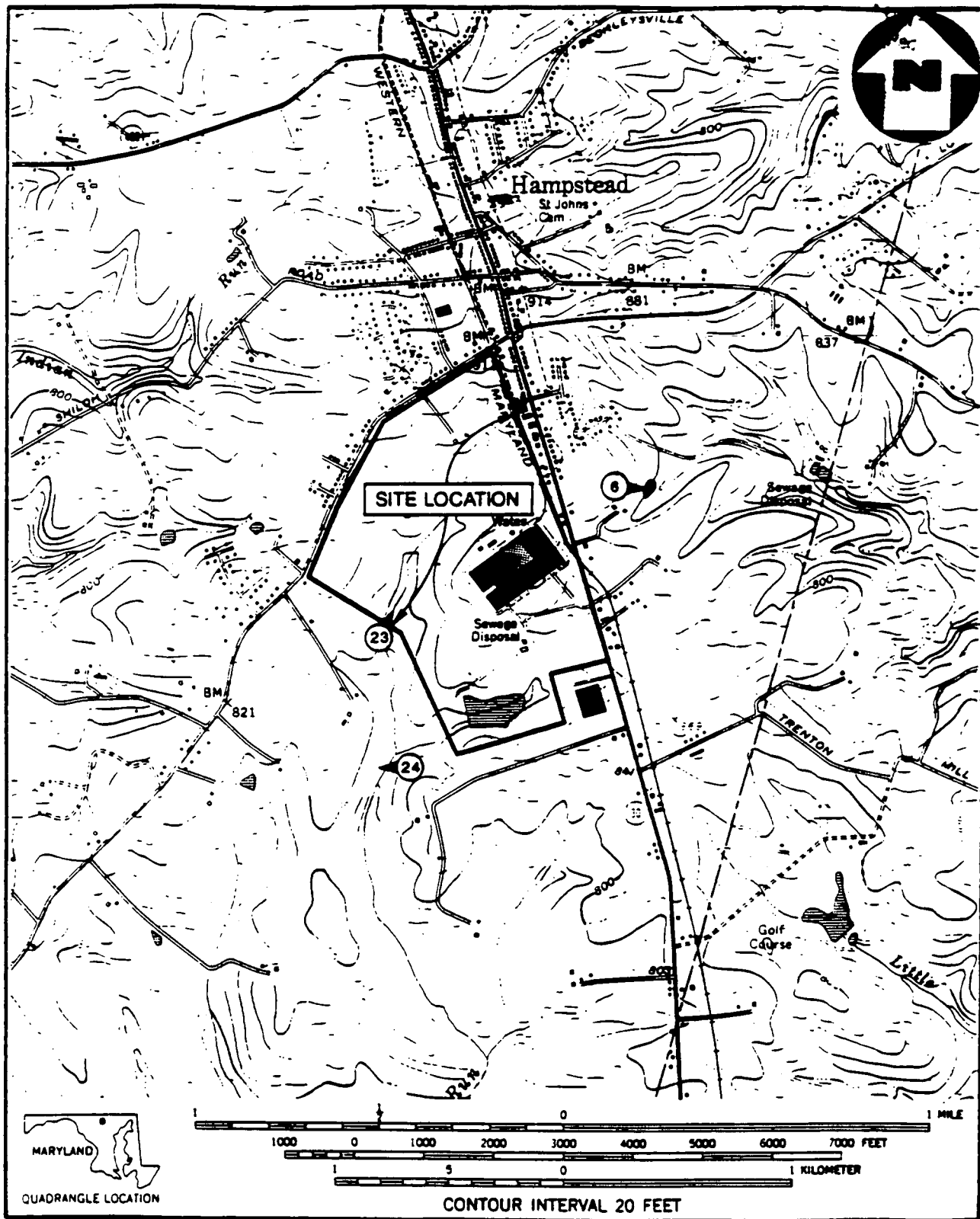
OFF-SITE PHOTO LOCATIONS

BLACK & DECKER

SCALE 1: 24000

FIGURE 5.5





SOURCE: (7.5 MINUTE SERIES) U.S.G.S. HAMPSTEAD, MD., QUAD.

OFF-SITE PHOTO LOCATIONS

BLACK & DECKER

SCALE 1: 24000

FIGURE 5.5





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

I. IDENTIFICATION

01 STATE MD 02 SITE NUMBER 3701

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY <i>Check as applicable:</i>		02 STATUS			03 DISTANCE TO SITE	
SURFACE		ENDANGERED			COMMUNITY well	
WELL		AFFECTED			A 0.26 (mi)	
COMMUNITY	A <input type="checkbox"/>	A <input type="checkbox"/>	B <input checked="" type="checkbox"/>	C <input checked="" type="checkbox"/>	potable supply wells	
NON-COMMUNITY	C <input type="checkbox"/>	D <input type="checkbox"/>	E <input checked="" type="checkbox"/>	F <input checked="" type="checkbox"/>	B on site (mi)	

III. GROUNDWATER

04 GROUNDWATER USE IN VICINITY (Check one)

A ONLY SOURCE FOR DRINKING B DRINKING
(Other sources available; COMMERCIAL, INDUSTRIAL, IRRIGATION)

C COMMERCIAL, INDUSTRIAL, IRRIGATION D NOT USED, UNUSABLE
(Limited other sources available)

05 POPULATION SERVED BY GROUND WATER 9475 06 DISTANCE TO NEAREST DRINKING WATER WELL <0.1 (mi)

07 DEPTH TO GROUNDWATER	08 DIRECTION OF GROUNDWATER FLOW	09 DEPTH TO AQUIFER OF CONCERN	10 POTENTIAL YIELD OF AQUIFER	11 SOLE SOURCE AQUIFER
<u>18.5 to 35.0</u> (ft)	<u>southwest and northeast</u>	<u>18.5 to 35.0</u> (ft)	<u>86,400</u> (gpd)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

12 DESCRIPTION OF WELLS (Including usage, depth, and location relative to population and buildings)
Homewell No. 2 - Well approximately 50 to 60 feet deep, high iron content, water not treated.

13 RECHARGE AREA	14 DISCHARGE AREA
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input type="checkbox"/> NO
COMMENTS: <u>Infiltration of precipitation</u>	COMMENTS: <u>Pumping of wells and discharge to streams; intermittent streams occur at the site.</u>

IV. SURFACE WATER

15 SURFACE WATER USE IN VICINITY (Check one)

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

16 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER	
NAME	AFFECTED DISTANCE TO SITE
<u>Piney Run</u>	<input type="checkbox"/> <u>0.9</u> (mi)
<u>Deep Run</u>	<input checked="" type="checkbox"/> <u>1.9</u> (mi)
	<input type="checkbox"/> _____ (mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

17 TOTAL POPULATION WITHIN			18 DISTANCE TO NEAREST POPULATION
ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE	<u><0.1</u> (mi)
A <u>2152</u>	B <u>4000</u>	C <u>6140</u>	
NO. OF PERSONS	NO. OF PERSONS	NO. OF PERSONS	

19 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE	20 DISTANCE TO NEAREST OFF-SITE BUILDING
<u>1324</u>	<u><0.1</u> (mi)

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

Land use in the area is a combination of residential, commercial, and farming.



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

I. IDENTIFICATION	
01 STATE MD	02 SITE NUMBER 3782

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 22.0 to 50.0 (ft)	04 DEPTH OF CONTAMINATED SOIL ZONE unknown (ft)	05 SOIL pH 4.0 to 5.5
--	--	--------------------------

06 NET PRECIPITATION 19.03 (in)	07 ONE-YEAR 24-HOUR RAINFALL 3.2 (in)	08 SLOPE SITE SLOPE 4 %	DIRECTION OF SITE SLOPE mainly southwest	TERRAIN AVERAGE SLOPE 5 %
------------------------------------	--	-------------------------------	---	------------------------------

09 FLOOD POTENTIAL SITE IS IN N/A YEAR FLOOD PLAIN	10 N/A <input type="checkbox"/> SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY
---	---

11 DISTANCE TO WETLANDS (5-acre minimum)	12 DISTANCE TO CRITICAL HABITAT (of endangered species)
ESTUARINE A. N/A (mi)	N/A (mi)
OTHER B. >1 (mi)	ENDANGERED SPECIES: _____

13 LAND USE IN VICINITY			
DISTANCE TO:			
COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS, NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	PRIME AGRICULTURAL LANDS	AG LAND
A. <0.1 (mi)	B. <0.1 (mi)	C. N/A (mi)	D. <0.1 (mi)

14 DESCRIPTION OF SITE IN RELATION TO SURROUNDING TOPOGRAPHY

The site generally slopes toward the west and southwest toward a tributary of Deep Run. A small portion in the northeastern corner of the property slopes eastwardly.

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

See reference nos. 1,4,5,9,10,11,12,13,14,15,16,17,18, and 22



EPA

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

I. IDENTIFICATION

01 STATE
MD

02 SITE NO. 378-1

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER	30	Organics: Aquatec, Incorporated	currently
SURFACE WATER	8	Inorganics: GP Environmental Service	available
WASTE			
AIR			
RUNOFF			
SPILL		Organics: Aquatec, Incorporated	
SOIL	13	Inorganics: GP Environmental Service	currently
VEGETATION			available
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
HNU	A background reading of 0.2 to 0.4 ppm was recorded. A reading of 4.0 to 5.0 ppm above background was recorded at MW-B1. A reading of 120 ppm above background was recorded at MW-12.
Radiation Alert	No readings above background were recorded.
OVA	A background reading of 1.2 ppm was recorded. No readings above background were obtained.

IV. PHOTOGRAPHS AND MAPS

01 TYPE	<input checked="" type="checkbox"/> GROUND <input type="checkbox"/> AERIAL	02 IN CUSTODY OF <u>NUS FIT 3</u> <small>(Name of organization or individual)</small>
03 MAPS	04 LOCATION OF MAPS	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<u>NUS FIT 3</u>	

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

N/A

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

See reference no. 9



EPA

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

I. IDENTIFICATION

01 STATE MD 02 SITE NUMBER 370

II. CURRENT OWNER(S) PARENT COMPANY (if applicable)
01 NAME Black and Decker (U.S.), Incorporated 02 D & B NUMBER 03 STREET ADDRESS (P.O. Box, RFD #, Etc.) 626 Hanover Pike 04 SIC CODE 05 CITY Hampstead 06 STATE MD 07 ZIP CODE 21074
III. PREVIOUS OWNERS(S) (List most recent first) IV. REALTY OWNER(S) (if applicable, list most recent first) PREVIOUS
01 NAME Charles J. Miller 02 D & B NUMBER 03 STREET ADDRESS (P.O. Box, RFD #, Etc.) unknown 04 SIC CODE 05 CITY 06 STATE 07 ZIP CODE
01 NAME Herbert R. Wooden 02 D & B NUMBER 03 STREET ADDRESS (P.O. Box, RFD #, Etc.) unknown 04 SIC CODE 05 CITY 06 STATE 07 ZIP CODE
01 NAME Ada and Nellie B. Wooden 02 D & B NUMBER 03 STREET ADDRESS (P.O. Box, RFD #, Etc.) unknown 04 SIC CODE 05 CITY 06 STATE 07 ZIP CODE
IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis reports)
See reference nos. 7 and 19



EPA

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

I. IDENTIFICATION

01 STATE
MD

02 SITE NUMBER
370

II. CURRENT OPERATOR (Provide if different from owner)

OPERATOR'S PARENT COMPANY (if applicable)

01 NAME
Black and Decker (U.S.), Incorporated

02 D & B NUMBER

10 NAME
N/A

11 D & B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, Etc.)
626 Hanover Pike

04 SIC CODE

12 STREET ADDRESS (P.O. Box, RFD #, Etc.)

13 SIC CODE

05 CITY
Hampstead

06 STATE
MD

07 ZIP CODE
21074

14 CITY

15 STATE

16 ZIP CODE

08 YEARS OF OPERATION
1952 - present

09 NAME OF OWNER
Black and Decker (U.S.), Incorporated

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

PREVIOUS OPERATOR'S PARENT COMPANIES (if applicable)

01 NAME
N/A

02 D & B NUMBER

10 NAME
N/A

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

01 NAME
N/A

02 D & B NUMBER

10 NAME
N/A

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

01 NAME
N/A

02 D & B NUMBER

10 NAME
N/A

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

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

See reference nos. 7 and 19



EPA

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

I. IDENTIFICATION	
01 STATE MD	02 SITE NUMBER 370

II. ON-SITE GENERATOR

01 NAME Black and Decker (U.S.), Incorporated		02 D & B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, Etc.) 626 Hanover Pike		04 SIC CODE
05 CITY Hampstead	06 STATE MD	07 ZIP CODE 21074

III. OFF-SITE GENERATOR(S)

01 NAME N/A		02 D & B NUMBER	01 NAME N/A		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
01 NAME N/A		02 D & B NUMBER	01 NAME N/A		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 Ecoflo, Incorporated		02 D & B NUMBER	01 NAME N/A		02 D & B NUMBER
03 STREET ADDRESS (P.O. Box, RFD #, Etc.) 2750 Patterson Street		04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, Etc.)		04 SIC CODE
05 CITY Greensboro	06 STATE NC	07 ZIP CODE 27407	05 CITY	06 STATE	07 ZIP CODE
01 NAME N/A		02 D & B NUMBER	01 NAME N/A		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)

See reference nos. 7 and 19



EPA

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

I. IDENTIFICATION ORIGINAL	
01 STATE MD	02 SITE NUMBER 370

II. PAST RESPONSE ACTIVITIES

01 <input type="checkbox"/> A WATER SUPPLY CLOSED	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> B TEMPORARY WATER SUPPLY PROVIDED	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> C PERMANENT WATER SUPPLY PROVIDED	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> D SPILLED MATERIAL REMOVED	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> E CONTAMINATED SOIL REMOVED	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> F WASTE REPACKAGED	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> G WASTE DISPOSED ELSEWHERE	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> H ON-SITE BURIAL	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> I IN SITU CHEMICAL TREATMENT	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> J IN SITU BIOLOGICAL TREATMENT	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> K IN SITU PHYSICAL TREATMENT	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> L ENCAPSULATION	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> M EMERGENCY WASTE TREATMENT	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> N CUTOFF WALLS	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> O EMERGENCY DIKING/SURFACE WATER DIVERSION	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> P CUTOFF TRENCHES/SUMP	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		
01 <input type="checkbox"/> Q SUBSURFACE CUTOFF WALL	02 DATE _____	03 AGENCY _____
04 DESCRIPTION None reported or observed		



EPA

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

I. IDENTIFICATION

01 STATE MD

02 SITE NUMBER 370

II. PAST RESPONSE ACTIVITIES (Continued)

01 [] 1 BARRIER WALLS CONSTRUCTED 02 DATE 03 AGENCY
04 DESCRIPTION
None reported or observed

01 [] 1 DIPPING/COVERING 02 DATE 03 AGENCY
04 DESCRIPTION
None reported or observed

01 [] 1 BULK TANKAGE REPAIRED 02 DATE 03 AGENCY
04 DESCRIPTION
None reported or observed

01 [] 1 GROUT CURTAIN CONSTRUCTED 02 DATE 03 AGENCY
04 DESCRIPTION
None reported or observed

01 [] 1 BOTTOM SEALED 02 DATE 03 AGENCY
04 DESCRIPTION
None reported or observed

01 [] 1 V GAS CONTROL 02 DATE 03 AGENCY
04 DESCRIPTION
None reported or observed

01 [] 1 FIRE CONTROL 02 DATE 03 AGENCY
04 DESCRIPTION
None reported or observed

01 [] 1 LEACHATE TREATMENT 02 DATE 03 AGENCY
04 DESCRIPTION
None reported or observed

01 [] 1 AREA EVACUATED 02 DATE 03 AGENCY
04 DESCRIPTION
None reported or observed

01 [] 1 ACCESS TO SITE RESTRICTED 02 DATE 03 AGENCY
04 DESCRIPTION
None reported or observed

01 [] 1 POPULATION RELOCATED 02 DATE 03 AGENCY
04 DESCRIPTION
None reported or observed

01 [] 3 OTHER REMEDIAL ACTIVITIES 02 DATE 03 AGENCY
04 DESCRIPTION
In May 1984, Black and Decker installed carbon filters on the facility potable water supply system as a result of VOC groundwater contamination detected in the plant's on-site production wells. An air stripper installed by BCM engineers in December 1986 was connected to the five on-site production wells. The treated water is the plant's sole potable water supply.
Black and Decker installed four in-line granular activated carbon filter (GAC) units in the Leister dairy barn on October 26, 1987 under MDE direction. The filter installation was a result of an agreement with Black and Decker to provide potable water to the farm due to PCE contamination.

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

See reference nos. 7 and 20



EPA

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

I. IDENTIFICATION

01 STATE
MD

02 SITE NUMBER
370

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY ACTION YES NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY ENFORCEMENT ACTION

In April 1984, TCE and PCE contamination was detected in the groundwater at the Black and Decker facility. MD DHMH inspected the facility and conducted sampling several times in 1984. On September 17, 1984, Black and Decker entered into a Consent Order with MD DHMH. In compliance with this order, the company performed an investigation of groundwater conditions at the facility. Twenty-one MWs were installed on Black and Decker's property by Geraghty and Miller consultants in April 1985. Further evaluation of the contaminated groundwater was recommended by the consultant.

MD DHMH conducted home well sampling in the area surrounding the subject facility. Varying levels of PCE and TCE contamination were detected in several wells.

A soil investigation was requested by MD DHMH and performed by BCM Eastern, Incorporated in August 1986.

Black and Decker contracted Weston consultants in 1987 to perform an environmental investigation of the facility. Weston installed 17 MWs on the property as part of this investigation. A work plan for soil and groundwater remediation was submitted to MD HSWMA in December 1989 by Weston. Information indicates that this work plan has not yet been approved by MDE.

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

See reference nos. 7, 19 and 21

1. Roy F. Weston, Incorporated. Environmental Investigation Report, Black and Decker, Incorporated, Hampstead, Maryland Facility. April 1989.
2. NUS FIT 3. Site Inspection; sample results. TDD No. F3-9101-19, February 26 and 27, 1991.
3. Lewis, Charles, MD DHMH. Site Complaint No. SC-0-84-487. May 2, 1984.
4. United States Geological Survey. Hampstead, Maryland Quadrangle, 7.5 Minute Series. Topographic Map. 1953, photorevised 1974. Combined with Manchester, Maryland Quadrangle, 7.5 Minute Series. Topographic Map. 1953, photorevised 1971; Westminster, Maryland Quadrangle, 7.5 Minute Series. Topographic Map. 1953, photorevised 1979; and Lineboro, Maryland - Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1953, photorevised 1974.
5. United States Department of Commerce, Bureau of the Census. 1980 Census of the Population. Volume 1 Characteristics of the Population, Chapter B General Population Characteristics. Part 40, Maryland. Issued August 1982.
6. Ramnarain, Pars, MDE Air Management Administration, with Linda Ciarletta, NUS FIT 3. Telecon. May 13, 1991.
7. Grimes, LaVere, Black and Decker Facilities Manager, with Linda Ciarletta, NUS FIT 3. Telecons. February 5, March 18, April 18, 1991.
8. NUS Corporation, FIT 3. Non-sampling site reconnaissance; Logbook No. 2480. TDD No. F3-9101-19, January 31, 1991.
9. NUS Corporation, FIT 3. Site Inspection; site visit. TDD No. F3-9101-19, February 26 and 27, 1991.
10. United States Department of Commerce, National Climatic Center. Climatic Atlas of the United States. 1979.
11. National Oceanic and Atmospheric Administration. Local Climatological Data, Baltimore, Maryland. 1983.
12. United States Department of Commerce, United States Printing Office. Rainfall Frequency Atlas of the United States. Technical Paper No. 40, 1963.
13. United States Department of the Interior, Fish and Wildlife Service. Hampstead, Maryland Quadrangle, 7.5 Minute Series. National Wetlands Inventory. 1991.
14. Riley, John, City of Hampstead Water Department. NUS FIT 3 Water Supply Questionnaire. November 6, 1990.
15. Miller, K.M., Maryland Department of Natural Resources, Water Resources Administration to William Wentworth, NUS FIT 3. Correspondence. April 29, 1991.
16. Weaver, K.N., and E.T. Cleaves, J. Edwards, J.D. Glaser, Maryland Geological Survey. Geologic Map of Maryland. 1968
17. Meyer, G., and R.M. Beall, Maryland Department of Geology, Mines, and Water Resources. The Water Resources of Carroll and Frederick Counties. Bulletin 22, 1958.
18. United States Department of Agriculture, Soil Conservation Service. Soil Survey of Carroll County, Maryland. October 1969.
19. Maryland Department of the Environment, Hazardous and Solid Waste Management Administration. A Preliminary Assessment of the Black and Decker, Incorporated Site. February 1990.
20. Chambers, Barry, MDE, to Butch Dye, MDE. Memorandum. October 28, 1987.
21. BCM Eastern, Incorporated. Landfill Soil Sampling Report, BCM Project No. 00-5543-03. September 16, 1986.
22. NUS FIT 3. Home Well Surveys for Black and Decker Site. January 31, February 6 and 20, 1991.

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SECTION 6



6.0 REFERENCES FOR SECTIONS 1.0 THROUGH 5.0

1. United States Geological Survey. Hampstead, Maryland Quadrangle, 7.5 Minute Series. Topographic Map. 1953, photorevised 1974. Combined with Manchester, Maryland Quadrangle, 7.5 Minute Series. Topographic Map. 1953, photorevised 1971; Westminster, Maryland Quadrangle, 7.5 Minute Series. Topographic Map. 1953, photorevised 1979; and Lineboro, Maryland - Pennsylvania Quadrangle, 7.5 Minute Series. Topographic Map. 1953, photorevised 1974.
2. NUS Corporation, FIT 3. Non-sampling site reconnaissance; logbook no. 2480. TDD No. F3-9101-19, January 31, 1991.
3. NUS Corporation, FIT 3. Site inspection; site visit. TDD No. F3-9101-19, February 26 and 27, 1991.
4. Grimes, LaVere, Black and Decker Facilities Manager, with Linda Ciarletta, NUS FIT 3. Meeting. January 31, 1991.
5. Grimes, LaVere, Black and Decker Facilities Manager, with Linda Ciarletta, NUS FIT 3. Telecons. February 5, March 18, and April 18, 1991.
6. Roy F. Weston, Incorporated. Environmental Investigation Report, Black and Decker, Incorporated, Hampstead, Maryland Facility. April 1989.
7. Lewis, Charles, Maryland Department of Health and Mental Hygiene. Site Complaint No. SC-0-84-487. May 2, 1984.
8. Bailey, William, Plant Services Manager, Black and Decker, to James Metz, Maryland Department of Natural Resources, Water Resources Administration. Correspondence. May 4, 1977.
9. Maryland Department of the Environment, Hazardous and Solid Waste Management Administration. A Preliminary Assessment of the Black and Decker, Incorporated Site. February 1990.

10. Healy, David, Maryland Department of Health and Mental Hygiene. Memorandum for the Record. January 27, 1978.
11. United States Environmental Protection Agency. Notification of Hazardous Waste Activity. Form Approved OMB No. 158-S79016, September 10, 1980.
12. The Office of the Federal Register, National Archives and Records Administration. Code of Federal Regulations 40, Part 261. July 1, 1985.
13. United States Environmental Protection Agency. Hazardous Waste Permit Application - Consolidated Permits Program. Form Approved OMB No. 158-S80004, November 24, 1980.
14. Bulkin, Shirley, United States Environmental Protection Agency, to Daniel Noble, Black and Decker (U.S.) Incorporated. Correspondence. June 4, 1981.
15. Noren, Donald, Maryland Department of Health and Mental Hygiene, to E.G. Delcher, Black and Decker. Notice of Violation and Corrective Order No. 77-12-003 (By Consent). February 21, 1978.
16. Noren, Donald, Maryland Department of Health and Mental Hygiene, to LaVere Grimes, Black and Decker. Correspondence (Corrective Order). November 16, 1978.
17. Connelly, J.M., Black and Decker Facilities Manager, to Donald Noren, Maryland Department of Health and Mental Hygiene. Correspondence. January 11, 1979.
18. Metcalf and Eddy, Incorporated. Report to Black and Decker (U.S.) Incorporated on Sludge Characterization and Alternatives for Sludge Management and Disposal. July 30, 1979.
19. Gascoyne Laboratories, Incorporated. Certificate of Analysis. Report No. 1630, December 17, 1979.
20. Maryland Department of Health and Mental Hygiene, Trace Organics Laboratory. Volatile Organic Analyses. April 23, 1984.

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21. Daniel, Robert, Maryland Department of Health and Mental Hygiene. Summary of Findings of Compliance Inspection of Black and Decker, Carroll County, Maryland. July 20, 1984.
22. Geraghty and Miller, Incorporated. Ground Water Conditions at the Black and Decker Plant, Hampstead, Maryland, Phase I. March 1985.
23. Maryland Department of Health and Mental Hygiene, Trace Organics Laboratory. Volatile Organic Analyses. May 3 and 23, 1984 and November 19, 1984.
24. Maryland Department of Health and Mental Hygiene, Trace Organics Laboratory. Volatile Organic Analyses. June 5, 1984.
25. Maryland Department of Health and Mental Hygiene. Consent Order C-0-85-022. September 17, 1984.
26. United States Environmental Protection Agency. RCRA Compliance Evaluation Inspection. August 16, 1985.
27. Geraghty and Miller, Incorporated. Phase II, Investigation of Ground Water Conditions at the Black and Decker Plant, Hampstead, Maryland. September, 1985.
28. Maryland Department of Health and Mental Hygiene. Report of Inspection to Determine Compliance with the TSCA Regulations. September 3, 1985.
29. Maryland Department of the Environment. 1989 Hazardous Waste Report. Form OMB No. 2050-0024, March 22, 1990.
30. Maryland Hazardous and Solid Waste Management Administration. 1988 Hazardous Waste Generation and Shipment Report. May 30, 1989.
31. Maryland Department of Health and Mental Hygiene, Trace Organics Laboratory. Volatile Organic Analyses: December 17, 1985, January 9 and 24, 1986, February 21, 1986, August 7, 11 and 18, 1986, October 3, 7, and 24, 1986, November 7, 1986.

32. Maryland Department of Health and Mental Hygiene. Report of Observations. September 4, 1986.
33. Maryland Department of Health and Mental Hygiene, Trace Organics Laboratory. Volatile Organic Analyses. September 4, 1986.
34. BCM Eastern, Incorporated. Landfill Soil Sampling Report. BCM Project No. 00-5543-03, September 16, 1986.
35. Maryland Department of Health and Mental Hygiene, Trace Organics Laboratory. Volatile Organic Analyses. September 23, 1988, October 12, 1988, August 15, 1989, and May 29, 1990.
36. Maryland Department of Health and Mental Hygiene. DHS Inspection Form and Report of Observations. January 30, 1990.
37. Maryland Department of the Environment. Timeline for Black and Decker remediation and impact on the Town of Hampstead Robert's well field. November 20, 1990.
38. Maryland Department of Health and Mental Hygiene, Gas Chromatography/Mass Spectrometry Laboratory. RCRA Analysis Report Forms. July 24, and 27, 1990.
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41. Weiner, Arlene, Maryland Department of the Environment Hazardous and Solid Waste Management Administration, to LaVere Grimes, Black and Decker. Correspondence. August 20, 1990.
42. Maryland Department of Health and Mental Hygiene, Gas Chromatography/Mass Spectrometry Laboratory. RCRA Analysis Report Form. August 14, 1990.

43. McAlister, Randall, Roy F. Weston, Incorporated, to Arlene Weiner, Maryland Department of the Environment Hazardous and Solid Waste Management Administration. Correspondence. September 5, 1990.
44. Maryland Department of the Environment. Discharge Permit No. 88-DP-0022. March 7, 1988.
45. Maryland Department of the Environment, Air Management Administration. Inspection and Observation General Report. March 6, 1990.
46. Ramnarain, Pars, Maryland Department of the Environment, Air Management Administration, with Linda Ciarletta, NUS FIT 3. Telecon. May 13, 1991.
47. Chambers, Barry, Maryland Department of the Environment, to Butch Dye, Maryland Department of the Environment. Memorandum. October 28, 1987.
48. Riley, John, City of Hampstead Water Department. NUS FIT 3 Water Supply Questionnaire. November 6, 1990.
49. Miller, K.M., Maryland Department of Natural Resources, Water Resources Administration, to William Wentworth, NUS FIT 3. Correspondence. April 29, 1991.
50. NUS Corporation, FIT 3. Home Well Surveys for Black and Decker site. TDD No. F3-9101-19. January 31, 1991, February 6 and 20, 1991.
51. United States Department of Commerce, Bureau of the Census. 1980 Census of the Population. Volume 1 Characteristics of the Population, Chapter B General Population Characteristics. Maryland. Issued August 1982.
52. Dintaman, Ray, Maryland Tidewater Administration, with Linda Ciarletta, NUS FIT 3. Telecon. March 18, 1991.

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62. Riley, John, Black and Decker, to Russ Summers, Maryland Department of Health and Mental Hygiene. Correspondence. July 12, 1982.

63. Maryland Hazardous and Solid Waste Management Administration. Uniform Hazardous Waste Manifest. Manifest Document No. MDC0243240. January 5, 1990.

ORIGINAL
(Rec)

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54. Weaver, K.N., and E.T. Cleaves, J. Edwards, J.D. Glaser, Maryland Geological Survey. Geologic Map of Maryland. 1968.
55. Meyer, G., and R.M. Beall, Maryland Department of Geology, Mines and Water Resources. The Water Resources of Carroll and Frederick Counties. Bulletin 22, 1958.
56. United States Department of Agriculture. Soil Conservation Service. Soil Survey of Carroll County, Maryland. October 1969.
57. National Oceanic and Atmospheric Administration. Climatology of the United States. No. 60, Climate of Maryland. 1977.
58. National Oceanic and Atmospheric Administration. Climatology of the United States. Local Climatological Data, Baltimore, Maryland. 1983.
59. United States Department of Commerce, National Climatic Center. Climatic Atlas of the United States. 1979.
60. United States Department of Commerce, United States Printing Office. Rainfall Frequency Atlas of the United States. Technical Paper No. 40, 1963.
61. Wolfin, John, United States Department of the Interior, Fish and Wildlife Service, to Garth Glenn, NUS FIT 3. Correspondence. March 19, 1991.

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATING TO IDENTIFICATION

(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

B = Not detected substantially above the level reported in laboratory or field blanks.

R = Unreliable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.

N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

J = Analyte present. Reported value may not be accurate or precise.

K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.

L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.

UJ = Not detected, quantitation limit may be inaccurate or imprecise.

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

Q = No analytical result.

DATA SUMMARY FORM: VOLATILES I

Site Name: Black and Decker

WATER SAMPLES
(µg/L)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation in (CRL * Dilution Fact.)

Sample No. Dilution factor Location	CDN24 1 MW-2A	CDN25 1 MW-2B	CDN26 1/10 MW-9 Field D.P. of CDNSD	CDN27 1 MW-9	CDN28 11.4 MW-81	CDN29 1/76.9 MW-12	CDN30 12.5 MW-10 Field D.P. of CDNSD	CDN31 1 PW-3	CDN32 1 PW-4
10	Chloromethane								
10	Bromomethane	UJ	UJ	UJ	UJ	UJ	UJ	UJ	2
10	Vinyl Chloride								
10	Chloroethane								
5	Methylene Chloride					3	B		
10	Acetone					3	B		
5	Carbon Disulfide						UJ		
5	1,1-Dichloroethane					4	J	7	
5	1,1-Dichloroethane			4	J	8			
5	Total 1,2-Dichloroethane			29		12		21	J
5	Chloroform					3	B		
5	1,2-Dichloroethane								
10	2-Butanone								
5	1,1,1-Trichloroethane			7		3	J		37
5	Carbon Tetrachloride								15
10	Vinyl Acetate				UJ		UJ		UJ
5	Bromodichloromethane								

UJL = Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: VOLATILES 2

Site Name: Black and DeckerWATER SAMPLES
(µg/L)Case #: 15947 Sampling Date(s): 2/26-27/91To calculate sample quantitation limit
(CRQL = Dilution Factor

CRQL	COMPOUND	CDN24	CDN25	CDN26	CDN27	CDN28	CDN29	CDN30	CDN31	CDN32		
		Sample No. Dilution Factor Location	Sample No. Dilution Factor Location	Sample No. Dilution Factor Location	Sample No. Dilution Factor Location	Sample No. Dilution Factor Location	Sample No. Dilution Factor Location	Sample No. Dilution Factor Location	Sample No. Dilution Factor Location	Sample No. Dilution Factor Location	Sample No. Dilution Factor Location	
		MN-2A	MN-2B	MN-8 FIELD DUP. of CDN30	MN-7	MN-81	MN-12	MN-10 FIELD DUP. of CDN26	PN-3	PN-4		
5	*1,2-Dichloropropane											
5	Cis-1,3-Dichloropropane											
5	Trichloroethene			1800 ⁺	18	33	J	12000 ⁺	2000	50	27	
5	Dibromochloromethane											
5	1,1,2-Trichloroethane											
5	*Benzene				UL			UL	UL	UL	UL	
5	Trans-1,3-Dichloropropene											
5	Bromoform											
10	4-Methyl-2-pentanone											
10	2-Hexanone											
5	*Tetrachloroethene			36	19	1900	210 ⁺	J	35	J	2	J
5	1,1,2,2-Tetrachloroethane											
5	*Toluene		6		UL			UL	UL	UL	UL	UL
5	*Chlorobenzene											
5	*Ethylbenzene											
5	*Styrene											
5	*Total Xylenes											

Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

result is from diluted analysis

revised 07/91

DATA SUMMARY FORM: VOLATILES 1

Site Name: Black and Decker

WATER SAMPLES
(µg/l.)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation in
(CRQL = Dilution Fac

CRQL	COMPOUND	CDN33		CDN34		CDN35		CDN36		CDN37		CDN44		CDN46		CDN48		CDN1		
		Sample No. Dilution Factor Location	1 PN-5	1 PN-6	10 PN-7	10 PN-7	10 Field Dup. of CDN36	10 Field Dup. of CDN35	10 PN-8	10 PN-8	1 AQ Blanks	1 SW-1	1 SW-2	1 SW-3	1 SW-3	1 SW-	1 SW-	1 SW-	1 SW-	1 SW-
10	Chloromethane																			
10	Bromomethane				43						43									
10	*Vinyl Chloride																			
10	Chloroethane																			
5	*Methylene Chloride							54	B											
10	Acetone							57	B		5	B								
5	Carbon Disulfide																			
5	*1,1-Dichloroethane																			
5	1,1-Dichloroethane																			
5	*Total 1,2-Dichloroethane			5	J															
5	Chloroform			1	B							3	B							
5	*1,2-Dichloroethane																			
10	*2-Butanone																			
5	*1,1,1-Trichloroethane													3	J					
5	*Carbon tetrachloride																			
10	Vinyl Acetate				43						43									
5	Bromodichloromethane											4	J							

CRQL = Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: VOLATILES 2

Site Name: BLACK and DECKER

WATER SAMPLES
(µg/L)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limit
(CQL = Dilution Factor)

Sample No. Dilution factor Location	CDN32	CDN34	CDN35	CDN36	CDN37	CDN44	CDN46	CDN47	CDN49	
	1 PN-5	1 PN-6	10 PW-7 Field Dup. of CDN36	13.2 PW-8 Field Dup. of CDN35	1 AP Shank 1	1 SW-1	1 SW-2	1 SW-3	1 SW-4	
1 AQL COMPOUND										
5 *1,2-Dichloropropane										
5 Cis-1,3-Dichloropropane										
5 Trichloroethene	3	3	9				18	15	7	
5 Dibromochloromethane						3	3			
5 1,1,2-Trichloroethane										
5 *Benzene		UL	UL	UL	UL	UL				
5 Trans-1,3-Dichloropropane										
5 Bromoform										
10 4-Methyl-2-pentanone										
10 2-Hexanone										
5 *Tetrachloroethene	13	3	10	1600	1500				1	
5 1,1,2,2-Tetrachloroethane										
5 *Toluene		UL	UL	UL	UL	UL				
5 *Chlorobenzene										
5 *Ethylbenzene										
5 *Styrene										
5 *Total Xylenes										

Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS
revised 88

DATA SUMMARY FORM: VOLATILES I

Site Name: Black and Decker

WATER SAMPLES
(µg/L)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limit
(CROL * Dilution Factor)

Sample No. Dilution Factor Location	CDNS1		CDNS4		CDNS6		CDNS7		CDNS8		CDNS1		CDNS2		CDNS4		CDNS6	
	SW-5		SW-6		SW-7		SW-8		HW-1		HW-2		HW-3		HW-5 Jeff Leister		HW-6 Stuart Leister	
10	Chloromethane																	
10	Bromomethane						UJ		UJ		UJ		UJ		UJ			UJ
10	*Vinyl Chloride																	
10	Chloroethane																	
5	*Methylene Chloride							1	B		1	B						
10	Acetone		3	B	4	B												
5	Carbon Disulfide						UJ		UJ		UJ		UJ		UJ			UJ
5	*1,1-Dichloroethane																	
5	1,1-Dichloroethane																	
5	*Total 1,2-Dichloroethane		2	J														
5	Chloroform																	
5	*1,2-Dichloroethane																	
10	*2-Butanone																	
5	*1,1,1-Trichloroethane										4	J						
5	*Carbon Tetrachloride																	
10	Vinyl Acetate						UJ		UJ		UJ		UJ		UJ			UJ
5	Bromodichloromethane																	

DATA SUMMARY FORM: VOLATILES 2

Site Name: Black and Decker

WATER SAMPLES

(µg/L)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limit
(CRQL = Dilution Factor)

Sample No. Dilution Factor Location	CDNS1	CDNS4	CDNS6	CDNS8	CDN60	CDN61	CDN62	CDN64	CDN65
	1 SW-5	1 SW-6	1 SW-7	1 SW-8	1 HW-1	1 HW-2	1 HW-3	1 HW-5	1 HW-6
CRQL									
COMPOUND									
5									
5									
5	6				7	2	2	1	
5									
5									
5		UL	UL	UL	UL	UL	UL	UL	UL
5									
5									
10									
10									
5	89			1	5		0.9		
5									
5		UL	UL	UL	UL	UL	UL	UL	UL
5									
5									
5									
5									
5									
5									
5									

Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS
revised 01/

DATA SUMMARY FORM: VOLATILES I

Site Name: Black and Decker

WATER SAMPLES
(µg/L)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation in µg/L:
(CRQL * Dilution Factor)

CRQL	COMPOUND	CDN66	CDN67	CDN68	CDN69	CDN70	CDN71	CDN72		
		1 HW-7	1 HW-8	1 HW-7	1 HW-10	1 AQ Blank2	1 TIP Blank2	1 PW-22		
10	Chloromethane									
10	Bromomethane	UJ	UJ	UJ	UJ	UJ	UJ	UJ		
10	*Vinyl Chloride									
10	Chloroethane									
5	*Methylene Chloride									
10	Acetone									
5	Carbon Disulfide	UJ	UJ	UJ	UJ	UJ	UJ	UJ		
5	*1,1-Dichloroethane									
5	1,1-Dichloroethane									
5	*Total 1,2-Dichloroethane									
5	Chloroform								2	0
5	*1,2-Dichloroethane									
10	*2-Butanone									
5	*1,1,1-Trichloroethane									
5	*Carbon Tetrachloride									
10	Vinyl Acetate	UJ	UJ	UJ	UJ	UJ	UJ	UJ		
5	Bromodichloromethane									

CRQL = Contract Required Quantitation Limit

UJ = Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

DATA SUMMARY FORM: VOLATILES 2

Site Name: Black and Decker

WATER SAMPLES
(µg/l.)

Case #: 15947 Sampling Date(s): 3/26-27/91

To calculate sample quantitation limit
(CRQL = Dilution Factor

Sample No. Dilution Factor Location	CDNG6	CDNG7	CDNG8	CDNG9	CDN70	CDN71	CDN72		
	1 HW-7	1 HW-8	1 HW-7	1 HW-10	1 APBMK2	1 TRIPSHAKS	1 PW-22		
5	*1,2-Dichloropropane								
5	Cis-1,3-Dichloropropane								
5	Trichloroethene								
5	Dibromochloromethane								
5	1,1,2-Trichloroethane								
5	*Benzene								
5	Trans-1,3-Dichloropropane								
5	Bromoform								
10	4-Methyl-2-pentanone								
10	2-Hexanone								
5	*Tetrachloroethene								
5	1,1,2,2-Tetrachloroethane								
5	*Toluene								
5	*Chlorobenzene								
5	*Ethylbenzene								
5	*Styrene								
5	*Total Xylenes								

Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS
revised 07/

DATA SUMMARY FORM: B H A B 1

Site Name: Black + Decker

WATER SAMPLES
(µg/l.)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limit
(CRQL = Dilution Factor)

CRQL	COMPOUND	CDN24	CDN25	CDN26	CDN27	CDN28	CDN29	CDN30	CDN31	CDN32
		MW-2A	MW-2B	MW-8	MW-9	MW-81	MW-12	MW-10	PW-3	PW-4
				Field Dup of CDN30				Field Dup of CDN26		
10	Phenol									
10	bis(2-Chloroethyl)ether									
10	2-Chlorophenol									
10	1,3-Dichlorobenzene									
10	1,4-Dichlorobenzene									
10	Benzyl Alcohol									
10	1,2-Dichlorobenzene									
10	2-Methylphenol									
10	bis(2-Chloroisopropyl)ether									
10	4-Methylphenol									
10	N-Nitrosodipropylamine									
10	Hexachloroethane									
10	Nitrobenzene									
10	Isophthalonitrile									
10	2-Nitrophenol									
10	2,4-Dimethylphenol									
50	Benzoic Acid									
10	bis(2-Chloroethoxy)methane									
10	2,4-Dichlorophenol									
10	1,2,4-Trichlorobenzene									
10	Naphthalene									
10	4-Chloroaniline									

CDN32
PW-4

CRQL = Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITION
revised 0

DATA SUMMARY FORM: B N A S 2

Site Name: Black + Decker

WATER SAMPLES
(µg/L)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limits:
(CRQL = Dilution Factor)

CRQL	COMPOUND	CDN24	CDN25	CDN26	CDN27	CDN28	CDN29	CDN30	CDN31	CDN32
		1 MW-2A	1 MW-2B	1 MW-8 Field Dup of CDN30	1 MW-9	1 MW-81	1 MW-12	1 MW-10 Field Dup of CDN26	1 PW-3	1 PW-4
10	Hexachlorobutadiene									
10	4-Chloro-3-methylphenol									
10	2-Methylnaphthalene									
10	Hexachlorocyclopentadiene									
10	2,4,6-Trichlorophenol									
50	2,4,5-Trichlorophenol									
10	2-Chloronaphthalene									
50	2-Nitroaniline									
10	Dimethylphthalate									
10	Acenaphthylene									
10	2,6-Dinitrotoluene									
50	3-Nitroaniline									
10	Acenaphthene									
50	2,4-Dinitrophenol									
50	4-Nitrophenol									
10	Dibenzofuran									
10	2,4-Dinitrotoluene									
10	Diethylphthalate									
10	4-Chlorophenyl-phenylether									
10	Fluorene									
50	4-Nitroaniline									
50	4,6-Dinitro-2-methylphenol									

CRQL - Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS
Revised 07/90

DATA SUMMARY FORM: D N A B 3

Site Name: Black + Decker

WATER SAMPLES
(µg/l.)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limit
(CRQL * Dilution Factor)

CRQL	COMPOUND	CDN24	CDN25	CDN26	CDN27	CDN28	CDN29	CDN30	CDN31	CDN32
		Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location
		1 MN-2A	1 MN-2B	1 MN-7 Field Dup. of CDN30	1 MN-9	1 MN-81	1 MN-12	1 MW-10 Field Dup. of CDN26	1 PW-3	1 PW-4
10	N-Nitrosodiphenylamine									
10	4-Bromophenyl-phenylether									
10	*Hexachlorobenzene									
50	*Pentachlorophenol									
10	Phenanthrene									
10	Anthracene									
10	Di-n-butylphthalate									
10	Fluoranthene									
10	Pyrene									
10	Butylbenzylphthalate									
20	3,3'-Dichlorobenzidine									
10	Benzo(a)anthracene									
10	Chrysene									
10	bis(2-Ethylhexyl)phthalate									
10	Di-n-octylphthalate									
10	Benzo(b)fluoranthene									
10	Benzo(k)fluoranthene									
10	Benzo(a)pyrene									
10	Indeno(1,2,3-cd)pyrene									
10	Dibenz(a,h)anthracene									
10	Benzo(e,h,i)perylene									

CRQL = Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITION

revised 01

DATA SUMMARY FORM: D H A S 1

Site Name: Black + Decker

WATER SAMPLES
(µg/L)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limit
(CRQL = Dilution Factor

CRQL	COMPOUND	CDN33	CDN34	CDN35	CDN36	CDN37	CDN44	CDN46	CDN48	CDN49
		1 PW-5	1 PW-6	1 PW-7 Field Dup. of CDN36	1 PW-8 Field Dup. of CDN35	1 AP BANK	1 SW-1	1 SW-2	1 SW-3	1 SW-4
10	Phenol									
10	bis(2-Chloroethyl)ether									
10	2-Chlorophenol									
10	*1,3-Dichlorobenzene									
10	*1,4-Dichlorobenzene									
10	Benzyl Alcohol									
10	1,2-Dichlorobenzene									
10	2-Methylphenol									
10	bis(2-Chloroisopropyl)ether			UJ		UJ	UJ	UJ	UJ	UJ
10	4-Methylphenol									
10	N-Nitrosodi-n-propylamine									
10	Hexachloroethane									
10	Nitrobenzene									
10	Isobutene									
10	2-Nitrophenol									
10	2,4-Dimethylphenol									
50	Benzoic Acid									
10	bis(2-Chloroethoxy)methane									
10	2,4-Dichlorophenol									
10	1,2,4-Trichlorobenzene									
10	Naphthalene									
10	4-Chloroaniline									

CRQL = Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITION
revised 01

DATA SUMMARY FORM: B N A 6 2

Site Name: Black + Decker

WATER SAMPLES
(µg/L)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limit
(CRQL = Dilution Factor)

Sample No. Dilution Factor Location		CDN33 1 PN-5	CDN34 1 PN-6	CDN35 1 PN-7 Field Dup of CDN36	CDN36 1 PN-8 Field Dup. of CDN35	CDN37 1 AP Blank	CDN44 1 SW-1	CDN46 1 SW-2	CDN48 1 SW-3	CDN49 1 SW-4
CRQL	COMPOUND									
10	Hexachlorobutadiene									
10	4-Chloro-3-methylphenol									
10	2-Methylnaphthalene									
10	Hexachlorocyclopentadiene									
10	2,4,6-Trichlorophenol									
50	2,4,5-Trichlorophenol									
10	2-Chloronaphthalene									
50	2-Nitroaniline									
10	Dimethylphthalate									
10	Acenaphthylene									
10	2,6-Dinitrotoluene									
50	3-Nitroaniline				UJ		UJ		UJ	UJ
10	Acenaphthene									
50	2,4-Dinitrophenol									
50	4-Nitrophenol				UJ		UJ		UJ	UJ
10	Dibenzofuran									
10	2,4-Dinitrotoluene									
10	Diethylphthalate						3d			
10	4-Chlorophenyl-phenylether									
10	Fluorene									
50	4-Nitroaniline				UJ		UJ		UJ	UJ
50	4,6-Dinitro-2-methylphenol									

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

revised 07/90

DATA SUMMARY FORM: B N A B 3

Site Name: Black + Decker

WATER SAMPLES
(µg/l.)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limit
(CRQL = Dilution Factor

CRQL	COMPOUND	CDN33	CDN34	CDN35	CDN36	CDN37	CDN44	CDN46	CDN48	CDN47
		1 PW-5	1 PW-6	1 PW-7 Field Dup of CDN36	1 PW-8 Field Dup. of CDN35	1 AQ BLANK1	1 SW-1	1 SW-2	1 SW-3	1 SW-4
10	N-Nitrosodiphenylamine									
10	4-Bromophenyl-phenylether									
10	*Hexachlorobenzene									
50	*Pentachlorophenol									
10	Phenanthrene									
10	Anthracene									
10	Di-n-butylphthalate									
10	Fluoranthene									
10	Pyrene									
10	Butylbenzylphthalate									
20	3,3'-Dichlorobenzidine			UJ		UJ	UJ	UJ	UJ	UJ
10	Benzo(a)anthracene									
10	Chrysene									
10	Bis(2-Ethylhexyl)phthalate								160	
10	Di-n-octylphthalate									
10	Benzo(b)fluoranthene									
10	Benzo(k)fluoranthene									
10	Benzo(a)pyrene									
10	Indeno(1,2,3-cd)pyrene									
10	Dibenz(a,h)anthracene									
10	Benzo(g,h,i)perylene									

ORIGINAL
(KRD)

CRQL = Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS
revised 07/

DATA SUMMARY FORM: D H A B 1

198 0

Site Name: Black + Decker

WATER SAMPLES
(µg/L)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation in
(CRQL * Dilution Factor)

Sample No. Dilution Factor Location	CDN51	CDN54	CDN56	CDN58	CDN60	CDN61	CDN62	CDN64	CDN67
	1 SW-5	1 SW-6	1 SW-7	1 SW-8	1 HW-1	1 HW-2	0.99 HW-3	1 HW-5 Jeff	1 HW- Stuart
CRQL	COMPOUND								
10	Phenol								
10	bis(2-Chloroethyl)ether								
10	2-Chlorophenol								
10	*1,3-Dichlorobenzene								
10	*1,4-Dichlorobenzene								
10	Benzyl Alcohol								
10	1,2-Dichlorobenzene								
10	2-Methylphenol								
10	bis(2-Chloroisopropyl)ether								
10	4-Methylphenol								
10	N-Nitroso-di-n-propylamine								
10	Hexachloroethane								
10	Nitrobenzene								
10	Isophenol								
10	2-Nitrophenol								
10	2,4-Dimethylphenol								
50	Benzoic Acid								
10	bis(2-Chloroethoxy)methane								
10	2,4-Dichlorophenol								
10	1,2,4-Trichlorobenzene								
10	Naphthalene								
10	4-Chloroaniline								

CRQL = Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS
revised 6

DATA SUMMARY FORM: B N A B 2

Site Name: Black + Decker

WATER SAMPLES
(µg/l.)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limit
(CRQL • Dilution Factor)

Sample No. Dilution Factor Location		CDNS1 1 SW-5	CDNS4 1 SW-6	CDNS6 1 SW-7	CDNS8 1 SW-8	CDN60 1 HW-1	CDN61 1 HW-2	CDN62 0.99 HW-3	CDN64 1 HW-5 Jeff	CDN65 1 HW-6 Stuart
CRQL	COMPOUND									
10	Hexachlorobutadiene									
10	4-Chloro-3-methylphenol									
10	2-Methylnaphthalene									
10	Hexachlorocyclopentadiene									
10	2,4,6-Trichlorophenol									
50	2,4,5-Trichlorophenol									
10	2-Chloronaphthalene									
50	2-Nitroaniline									
10	Dimethylphthalate									
10	Acenaphthylene									
10	2,4-Dinitrotoluene									
50	5-Nitroaniline					UJ	UJ	UJ	UJ	UJ
10	Acenaphthene									
50	2,4-Dinitrophenol					UJ	UJ	UJ	UJ	UJ
50	4-Nitrophenol					UJ	UJ	UJ	UJ	UJ
10	Dibenzofuran									
10	2,4-Dinitrotoluene									
10	Diethylphthalate									
10	4-Chlorophenyl-phenylether									
10	Fluorene									
50	4-Nitroaniline					UJ	UJ	UJ	UJ	UJ
50	4,6-Dinitro-2-methylphenol									

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITION
revised 07/

DATA SUMMARY FORM: D N A B 3

Site Name: Black + Decker

WATER SAMPLES
(µg/L)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limit
(CRL = Dilution Factor)

CRL	COMPOUND	CDN51	CDN54	CDN56	CDN58	CDN60	CDN61	CDN62	CDN64	CDN65
		Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location	Dilution Factor Location
		1 SW-5	1 SW-6	1 SW-7	1 SW-8	1 HW-1	1 HW-2	0.99 HW-3	1 HW-5 Jeff	1 HW-6 Stuart
10	N-Nitrosodiphenylamine									
10	4-Bromophenyl-phenylether									
10	*Hexachlorobenzene									
50	*Pentachlorophenol									
10	Phenanthrene									
10	Anthracene									
10	Di-n-butylphthalate									
10	Fluoranthene									
10	Pyrene									
10	Butylbenzylphthalate									
20	3,3'-Dichlorobenzidine				UJ	UJ	UJ	UJ	UJ	UJ
10	Benzo(a)anthracene									
10	Chrysene									
10	bis(2-Ethylhexyl)phthalate									
10	Di-n-octylphthalate									
10	Benzo(b)fluoranthene									
10	Benzo(k)fluoranthene									
10	Benzo(a)pyrene									
10	Indeno(1,2,3-cd)pyrene									
10	Dibenz(a,h)anthracene									
10	Benzo(g,h,i)perylene									

CRL = Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS
revised 07

DATA SUMMARY FORM: D H A S 1

Site Name: Black + Decker

WATER SAMPLES
(µg/l.)

Case #: 15947 Sampling Date(s): 2/26-27/91

To calculate sample quantitation limit
(CRQL • Dilution Factor)

CRQL	COMPOUND	CDN66	CDN67/RE	CDN68	CDN69	CDN70	CDN72						
		Dilution Factor	Location										
		0.99	1	1	1	1	1						
		HW-7	HW-9	HW-9	HW-10	AD Blank 2	PW-22						
10	Phenol			UJ									
10	bis(2-Chloroethyl)ether												
10	2-Chlorophenol			UJ									
10	*1,3-Dichlorobenzene												
10	*1,4-Dichlorobenzene												
10	Benzyl Alcohol			UJ									
10	1,2-Dichlorobenzene												
10	2-Methylisobutyl			UJ									
10	bis(2-Chloroisopropyl)ether				UJ	UJ	UJ	UJ					
10	4-Methylphenol			UJ									
10	N-Nitrosodimethylamine												
10	Hexachloroethane												
10	Nitrobenzene												
10	Isophthalic												
10	2-Nitrophenol			UJ									
10	2,4-Dimethylisobutyl			UJ									
50	Benzoic Acid			UJ									
10	bis(2-Chloroethoxy)methane												
10	2,4-Dichlorophenol			UJ									
10	1,2,4-Trichlorobenzene												
10	Naphthalene												
10	4-Chlorophenol												

CRQL = Contract Required Quantitation Limit

Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS
revised 07



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

I. IDENTIFICATION
01 STATE MD 02 SITE NUMBER 370

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site) Black and Decker, Incorporated		02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER 626 Hanover Pike			
03 CITY Hampstead		04 STATE MD	05 ZIP CODE 21074	06 COUNTY Carroll	07 COUNTY CODE 013
09 COORDINATES LATITUDE 3 9° 35' 36" N		LONGITUDE 76° 50' 58" W		10 TYPE OF OWNERSHIP (Check one) <input checked="" type="checkbox"/> A PRIVATE <input type="checkbox"/> B FEDERAL <input type="checkbox"/> C STATE <input type="checkbox"/> D COUNTY <input type="checkbox"/> E MUNICIPAL <input type="checkbox"/> F OTHER <input type="checkbox"/> G UNKNOWN	

III. INSPECTION INFORMATION

01 DATE OF INSPECTION 02 / 26, 27 91 month day year		02 SITE STATUS <input checked="" type="checkbox"/> A ACTIVE <input type="checkbox"/> B INACTIVE		03 YEARS OF OPERATION 1952 / present BEGINNING YEAR ENDING YEAR	
04 AGENCY PERFORMING INSPECTION (Check all that apply) <input type="checkbox"/> A EPA <input checked="" type="checkbox"/> B EPA CONTRACTOR NUS FIT 3 (Name of firm) <input type="checkbox"/> C MUNICIPAL <input type="checkbox"/> D MUNICIPAL CONTRACTOR (Name of firm) <input type="checkbox"/> E STATE <input type="checkbox"/> F STATE CONTRACTOR (Name of firm) <input type="checkbox"/> G OTHER (Specify)					

05 CHIEF INSPECTOR Linda Ciarletta	06 TITLE Biologist	07 ORGANIZATION NUS FIT 3	08 TELEPHONE NO. (215) 687-9510
09 OTHER INSPECTORS Janis Hottinger Mary Williams	10 TITLE Environmental Scientist Environmental Scientist	11 ORGANIZATION NUS FIT 3 NUS FIT 3	12 TELEPHONE NO. 215 687-9510 (215) 687-9510
Thomas Ferrie Steven Sottung	Environmental Scientist Environmental Scientist	NUS FIT 3 NUS FIT 3	(215) 687-9510 (215) 687-9510
John Pugh	Environmental Scientist	NUS FIT 3	(215) 687-9510
Paul Davis	Environmental Scientist	NUS FIT 3	(215) 687-9510
Thomas Smith	Environmental Scientist	NUS FIT 3	(215) 687-9510
13 SITE REPRESENTATIVES INTERVIEWED LaVere Grimes	14 TITLE Facilities Manager	15 ADDRESS 626 Hanover Pike Hampstead, MD 21071	16 TELEPHONE NO. (301) 239-5555
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17 ACCESS GAINED BY (Check one) <input checked="" type="checkbox"/> PERMISSION <input type="checkbox"/> WARRANT	18 TIME OF INSPECTION 02/26/91 10:00AM 02/27/91 8:30AM	19 WEATHER CONDITIONS partly sunny, with temperatures in the mid-30s
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IV. INFORMATION AVAILABLE FROM

01 CONTACT Donna Santiago		02 OF (Agency/Organization) US EPA		03 TELEPHONE NO. (215) 597-1105	
04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM Linda Ciarletta		05 AGENCY NUS	06 ORGANIZATION FIT 3	07 TELEPHONE NO. (215) 687-9510	08 DATE 05 / 15 91 month day year