FINAL

ENVIRONMENTAL CONDITION OF PROPERTY REPORT

WHITEHALL MEMORIAL
U.S. ARMY RESERVE CENTER (OH014)
721 COUNTRY CLUB ROAD
COLUMBUS, OH 43213

Prepared For:

U.S. Army Corps of Engineers – Louisville District
Engineering Division – Environmental Engineering Branch
600 Dr. Martin Luther King, Jr. Place
Louisville, Kentucky 40202-2232

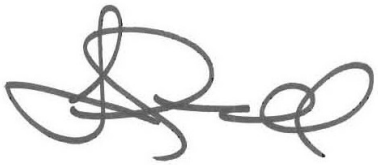
February 2007

CERTIFICATION

All information/documentation provided accurately reflects the environmental condition of the property. This ECP Report is in general accordance with the U.S. Department of Defense (DOD) requirements for completion of an Environmental Condition of Property (ECP) Report.

DAVID L. MOORE **DATE**
Chief, Environmental Division
88th Regional Readiness Command

The undersigned certifies the contents of this report are in general accordance with DoD policies for the completion of an ECP.



02/07/07

LENARD GUNNELL, P.G. **DATE**
Project Geologist
U.S. Army Corps of Engineers

Executive Summary

CH2M HILL, under contract to the U.S. Army Corps of Engineers, Louisville District, has prepared this Environmental Condition of Property Report for the Whitehall Memorial U.S. Army Reserve (USAR) Center (Facility ID OH014), hereafter referred to as the "Property" or "USAR Center." The Property is at 721 Country Club Road, Columbus, Franklin County, Ohio, 43213, and encompasses approximately 5 acres.

This ECP Report was conducted in conformance with the Department of Defense's Base Redevelopment and Realignment Manual (BRRM), DoD 4165.77-M, Army Regulation 200-1, of American Society for Testing and Materials (ASTM) Designation D6008-96 (2005), *Standard Practice for Conducting Environmental Baseline Surveys.*

This ECP Report details the history of the Property, including USAR use of the Property, any prior uses by earlier tenants or lessors, and the resulting environmental condition of the Property. This ECP Report was based on readily available information and describes the environmental condition of the property at the time of termination of the lease.

The USAR Center is on approximately 5 acres of land with three permanent structures: a USARC Building, an Organizational Maintenance Shop (OMS), and a utility building. The buildings were constructed in 1960 and have been used for Army Reserve activities since that time. The site is currently occupied by 346th Psychological Operations Company Tactical Airborne.

Based on a review of aerial photographs and U.S. Geological Survey topographical maps dating back to 1900 (Figures 5 and 7 through 18, Appendix A), the City of Columbus is shown to be established as early as 1900, but Whitehall was not on the map. The City of Whitehall does not appear until 1955 and the Property and surrounding areas are undeveloped. The USAR Center appears in 1964 and very little change is noted on the Property and surrounding adjacent properties after the construction of the USAR Center.

Areas of potential environmental concern were reviewed and CH2M HILL found no significant findings relating to the environmental condition of the Property.

In accordance with Department of Defense policy defining the classifications (See Sherri Goodman Memorandum dated 21 October 1996), the Property has been classified as Type 1. This classification does not include categorizing the Property based on *de minimis* conditions that generally do not present material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

Contents

Appendixes

Tables

Abbreviations and Acronyms

ACM	asbestos-containing material
AEP	American Electric Power
AMSA	Area Maintenance and Support Activity
AR	Army Regulation
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
BRAC	Base Realignment and Closure
BRRM	Base Redevelopment and Realignment Manual
BUSTR	Bureau of Underground Storage Tank Regulations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Act Information System
CESQG	conditionally exempt small quantity generator
CFR	Code of Federal Regulations
CORRACTS	Resource Conservation and Recovery corrective action site
DoD	Department of Defense
ECP	environmental condition of property
EDR	Environmental Data Resources, Inc.
FEMA	Federal Emergency Management Agency
gpm	gallons per minute
kg	kilogram
LBP	lead-based paint
LUST	leaking underground storage tank
µg/ft²	micrograms per square foot
MEC	munitions and explosives of concern
MEP	military equipment parking
NFA	no further action

NPL	National Priorities List
NRHP	National Register of Historic Places
ODNR	Ohio Department of Natural Resources
OMS	Organizational Maintenance Shop
OWS	oil/water separator
PCB	polychlorinated biphenyl
pCi/L	picoCuries per liter
POL	petroleum, oil, and lubricant
POV	privately owned vehicle
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Act Information System
RRC	Regional Readiness Command
TSD	treatment, storage, or disposal
USACE	U.S. Army Corps of Engineers
USAR	U.S. Army Reserve
USARC	U.S. Army Reserve Center (Building)
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
WSR	Wild and Scenic River

1 Introduction

CH2M HILL, under contract to the U.S. Army Corps of Engineers (USACE) Louisville District Engineering Division, was authorized to conduct an Environmental Condition of Property (ECP) report for the Whitehall Memorial U.S. Army Reserve (USAR) Center (OH014). The facility is located at 721 Country Club Road, Franklin County, Columbus, Ohio, and is hereafter referred to as the "Property" or "USAR Center." CH2M HILL prepared this ECP report under contract number W912QR-04-D-0020, Task Order No. 0018, with the USACE Louisville District.

A visual nonintrusive reconnaissance of the Property was conducted on August 3, 2006, in support of the ECP. The reconnaissance purpose was to visually obtain information indicating the likelihood of recognized environmental conditions associated with the Property or adjacent properties.

In preparing this ECP report, CH2M HILL gathered information from the available records and previous work from others, interviews with individuals purporting to be familiar with the Property, and observations from a site reconnaissance. The accuracy of the information obtained from these sources was not verified by CH2M HILL. As such, CH2M HILL will make no warranty, expressed or implied, relative to the accuracy, completeness, or reliability of the information used to create the records and reports prepared by others.

1.1 Purpose of Environmental Condition of Property

The Military Department with real property accountability shall assess, determine, and document the environmental condition of all transferable property in an ECP Report. This ECP Report is based on readily available information. Pursuant to the Department of Defense's (DoD) policy, set forth in the Base Redevelopment and Realignment Manual (BRRM) (DoD 4165.66-M, March 1, 2006) Section C8.3, the primary purposes of the ECP Report include the following:

- Provide the Army with information it may use to make disposal decisions.
- Provide the public with information relative to the environmental condition of the property.
- Assist in community planning for the reuse of Base Realignment and Closure (BRAC) property.
- Assist federal agencies during the property screening process.
- Provide information for prospective buyers.
- Assist prospective new owners in meeting the requirements under U.S. Environmental Protection Agency's (USEPA) "All Appropriate Inquiry" regulations.
- Provide information about completed remedial and corrective actions at the property.

- Assist in determining appropriate responsibilities, asset valuation, and liabilities with other parties to a transaction.

The ECP Report contains the information required to comply with the provisions of 40 Code of Federal Regulations (CFR) Part 373, which require that a notice accompany contracts for the sale of, and deeds entered into, for the transfer of federal property on which any hazardous substance was stored, released, or disposed of. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Section 120(h), stipulates that a notice is required if certain quantities of designated hazardous substances have been stored on the property for 1 year or more—specifically, quantities exceeding 1,000 kilograms (kg) or the reportable quantity, whichever is greater, of the substances specified in 40 CFR 302.4 or 1 kg of acutely hazardous waste as defined in 40 CFR 261.30. A notice is also required if hazardous substances have been disposed of or released on the property in an amount greater than or equal to the reportable quantity. Army Regulation (AR) 200-1 requires that the ECP Report address asbestos, lead-based paint (LBP), radon, and other substances potentially hazardous to human health.

This ECP Report used the American Society for Testing and materials (ASTM) Designation D6008-96 (2005), *Standard Practice for Conducting Environmental Baseline Surveys*, the BRRM, CERCLA § 120, and Army Regulation 200-1.

1.2 Scope of Services

This ECP report covers the 5-acre USAR Center located at 721 Country Club Road, Columbus, Ohio. The 5-acre parcel is situated in a rural area that is bordered on the east by Country Club Road, by residential areas on the north and south, and on the west by a City of Whitehall public park. All site maps, figures, and aerial photographs referenced herein are provided in Appendix A, while Appendix B contains the photographs taken during the August 3, 2006, site reconnaissance. Appendix C contains the Property warranty deeds and chain of title information, and lease or permit agreements if applicable. Relevant historical environmental documents and reports are provided in Appendix D, while Appendix E contains the Environmental Data Resources, Inc. (EDR) radius search reports commissioned for this effort.

This ECP report classifies the property into one of seven DoD Environmental ECP categories as defined by DoD policy defining the classifications (see Sherri Goodman Memorandum dated 21 October 1996). The property classification categories are as follows:

- ECP Area Type 1—An area or parcel of real property where no release or disposal of hazardous substances or petroleum products or their derivatives has occurred (including no migration of these substances from adjacent properties).
- ECP Area Type 2—An area or parcel of real property where only the release or disposal of petroleum products or their derivatives has occurred.
- ECP Area Type 3—An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred, but at concentrations that do not require a removal or remedial action.

- ECP Area Type 4—An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred and all remedial actions necessary to protect human health and the environment have been taken.
- ECP Area Type 5—An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred and removal or remedial actions, or both, are underway, but all required actions have not yet been taken.
- ECP Area Type 6—An area or parcel of real property where release, disposal, or migration, or some combination thereof, of hazardous substances has occurred, but required response actions have not yet been initiated.
- ECP Area Type 7—An area or parcel of real property that is unevaluated or requires additional evaluation.

2 Site Location and Physical Description

2.1 Site Location

The USAR Center is located in Franklin County, in the city of Columbus, Ohio, at 721 Country Club Road. A site location map is available as Figure 1 in Appendix A. The 5-acre parcel is situated in a residential area that is bordered on the east by Country Club Road, by residential areas on the north and south, and on the west by a City of Whitehall public park.

2.2 Asset Information

Facility Name and Address:	Whitehall Memorial U.S. Army Reserve Center 721 Country Club Road Columbus, Ohio 43213
Property Owner:	U.S. Government
Date of Ownership:	December 4, 1958
Current Occupants:	346th Psychological Operations Company Tactical Airborne
Zoning:	Residential/Commercial
County, State:	Franklin, Ohio
U.S. Geological Survey (USGS) Quadrangle(s):	Reynoldsburg, Ohio
Section/Township/Range:	Half of Section 12, Section 9, Township 12, Range 21
Latitude/longitude:	39°58'43.9"N; 82°51'59.8"W
Legal Description:	Beginning at a point in the center of Country Club Road, said point being in the east line of the said half Section 12, and located approximately 1001.00 feet north of the south line of said half section, thence, from the said point of beginning, North 83° 37' West passing an iron pin at 30.00 feet in all 532.98 feet to an iron pin marking the southwest corner of the subject owner property, thence, with the subject owner west line, North 6° 44' East 409.00 feet to a pin, thence leaving the said west line, and severing the land of the subject owner,

South 83° 37' East 533.10 feet to a point in the center of the said Country Road, thence, with the said road,

South 6° 45' West 409.00 feet to the place of beginning containing 5.00 acres, more or less, and being a part of the same land as that described in a deed to Harschel Baker from Harry Alexander and Lulu Alexander, his wife, dated October 18, 1955, and recorded in Volume 1964, page 411, of the record of Franklin County, Ohio.

2.3 Physical Description

The USAR Center is located on a 5-acre parcel in Columbus, Ohio. The Property is located on the USGS 7.5-minute Reynoldsburg at an average elevation of 798 feet above mean sea level. The topography is generally flat.

The USAR Center contains three permanent structures, one privately owned vehicle (POV) parking lot, and one military equipment parking (MEP) area. A site map is included as Figure 2 in Appendix A. The three structures are brick buildings that include the USARC Building, the Organizational Maintenance Shop (OMS), and a small utility building, which were all built in 1960.

The USARC Building functions as an administrative office and drill hall for the USAR Center. An interior layout of the building is provided as Figure 3, Appendix A. It is a T-shaped, multiple-level building comprised of two-story rectangular building sections connected by a one-story enclosed corridor. It rests upon a poured concrete foundation with concrete block walls and a red brick veneer. A projecting entrance consisting of two pairs of glass pedestrian doors is located on the east side of the building. A second projecting entrance consisting of a metal pedestrian door and concrete porch covered by a metal awning is located on the southwest corner of the building. Pairs of metal pedestrian doors are located on the north, south, and west walls, and a metal overhead retractable bay door is located on the west wall of the drill hall. The kitchen was added to the southeast corner of the drill hall in 1989 and closed in 2001. The kitchen had a grease trap and the cleanout port was located outside the kitchen on the south side of the building (Photo 12, Appendix B). A drain was noted on the landing located outside the kitchen door (Photo 13, Appendix B).

The OMS functions as a vehicle maintenance facility for the USAR Center. An interior layout of the facility is provided in Figure 4, Appendix A. Constructed in 1960, the OMS is a one-story rectangular building that rests upon a poured concrete foundation with concrete block walls and red brick veneer. Entrances include three metal overhead retractable bay doors, which are located along the east wall of the building, and metal pedestrian doors located on the north and south walls. A flat roof covers the structure.

The utility building functions as a storage facility for equipment serving the electrical and water systems at the USAR Center. It is a half-story rectangular building with a concrete foundation and brick walls. A metal pedestrian door is located on the east wall of the building. Metal vents are located on the south and north walls. A low-pitch shed roof covers the building.

Approximately one-third of the Property is covered by impervious surface features such as asphalt parking areas, driveways, and concrete walkways. The remaining land is grassed with a very sparse population of trees scattered over the property.

2.4 Site Hydrology and Geology

According to the Ohio Department of Natural Resources (ODNR) Division of Geologic Survey, the primary physiographic region of where the USAR Center is located in Franklin County lies in the Columbus Lowland Till Plain. The surficial geology of the unconsolidated material on top of the bedrock is a heterogeneous mixture of clay, silt, sand, and gravel from an accumulation of material carried and finally deposited by glaciers of the Wisconsinan glaciations. The material consists mostly of ground moraines deposited 14,000–24,000 years ago. The soil of the area is derived from this material. Further underlying the Property is Devonian-age carbonate bedrock, consisting of limestone and dolomite.

2.4.1 Surface Water Characteristics

Figure 5 in Appendix A provides a portion of the 1964-1994 Reynoldsburg USGS topographic map that includes the Property. As shown, the Property is situated at an elevation of approximately 798 feet above mean sea level and is relatively flat.

Stormwater flows across the site storm drains located both onsite and offsite on the perimeter of the Property. Surface water from the site mainly infiltrates into the underlying soil. No surface water features are located in the immediate vicinity of the Property.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map, Community Panel 1707190003B, the Property is not included in the 100-year floodplain elevation. Figure 6 in Appendix A provides a map depicting the extent of the nearest 100-year floodplain in relation to the Property.

2.4.2 Hydrogeological Characteristics

Regional hydrogeologic information obtained from the ODNR Division of Water shows the Property in a complex hydrogeologic setting, where the primary hydrogeologic setting is glacial drift composed of a mixture of till with sand and gravel with intermittent and discontinuous sand and gravel seams. Groundwater yield from these unconsolidated aquifers are low, ranging from less than 5 gallons per minute (gpm) to upwards of 25 gpm, whereas the groundwater yield in the upper bedrock aquifer can range up to 100 gpm. Available information does not indicate the depth to groundwater on the Property, but the water elevation in Big Walnut Creek, located approximately 0.66 mile east of the Property, is approximately 30 to 35 feet below the ground surface elevation of the Property, suggesting that groundwater beneath the site may be approximately 30 feet below the ground surface. Commonly, shallow groundwater flow directions mimic surface topography and/or are directed toward hydraulically interconnected surface water. Because Big Walnut Creek is located east of the Property, it is assumed that shallow groundwater flows generally east, toward Big Walnut Creek.

2.5 Site Utilities

Water Service—The City of Columbus provides potable water service to the Property.

Sanitary Sewer System—The City of Columbus provides sanitary sewer service to the Property. The primary source of wastewater that is directed to the city sewer system includes nonprocess wastewater (bathrooms, sinks, etc.).

Gas and Electric—Columbia Gas of Ohio provides natural gas service to the Property, while American Electric Power (AEP) provides electric service to the Property.

2.6 Water Supply Wells and Septic Systems

Based upon a review of available historical site and agency records and interviews with site personnel, there are no water supply wells located currently or historically at the Property. Potable water is supplied by the City of Columbus. The City of Columbus has supplied potable water to the USARC Building and the OMS since they were constructed.

3 Site History

3.1 History of Ownership

A historical Chain of Title and Warranty Deed, dated September 11, 2006, document that the Property was purchased by the U.S. Government in 1958 (see Appendix C). According to a City Directory provided by EDR dated July 12, 2006, the address of the USAR Center was first listed in the research source (Haines X—Ref Directory) in 2002. Subsequent city directory searches do not list the Property. Historical documentation supports the 1960 construction of the main building and the OMS. A copy of the City Directory is included in Appendix E.

3.2 Past Uses and Operations

In 1958, the U.S. Government purchased the 5 acres of land for construction of the USARC Building and the OMS. Based on the review of aerial photographs, there were no structures on the property at the time of purchase. The Property has served as a USAR Center since the Government purchased the land.

The USARC Building is an administrative and educational facility, with limited maintenance of military vehicles occurring in the OMS. The Property was historically used by reservists for drill activities on various weekends throughout the year. The OMS was used to conduct limited maintenance activities on military equipment. Activities inside the OMS included limited vehicle maintenance such as checking vehicle motor oil and antifreeze levels, and changing batteries. Any equipment requiring heavier maintenance activities was sent to an Area Maintenance Support Activity (AMSA) shop located at one of the other USAR Centers. Equipment requiring major overhaul also was sent offsite.

Topographic maps (dated 1900, 1912, 1955, 1964, 1973, 1985, and 1994) and historical aerial photographs (dated 1938, 1957, 1964, 1971, 1988, and 1994) were the primary source of information on the past use and operations at the Property.

The 1900 and 1912 USGS topographic maps (Figures 7 and 8, Appendix A) show the City of Columbus to be established, but Whitehall was not on the map. The City of Whitehall does not appear until the 1955 USGS topographical map (Figure 9, Appendix A), which shows the Property and surrounding areas as undeveloped. The USAR Center appears on the 1964 USGS topographic map (Figure 10, Appendix A). Very little change is noted in the 1973, 1985, and 1994 USGS topographic maps (Figures 11, 12, and 5, respectively, in Appendix A).

The 1938 aerial photograph (Figure 13, Appendix A) shows minimal development of the surrounding area of the Property. The 1957 aerial photograph (Figure 14, Appendix A) shows the Property as undeveloped, the area to the east with significant residential growth, and a drive-in theater located to the south. The 1964 aerial photograph (Figure 15, Appendix A) shows the Property as developed, but little change is noted on the adjacent properties. The 1971, 1988, and 1994 aerial photograph quality (Figure 16, 17, and 18,

Appendix A) is poor, but shows the Property and surrounding adjacent relatively unchanged from the 1964 aerial photograph.

3.3 Past Use, Storage, Disposal, and Release of Hazardous Substances

3.3.1 Past Use and Storage of Hazardous Substances

Information related to the past use and storage of hazardous substances at the Property was compiled through a review of available site records, search of federal and state environmental databases, and interviews with Army Reserve personnel. Chemicals formerly used and stored at the Property were associated with vehicle and facility maintenance activities, and janitorial services. Janitorial chemicals and building maintenance-related products were stored in the designated storage area within the janitorial closet located in the USARC Building. Vehicle maintenance products and small amounts of petroleum, oil, and lubricant (POL) products also were stored within designated areas in the OMS. Other potentially hazardous materials and POL products were stored in the outdoor hazardous material storage shed located in the southwest corner of the MEP area.

Certain types of chemical products used and stored at the Property contained CERCLA hazardous substances and were stored on a rotational basis in amounts necessary to support the unit through direct support level maintenance. There is no indication that CERCLA hazardous substances were stored at the Property for 1 year or more in excess of corresponding reportable quantities.

3.3.2 Past Disposal and Release of Hazardous Substances

Information related to past disposal and potential release of hazardous substances at the Property was compiled through a review of available site records, search of federal and state environmental databases, and interviews with Army Reserve personnel. According to 88th Regional Readiness Command (RRC) personnel, disposal of hazardous materials/hazardous waste was accomplished through the Defense Reutilization and Marketing Office or an authorized vendor such as Safety-Kleen. No stained soil or stressed vegetation was observed during the August 2006 site reconnaissance. Additionally, the MEP area and POV parking area did not show any signs of staining, and no noxious or foul odors were noted during the site reconnaissance.

3.4 Past Presence of Bulk Petroleum Storage Tanks

Based upon a review of available site records, a search of federal and state environmental databases, and interviews with Army Reserve personnel, no underground storage tanks (USTs) or aboveground storage tanks (ASTs) currently or formerly were located at this facility, nor was visible evidence of any USTs or ASTs observed during the site reconnaissance.

3.5 Review of Previous Environmental Reports

A review of site records produced several reports pertaining to the Property. The following subsections provide a brief summary of these reports. Copies of the reports, unless otherwise specified, are provided in Appendix D.

3.5.1 1998 Oil/Water Separator Evaluation Report

Jones Technology, Inc. prepared an oil/water separator (OWS) evaluation report for numerous USAR sites within the state of Ohio, including the Whitehall Memorial USAR Center. As part of the reporting process, Jones Technology, Inc. was responsible for documenting and locating each OWS located at USAR facilities throughout Ohio. The report states that no OWS is located on the Property within the MEP area or near the OMS (Jones Technology, 1998).

3.5.2 Cultural Resources Report

During December 1998 through December 1999, the Fort McCoy Archaeological Laboratory prepared a Section 110 cultural resources survey report for the 88th RRC. The purpose of the survey and subsequent report was to inventory all properties controlled or leased by the 88th RRC in the state of Ohio. Historical information, setting and landscape, cultural resources, security, architectural information, and structure descriptions are included for each property. Each site also was assessed for its eligibility to the National Register of Historic Places (NRHP). None of the buildings located at the Whitehall Memorial USAR Center meet the criteria for the NRHP, and thus were not recommended for nomination to the NRHP. A documentary and architectural investigation conducted at the facility determined that there is no direct relationship between the facility and prehistoric or historic events in the Columbus area, there is no association with significant persons involved in prehistoric or historic events, buildings on the facility are not architecturally or technologically significant, and the facility is unlikely to hold future research potential (Fort McCoy Archaeological Laboratory, 1999).

3.5.3 1996 Environmental Compliance Assessment Report

USAR performed an internal survey in 1996, listing and evaluating areas on the Property where environmental concerns were apparent. Six findings were made in three areas regarding hazardous waste management and solid waste management in the areas of housekeeping and records keeping. They were made regarding the lack of training of site personnel, the lack of proper spill response plans, and the proper management of materials safety data sheets. None of the deficiencies were determined to affect the environmental condition at the Property.

3.5.4 Range Cleanup

IT Corporation of Cincinnati, Ohio, performed a closure and inspection of the Property's former facility indoor firing range. After reviewing information relative to cleaning methods and clearance sampling, the value of 200 micrograms per square foot ($\mu g/ft^2$) was derived as a value that would release the indoor range as a room that could be reoccupied as a lead-free work area. The report indicates that 22 surface dust samples were collected from the

indoor range and documents that it was cleaned to less than 200 µg/ft². The range was opened for subsequent reuse.

3.5.5 2005 Environmental Survey Report: Asbestos, PCB, Lead-based Paint, and Radon Survey

ITI of South Florida, Inc. prepared an environmental survey report in June 2005 for the USAR Center that included the USARC Building and OMS. The survey did not include the interior of the small utility building because it was inaccessible at the time of the survey. Potential types, quantities, locations, and conditions of asbestos, polychlorinated biphenyls (PCBs), LBP, and the possible presence of radon were examined in the report. ITI's survey confirmed the presence of gray LBP on the door jambs of the OMS. Asbestos-containing mastic was found throughout the USARC Building and in the caulking around the door jamb in the mechanical room. Asbestos-containing material (ACM) was found in the OMS in the form of window glaze and window caulking, and in the door frame and electrical switch plate around the man way. Roofing materials, fire doors, and electrical wiring in both facilities were suspected by ITI to contain asbestos, but not confirmed.

ITI observed four light ballasts in the USARC Building and in the OMS. ITI reported that the ballast in the OMS and two in the main building were labeled "No PCBs." Three pole-mounted transformers were noted by ITI on the left side of the main building. The local utility company, AEP, was contacted to determine whether the units have been tested. AEP stated that the transformers were all manufactured in 1976 and, by USEPA regulations, they are assumed to be PCB contaminated (50–499 parts per million).

All measured radon levels at the USAR Center were below the USEPA-recommended action level of 4 picoCuries per liter (pCi/L) (ITI, 2005).

4 Adjacent Properties

Adjacent property land uses are significant to the ECP process because the current or past uses may have an environmental impact on the USAR Center. Adjacent properties were included in the EDR report review for this reason. Typically, adjacent properties within 0.25 mile of the USAR Center property boundaries are reviewed and visually surveyed. For the purposes of this ECP, the adjacent property reconnaissance was performed from the USAR Center property boundaries and from public access points. Historical aerial photographs and topographic maps also were reviewed for conditions or activities that may have had an environmental impact on the Property.

4.1 Land Uses

The Property is situated in a rural area that is bordered on the east by Country Club Road, by residential areas on the north and south, and on the west by a City of Whitehall public park. Table 1 summarizes the current adjacent properties and zoning.

TABLE 1
Current Adjacent Properties
Whitehall Memorial USAR Center, Columbus, Ohio

Name/Type of Property	Address	Direction from Property	Zoning
Residential area	Country Club Road	Multiple residences located on the property to the north, south, and east	Residential
Whitehall Community Park	402 North Hamilton Road	Park, located on the adjacent property to the west, with playgrounds, ball fields, shelters, etc.	Residential

4.2 Findings

The EDR database search results were reviewed for any evidence that adjacent properties may have past or present environmental issues that would impact the USAR Center. None of the adjacent properties were found to have any environmental issues.

Water well databases at the federal and state level were reviewed to identify any water supply source near the Property. The state database identified 10 water supply sources located within 0.5 mile of the property. Assuming that groundwater flows generally easterly toward Big Walnut Creek, all ten of the wells are located in the anticipated downgradient from the site. All of the wells were found to be privately owned.

5 Review of Regulatory Information

An essential component of an ECP is the review of records and databases containing information on the Property and adjacent properties. The review includes reasonably obtainable federal, state, and local government records, and is intended to identify a release or likely release of any hazardous substance or any petroleum product that is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product to the Property.

The majority of the regulatory information for this ECP was obtained from EDR on August 3, 2006. EDR provides a regulatory database summary that consolidates standard federal, state, local, and tribal environmental record sources based on ASTM-recommended minimum search distances from the Property.

All findings reported in Sections 5.1, 5.2, and 5.3 are from the EDR report unless otherwise noted. A copy of the complete EDR report is included in Appendix E.

5.1 Federal Environmental Records

5.1.1 Federal National Priorities List Sites within 1 Mile

USEPA maintains a record of the nation's worst uncontrolled or abandoned hazardous waste sites, known as the National Priorities List (NPL). Sites on the NPL undergo long-term remedial action under CERCLA. The USAR Center is not an NPL site, nor were any such sites located within 1 mile of the Property.

5.1.2 Federal Comprehensive Environmental Response, Compensation and Liability Act Information Systems Sites within 0.5 Mile

The CERCLA Information System (CERCLIS) contains data on potentially hazardous waste sites that have been reported to USEPA by state, municipalities, private companies, and private persons, pursuant to Section 103 of the Act. CERCLIS contains sites that are either proposed to be or are on the NPL and sites that are in the screening and assessment phase for possible inclusion on the NPL.

The USAR Center is not a CERCLIS site, and there are no CERCLIS sites located within 0.5 mile of the USAR Center.

5.1.3 Resource Conservation and Recovery Act Corrective Action Sites within 1 Mile

Resource Conservation and Recovery Act (RCRA) corrective action sites (CORRACTS) represent facilities that have generated or managed hazardous wastes and require corrective action. The USAR Center is not a CORRACTS site, nor were any such sites identified within 1 mile of the USAR Center.

5.1.4 RCRA Transport, Treatment, and/or Disposal Sites within 0.5 Mile

RCRA defines and regulates sites that generate, transport, or provide treatment, storage, or disposal (TSD) of hazardous wastes. The RCRA Information System (RCRIS) includes selective information on these sites.

The USAR Center is not a RCRIS TSD site, and there are no such sites located with 0.5 mile of the USAR Center.

5.1.5 Federal RCRA Small and Large Quantity Generators List within 0.25 Mile

Conditionally exempt small quantity generators (CESQG) are defined as facilities generating less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. RCRA small quantity generators are defined as facilities generating between 100 and 1,000 kg of hazardous waste per month. A facility generating more than 1,000 kg of hazardous waste or over 1 kg of acutely hazardous waste per month is defined as a large quantity generator.

The USAR Center is listed as an RCRA-registered small quantity generator No. 1000834448. No RCRA violations are reported for the USAR Center. No other properties within 0.25 mile are listed as RCRA small quantity or large quantity generators.

5.1.6 Federal Emergency Response Notification System List

The Federal Emergency Response Notification System List maintains information on reported releases of oil and hazardous substances. The USAR Center is not on this notification list.

5.2 State and Local Environmental Records

Most of the information presented in this subsection was obtained from the EDR report. Additional information also was obtained from online database searches of the State of Ohio Bureau of Underground Storage Tank Regulations (BUSTR)

5.2.1 State Lists of Hazardous Waste Sites within 1 Mile

The USAR Center is not on the state list of hazardous waste sites, and no adjacent properties within 1 mile of the USAR Center were listed in the EDR report as having a hazardous waste site.

5.2.2 State-Registered Landfills or Solid Waste Disposal Sites within 0.5 Mile

The USAR Center does not have a solid waste landfill, incinerator, or transfer station within the Property boundaries. No adjacent properties within 0.5 mile of the USAR Center have a solid waste landfill, incinerator, or transfer station.

5.2.3 State-Registered Leaking UST Sites within 0.5 Mile

In addition to information obtained from the EDR report, the BUSTR Web page maintains a database of leaking underground storage tank (LUST) sites. The USAR Center is not listed in the BUSTR database.

Within 0.5 mile of the Property, however, four LUST sites in various stages of closure were identified. Table 2 summarizes their information relative to the Property and provides the status of their corrective action. Two of the sites have been closed with no further action (NFA) status indicating it does not pose a threat to human health and the environment and, therefore, will not have an environmental impact on the Property. Two sites (Speedway #9151 and BP Oil #07827) are in Active-Tier 2 remedial investigations. The BUSTR database states that both sites are under investigation for benzene, toluene, ethyl benzene, and xylene. Neither of these sites are located in the likely upgradient direction from the Property (that is, to the west); therefore, offsite migration from these sites is not expected to affect the Property.

TABLE 2
Leaking Underground Storage Tank Sites within 0.5 Mile
Whitehall Memorial USAR Center, Columbus, Ohio

Company/Site	Address	Distance and Direction from Property	Regulatory Status	Elevation Relative to Property
Speedway #9151	4901 East Main Street	Approx. 2,552 feet to the south	Active–Tier 2	12 feet lower
Cumberland Gulf #124103	4900 East Main Street	Approx. 2,552 feet to the south	NFA	12 feet lower
United Dairy Farmers #663	4890 East main Street	Approx. 2,560 feet to the south	NFA	12 feet lower
BP Oil Co. #07827	4865 East Main Street	Approx. 2,569 feet to the south	Active–Tier 2	12 feet lower

Active-Tier 2—under further investigation

5.2.4 State-Registered UST Sites within 0.5 Mile

A review of the EDR report and the Ohio BUSTR database indicated no registered UST sites were identified within 0.5 mile of the USAR Center; however, one unregulated tank was identified. Table 3 lists the site along with the tank status. The USAR Center was not listed in the state UST database.

TABLE 3
Underground Storage Tank Sites within 0.5 Mile
Whitehall Memorial USAR Center, Columbus, Ohio

Company/Site	Address	Distance and Direction from Property	Tank Status	Closure Status	Elevation Relative to Property
Former Howard Johnson	5000 East Main Street	Approx. 2,588 feet to the south	Not reported	Not reported	13 feet lower

5.2.5 State Spills Incidents

The USAR Center is not listed on the state petroleum spill list.

5.2.6 Records of Contaminated Public Wells

The City of Columbus does not own or operate any municipal water supply wells within 0.5 mile of the USAR Center.

5.2.7 Voluntary Remediation Program Sites within 0.5 Mile

The USAR Center is not listed in Ohio Brownfields Program. No sites located within 0.5 mile of the USAR Center are listed as being in the Brownfields Program.

5.2.8 State Registered Bulk Fertilizer and Pesticide Storage Facilities within 0.25 Mile

The USAR Center is not registered with the state as a bulk fertilizer and pesticide storage facility. Additionally, no adjacent properties within 0.25 mile were registered as one of these facilities.

5.3 Unmapped Sites

Some sites within the databases EDR searches have the same zip code as the USAR Center, but no street address. These sites, known as unmapped or orphan sites, cannot be mapped from the EDR results alone. Additional efforts described herein were made to locate these sites and assess their environmental importance to the Property.

Using the mapping utility provided at maps.google.com, the locations of the orphan sites, with the exception of one, were not identified or the addresses were over 2 miles from the Property. One address, 4531 Etna Road, corresponds to Etna Road Elementary School and is located 0.8 mile from the site. The site is listed in the Ohio spill database, but no other information was found.

5.4 Summary of Properties Evaluated to Determine Risk to the Property

To summarize Subsections 5.1 through 5.3, five separate properties, near or adjacent to the USAR Center, were evaluated as potential risk properties to the Property. These adjacent properties evaluated were identified as a result of information obtained during area reconnaissance, interviews, and regulatory database searches, and are summarized in Table 4.

Based on an evaluation of available site information and details concerning the properties listed in Table 4, none of the facilities evaluated exhibit significant environmental conditions that have the probability of adversely affecting the environmental conditions at another site.

TABLE 4
Nearby Properties Evaluated for Potential Environmental Risks
Whitehall Memorial USAR Center, Columbus, Ohio

Company/Site	Database	Elevation Relative to Property?	Potential Impact on the Property?
Speedway #9151	4901 East Main Street	12 feet lower	None[a]
Cumberland Gulf #124103	4900 East Main Street	12 feet lower	None
United Dairy Farmers #663	4890 East Main Street	12 feet lower	None
BP Oil Co. #07827	4865 East Main Street	12 feet lower	None[a]
Former Howard Johnson	5000 East Main Street	13 feet lower	None

[a] No effect is anticipated based on the assumption that groundwater flow is directed east, away from the Property and toward nearby Big Walnut Creek.

6 Site Investigation and Review of Hazards

Findings documented in the following subsections are based on the August 3, 2006, site reconnaissance, a review of available site records, and information obtained from USAR personnel.

6.1 USTs/ASTs

No USTs or ASTs have been located at the USAR Center.

6.2 Inventory of Chemicals/Hazardous Substances

Records pertaining to hazardous substances including hazardous materials, chemical bulk storage, petroleum products, hazardous waste, and petroleum waste were reviewed in addition to interviews and the site reconnaissance to develop the inventory for the Property. Hazardous materials were observed in a flammable storage locker in both the USARC Building and the OMS, and the hazardous material storage shed was observed in the southwest corner of the MEP area.

Information related to the past use and storage of hazardous substances at the Property was compiled through a review of available site records, a search of federal and state environmental databases, and interviews with Army Reserve personnel. Available records indicate that chemicals formerly used and stored at the Property were associated with vehicle and facility maintenance activities, and janitorial services. Janitorial chemicals and building maintenance-related products are stored in the designated storage area within the janitorial closet located in the main building. Vehicle maintenance products and small amounts of POL products also were stored within designated areas within the OMS building. During the August 2006 site reconnaissance, 55-gallon drums containing petroleum were observed in a hazardous material storage shed. Other hazardous materials and POL products are stored in the outdoor hazardous material storage shed located in the southwest corner of the MEP area. Photos 23, 24, 25, 26, 27, and 30 in Appendix B document some of the current storage areas and safety equipment in the OMS Building.

6.3 Waste Disposal Sites

Available records and interviews did not indicate the practice of onsite waste disposal other than through managed storage and offsite disposal. No waste disposal sites were observed during the site reconnaissance, nor were any signs of past onsite waste disposal (such as stressed vegetation or suspicious depressions in the landscape) observed.

6.4 Pits, Sumps, Drywells, and Catch Basins

Available records, interviews, and site observations did not indicate the existence or past existence of any pits, sumps, drywells, or catch basins.

The kitchen has a grease trap and the cleanout port was located outside the kitchen on the south side of the building (Photo 12, Appendix B). A drain was noted on the landing located outside the kitchen door (Photo 13, Appendix B). According to site personnel, the drain leads to the grease trap. The grease trap is an in-line system associated with the sanitary sewer line and according to site personnel has been cleaned with in the last couple of years.

6.5 Asbestos-containing Material

A site-specific ACM survey was conducted at the USAR Center as part of the 2005 asbestos, PCB, LBP, and radon environmental survey (ITI, 2005). ACM was identified in the mastic throughout the USARC Building and in the caulking around the door jamb in the mechanical room. ACM was identified in the window glaze and window caulking of the OMS, and in the door frame and electrical switch plate around the man way. Roofing materials, fire doors, and electrical wiring in both facilities were suspected to contain asbestos, but not confirmed.

6.6 PCB-containing Equipment

A site-specific PCB survey was conducted at the USAR Center as part of the 2005 asbestos, PCB, LBP, and radon survey (ITI, 2005). Four light ballasts were observed during the site reconnaissance in the USARC Building and in the OMS. The ballast in the OMS and two in the USARC Building were labeled “No PCBs.” Three pole-mounted transformers were noted on the left side of the main building. The condition of the transformers appeared to be well maintained and no signs of spills or leaks were noted on the ground below the transformers. The local utility company, AEP, was contacted to determine whether the units have been tested. AEP stated that the transformers were all manufactured in 1976 and, by USEPA regulations, these are assumed to be PCB contaminated (50–499 parts per million).

6.7 Lead-based Paint

A site-specific LBP survey was conducted at the USAR Center as part of the 2005 asbestos, PCB, LBP, and radon survey (ITI, 2005). The survey confirmed the presence of gray LBP on the door jambs of the OMS. During the site visit, the LBP was in good condition and no flaking or peeling of the paint was noted. According to site personnel, no remediation actions for LBP have been conducted since the survey was conducted by ITI.

6.8 Radon

A site-specific radon survey was conducted at the USAR Center as part of the 2005 asbestos, PCB, LBP, and radon survey (ITI, 2005). Passive detection equipment was installed throughout the USARC Building and OMS to determine the levels of radon gas. Based on

the sampling results, no sample locations exhibited radon levels above the USEPA-recommended maximum allowable exposure level of 4 pCi/L.

6.9 Munitions and Explosives of Concern

Based on a review of available records, the site reconnaissance, and interviews with USAR Center personnel, there are no indications that munitions and explosives of concern (MEC) are or were present at the Property.

IT Corporation of Cincinnati, Ohio, performed a closure and inspection of the Property's former facility indoor firing range (Photo 8, Appendix B). After reviewing information relative to cleaning methods and clearance sampling, the value of 200 $\mu g/ft^2$ was derived as a value that would release the indoor range as a room that could be reoccupied as a lead-free work area. The report indicates the indoor range was cleaned to less than 200 $\mu g/ft^2$, and the range opened for subsequent reuse.

6.10 Radioactive Materials

Based on the site reconnaissance and interviews with USAR Center personnel, radioactive materials were present in equipment used on the Property, including testing and calibration equipment. The equipment or sources are sealed, therefore, there is a low potential for a release. According to site personnel, no releases of radioactive materials have been documented to have occurred at the Property.

7 Review of Special Resources

7.1 Land Use

The City of Columbus has designated this Property and surrounding properties as residential or light commercial. The site is located in a mixed-use area that combines residential, light commercial, and agricultural land use.

7.2 Coastal Zone Management

This Property is not included in the coastal zone management plan, nor is it in a coastal zone.

7.3 Wetlands

According to the 1988 U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory maps (Figure 19, Appendix A) and visual observations, no wetlands were observed on the Property or on adjacent properties.

7.4 100-year Floodplain

A review of the FEMA digital Flood Hazard Area map indicates that the Property is not located within the 100-year floodplain. Figure 6 in Appendix A provides a map of the 100-year floodplain elevations located in the immediate vicinity of the Property.

7.5 Natural Resources

No natural resources surveys or mapping have been conducted on this Property or on the adjacent properties. The developed nature of the area, the length of time it has been developed, the small acreage involved, and the results of the site reconnaissance indicate that it is unlikely any threatened or endangered plant or animal species, or any habitat critical to their survival, would occur at this location.

7.6 Cultural Resources

A Section 110 cultural resources survey report for the Property was prepared for the 88th RRC by the Fort McCoy Archaeological Laboratory in December 1998 to December 1999. The purpose of the survey and subsequent report was to inventory all properties controlled or leased by the 88th RRC in the state of Ohio. Historical information, setting and landscape, cultural resources, security, architectural information, and structure descriptions are included for each property. Each site also was assessed for its eligibility to the NRHP, and none of the buildings at the USAR Center were found to be eligible (Fort McCoy

Archaeological Laboratory, 1999). Appendix D provides a copy of the Section 110 survey report.

7.7 Other Special Resources

Ohio has 12 river systems included as components of the State Scenic Rivers Program, totaling 21 individual stream segments. The closest of these rivers, Big Darby Creek, is located approximately 25 miles southwest from the Property. Based on the location of the Wild and Scenic Rivers (WSRs) and historical activities conducted at the USAR Center, no activities conducted at the site would adversely impact any of the designated WSRs.

8 Conclusions

The following information was obtained after conducting an environmental record search including records for adjacent properties, reviewing available historical information, conducting interviews with knowledgeable parties connected with the Property or with state and local agencies, and conducting a reconnaissance of the Property and adjacent properties.

Hazardous Substances. CERCLA hazardous substances were used and stored at the Property in amounts necessary to support unit-level vehicle and building maintenance activities. There is no evidence that the chemicals used or stored were released or disposed of at the Property.

USTs/ASTs. No USTs or ASTs have historically been located on the Property or are currently located on the Property.

Non-UST/AST Petroleum Storage. Petroleum storage in 55-gallon drums located in a hazardous material storage shed was observed during the August 2006 site visit.

PCBs. A site-specific PCB survey was conducted at the USAR Center as part of the 2005 environmental survey report (ITI, 2005). Four light ballasts were observed during the site reconnaissance in the USARC Building and in the OMS. The ballast in the OMS and two in the USARC Building were labeled "No PCBs." Three pole-mounted transformers were noted on the left side of the main building. The condition of the transformers appeared to be well maintained and no signs of spills or leaks were noted on the ground below the transformers. The local utility company, AEP, was contacted to determine whether the units have been tested. AEP stated that the transformers were all manufactured in 1976 and, by USEPA regulations, they are assumed to be PCB contaminated (50–499 parts per million).

ACM. A site-specific ACM survey was conducted at the USAR Center as part of the 2005 environmental survey report (ITI, 2005). Asbestos-containing mastic was found throughout the USARC Building and in the caulking around the door jamb in the mechanical room. ACM was found in the OMS in the form of window glaze and window caulking, and in the door frame and electrical switch plate around the man way. Roofing materials, fire doors, and electrical wiring in both facilities were suspected to contain asbestos, but not confirmed.

LBP. A site-specific LBP survey was conducted at the USAR Center as part of the 2005 environmental survey (ITI, 2005). The survey confirmed the presence of gray LBP on the door jambs of the OMS. During the site inspection, the paint was in good condition and no peeling or chipping was noted.

Radiological Materials. Based on a review of available records, the site reconnaissance, and interviews with USAR Center personnel, radioactive materials were present in equipment used on the Property, including testing and calibration equipment stored in a marked locker inside the USARC Building. According to site personnel, there have been no releases of radiological materials onsite.

Radon. A site-specific radon survey was conducted at the USAR Center as part of the 2005 environmental survey (ITI, 2005). Passive detection equipment was installed throughout the USARC Building and OMS to determine the levels of radon gas. Based on the sampling results, no sample locations exhibited radon levels above the USEPA-recommended maximum allowable exposure level of 4 pCi/L.

MEC. Available records do not indicate any MEC currently or formerly located at the Property. No evidence of MEC was observed during the August 2006 site reconnaissance. The Property had an indoor firing range, which was closed and cleaned. IT Corporation of Cincinnati, Ohio, performed a closure and inspection of the Property's former indoor firing range. After reviewing information relative to cleaning methods and clearance sampling, the value of 200 $\mu g/ft^2$ was derived as a value that would release the indoor range as a room that could be reoccupied as a lead-free work area. The report indicates the indoor range was cleaned to less than 200 $\mu g/ft^2$, and the range was opened for subsequent reuse.

Surrounding Properties. Potential environmental sites of concern, located within the ASTM D6008-recommended minimum search distances from the Property, were evaluated through database review and site reconnaissance. None of the adjacent properties evaluated exhibited environmental conditions that had or have the potential to adversely affect environmental conditions at the Property.

Wetlands and Floodplain. According to the 1988 USFWS National Wetlands Inventory maps and visual observations, no wetlands were observed or appear to be associated with any of the facilities at the Property, or with any adjacent properties. The Property is not located within a 100-year floodplain or within a coastal zone.

Threatened and Endangered Species. No natural resources surveys or mapping have been performed for the Property. The developed nature of the area, the length of time this area has been developed, the small acreage involved, and the results of the site reconnaissance indicate that it is unlikely any threatened or endangered plant or animal species, or any habitat critical to their survival, would occur at this location.

Archaeological and Historical Resources. A Section 110 cultural resources survey report for the Property was prepared for the 88th RRC by the Fort McCoy Archaeological Laboratory in December 1998 to December 1999. The report concluded that none of the buildings at the USAR Center were found to be eligible for listing on the NRHP (Fort McCoy Archaeological Laboratory, 1999).

8.1 Environmental Condition of Property

Findings of this ECP report were based on readily available environmental information; interviews with site, state, and local personnel; review of previous environmental studies; and federal and state database and file information related to the storage, release, treatment, or disposal of hazardous substances or petroleum products. Results also were based on visual observations of the Property and adjacent properties.

In accordance with DoD policy defining the classifications (see Sherri Goodman Memorandum dated 21 October 1996), the Property has been classified into one of seven

property types. Based on the results of this ECP study, the property has been assigned an overall DoD Environmental Condition Type 1.

8.2 Major Findings

- No USTs, ASTs, or OWSs have historically been located on the Property or are currently located on the Property.
- There is no reasonably available evidence that chemicals used or stored at the facility were improperly released or disposed of at the USAR Center.
- No staining or stressed vegetation was noted on the property.
- None of the adjacent properties evaluated exhibited environmental conditions that had or have the potential to adversely affect environmental conditions at the Property.

9 References

Persons Contacted

- Sgt. Taylor, Facility Supply Sergeant for the 346th PSYOP, 614-861-8460, August 3, 2006.
- Sgt. Rosalo, OMS Facility Support for the 346th PSYOP, 614-861-8460, August 3, 2006.
- Dave Ayers, Ohio State Environmental Manager, 88th Regional Readiness Command, 614-693-9547, August 3, 2006.
- Bill Kasson, AEP, at wnkasson@aep.com or (614-883-6705).

Resources Consulted

- Aerial photographs provided by Environmental Data Resources dated 1938, 1957, 1964, 1971, 1980, and 1994.
- National Wild and Scenic Rivers, http://www.nps.gov/rivers/wildriverslist.html#ny.
- FEMA Flood Hazard Insurance Map, http://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView.
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory maps.
- Federal Regulatory Databases
  - **NPL** National Priority List
  - **Proposed NPL** Proposed National Priority List Sites
  - **Delisted NPL** National Priority List Deletions
  - **NPL RECOVERY** Federal Superfund Liens
  - **CERCLIS** Comprehensive Environmental Response, Compensation, and Liability Information
  - System
  - **CERC-NFRAP** CERCLIS No Further Remedial Action Planned
  - **CORRACTS** Corrective Action Report
  - **RCRA-TSDF** Resource Conservation and Recovery Act Information
  - **ERNS** Emergency Response Notification System
  - **HMIRS** Hazardous Materials Information Reporting System
  - **US ENG CONTROLS** Engineering Controls Sites List
  - **US INST CONTROL** Sites with Institutional Controls
  - **DoD** Department of Defense Sites
  - **FUDS** Formerly Used Defense Sites
  - **US BROWNFIELDS** A Listing of Brownfields Sites
  - **CONSENT** Superfund (CERCLA) Consent Decrees
  - **ROD** Records Of Decision
  - **UMTRA** Uranium Mill Tailings Sites
  - **ODI** Open Dump Inventory

- **TRIS** Toxic Chemical Release Inventory System
- **TSCA** Toxic Substances Control Act
- **FTTS** FIFRA/ TSCA Tracking System—FIFRA (Federal Insecticide, Fungicide, &
- Rodenticide Act)/TSCA (Toxic Substances Control Act)
- **SSTS** Section 7 Tracking Systems
- **ICIS** Integrated Compliance Information System
- **PADS** PCB Activity Database System
- **MLTS** Material Licensing Tracking System
- **MINES** Mines Master Index File
- **RAATS** RCRA Administrative Action Tracking System

- State and Local Regulatory Databases

  - **SHWS** This state does not maintain a SHWS list. See the Federal CERCLIS list and
  - Federal NPL list.
  - **TOWNGAS** DERR Towngas Database
  - **SWF/LF** Licensed Solid Waste Facilities
  - **HIST LF** Old Solid Waste Landfill
  - **ARCHIVE UST** Archived Underground Storage Tank Sites
  - **OH Spills** Emergency Response Database
  - **ENG CONTROLS** Sites with Engineering Controls
  - **INST CONTROL** Sites with Institutional Engineering Controls
  - **VCP** Voluntary Action Program Sites
  - **DRYCLEANERS** Drycleaner Facility Listing
  - **BROWNFIELDS** Ohio Brownfield Inventory
  - **CDL** Clandestine Drug Lab Locations
  - **NPDES** NPDES General Permit List
  - **USD** Urban Setting Designation Sites
  - **HIST INST CONTROLS** Institutional Controls Database
  - **HIST ENG CONTROLS** Operation & Maintenance Agreements Database
  - **HIST USD** Urban Setting Designations Database

Works Cited

Fort McCoy Archaeological Laboratory. 1999. Section 110 Cultural Resources Survey Report for Whitehall Memorial U.S. Army Reserve Center.

Fort McCoy Archaeology laboratory. 1996. Whitehall Memorial USARC ECAS Report.

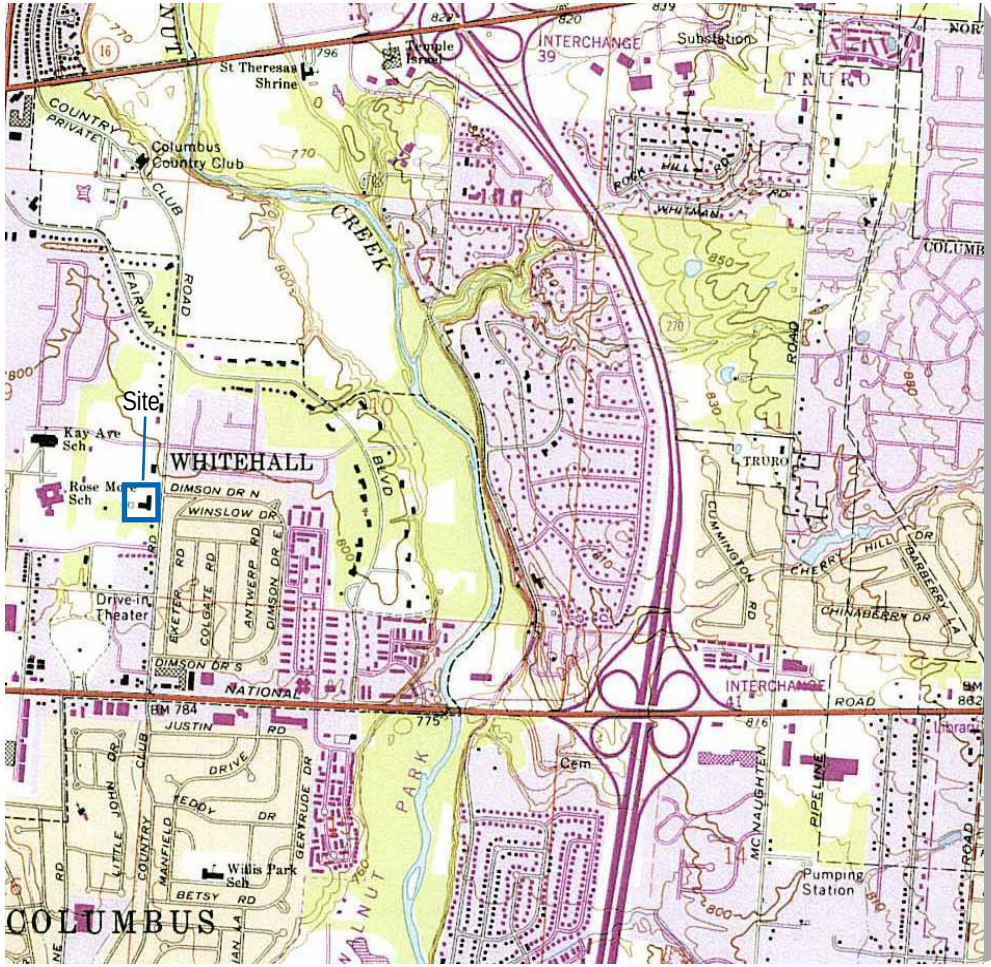
Goodman, Sherri. 1996. Memorandum. October.

IT Corporation. 2003. Range Cleanup Report Whitehall Memorial USARC.

ITI of South Florida, Inc. 2005. *2005 Environmental Survey Report – Asbestos, PCB, Lead-based Paint, and Radon Survey*. June.

Jones Technology, Inc. 1998. OWS Evaluation Report for Whitehall Memorial U.S. Army Reserve Center.

Appendix A
Figures



North

Scale Unknown

SOURCE: Section 110 report for Ft. Hayes

FIGURE 1
General Site Location Map
Phase I ECP Report

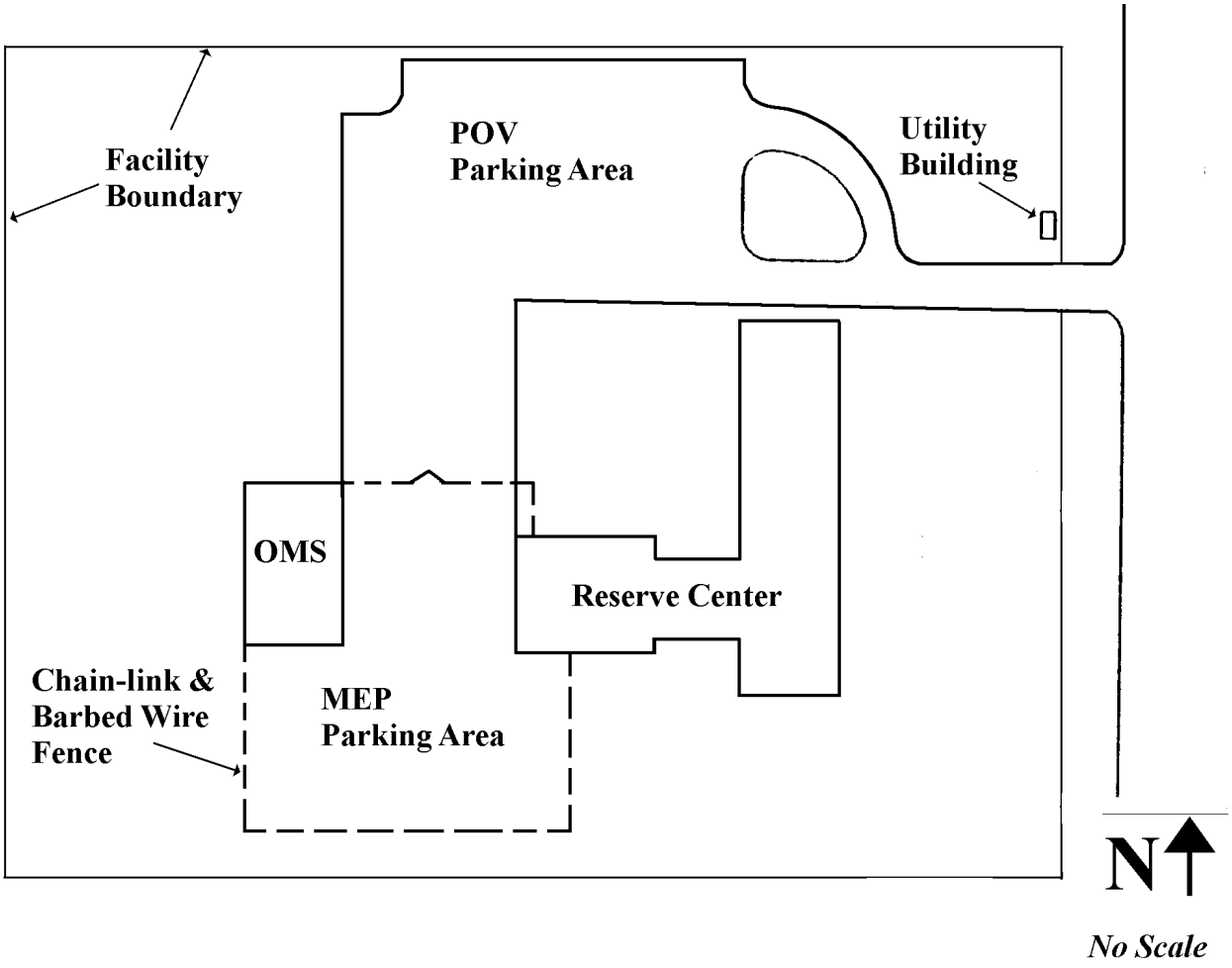
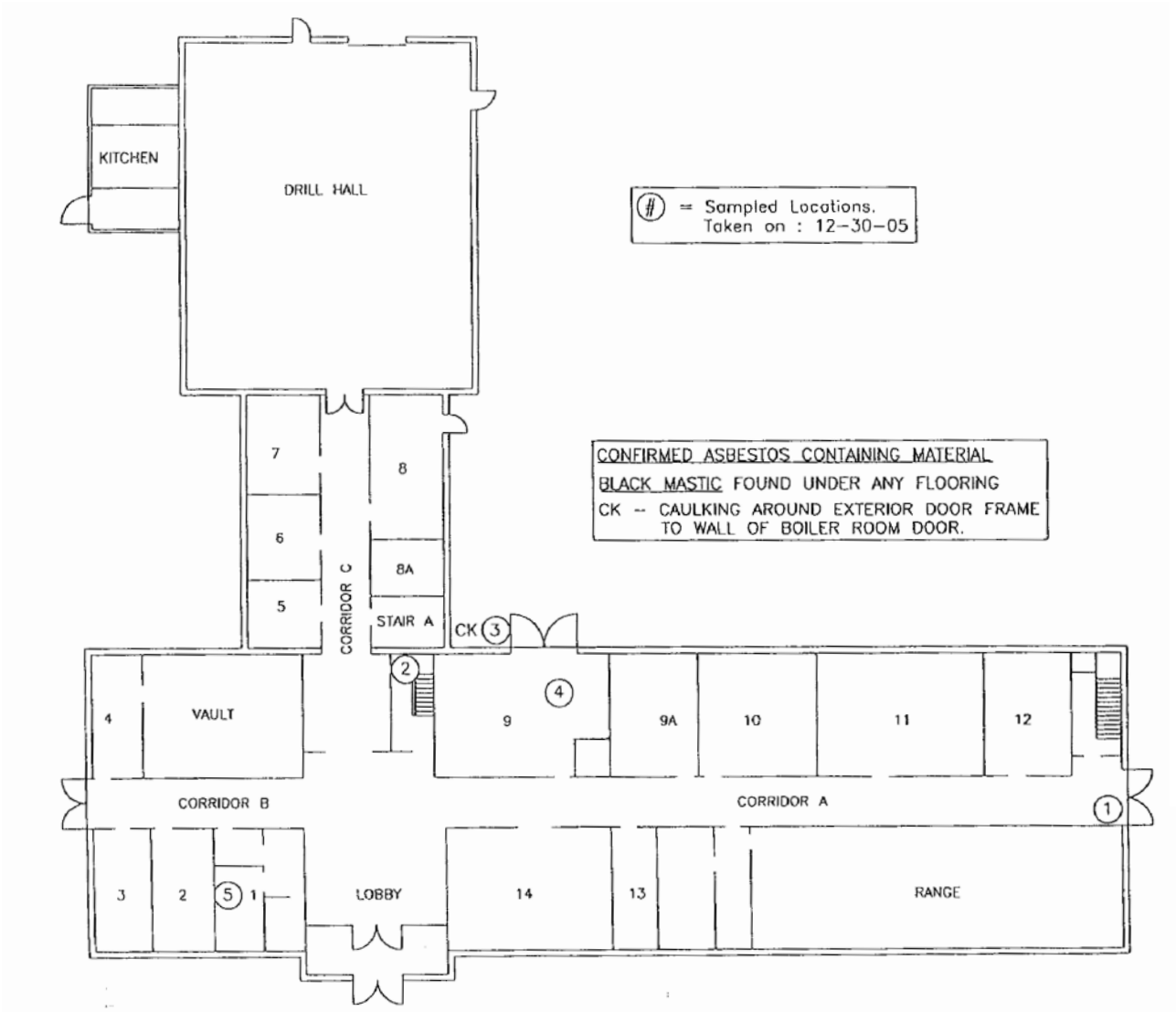
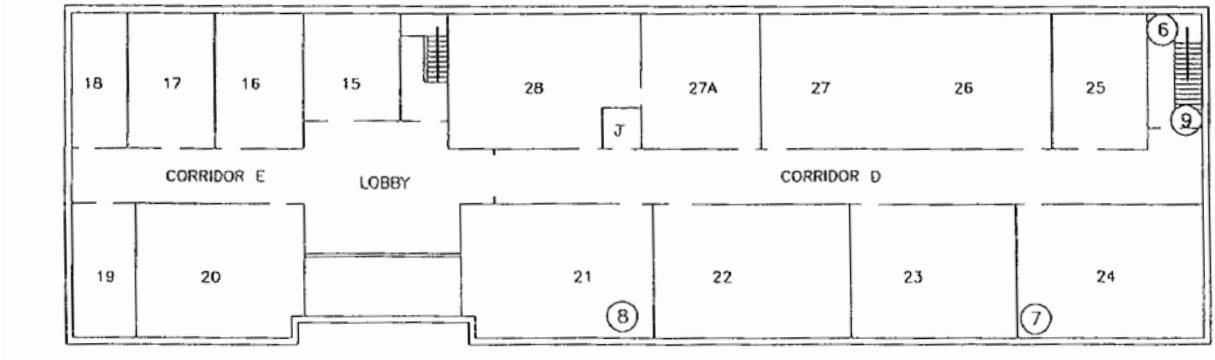


FIGURE 2
Site Layout Plan
Phase I ECP Report



First Floor



Second Floor

FIGURE 3
Interior Layout, Reserve Center
Phase I ECP Report

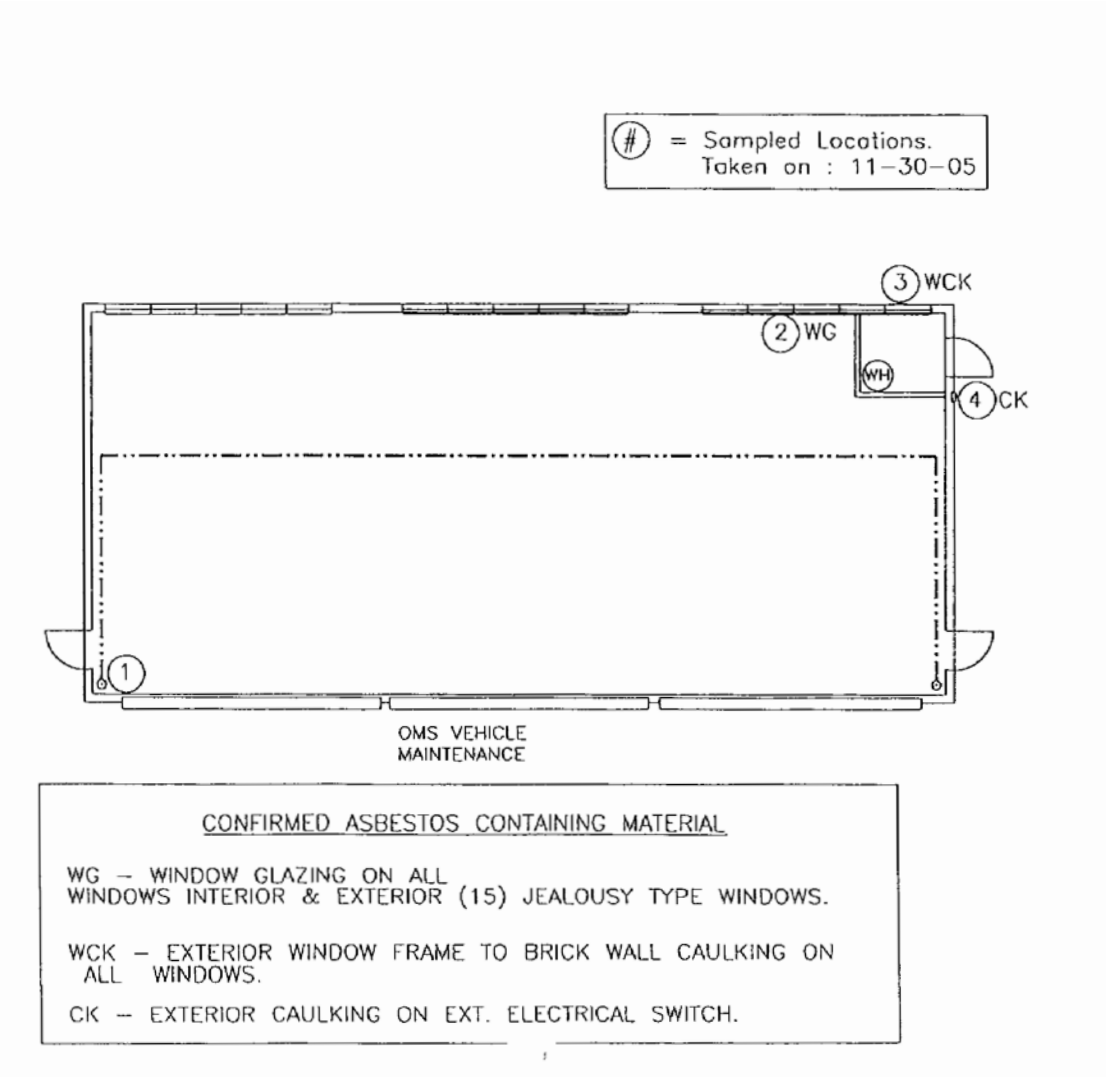


FIGURE 4
Interior Layout, OMS Building
Phase I ECP Report

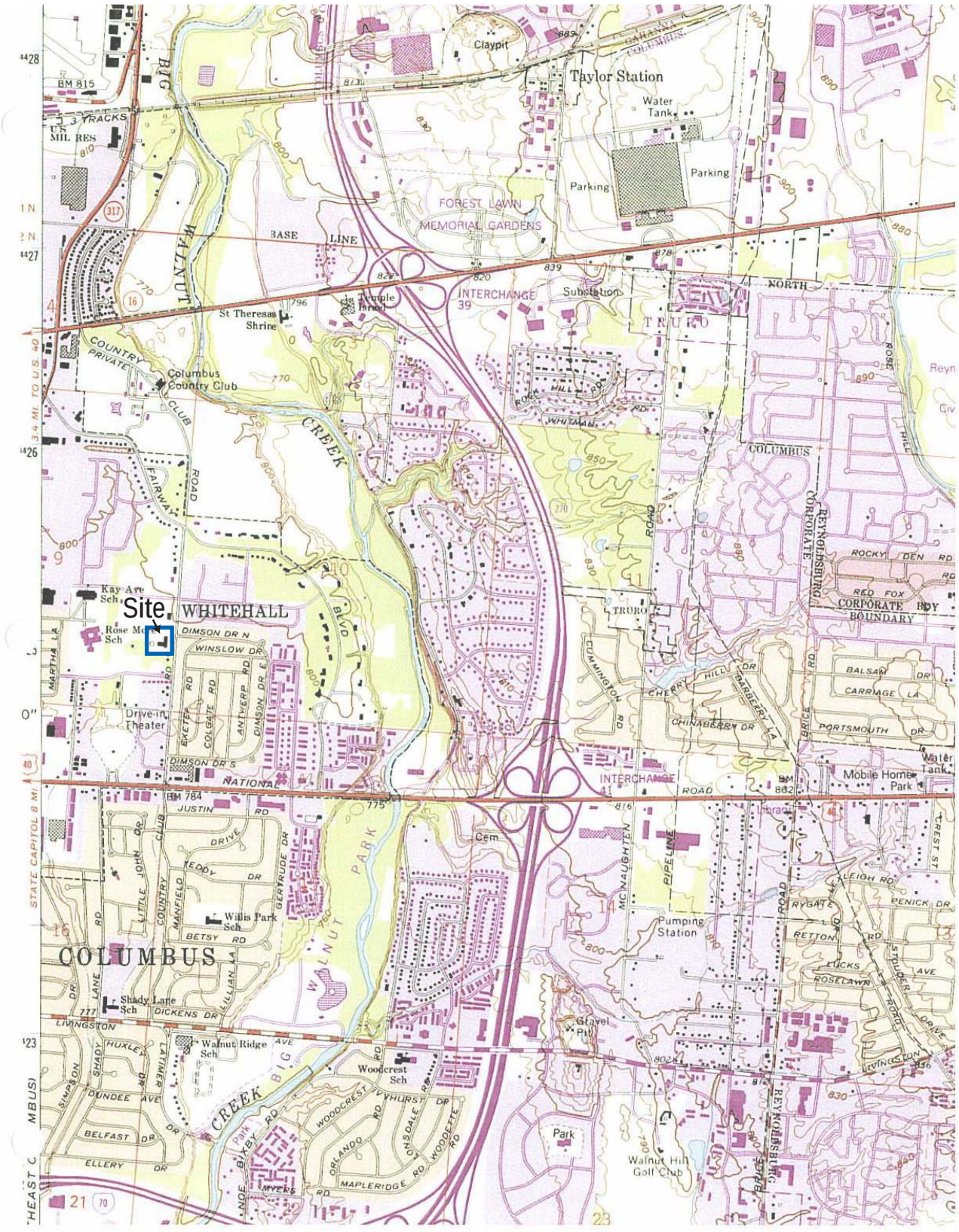


FIGURE 5
1964-1994 USGS 7.5-Minute
Topographic Map, Reynoldsburg
Phase I ECP Report

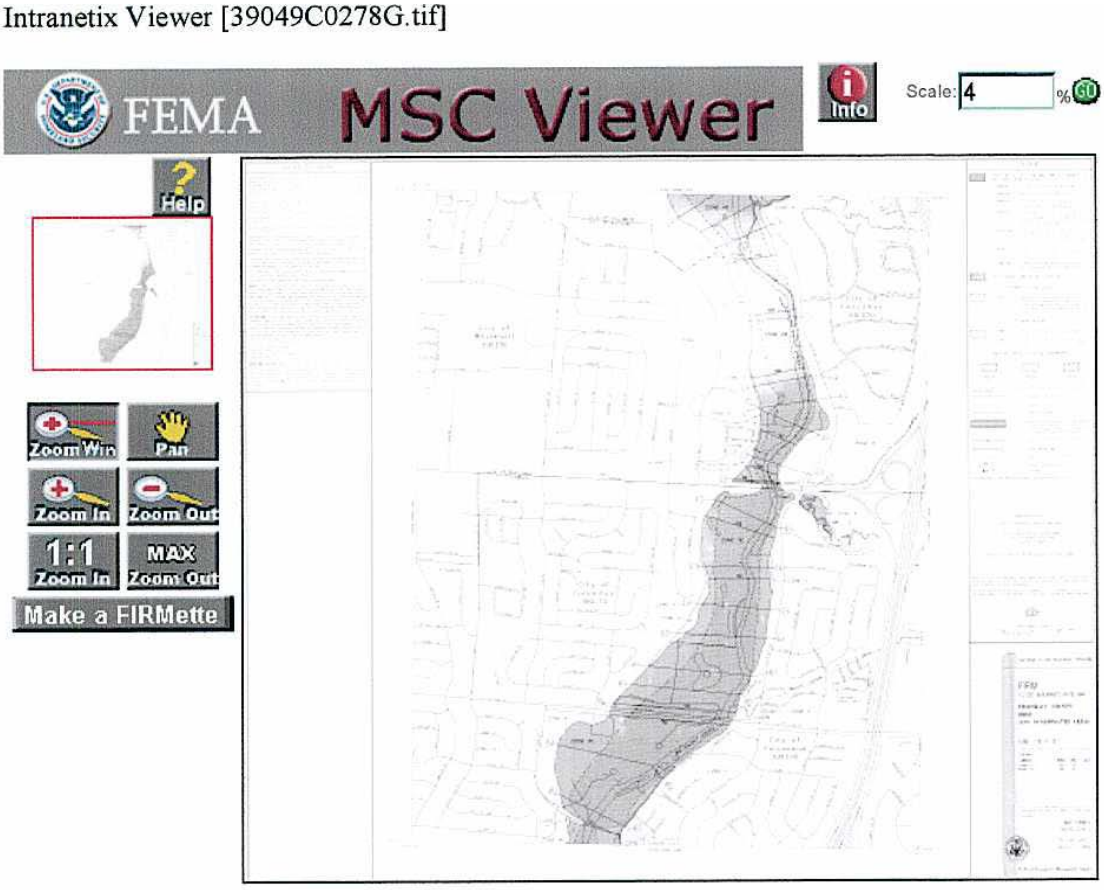
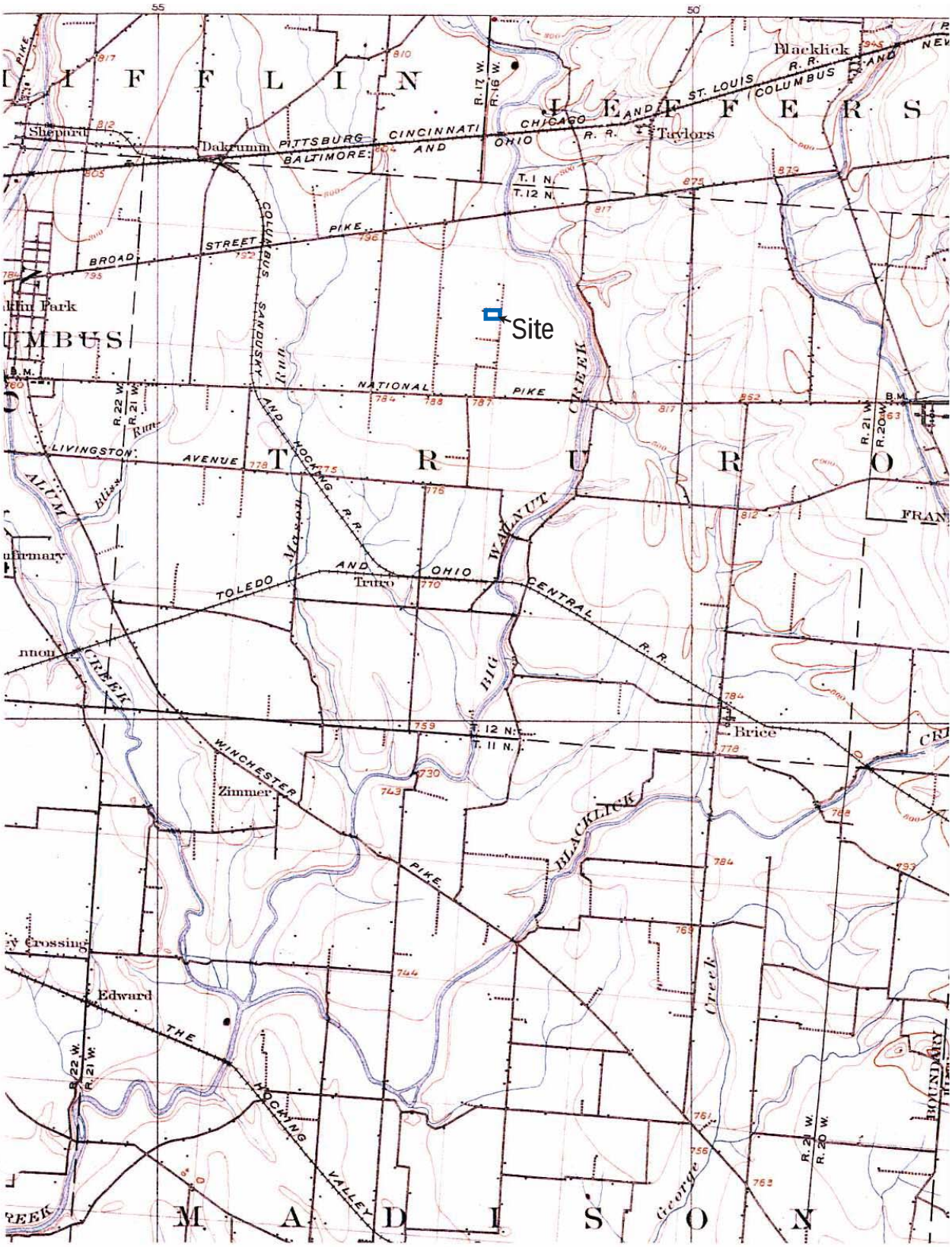


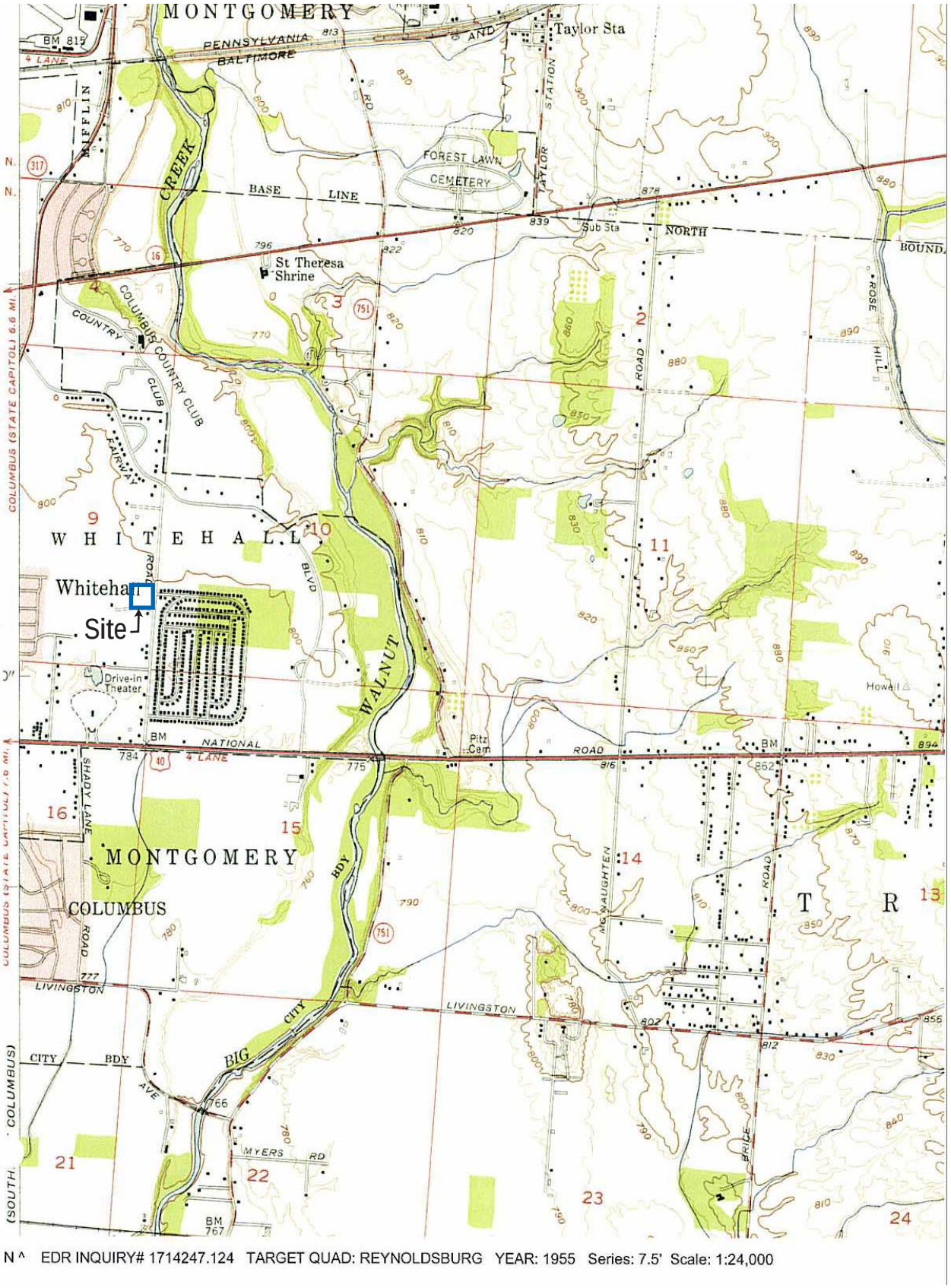
FIGURE 6
Floodplain Map
Phase I ECP Report



N ^ EDR INQUIRY# 1714247.124 TARGET QUAD: EASTCOLUMBUS YEAR: 1900 Series: 15' Scale: 1:62,500

FIGURE 7
1900 USGS Series 15'
Topographic Map, East Columbus
Phase I ECP Report

FIGURE 8
1912 USGS Series 30"
Topographic Map, Columbus
Phase I ECP Report



N ^ EDR INQUIRY# 1714247.124 TARGET QUAD: REYNOLDSBURG YEAR: 1955 Series: 7.5' Scale: 1:24,000

FIGURE 9
1955 USGS 7.5-Minute
Topographic Map, Reynoldsburg
Phase I ECP Report

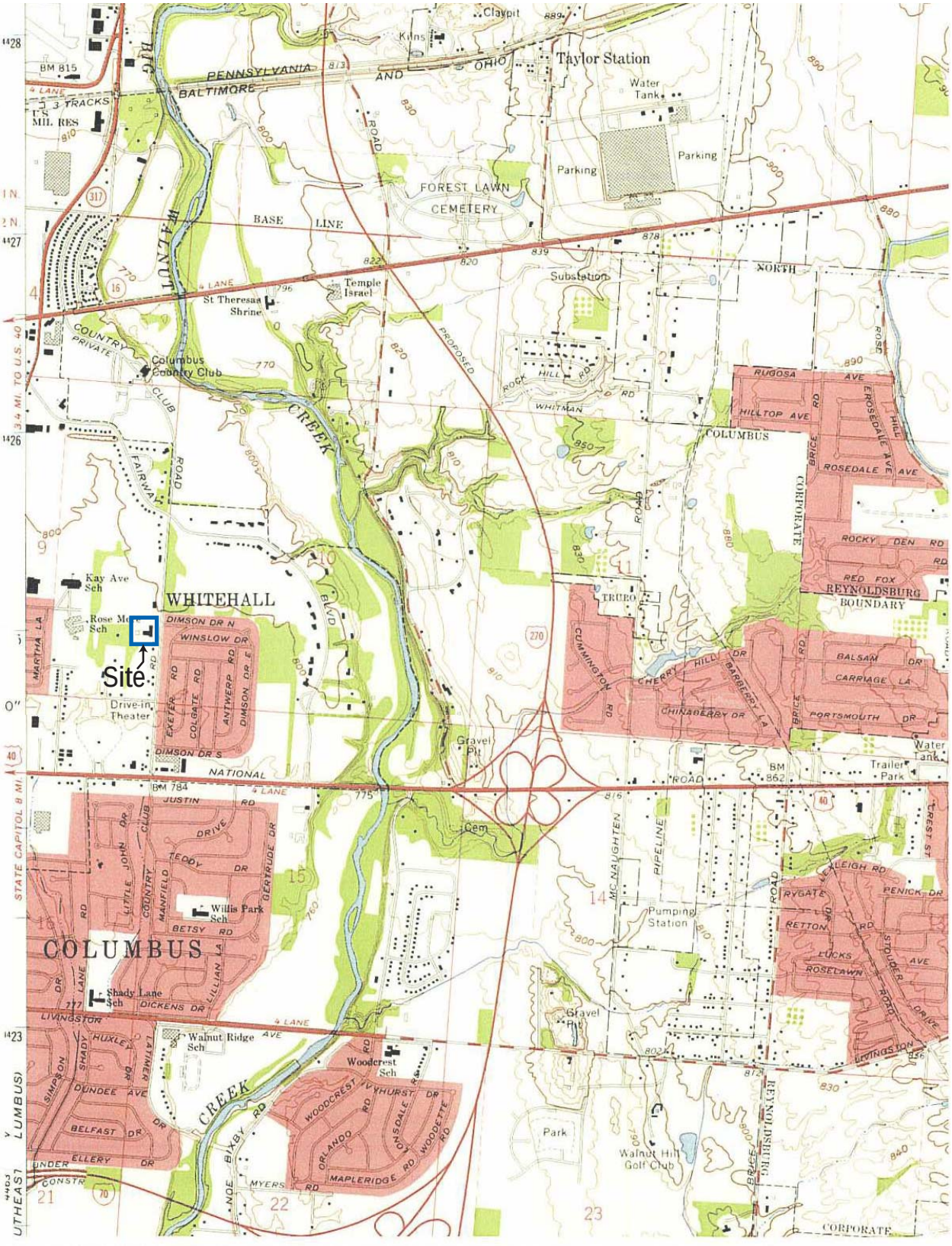


FIGURE 10
1964 USGS 7.5-Minute
Topographic Map, Reynoldsburg
Phase I ECP Report

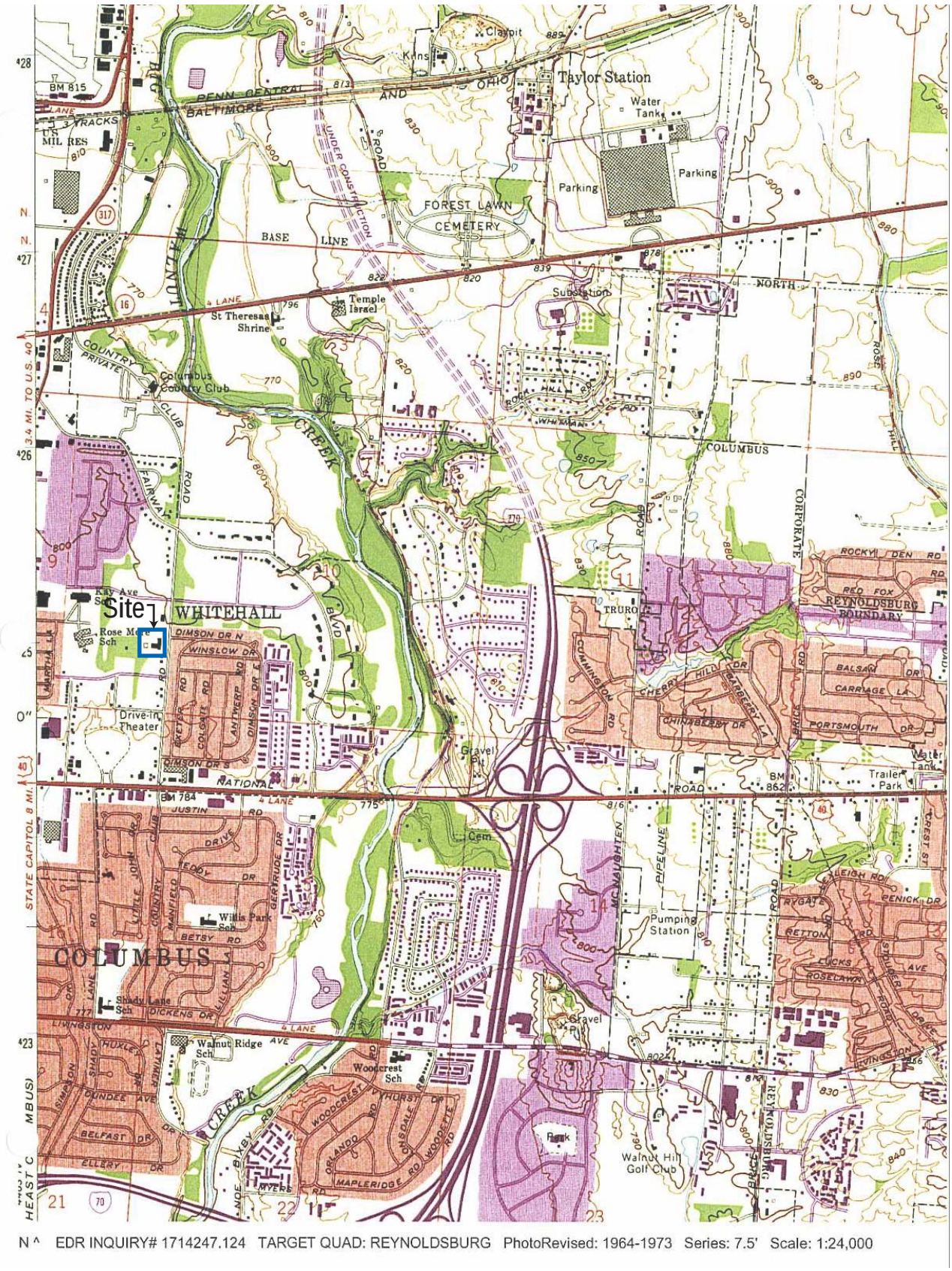


FIGURE 11
1964-1973 USGS 7.5-Minute
Topographic Map, Reynoldsburg
Phase I ECP Report

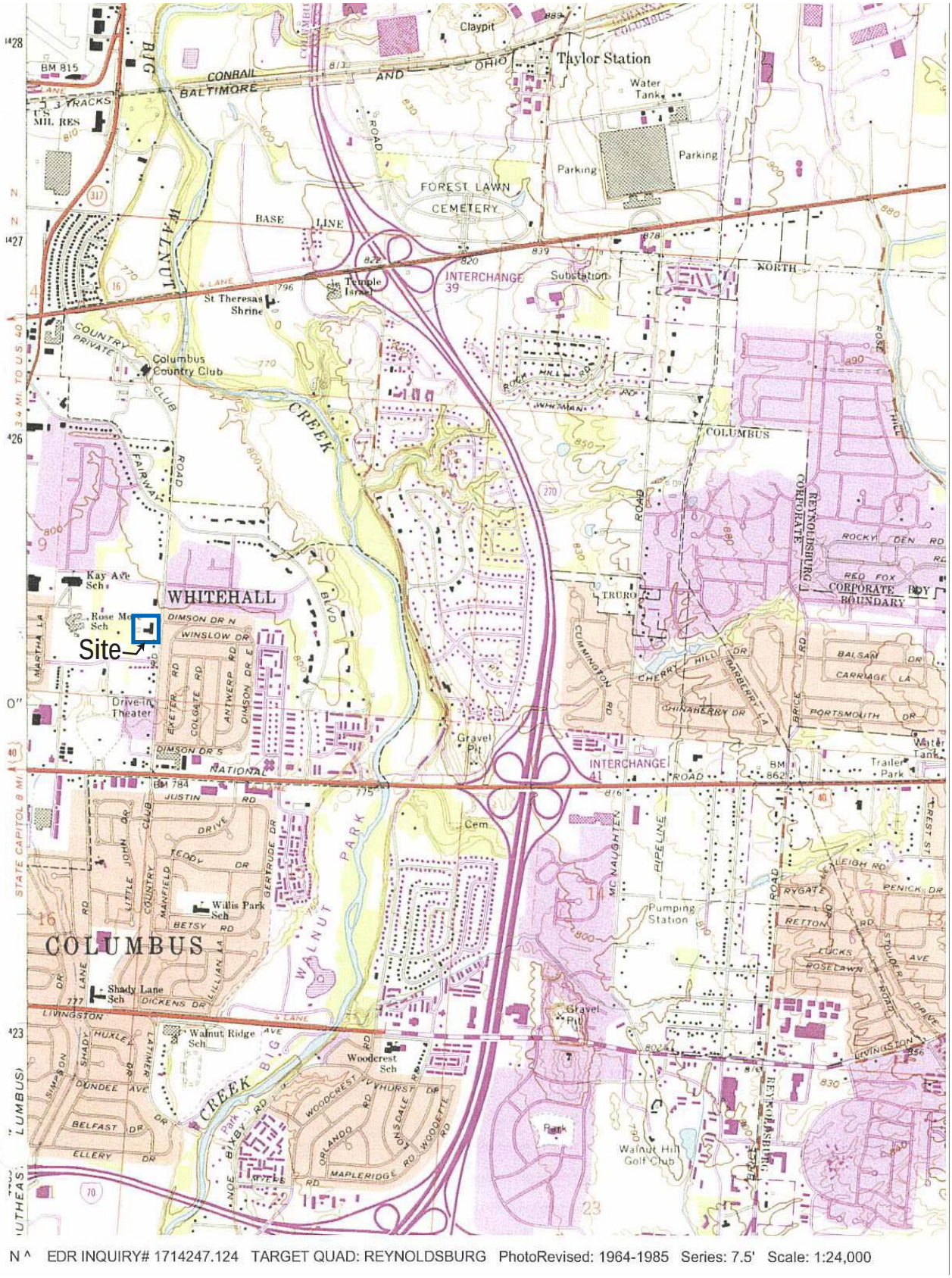


FIGURE 12
1964-1985 USGS 7.5-Minute
Topographic Map, Reynoldsburg
Phase I ECP Report

FIGURE 13
1938 Aerial Photograph
Phase I ECP Report

FIGURE 14
1957 Aerial Photograph
Phase I ECP Report

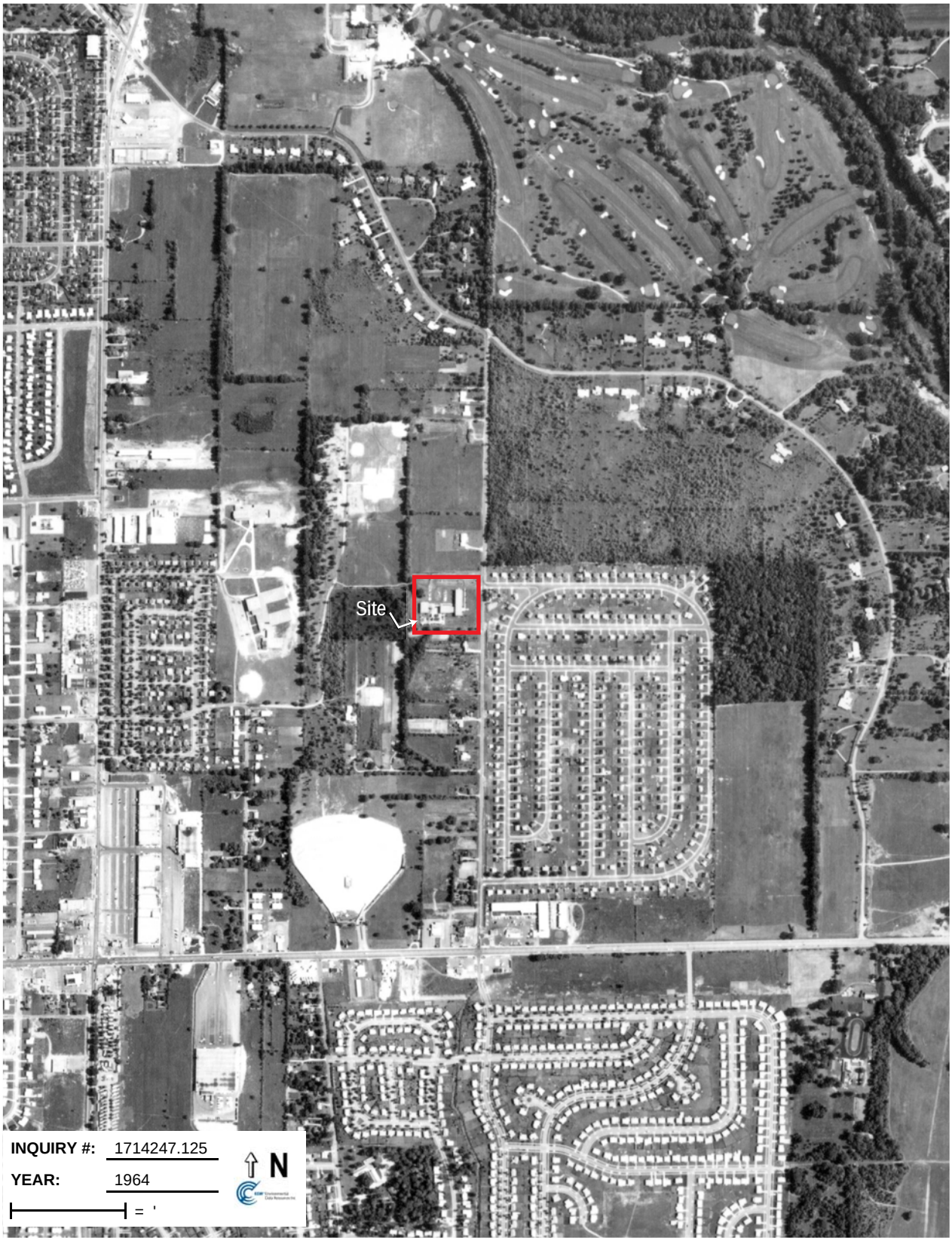


FIGURE 15
1964 Aerial Photograph
Phase I ECP Report

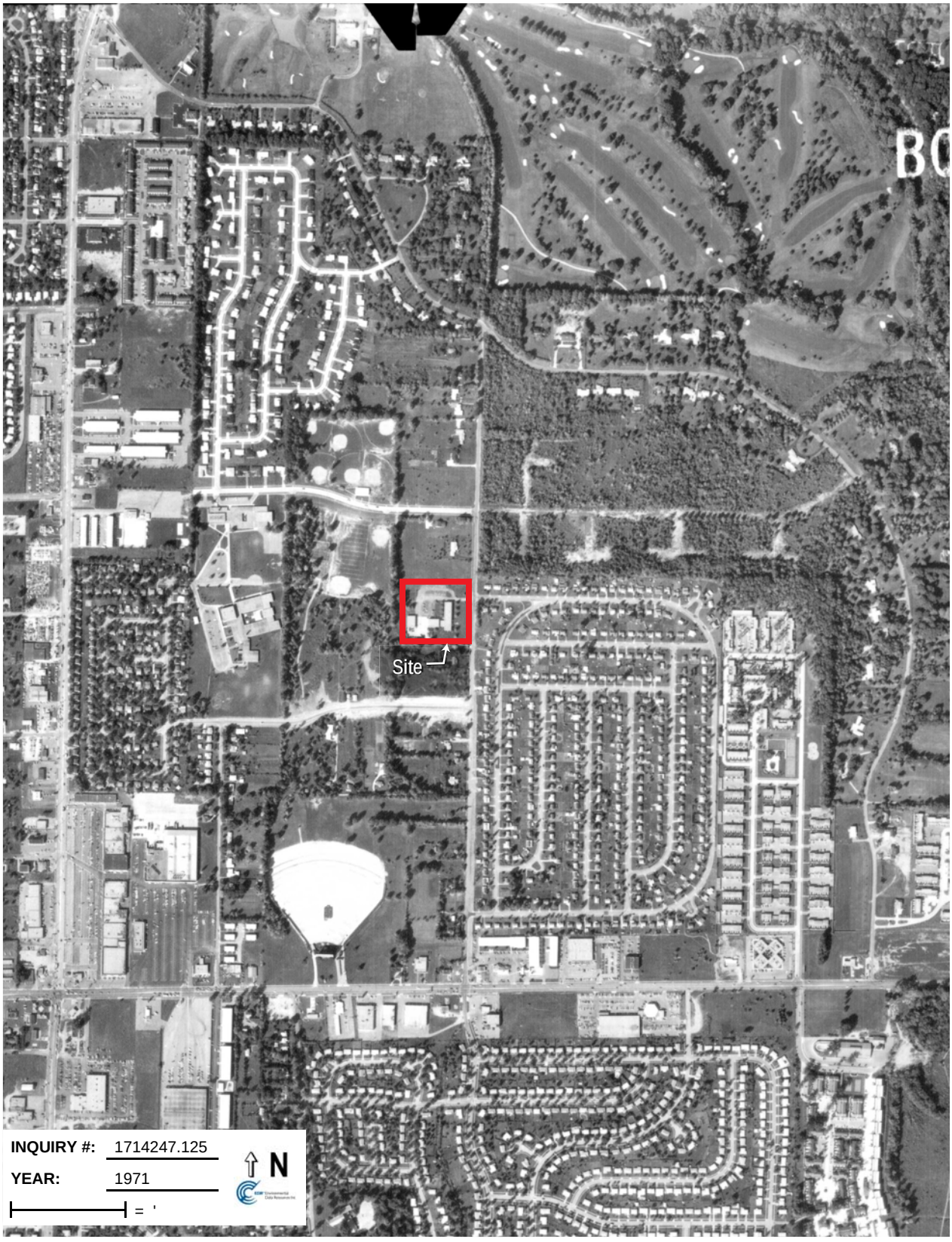
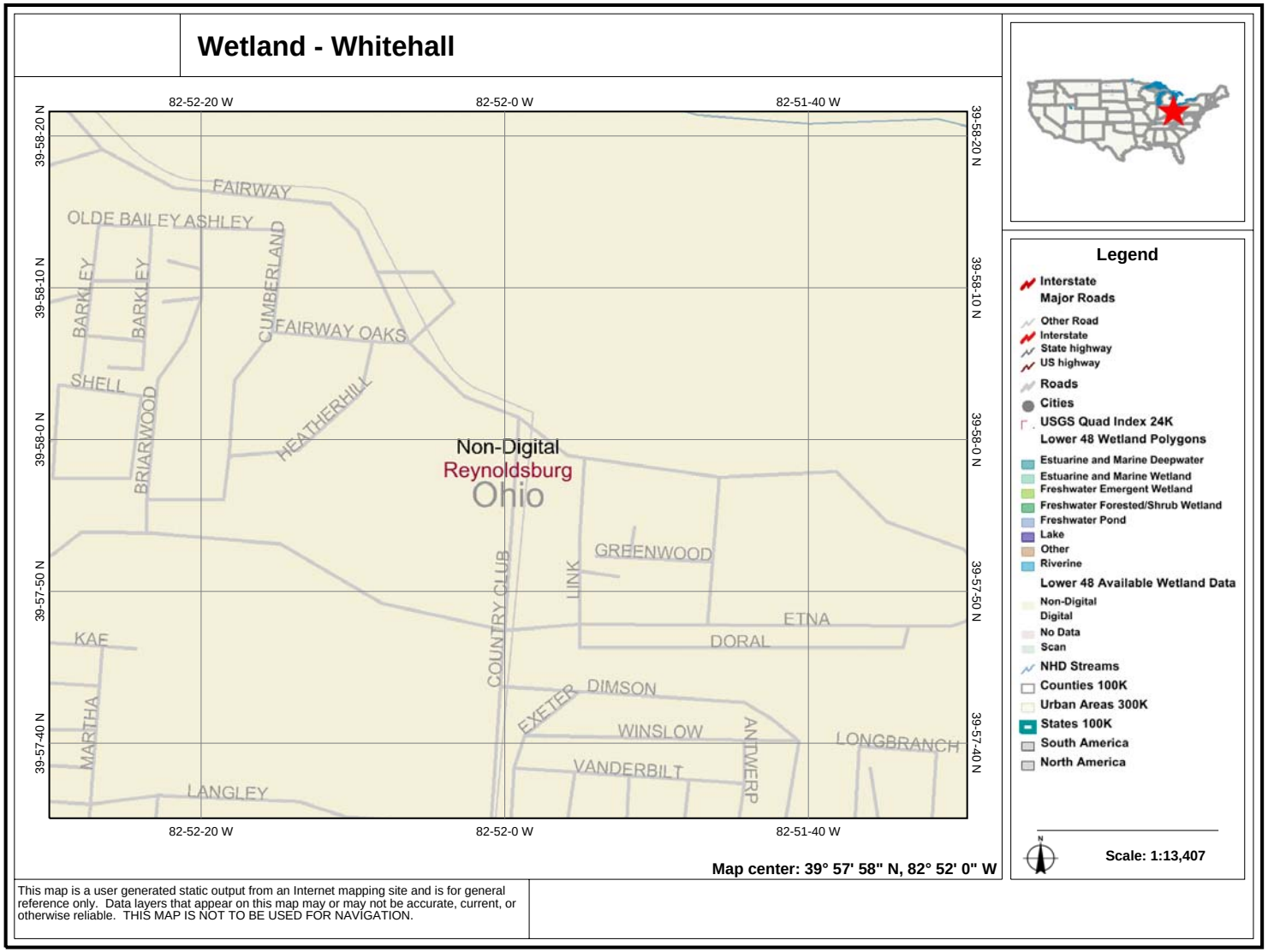


FIGURE 16
1971 Aerial Photograph
Phase I ECP Report

FIGURE 17
1988 Aerial Photograph
Phase I ECP Report

FIGURE 18
1994 Aerial Photograph
Phase I ECP Report



North

FIGURE 19
Wetlands Inventory
Phase I ECP Report

Appendix B
Site Reconnaissance Photographs

APPENDIX B

Site Reconnaissance Photographs

1. USAR Center entrance.

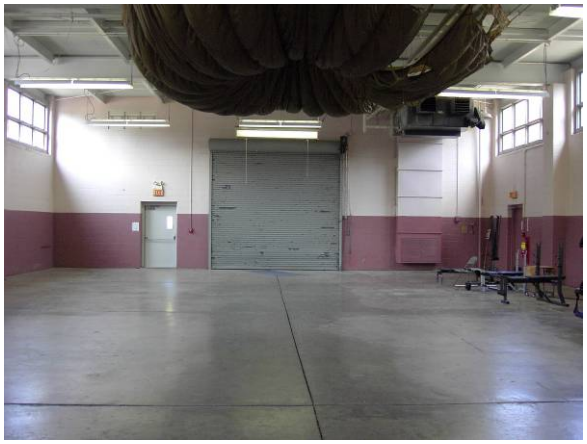
2. Exterior view of the north side of the USAR Center.

3. Exterior view of the east side of the USAR Center

4. Exterior view of the east side of the USAR Center.

4A. West exterior of the USAR Center. Bay door into drill hall.

5. USAR Center parking area, Waste Management solid waste collection container, and northern boundary of the facility.



6. USAR Center drill hall, view toward the west.

7. Corridor C in the USAR Center, view toward the east.

8. Former gun range, view toward the north.

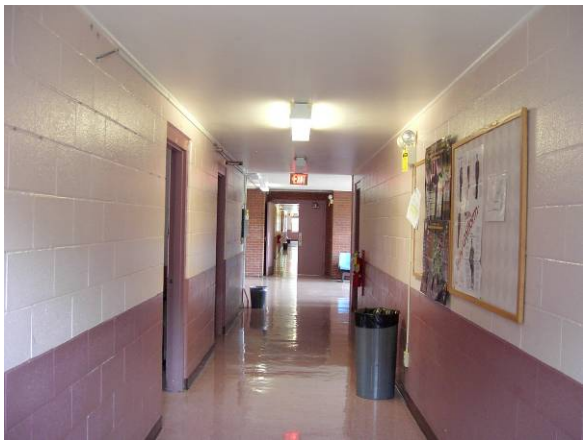
9. USAR Center boiler Tank. The elbow shown in photo does not containing asbestos, and no asbestos was identified in the boiler room during the review of asbestos survey reports prepared for the site.

10. USAR Center boiler.

11. USAR Center kitchen area, no longer in use.

12. Kitchen grease trap, located outside on the east side of the kitchen.

13. Drain located on the kitchen exit on the south side of the USAR Center.



14. Second floor corridor of the USAR Center where classrooms are located.

15. Second floor classroom in the USAR Center.

16. Exterior view of east side of the OMS facility.

16A. Old hazardous materials storage room located in the northeast corner of the OMS facility. Entrance is on the exterior of the facility.

17. Exterior view of south side of the OMS facility.

18. Exterior view of west side of the OMS facility.

19. Exterior view of north side of the OMS facility.

20. South exterior side of the OMS facility. View into southern bay door of the OMS facility.

21. General storage cabinet located along the south wall of the OMS facility. A battery and flammable and corrosive materials stored in the cabinet.

22. Storage cages along the west wall of the OMS facility.

23. View into middle bay door of the OMS facility.

24. OMS facility spill kit located in the middle of the OMS facility near the storage cage door.

25. Contents of flammable cabinet located in northern end of the OMS facility.

26. Flammable cabinet located in northern end of the OMS facility.

27. Emergency eyewash and shower located in the northeast corner of the OMS facility.

28. OMS vehicle storage area.

29. Southern fence line of the OMS vehicle storage area.

30. Hazardous materials storage facility located southeast corner of the OMS vehicle storage area.

31. Conex storage boxes located in the OMS vehicle storage area.

32. Typical contents of Conex storage boxes at the facility.

33. Facility parking lot.

34. Utility building located on the northwest corner of the property.

35. Property along the northern border of the facility.

36. Property along the eastern border of the facility.

37. Property along the southern border of the facility.

38. Property bordering the eastern boundary of the facility.

Appendix C

Property Acquisition Documents and Chain of Title Report

OH014

VOL 2146 PAGE 429

22560

TRANSFERRED
Dec. 4, 1958
Fred C. Dunn
Auditor
Franklin County, Ohio

WARRANTY DEED

UNITED STATES ARMY RESERVE CENTER
COLUMBUS, OHIO

TRACT NO. 100

KNOW ALL MEN BY THESE PRESENTS: That Herschel Baker and Bessie M. Baker, his wife, the GRANTORS, in consideration of the sum of Seventeen Thousand Five Hundred Dollars ($17,500.00) to them paid by the United States of America, whose address is Washington, D. C., the receipt and sufficiency whereof are hereby acknowledged, do hereby GRANT, BARGAIN, SELL and CONVEY unto the UNITED STATES OF AMERICA, the GRANTEE, and its assigns forever, the fee simple title to that certain parcel of land situate in the City of Whitehall, Truro Township, Franklin County, Ohio, being part of half Section 12, Section 9, Township 12, Range 21, Refugees Land, and more particularly bounded and described as follows:

> Beginning at a point in the center of Country Club Road, said point being in the east line of the said half Section 12, and located approximately 1001.00 feet north of the south line of said half section; thence, from the said point of beginning,
>
> North 83° 37' West passing an iron pin at 30.00 feet, in all 532.98 feet to an iron pin marking the southwest corner of the subject owner property; thence, with the subject owner west line,
>
> North 6° 44' East 409.00 feet to a point; thence, leaving the said west line, and severing the land of the subject owner,
>
> South 83° 37' East 533.10 feet to a point in the center of the said Country Club Road; thence, with the said road,
>
> South 6° 45' West 409.00 feet to the place of beginning, containing 5.00 acres, more or less, and being a part of the same land as that described in a deed to Herschel Baker from Harry Alexander and Lulu Alexander, his wife, dated October 18, 1955, and recorded in Volume 1964, page 411, of the records of Franklin County, Ohio.

Further, in consideration of the amount set forth above, the said Grantors do hereby remise, release and forever quitclaim unto the said Grantee and its assigns, all their right, title and interest in and to the banks, beds and waters of any stream opposite to or fronting upon the above-described land, and in any alleys, roads, streets, ways, strips, gores or railroad rights of way abutting or adjoining said land and in any means of ingress or egress appurtenant thereto.

4096

Recorder's Fee $1.40

Dec. 4 1958 Received 12-4 1958 At 9:50 O'clock A.M. Recorded 12-8 1958 In Franklin County.

2055 East Rio Salado Parkway, Suite 201
Tempe, Arizona 85281
Phone: (480) 967-6752
Fax Number: (480) 966-9422
Web Site: www.netronline.com

HISTORICAL CHAIN OF TITLE REPORT

WHITE HALL MEMORIAL USARC, OH
721 COUNTRY CLUB RD
COLUMBUS, OHIO

Submitted to:

ENVIRONMENTAL DATA RESOURCES, INC.
C/O
CH2M HILL
1569 Stampmill Way
Lawrenceville, Georgia 30043
(770) 338-1589

Attention: Mary Jacques

Project No. N06-5569

Monday, September 11, 2006

NETR- Real Estate Research & Information hereby submits the following ASTM historical chain-of-title to the land described below, subject to the leases/miscellaneous shown in Section 2. Title to the estate or interest covered by this report appears to be vested in:

UNITED STATES OF AMERICA

The following is the current property legal description:

Being that parcel or tract of land, known as Tract No. 100, situated and lying in Sections 9 and 12, Township 12, Range 21, in the City of Whitehall, Truro Township, Franklin County, State of Ohio

Assessor's Parcel No: 090-002161

1. HISTORICAL CHAIN OF TITLE

1. WARRANTY DEED:
   - RECORDED: 12-02-1920
   - GRANTOR: Willis Hall
   - GRANTEE: Harry B. Alexander
   - INSTRUMENT: Bk 693, Pg 130

2. WARRANTY DEED:
   - RECORDED: 03-07-1956
   - GRANTOR: Harry B. Alexander
   - GRANTEE: Herschel Baker
   - INSTRUMENT: Bk 1964, Pg 411

3. WARRANTY DEED:
   - RECORDED: 12-08-1958
   - GRANTOR: Herschel Baker & Bessie M. Baker, his wife
   - GRANTEE: United States of America
   - INSTRUMENT: Bk 2146, Pg 429

2. LEASES AND MISCELLANEOUS

1. No environmental liens, institutional controls or engineering controls were found of record.

3. LIMITATION

This report was prepared for the use of Environmental Data Resources, Inc., and CH2M Hill, exclusively. This report is neither a guarantee of title, a commitment to insure, or a policy of title insurance. NETR- Real Estate Research & Information does not guarantee nor include any warranty of any kind whether expressed or implied, about the validity of all information included in this report since this information is retrieved as it is recorded from the various agencies that make it available. The total liability is limited to the fee paid for this report.

Appendix D

Previous Environmental Site Assessment Reports

APPENDIX D

Contents

FT. KNOX ASBESTOS SURVEY REPORT
U. S. ARMY RESERVE CENTERS

WHITEHALL MEMORIAL USARC
Columbus, Ohio

OH 013

CONTENTS

Prepared by:

RMT INC.

NARRATIVE SUMMARY

INTRODUCTION

Whitehall Memorial U.S. Army Reserve Center (USARC) is a two-story building. The reserve center building and the vehicle maintenance shop were inspected for suspect asbestos-containing materials (ACM) by an RMT asbestos field inspector. The date of the inspection is provided on the Asbestos Survey Field Log. A total of thirty-four samples of suspect ACM were collected from these buildings. Results, sample point locations, and ACM locations are reported on the Database Summary Sheet, Building Drawing, and the Asbestos Survey Field Log. Samples were analyzed using Polarized Light Microscopy (PLM) by Hygeia Environmental Laboratories, Inc. (Hygeia). Hygeia is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) for PLM analysis of bulk asbestos samples. Hygeia's PLM Analysis Summary sheet is included at the end of this report.

RMT has adopted the Environmental Protection Agency (EPA) Asbestos Hazard Emergency Response Act (AHERA) protocols for determining whether homogeneous areas are asbestos-containing. This protocol states that if one sample taken from the same homogeneous area contains more than 1% asbestos, by weight, then the entire homogeneous area is considered to be an asbestos-containing material.

EXPOSURE ASSESSMENT

An exposure assessment using Priority Index Number (PIN) values was developed in accordance with TRADOC, October, 1984 Edition. The assessment was based on seven elements. These elements include the material's friability, accessibility, condition, percent of asbestos, level of activity, number of occupants, and duration of occupancy.

RECOMMENDATIONS

Pipe insulation (cardboard wrap type) was found throughout the first floor of the reserve center and in the vehicle maintenance shop. This material exhibited low friability and was in good condition at the time of this survey.

Asbestos-containing floor tiles were found underneath the carpeted area. The floor tiles were non-friable and in good condition at the time of this survey.

The cloth expansion joints found in the range storage area, the drill hall, and the vehicle maintenance shop are assumed to contain asbestos. This material was not sampled because sampling may have caused asbestos fibers to enter into the ventilation system airflow, resulting in possible air contamination in the building. This cloth expansion joint was in good condition.

Asbestos-containing joint tape and compound was found throughout the building. This material was non-friable and in good condition at the time of this survey.

Activities that may disturb friable materials or render non-friable materials friable should be prohibited. RMT recommends ACM be removed prior to major renovation or demolition projects that may potentially disturb these materials. An Interim Control, such as an Operation and Maintenance Program (O&M), should be developed and instituted for these materials. Such a program should include establishment of an information system for building occupants and maintenance personnel, including outside contractors, entailing procedural requirements for handling and maintaining ACM in a non-friable state, and a periodic inspection schedule for reassessment. This program will allow the ACM to be properly managed until abatement is performed.

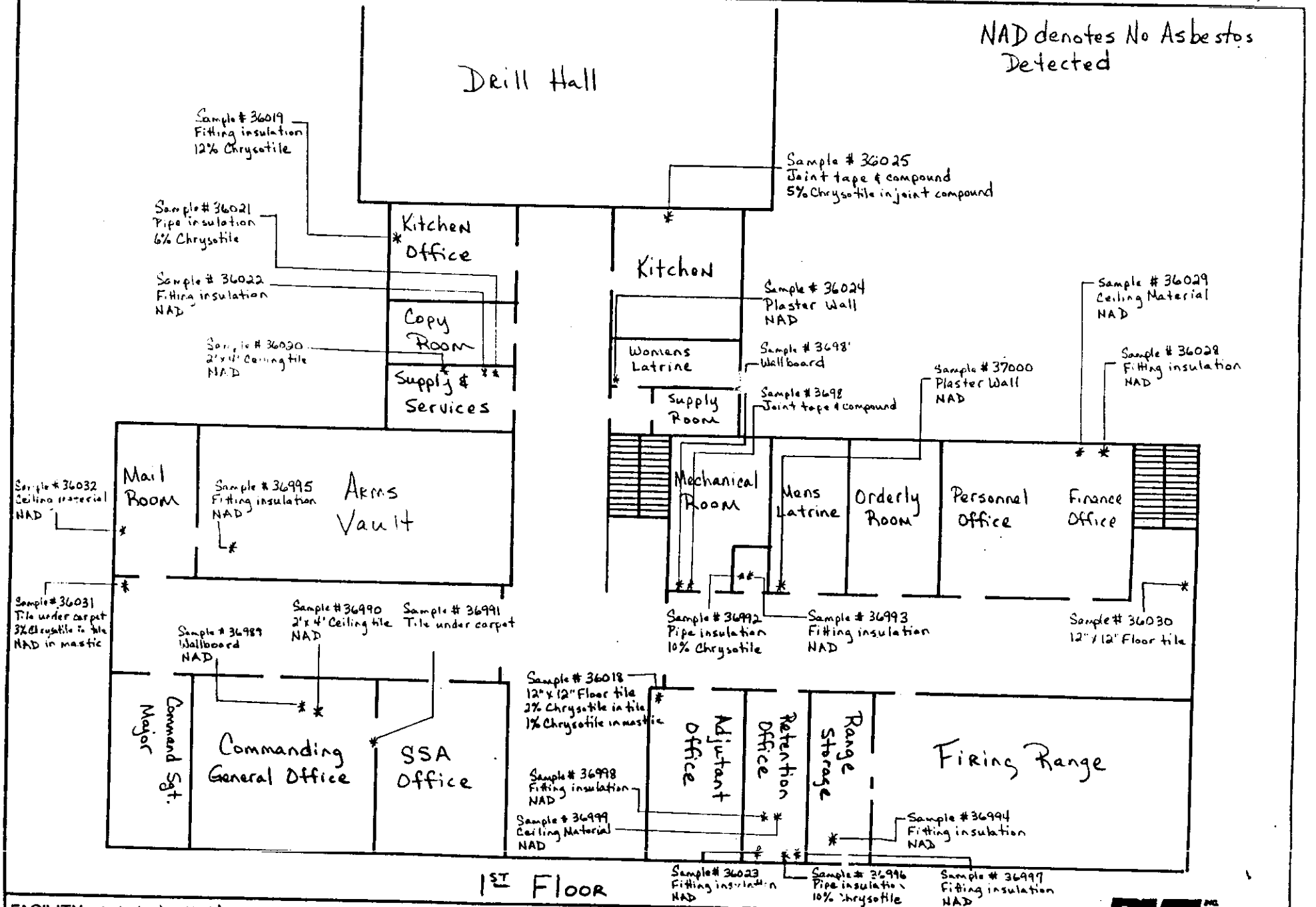
COST ESTIMATES FOR WHITEHALL MEMORIAL USARC

ACM	Quantity	Abatement			Replacement			Total
		Labor Hours	Unit Cost	Total	Labor Hours	Unit Cost	Total	
Pipe insulation	418 SF	100	$12.00	$5,016	50	$7.50	$3,135	$8,151
Floor tile under carpet	767 SF	31	$3.50	$2,685	15	$2.30	$1,764	$4,449
Cloth expansion joints	32 SF	10	$30.00	$960	5	$10.00	$320	$1,280

Bldg.	Inspection Date	Building Usage	Type of ACM	Location of ACM	Amount of ACM	Total % of Asbestos in Material	PIN #	Abatement Cost
WHITEHALL	12/09/1992	OTHER	OTHER	Cloth exp. joint-range storage,drill hall,VMF	32 SF	50	0.324	1280
Assumed ACM.								
WHITEHALL	12/09/1992	OTHER	FLOOR COVERING	Floor tile under the carpet.	767 SF	10	0.020	4449
Ref. Sample #36991 - 10% Chrysotile in tile.								
WHITEHALL	12/09/1992	OTHER	PIPE INSULATION	Throughout the 1st floor and in the VMF.	418 LF	10	6.660	8151
Ref. Sample #36992 - 10% Chrysotile.								

NAD denotes No Asbestos Detected.
Abatement cost detail in Narrative Summary.
See Survey Field Log and drawing for specific room locations.

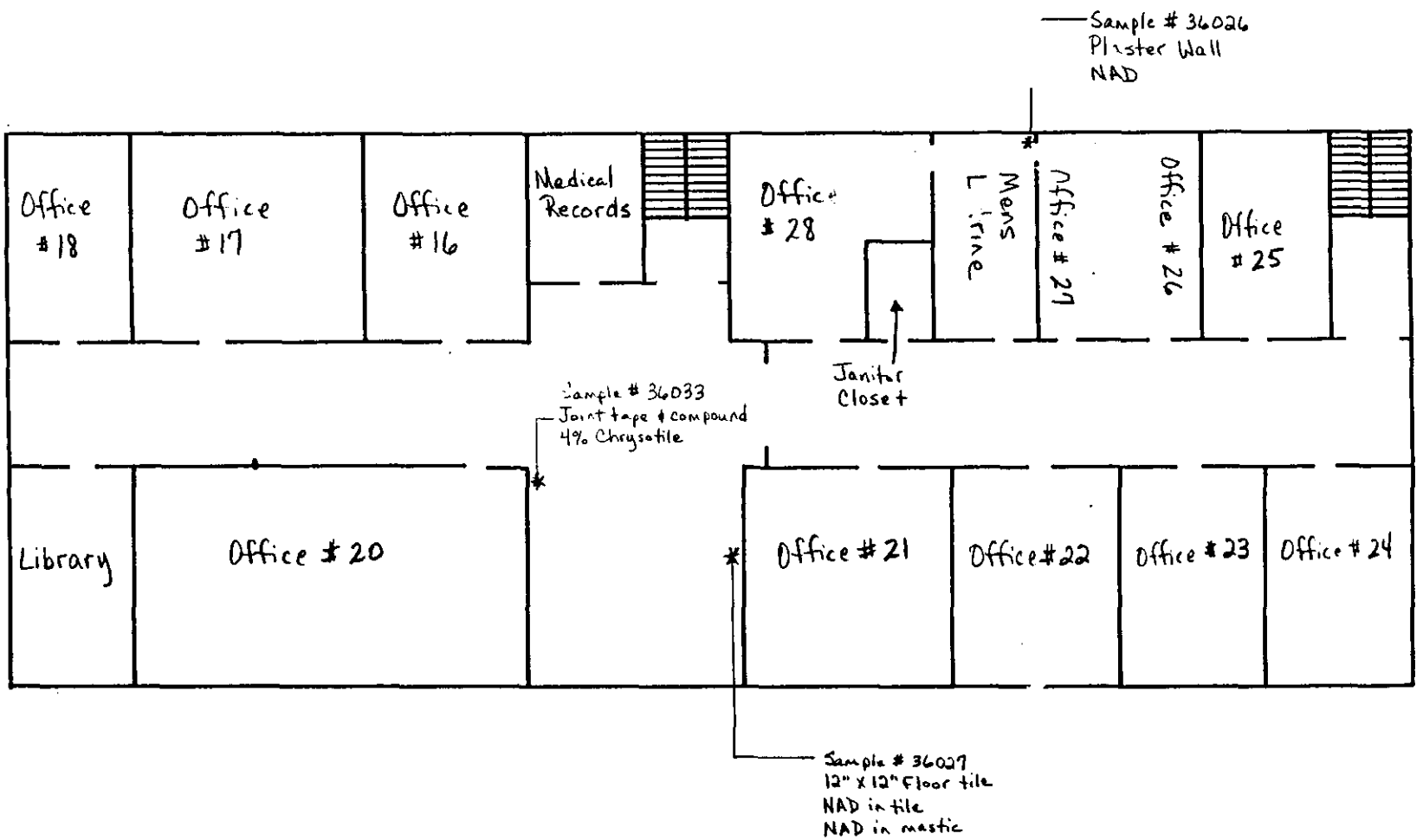
NAD denotes No Asbestos Detected



FACILITY: Whitehall Memorial USARC - Columbus, Ohio

PROJECT NO. 942.04

RMT, INC.



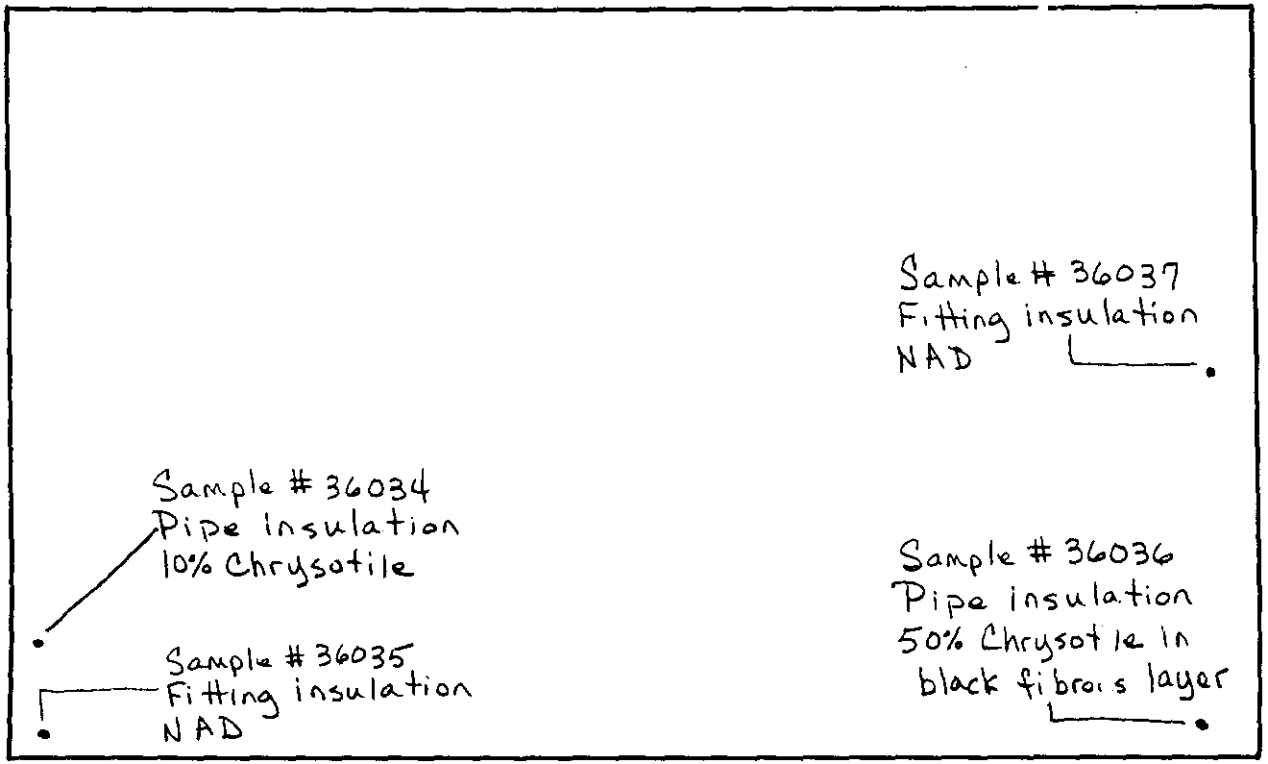
2nd Floor

NAD denotes No Asbestos Detected

FACILITY: Whitehall Memorial USARC - Columbus, Ohio

PROJECT NO. 942.04

RMT



VEHICLE MAINTENANCE FACILITY

NAD DENOTES
NO ASBESTOS DETECTED

FACILITY: WHITEHALL MEMORIAL ILSARC – COLUMBUS, OHIO | PROJECT NO. 94204

RMT

U. S. ARMY RESEA.. ..ENTERS
ASBESTOS SURVEY FIELD LOG

Building Name: Whitehall Memorial USARC

Building Site: Columbus, Ohio

Date: 12/8/92 - 12/9/92

Building Usage Code: _____

Page 1 of 8

FLOOR	AREA / ROOM #	HOMO AREA	TYPE	ASSESSMENT FRBL	ASSESSMENT ACC	ASSESSMENT COND	ASSESSMENT ACT	# OF OCCUP	DUR OF OCCUP	SAMPLE #	SAMPLE LOCATION	RESULTS	QUANTITY	COMMENTS
1st	Mechanical room							18	40					Fiberglass pipes & H_2O storage tank - plastic boat fittings
	↓	01	K	L	M	G	L			36987	Front wall - 5 ft. from the door	< 1% Chrysotile		01 - Wallboard (ceiling only)
	↓	02	H	L	L	G	L			36988	"	3% Chrysotile in joint compound		02 - Joint tape & wallboard
	Finance & Personnel Officers	03	C	L	H	G	H						836 SF	03 - 12"x12" rose floor tile
	↓	04	H	L	M	G	L			36028	Back wall - near last window	NAD	836 SF	04 - Ceiling material
	↓	11	H	L	H	G	L			36029	"	NAD	25 ea	
	Orderly Room	01	K	L	M	G	L						380 SF	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H						380 SF	
	↓	11	H	L	H	G	L						8 ea.	
	Firing Range	No suspect ACM												
	Range storage	05	H	L	L	G	L			36994	Above HVAC unit	NAD	2 ea.	05 - Fitting insulation on cork pipe insulation
	↓	12	H	L	L	G	M			Assumed ACM			8 SF	
	Janitors closet	06	A	L	M	G	L			36992	Above the door	10% Chrysotile	8 LF	06 - Pipe insulation (cardboard wrap type)
↓	↓	09	H	L	M	G	L	↓	↓	36993	"	NAD	5 ea.	07 - Fitting insulation (on cardboard wrap type)

U. S. ARMY RESE[illegible]ENTERS
ASBESTOS SURVEY FIELD LOG

Building Name: Whitehall Memorial USARC

Building Site: Columbus, Ohio

Date: 12/8/92 - 12/9/92

Building Usage Code:

FLOOR	AREA / ROOM #	HOMO AREA	TYPE	ASSESSMENT FRBL	ASSESSMENT ACC	ASSESSMENT COND	ASSESSMENT ACT	# OF OCCUP	DUR OF OCCUP	SAMPLE #	SAMPLE LOCATION	RESULTS	QUANTITY	COMMENTS
1st	Retention Office	03	C	L	H	G	H	18	40				133 SF	
	↓	04	H	L	M	G	L			36999	Above back light fixture	NAD	133 SF	
		05	H	L	L	G	L			36998	"	NAD	7 ea.	
		06	A	L	H	G	L			36996	Back left corner	10% Chrysotile	30 LF	
		07	H	L	H	G	L			36997	Back left corner - at the ceiling	NAD	5 ea.	
	↓	11	H	L	H	G	L			36023		NAD	12 ea.	
	Mens latrine	08	H	L	H	G	L			37000	Beside the door	NAD	519 SF	08 - Plaster ceiling & walls
	Adjutants Office	01	K	L	M	G	L						589 SF	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H			36018	Front right corner	2% Chrysotile in tile 1% Chrysotile in mastic	589 SF	(Different tile under baseboard - appears to be choc. brown w/mastic - included in sample
	SSA Office	01	K	L	M	G	L						285 SF	
	↓	02	H	L	L	G	L							
	↓	05	H	L	L	G	L						2 ea.	
	↓	09	C	L	L	G	L						285 SF	09 - Tile under carpet
	Commanding Generals Office	01	K	L	M	G	L			36989	Above ceiling tile - between lights in front of the door	NAD	238 SF	
	↓	02	H	L	L	G	L							
↓	↓	09	C	L	L	G	L	↓	↓	36991	At the threshold	10% Chrysotile in tile	238 SF	(small amount of mastic)

U. S. ARMY RESE. CENTERS
ASBESTOS SURVEY FIELD LOG

Building Name: Whitehall Memorial USARC

Building Site: Columbus, Ohio

Date: 12/8/92 - 12/9/92

Building Usage Code:

FLOOR	AREA / ROOM #	HOMO AREA	TYPE	ASSESSMENT FRBL	ACC	COND	ACT	# OF OCCUP	DUR OF OCCUP	SAMPLE #	SAMPLE LOCATION	RESULTS	QUANTITY	COMMENTS
1st	Commanding Generals Office (cont.)	10	N	H	M	G	L	18	40	36990	Between lights in front of the door	NAD	238 SF	10-2'x4' ceiling tile
	Command Sgt. Majors Office	03	C	L	H	G	H						162 SF	
	↓	04	H	L	L	G	L						162 SF	
	↓	11	H	L	M	G	L						12 ea.	11- Fitting insulation on fiberglass pipes
	Mail room	03	C	L	H	G	H						152 SF	
	↓	04	H	L	L	G	L			36032	Left wall	NAD	152 SF	
	↓	05	H	L	M	G	L						4 ea.	
	↓	11	H	L	M	G	L						8 ea.	
	ARNIS Vault	05	H	L	M	G	L			36995	Above the light @ the door	NAD	10 ea.	
	Entrance to womens latrine	01	K	L	M	G	L						24 SF.	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H						24 SF.	
	Supply room	01	K	L	M	G	L						63 SF.	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H						63 SF	
↓	Women's latrine	08	H	L	H	G	L	↓	↓	36024	Behind the door	NAD	319 SF	

U. S. ARMY RESE... CENTERS
ASBESTOS SURVEY FIELD LOG

Building Name: Whitehall Memorial USARC

Building Site: Columbus, Ohio

Date: 12/8/92-12/9/92

Building Usage Code:

Page 4 of 8

FLOOR	AREA / ROOM #	HOMO AREA	TYPE	ASSESSMENT FRBL	ACC	COND	ACT	# OF OCCUP	DUR OF OCCUP	SAMPLE #	SAMPLE LOCATION	RESULTS	QUANTITY	COMMENTS
1st	Kitchen	01	K	L	M	G	L	18	40				248 SF	
	↓	02	H	L	L	G	L			36025	Middle of left wall @ the ceiling	5% Chrysotile in joint compound		
	↓	03	C	L	H	G	H						248 SF	
	Kitchen Office	03	C	L	H	G	H						173 SF	
	↓	04	H	L	M	G	L						173 SF	
	↓	11	H	L	M	G	L			36019	Above the window	12% Chrysotile	6 ea.	
	Copy Room	01	K	L	M	G	L						135 SF	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H						135 SF	
	Supply & services	03	C	L	H	G	H						173 SF	
	↓	06	A	L	L	G	L			36021	Right front corner - above ceiling tile	6% Chrysotile	25 LF	
	↓	07	H	L	L	G	L			36022	"	NAD	4 ea.	
	↓	10	N	H	M	G	L			36020	Right side - middle of the wall	NAD	173 SF	
↓	↓	11	H	L	M	G	L	↓	↓					

U. S. ARMY RESEARCH CENTERS
ASBESTOS SURVEY FIELD LOG

Building Name: Whitehall Memorial USARC

Building Site: Columbus, Ohio

Date: 12/8/92 - 12/9/92

Building Usage Code:

FLOOR	AREA / ROOM #	HOMO AREA	TYPE	ASSESSMENT FRBL	ACC	COND	ACT	# OF OCCUP	DUR OF OCCUP	SAMPLE #	SAMPLE LOCATION	RESULTS	QUANTITY	COMMENTS
1st	Drill Hall	06	A	L	M	G	L	18	40				175 LF	(Far left pipe above the doors)
↓	↓	07	H	L	M	G	L	↓	↓				7 ea	
		11	H	L	M	G	L						25 ea.	
	↓	12	H	L	L	G	M			Assumed ACM			18 SF	12-Cloth expansion joint
	Halls, lobby, & stairwells	01	K	L	M	G	L						1550 SF	
	↓	02	H	L	L	G	L							
		03	C	L	H	G	H			36030	End stairwell	NAD in tile NAD in mastic	1304 SF	
		09	C	L	L	G	L			36031	Beside outside doors	3% Chry. in tile NAD in mastic	244 SF	
↓	↓	11	H	L	M	G	L	↓	↓				21 ea.	
2nd	Medical records	03	C	L	H	G	H	18	40				165 SF	
↓	Office #16	03	C	L	H	G	H	↓	↓				247 SF	
	Office #17	01	K	L	M	G	L						247 SF	
	↓	02	H	L	L	G	L							
↓	↓	03	C	L	H	G	H	↓	↓				247 SF	

U. S. ARMY RESER ENTERS
ASBESTOS SURVEY FIELD LOG

Building Name: Whitehall Memorial USARC

Building Site: Columbus, Ohio

Date: 12/8/92-12/9/92

Building Usage Code:

FLOOR	AREA / ROOM #	HOMO AREA	TYPE	ASSESSMENT FRBL	ACC	COND	ACT	# OF OCCUP	DUR OF OCCUP	SAMPLE #	SAMPLE LOCATION	RESULTS	QUANTITY	COMMENTS
2nd	Office #18	01	K	L	M	G	L	18	40				209 SF	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H						209 SF	
	Library	01	K	L	M	G	L						171 SF	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H						171 SF	
	Office #20	01	K	L	M	G	L						532 SF	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H						532 SF	
	Office #21	01	K	L	M	G	L						551 SF	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H						551 SF	
	Office #22	01	K	L	M	G	L						627 SF	
	↓	02	H	L	L	G	L							
↓	↓	03	C	L	H	G	H	↓	↓				627 SF	

U. S. ARMY RESEARCH CENTERS
ASBESTOS SURVEY FIELD LOG

Building Name: Whitehall Memorial USARC

Building Site: Columbus, Ohio

Date: 12/8/92 - 12/9/92

Building Usage Code:

FLOOR	AREA / ROOM #	HOMO AREA	TYPE	ASSESSMENT FRBL	ASSESSMENT ACC	ASSESSMENT COND	ASSESSMENT ACT	# OF OCCUP	DUR OF OCCUP	SAMPLE #	SAMPLE LOCATION	RESULTS	QUANTITY	COMMENTS
2nd	Office #23	01	K	L	M	G	L	18	40				627 SF	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H						627 SF	
	Office #24	01	K	L	M	G	L						532 SF	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H						532 SF	
	Office #25	03	C	L	H	G	H						475 SF	
	Offices #26 & 27	01	K	L	M	G	L						760 SF	
	↓	02	H	L	L	G	L							
	↓	03	C	L	H	G	H						760 SF	
	Mens latrine	08	H	L	H	G	L			36026	Beside door to office #27	NAD	675 SF	
	Janitors closet	No suspect ACM												
	Office #28	01	K	L	M	G	L						440 SF	
	↓	02	H	L	L	G	L							
↓	↓	03	C	L	H	G	H	↓	↓				440 SF	

U. S. ARMY RESE[illegible]ENTERS
ASBESTOS SURVEY FIELD LOG

Building Name: Whitehall Memorial USARC

Building Site: Columbus, Ohio

Date: 12/8/92 - 12/9/92

Building Usage Code: _____

FLOOR	AREA / ROOM #	HOMO AREA	TYPE	ASSESSMENT FRBL	ASSESSMENT ACC	ASSESSMENT COND	ASSESSMENT ACT	# OF OCCUP	DUR OF OCCUP	SAMPLE #	SAMPLE LOCATION	RESULTS	QUANTITY	COMMENTS
2nd	Halls, lobby & stairwells	01	K	L	M	G	L	14	40				1497 SF	
↓	↓	02	H	L	L	G	L	↓	↓	36033	Opposite water cooler	4% Chrysotile in joint compou[illegible]		
↓	↓	03	C	L	H	G	H	↓	↓	36027	Beside water cooler	NAD in tile NAD in mas[illegible]	1497 SF	
↓	Roof							↓	↓					Rubber membrane - not sampled
	Maintenance shop													
	↓	01	A	L	M	G	L			36034	Front left corner	10% Chrysotile	180 LF	01 - Pipe insulation
		01	A	L	M	G	L			36036	Front right corner	50% Chrysotile in black fibrous layer	see above	
		02	H	L	M	G	L			36035	Front left corner	NAD	30 ea.	02 - Fitting insulation
		02	H	L	M	G	L			36037	Right wall - middle	NAD	see above	
	↓	03	H	L	L	G	M			Assumed ACM			6 SF	03 - Cloth expansion joint

Hygeia Environmental Laboratories Inc.

Atlanta
Boston
Los Angeles
New York

Cobb Corporate Center
350 Franklin Road/300
Marietta, Georgia
30067-7749
404-425-9901
FAX: 404-424-0185

RMT, Inc.
100 Verdae Boulevard
P.O. Box 16778
Greenville SC 29606

Subject: PLM Analysis of Bulk Samples
Hygeia Project #: A005-93-040
Client Reference: **942.04 (Whitehall Memorial)**

Dear Ms. Mi[illegible]feldt:

Please find enclosed the results of our analysis of the bulk samples collected by you and submitted to this laboratory on 12/23/92. All analyses were performed in accordance with the EPA Method 600/M4-82-020, Dec. 1982. The phase abundances are provided as an estimated percent and may be considered within the limits of variability inherent in the method employed.

Hygeia Environmental Laboratories Inc. is accredited under the NIST/NVLAP program for asbestos in bulk materials by polarized light microscopy.

This report includes a summary of the analytical results. Hygeia Environmental Laboratories Inc. is responsible for the accuracy of the analytical results provided in this report only. This report may not be considered a product endorsement by NVLAP or any other government agency. The samples will be retained for a period of ninety days unless otherwise specified.

If you have any questions regarding your results, this report or the analytical methods employed, please contact me at (404) 425-9901.

Sincerely,
Hygeia Environmental
Laboratories Inc.

Julian C. Gray
Supervisor of Light Microscopy
Atlanta Region

jcg/de

Enclosures

Hygeia Environmental Laboratories Inc.

Cobb Corporate Center
350 Franklin Road/300
Marietta, Georgia
30067-7749
404-425-9901
FAX: 404-424-0185

Atlanta
Boston
Los Angeles
New York

PLM Analysis Summary

HEL Project Number: A005-93-040
Client Project ID: 942.04 (Whitehall Memoria

Sample ID		Asbestos Percent					Other Fibers		Non-Fibers		
Client	HEL	Ch.	Am.	Cr.	An.	T/A	Cell.	Glass	Per.	Ver.	Binder
36987	67737-A	<1%					15%				85%
Comments: .											
36988	67738-A	3%					2%				95%
Comments: 3% chrysotile in joint compound.											
36989	67739-A						15%				85%
Comments: No Asbestos Detected											
36990	67740-A						30%	30%	20%		20%
Comments: No Asbestos Detected											
36991	67741-A	10%					10%				80%
Comments: 10% chrysotile in tile, no mastic in sample.											
36992	67742-A	10%					60%				30%
Comments: .											
36993	67743-A						10%	30%			60%
Comments: No Asbestos Detected											
36994	67744-A						5%	40%			55%
Comments: No Asbestos Detected											
36995	67745-A							35%			65%
Comments: No Asbestos Detected											
36996	67746-A	10%					70%				20%
Comments: .											
36997	67747-A							30%			70%
Comments: No Asbestos Detected											
36998	67748-A						5%	30%			65%
Comments: No Asbestos Detected											

Hygeia Environmental Laboratories Inc.

Cobb Corporate Center
350 Franklin Road/300
Marietta, Georgia
30067-7749
404-425-9901
FAX: 404-424-0185

Atlanta
Boston
Los Angeles
New York

PLM Analysis Summary

HEL Project Number: A005-93-040
Client Project ID: 942.04 (Whitehall Memoria

Sample ID		Asbestos Percent					Other Fibers		Non-Fibers		
Client	HEL	Ch.	Am.	Cr.	An.	T/A	Cell.	Glass	Per.	Ver.	Binder
36999	67749-A						25%				75%
Comments:	No Asbestos Detected										
37000	67750-A						3%				97%
Comments:	No Asbestos Detected										
36018	67751-A	1%					2%				97%
Comments:	2% chrysotile in tile, 1% in mastic.										
36019	67752-A	12%					5%	28%			55%
Comments:	.										
36020	67753-A						30%	15%	15%		40%
Comments:	No Asbestos Detected										
36021	67754-A	6%					74%				20%
Comments:	.										
36022	67755-A							40%			60%
Comments:	No Asbestos Detected										
36023	67756-A							40%			60%
Comments:	No Asbestos Detected										
36024	67757-A						3%				97%
Comments:	No Asbestos Detected										
36025	67758-A	2%					18%				80%
Comments:	5% chrysotile in joint compound, 2% overall.										
36026	67759-A						2%				98%
Comments:	No Asbestos Detected										
36027	67760-A						2%				98%
Comments:	NAD in tile, NAD in mastic.										

Hygeia Environmental Laboratories Inc.

Cobb Corporate Center
350 Franklin Road/300
Marietta, Georgia
30067-7749
404-425-9901
FAX: 404-424-0185

Atlanta
Boston
Los Angeles
New York

PLM Analysis Summary

HEL Project Number: A005-93-040
Client Project ID: 942.04 (Whitehall Memoria

Sample ID		Asbestos Percent					Other Fibers		Non-Fibers		
Client	HEL	Ch.	Am.	Cr.	An.	T/A	Cell.	Glass	Per.	Ver.	Binder
36028	67761-A						30%				70%
Comments:	No Asbestos Detected										
36029	67762-A						5%	40%			55%
Comments:	No Asbestos Detected										
36030	67763-A						2%				98%
Comments:	NAD in tile, NAD in mastic.										
36031	67764-A	3%					2%				95%
Comments:	3% chrysotile in tile, NAD in mastic.										
36032	67765-A						60%				40%
Comments:	No Asbestos Detected										
36033	67766-A	4%					26%				70%
Comments:	4% chrysotile in joint compound.										
36034	67767-A	10%					70%				20%
Comments:	.										
36035	67768-A							40%			60%
Comments:	No Asbestos Detected										
36036	67769-A	<1%					80%				20%
Comments:	50% chrysotile in black fibrous layer.										
36037	67770-A							40%			60%
Comments:	No Asbestos Detected										

DEPARTMENT OF THE ARMY
HEADQUARTERS, 88th REGIONAL SUPPORT COMMAND
506 ROEDER CIRCLE
FORT SNELLING, MN 55111-4009

REPLY TO
ATTENTION OF

AFRC-CMN-EN (200)

6 July 2001

MEMORANDUM FOR 88th Regional Support Command (RSC) Facility Managers and Facility Coordinators

SUBJECT: Cultural Resources Survey

1. Please review and file the attached Cultural Resource Survey (Section 110 Survey) in the Cultural Resource Section of your Facility Environmental Files. This is a permanent facility record.

2. The 88th Regional Support Command (88th RSC) contracted the Fort McCoy Archaeology Laboratory (FMAL) to conduct a historic property inventory, under the provisions of Section 110 of the National Historic Preservation Act (NHPA), of United States Army Reserve Command (USARC) facilities owned or leased by the 88th RSC. This survey describes the recordation methods, physical descriptions, evaluation criteria, and the eligibility for nomination to the National Register of Historic Places (NRHP) for this property. Information contained in this survey also includes an explanation of the sources used in preparation of the survey.

3. The exterior of each building, structure, and object located on the USARC facility was photographed. Comprehensive views and unique architectural elements of each building were photographed in 35-mm black and white format and digital format. The 35-mm black and white photos are located at the 88th RSC Engineering Directorate. The survey and the digital photos are located on the Engineering public drive.

4. No additional review under the Section 110 of the NHPA is currently recommended at this USARC. Additional review will be required when existing building(s) reach the 50-year eligibility requirement for the NRHP or specific undertakings require compliance with Section 106 of the NHPA.

5. If you have any questions or require additional information, please contact your State Environmental Manager or the Headquarters Environmental Division at (612) 713-3825.

MARK E. BUCK
Environmental Division Chief

Enclosure

Ohio Section 110 Inventory
Volume I

Archaeological Resource Management Series
Reports of Investigation Number 16

Prepared for:

U.S. Army Reserve Command
88th Regional Support Command
Environmental Management Division
Fort Snelling
Minneapolis, Minnesota

Prepared by:

Heather L. Spencer
Fort McCoy Archaeology Laboratory
Directorate of Training and Mobilization
Fort McCoy, Wisconsin
December 1998

Editorial Review:

Andrea Den Otter
Fort McCoy Archaeology Laboratory
December 1999

THIS DOCUMENT CONTAINS ARCHAEOLOGICAL SITE INFORMATION AND IS INTENDED FOR MANAGEMENT AND PRESERVATION PURPOSES AND SHOULD NOT BE DISTRIBUTED TO THE PUBLIC WITHOUT PERMISSION FROM THE OHIO STATE HISTORIC PRESERVATION OFFICER AND THE DEPARTMENT OF THE ARMY.

Cover: LT Jacob Parrott USARC Reserve Center

National Historic Preservation Act of 1966, as Amended
Section 110

"In accordance with subsection 101(F) of the National Historic Preservation Act, the Secretary of the Interior in consultation with the Advisory Council on Historic Preservation, has developed the following guidelines for carrying out Federal agency responsibilities under Section 110 of the Act...Federal Agencies should follow these guidelines in establishing, monitoring, reviewing, and evaluating their programs for compliance with Section 110 of the Act. State Historic Preservation Officers should refer to these guidelines when providing assistance to Federal agencies under Sections 101(b)(3)(E) and (F) of the Act. The advisory Council on Historic Preservation [Council] will use these guidelines, as applicable, and recommend their use to Federal agencies, State Historic Preservation Officers, and others in agreements executed pursuant to Section 106 of the Act and 36 CFR Part 800. The Council will also use these guidelines in its review of Federal agency programs under Section 202(a)(6) of the Act...*Section 110(a)(1)*: "The heads of all Federal agencies shall assume responsibility for the preservation of historic properties which are owned or controlled by such agency. Prior to acquiring, constructing, or leasing buildings for purposes of carrying out agency responsibilities, each Federal agency shall use, to the maximum of the extent feasible, historic properties available to the agency. Each agency shall undertake, consistent with the preservation of such properties and the mission of the agency and the professional standards pursuant to Section 101(f) any preservation, as may be necessary to carry out this section" *Section 110(a)(2)*: "With the advice of the Secretary and in cooperation with the State Historic Preservation Officer for the State involved, each Federal agency shall establish a program to located, inventory, and nominate to the Secretary all properties under the agency's ownership or controlled by the agency, that appear to qualify for inclusion on the National Register in accordance with the regulations promulgated under Section 110(a)(2)(A). Each Federal agency shall exercise caution to assure that any such property that might qualify for inclusion is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. Section 110(b): "Each Federal agency shall initiate measures to assure that where, as a result of Federal action or assistance carried out by such agency, a historic property is to be substantially altered or demolished, timely steps are taken to make or have made appropriate records, and that such records then be deposited, in accordance with Section 101(a), in the Library of Congress or with such other appropriate agency as may be designated by the Secretary, for future use and reference" *Section 100(c)*: "The head of each Federal Agency shall, unless exempted under Section 214, designate a qualified official to be known as the agency's "preservation officer who shall be responsible for coordinating that agency's activities under the Act. Each Preservation Officer may, in order to be considered qualified, satisfactorily complete and appropriate training program established by the Secretary under Section 110(g)." *Section 100(d)*: "Consistent with the agency's mission and mandates, all Federal agencies shall carry out agency programs and projects (including those under which any Federal assistance is provided for any federal license, permit, or other approval is required) in accordance with the purposes of this Act and, give consideration to programs and projects which will further the purposes of this Act." *Section 110(e)*: "The Secretary shall review and approve the plans for transferees of surplus federally owned historic properties not later than ninety days after his receipt of such plans to ensure that the prehistorical, historical, architectural, or culturally significant values will be preserved or enhanced. *Section 110(f)*: "Prior to the approval of any Federal undertaking which may directly and adversely affected any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark, and shall afford the Advisory council on Historic Preservation a reasonable opportunity to comment on the undertaking" *Section 110(g)*: "Each Federal agency may include the costs of preservation activities of such agency under this Act as eligible project costs in all undertakings such agency or assisted by such agency. The eligible project costs may also include amounts paid by a federal agency to any state to be used in carrying out, such preservation responsibilities of the federal agency under this Act, and reasonable costs may be charged to Federal licensees and permits as a condition to the issuance of such license or permit." *Section 110(h)*: "The Secretary shall establish an annual preservation awards program under which he may make monetary awards in amounts not to exceed $1,000 and provide citations for special achievements to officers and employees of Federal, State, and certified local governments in recognition of their outstanding contributions to the preservation of historic resources. Such programs may include the issuance of annual awards by the President of the United States to any citizen of the United States recommended for such award by the Secretary;" *Section 110(i)*: "Nothing in this Act shall be construed to require the preparation of an environmental impact statement where such a statement would not otherwise be required under the National Environmental Policy Act 1969, and nothing in this Act shall be construed to provide exemption from any requirement respecting the preparation of such a statement under such Acts." *Section 110(j)*: "The secretary shall promulgate regulations under which the requirements of this section may be waived in whole or in part in the event of a major natural disaster or an imminent threat to national security."

Table of Contents

Introduction

In 1996, the Fort McCoy Archaeology Laboratory contracted with the 88th RSC to conduct a historic properties inventory under the provisions of Section 110 of the NHPA. The inventory included all USARC facilities owned or leased by the 88th RSC in the state of Ohio. This report describes the recordation, evaluation methods, and results of the inventory. Additionally, this report documents the sources and informants used to evaluate the actions to nominate properties to the NHRP. Recommendations for NRHP reevaluation are also included.

Preliminary investigations included meetings with officials of the Ohio State Historic Preservation Office (SHPO) and documentary research conducted at the Ohio State Historical Society, regional county courthouses, and local libraries. Oral interviews were conducted with USARC personnel at each facility. The Ohio Archaeological Sites Index, maintained by the Ohio SHPO, was consulted to determine the location of any known archaeological sites located within a one-mile radius of each USARC facility. Fieldwork for the project was conducted during August-November 1997. All Ohio listings in the NRHP were reviewed prior to commencement of fieldwork for the inventory. Those properties on all USARC facilities that met the criteria for NRHP eligibility were examined and recorded to assess their potential for possible nomination to the NRHP.

Statement of Purpose

The Fort McCoy Archaeology Laboratory Section 110 inventory of the USARC facilities within the state of Ohio was conducted consistent with the *Secretary of the Interior's Standards and Guidelines for Identification and Evaluation* (*Standards*).

The primary goal of the NHPA, according to the *Standards*, is to "preserve prehistoric and historic resources throughout the nation for the inspiration and benefit of present and future generations." In fulfillment of this goal, governmental agencies, within the framework of their missions, are charged with administering federally owned, administered, or controlled prehistoric and historic resources in a spirit of stewardship, and caring for significant prehistoric and historic properties in ways that ensure long-them protection and integrity of those properties.

The *Standards* require agencies to identify, evaluate, and document their historic properties, and nominate them to the NRHP. According to the *Standards*, "identification, evaluation, and documentation of historic properties are critical in the long-term management of historic properties, as well as in program and project specific planning by a federal agency. The *Standards* also require that "the agency manages and maintains its historical properties in ways that preserve the properties historic, archaeological, architectural, or cultural values," and that "the agency considers historic properties in addition to its own when planning activities that may affect them." Agencies are also required under the *Standards* to develop "a process that identifies and evaluates historic properties in a timely fashion," and "a process that develops and implements agreements regarding the means by which adverse affects on historic properties will be considered." The documentation of historic properties, before they are substantially altered or demolished, and the placement of the documentation in an appropriate repository for future use and research, is also required.

In complying with the requirements of Section 110(a)(2) of the NHPA and the *Standards*, researchers from the Fort McCoy Archaeology Laboratory conferred with the Ohio SHPO regarding previous archaeological

or historical architectural investigations of U.S. Army Reserve Command properties within the State of Ohio. No information on previous archaeological or architectural documentation was found for the USARC facilities in Ohio. Discrepancies between existing documentary files about USAR buildings and structure and on-site recordation conducted by members of the Fort McCoy Archaeology Laboratory are recorded in detail within the individual facility sections of this report. All known archaeological sites within one-mile of the USARC facilities were also identified and documented. Historic themes established by the Ohio SHPO were followed in preparation of the historic context, and in identifying historic properties.

All fieldwork was conducted by Fort McCoy Archaeology Laboratory personnel who meet the *Secretary of Interior's Professional Qualification Standards* at 36 CFR61. The field recordation methods employed in the inventory follow accepted practices within the field of historic research and historic preservation. These included, but were not limited to, on-site evaluation and documentation of historic buildings and properties, review of all pertinent historical documentation of historic buildings and properties, review of all pertinent historical documentation, and interviews with facilities managers regarding the properties. Assessments of potential eligibility for the NRHP were made based upon the field research, on-site documentation and post inventory evaluation.

Factors That May Precipitate a Change in Status

The recommendations contained within this report are based upon the current legal ownership and physical conditions. Changes in the status of these properties may require a reevaluation of the property, or require additional investigations in compliance with Section 106 of the NHPA. Examples of changes that could necessitate a reevaluation of properties include, but are not limited to, demolition, demolition by neglect, construction, rehabilitation, or disposition.

Methodology

Members of the Fort McCoy Archaeology Laboratory conducted a formal literature and record search of each facility. The objective of this search was to establish the historical and archaeological context associated with each USARC. Searches conducted at local historical societies and municipal governments provided additional documentary and cartographic information relevant to the historic context of individual USARC facilities. Research was also conducted at the Ohio SHPO offices to obtain information relative to the location of all recorded archaeological sites within a one mile radius of each USARC facility. All existing archaeological sites were documented and evaluated in terms of their significance to USARC locations. A surface reconnaissance survey was conducted on the land associated with each USARC facility.

Architectural Study Methods

The architectural survey undertaken by members of the Fort McCoy Archaeology Laboratory was conducted using guidelines published by the Historic American Building Survey (HABS) and the Ohio SHPO. Data represented in this report was collected with methods that includes:

1) a literature review of the historic documents relating to the construction and maintenance of each building on the USARC facilities;

2) an architectural evaluation of the potential eligibility of each building on the USARC facilities;

3) a surface reconnaissance of land associated with each USARC facility.

The historic themes used to evaluate the historic contexts associated with the properties analyzed in this inventory were taken directly from the guidelines identified by the Ohio SHPO. The results of the historical, architectural, and surface surveys conducted by members of the Fort McCoy Archaeological Laboratory are described in the following sections of this report.

Historical Literature Review

The methodology for the Ohio Section 110 Inventory was designed to establish a historic context for each USARC facility to assess the potential eligibility of USARC buildings for nomination to the NRHP. In preparation for the documentation of each USARC facility, historic research was conducted by members of the Fort McCoy Archaeology Laboratory and included:

1) examination of real property records maintained by the 88th RSC;

2) examination of real property records located at each USARC facility (when available);

3) an interview with the facility manager at each USARC facility;

4) NRHP eligibility nominations filed with the Ohio SHPO (when applicable);

5) examination of the Archaeological Sites Index maintained by the Ohio SHPO;

6) examination of the historic documents housed at the Ohio State Historical Society, regional county courthouses, and local libraries;

7) examination of previous cultural resource, archaeological, architectural, and environmental surveys available about each USARC facility (when available).

Architectural Fieldwork

Historic research of buildings at each USARC facility was conducted to establish an initial database of the architectural styles that would be encountered during on-site documentation. On-site fieldwork consisted of producing in-depth textual descriptions that included:

1). Architect/Builder
2). Type of building
3). Date of construction
4). Date of acquisition
5). Architectural style

6). Foundation material
7). Number of bays
8). Plan shape
9). Wall construction
10). Roof type
11). Roof materials
12). Chimney construction
13). Chimney placement
14). Type and location of entrances
15). Type and location of fenestration
16). Relationship of all buildings on the facility
17). Integrity of each building
18). Potential threat to the buildings
19). Future research potential at the facility
20). Assessment of the potential eligibility of each building to the NRHP under Criteria A, B, C, and D

Photo documentation captured the exterior of each building at the Ohio USARC facilities, including unique architectural elements. Photos were recorded in 35 mm black and white and Kodak DC 50 digital format. Data collected during on-site documentation and assessments was compiled into the Ohio Section 110 report and entered into USARC databases maintained by the Fort McCoy Archaeology Laboratory.

The Ohio Section 110 Inventory Report

An on-site assessment of the historic, architectural, and archaeological significance was accomplished to determine if buildings and/or districts on each USARC facility were potentially eligible for nomination under Criteria A, B, C, and D to the NRHP. The Ohio Section 110 Inventory is intended to provide the Commander, 88th RSC, with a comprehensive overview of all USARC properties in Ohio. Specifically, this report provides architectural, historic, archaeological, and security information to aid in the management of the physical resources located on USARC facilities owned or leased by the 88th RSC. Data contained in the individual sections of this report were recorded and presented in accordance with standards established by HABS and *the Secretary of the Interior's Guidelines for Section 110 of the NHPA.*[1]

Information included in discussions of individual USARC facilities may be repeated in the introduction and discussion sections. Information contained in the individual USARC facility sections include:

1). Facility Identification Number
2). Facility Name
3). Facility Address
4). USGS 7.5 Minute Series Quadrangle Map
5). UTM coordinates
6). Present Ownership/Occupant
7). Setting & Landscape
8). Archaeological Resources
9). Historical Information
10). Architectural Information
11). Security

12). Building Descriptions
13). Eligibility
14). Recommendations
15). Sources
16). Notes

National Register Criteria of Evaluation

Each building on the USARC facilities was assessed for its potential eligibility to the NRHP as defined in 36 CFR Part 60. The criteria used to evaluate the eligibility of properties for potential nomination to the NRHP assesses the significance of each facility in terms of its contribution to American history, historic persons, architecture, engineering, and archaeological research. The NRHP criteria and criteria considerations include:

Criteria:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded, or may be likely to yield, information important in prehistory or history.[2]

Criteria Considerations:

A. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or

B. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with the historic person or event; or

C. A birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or buildings directly associated with his productive life; or

D. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive

design features, or from association with historic events; or

E. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

F. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance;

G. A property achieving significance within the past 50 years if it is of exceptional importance.[3]

Historic Background

The European-American history of Ohio spans the past 330 years. During this time the physical character of the state changed from that of a sparsely settled, densely forested land, to a heavily populated state of large urban centers interspersed with small communities and farms. The Ohio Historic Preservation Office's research themes for Cultural Resources Management will be followed in this report.

History of Ohio

A French explorer, Nicolas Sanson d'Abbeville, mapped Lake Erie as early as 1650[4]. Rene Robert Cavelier Sieur de La Salle is thought to have discovered the Ohio River in 1669. Aside from the major waterways, the area that was to become Ohio was bypassed during the initial wave of French exploration to avoid conflict with the Iroquois Confederacy.[5] The French recognized the economic importance of the region, but were unable to establish effective control over such a vast area.

Beginning in the late 1600s and early 1700s, British explorers and trappers began to enter Ohio from Pennsylvania and Virginia. Both British and French crowns claimed the area; the French by right of discovery and the British by reliance on the traditional venue of royal charters. Competing French and British interests continued until 1752 when open warfare began in 1752. French-Canadians and Indians attacked and destroyed a Miami village with allegiance to Britain near the town of Pickawillany.[6] Although the French tried to maintain a viable national presence in Ohio, the final outcome of the French and Indian War[7] sealed the fate of the region when France abandoned the territory with the Treaty of 1763.

The period of official British control over the area was brief. Following the Treaty of 1763, the British Crown attempted to control trade with various Indian and French groups. The British soon found, however, that they also had a problem with increasing American encroachment into the region, resulting in conflict with the resident Native American tribes. In 1763, the British Crown issued a decree that forbade Americans from settling beyond the Appalachians and like most British decrees, was largely ignored by the American frontiersmen. At the start of the American Revolution, British control of Ohio was tenuous at best. Although large delegations of Native Americans signed a neutrality treaty at Fort Pitt in September 1775, by 1777, cross-border raids had resulted in open conflict between the tribes and American settlers, with the Native Americans increasingly aligned with the British[8]. Ohio was the scene of several skirmishes during the war,

	Columbus, Ohio Whitehall Memorial USARC
Identification Information:	Identification Number: OH014/39860 Whitehall Memorial USARC 721 Country Club Rd., Columbus, Franklin County, Ohio 43213-2485 Telephone Number: (614) 692-5451 Reynoldsburg Quadrangle, Ohio, USGS 7.5 Minute Series, T12N R17W, Section 9 (Figure 228) UTM: Z17, 340665E, 4424895N Present Owner/Occupant: The facility is owned by the United States Government and controlled by the 88th RSC.
Setting and Landscape:	The Whitehall Memorial USARC consists of three buildings located on five acres of land (CL001) in a residential district in Columbus, Ohio (Figure 229). The facility is landscaped with grass, trees, and shrubs.
Archaeological Resources:	An archaeological records search at the Ohio State Historic Preservation Office determined that there are no known archaeological sites located within a one-mile radius of the Whitehall Memorial USARC.
Historical Information:	The Whitehall Memorial USARC was constructed in 1960.[1] There appear to have been no significant additions or alterations to the buildings since their original construction.
Security:	Security measures at the Whitehall Memorial USARC include chain-link fencing topped with barbed wire surrounding a military vehicle parking area, the east and south walls of the Organizational Maintenance Shop, and the west wall of the Reserve Center's drill hall. High intensity lighting is also present to illuminate military and civilian vehicle parking areas.
Architectural Information:	The Whitehall Memorial USARC consists of three concrete block buildings with red brick veneers. The buildings do not appear to exhibit significant

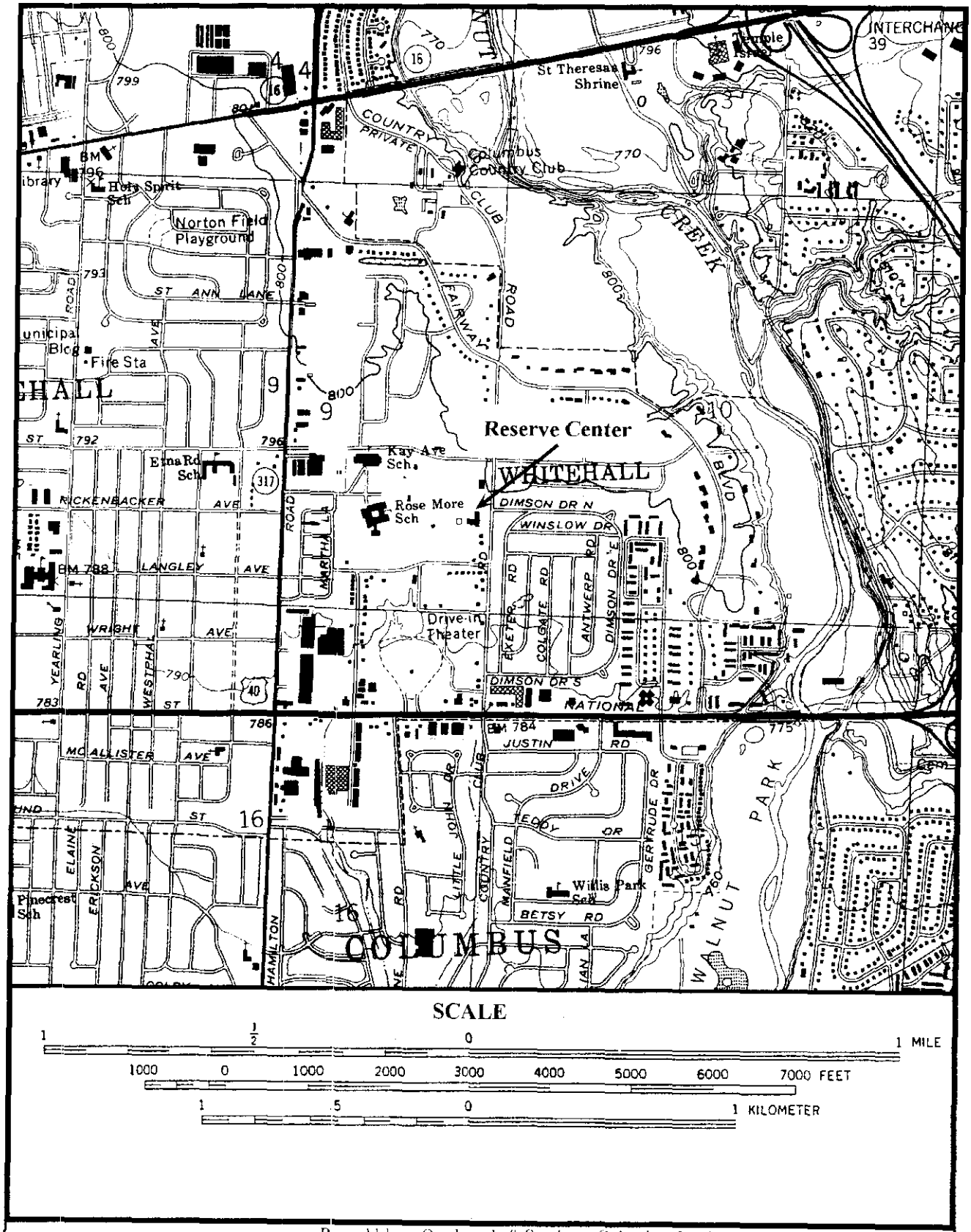
	historical or architectural character or merit that contributes to the historic context of the period associated with their construction.
Building Descriptions:	**Reserve Center** (CL002) The Reserve Center functions as an administrative office and drill hall for the Whitehall Memorial USARC. Constructed in1960, is a T-shaped, multiple-level building comprised of two-story rectangular building sections connected by a one-story enclosed corridor. It rests upon a poured concrete foundation with concrete block walls and a red brick veneer. A projecting entrance consisting of two pairs of glass pedestrian doors surrounded by multiple single light fixed transom and sidelights is located on the east side of the building (Figure 230). A second projecting entrance consisting of a metal pedestrian door and concrete porch covered by a metal awning is located on the southwest corner of the building (Figure 231). Pairs of metal pedestrian doors are located on the north, south, and west walls, and a metal overhead retractable bay door is located on the west wall of the drill hall. A series of one-over-one light double-hung windows with plain slip metal sills, and one-over-one light double-hung ribbon windows with continuous plain slip metal sills are located around the perimeter of the building (Figure 232). A flat roof covers the structure (Figure 233 & 234). **Organizational Maintenance Shop** (CL003) The Organizational Maintenance Shop functions as a vehicle maintenance facility for the Whitehall Memorial USARC. Constructed in 1960, the OMS is a one-story rectangular building that rests upon a poured concrete foundation with concrete block walls with red brick veneer. Entrances include three metal overhead retractable bay doors are located along the east wall of the building, and metal pedestrian doors located on the north and south walls (Figures 235 & 236). A series of one-over-one light double-hung awning ribbon windows with continuous plain slip sills are located along the west wall near the roof eaves (Figure 237). A flat roof covers the structure (Figure 238). **Utility Building** (OH014/39860)[2] The Utility Building functions as a storage facility for equipment serving the electrical and water systems at the Whitehall Memorial USARC. Constructed in 1960, it is a half-story rectangular building with a concrete foundation with brick walls. A metal pedestrian door is located on the east wall of the building (Figure 239). Fenestrations on the structure consist of

	metal vents located on the south and north walls (Figure 240). A low-pitch shed roof covers the building. The roof shows signs of deterioration along the west eaves (Figure 241 & 242).
Eligibility:	None of the buildings located at the Whitehall Memorial USARC meet the criteria for the National Register of Historic Places (NRHP), under Criterion A, B, C, or D, and thus are not recommended for nomination to the NRHP. A documentary and architectural investigation conducted at the facility determined there is no direct relationship between the facility and pre-historic or historic events in the Columbus area (criterion A), there is no association with significant persons involved in prehistoric or historic events (criterion B), buildings on the facility are not architecturally or technologically significant (criterion C), and the facility is unlikely to hold future research potential (criterion D).
Recommendations:	No additional review under Section 110 is recommended until the existing buildings at the Whitehall Memorial USARC reach the 50 year eligibility requirement for the NRHP in 2010, or unless specific undertakings require compliance with Section 106 of the National Historic Preservation Act (36 CFR 800).
Sources:	"Environmental Audit of Whitehall Memorial U.S. Army Reserve Center." Lexington, Kentucky: Howard K. Bell, Consulting Engineers, Inc. 1991. "Peters, Norris F. "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)." 14 April 1989. "Real Property Detail Report Criteria: Total Inventory," 88th RSC DSCEN Real Estate Division, March 1998. "Reynoldsburg Quadrangle." USGS 7.5 Minute Series Map. Denver, Colorado: United States Geological Survey. 1964, revised 1994. "Southeast Columbus Quadrangle." USGS 7.5 Minute Series Map. Denver, Colorado: United States Geological Survey. 1964, revised 1994. Warren, Benjamin H. "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)." 15 March 1985.

Notes:

[1] Norris F. Peters, "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)," 14 April 1989, p. 1 and Benjamin H. Warren "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)," 15 March 1985, p. 1. Copies of these reports are on file at the 88th RSC DSCEN Real Estate Division office, Fort Snelling, Minnesota.

[2] "Real Property Detail Report Criteria: Total Inventory," 88th RSC DSCEN Real Estate Division, March 1998, p. 22-23. According to records maintained by real property specialists, the Utility Building at the Whitehall Memorial USARC has not been assigned a building number within the facility. A copy of this report is on file at the 88th RSC DSCEN Real Estate Division office, Fort Snelling, Minnesota.



Reynoldsburg Quadrangle & Southeast Columbus Quadrangle USGS 7.5 Minute Series

Figure 228. Location of the Whitehall Memorial USARC.

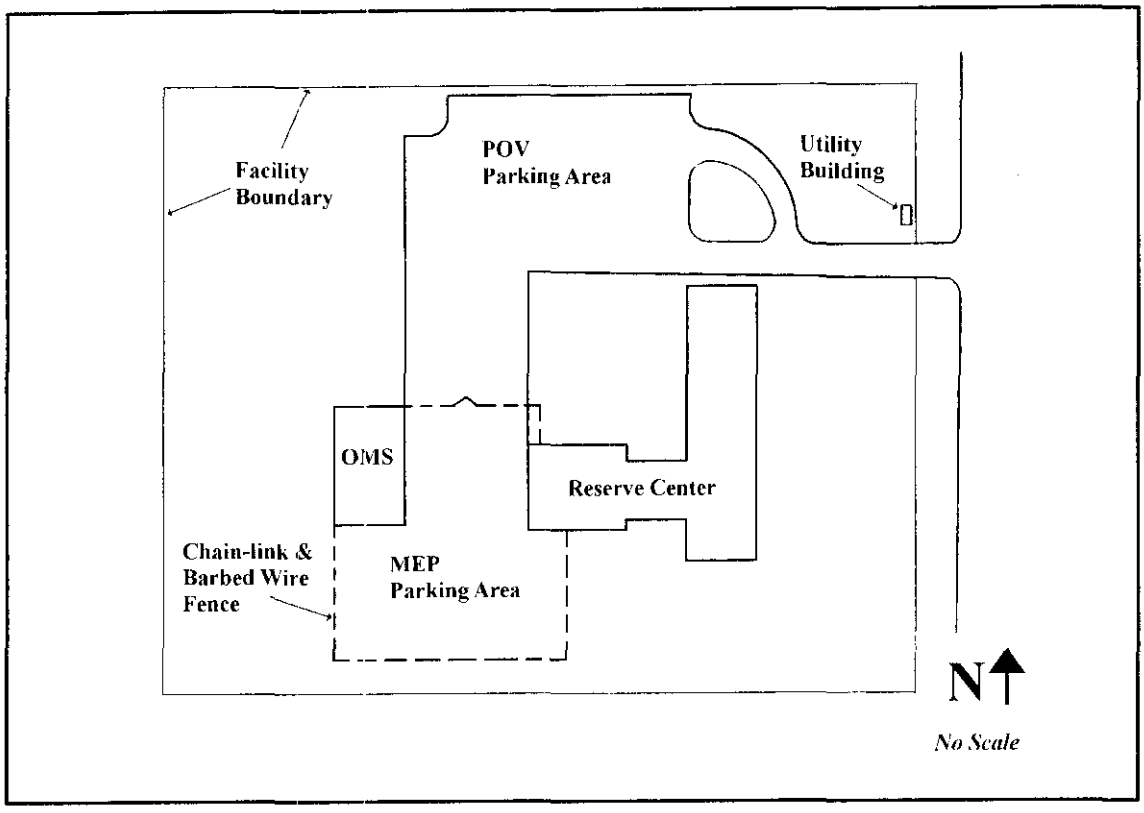


Figure 229. Map of the Whitehall Memorial USARC (map modified from "Environmental Audit Whitehall Memorial U.S. Army Reserve Center," Howard K. Bell, Consulting Engineers, Inc., Attachment No. 1).

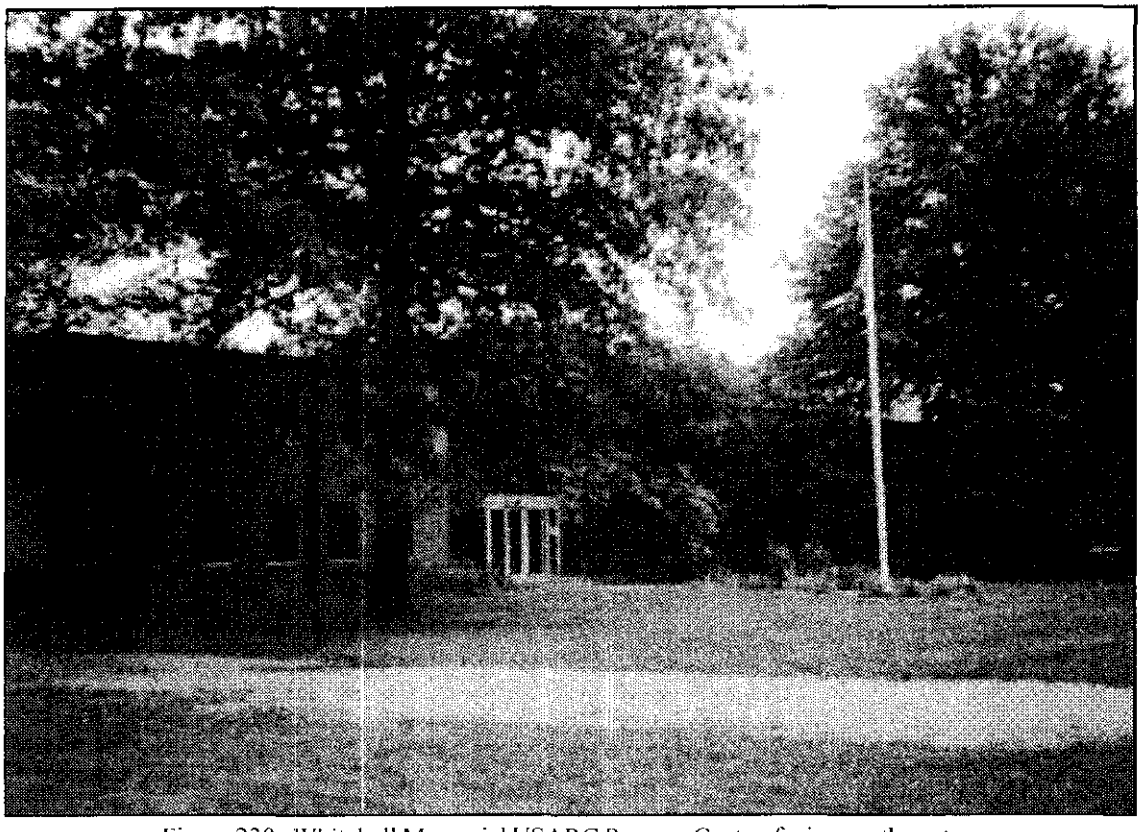


Figure 230. Whitehall Memorial USARC Reserve Center, facing northwest.

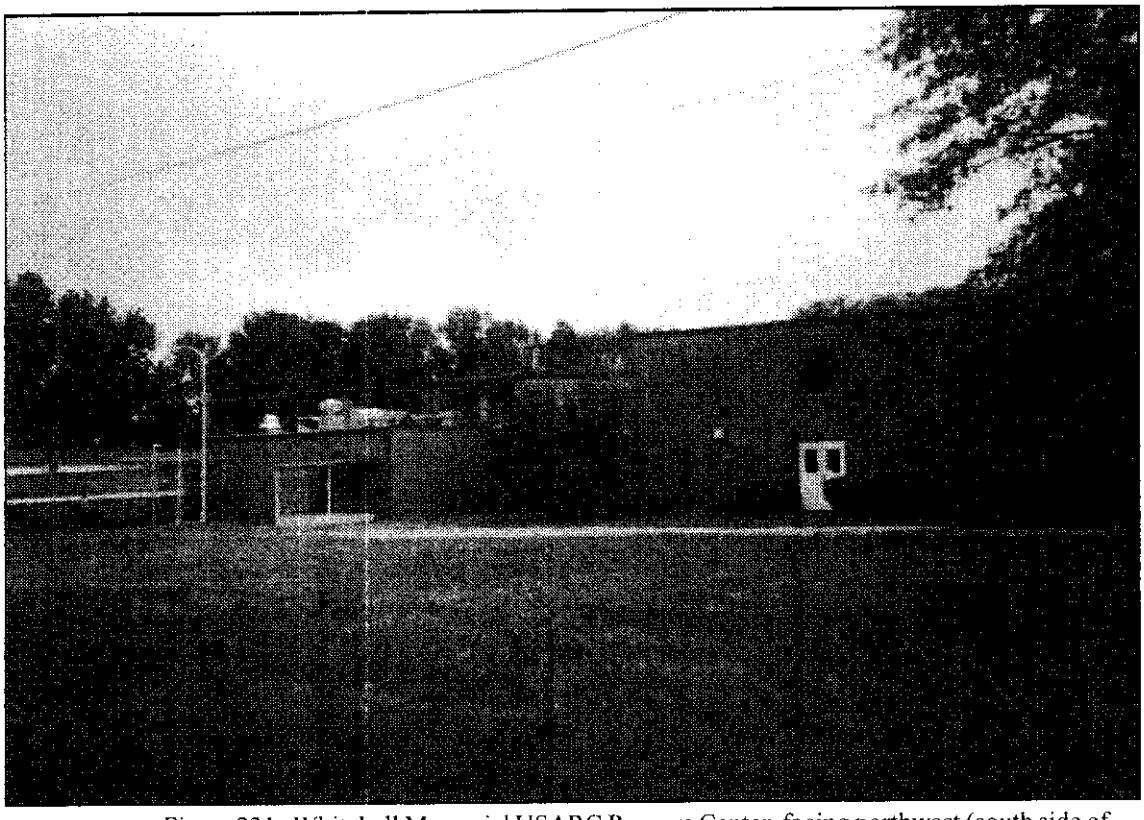


Figure 231. Whitehall Memorial USARC Reserve Center, facing northwest (south side of building).

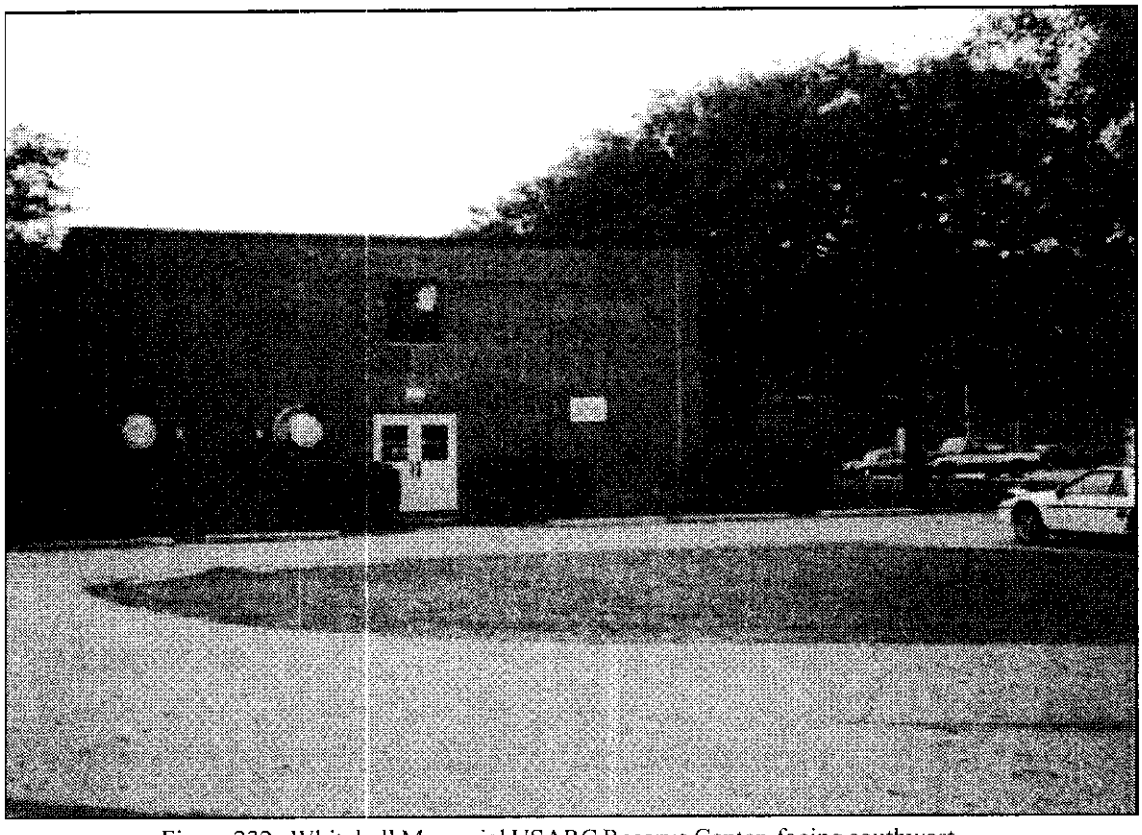


Figure 232. Whitehall Memorial USARC Reserve Center, facing southwest.

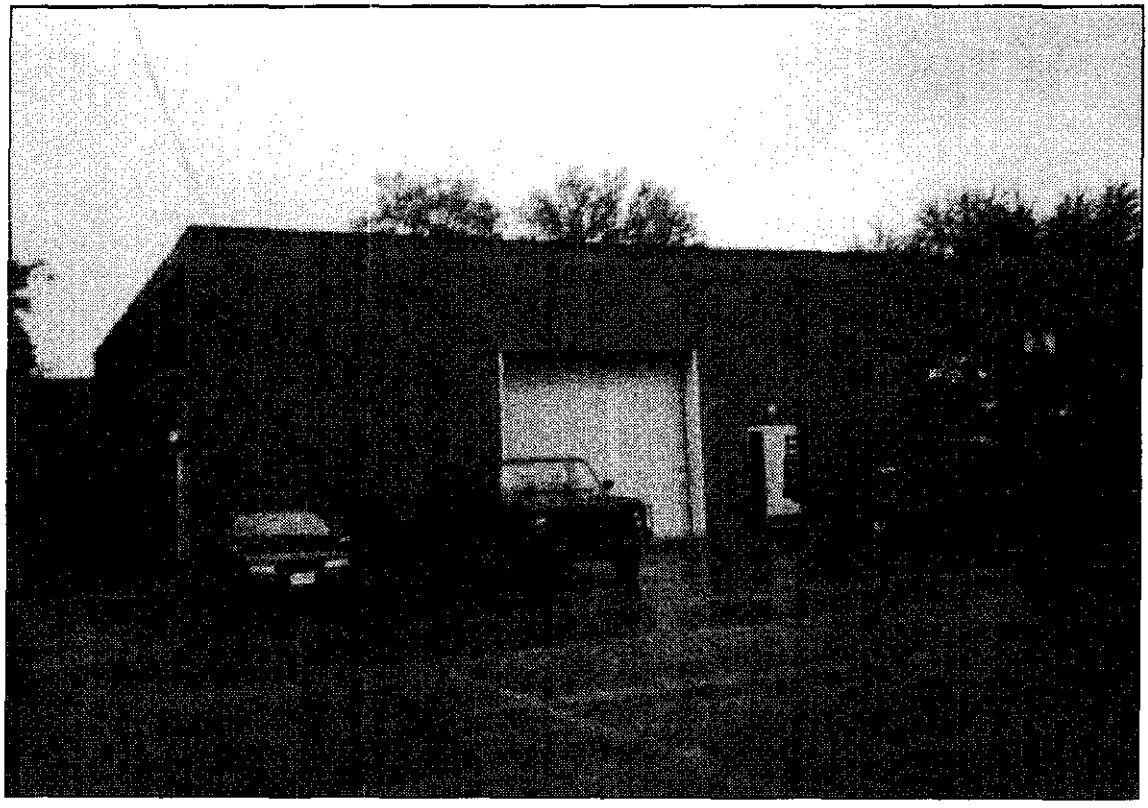


Figure 233. Whitehall Memorial USARC Reserve Center, facing east (drill hall).

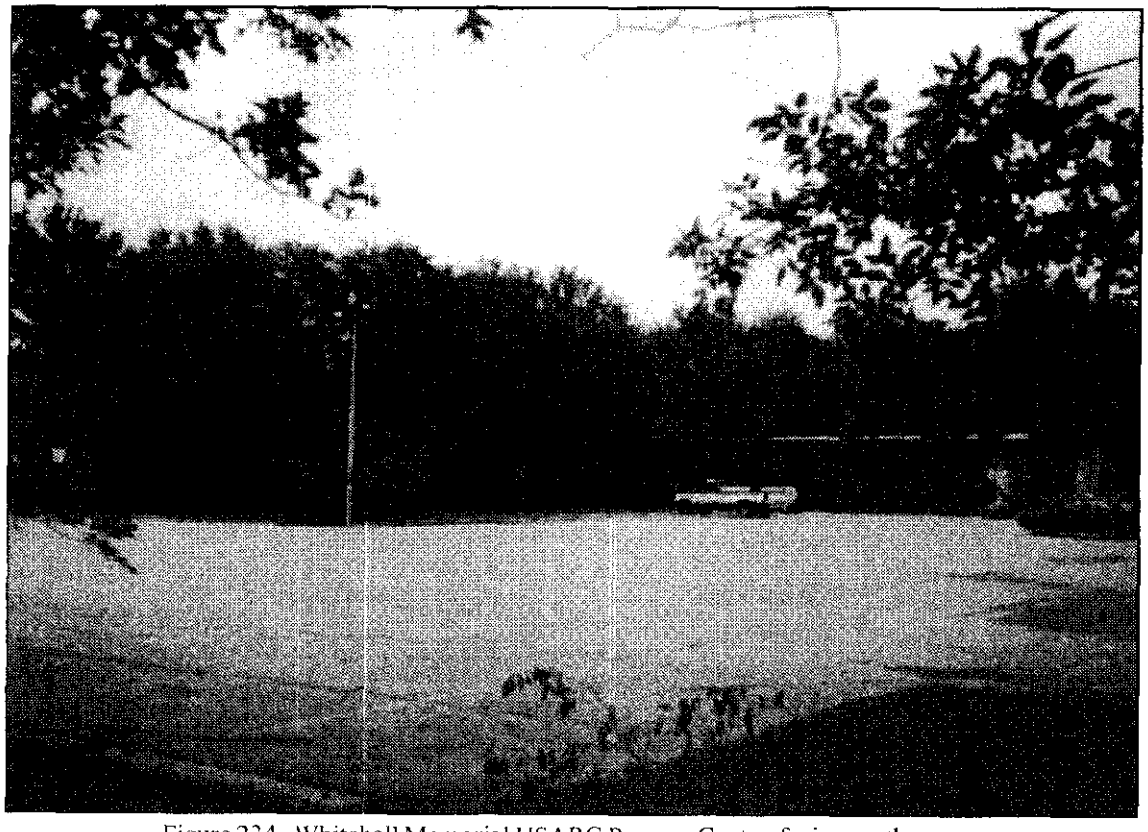


Figure 234. Whitehall Memorial USARC Reserve Center, facing southeast.

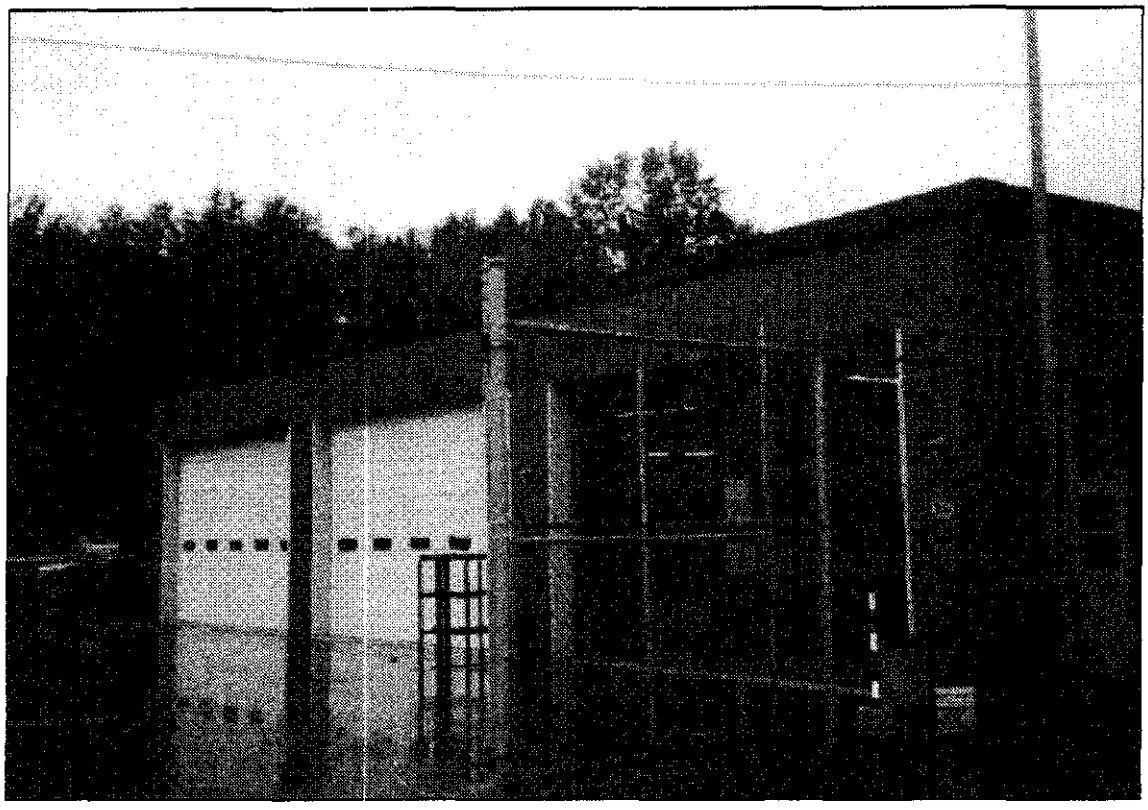


Figure 235. Whitehall Memorial USARC Organizational Maintenance Shop, facing southwest.

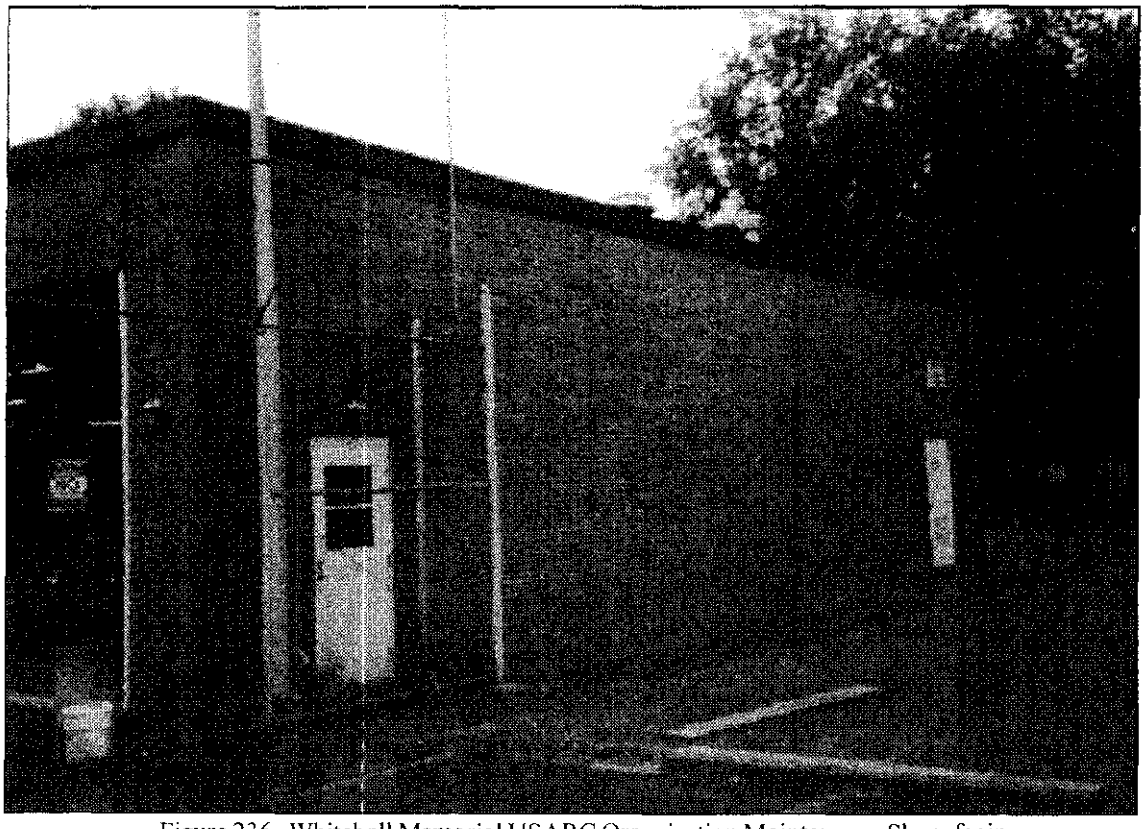


Figure 236. Whitehall Memorial USARC Organization Maintenance Shop, facing southwest.

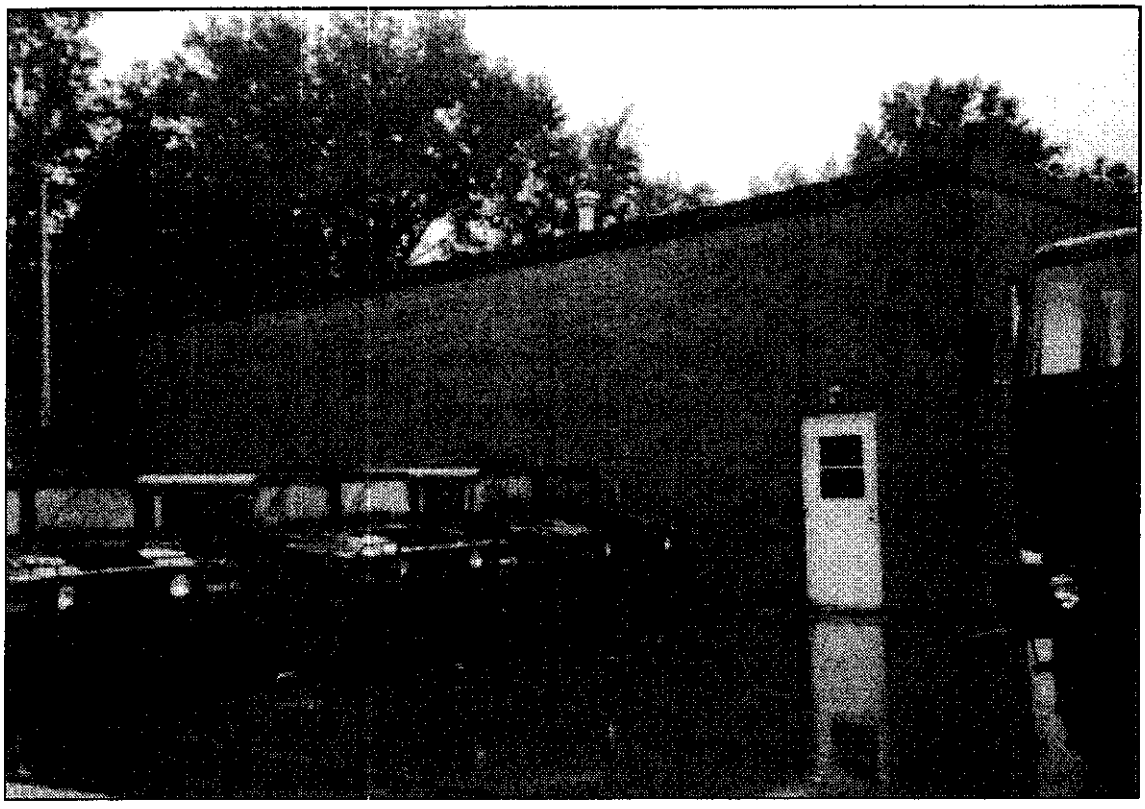


Figure 237. Whitehall Memorial USARC Organizational Maintenance Shop, facing northwest.

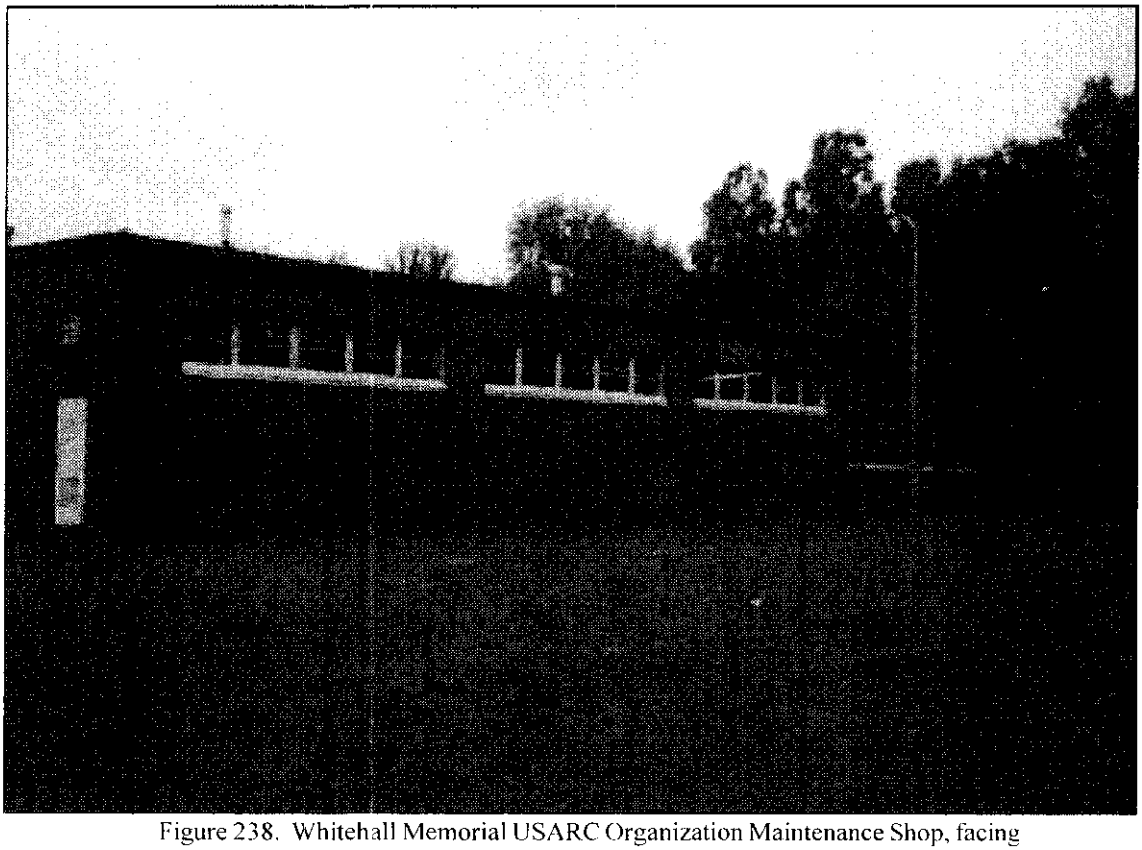


Figure 238. Whitehall Memorial USARC Organization Maintenance Shop, facing southeast.

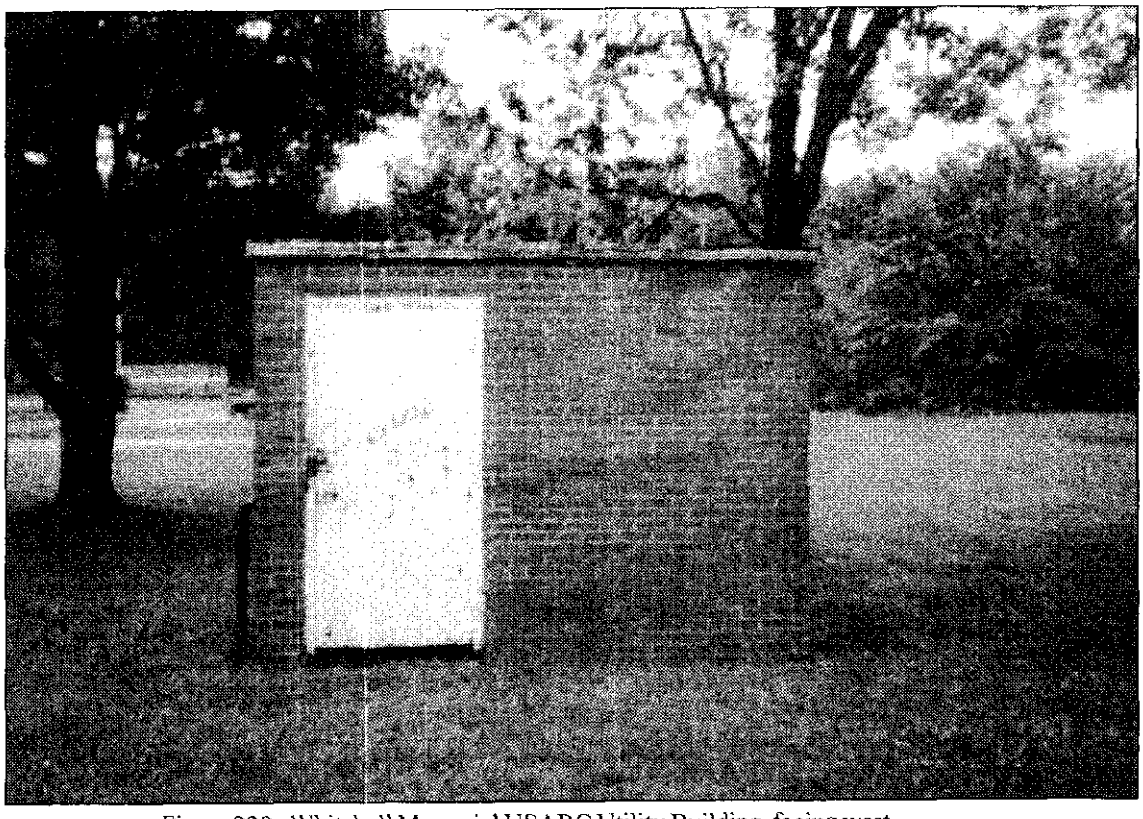


Figure 239. Whitehall Memorial USARC Utility Building, facing west.

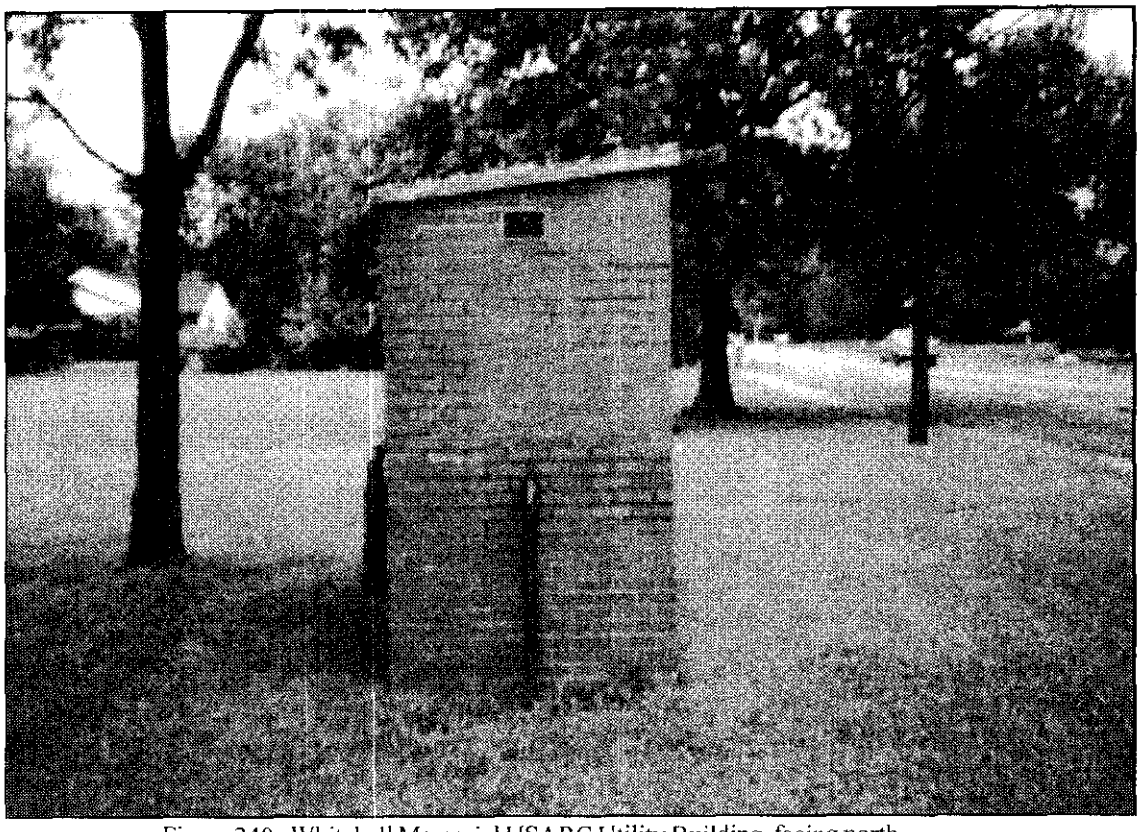


Figure 240. Whitehall Memorial USARC Utility Building, facing north.

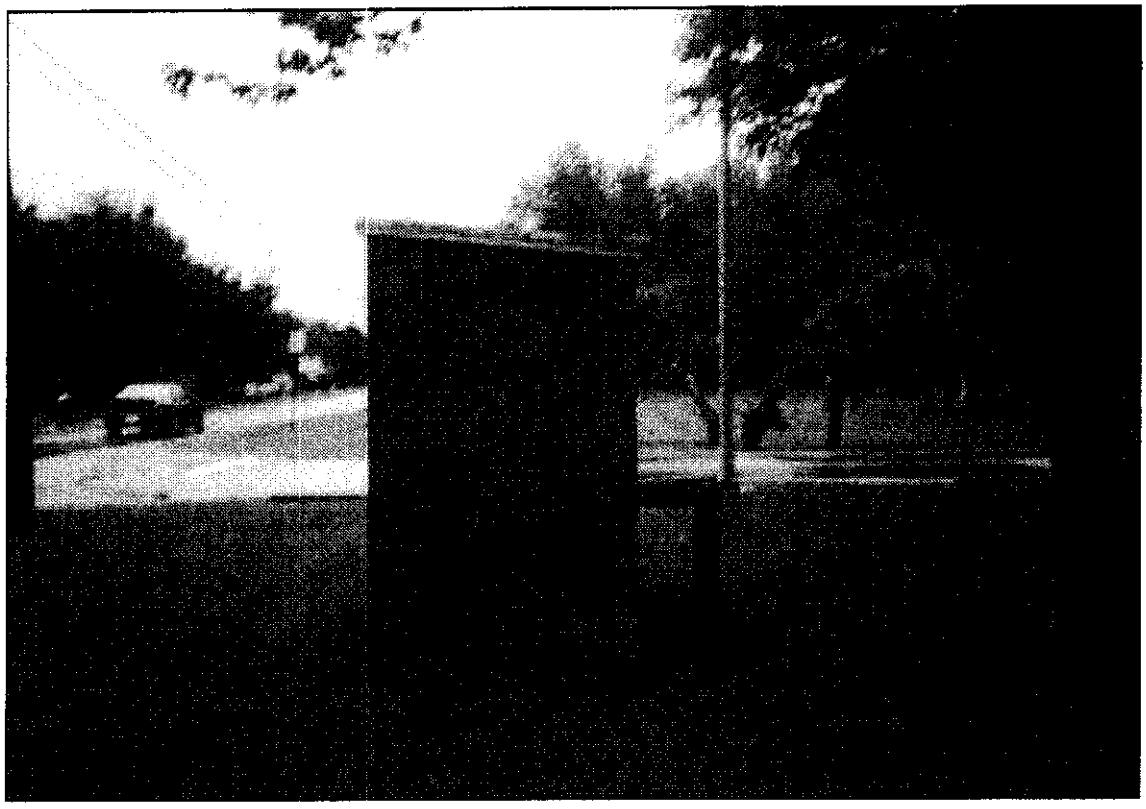


Figure 241. Whitehall Memorial USARC Utility Building, facing south.

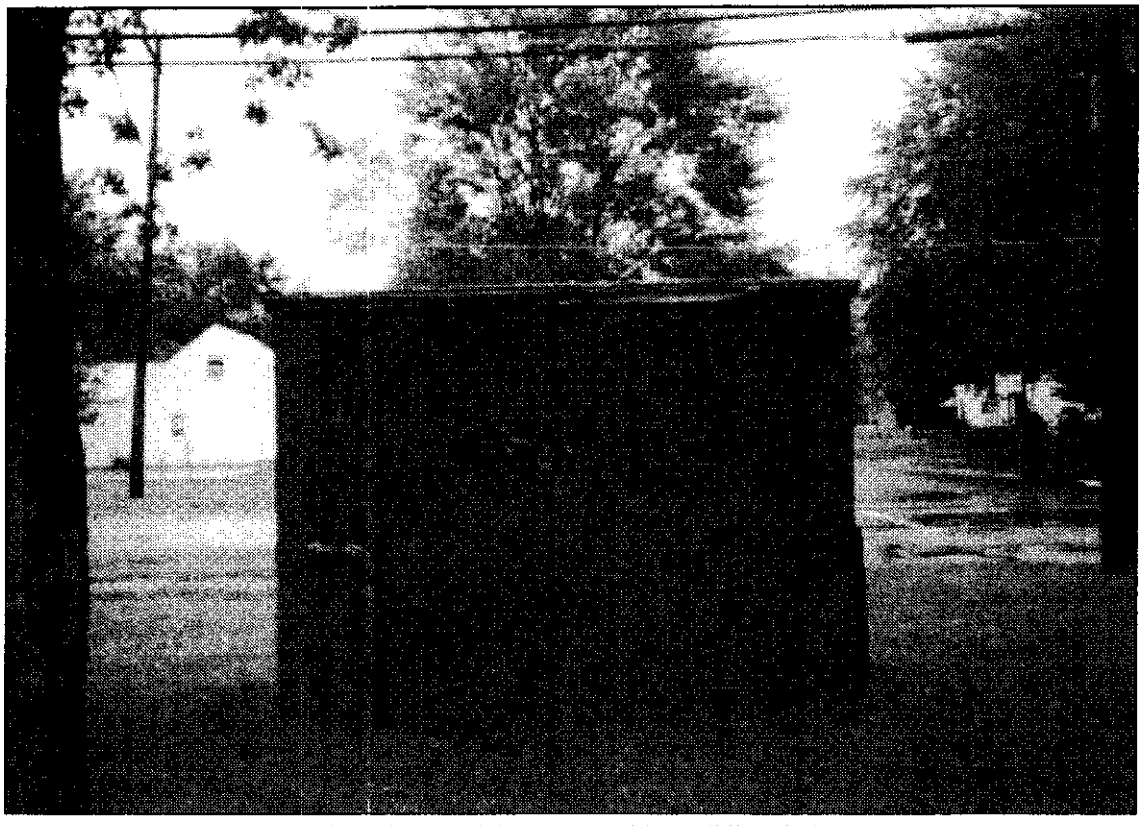
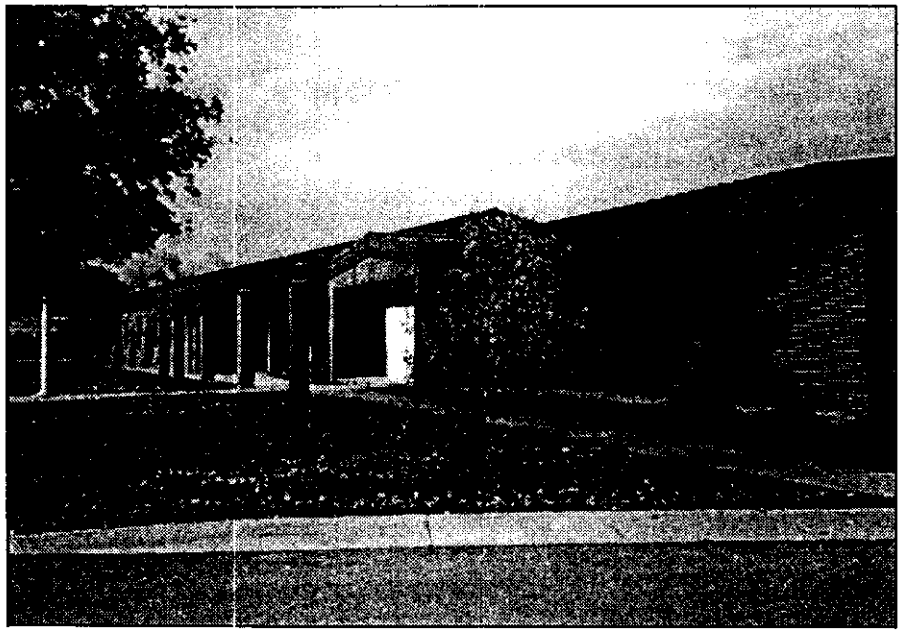


Figure 242. Whitehall Memorial USARC Utility Building, facing east.

FORT McCOY
CULTURAL RESOURCES
MANAGEMENT SERIES

Reports of Investigation No. 16
Ohio Section 110 Inventory Volume II
December 1999



Fort McCoy Archaeology Laboratory
Directorate of Training and Mobilization
Fort McCoy, WI 54656-5162

National Historic Preservation Act of 1966, as Amended
Section 110

"In accordance with subsection 101(F) of the National Historic Preservation Act, the Secretary of the Interior in consultation with the Advisory Council on Historic Preservation, has developed the following guidelines for carrying out Federal agency responsibilities under Section 110 of the Act...Federal Agencies should follow these guidelines in establishing, monitoring, reviewing, and evaluating their programs for compliance with Section 110 of the Act. State Historic Preservation Officers should refer to these guidelines when providing assistance to Federal agencies under Sections 101(b)(3)(E) and (F) of the Act. The advisory Council on Historic Preservation [Council] will use these guidelines, as applicable, and recommend their use to Federal agencies, State Historic Preservation Officers, and others in agreements executed pursuant to Section 106 of the Act and 36 CFR Part 800. The Council will also use these guidelines in its review of Federal agency programs under Section 202(a)(6) of the Act...*Section 110(a)(1)*: "The heads of all Federal agencies shall assume responsibility for the preservation of historic properties which are owned or controlled by such agency. Prior to acquiring, constructing, or leasing buildings for purposes of carrying out agency responsibilities, each Federal agency shall use, to the maximum of the extent feasible, historic properties available to the agency. Each agency shall undertake, consistent with the preservation of such properties and the mission of the agency and the professional standards pursuant to Section 101(f) any preservation, as may be necessary to carry out this section" *Section 110(a)(2)*: "With the advice of the Secretary and in cooperation with the State Historic Preservation Officer for the State involved, each Federal agency shall establish a program to located, inventory, and nominate to the Secretary all properties under the agency's ownership or controlled by the agency, that appear to qualify for inclusion on the National Register in accordance with the regulations promulgated under Section 110(a)(2)(A). Each Federal agency shall exercise caution to assure that any such property that might qualify for inclusion is not inadvertently transferred, sold, demolished, substantially altered, or allowed to deteriorate significantly. Section 110(b): "Each Federal agency shall initiate measures to assure that where, as a result of Federal action or assistance carried out by such agency, a historic property is to be substantially altered or demolished, timely steps are taken to make or have made appropriate records, and that such records then be deposited, in accordance with Section 101(a), in the Library of Congress or with such other appropriate agency as may be designated by the Secretary, for future use and reference" *Section 100(c)*: "The head of each Federal Agency shall, unless exempted under Section 214, designate a qualified official to be known as the agency's "preservation officer who shall be responsible for coordinating that agency's activities under the Act. Each Preservation Officer may, in order to be considered qualified, satisfactorily complete and appropriate training program established by the Secretary under Section 110(g)." *Section 100(d)*: "Consistent with the agency's mission and mandates, all Federal agencies shall carry out agency programs and projects (including those under which any Federal assistance is provided for any federal license, permit, or other approval is required) in accordance with the purposes of this Act and, give consideration to programs and projects which will further the purposes of this Act." *Section 110(e)*: "The Secretary shall review and approve the plans for transferees of surplus federally owned historic properties not later than ninety days after his receipt of such plans to ensure that the prehistorical, historical, architectural, or culturally significant values will be preserved or enhanced. *Section 110(f)*: "Prior to the approval of any Federal undertaking which may directly and adversely affected any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark, and shall afford the Advisory council on Historic Preservation a reasonable opportunity to comment on the undertaking" *Section 110(g)*: "Each Federal agency may include the costs of preservation activities of such agency under this Act as eligible project costs in all undertakings such agency or assisted by such agency. The eligible project costs may also include amounts paid by a federal agency to any state to be used in carrying out, such preservation responsibilities of the federal agency under this Act, and reasonable costs may be charged to Federal licensees and permits as a condition to the issuance of such license or permit." *Section 110(h)*: "The Secretary shall establish an annual preservation awards program under which he may make monetary awards in amounts not to exceed $1,000 and provide citations for special achievements to officers and employees of Federal, State, and certified local governments in recognition of their outstanding contributions to the preservation of historic resources. Such programs may include the issuance of annual awards by the President of the United States to any citizen of the United States recommended for such award by the Secretary;" *Section 110(l)*: "Nothing in this Act shall be construed to require the preparation of an environmental impact statement where such a statement would not otherwise be required under the National Environmental Policy Act 1969, and nothing in this Act shall be construed to provide exemption from any requirement respecting the preparation of such a statement under such Acts." *Section 110(j)*: "The secretary shall promulgate regulations under which the requirements of this section may be waived in whole or in part in the event of a major natural disaster or an imminent threat to national security."

Introduction

In 1996, the Fort McCoy Archaeology Laboratory contracted with the 88th RSC to conduct a historic properties inventory under the provisions of Section 110 of the NHPA. The inventory included all USARC facilities owned or leased by the 88th RSC in the state of Ohio. This report describes the recordation, evaluation methods, and results of the inventory. Additionally, this report documents the sources and informants used to evaluate the actions to nominate properties to the NHRP. Recommendations for NRHP reevaluation are also included.

Preliminary investigations included meetings with officials of the Ohio State Historic Preservation Office (SHPO) and documentary research conducted at the Ohio State Historical Society, regional county courthouses, and local libraries. Oral interviews were conducted with USARC personnel at each facility. The Ohio Archaeological Sites Index, maintained by the Ohio SHPO, was consulted to determine the location of any known archaeological sites located within a one-mile radius of each USARC facility. Fieldwork for the project was conducted during August-November 1997. All Ohio listings in the NRHP were reviewed prior to commencement of fieldwork for the inventory. Those properties on all USARC facilities that met the criteria for NRHP eligibility were examined and recorded to assess their potential for possible nomination to the NRHP.

Statement of Purpose

The Fort McCoy Archaeology Laboratory Section 110 inventory of the USARC facilities within the state of Ohio was conducted consistent with the *Secretary of the Interior's Standards and Guidelines for Identification and Evaluation* (*Standards*).

The primary goal of the NHPA, according to the *Standards*, is to "preserve prehistoric and historic resources throughout the nation for the inspiration and benefit of present and future generations." In fulfillment of this goal, governmental agencies, within the framework of their missions, are charged with administering federally owned, administered, or controlled prehistoric and historic resources in a spirit of stewardship, and caring for significant prehistoric and historic properties in ways that ensure long-them protection and integrity of those properties.

The *Standards* require agencies to identify, evaluate, and document their historic properties, and nominate them to the NRHP. According to the *Standards*, "identification, evaluation, and documentation of historic properties are critical in the long-term management of historic properties, as well as in program and project specific planning by a federal agency. The *Standards* also require that "the agency manages and maintains its historical properties in ways that preserve the properties historic, archaeological, architectural, or cultural values," and that "the agency considers historic properties in addition to its own when planning activities that may affect them." Agencies are also required under the *Standards* to develop "a process that identifies and evaluates historic properties in a timely fashion," and "a process that develops and implements agreements regarding the means by which adverse affects on historic properties will be considered." The documentation of historic properties, before they are substantially altered or demolished, and the placement of the documentation in an appropriate repository for future use and research, is also required.

In complying with the requirements of Section 110(a) (2) of the NHPA and the *Standards*, researchers from the Fort McCoy Archaeology Laboratory conferred with the Ohio SHPO regarding previous archaeological

2) an architectural evaluation of the potential eligibility of each building on the USARC facilities;

3) a surface reconnaissance of land associated with each USARC facility.

The historic themes used to evaluate the historic contexts associated with the properties analyzed in this inventory were taken directly from the guidelines identified by the Ohio SHPO. The results of the historical, architectural, and surface surveys conducted by members of the Fort McCoy Archaeological Laboratory are described in the following sections of this report.

Historical Literature Review

The methodology for the Ohio Section 110 Inventory was designed to establish a historic context for each USARC facility to assess the potential eligibility of USARC buildings for nomination to the NRHP. In preparation for the documentation of each USARC facility, historic research was conducted by members of the Fort McCoy Archaeology Laboratory and included:

1) examination of real property records maintained by the 88th RSC;

2) examination of real property records located at each USARC facility (when available);

3) an interview with the facility manager at each USARC facility;

4) NRHP eligibility nominations filed with the Ohio SHPO (when applicable);

5) examination of the Archaeological Sites Index maintained by the Ohio SHPO;

6) examination of the historic documents housed at the Ohio State Historical Society, regional county courthouses, and local libraries;

7) examination of previous cultural resource, archaeological, architectural, and environmental surveys available about each USARC facility (when available).

Architectural Fieldwork

Historic research of buildings at each USARC facility was conducted to establish an initial database of the architectural styles that would be encountered during on-site documentation. On-site fieldwork consisted of producing in-depth textual descriptions that included:

1). Architect/Builder
2). Type of building
3). Date of construction
4). Date of acquisition
5). Architectural style

12). Building Descriptions
13). Eligibility
14). Recommendations
15). Sources
16). Notes

National Register Criteria of Evaluation

Each building on the USARC facilities was assessed for its potential eligibility to the NRHP as defined in 36 CFR Part 60. The criteria used to evaluate the eligibility of properties for potential nomination to the NRHP assesses the significance of each facility in terms of its contribution to American history, historic persons, architecture, engineering, and archaeological research. The NRHP criteria and criteria considerations include:

Criteria:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded, or may be likely to yield, information important in prehistory or history.[2]

Criteria Considerations:

A. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or

B. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with the historic person or event; or

C. A birthplace or grave of a historical figure of outstanding importance if there is no other appropriate site or buildings directly associated with his productive life; or

D. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive

	Columbus, Ohio Whitehall Memorial USARC
Identification Information:	Identification Number: OH014/39860 Whitehall Memorial USARC 721 Country Club Rd., Columbus, Franklin County, Ohio 43213-2485 Telephone Number: (614) 692-5451 Reynoldsburg Quadrangle, Ohio, USGS 7.5 Minute Series, T12N R17W, Section 9 (Figure 228) UTM: Z17, 340665E, 4424895N Present Owner/Occupant: The facility is owned by the United States Government and controlled by the 88th RSC.
Setting and Landscape:	The Whitehall Memorial USARC consists of three buildings located on five acres of land (CL001) in a residential district in Columbus, Ohio (Figure 229). The facility is landscaped with grass, trees, and shrubs.
Archaeological Resources:	An archaeological records search at the Ohio State Historic Preservation Office determined that there are no known archaeological sites located within a one-mile radius of the Whitehall Memorial USARC.
Historical Information:	The Whitehall Memorial USARC was constructed in 1960.[1] There appear to have been no significant additions or alterations to the buildings since their original construction.
Security:	Security measures at the Whitehall Memorial USARC include chain-link fencing topped with barbed wire surrounding a military vehicle parking area, the east and south walls of the Organizational Maintenance Shop, and the west wall of the Reserve Center's drill hall. High intensity lighting is also present to illuminate military and civilian vehicle parking areas.
Architectural Information:	The Whitehall Memorial USARC consists of three concrete block buildings with red brick veneers. The buildings do not appear to exhibit significant

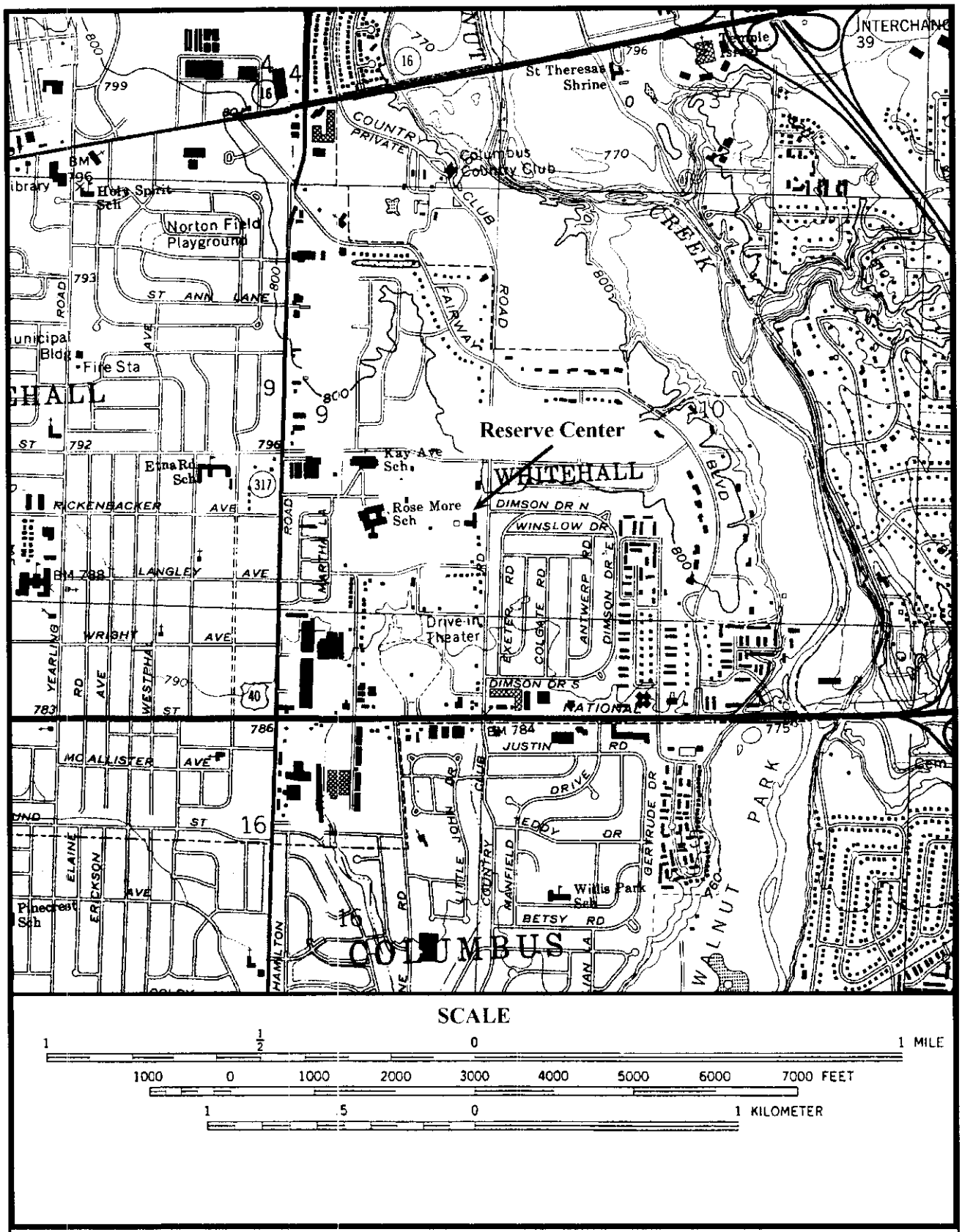
	historical or architectural character or merit that contributes to the historic context of the period associated with their construction.
Building Descriptions:	**Reserve Center** (CL002) The Reserve Center functions as an administrative office and drill hall for the Whitehall Memorial USARC. Constructed in1960, is a T-shaped, multiple-level building comprised of two-story rectangular building sections connected by a one-story enclosed corridor. It rests upon a poured concrete foundation with concrete block walls and a red brick veneer. A projecting entrance consisting of two pairs of glass pedestrian doors surrounded by multiple single light fixed transom and sidelights is located on the east side of the building (Figure 230). A second projecting entrance consisting of a metal pedestrian door and concrete porch covered by a metal awning is located on the southwest corner of the building (Figure 231). Pairs of metal pedestrian doors are located on the north, south, and west walls, and a metal overhead retractable bay door is located on the west wall of the drill hall. A series of one-over-one light double-hung windows with plain slip metal sills, and one-over-one light double-hung ribbon windows with continuous plain slip metal sills are located around the perimeter of the building (Figure 232). A flat roof covers the structure (Figure 233 & 234). **Organizational Maintenance Shop** (CL003) The Organizational Maintenance Shop functions as a vehicle maintenance facility for the Whitehall Memorial USARC. Constructed in 1960, the OMS is a one-story rectangular building that rests upon a poured concrete foundation with concrete block walls with red brick veneer. Entrances include three metal overhead retractable bay doors are located along the east wall of the building, and metal pedestrian doors located on the north and south walls (Figures 235 & 236). A series of one-over-one light double-hung awning ribbon windows with continuous plain slip sills are located along the west wall near the roof eaves (Figure 237). A flat roof covers the structure (Figure 238). **Utility Building** (OH014/39860)[2] The Utility Building functions as a storage facility for equipment serving the electrical and water systems at the Whitehall Memorial USARC. Constructed in 1960, it is a half-story rectangular building with a concrete foundation with brick walls. A metal pedestrian door is located on the east wall of the building (Figure 239). Fenestrations on the structure consist of

	metal vents located on the south and north walls (Figure 240). A low-pitch shed roof covers the building. The roof shows signs of deterioration along the west eaves (Figure 241 & 242).
Eligibility:	None of the buildings located at the Whitehall Memorial USARC meet the criteria for the National Register of Historic Places (NRHP), under Criterion A, B, C, or D, and thus are not recommended for nomination to the NRHP. A documentary and architectural investigation conducted at the facility determined there is no direct relationship between the facility and prehistoric or historic events in the Columbus area (criterion A), there is no association with significant persons involved in prehistoric or historic events (criterion B), buildings on the facility are not architecturally or technologically significant (criterion C), and the facility is unlikely to hold future research potential (criterion D).
Recommendations:	No additional review under Section 110 is recommended until the existing buildings at the Whitehall Memorial USARC reach the 50 year eligibility requirement for the NRHP in 2010, or unless specific undertakings require compliance with Section 106 of the National Historic Preservation Act (36 CFR 800).
Sources:	"Environmental Audit of Whitehall Memorial U.S. Army Reserve Center." Lexington, Kentucky: Howard K. Bell, Consulting Engineers, Inc. 1991. "Peters, Norris F. "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)." 14 April 1989. "Real Property Detail Report Criteria: Total Inventory," 88th RSC DSCEN Real Estate Division, March 1998. "Reynoldsburg Quadrangle." USGS 7.5 Minute Series Map. Denver, Colorado: United States Geological Survey. 1964, revised 1994. "Southeast Columbus Quadrangle." USGS 7.5 Minute Series Map. Denver, Colorado: United States Geological Survey. 1964, revised 1994. Warren, Benjamin H. "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)." 15 March 1985.

Notes:

[1] Norris F. Peters, "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)," 14 April 1989, p. 1 and Benjamin H. Warren "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)," 15 March 1985, p. 1. Copies of these reports are on file at the 88th RSC DSCEN Real Estate Division office, Fort Snelling, Minnesota.

[2] "Real Property Detail Report Criteria: Total Inventory," 88th RSC DSCEN Real Estate Division, March 1998, p. 22-23. According to records maintained by real property specialists, the Utility Building at the Whitehall Memorial USARC has not been assigned a building number within the facility. A copy of this report is on file at the 88th RSC DSCEN Real Estate Division office, Fort Snelling, Minnesota.



Reynoldsburg Quadrangle & Southeast Columbus Quadrangle USGS 7.5 Minute Series

Figure 228. Location of the Whitehall Memorial USARC.

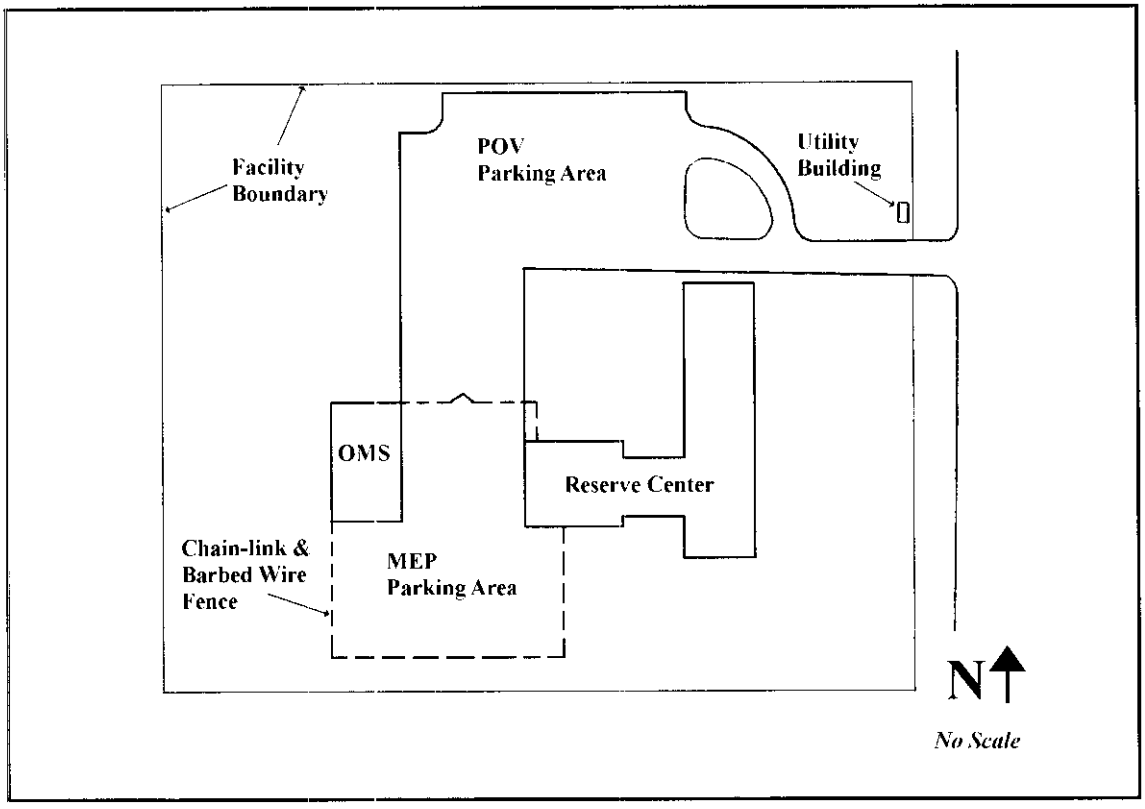


Figure 229. Map of the Whitehall Memorial USARC (map modified from "Environmental Audit Whitehall Memorial U.S. Army Reserve Center," Howard K. Bell, Consulting Engineers, Inc., Attachment No. 1).

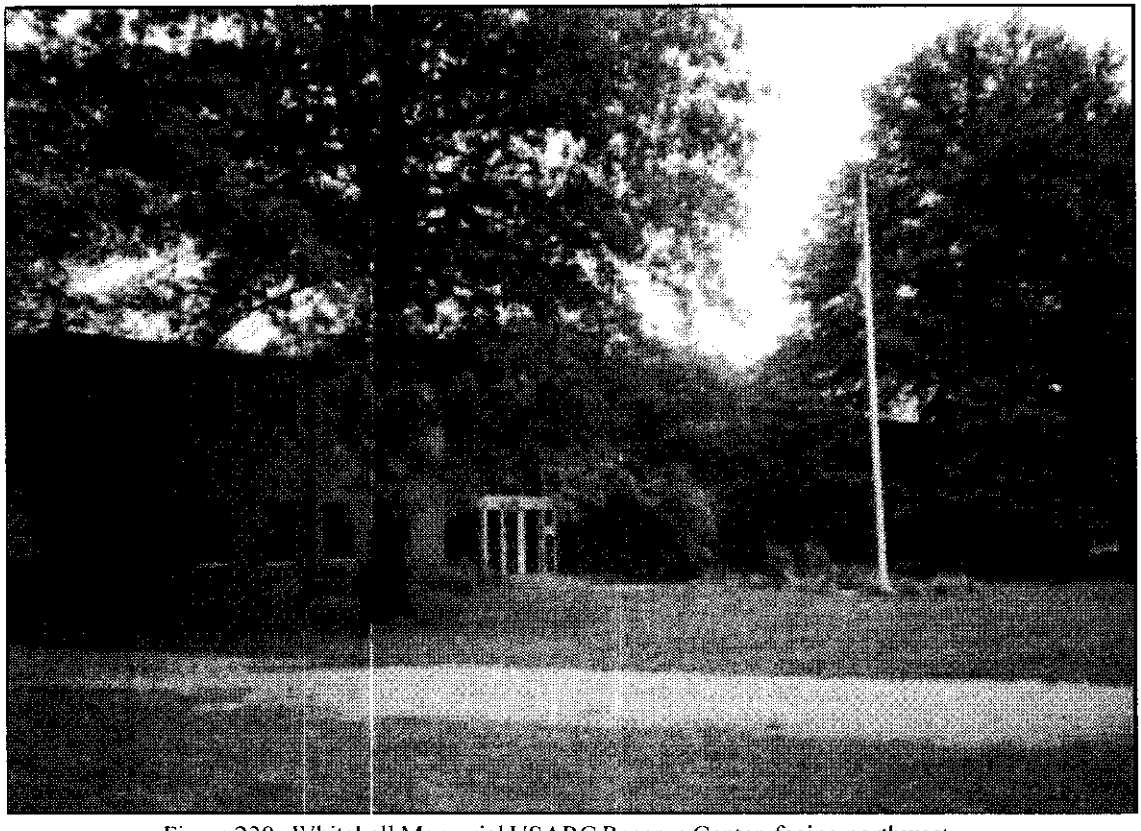


Figure 230. Whitehall Memorial USARC Reserve Center, facing northwest.

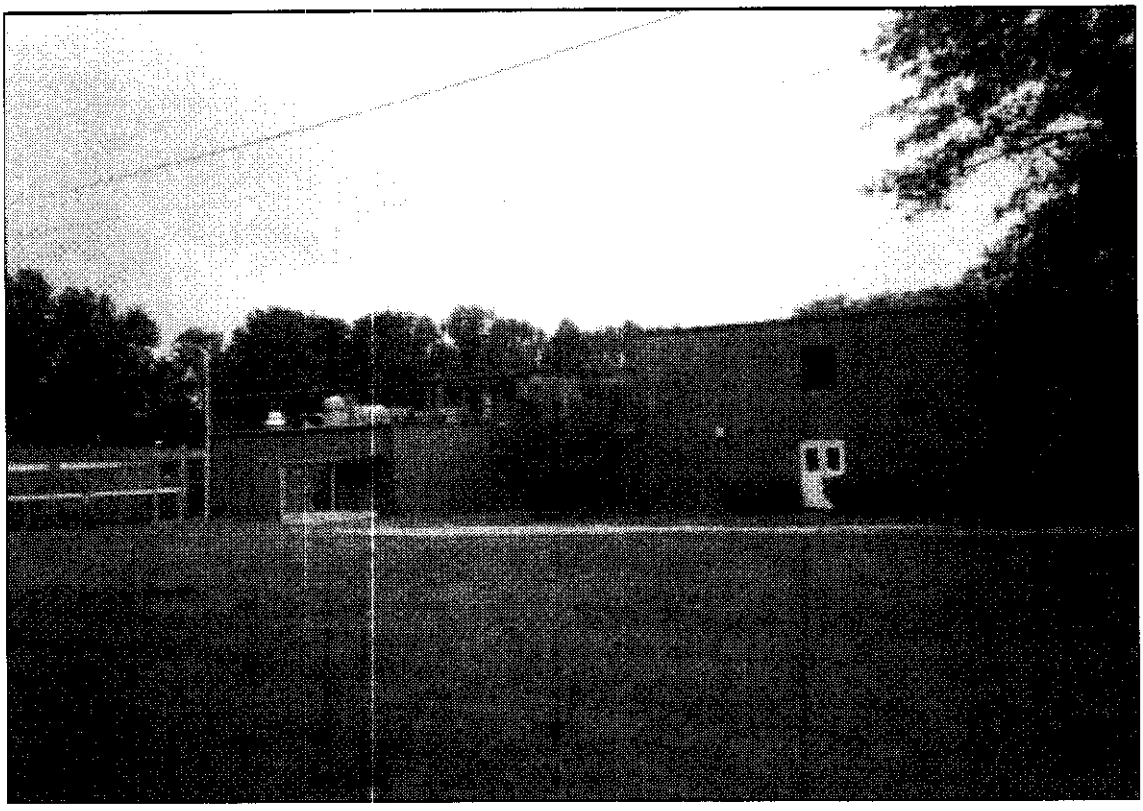


Figure 231. Whitehall Memorial USARC Reserve Center, facing northwest (south side of building).

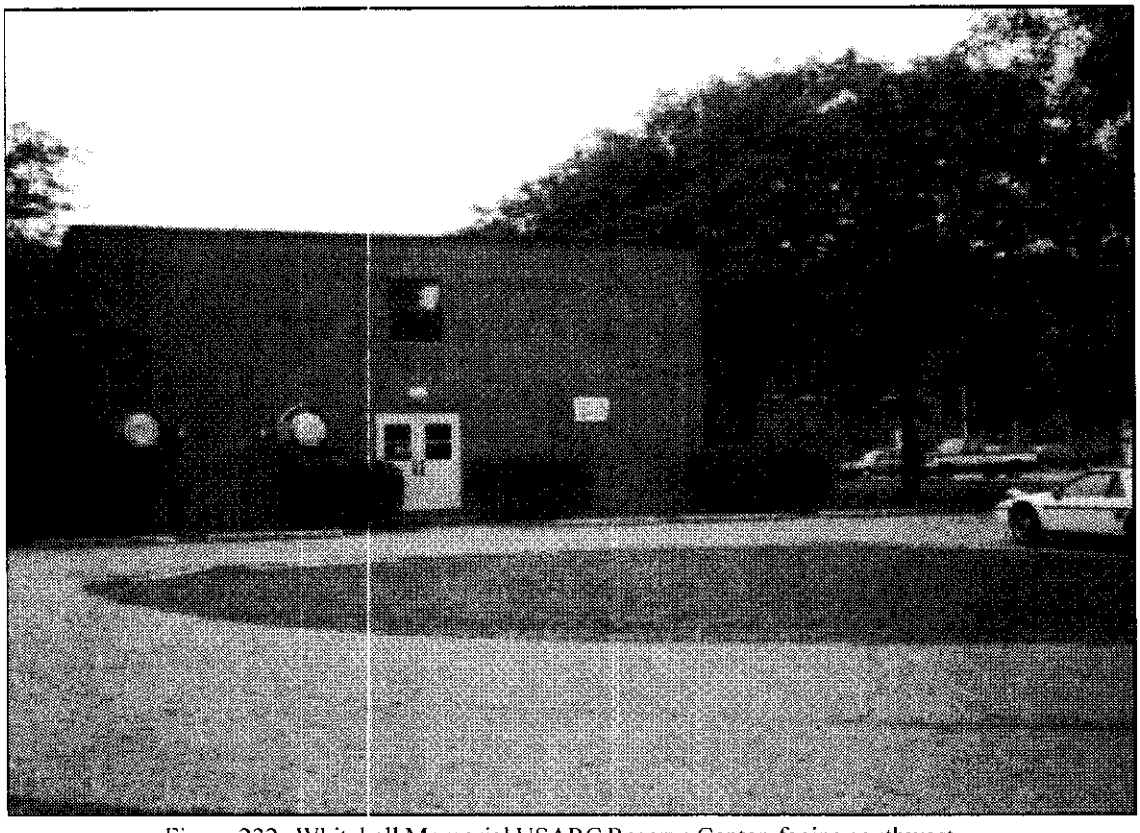


Figure 232. Whitehall Memorial USARC Reserve Center, facing southwest.

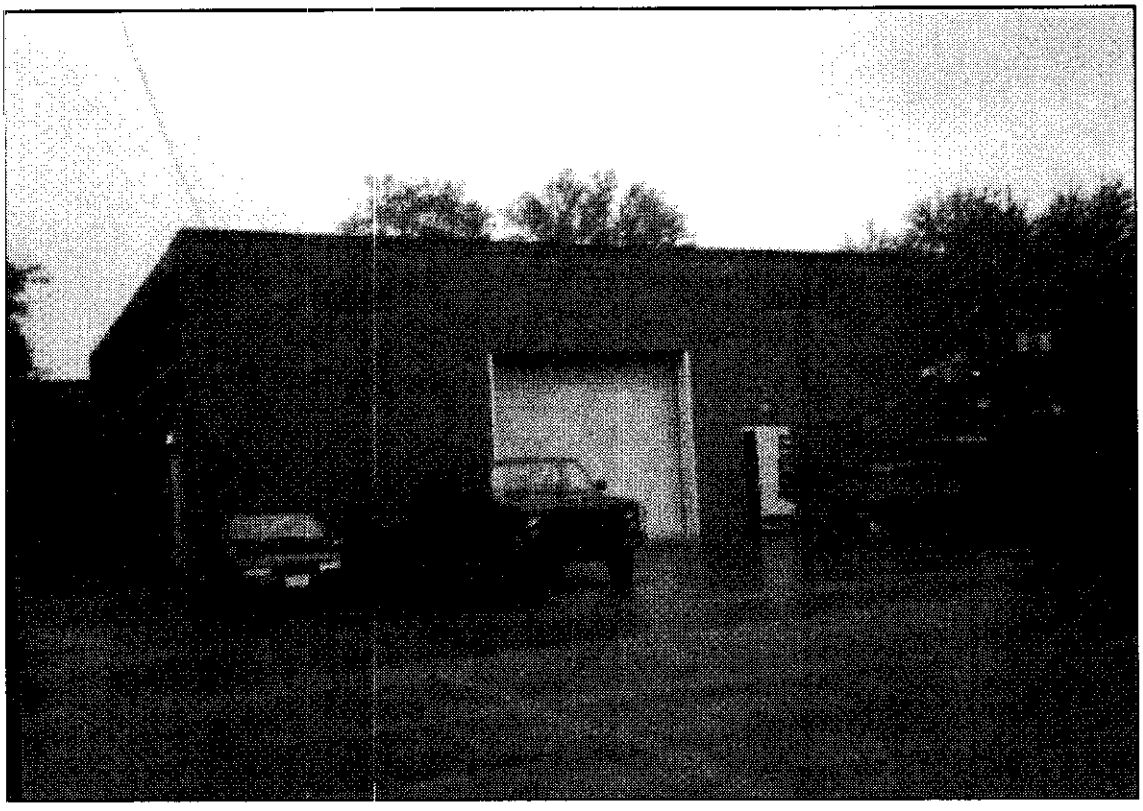


Figure 233. Whitehall Memorial USARC Reserve Center, facing east (drill hall).

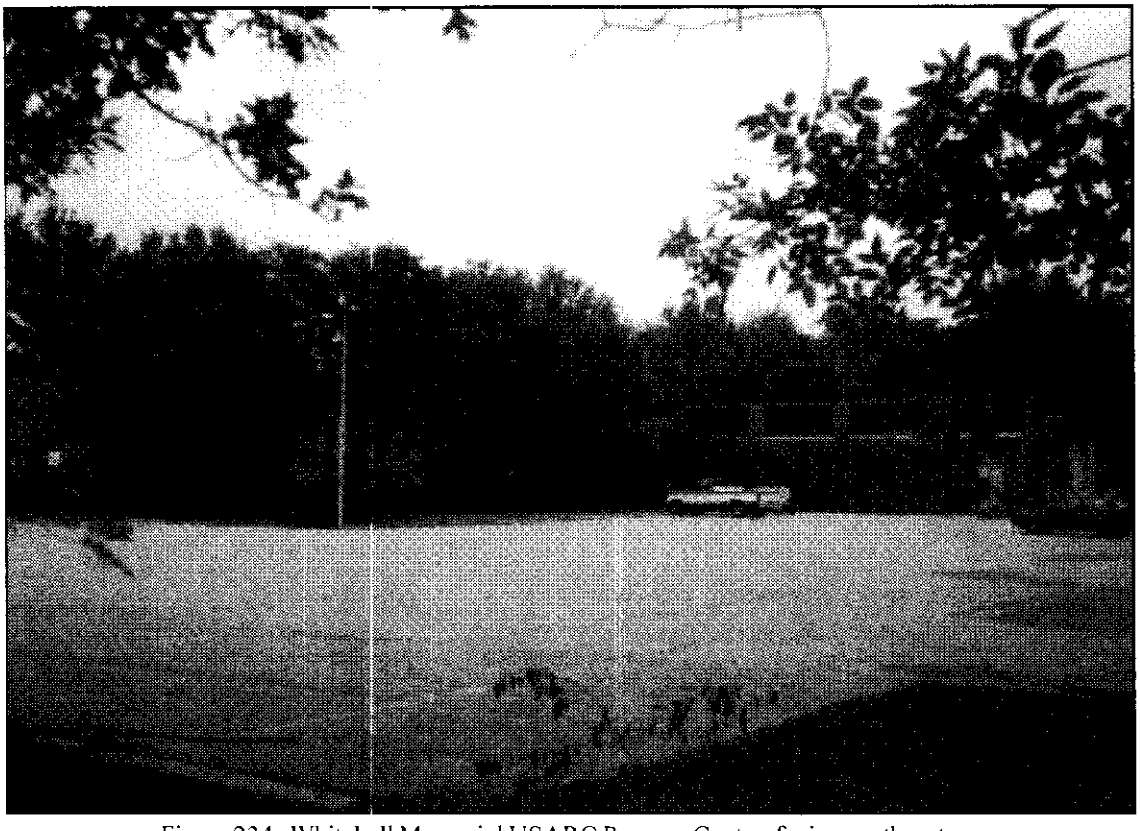


Figure 234. Whitehall Memorial USARC Reserve Center, facing southeast.

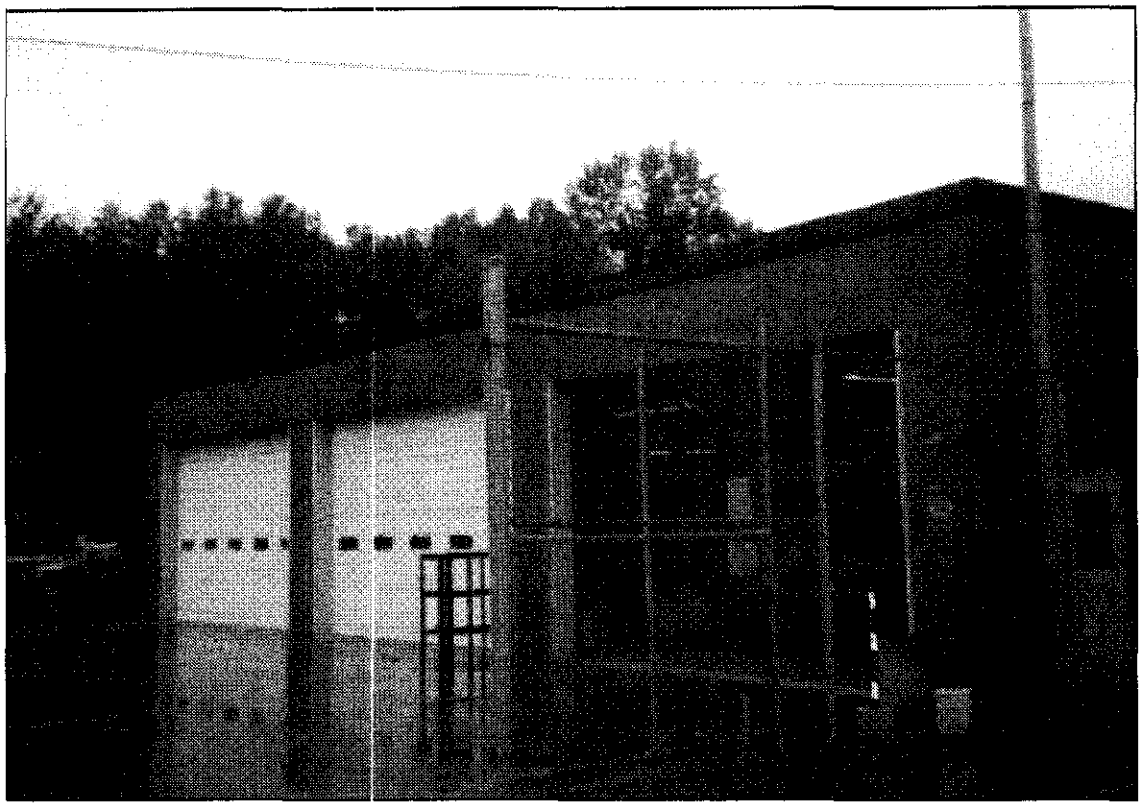


Figure 235. Whitehall Memorial USARC Organizational Maintenance Shop, facing southwest.

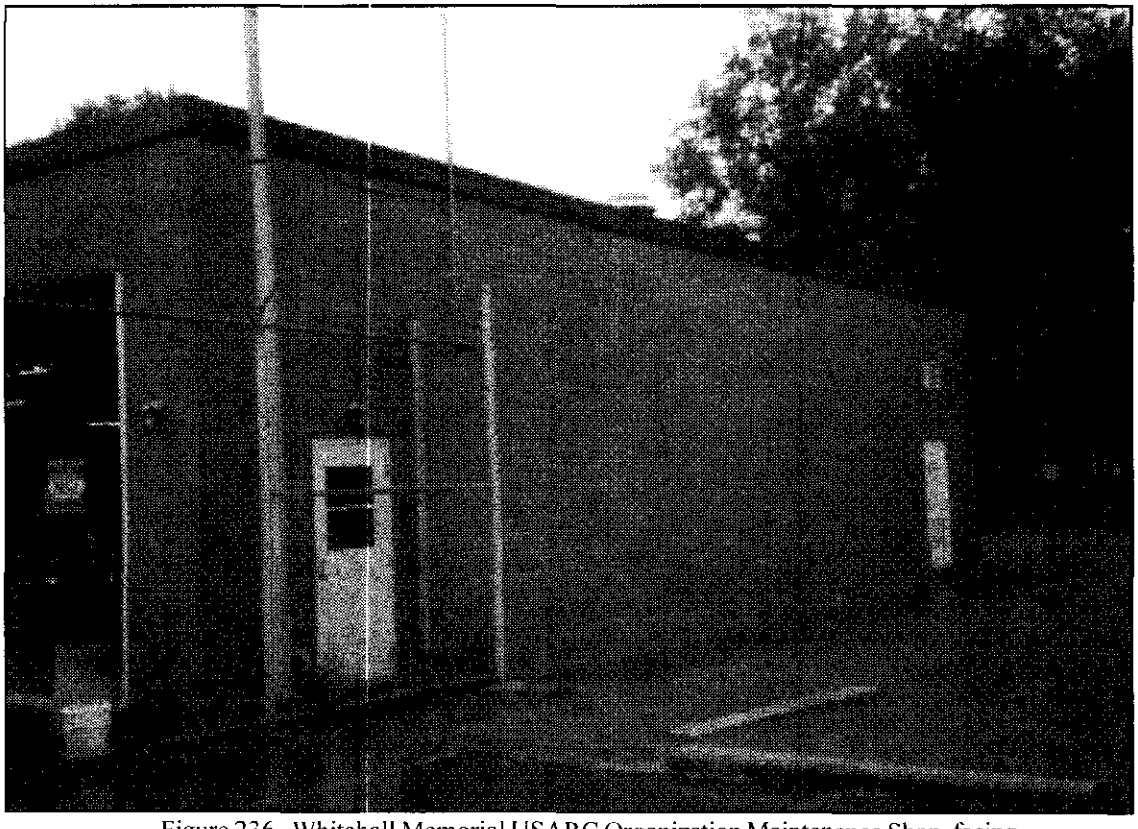


Figure 236. Whitehall Memorial USARC Organization Maintenance Shop, facing southwest.

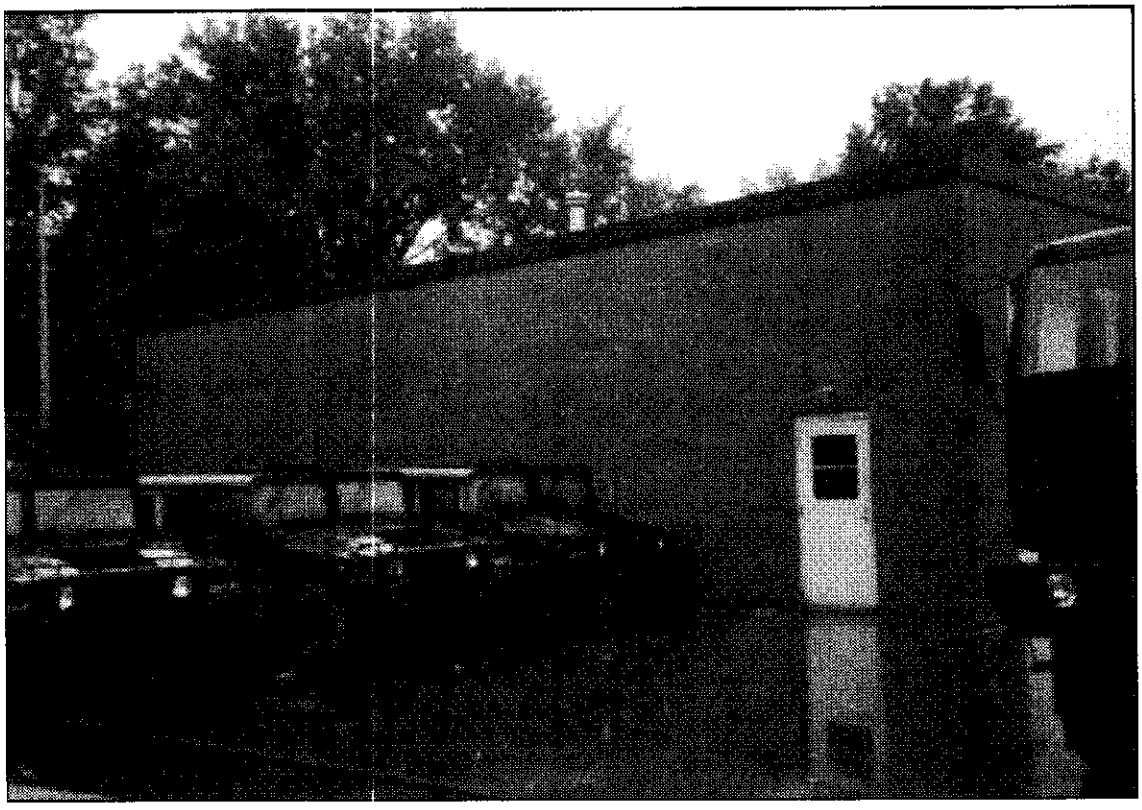


Figure 237. Whitehall Memorial USARC Organizational Maintenance Shop, facing northwest.

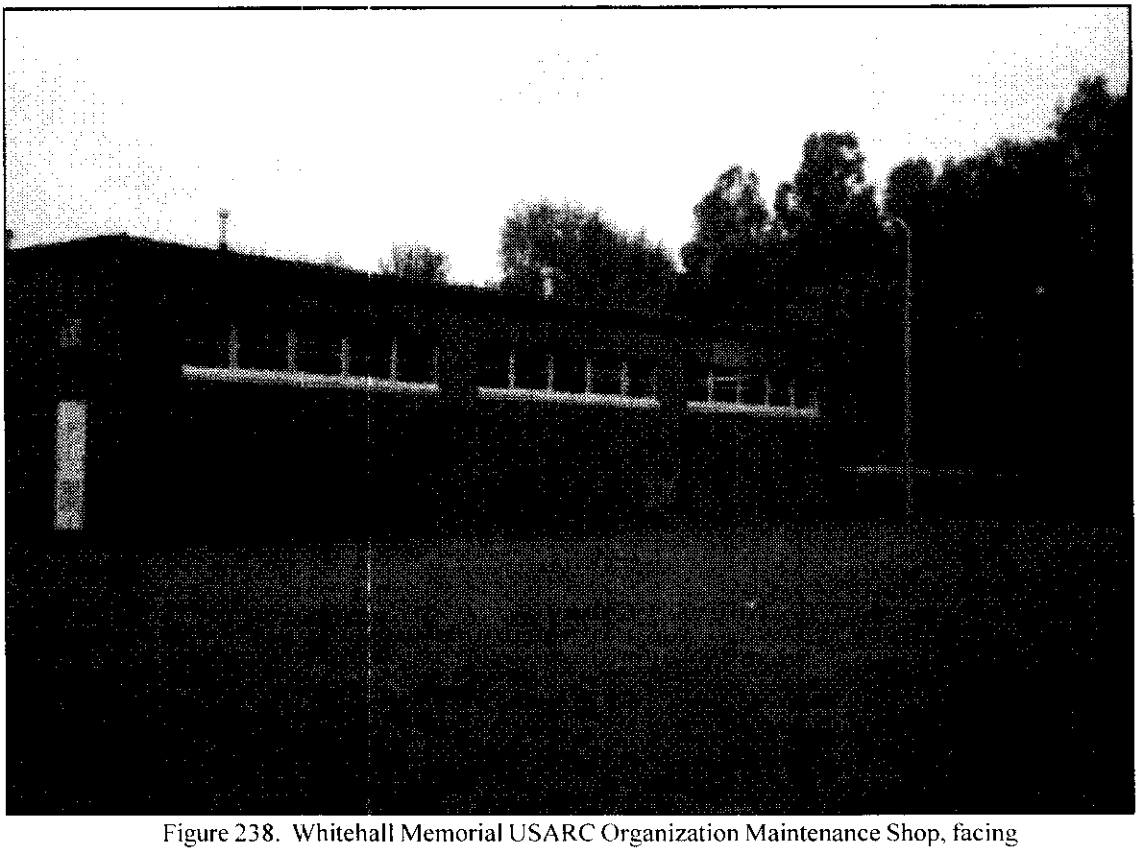


Figure 238. Whitehall Memorial USARC Organization Maintenance Shop, facing southeast.

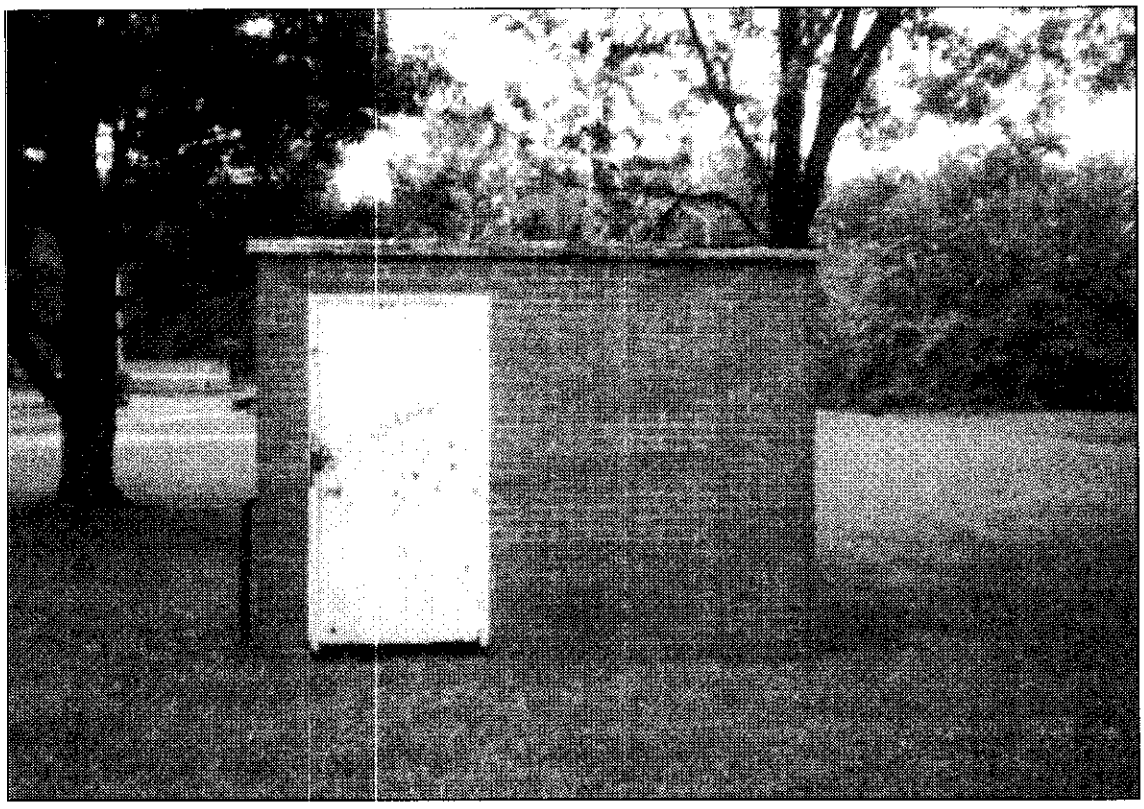


Figure 239. Whitehall Memorial USARC Utility Building, facing west.

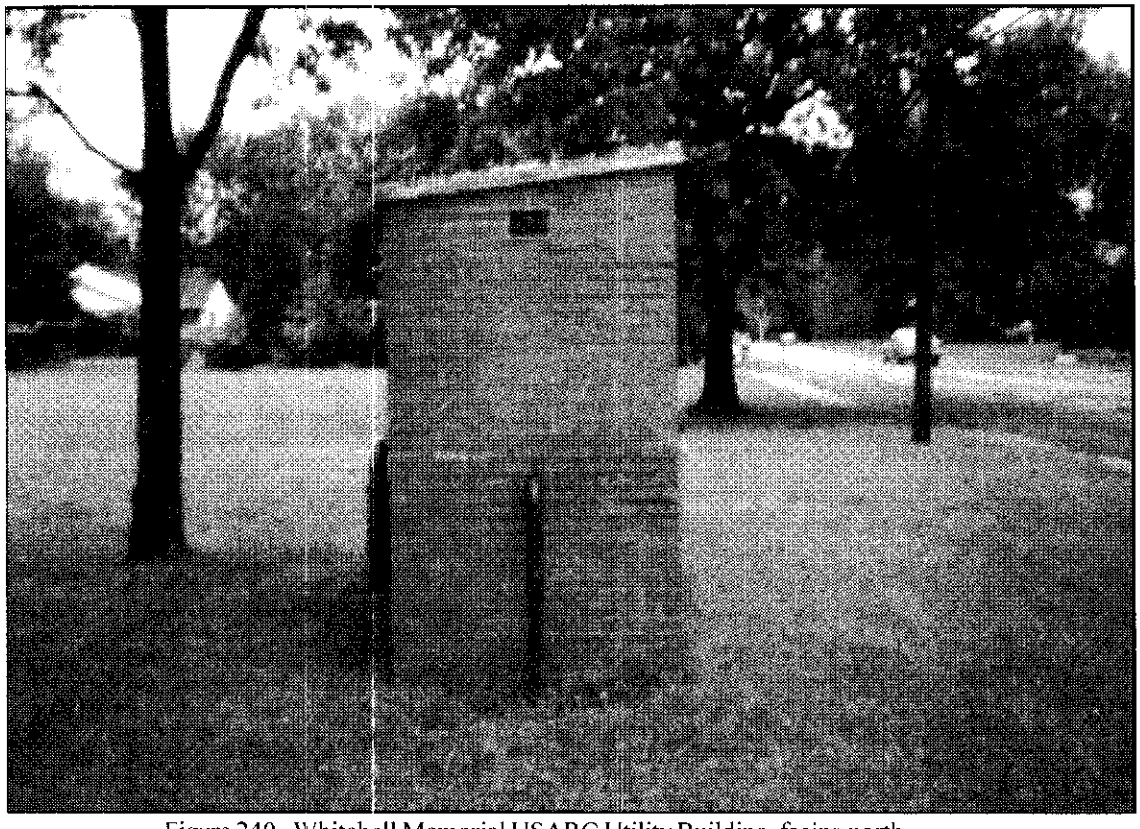


Figure 240. Whitehall Memorial USARC Utility Building, facing north.

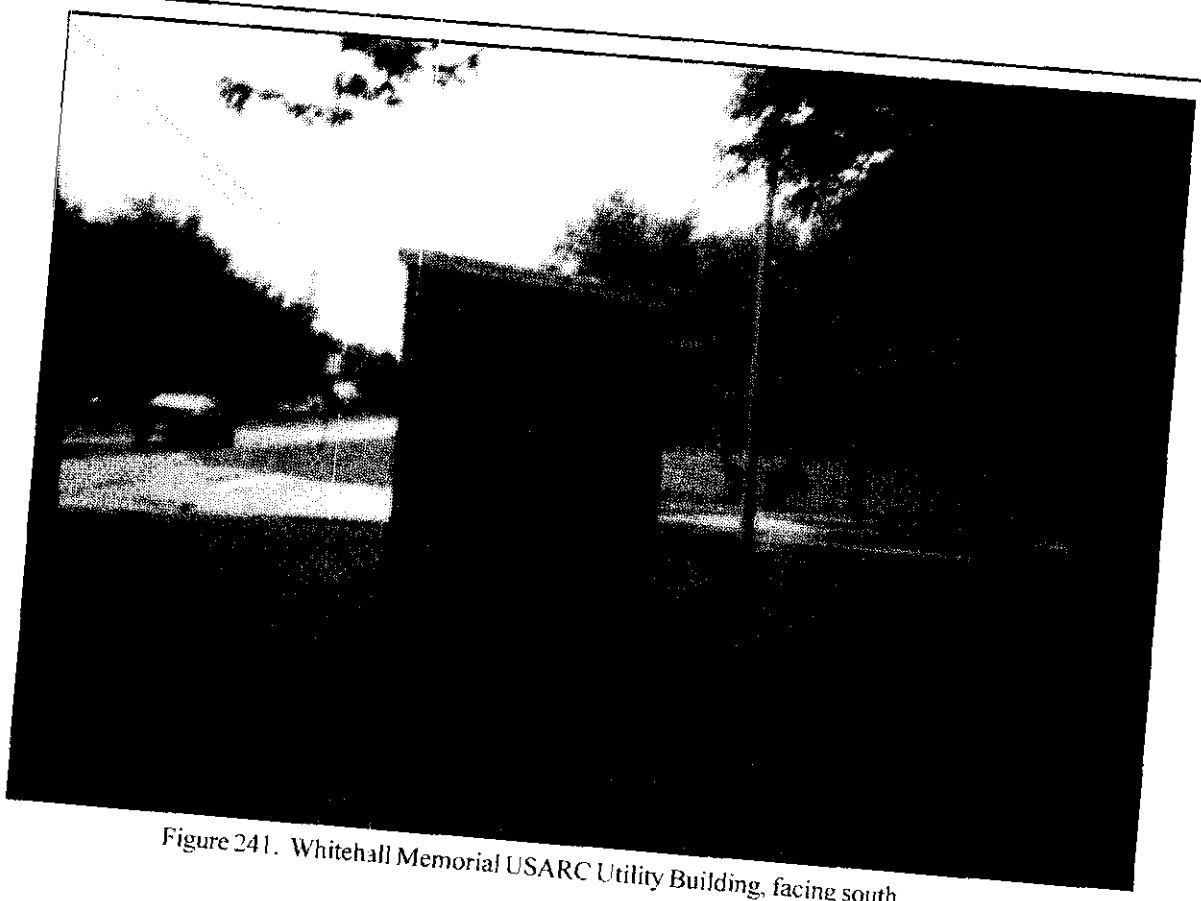


Figure 241. Whitehall Memorial USARC Utility Building, facing south.

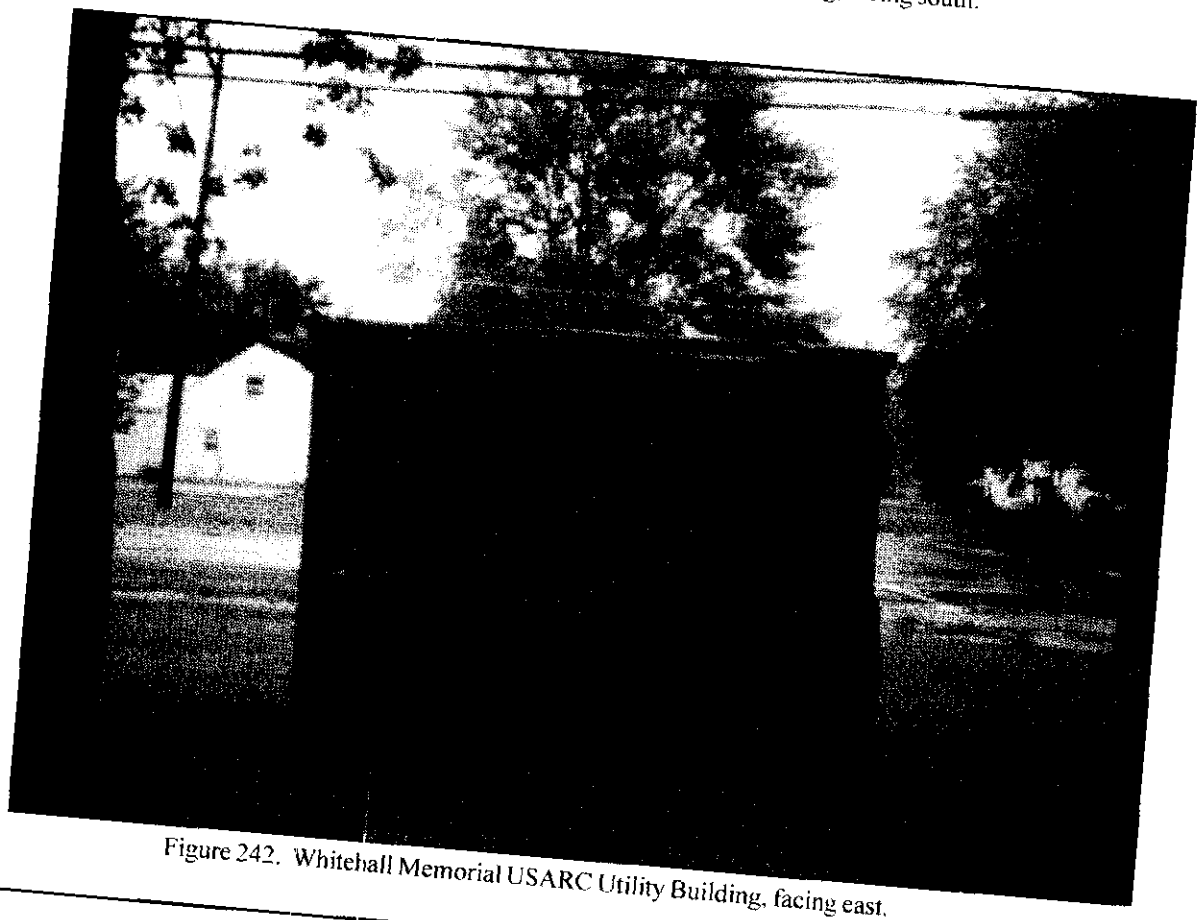


Figure 242. Whitehall Memorial USARC Utility Building, facing east.

TABLE 1-1
SUMMARY OF FINDINGS

INSTALLATION: WHITEHALL MEMORIAL USARC Fiscal Year: 1996
ID: OH-2104~~41606~~ OH014

SECTION NO.	TITLE	REGULATORY 1	REGULATORY 2	REGULATORY HS	MANAGEMENT POS	MANAGEMENT 3	MANAGEMENT HS	TOTAL
A	Air Emissions	0	0	0	0	0	0	0
C	Cultural Resources	0	0	0	0	0	0	0
HM	Hazardous Materials	3	0	0	0	0	0	3
HW	Hazardous Waste	0	0	0	0	0	0	0
NR	Natural Resource	0	0	0	0	0	0	0
01	Environmental Impacts	0	0	0	0	0	0	0
02	Environmental Noise	0	0	0	0	0	0	0
03	IRP	0	0	0	0	0	0	0
04	Pollution Prevention	0	0	0	0	0	0	0
05	Program Management	0	0	0	0	0	0	0
PM	Pesticide	0	0	0	0	0	0	0
PO	POL	2	0	0	0	0	0	2
SO	Solid Waste	0	0	0	0	0	0	0
ST	Storage Tanks	0	0	0	0	0	0	0
T1	PCB	0	0	0	0	0	0	0
T2	Asbestos	0	0	0	0	0	0	0
T3	Radon	0	0	0	0	0	0	0
T4	Lead Based Paint	0	0	0	0	0	0	0
W[illegible]	Wastewater	0	0	0	0	0	0	0
[illegible]	ater Quality	0	0	0	0	0	0	0
	TOTALS	5	0	0	0	0	0	5

Data File Name Prefix: C:\ECAS15\OH014
Date Summary Report Produced: 03/17/96

Installation FFID: OH-210441606 Fiscal Year: 1996

[redacted]nding ID: OH014-001
[redacted]t or Tenant: H

Tenant FFID: - Tenant Category:
*Tenant Name:
Tenant MACOM/HQ:

MUSARC:
BASOPS ARCOM:

Facility/Activity Type: AFRC(MB) - ARMED FORCES RESERVE CENTER - MAIN BLDG
*Manual Section Number: PO Petroleum, Oils, and Lubricants (POL) Management
*Law/Reg: OSHA
Finding Summary:
UNIT HAS NO SPCC/ISC
Finding Description: UNIT IS REQUIRED TO HAVE A SPCC/ISC TAILORED FOR ITS SPECIFIC HAZARDOUS MATERIALS AT SITE

*Question Number: PO-005-003- A *Regulatory Agency Level: F
*Criteria: The installation must have a spill contingency plan (ISCP) that addresses specific issues (AR 200-1, para 8-5a through 8-5c).

Pollutant Category: Reason Code: 33
[redacted]ding Location: MAIN BUILDING
[redacted]Number:
*[redacted]nding Category: 01 *Positive/Negative Finding: N
*Regulatory/Mgt. Deficiency(R/M): R Repeat ECAS Finding(Y/N)?: N
Existing NOV(Y/N)?: N Recurring NOV(Y/N)?: N
NOV Number:

Was the finding determined to be an immediate threat(Y/N): N
Suggested Corrective Action(s): UNIT HAS HIGHER LEVEL ORGANIZATION INFORMATION. NEEDS TO SITE ADAPT TO SPECIFIC REQUIREMENTS.

Root Cause Code: P2
Finding Comments:

Corrective Action Data - ECAR

Corrective Action Summary:

Corrective Action:

Corrective Action Type: Estimated Cost $ 0
Corrective Action Comments:

Installation Data - ICAP

1383 Project No.: Funding Year:
Status of Correction: Must Fund:
Unit/Activity:
[redacted]nt of Contact:
[redacted]ense Date (MM/DD/YYYY): / /
Actual Completion Date (MM/DD/YYYY): / /

Installation FFID: OH-210441606 Fiscal Year: 1996

*[redacted]ding ID: OH014-002
[redacted]t or Tenant: H

Tenant FFID: - Tenant Category:
*Tenant Name:
Tenant MACOM/HQ:

MUSARC:
BASOPS ARCOM:

Facility/Activity Type: AFRC(MB) - ARMED FORCES RESERVE CENTER - MAIN BLDG
*Manual Section Number: PO Petroleum, Oils, and Lubricants (POL) Management
*Law/Reg: CWA
Finding Summary:
SPILL PLAN TRAINING
Finding Description: UNIT DOES NOT HAVE DOCUMENTAION OF SPILL PLAN TRAINING

*Question Number: PO-005-007- *Regulatory Agency Level: F
*Criteria: All installation/CW facility personnel involved with the management and handling of oil must take part in periodic training in spill prevention and response (40 CFR 112.7(e)(10)).

P[redacted]llutant Category: Reason Code: 33
[redacted]ing Location: MAIN BUILDING
IR[redacted] Number:
*Finding Category: 01 *Positive/Negative Finding: N
*Regulatory/Mgt. Deficiency(R/M): R Repeat ECAS Finding(Y/N)?: N
Existing NOV(Y/N)?: N Recurring NOV(Y/N)?: N
NOV Number:

Was the finding determined to be an immediate threat(Y/N): N
Suggested Corrective Action(s): UNIT WILL TRAIN AND DOCUMENT TRAINING OF PERSONNEL ON SPILL PLAN TRAINING

Root Cause Code: P2
Finding Comments:

Corrective Action Data - ECAR

Corrective Action Summary:

Corrective Action:

Corrective Action Type: Estimated Cost $ 0
Corrective Action Comments:

Installation Data - ICAP

1383 Project No.: Funding Year:
Status of Correction: Must Fund:
U[redacted]/Activity:
I[redacted]t of Contact:
Suspense Date (MM/DD/YYYY): / /
Actual Completion Date (MM/DD/YYYY): / /

Installation FFID: OH-210441606 Fiscal Year: 1996

[redacted]ding ID: OH014-003
*Host or Tenant: H

Tenant FFID: - Tenant Category:
*Tenant Name:
Tenant MACOM/HQ:

MUSARC:
BASOPS ARCOM:

Facility/Activity Type: AFRC(MB) - ARMED FORCES RESERVE CENTER - MAIN BLDG
*Manual Section Number: HM Hazardous Materials Management
*Law/Reg: OSHA
Finding Summary:
LISTING OF MSDS SHEETS
Finding Description: UNIT DOES NOT HAVE A CURRENT/UPDATED LISTING OF ALL HAZARDOUS MATERIALS OR MSDS SHEETS ON SITE

*Question Number: HM-010-001- *Regulatory Agency Level: F
*Criteria: Installations/CW facilities are required to have a written hazard communication program that is designed to provide all employees with information about the hazardous chemicals to which they are exposed (29 CFR 1910.1200(b)(6) and 1910.1200(e)(1)).

[redacted]llutant Category: Reason Code: 42
Finding Location: MAIN BUILDING
IFS Number:
*Finding Category: 01 *Positive/Negative Finding: N
*Regulatory/Mgt. Deficiency(R/M): R Repeat ECAS Finding(Y/N)?: N
Existing NOV(Y/N)?: N Recurring NOV(Y/N)?: N
NOV Number:

Was the finding determined to be an immediate threat(Y/N): N
Suggested Corrective Action(s): UNIT IS WORKING WITH CST/BASOPS TO SECURE ALL REQUIRED INFORMATION

Root Cause Code: R2
Finding Comments:

Corrective Action Data - ECAR

Corrective Action Summary:

Corrective Action:

Corrective Action Type: Estimated Cost $ 0
Corrective Action Comments:

Installation Data - ICAP

[redacted] Project No.: Funding Year:
[redacted]us of Correction: Must Fund:
Unit/Activity:
Point of Contact:
Suspense Date (MM/DD/YYYY): / /

Installation FFID: OH-210441606 Fiscal Year: 1996

[redacted]ding ID: OH014-004
[redacted]t or Tenant: H

Tenant FFID: - Tenant Category:
*Tenant Name:
Tenant MACOM/HQ:

MUSARC:
BASOPS ARCOM:

Facility/Activity Type: AFRC(MB) - ARMED FORCES RESERVE CENTER - MAIN BLDG
*Manual Section Number: HM Hazardous Materials Management
*Law/Reg: OSHA
Finding Summary:
MSDS SHEETS TO FIRE DEPT.
Finding Description: UNIT HAS NOT PROVIDED LISTING OF MSDS SHEETS TO FIRE DEPARTMENT

*Question Number: HM-030-001- *Regulatory Agency Level: F
*Criteria: Installations/CW facilities which are required to prepare or have available a MSDS for a hazardous chemical under OSHA are required to meet specific MSDS reporting requirements for planning purposes (EO 12856; 40 CFR 370.20, 370.21, and 370.28).

[redacted]ntant Category: Reason Code: 42
Finding Location: MAIN BUILDING
IFS Number:
*Finding Category: 01 *Positive/Negative Finding: N
*Regulatory/Mgt. Deficiency(R/M): R Repeat ECAS Finding(Y/N)?: N
Existing NOV(Y/N)?: N Recurring NOV(Y/N)?: N
NOV Number:

Was the finding determined to be an immediate threat(Y/N): N
Suggested Corrective Action(s): UNIT WILL PROVIDE UPDATED LISTING TO MSDS INFORMATION TO FIRE DEPARTMENT

Root Cause Code: P1
Finding Comments:

Corrective Action Data - ECAR

Corrective Action Summary:

Corrective Action:

Corrective Action Type: Estimated Cost $ 0
Corrective Action Comments:

Installation Data - ICAP

1383 Project No.: Funding Year:
[redacted]us of Correction: Must Fund:
[redacted]Activity:
Point of Contact:
Suspense Date (MM/DD/YYYY): / /

Installation FFID: OH-210441606 Fiscal Year: 1996

[redacted]nding ID: OH014-005
[redacted]t or Tenant: H

Tenant FFID: - Tenant Category:
*Tenant Name:
Tenant MACOM/HQ:

MUSARC:
BASOPS ARCOM:

Facility/Activity Type: AFRC(MB) - ARMED FORCES RESERVE CENTER - MAIN BLDG
*Manual Section Number: HM Hazardous Materials Management
*Law/Reg: OSHA
Finding Summary:
IMPROPER STORAGE OF POL
Finding Description: STORAGE ROOM IN OMS HAS NOT BEEN CORRECTED TO PROPERLY STORE POL. NO 4" SILL/SECONDARY CONTAINMENT, WALL JOINTS NOT TIGHT (REPAIRS NEEDED), OUTSIDE DOOR NOT SELF-CLOSING, NO AISLE EXITS

*Question Number: HM-035-006- *Regulatory Agency Level: F
*Criteria: Flammable/combustible storage rooms inside of buildings must meet certain specifications (29 CFR 1910.106 (d)(4)).

[redacted]llutant Category: Reason Code: 61
[redacted]ing Location: OMS
[redacted] Number:
*Finding Category: 01 *Positive/Negative Finding: N
*Regulatory/Mgt. Deficiency(R/M): R Repeat ECAS Finding(Y/N)?: N
Existing NOV(Y/N)?: N Recurring NOV(Y/N)?: N
NOV Number:

Was the finding determined to be an immediate threat(Y/N): N
Suggested Corrective Action(s): CONSOLIDATE POL AND STORE IN PROPER MANNER; MAKE RENOVATIONS TO EXISTING POL ROOM

Root Cause Code: E2
Finding Comments:

Corrective Action Data - ECAR

Corrective Action Summary:

Corrective Action:

Corrective Action Type: Estimated Cost $ 0
Corrective Action Comments:

Installation Data - ICAP

1383 Project No.: Funding Year:
Status of Correction: Must Fund:
[redacted]/Activity:
[redacted]t of Contact:
Suspense Date (MM/DD/YYYY): / /
Actual Completion Date (MM/DD/YYYY): / /

TABLE 1-1
SUMMARY OF FINDINGS

INSTALLATION: BLDG 118, GUARD HOUSE Fiscal Year: 1996
[redacted]: OH-2104OH087

SECTION NO.	TITLE	REGULATORY 1	REGULATORY 2	REGULATORY HS	MANAGEMENT POS	MANAGEMENT 3	MANAGEMENT HS	TOTAL
A	Air Emissions	0	0	0	0	0	0	0
C	Cultural Resources	0	0	0	0	0	0	0
HM	Hazardous Materials	0	0	0	0	0	0	0
HW	Hazardous Waste	0	0	0	0	0	0	0
NR	Natural Resource	0	0	0	0	0	0	0
O1	Environmental Impacts	0	0	0	0	0	0	0
O2	Environmental Noise	0	0	0	0	0	0	0
O3	IRP	0	0	0	0	0	0	0
O4	Pollution Prevention	0	0	0	0	0	0	0
O5	Program Management	0	0	0	0	0	0	0
PM	Pesticide	0	0	0	0	0	0	0
PO	POL	1	0	0	0	0	0	1
SO	Solid Waste	0	0	0	0	0	0	0
ST	Storage Tanks	0	0	0	0	0	0	0
T1	PCB	0	0	0	0	0	0	0
T2	Asbestos	0	0	0	0	0	0	0
T3	Radon	0	0	0	0	0	0	0
T4	Lead Based Paint	0	0	0	0	0	0	0
WA	Wastewater	0	0	0	0	0	0	0
W[redacted]	ater Quality	0	0	0	0	0	0	0
	TOTALS	1	0	0	0	0	0	1

Data File Name Prefix: C:\ECAS\DATA\88RSC\88RSC
Date Summary Report Produced: 04/26/96

PO:5.7 #1 I FEDERAL FINDING
MANUAL QUESTION NUMBER: PO-005-007 FINDING ID: 087-001
FINDING CATEGORY: CLASS I
FINDING TYPE: Negative EXISTING NOV: NO
LOCATION: ORDERLY ROOM RECORDS/ FILES
IFS FACILITY NUMBER: BLDG 118
FACILITY TYPE: AFRC(MB) - ARMED FORCES RESERVE CENTER - MAIN BLDG
TENANT NAME: BLDG 118, GUARD HOUSE

FINDING DESCRIPTION: PERSONNEL ARE NOT PROVIDED PERIODIC TRAINING IN SPILL PREVENTION AND RESPONSE REQUIREMENTS.

CRITERIA: All installation/CW facility personnel involved with the management and handling of oil must take part in periodic training in spill prevention and response (40 CFR 112.7(e)(10)).

FINDING COMMENTS:

SUGGESTED/ALTERNATIVE CORRECTIVE ACTION(S): UTILIZE HIGHER HEADQUARTERS STANDARD OPERATING PROCEDURES TO DEVELOP AN SOP THAT IS SPECIFIC TO UNIT OPERATIONS AS DERIVED FROM THE HAZARDOUS MATERIAL MASTER LIST OF MSDS MATERIALS UTILIZED BY THE UNIT FOR TRAINING PURPOSES IN A SPILL PREVENTION AND RESPONSE PLAN.

STATUS OF CORRECTION:

INSTALLATION RESPONSE:
CORRECTIVE ACTION DESCRIPTION: _____

DATE CORRECTIVE ACTION COMPLETED: _____

ESTIMATED DATE CORRECTIVE ACTION TO BE COMPLETED: _____
1383 PROJECT # (IF APPLICABLE): _____

POC: _____ PHONE NUMBER: _____

FINAL

OIL/WATER SEPARATOR EVALUATION REPORT

88th Regional Support Command, Ohio

DATE:	December 4, 1998
CLIENT:	U.S. Army Corps of Engineers, Norfolk District
PROJECT NAME:	Oil/Water Separator Evaluation
PROJECT LOCATION:	Regional Support Command, Ohio Customer Support Team
CONTRACT NUMBER:	DACA 65-96-D-0119, Delivery Order #20
PREPARED BY:	Jones Technologies, Inc.

LIST OF ACRONYMS

CFR	Code of Federal Regulations
CWA	Clean Water Act
GADMOD	GARIS Attribute Data Module
GARIS	Geographic Army Reserve Information System
JTI	Jones Technologies, Inc.
NPDES	National Pollutant Discharge Elimination System
O&M	operation and maintenance
OPA	Oil Pollution Act
OWS	oil/water separator
POTW	publicly owned treatment works
RCRA	Resource Conservation and Recovery Act
RSC	Regional Support Command
USARC	United States Army Reserve Center
UST	underground storage tank

TABLE OF CONTENTS

List of Attachments

1 EXECUTIVE SUMMARY

The 88th Regional Support Command Office of Environmental Management ensures that all Army Reserve mission activities are in compliance with applicable federal, state, local, and Department of Defense environmental laws, procedures, and regulations. This responsibility must be carried forth in a way that will enhance adequate combat training and related mission support, while ensuring sound environmental management.

The continued growth of federal and state environmental laws and regulations has resulted in increased Operations and Maintenance (O&M) responsibility for the Army Reserve over the past 25 years, effectively reducing the available funds to support troop missions and training. Regulatory oversight and changing rule interpretations have added to the burden. In addition, the threat of notice of violation, fine, and civil and/or criminal penalty is a constant concern to military personnel. To address these demands, every effort is being made to produce a reasonable balance among operational support, training requirements, and environmental regulations.

1.1 Project Description

The 88th Regional Support Command, Ohio Customer Support Team requested Jones Technologies, Inc. (JTI) to identify and document each oil/water separator located at Army Reserve facilities throughout Ohio. The separators were installed to support organizational level maintenance activities or area maintenance support activities. Installation dates of the separators varies. Some of the devices were installed at the time of facility construction, while others were added to a facility as requirements for pollution control devices changed. The oil/water separators are used to prevent the discharge of petroleum, oil, and lubricants during maintenance or vehicle washing activities to storm water sewer system, sanitary sewer system, or directly to surface water bodies.

With this tasking, JTI reviewed site plans and utility plans of the facility to identify to the greatest extent possible, storm drainage systems on site as well as any municipal storm system and sanitary system connections. If information regarding municipal storm and/or sanitary system connections was not available on existing plans, JTI contacted the local sewer authority to confirm connections to municipal storm or sanitary sewers.

During the site visit, JTI conducted a survey of the entire property to identify floor drains and storm drains, all associated pretreatment systems such as oil/water separators, grease traps, running traps, grit chambers, or acid neutralizing sumps. In addition, the location of the discharge point for each of the floor drains and storm drains was identified. The data collection phase was performed in accordance with the United States Army Reserve Command's "Floor Drain/Storm Drain Data Gathering Protocol'" dated June 1997. The primary objective of this protocol is to ensure that data on floor drains and storm drains at United States Army Reserve facilities are gathered in a consistent, uniform manner and format.

Finally, JTI entered the information required for all sanitary and stormwater discharges, associated pretreatment systems, and inlets into the Geographic Army Reserve Information System Attribute Data Module (GADMOD) computer program.

1.2 Summary of Status

Jones Technologies, Inc. visited 42 U.S. Army Reserve facilities located throughout Ohio from October 22, 1997 to January 15, 1998. Oil/water separator systems were present at 26 of the 42 U.S. Army Reserve facilities. An oil/water separator system includes a source drain, oil/water separator and discharge point. Accessory features of an oil/water separator system may include a control valve and holding tank to provide flexibility with the system. Table 1-1 provides an overview of the oil/water separator systems at the U.S. Army Reserve facilities.

The configuration, components and condition of the existing oil/water separator systems vary across the state. The source drains for the oil/water separators included vehicle wash facilities, grease racks, and maintenance shops. These drains may be present at either exterior or interior locations. Storm water is an additional consideration when the source drain is at an exterior location.

Nine of the 26 facilities with oil/water separators have a manually operated control valve. In theory, a soldier is to "open" the control valve prior to washing a vehicle at the wash facility. This would allow for oily water to be diverted through an oil/water separator prior to being discharged to the municipal sanitary sewer system. After the vehicle washing activity is completed, the soldier is to "close" the control valve. In this position, the valve would divert any storm water to the storm water sewer system. JTI determined only 22% (2 of the 9) control valve were functioning properly. Most of the control valves could not be turned to the "closed" position. The practice of diverting storm water through an oil/water separator may appear as a safety precaution, however, most of the oil/water separator's located at the U.S. Army Reserve facilities are not designed to handle the excess amount of water.

Six of the 26 oil/water separator systems have a holding tank (i.e. underground storage tank) to provide extra storage capacity for the separator. All six of the holding tanks are approximately 500 gallons in capacity. According to the Ohio Bureau of Underground Storage Tank Regulations (OAC 1301:7-9-02 (52)), these holding tanks meet the definition of an underground storage tank and subject regulations for annual registration, upgrade, and/or release detection.

For 23 of the 26 oil/water separator systems, the discharge points consist of municipal sanitary sewer systems. The wastewater treatment plant will treat the effluent from the oil/water separator systems. Local entities may have enforceable wastewater discharge limitations that regulate discharges to treatment plants. Local limitations often include pH, temperature, and concentrations of various organic and inorganic compounds. Major industrial operations, including the U.S. Army Reserve, which discharge to an offsite treatment plant will be subjected to pretreatment permits issued by the treatment plant, state, or federal agencies.

Table 1-1: Summary of Oil/Water Separator Systems at Army Reserve Facilities Located in Ohio

FACID	CITY	FACILITY	OIL/WATER SEPARATOR PRESENT?	SOURCE DRAIN(S)	CONTROL VALVE PRESENT?	UST PRESENT?	DISCHARGE POINT	NPDES PERMIT REQUIRED?	OWS SYSTEM IN COMPLIANCE?
OH001	Akron	Schaffner USARC	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH002	Akron	Woodford USARC	YES	exterior vehicle wash facility	YES	YES	open: sanitary closed: unknown	NO	NO(1)
OH003	Bellaire	Belmont County Memorial USARC	YES	exterior vehicle wash facility	YES	YES	open: sanitary closed: outfall	NO	NO(1)
OH028	Blacklick	Taylor Station USARTF	YES	interior maintenance shop	NO	NO	sanitary	NO	YES
OH104	Brooklyn	Brooklyn USARC	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH004	Bryan	Knight USARC	YES	exterior vehicle wash facility	YES	NO	open: sanitary closed: storm sewer	NO	NO (2)
OH005	Cadiz	Conaway USARC	YES	exterior vehicle wash facility	NO	NO	sanitary	NO	YES
OH006	Canal Fulton	AMSA #3	YES	interior maintenance shop	NO	NO	outfall	YES	NO (2)
OH007	Canton	Hastings USARC	YES	exterior vehicle wash facility	YES	NO	open: sanitary closed: storm sewer	NO	YES
OH089	Canton	Shepler Church USARC	YES	interior warehouse	NO	NO	sanitary	NO	YES
OH008	Chillicothe	Skaggs USARC	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH009	Cincinnati	Morrow USARC	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH013	Columbus	Fort Hayes USARC	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH014	Columbus	Whitehall USARC	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH078	Columbus	Fort Hayes, Bldg. 300	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH095	Columbus	Rickenbacker ANGB	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH020	Dayton	LaPointe USARC	YES	exterior vehicle wash facility exterior grease rack	NO	NO	sanitary	NO	YES
OH024	Delaware	Delaware USARC	YES	interior maintenance shop	NO	YES	sanitary	NO	NO(1)
OH025	Elyria	Elyria USARC	YES	interior warehouse	NO	NO	sanitary	NO	YES
OH030	Kenton	Parrott USARC	YES	interior maintenance shop	NO	NO	sanitary	NO	YES
OH032	Kings Mills	Kings Mills USARC	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH079	Kings Mills	AMSA #59	YES	interior vehicle wash facility interior maintenance shop	NO	NO	septic system	YES	YES
OH033	Lima	Faze USARC	YES	exterior vehicle wash facility	NO	NO	sanitary	NO	YES
OH037	Mansfield	Scoutin USARC	YES	exterior vehicle wash facility	YES	YES	open: sanitary closed: storm sewer	NO	NO(1)
OH038	Marietta	Washington County Memorial USARC	YES	exterior vehicle wash facility	NO	NO	sanitary	NO	YES
OH039	Marion	Pennington USARC	YES	exterior vehicle wash facility	YES	NO	open: sanitary closed: infiltration	NO	YES
OH044	Milan	Cooney USARC	YES	exterior vehicle wash facility interior maintenance shop	NO	NO	septic system	YES	YES
OH094	Monclova	Toledo USARC	NO	N/A	N/A	N/A	N/A	N/A	N/A

NO (1) - OWS system out of compliance due to UST

NO (2) - OWS system out of compliance due to discharge

Table 1-1: Summary of Oil/Water Separator Systems at Army Reserve Facilities Located in Ohio

FACID	CITY	FACILITY	OIL/WATER SEPARATOR PRESENT?	SOURCE DRAIN(S)	CONTROL VALVE PRESENT?	UST PRESENT?	DISCHARGE POINT	NPDES PERMIT REQUIRED?	OWS SYSTEM IN COMPLIANCE?
OH103	Monclova	AMSA #165	YES	interior maintenance shop	NO	NO	sanitary	NO	YES
OH036	Northfield	AMSA #123	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH049	Parma	Mote USARC	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH058	Sharonville	Outcalt USARC	YES	exterior vehicle wash facility	YES	YES	open: sanitary closed: storm sewer	NO	NO(1)
OH059	Springfield	Downs USARC	YES	exterior vehicle wash facility interior maintenance shop	NO	NO	sanitary	NO	YES
OH060	Tiffin	Tiffin USARC	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH063	Troy	Troy Memorial USARC	YES	exterior vehicle wash facility	NO	NO	sanitary	NO	YES
OH064	Warren	Kunkel USARC	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH066	Warrensville	Huisman USARC	YES	exterior vehicle wash facility	YES	YES	open: sanitary closed: unknown	NO	NO(1)
OH018	Whitehall	88th RSC, CST #3	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH101	Whitehall	AMSA #56	YES	exterior vehicle wash facility interior maintenance shop	NO	NO	sanitary	NO	YES
OH102	Whitehall	DS/GS Training Facility	NO	N/A	N/A	N/A	N/A	N/A	N/A
OH068	Wooster	Ward Memorail USARC	YES	exterior vehicle wash facility	YES	NO	open: sanitary closed: unknown	NO	YES
OH072	Zanesville	Zanesville Memorial USARC	YES	exterior vehicle wash facility interior maintenance shop	NO	NO	sanitary	NO	YES

NO (1) - OWS system out of compliance due to UST
NO (2) - OWS system out of compliance due to discharge

Cooney USARC (Milan) and AMSA #59 (Kings Mills) have a package sewage treatment plant, infiltration gallery, and chlorinator on-site to treat the sanitary sewage, including the effluent from the oil/water separator system. The oil/water separator system at AMSA #3 (Canal Fulton) discharges directly to an open ditch. A National Pollutant Discharge Elimination System (NPDES) permit needs to be obtained for the three aforementioned facilities. A NPDES permit is granted to a direct discharger who permits wastewater discharge to a watercourse in accordance with the conditions of the permit (40 CFR 403.3(1)).

1.3 Recommendations

A summary of the recommendations and alternatives for the oil/water separator systems is included in Table 1-2. Specific cost information listed Table 1-2 is provided in Attachment A. Jones Technologies contacted several manufacturers of oil/water separators. A copy of their product brochures are included Attachment B.

2 REGULATORY ASPECTS

At the Federal level, oil/water separator operation can be affected by the Clean Water Act, Oil Pollution Act, and possibly by Resource Conservation and Recovery Act.

2.1 Clean Water Act

The Clean Water Act (CWA) governs the disposal of wastewater. Authorized State agencies use CWA water quality criteria to develop site-specific permits for the discharge of wastewater to surface water bodies. General pretreatment standards have been developed under the CWA which apply to the discharge of wastewater through Publicly Owned Treatment Works (POTW) and National Pollutant Discharge Elimination System (NPDES) permitted outfalls. The CWA requires POTWs to develop local limits for discharges of nondomestic wastewater to the POTW.

The NPDES permit for wastewater discharge dictates the waste stream sampling protocol. The sampling protocol includes sampling point locations, sampling frequency, sampling parameters, and minimum and maximum concentrations for each outfall. For oil/water separators discharging to a storm drain, a NPDES permit requires periodic sampling to prevent excessive emission to the storm drain. A separate industrial waste permit is typically required for each oil/water separator.

Regulations implementing major portions of the CWA affecting oil/water separators are found in Title 40 Code of Federal Regulations (CFR) Parts 104-149 (Water Programs) and Parts 401-471 (Effluent Guidelines and Standards).

Table 1-2: Summary of Recommendations and Alternatives at Army Reserve Facilities Located in Ohio

FACID	CITY	FACILITY	RECOMMENDATIONS	COST	ALTERNATIVES	COSTS
OH002	Akron	Woodford USARC	1. The control valve should be repaired/replaced for the OWS to function properly. 2. UST should be registered with the Ohio State Fire Marshal. 3. UST tank release detection program should be initiated.	1. $4,500 2. $320 3. $2,750	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH003	Bellaire	Belmont County Memorial USARC	1. The control valve should be repaired/replaced for the OWS to function properly. 2. UST should be registered with the Ohio State Fire Marshal. 3. UST tank release detection program should be initiated.	1. $4,500 2. $320 3. $2,750	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH028	Blacklick	Taylor Station USARTF	1. The contents (water, oil, and solid debris) should be removed. 2. Maintenance personnel should discontinue the practice of performing parts cleaning near the trench drain.	1. $1,500 2. $0	1. None	1. $0
OH004	Bryan	Knight USARC	1. The storm water line should be repaired. 2. The control valve should be repaired/replaced for the OWS to function properly. 3. UST tank release detection program should be initiated.	1. TBD 2. $4,500 3. $2,750	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH005	Cadiz	Conaway USARC	1. The contents (water, oil, and solid debris) should be removed.	1. $1,500	1. None	1. $0
OH006	Canal Fulton	AMSA #3	1. Obtain and comply with an NPDES permit. 2. Develop a program to periodically inspect the condition of the OWS system, especially the cracks in concrete blocks. 3. The contents (water, oil, and solid debris) of the OWS should be removed.	1. $4,220 2. $920 3. $1,500	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500

Table 1-2: Summary of Recommendations and Alternatives at Army Reserve Facilities Located in Ohio

FACID	CITY	FACILITY	RECOMMENDATIONS	COST	ALTERNATIVES	COSTS
OH007	Canton	Hastings USARC	1. The control valve should be repaired/replaced for the OWS to function properly.	1. $4,500	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH089	Canton	Shepler Church USARC	1. The contents (water, oil, and solid debris) should be removed.	1. $1,500	1. None	
OH020	Dayton	LaPointe USARC	1. OWS needs repaired - baffles missing.	1. $1,200	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH024	Delaware	Delaware USARC	1. UST should be registered with the Ohio State Fire Marshal. 2. UST tank release detection program should be initiated.	1. $320 2. $2,750	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH025	Elyria	Elyria USARC	1. None	1. $0	1. None	1. $0
OH030	Kenton	Parrott USARC	1. None	1. $0	1. None	1. $0
OH079	Kings Mills	AMSA #59	1. Develop a program to periodically inspect the condition of the OWS system, especially the high-level indicator alarm. 2. The contents (water, oil, and solid debris) of the OWS should be removed.	1. $920 2. $1,500	1. None	1. $0
OH033	Lima	Faze USARC	1. The contents (water, oil, and solid debris) should be removed.	1. $1,500	1. None	1. $0

Table 1-2: Summary of Recommendations and Alternatives at Army Reserve Facilities Located in Ohio

FACID	CITY	FACILITY	RECOMMENDATIONS	COST	ALTERNATIVES	COSTS
OH037	Mansfield	Scoutin USARC	1. The control valve should be repaired/replaced for the OWS to function properly. 2. UST should be registered with the Ohio State Fire Marshal. 3. UST tank release detection program should be initiated. 4. The contents (water, oil, and solid debris) should be removed.	1. $4,500 2. $320 3. $2,750 4. $1,500	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH038	Marietta	Washington County Memorial USARC	1. OWS needs repaired - baffles missing. 2. The contents (water, oil, and solid debris) should be removed.	1. $1,200 2. $1,500	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH039	Marion	Pennington USARC	1. None	1. $0	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH044	Milan	Cooney USARC	1. The contents (water, oil, and solid debris) should be removed. 2. Excavate soil above OWS to obtain access for further evaluation of system.	1. $1,500 2. $2,580	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH103	Monclova	AMSA #165	1. The contents (water, oil, and solid debris) should be removed.	1. $1,500	1. None	1. $0
OH058	Sharonville	Outcalt USARC	1. UST should be registered with the Ohio State Fire Marshal. 2. UST tank release detection program should be initiated.	1. $320 2. $2,750	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500

Table 1-2: Summary of Recommendations and Alternatives at Army Reserve Facilities Located in Ohio

FACID	CITY	FACILITY	RECOMMENDATIONS	COST	ALTERNATIVES	COSTS
OH059	Springfield	Downs USARC	1. None	1. $0	1. None	1. $0
OH063	Troy	Troy Memorial USARC	1. The pipe between the vehicle wash facility and OWS should be repaired.	1. $2,750	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH066	Warrensville	Huisman USARC	1. The control valve should be repaired/replaced for the OWS to function properly. 2. UST should be registered with the Ohio State Fire Marshal. 3. UST tank release detection program should be initiated.	1. $4,500 2. $320 3. $2,750	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH101	Whitehall	AMSA #56	1. None	1. $0	1. None	1. $0
OH068	Wooster	Ward Memorail USARC	1. The control valve should be repaired/replaced for the OWS to function properly.	1. $4,500	1. Remove existing OWS system and replace with a grit trap connected to sanitary sewer system. 2. Remove existing OWS system and replace with a new OWS system. 3. Remove vehicle wash facility and OWS system.	1. $10,250 2. $20,500 3. $7,500
OH072	Zanesville	Zanesville Memorial USARC	1. The contents (water, oil, and solid debris) should be removed.	1. $1,500	1. None	1. $0

2.2 Oil Pollution Act

The Oil Pollution Act (OPA) establishes liability for removal costs and damages for those parties responsible for a vessel or facility from which oil is discharged, or which poses the substantial threat of discharge of oil, into or upon navigable waters or adjoining shorelines or the exclusive economic zone.

Regulations implementing portions of the OPA which could affect oil/water separators include Title 40 CFR Part 110, "Discharge of Oil," and Part 112, "Oil Pollution Prevention." Title 40 CFR Part 112 establishes requirements for the preparation and implementation of Spill Prevention Control and Countermeasure Plans.

2.3 Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) establishes the requirements to regulate and control the generation, treatment, storage, transportation, and disposal of solid and hazardous wastes. RCRA also establishes requirements to regulate underground storage tanks containing certain substances, including oil and hazardous wastes. RCRA can have serious impacts on use of oil/water separators in several ways.

Underground oil/water separators and/or their holding tanks can be designated as regulated underground storage tanks due to the oil contained in holding reservoirs or tanks. This can impose stringent controls and management and reporting requirements under Title 40 CFR Part 280, "Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (UST)," which include physical requirements such as double walls or linings, leak detection devices, and monitoring wells.

Oil/water separator sludge and oils can become contaminated with solvents, halogens, and/or metals if improperly used. A leaking oil/water separator containing these hazardous wastes can result in designation as a solid waste management unit and be subject to corrective actions under RCRA regulations found in Title 40 CFR Subpart F, "Releases from Solid Waste Management Units." Corrective actions generate numerous investigative and potential cleanup requirements, not to mention possible notices of violation.

2.4 State and Local

State and local regulatory activities may have additional requirements more stringent than Federal levels.

3 OVERVIEW OF OIL/WATER SEPARATOR SYSTEMS

Oil/water separators are devices commonly used as a method to separate oily waste products from wastewater streams. They are typically installed in industrial and maintenance areas to receive and separate oils at low concentrations from wastewater generated during industrial processes such as vehicle maintenance and washing. However, oil/water separators are not

automatic insurance that will guarantee oils will not enter a storm water drainage system or sanitary sewer system. Oil/water separators are not designed to separate high concentrations of oil such as from a spill or pouring waste oil down the drain.

3.1 Operation of an Oil/Water Separator

Oil/water separators use several techniques, depending on the type and application or intended use of the separation system. The performance of these systems is based primarily on the relatively low solubility of petroleum products in water and the difference between the specific gravity of water and the specific gravity of petroleum compounds. Gravity oil/water separators are not designed to separate other products such as solvents, detergents, or metals. The illustration below represents a very simple example of the separation phases in a gravity oil/water separator.

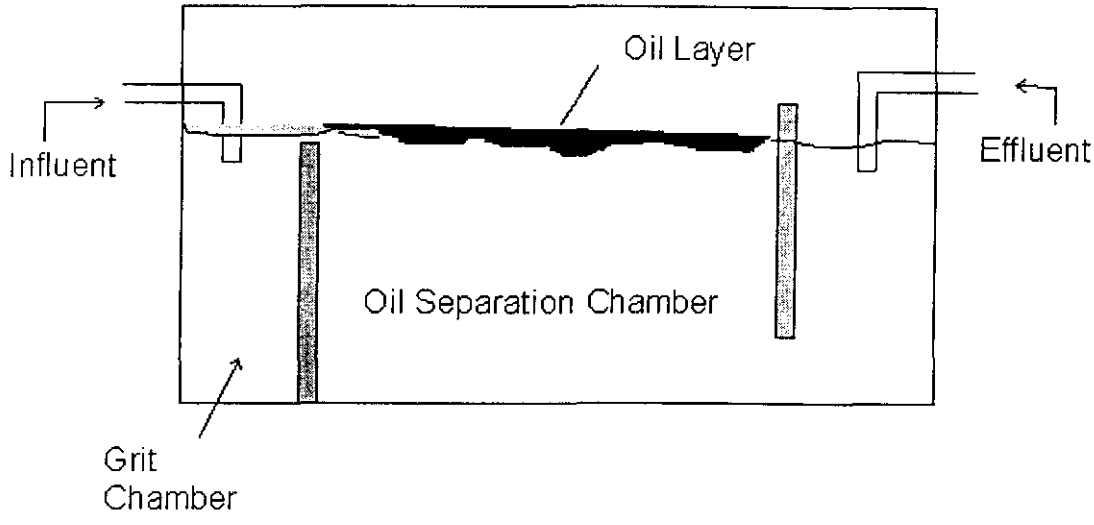


Figure 3-1: Oily wastewater influent is introduced to the inlet of the separator. The first baffle stabilizes water turbulence and solids are settled and accumulated as sludge in the bottom of the separator. As the wastewater flows to the second chamber located at the center of the separator, oil droplets rise to the top of the water and are prevented from exiting by a second baffle. Thus, as illustrated, solid sludge heavier than water can be collected and oil droplets lighter than water can be accumulated on top of the wastewater and routed to a holding chamber or tank

3.2 Factors Affecting Oil/Water Separator Performance

The basic operation of an oil/water separator is simple; however, many factors will have direct effects on its efficiency. The following elements have a direct impact on the efficiency, use, and management of oil/water separators:

3.2.1 Frequency and Intensity

The longer the residence time of the waste stream in the oil/water separator, the more efficient it will be at separating oil. Contaminated water enters a receiving chamber of the separator where the flow rate of the wastewater is reduced allowing heavy solids to settle while larger oil droplets float to the top of the compartment. Further separation continues in the separation chamber where smaller droplets of oil separate from the water and join the larger droplets previously separated. The oil layer, which has accumulated on the top of the water spills over an oil skimmer into a holding area and the wastewater then, flows, or is pumped, to the storm water or sanitary sewer system. A longer separation time increases the efficiency of the oil/water separator by allowing a greater amount of oil to rise to the top of the wastewater. Therefore, decreasing the wastewater flow rate through the separator will increase the efficiency of the separator.

3.2.2 Design Capacity

An oil/water separator has a finite capacity for storage of oils and sludge accumulated during its operation. Quite often the oil/water separator holding compartments can become saturated or full, allowing contamination to flow freely into the wastewater effluent exiting the separator system. Ensuring the separator capacity meets the needs of the process will aid separation efficiency.

3.2.3 Emulsifying Agents

Detergents and soaps designed to remove oily grime from dirty weapon systems, vehicles, or other components can adversely affect oil/water separator operation. These agents are designed to increase solvency of oily grime in water. Hence, the oil droplets take longer to separate from water reducing separation efficiency. Overzealous use of detergents can degrade efficiency by completely emulsifying oil in the wastewater stream, thus allowing it to pass through the oil/water separator unaffected.

3.2.4 Periodic Maintenance Practices

Sludge and oils, which are not periodically pumped from separator holding tanks, can render it inoperative. Additionally, leaks from oil/water separators can result in environmental pollution, which can potentially require investigative studies and extensive cleanup. A periodic maintenance plan can prevent contaminated discharges from the oil/water separator system.

3.2.5 Type of Oil/Water Separator System

An oil/water separator designed and installed for a past mission requirement may not be suitable for present maintenance operations. These units are susceptible to unnoticed abuse by maintenance activities. A wash rack with an oil/water separator designed to capture contaminants from a small vehicle will not handle larger wastewater volumes from a larger vehicle. Additionally, mission changes can result in changes in the effluent characteristics of

the wastewater being discharged to an oil/water separator (i.e., wastewater with solvents or emulsification versus oil). Mission conversions can necessitate modification of storm water/wastewater drainage systems. Oil/water separators not having a storm water diversion system that allows storm water to be diverted from the separation system can also impair efficiency.

3.2.6 Contaminants Contained in the Wastewater Stream

Heavy metals and dirt in the wastewater will settle into the sludge at the bottom of the oil/water separator receiving compartments. The sludge could be regulated as a hazardous waste if levels exceed Resource Conservation and Recovery Act (RCRA) or State hazardous waste levels. Solvents or fuels may also be retained in oil/water separator sludge.

4 EXPLANATION OF STATUS REPORTS

Jones Technologies, Inc. has prepared a "Status Report" for each of the Army Reserve facilities with oil/water separators. Each report details the condition of the oil/water separator, provides recommendations concerning the continued operation of the separator. In addition, at least one photograph of the discharge location (if an outfall to a surface water body) and a computer-generated diagram of each oil/water separator with respect to its location on the facility and the connections to the system. The diagrams were completed utilizing the nomenclature guidelines set forth by the Tri-Services Commission. Building, floor drain, storm drain, sanitary lines, storm water lines, associated pretreatment systems, and discharges were identified in accordance with the United States Army Reserve Command's "Floor Drain/Storm Drain Data Gathering Protocol'" dated June 1997.

The following is a brief explanation of the sections in each of the Status Reports located in Attachment C. When appropriate, JTI used the same terminology as the database support software (see Section 5).

4.1 Facility

The name and address of the facility is listed.

4.2 Location of Oil/Water Separator

A brief narrative description is provided including where the oil/water separator is located at the site and how it can be identified at the surface.

4.3 Source Drains

This section is a brief narrative description of the floor and/or storm drains that supply the oily water to the separator. If the drain is located at a vehicle wash facility or inside a maintenance shop, it is also noted in this section.

4.3.1 Potential Contaminants

This is a narrative description of the types of contaminants that could potentially enter the drain based upon the proximity of the contaminant and the design of the inlet. Typical potential contaminants include: antifreeze; battery acid; degreasing solvents; diesel fuel; fuel oil; gasoline; hazardous waste; petroleum, oil, and lubricants; unknown; and waste oil.

4.4 Discharge

This section is a narrative description describing the discharge location of the oil/water separator system, which includes the source drain, control valve, and the separator. If a system had a control valve, the discharge of the source drain and oil/water separator is discussed. However, field verification of the discharge was not always possible due to several factors: malfunctioning control valves, excess silt in source drain, and broken buried lines. JTI has noted where these difficulties were encountered.

4.5 Oil/Water Separator Data

This is information specific about the oil/water separator.

4.5.1 Status

Based on a database support software picklist. Options include: blocked, currently in use, potentially operational, and removed from service.

4.5.2 Size

Provides the physical dimensions (in feet) of the oil/water separator, including the depth.

4.5.3 Total Capacity

Provides the total volume (in gallons) of the oil/water separator.

4.5.4 Oil Storage Capacity

Provides the volume (in gallons) of oil the oil/water separator or oil holding tank is capable of storing.

4.5.5 Construction Materials

Based on a database support software picklist. Options include: steel, wood, PVC. A few reports have "concrete" listed since no units are currently assigned to the facility. This description will have to be added to the database support software.

4.5.6 Condition

Based on a database support software picklist. Options include: good condition, needs maintenance, and fair condition.

4.5.7 Level of Use

Based on a database support software picklist. Options include: daily, weekly, monthly. A few reports have "never" listed since no units are currently assigned to the facility.

4.5.8 Maintenance Schedule

Provides information regarding the current level of liquid in the oil/water separator and the date of last cleaning, if known.

4.5.9 Control Valve

A brief narrative description of the control valve, if present.

4.5.10 Oil Holding Tank

A brief narrative description of the oil holding tank, if present.

4.6 Regulatory Compliance Status

Based on a database support software picklist. Options include: could not be determined, in compliance, out of compliance, and potentially out of compliance. Regulatory citations are provided in this section if the oil/water separator system is out of compliance and potentially out of compliance.

4.7 Recommendations

Jones Technologies, Inc. has provided a list of actions required to make the oil/water separator system function properly or to bring the system into compliance. Additional discussion of the recommendations is located in Section 1.3 of this report.

4.8 Alternatives

Several alternatives that may be implemented to upgrade the operations of the oil/water separator are described. Additional discussion of the alternatives is located in Section 1.3 of this report.

5 DATABASE SUPPORT

Geographic Army Reserve Information System (GARIS) is an information management tool for the environmental and facilities management of, and master planning for, Army Reserve facilities. GARIS Attribute Data Module (GADMOD) is a data/metadata entry application that provides for direct input of the floor drain/storm drain survey results into database tables for subsequent upload to the host database system.

At the request of the 88th Regional Support Command, Ohio Customer Support Team, JTI used GADMOD to capture field data in an electronic format. A large number of data elements (i.e. floor drains, storm drains, associated pretreatment systems, and discharge points) are selected from "picklists" so that a minimal amount of keying in is necessary. Data entry screens for capturing metadata (i.e. data about the data) are also included in GADMOD. To simplify entry, metadata fields are divided into five categories: common, facility specific, source, field survey, and graphic. A copy of the GADMOD User Guide is included Attachment D.

This facility does not have an oil/water separator.

OH0184

OH0141

CROSSCONNECTION/BACKFLOW PREVENTION PROGRAM

FOR

THE 88TH REGIONAL SUPPORT COMMAND FACILITIES IN OHIO

Prepared for:

U.S. ARMY CORPS OF ENGINEERS
Louisville District
Louisville, Kentucky

Prepared by:

DODSON-STILSON, INC.
Columbus, Ohio

January 31, 1997

Contract No. DACW27-96-D-0035 **Delivery Order No. 0001**

TABLE OF CONTENTS

i. EXECUTIVE SUMMARY

This study was undertaken by request of the Louisville Corp. of Engineers and the 88th Support Command. The purpose of the study was to survey the USARC sites in the state of Ohio, to locate and identify the occurrences of cross-connection protection code violations and make the appropriate backflow prevention device recommendations to correct these deficiencies.

The majority of the sites in the scope of work should have additional cross-connection protection. The most common need is protection for hose bibbs and wall hydrants. The recommendation for these devices is an inexpensive add-on that attaches to the device. Another common deficiency is the make-up water connections to the mechanical systems, many of these connections are unprotected in many buildings. A Reduced Pressure Principle Backflow Preventer is recommended in those cases. All existing devices as well as those recommended should be tested every year and some specific models should be cleaned or rebuilt at regular intervals. The records of the inspections should be maintained yearly and a copy sent to the water provider.

The most serious violation of all the sites was at the Fort Hayes USARC. In building 116 there is a water meter pit that contains an 8" incoming water line from Cleveland Avenue which serves as the main water source for what was once the entire Fort Hayes complex. The meter pit also has a 12" diameter sump about 2' deep in the floor with an eductor (a non-electrically operated sump pump). The water supply to operate the eductor's float control was connected (hard piped) with a 1" diameter galvanized pipe threaded into the 8" water main down stream of the two water meters. The eductor's discharge line was directly connected into what appears to be an 8" hub and spigot sanitary or storm sewer line running north and south thru the meter pit. This is a severe cross-connection problem without any backflow protection device to protect the city of Columbus' water supply, or the downstream connected consumers and needs immediate attention.

The applicable codes for each of the sites in the study were obtained and are located in Chapter 6, "OHIO CROSS-CONNECTIONS AND BACKFLOW PREVENTION CODES." This chapter the includes national, state and local water supplier regulations that apply. Each facility was inspected and the potential cross-connection violations were identified.

Diagrams for each facility were included in Chapter 4, "OHIO RESERVE SITES", indicating the location of the potential cross-connection locations requiring inspections and/or backflow prevention devices. Diagrams distinguish between where devices are required by regulation and where they are recommended by the Corps of Engineers. Recommendations for the type of backflow prevention device that should be installed at each specific location where required to meet state and local regulations are located on the diagrams. A cost estimate for purchasing and installing each device is also included in the chapter.

A summary table of the location, model number, cleaning schedule, rebuilding schedule of the existing backflow prevention devices was listed in Chapter 5, "SUMMARY OF EXISTING BACKFLOW PREVENTERS." Ohio EPA's sample forms for inspection of existing backflow preventers were included in Chapter 3, "CROSS-CONNECTION/BACKFLOW PREVENTION PROGRAM." A database is included, showing facility, facility id number, building number, address, water provider, point of contact at the water provider in charge of backflow compliance, the contact's phone number, the units, type, model number, date of installation, date of last inspection, inspection frequency, and room for additional notes per site. The database is in Chapter 8, "DATABASE OF BACKFLOW DEVICES AT EACH FACILITY".

ii. INTRODUCTION

This study was undertaken at the request of Gary Meden of the Louisville District of the US Army Corps of Engineers, Geotechnical and Environmental Engineering Branch, and Mike Gretchen of the 88th Regional Support Command (RSC).

The purpose of this study is to establish a cross-connection/backflow prevention program for 29 military reserve centers in Ohio. The intent is to prevent any significant risk to human health from potential backflow from the facilities into the public water supply and to conform to State and Local regulations pertaining to cross-connections and backflow prevention devices.

Dodson-Stilson wishes to thank the Corps of Engineers and the 88th Regional Support Command for the privilege of assisting them in this survey. We would be glad to provide further services as the need arises.

iii. ABBREVIATIONS LIST

AMER.	AMERICAN
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
ASSE	AMERICAN SOCIETY OF SANITARY ENGINEERS
ATM.	ATMOSPHERIC
AWWA	AMERICAN WATER WORKS ASSOCIATION
BLDG.	BUILDING
BKR.	BREAKER
CAD	COMPUTER AIDED DRAFTING
CERT.	CERTIFIED
DHW	DOMESTIC HOT WATER
DIFF.	DIFFERENCE
EPA	ENVIRONMENTAL PROTECTION AGENCY
FPWH	FROST PROOF WALL HYDRANT
GPM	GALLONS PER MINUTE
HT	HEIGHT
H.W.	HOT WATER
MFG	MANUFACTURER
NA	NOT APPLICABLE
NO.	NUMBER
OEPA	OHIO ENVIRONMENTAL PROTECTION AGENCY
OBBC	OHIO BASIC BUILDING CODE
PSI	POUNDS PER SQUARE INCH
PSID	POUNDS PER SQUARE INCH DISPLACEMENT
QTY	QUANTITY
RM.	ROOM
STD.	STANDARD
VAC.	VACUUM

1.0 CODE REQUIREMENTS

There are three categories of codes pertaining to cross-connections and backflow: national, state, and local. The national standards are manufacturer's standards and ASSE (The American Society of Sanitary Engineers). Manufacturer's standards are developed from years of experience, and have been adopted as guidelines for the industry. The state codes in Ohio are the OBBC (The Ohio Basic Building Code) and OEPA (The Ohio Environmental Protection Agency). The local communities that have regulations in addition to the state codes are the cities of Akron, Bryan, Canton, Cleveland, Columbus, Marietta, Springfield, Warren, Zanesville, and Montgomery and Warren Counties. In some cases, the local communities did not adopt any addition regulations in addition to the national and state codes.

Dodson-Stilson contacted the water provider for every site to obtain the codes for each area. The persons in charge of compliance with the backflow and cross-connection regulations, and a phone number where they can be reached are listed in the database of Chapter 8 "DATABASE OF BACKFLOW DEVICES AT EACH FACILITY". Any standards beyond the Ohio EPA's standard are listed in Chapter 6 "OHIO CROSS-CONNECTION AND BACKFLOW CODES" of this report.

The American Society of Sanitary Engineers has published a standard which is referenced by most of the codes. It sets minimum requirements for meeting certain classifications of protection. The Ohio Basic Building Code, sometimes refered to as the Administrative Code, is a code that should be followed for the types of buildings surveyed for this study. It lists a few guidelines that should be observed, but is not as extensive as the OEPA regulations. The Ohio Environmental Protection Agency has published a guideline which should be followed for all backflow preventers in the State of Ohio. The rules for what type of device should be used in each case, the procedures for testing, the frequency of testing and how to deal with special cases are listed. Chapter 6 "LISTING OF CODES" contains the requirements of these codes.

2.0 INSPECTION OF THE FACILITIES

Two teams were formed to go throughout the state and investigate each of the sites. Both teams were led by design engineers fully knowledgeable of the cross-connection and backflow prevention codes in Ohio. Each team included a CAD (Computer Aided Drafting) technician to assist in site inspections and do the necessary drafting on the sites surveyed.

The procedure the teams used while inspecting each site was as follows:

> After arriving at the site, the facilities representative was contacted. A sketch of the general layout of the building was made for reference of collected information. All observed cross-connection and backflow situations were recorded. The cross-connections were found at plumbing fixtures or connections to mechanical systems located throughout the building in rooms such as, but not limited to, kitchens, toilet rooms and boiler rooms. Existing backflow preventers and their locations were also noted. Any hose-bibbs or wall hydrants, their locations and whether or not they were protected from back siphonage were also noted.

3.0 CROSS-CONNECTION/BACKFLOW PREVENTION PROGRAM

Proper protection against backflow and back-siphonage is important for the health of the inhabitants of the building as well as the general public. It is the joint responsibility of the regulatory agencies, the water provider, and the water consumer to keep the water supply clean. For the water consumer, the responsibilities in the cross-connection/backflow prevention program are as follows:

> The water consumer should have periodic surveys made of the water system to determine if there are any cross-connections. Then check to see if they are protected, or can be eliminated. All plumbing regulations should be followed concerning the potable water system. The consumer is responsible for maintaining all backflow prevention devices in proper working order and for reporting to the water supplier the testing and maintenance records.

The Ohio EPA states minimum time intervals for testing of the different types of backflow prevention devices. The higher degree of hazard involved, the more frequent the inspections should occur. More frequent inspections than the minimum mentioned by the Ohio EPA should be done for higher hazard situations. The minimum testing for air gaps, Double Check Valve Backflow Preventers, Reduced Pressure Principle Backflow Preventers, and Atmospheric Vacuum Breakers is once a year. Double Check Valve Backflow Preventers need to be cleaned at least every 30 months. Reduced Pressure Principle Backflow Preventers need to be rebuilt at least every 5 years. All inspections should be performed by a registered plumber who certified to do inspections. All cross-connection protection devices should either be rebuilt or replaced immediately if they do not pass the inspections.

The cost to have a Double Check Valve Backflow Preventer or Reduced Pressure Backflow Preventer tested varies with the size and location. For example a 3/4" Reduced Pressure Principle Backflow Preventer inspection would cost approximately $90 to $100 in 1997 dollars, but could cost more in cities with more stringent inspector certification requirements, or where the inspector would need to travel further to get to the site. The cost to test an air gap would be much less, because it only takes a simple visual inspection, and filling out of paper work. Typical costs for the cleaning of a Double Check Valve Backflow Preventer are approximately $180 for a 2", and $300 for a 4", both figures in 1997 dollars. The rebuilding of a 3/4" Reduced Pressure Principle Backflow Preventer could range from $100 to $250 in 1997 dollars depending on the condition of the device. A cost for travel and setup for the registered plumber must also be considered and would vary on location. Travel time for a typical plumber is usually around $50/hr. in 1997 dollars. Chapter 4, "OHIO RESERVE SITES" contains cost estimates for each type of cross-connection or backflow device required at the various sites.

On the following pages are sample forms from the Ohio EPA for inspections:

SUGGESTED FORM
Report on Inspection, Tests and Maintenance

VACUUM BREAKERS

Type of Device Mfg. Model Serial No. Size	Location of Device	Ht. Above Highest Outlet	External Inspection	Initial Test (psi)		Internal Inspection	Cleaned	Repaired	Final Test (psi)	
				Air Inlet Opening	Check Valve Diff.				Air Inlet Opening	Check Valve Diff.

Inspector _____ Cert. Tester No. _____ Date _____
(signature)

CERTIFICATION

I hereby certify that the foregoing report is correct and that the following statement is true:

The vacuum breakers have been in constant use at these locations during the entire prescribed interval between tests, and during that period these devices were not bypassed, made inoperative or removed without proper authorization. All defects found during the operating period or during inspections or tests of these devices were satisfactorily corrected without delay.

Company _____ Signature _____

Address _____ Print Name _____

_____ Title _____

Date _____

Suggested form from the OEPA

SUGGESTED FORM
Report on Inspection, Tests and Maintenance
REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION DEVICE

Type of Device _____ Model _____

Size _____ Date Installed _____

Location of Device _____ Service No. _____

	Check Valve No. 1	Check Valve No. 2	Differential Pressure Relief Valve
Initial Test	Apparent static drop ____ psid Leaked? Yes ( ) No ( ) Actual static drop _____ psid	Leaked ( ) Closed Tight ( )	Opened at _____ psid Did not open ( )
Describe Repairs			
Materials Used			
Final Test	Apparent static drop ____ psid Actual static drop _____ psid	Closed Tight ( )	Open at _____ psid

Inspector _____ Cert. Tester No. _____ Date _____
(signature)

CERTIFICATION

I hereby certify that the foregoing report is correct and that the following statement is true:

The reduced pressure principle backflow prevention device has been in constant use at this location during the entire prescribed interval between tests and during that period this device was not bypassed, made inoperative or removed without proper authorization. All defects found during the operating period or during inspections or tests of the device were satisfactorily corrected without delay.

Company _____ Signature _____

Address _____ Print Name _____

_____ Title _____

Date _____

Suggested form from the OEPA

SUGGESTED FORM
Report on Inspection, Tests and Maintenance
LOW PRESSURE CUT-OFF DEVICE AND
MINIMUM PRESSURE SUSTAINING VALVE

Location of Cut-off Device: _____

Size of Service: _____

Pump Rating : _____ gpm	Initial Test	Final Test	
The pump automatically cut off at	_____	_____	psig
Is a minimum pressure sustaining valve installed after the pump?	_____	_____	yes/no
Did the minimum pressure sustaining valve operate properly before pump cut off?	_____	_____	yes/no/NA
Did the pump remain off until manually restarted?	_____	_____	yes/no
Did the pump turn on with manual restart?	_____	_____	yes/no

Describe repairs:

Inspector signature _____

Printed name _____ Date _____

CERTIFICATION

I hereby certify that the foregoing report is correct and that the following statement is true:

This low pressure cut-off device and minimum pressure sustaining valve (if installed) have been in constant use at this location during the entire prescribed interval between tests and during that period this device was not bypassed, made inoperative and removed without proper authorization. All defects found during the operating period or during inspections or tests of the device were satisfactorily corrected without delay.

Company _____ Signature _____

Address _____ Print Name _____

_____ Title _____

Date _____

Suggested form from the OEPA

INTERCHANGEABLE CONNECTION

Type of Device _____

Location of Device _____

Date Installed _____ Service No. _____

I hereby certify that the interchangeable connection described above was inspected by me on _____ and the following findings were made:
(date)

_____ Yes _____ No — The device has been properly installed in accordance with approved plans and has not been relocated, removed, or bypassed.

_____ Yes _____ No — The reduced pressure principle backflow prevention device installed as part of this interchangeable connection has been tested for tightness and proper operation (report attached).

Inspector _____ Cert. Tester No. _____ Date _____

CERTIFICATION

I hereby certify that the foregoing report is correct and that the following statement is true:

The interchangeable connection has been in constant use at this location during the entire prescribed interval between inspection periods and during that period this device was not bypassed or otherwise made ineffective.

Company _____ Signature _____

Address _____ Print Name _____

_____ Title _____

Date _____

Suggested form from the OEPA

SUGGESTED FORM

Report on Inspection, Tests and Maintenance

DOUBLE CHECK VALVE ASSEMBLY

Type of Device _____ Model _____

Size _____ Serial No. _____ Date Installed _____

Location of Device _____ Service No. _____

	Check Valve No. 1	Check Valve No. 2
Test Before Repair	Leaked ( ) Closed Tight ( )	Leaked ( ) Closed Tight ( )
Describe Repairs		
Materials Used		
Final Test	Closed Tight ( )	Closed Tight ( )

Inspector _____ Cert. Tester No. _____

(signature) Date _____

CERTIFICATION

I hereby certify that the foregoing report is correct and that the following statement is true:

The double check valve assembly has been in constant use at his location during the entire prescribed interval between test periods and during that period this assembly was not bypassed, made inoperative or removed without proper authorization. All defects found during the operating period or during tests of the assembly were satisfactorily corrected without delay.

Company _____ Signature _____

Address _____ Print Name _____

_____ Title _____

Date _____

Suggested form from the OEPA

SUGGESTED FORM
Report on Inspection
AIR GAP SEPARATION

Location of Device _____

Date Installed _____ Service No. _____

I hereby certify that the air gap separation described above was inspected by me on _____ and the following findings were made:
(date)

_____ Effective diameter of the supply pipe or opening.

_____ Near wall distance, if present.

_____ Height of supply opening above the flood level rim.

____ ____ Required minimum air gap separation is provided.
Yes No

____ ____ Air gap separation is not being bypassed.
Yes No

____ ____ No evidence that arrangements have been made to bypass the air
Yes No gap separation.

Inspector _____ _____
(signature) (printed name)

CERTIFICATION

I hereby certify that the foregoing report is correct and that the following statement is true:

The air gap separation has been in constant use at the location during the entire prescribed interval between inspections and during the period this device was not bypassed or otherwise made ineffective.

Company _____ Signature _____

Address _____ Print Name _____

_____ Title _____

Date _____

Suggested form from the OEPA

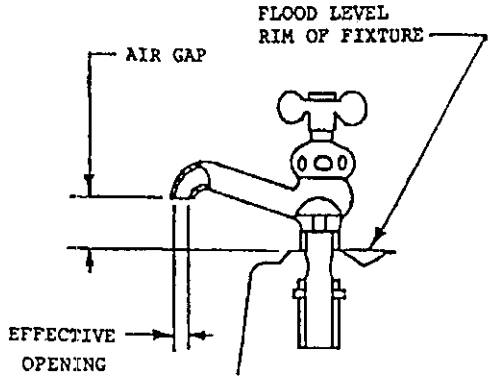
4.0 OHIO RESERVE SITES

The following table and photos describe the device or method, service and reference standards:

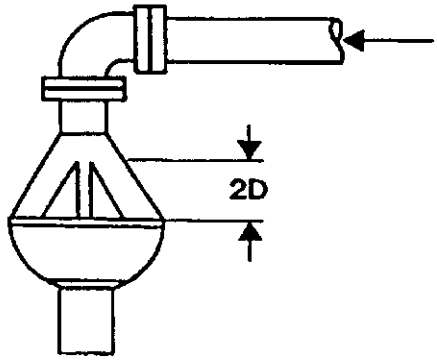
Backflow Preventers - Types

TYPE	DEVICE/METHOD	DESCRIPTION	SERVICE	REF. STD.
#1	Air Gap (All Hazard) 2 Times the Pipe Diameter - Not Less Than 2"	Physical separation of the piping system.	Air Gap	ANSI 112.1.2 - 1973
#2	Reduced Pressure Principle Backflow Preventer (High Hazard)	Two independently-acting check valves with a hydraulically operated relief means, two tightly closing shut-off valves and four test cocks.	Boiler FW Make-up	ASSE 1013-71
#3	Atmospheric Vacuum Breaker (Moderate to High Hazard)	A check valve member and an air vent valve that is normally closed when the device is pressurized and open when the inlet pressure is atmospheric.	Kitchen & Service Sinks	ASSE 1001-82
#4	Atmospheric Vacuum Breaker (Moderate Hazard)	A check valve member and an atmospheric vent valve.	Hose Bibb	ASSE 1011-82
#5	Pressure Type Vacuum Breaker with Intermediate Atmospheric Vent (Moderate Hazard)	Two independently-acting check valves with an intermediate relief valve.	Existing to Remain	ASSE 1012-72
#6	Double Check Valve Assembly (Low Hazard)	Two independently-acting check valves, two isolation valves and four test cocks.	Limited Area F.P.	ASSE 1015-72
#7	Double Check Detector Assembly	Two check valves installed in parallel with a bypass meter to detect low flows up to three gpm and an ASSE 1013 device	Fire Protection (Bldgs.)	ASSE 1048
#8	Inline Vacuum Breaker	Two independently-acting check valves with a means for automatically venting to atmosphere.	In-Line Ice Machines	ASSE 1035

This table is repeated in Chapter 7 for reference.

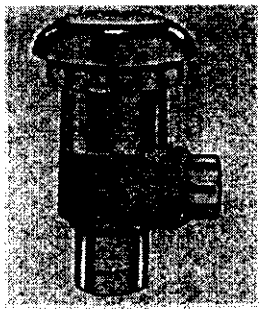


TYPE 1
Air Gap on a Faucet
ASSE #1021



TYPE 1
Air Gap in a Pipe
ASSE #1021

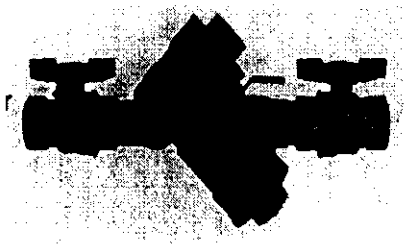
TYPE 2
Reduced Pressure Principle
Backflow Preventer
ASSE #1013



TYPE 3
Pipe Applied
Atmospheric Type
Vacuum Breaker
ASSE #1011

TYPE 4
Hose Connection
Vacuum Breaker
ASSE #1011

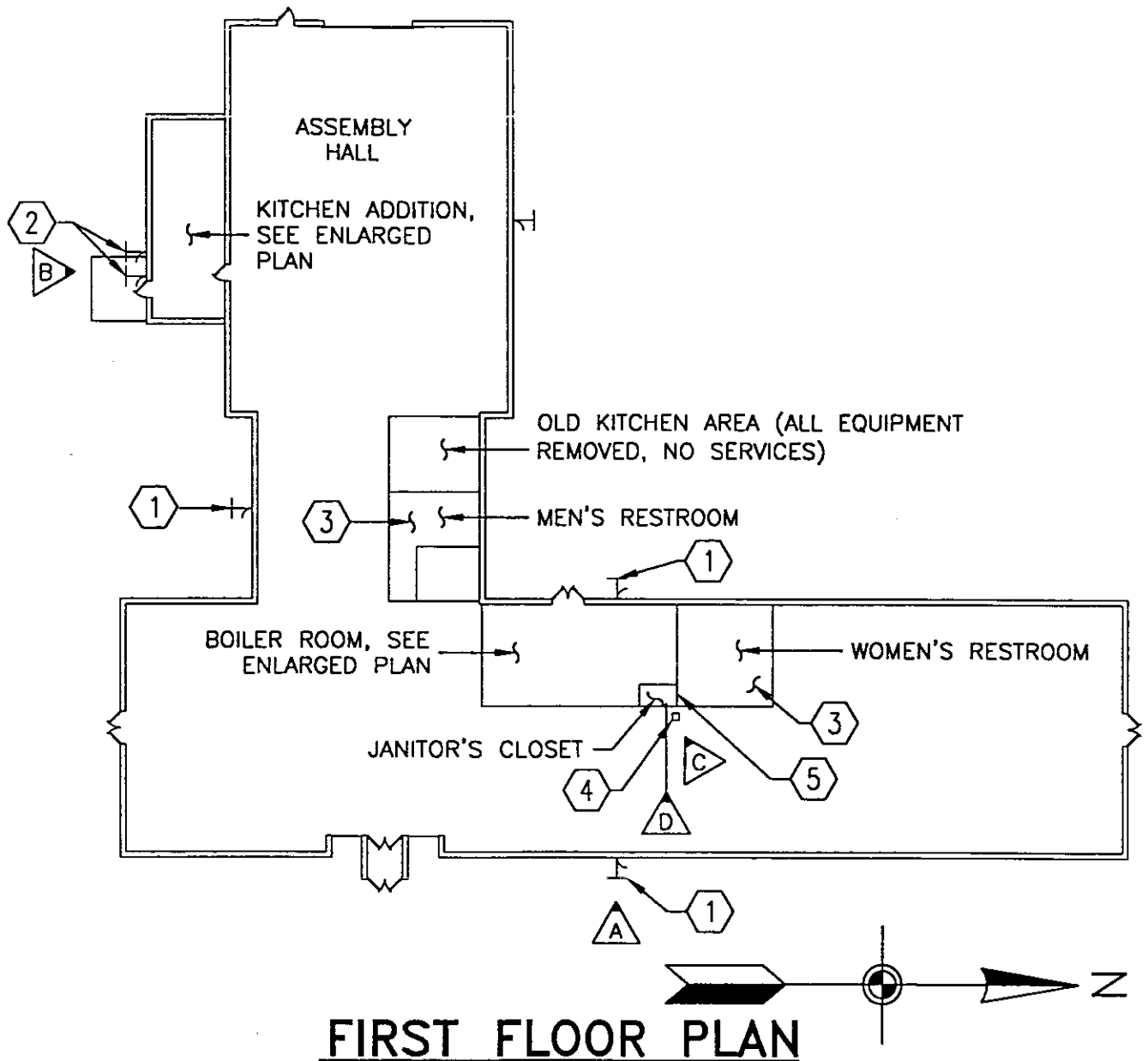
TYPE 5
Backflow
Preventer with
Intermediate
Atmospheric
Vent
ASSE #1012



TYPE 6
Double Check Backflow
Prevention Assembly
ASSE #1015

TYPE 7
Double Check Detector
Assembly Backflow
Preventer
ASSE #1048

TYPE 8
Inline Vacuum
Breaker
ASSE #1035



FIRST FLOOR PLAN

APPROXIMATE SCALE: 1" = 30'

CODED NOTES:

1. UNPROTECTED FROST PROOF WALL HYDRANT REQUIRES BACKFLOW PREVENTER TYPE 4 PER OEPA 3745-95-04-(B2) AND OBBC 4101:2-61-05.
2. CAN WASH STATION WITH ZURN MANUFACTURED HOT & COLD FROST PROOF WALL HYDRANTS WITH INTEGRAL ATMOSPHERIC TYPE BACKFLOW PREVENTER IS SATISFACTORY BY DESIGN, NO FURTHER BACKFLOW PREVENTION DEVICES ARE REQUIRED.
3. FIXTURES, FLUSH VALVES, AND FAUCETS IN RESTROOMS ARE SATISFACTORY BY DESIGN, NO FURTHER BACKFLOW PROTECTION IS REQUIRED.
4. ELECTRIC WATER COOLER IS SATISFACTORY BY DESIGN, NO FURTHER BACKFLOW PROTECTION IS REQUIRED.
5. JANITOR'S SERVICE SINK FAUCET IS EQUIPPED WITH AN EXISTING ATMOSPHERIC TYPE BACKFLOW PREVENTER, HOWEVER, FAUCET SET LEAKS AND IS WORN OUT AND SHOULD BE REPLACED WITH NEW FAUCET SET INCLUDING AN INTEGRAL TYPE 3 BACKFLOW PREVENTER DEVICE.

SYMBOLS:

(X) INDICATES DIRECTION OF PHOTOGRAPH OF SUBJECT TAKEN. PHOTOGRAPHS FOLLOW DIAGRAMS IN THIS STUDY. LETTER IN THE TRIANGLE CORRESPONDS TO THE PHOTOGRAPHS.

BACKFLOW PREVENTION DEVICE SURVEY
88TH REGIONAL SUPPORT FACILITIES IN OHIO

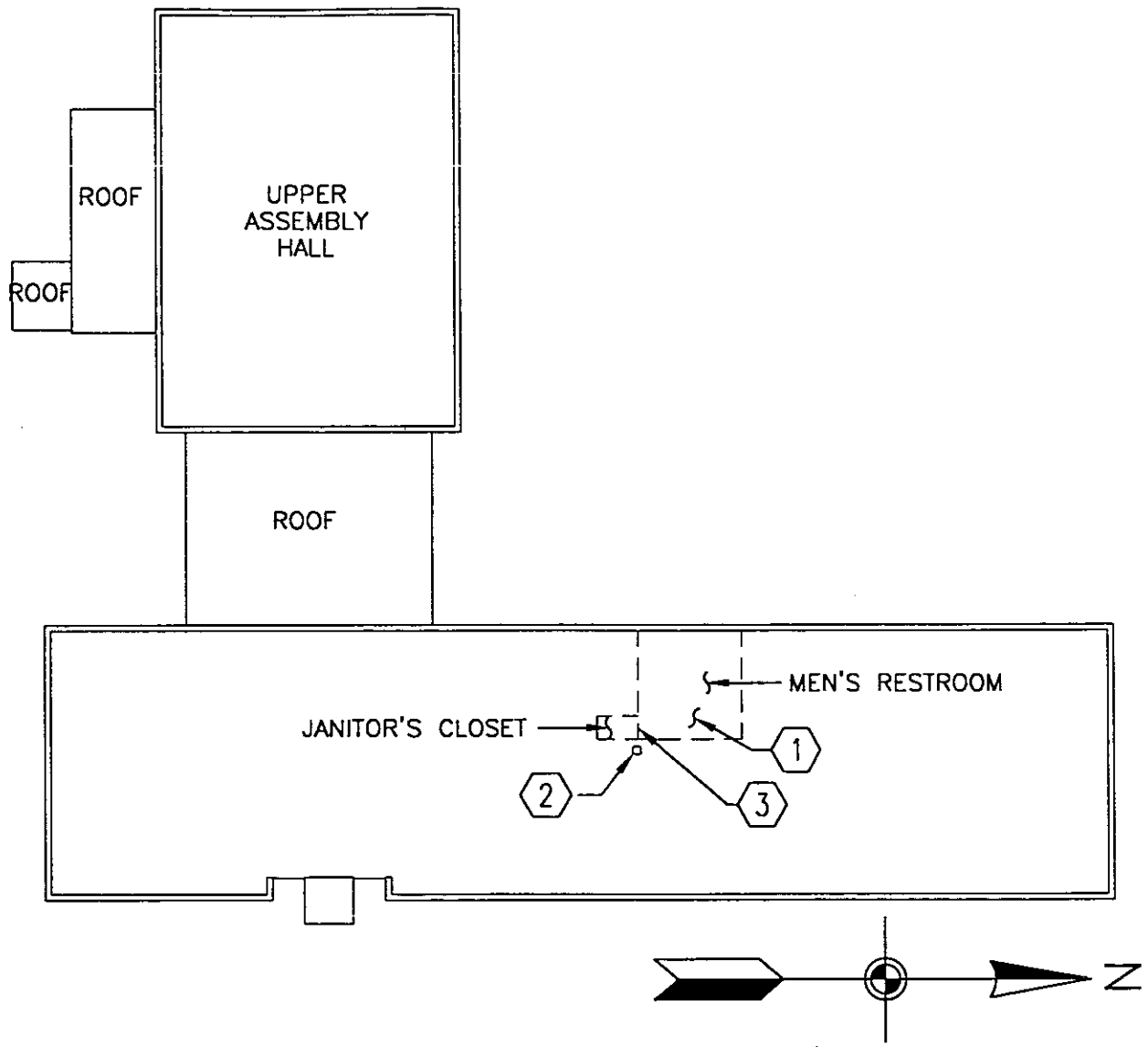
WHITEHALL MEMORIAL USARC
FACILITY NO. OH014
721 COUNTRY CLUB ROAD
COLUMBUS, OHIO 43213

US Army Corps of Engineers

U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
LOUISVILLE, KENTUCKY

Dodson Stilson — Dodson-Stilson, Inc. A DLZ Company — ENGINEERS · ARCHITECTS · SCIENTISTS

PLATE No.	1 OF 5
SCALE	NOTED
DATE	1-31-97
APPROVED	WPS



SECOND FLOOR PLAN

APPROXIMATE SCALE: 1" = 30'

CODED NOTES:

1. FIXTURES, FLUSH VALVES, AND FAUCETS IN THE RESTROOMS ARE SATISFACTORY BY DESIGN, NO FURTHER BACKFLOW PROTECTION IS REQUIRED.
2. ELECTRIC WATER COOLER IS SATISFACTORY BY DESIGN, NO FURTHER BACKFLOW PROTECTION IS REQUIRED.
3. UNPROTECTED JANITOR'S SINK FAUCET REQUIRES REPLACEMENT OF FAUCET WITH UNIT CONTAINING INTEGRAL BACKFLOW PREVENTER PER OEPA 3745-95-04-(B2) AND OBBC 4101:2-61-05.

[[GRB]] - I:\FAC\96217022.00\7022M101.DWG - JAN 27, 1997 - 08:48:58 - SCALE = 1.00

BACKFLOW PREVENTION DEVICE SURVEY
88TH REGIONAL SUPPORT FACILITIES IN OHIO

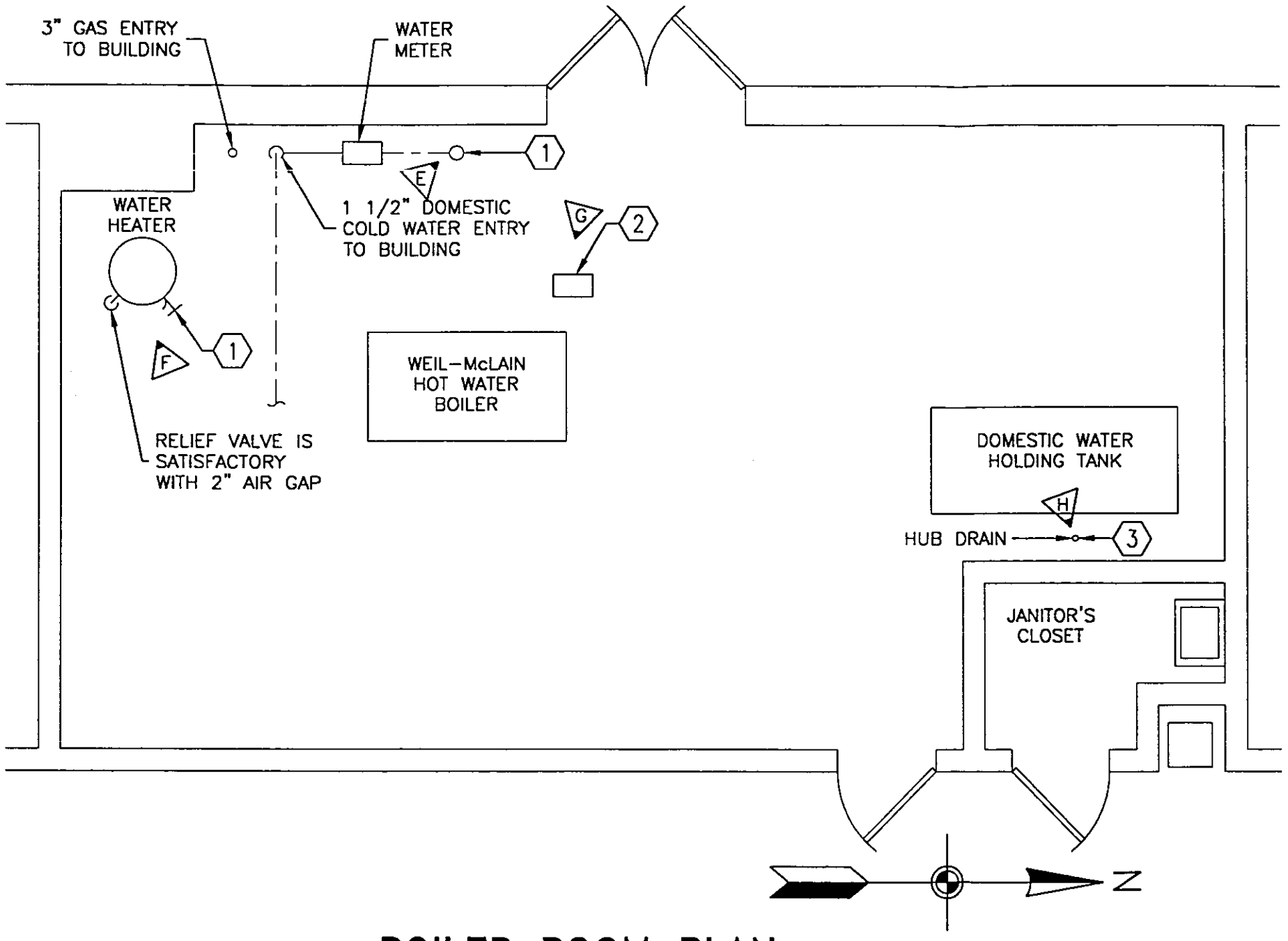
WHITEHALL MEMORIAL USARC
FACILITY NO. OH014
721 COUNTRY CLUB ROAD
COLUMBUS, OHIO 43213

US Army Corps of Engineers

U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
LOUISVILLE, KENTUCKY

Dodson Stilson — Dodson-Stilson, Inc. A DLZ Company — ENGINEERS • ARCHITECTS • SCIENTISTS

PLATE No.	2 OF 5
SCALE	NOTED
DATE	1-31-97
APPROVED	WPS



BOILER ROOM PLAN

APPROXIMATE SCALE: 1/4" = 1'

CODED NOTES:

1. UNPROTECTED HOSE BIBB REQUIRES BACKFLOW PREVENTER TYPE 4 PER OEPA 3745-95-04-(B2) AND OBBC 4101:2-61-05.
2. DOMESTIC COLD WATER MAKE-UP TO BOILER IS EQUIPPED WITH A 3/4" WATTS MODEL 909 MOD-CW (ASSE 1013) BACKFLOW PREVENTER, NO FURTHER BACKFLOW PROTECTION IS REQUIRED.
3. RELIEF VALVE DISCHARGE PROJECTS INTO HUB DRAIN REQUIRES REWORKING OF PIPE TO PROVIDE 2" AIR GAP PER OEPA 3745-95-04-(B2) AND OBBC 4101:2-61-05.

SYMBOLS:

(X) INDICATES DIRECTION OF PHOTOGRAPH OF SUBJECT TAKEN. PHOTOGRAPHS FOLLOW DIAGRAMS IN THIS STUDY. LETTER IN THE TRIANGLE CORRESPONDS TO THE PHOTOGRAPHS.

BACKFLOW PREVENTION DEVICE SURVEY
88TH REGIONAL SUPPORT FACILITIES IN OHIO

WHITEHALL MEMORIAL USARC
FACILITY NO. OH014
721 COUNTRY CLUB ROAD.
COLUMBUS, OHIO 43213

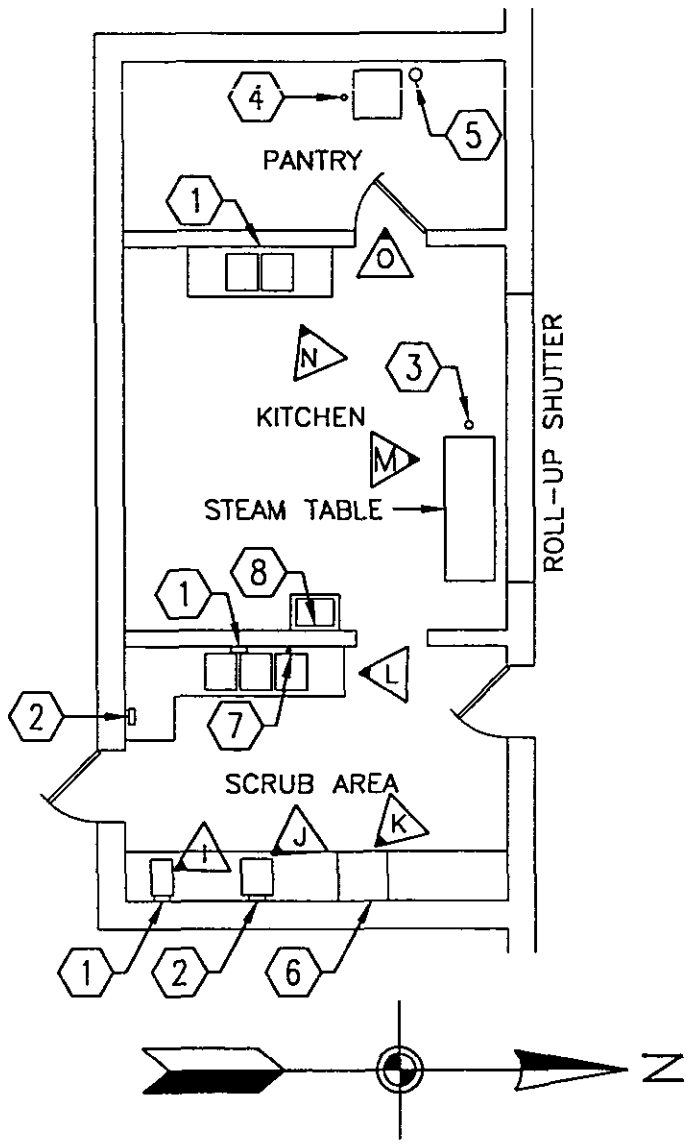
US Army Corps of Engineers

U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
LOUISVILLE, KENTUCKY

Dodson Stilson — Dodson-Stilson, Inc. A DLZ Company — ENGINEERS · ARCHITECTS · SCIENTISTS

PLATE No.	3 OF 5
SCALE	NOTED
DATE	1-31-97
APPROVED	WPS

[[GRB]] ..\FAC\96217022.00\7022M102.DWG - JAN 27, 1997 - 09:04:08 - SCALE = 1.00



KITCHEN PLAN

APPROXIMATE SCALE: 1/8" = 1'

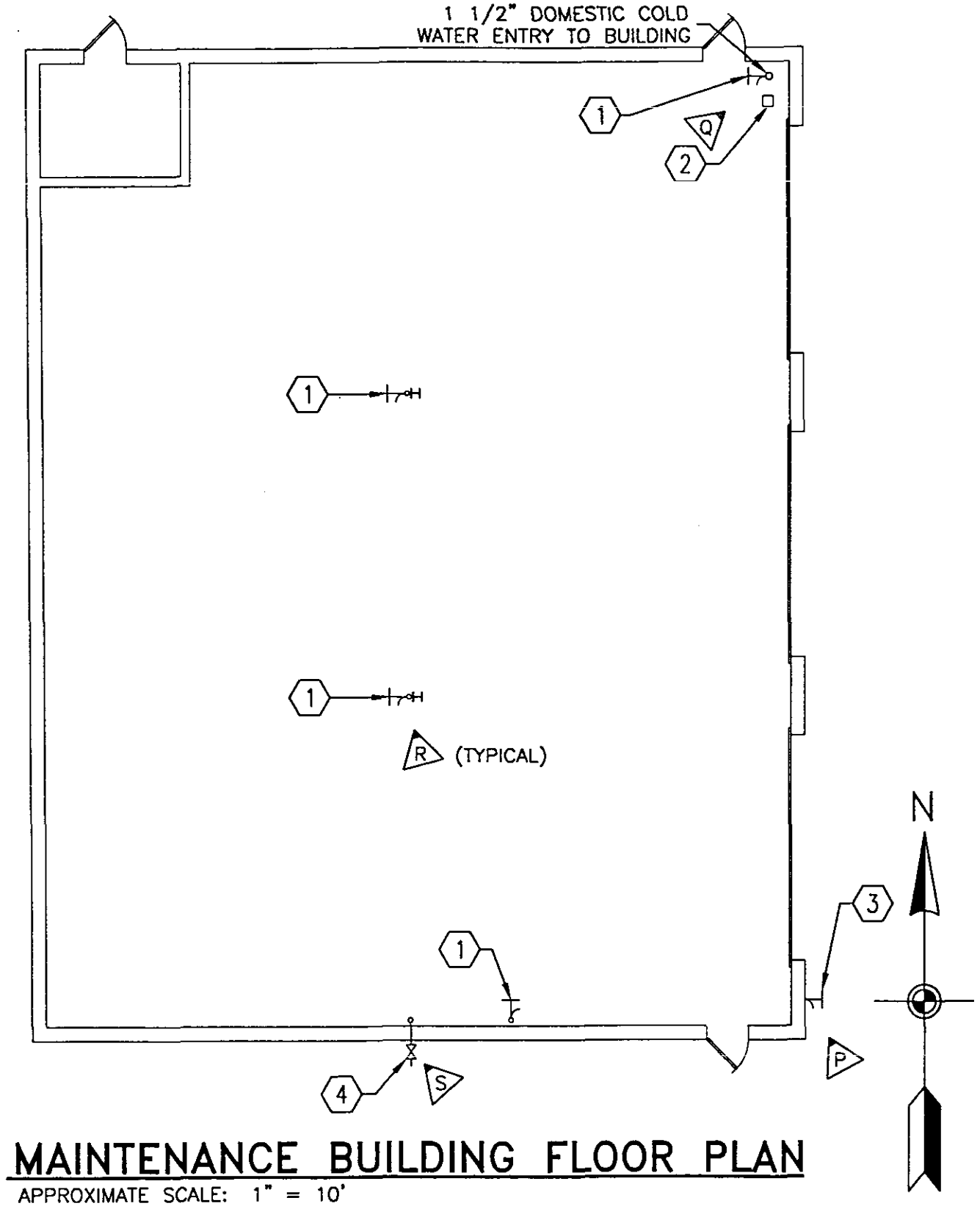
CODED NOTES:

1. HOT & COLD SWING SPOUT FAUCET IS SATISFACTORY BY DESIGN, NO FURTHER BACKFLOW PROTECTION IS REQUIRED.
2. UNPROTECTED PRE-RINSE HAND SPRAY FAUCET REQUIRES BACKFLOW PREVENTER TYPE 8 PER OEPA 3745-95-04-(B2) AND OBBC 4101:2-61-05.
3. HUB DRAIN WITH 1" COPPER DRAIN FROM STEAM TABLE PROJECTING INTO IT, REQUIRES REWORKING OF PIPE TO PROVIDE 2" AIR GAP PER OEPA 3745-95-04-(B2) AND OBBC 4101:2-61-05.
4. HUB DRAIN WITH DRAIN LINE FROM ICE MAKER PROJECTING INTO IT, REQUIRES REWORKING OF PIPE TO PROVIDE 2" AIR GAP PER OEPA 3745-95-05-(B2) AND OBBC 4101:2-61-05.
5. 1/4" DOMESTIC COLD WATER TO ICE MAKER REQUIRES BACKFLOW PREVENTER TYPE 8 PER OEPA 3745-95-04-(B2) AND OBBC 4101:2-61-05.
6. DISHWASHER IS PROTECTED BY A WATTS NO. 288A BACKFLOW PREVENTER ON THE SOAP DISPENSER AND A WATTS NO. 288A BACKFLOW PREVENTER ON THE DOMESTIC COLD WATER SUPPLY. THE SYSTEM IS SATISFACTORY, NO FURTHER BACKFLOW PROTECTION IS REQUIRED.
7. SINGLE 180° FAUCET HAS AN INAPPROPRIATELY INSTALLED WATTS NO. 288A BACKFLOW PREVENTER. REQUIRES REMOVAL OF THE 288A AND INSTALLATION OF A TYPE 8 BACKFLOW PREVENTER DEVICE IN THE VERTICAL COPPER 180° LINE PRIOR TO THE FAUCET PER OEPA 3745-95-04-(B2) AND OBBC 4101:2-61-05.
8. HAND SINK HOT AND COLD FAUCET SET HAS ADEQUATE AIR GAP - SAFE BY DESIGN, NO BACKFLOW PREVENTER DEVICE IS REQUIRED.

SYMBOLS:

X - INDICATES DIRECTION OF PHOTOGRAPH OF SUBJECT TAKEN. PHOTOGRAPHS FOLLOW DIAGRAMS IN THIS STUDY. LETTER IN THE TRIANGLE CORRESPONDS TO THE PHOTOGRAPHS.

BACKFLOW PREVENTION DEVICE SURVEY 88TH REGIONAL SUPPORT FACILITIES IN OHIO	WHITEHALL MEMORIAL USARC FACILITY NO. OH014 721 COUNTRY CLUB ROAD COLUMBUS, OHIO 43213	US Army Corps of Engineers U.S.ARMY ENGINEER DISTRICT CORPS OF ENGINEERS LOUISVILLE, KENTUCKY	Dodson Stilson Dodson-Stilson, Inc. A DLZ Company ENGINEERS · ARCHITECTS · SCIENTISTS	PLATE No. 4 OF 5 SCALE NOTED DATE 1-31-97 APPROVED WPS



MAINTENANCE BUILDING FLOOR PLAN

APPROXIMATE SCALE: 1" = 10'

CODED NOTES:

1. UNPROTECTED HOSE BIBB REQUIRES BACKFLOW PREVENTER TYPE 4 PER OEPA 3745-95-04-(B2) AND OBBC 4101:2-61-05.
2. EMERGENCY EYE WASH/SHOWER IS SATISFACTORY BY DESIGN, NO FURTHER BACKFLOW PROTECTION IS REQUIRED.
3. UNPROTECTED FROST PROOF HOSE BIBB REQUIRES BACKFLOW PREVENTER TYPE 4 PER OEPA 3745-95-04-(B2) AND OBBC 4101:2-61-05.
4. 1 1/2" ANGLE HOSE VALVE (USED AS VEHICLE WASH STATION). CUT 1 1/2" DOMESTIC COLD WATER LINE INSIDE BUILDING. INSTALL 1 1/2" X 3/4" REDUCER, 3/4" GATE VALVE IN VERTICAL DROP INSIDE AND PROVIDE EXTERIOR 3/4" HOSE BIBB WITH TYPE 4 BACKFLOW PREVENTER DEVICE PER OEPA 3745-95-04-(B2) AND OBBC 4101:2-61-05.

SYMBOLS:

X — INDICATES DIRECTION OF PHOTOGRAPH OF SUBJECT TAKEN. PHOTOGRAPHS FOLLOW DIAGRAMS IN THIS STUDY. LETTER IN THE TRIANGLE CORRESPONDS TO THE PHOTOGRAPHS.

BACKFLOW PREVENTION DEVICE SURVEY
88TH REGIONAL SUPPORT FACILITIES IN OHIO

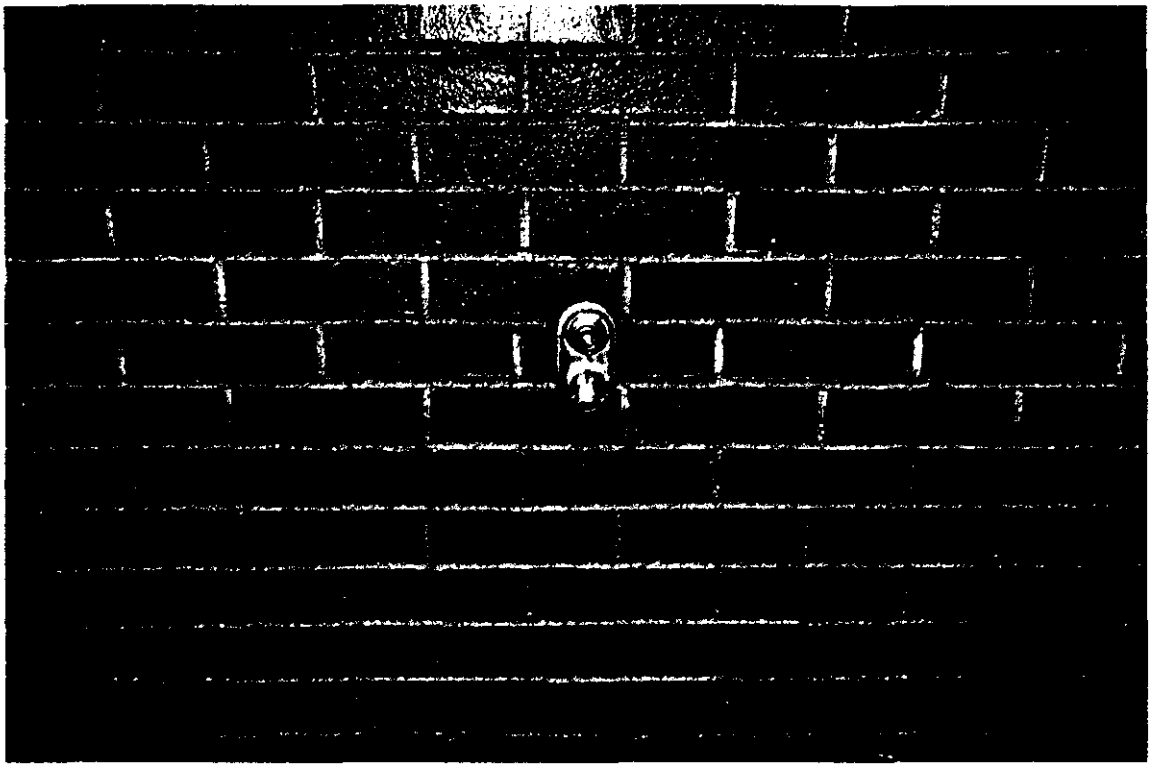
WHITEHALL MEMORIAL USARC
FACILITY NO. OH014
721 COUNTRY CLUB ROAD
COLUMBUS, OHIO 43213

US Army Corps of Engineers
U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
LOUISVILLE, KENTUCKY

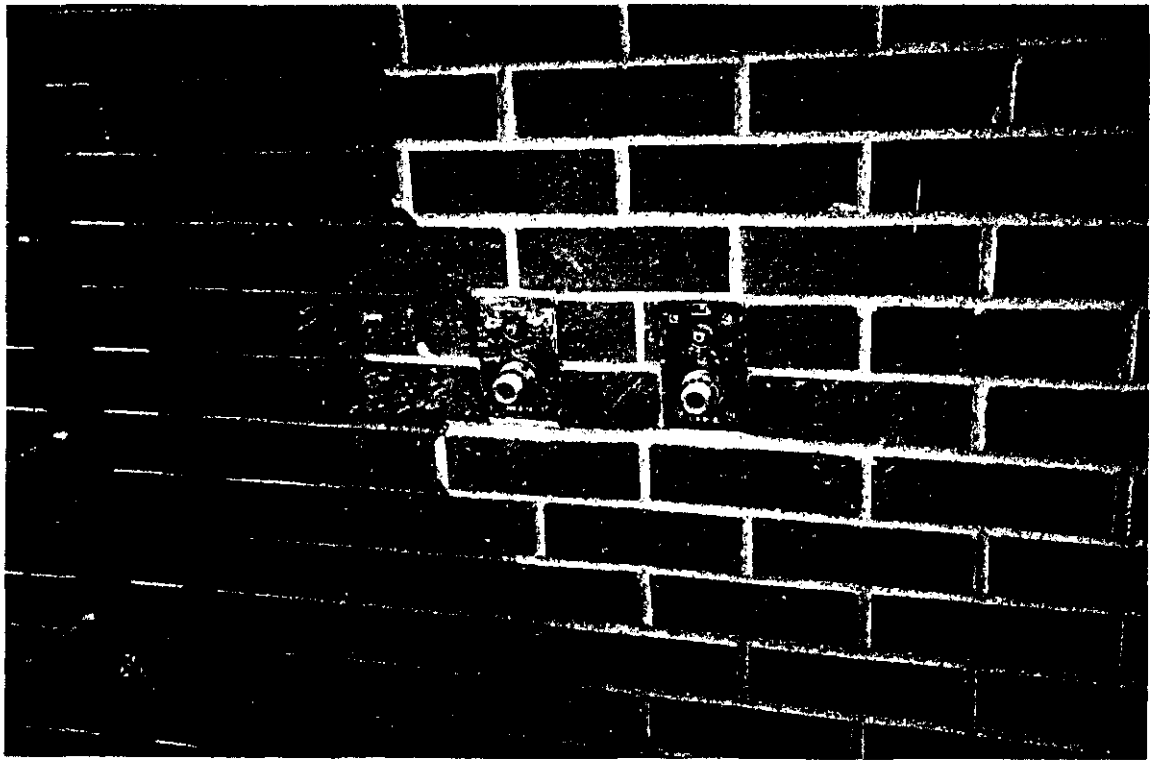
Dodson Stilson — Dodson-Stilson, Inc. A DLZ Company — ENGINEERS • ARCHITECTS • SCIENTISTS

PLATE No.	5 OF 5
SCALE	NOTED
DATE	1-31-97
APPROVED	WPS

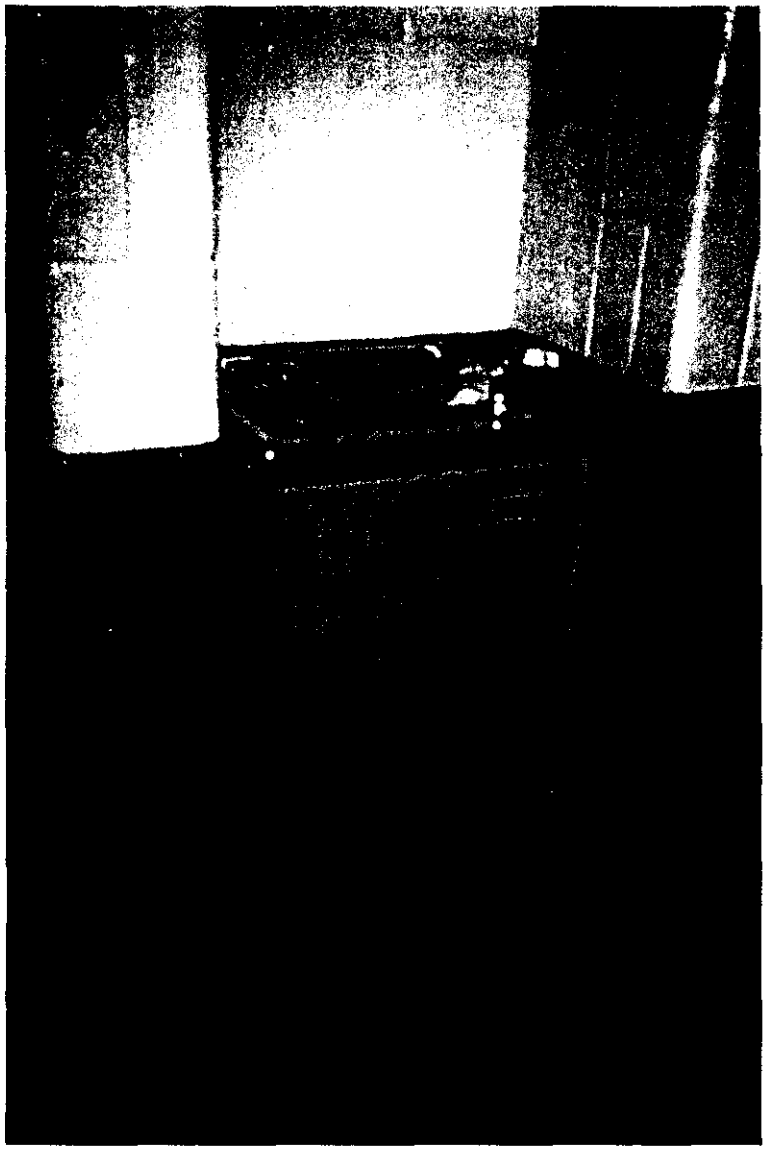
[[GRB]] - I:\FAC\96217022.00\7022M104.DWG - JAN 27, 1997 - 10:44:08 - SCALE = 1.00



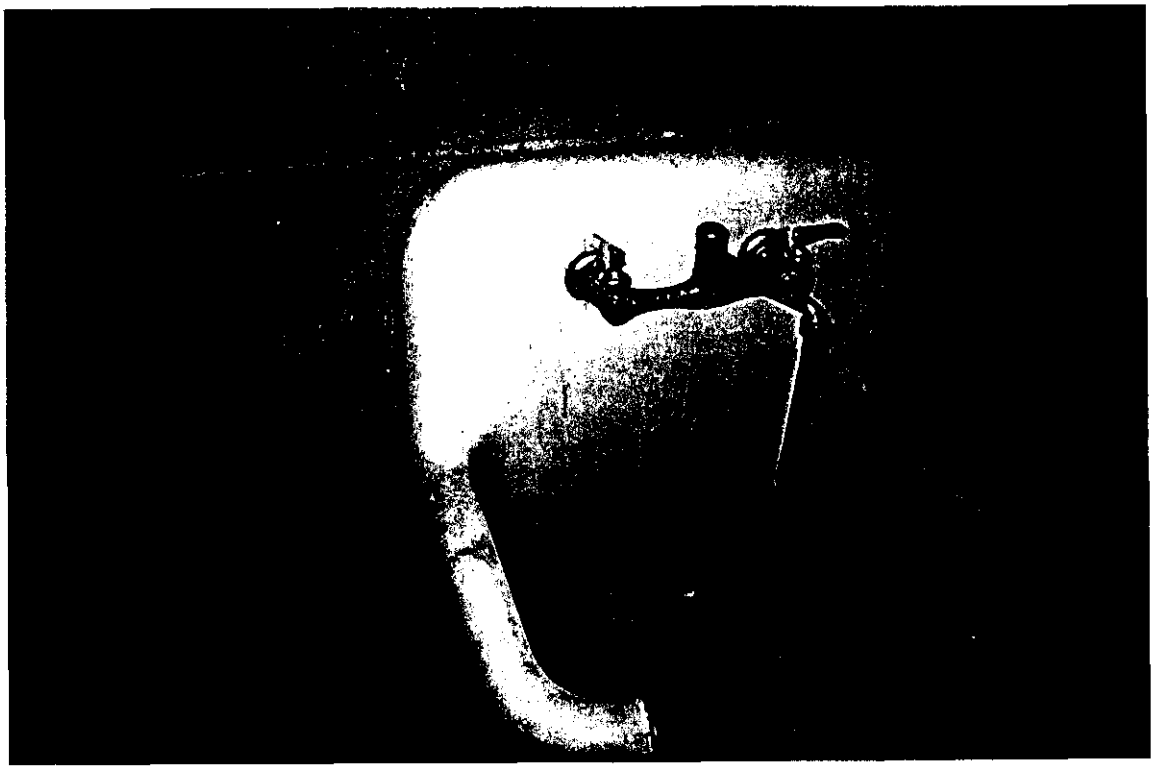
Photograph A: Unprotected frost proof wall hydrant requires Type 4 BFP device.



Photograph B: H&C frost proof wall hydrant at can washing station, each with integral atmospheric type BFP devices, both are satisfactory.

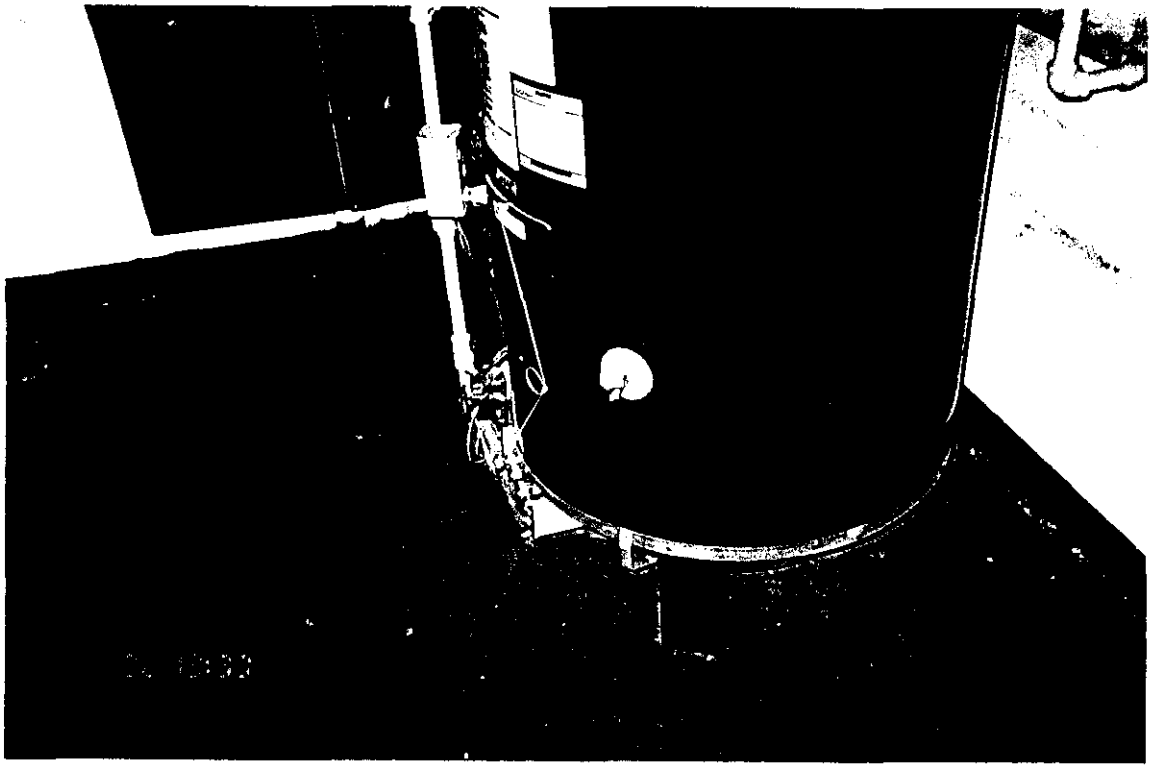


Photograph C: Electric water cooler, no BFP device required.

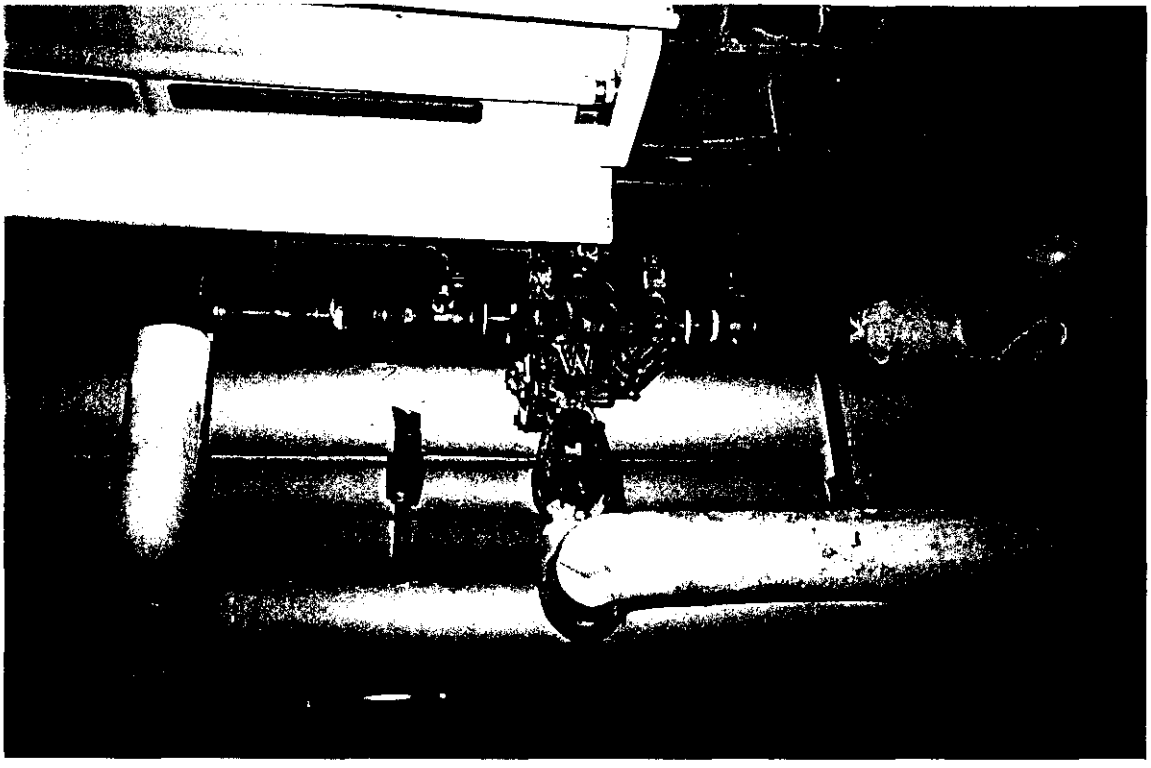


Photograph D: H&C faucet set leaks and worn out, should be replaced with new, including integral Type 3 BFP device.

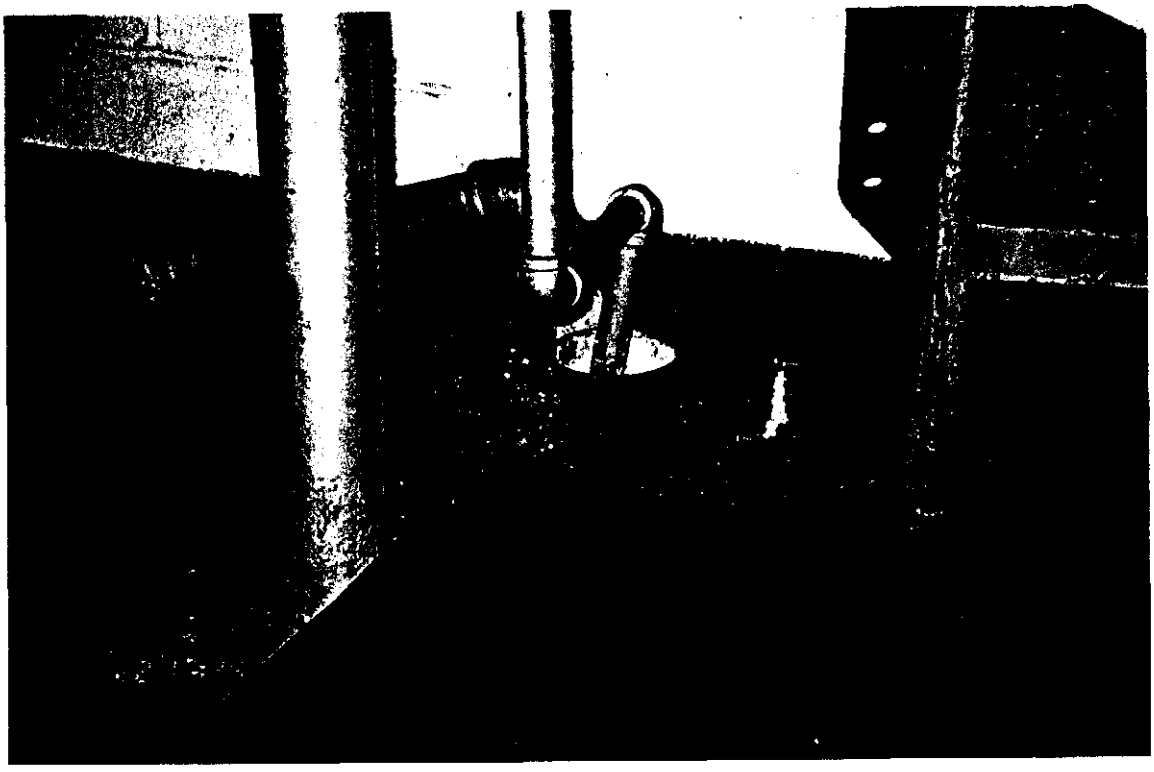
Photograph E: 3/4" hose bibb drain valve requires Type 4 BFP device to be installed.



Photograph F: 3/4" tank drain valve requires Type 4 BFP device to be installed. Relief valve has 2" air gap protecting the discharge line.

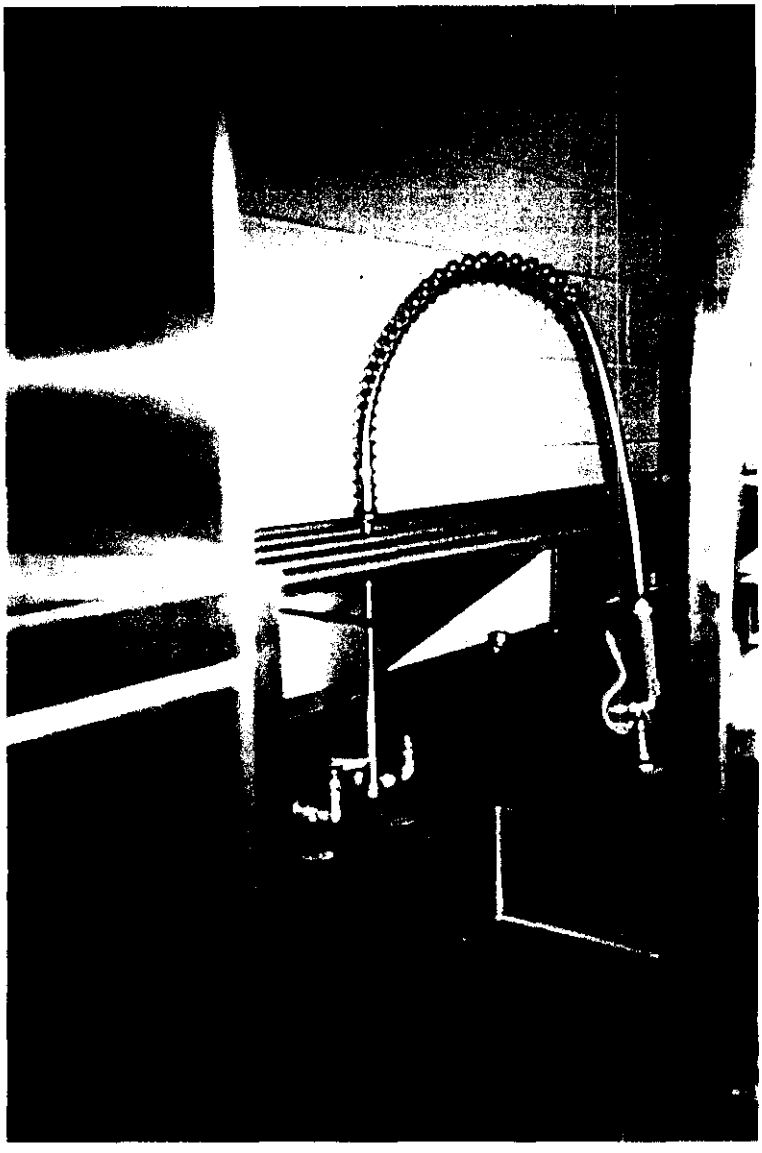


Photograph G: 3/4" Watts No. 909 MOD-CW on DCW make-up line to boiler/ heating system, no further BFP devices required.

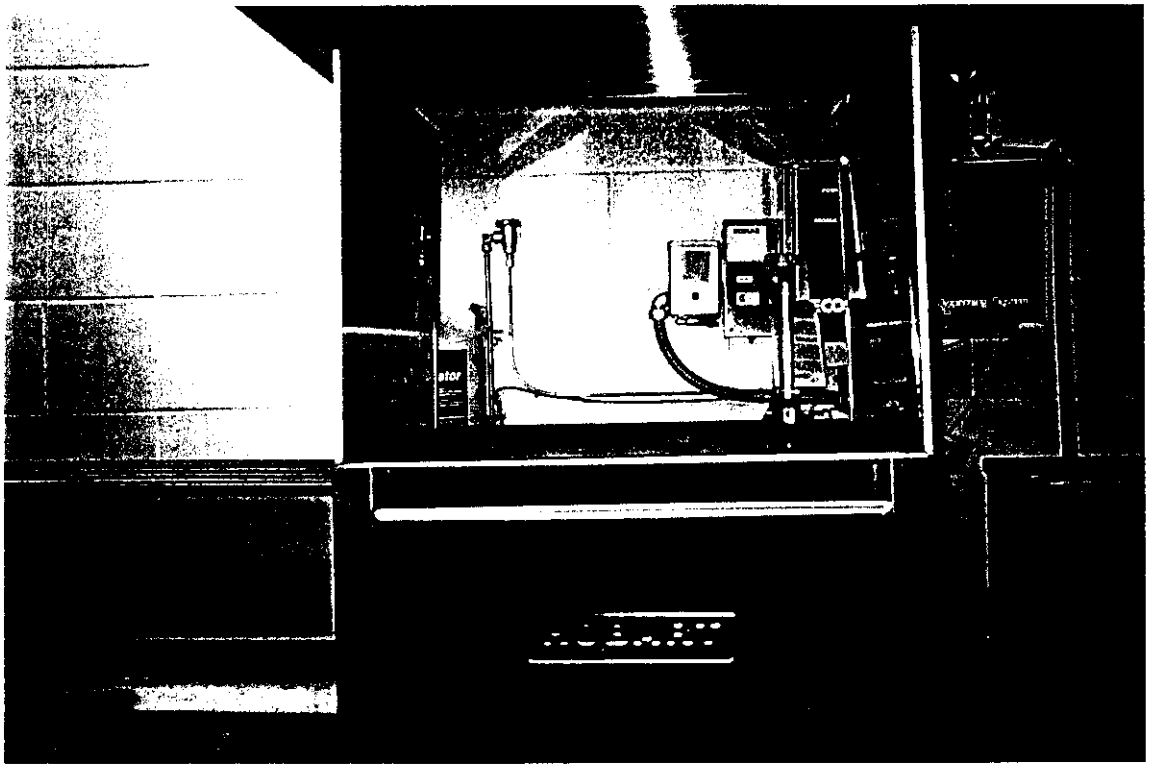


Photograph H: Safety relief valve discharge line from domestic hot water holding tank requires re-working to provide adequate 2" air gap.

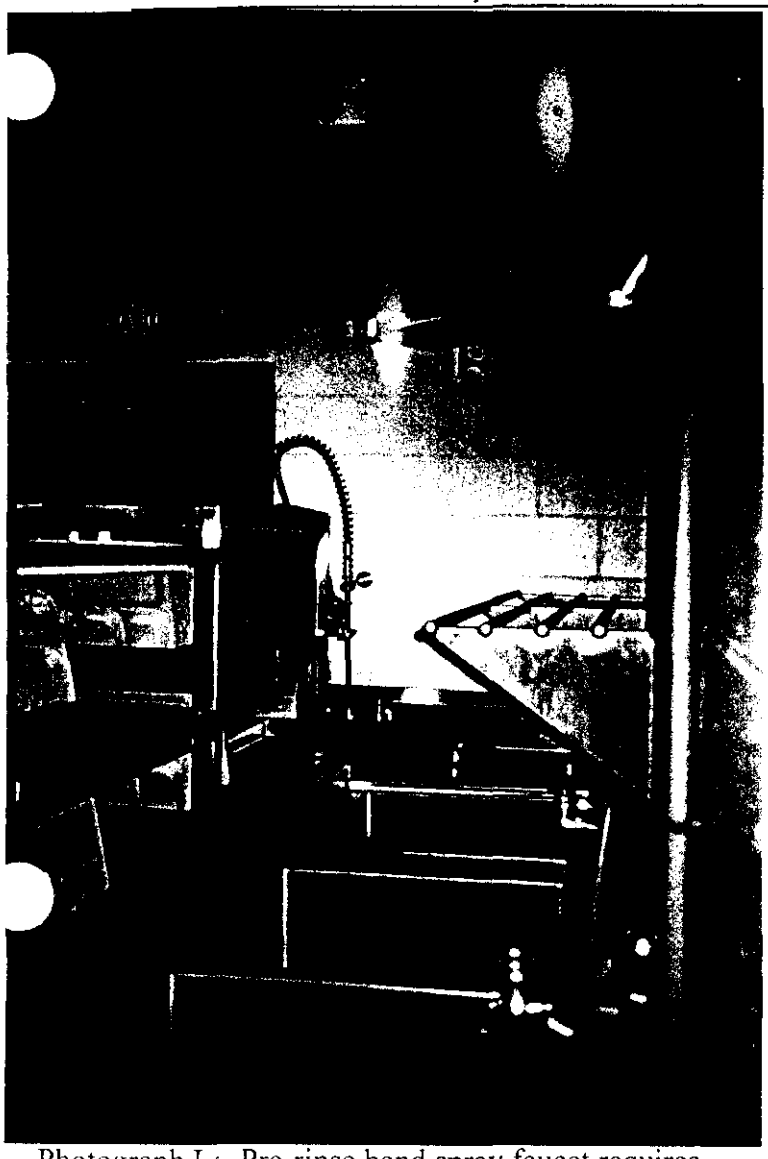
Photograph I: H&C swing spout adequately protected by 2" air gap, see Picture "J" for pre-rinse hand spray faucet requirement.



Photograph J: H&C pre-rinse hand spray requires Type 8 BFP device installed. DCW to garbage disposer (in sink below pre-rinse hand spray faucet) is protected by a Watts No. 288A BFP device.

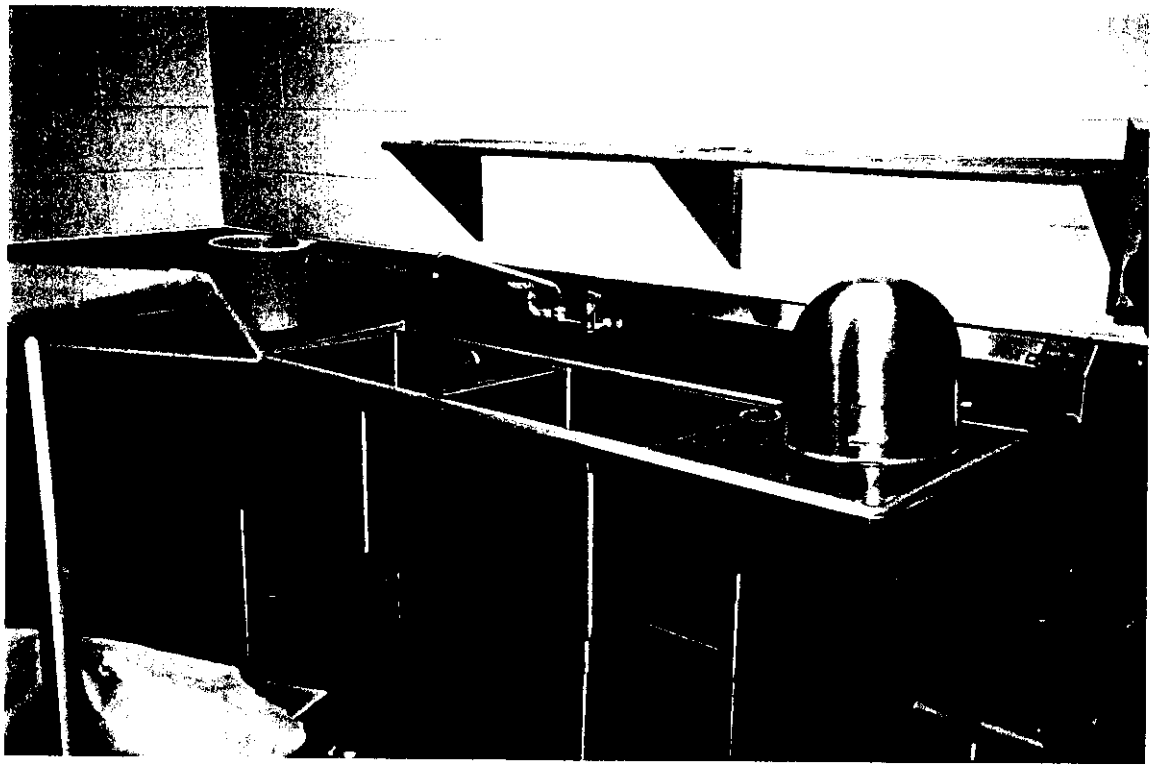


Photograph K: Hobart dishwashing machine, DCW protected by a Watts No. 288A BFP device, soap dispenser also protected by a Watts No. 288A BFP device.



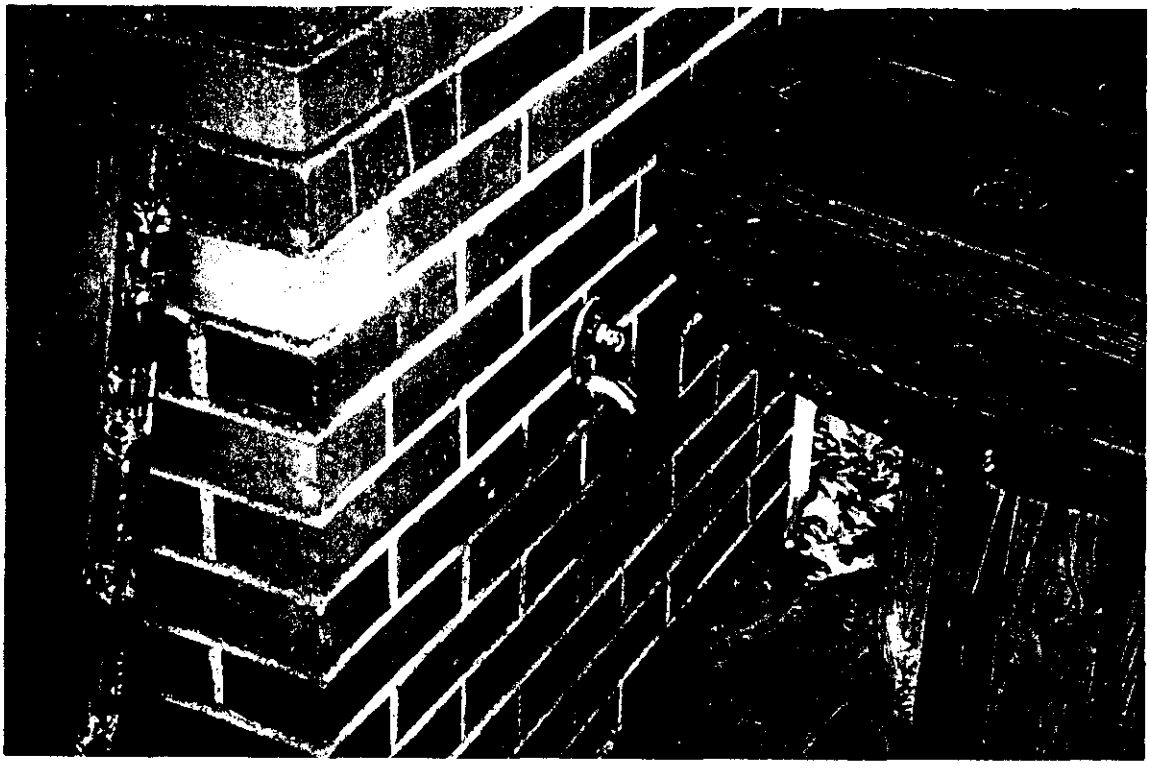
Photograph L: Pre-rinse hand spray faucet requires Type 8 BFP device to be installed. H&C swing spout has adequate air gap. Near foreground shows single 180° faucet w/ inappropriately installed Watts No. 288A BFP device. Remove the 288A and install Type 8 BFP device in vertical 180° copper line prior to the faucet.

Photograph M: Inadequate air gap on 1" copper drain line from steam table. Re-work piping to provide 2" air gap.



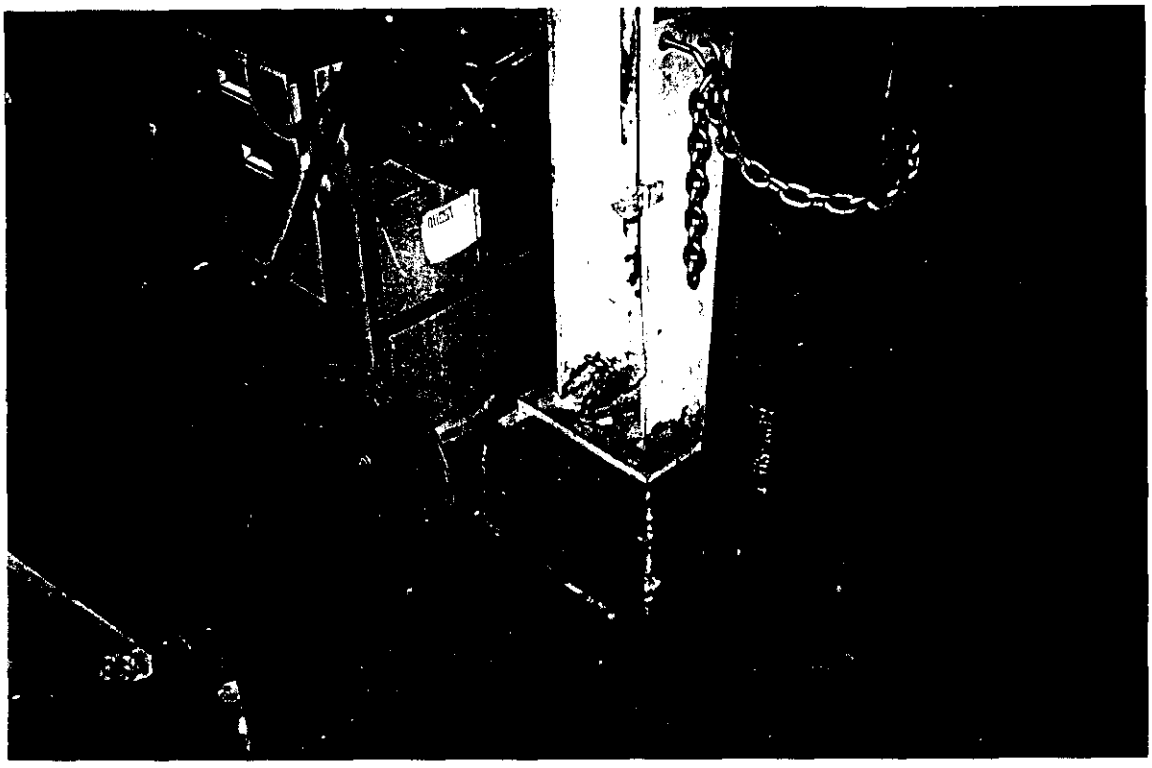
Photograph N: H&C swing spout adequately air gapped - no further requirements are necessary.

Photograph Q: Ice making machine requires Type 8 BFP device installed on 1/4" DCW line and reworking of copper drain line to provide 2" air gap.

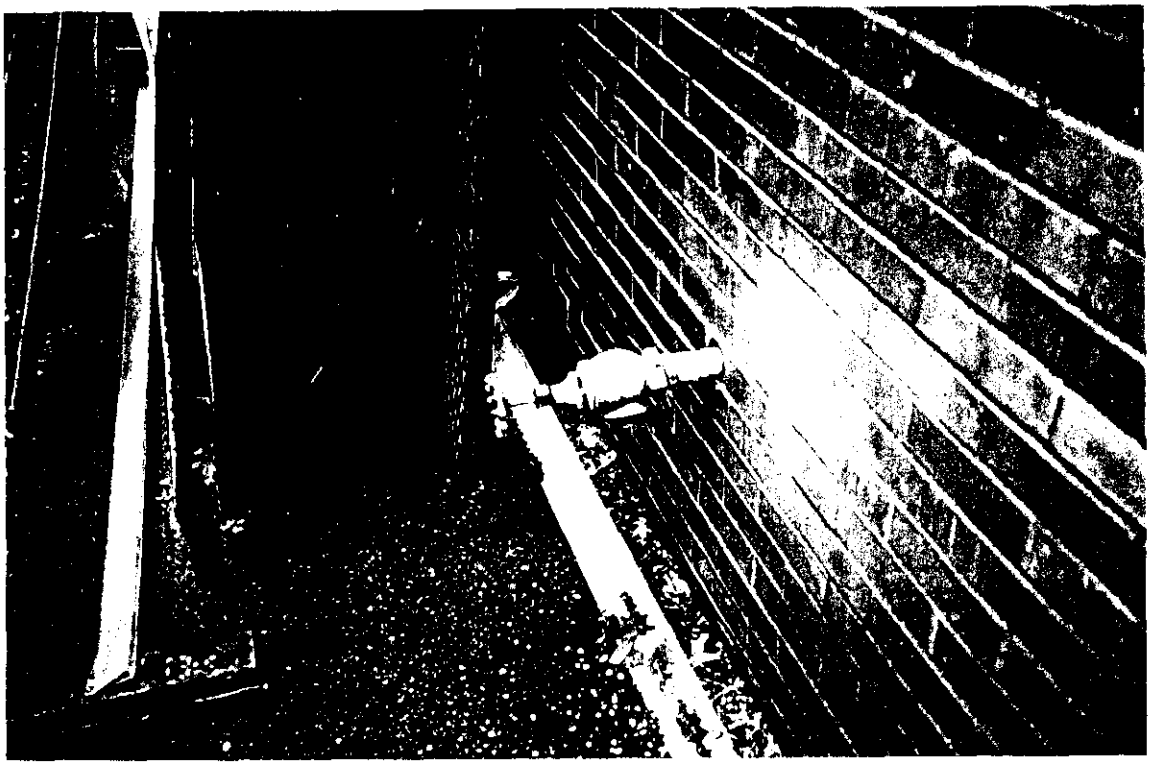


Photograph P: Unprotected frost proof wall hydrant requires Type 4 BFP installed.

Photograph Q: Unprotected hose bibb drain valve requires Type 4 BFP device installed. Emergency shower and eye wash safe by design.



Photograph R: Unprotected hose bibb provides Type 4 BFP device installed.



Photograph S: 1 ½" angle hose valve (formerly used as vehicle washing station). Cut 1 ½" DCW line inside bldg. Install 1 ½" x 3/4" reducer, 3/4" gate valve in vertical drop and inside provide exterior 3/4" hose bibb with Type 4 BFP device.

Whitehall Memorial USARC, Columbus, Ohio FACILITY OH014

DESCRIPTION	QTY	UNIT	MATERIAL PER UNIT	TOTAL MATERIAL	LABOR PER UNIT	TOTAL LABOR	TOTAL
WALL HYDRANTS	4	EA	$12.00	$48.00	$12.50	$50.00	$98.00
FAUCET REPLACEMENT	2	EA	$66.50	$133.00	$24.50	$49.00	$182.00
ICE MAKER	1	EA	$18.45	$18.45	$25.00	$25.00	$43.45
FAUCET BRK.	1	EA	$18.45	$18.45	$25.00	$25.00	$43.45
HOSE BIBBS	5	EA	$12.00	$60.00	$12.50	$62.50	$122.50
WATER HEATER DRAIN	1	EA	$12.00	$12.00	$12.50	$12.50	$24.50
INCREASE AIR GAP	2	EA	$20.00	$40.00	$60.00	$120.00	$160.00
FLEX HOSE ON SINK	1	EA	$18.45	$18.45	$25.00	$25.00	$43.45
WALL HYDRANT REPLACEMENT	1	EA	$176.60	$176.60	$60.00	$60.00	$236.60
					SUBTOTAL		$954
					OVERHEAD 18%		$171.71
					SUBTOTAL		$1,126
					PROFIT 10%		$112.57
					TOTAL		$1,238

ENVIRONMENTAL SURVEY REPORT
ASBESTOS, PCB, LEAD BASED PAINT AND RADON SURVEY
88TH REGIONAL SUPPORT COMMAND
WHITEHALL MEMORIAL USARC, COLUMBUS OHIO (OH-014)
ADMINISTRATION BUILDING & OMS BUILDING
04 MARCH 2005

PREPARED FOR:

88th Regional Support Command
506 Roeder Circle
Ft. Snelling, MN 55111

PREPARED BY:

ITI OF SOUTH FLORIDA, INC.
2710 CENTRAL AVE.
St. Petersburg, FL 33712
727 502 9223 727 581 0764 (fax) itisf@aol.com

Adecco Technical Task Order DAY A000003029

Gil Bakshi
04 March 2005

TABLE OF CONTENTS

APPENDICES

1.0 INTRODUCTION

International Training Institute of South Florida, Inc. (ITI) has performed a site survey for the 88th Regional Support Command (RSC) property located at the Whitehall Memorial USARC located in Columbus, Ohio (OH-014). ITI's work was based on a scope of work prepared by the 88th RSC and administered under Adecco Technical Task Order DAY A000003029.

2.0 PURPOSE

This report provides information concerning the potential types, quantities, locations, and condition of asbestos containing materials, polychlorinated biphenyls (PCBs), lead based paint (LBP) and radon.

The purpose of this document is to assist the 88th RSC in complying with federal and state regulations concerning Asbestos, PCBs, LBPs and Radon. ITI's evaluation is based on a site inspection, information obtained from available documentation located at the site and the 88th RSC, and interviews with persons knowledgeable about the current and past history of the site.

3.0 Site Description

ADMINISTRATION BUILDING

This two story building is a block structure with a brick exterior finish. Interior walls are painted block and framed drywall partitions. The roof is a flat built-up asphalt mopped surface.

OMS

This one story building is a block structure with a brick exterior finish. Interior walls are painted block. The roof is a flat built-up asphalt mopped surface.

3.1 Scope of Work

ITI has conducted one or more of the following tasks at this site: collect radon samples, conduct a lead based paint inspection, identify PCBs and asbestos inspection.

- Conduct radon testing at all identified 88th RSC sites for radon gas concentration levels and review all previous radon test results provided by the government.
- Determine levels of radon gas by installing passive detection equipment (alpha track) in specific buildings of the selected facilities.
- Utilize the laboratory that supplied the alpha track radon detectors for analysis.

- Evaluate each facility be age to determine the potential for existence of lead based paint (LBP) and review any previous LBP surveys conducted by the government
- Were the potential for LBP is determined, ITI will conduct a visual inspection of all (but not limited to) of the following surfaces; doors, door casings and frames, walls, upper and lower, windows sashes, stair stringers, tends, and handrails, ceilings, vents, structural steel, HVAC ducts and window guards at each facility. Samples of suspect surfaces will be conducted by using a portable, on-site measuring instrument that uses X-Ray Fluorescence to determine the existence of LBP.
- Include all information observed as part of the final report to include all existing LBP and it's condition, along with all sample locations (CAD drawings and/or field notes).
- Evaluate each facility by age to determine the potential for the existence of PCBs and review any previous PCB surveys conducted by the government.
- Where the potential for PCBs is determined, ITI will conduct a visual inspection of each facility to determine the existence of PCBs and identify all potential equipment. This will require ITI to randomly open one or more like types of equipment to visually confirm the existence of PCB containing material within the equipment.
- Include all information as part of the final report to include all equipment and its condition, potentially containing PCBs.
- Review all previous asbestos surveys conducted by the government.
- ITI will visually inspect each facility and visually verify all information found in pervious surveys and note any variances and/or missing data.
- ITI will identify all asbestos containing materials (ACM) and any potential asbestos containing material (PACM), estimate the amount in the entire building and determine and record the condition of the ACM and PACM in the survey. Samples will be collected on friable PACM only. PACM identified in the significantly damaged and damaged conditions will be analyzed. Friable PACM in good condition will only be analyzed with the approval for the COR or his representative. ITI will maintain and store all samples collected until sent for analysis or authorized disposal by the COR or his representative. All samples not analyzed will be disposed of in accordance with all Federal, State and Local regulations. Any friable ACM or PACM in significantly damaged or damaged condition will be brought to the attention of the COR or his representative as soon as possible.
- ITI will include all information as part of the final report to include all existing ACM, any PACM and the condition of both existing asbestos and PACM.
- Installation and retrieval of government owned alpha tract radon detectors.
- ITI must document all new data and integrate the 88th RSC information into the final report.

3.2 EXECUTIVE SUMMARY

ASBESTOS

Based on ITI's survey of the building, ITI has concluded the following materials contain asbestos:

ADMINISTRATION BUILDING

CONFIRMED ASBESTOS

- Black mastic adhesive
  - Located Throughout
- Caulking around door frames
  - Located on exterior of Mechanical Room

PRESUMED ASBESTOS

- Roofing Material
- Fire Doors
- Electrical Wiring

OMS

CONFIRMED ASBESTOS

- Window Glazing
  - Located on all window glass
- Window Caulking
  - Located on the exterior of all windows
- Door frame & electrical switch plate caulking
  - Located around man way door frame

PRESUMED ASBESTOS

- Roofing Material
- Fire Doors
- Electrical Wiring

PCB'S

Based on ITI's survey of the building, ITI has concluded that the following types of transformers are located in the building.

ADMINISTRATION BUILDING

- Light Ballasts – Magnetek B232I120RH - Electronic

- Light Ballasts – Advance RCL-3P32-RH-TP ("No PCB's" on label)
- Light Ballasts – Valuemont E132PI120601 ("No PCB's" on label)
- Light Ballasts – Valuemiser E132PI120601 – Electronic

OMS

- Light Ballasts – Advance R-2E75-S-2-TP ("No PCB's" on label)

TRANSFORMERS

- There are three pole-mounted transformers located on the left edge of the USARC Administration building. (No marking on transformers or poles, presumed to contain PCBs)

LEAD BASED PAINTS

Based on ITI's survey for LBP, ITI has concluded that the following building products contain LBP:

ADMINISTRATION BUILDING

- None found

OMS

- Bay Area
  - Gray painted metal right door jamb
  - Gray painted metal left door jamb
  - Gray painted metal overhead door jambs

RADON

Based on sampling results, ITI has concluded that Radon results are below 4 piCu/l (Administration Building).

4.0 PREVIOUS INSPECTIONS

Below are the records for previous inspections conducted at this site.

4.1 ASBESTOS

- NO PREVIOUS INSPECTIONS

4.2 PCB'S

- NO PREVIOUS INSPECTIONS

4.3 LEAD BASED PAINT

- NO PREVIOUS INSPECTIONS.

4.4 RADON

- NO PREVIOUS INSPECTIONS

5.0 ASBESTOS CONTAINING MATERIALS

During this survey conducted in 2002, 2003 & 2004, ITI accredited building inspectors Mr. Narciso Martinez and Brian Gibson performed a walk-through of the subject building. This was performed in order to identify and delineate locations of homogeneous materials suspected of containing asbestos. A homogeneous material is defined as material that presents similar distinguishing features such as contents. Once homogeneous materials were identified, ITI inspectors collected bulk samples from these materials in order to confirm the presence or absence of asbestos. Samples were collected in accordance with U.S. Environmental Protection Agency (EPA) and Occupational Safety and Health Administration (OSHA).

BULK SAMPLES

During the Inspection, sampling locations were recorded on floor plans and are identified in Appendix A of this report.

A.E.S.L. Environmental located in Tempe, Arizona is the laboratory ITI used for analysis of bulk samples. This independent laboratory successfully participates in the National Voluntary Laboratory Accreditation Program (NVLAP) for bulk asbestos sample analysis. The samples are analyzed using Polarized Light Microscopy (PLM) analysis methodology coupled with dispersion staining solutions to distinguish the unique optical properties of mineral forms. Employing this method of analysis allows asbestos fiber characteristics to colonize, which enables the microscopist to verify the presence or absence, quantity and type of asbestos in the samples. Any product that contains more than one percent asbestos is considered to be ACM by EPA & OSHA. ITI performed QA/QC sampling for the total collected bulk samples (minimum of 10%). PLM results will be located in Appendix A to this report.

5.1 ASSESSMENT METHODOLOGY

All Asbestos Containing Building Materials (ACBM) were classified into the following three types of suspect materials:

1. Surfacing Materials
2. Thermal System Insulation (TSI)
3. Miscellaneous Materials

ACM identified during the building survey was assessed according to the protocol described in 40 CR 763. The protocol evaluates the risk of exposure to airborne asbestos fibers by assessing the condition of each ACM and potential for that ACM to be

disturbed and generate fibers. ACM was assessed according to each of the following factors:

(1) Damaged or significantly damaged thermal system insulation ACM.

(2) Damaged friable surfacing ACM.

(3) Significantly damaged friable surfacing ACM.

(4) Damaged or significantly damaged friable miscellaneous ACM.

(5) ACBM with potential for damage.

(6) ACBM with potential for significant damage.

(7) Any remaining friable ACBM or friable suspected ACBM.

ASSESSING CONDITION AND FRIABILITY

NATIONAL EMISSIONS FOR HAZARD AIR POLLUTANTS, 40 CFR Part 61, Subpart M, definitions for asbestos:

- Friable (F): ACM that can be crumbled, crushed, or reduced to powder by hand pressure.
- Nonfriable Category 1(NF1): Asbestos containing packing, gaskets, resilient floor coverings, asphalt roofing products, caulks, and mastics. These bituminous materials are assumed to remain nonfriable if demolition is performed using "normal" methods, but will become friable if severely weathered, sanded, or abraded.
- Nonfriable Category 2 (NF2): ACM excluding Category 1 nonfriable ACM, that, when dry and in its present form, cannot be crumbled, pulverized or reduced to powder by hand pressure; however, these materials may become friable during demolition activities. These products include Transite board and asbestos cement products.

The condition of ACM including severity and extent of damage is classified into one of the following categories:

- Significantly Damaged: ACM that is crumbled, blistered, gouged, marred, delaminated, or otherwise damaged either uniformly or locally over a substantial portion of its surface area.
- Damaged: ACM that is crumbled, blistered, gouged, marred, delaminated, or otherwise damaged either uniformly or locally over a small portion of its surface area.
- Good: ACM with very little or no damage.
- Potential for Disturbance: The potential for disturbance of each ACM was evaluated with respect to the types and frequency of occupancy, whether the ACM was accessible to area occupants, including vibration and air erosion.

5.2 ASBESTOS CONTAINING MATERIALS

ADMINISTRATION BUILDING

CONFIRMED ASBESTOS

- Black mastic adhesive
  - Located Throughout
- Caulking around door frames
  - Located on exterior of Mechanical Room
    - This material was found to be less than 1% asbestos. According to the USEPA, asbestos containing material is >1%; however, for the purposes of this survey, any amount of asbestos is being reported as confirmed.

PRESUMED ASBESTOS

- Roofing Material
- Fire Doors
- Electrical Wiring

OMS

CONFIRMED ASBESTOS

- Window Glazing (This material is in damaged condition)
  - Located on all window glass
- Window Caulking
  - Located on the exterior of all windows
- Door frame & electrical switch plate caulking
  - Located around man way door frame

PRESUMED ASBESTOS

- Roofing Material
- Fire Doors
- Electrical Wiring

5.3 NON ASBESTOS CONTAINING MATERIAL

ADMINISTRATION BUILDING

- 12"x12" pink floor tiles.
  - Located throughout
- Baseboards - 4" cove base boards
  - Located throughout

- Ceiling tiles 2'x 4'
    - Located throughout
- Ceiling material, off white hard & non-friable
    - See CAD drawings for sample locations
- Thermal insulation on piping
    - Grey, Pink and Brown
    - See CAD drawings for sample locations

6.0 POLYCHLORINATED BIPHENYL

PCBs are mixtures of chlorinated biphenyls that are relatively nonflammable and have useful heat exchange and dielectric properties. PCBs were used in the electric industry as dielectric fluid in capacitors and transformers until 1976, when PCBs were banned from use because of their carcinogenic properties. PCBs were also used in the formulation of lubricating oils, pesticides, adhesives, plastics, inks, paints, and sealants. ITI inventoried electrical transformers and light ballasts as part of its scope.

The primary uses of potential PCB materials are associated with transformers (i.e., pad-, pole-, or wall-mounted) or light ballast. ITI recorded available information, such as the manufacturer, serial and model number, condition, date of manufacture, and location of potential PCB-containing equipment.

The principal requirements for PCB management are detailed in the Toxic Substances Control Act (TSCA) federal regulatory program, Title 40; Subchapter R, Part 761, Code of Federal Regulations (CFR). CFR Title 40 Part 761 establishes regulations for the use, storage, removal, disposal, and testing of PCB-containing equipment.

ITI used these management requirements regarding onsite PCB management as guidelines during the Site investigation.

6.1 PCB Inventory

ITI personnel observed the following: - Refer to drawing in Appendix B for inspection locations.

ADMINISTRATION BUILDING

- Light Ballasts – Magnetek B232I120RH - Electronic
- Light Ballasts – Advance RCL-3P32-RH-TP ("No PCB's" on label)
- Light Ballasts – Valuemont E132PI120601 ("No PCB's" on label)
- Light Ballasts – Valuemiser E132PI120601 – Electronic

OMS

- Light Ballasts – Advance R-2E75-S-2-TP ("No PCB's" on label)

TRANSFORMERS

- There are three pole-mounted transformers located on the left edge of the USARC Administration building. (No marking on transformers or poles, presumed to contain PCBs)

7.0 LEAD BASED PAINT

During this survey, ITI inspector, Mr. Narciso Martinez performed a walk-through of the subject building on 08 July 2003 for LBP. This was performed in order to identify and delineate locations that would be sampled for lead based paint.

During the Inspection, sampling locations were recorded on working drawings and are identified in Appendix C of this report.

Samples were taken using an X-ray Fluorescence (XRF) Analyzer RMD Model LPA-1 (Serial Number 01908) manufactured by RMD, Inc. of Watertown, MA. An XRF analyzer works by exposing a paint surface to radiation emitted from a sealed source inside the instrument. The source of this radiation is cobalt-57 isotope. This radioactive material spontaneously emits energy in the form of X rays and gamma rays. When these rays are released from an XRF analyzer and hit a painted surface, the elements in the paint matrix - which can include lead – are excited and respond by emitting energy in the form of X rays characteristic of each of the elements. This response is known as Fluorescence.

In 1990 the Department of Housing and Urban Development issued the first comprehensive document addressing lead based paint in hosing. This document, Lead based paint: Interim Guidelines for Hazard Identification and Abatement in Public and Indian Housing established criteria for conducting lead based paint inspections in public and Indian housing.

This Interim Guidelines described how to conduct a lead based paint inspection. State and Federal regulations use the XRF analyzer or laboratory analysis and specify a reading of 1.0 milligrams per square centimeter (XRF) and 0.5 percent by weight (Paint Chips) as the levels that require abatement.

See Appendix C for XRF report.

7.1 LEAD BASED PAINT

Based on ITI's survey for LBP, ITI has concluded that the following building products contain LBP:

ADMINISTRATION BUILDING

- None found

OMS

- Bay Area
  - Gray painted metal right door jamb
  - Gray painted metal left door jamb
  - Gray painted metal overhead door jambs

7.2 RESPONSIBLE AGENCIES

Various groups and governmental bodies have responsibilities for conducing, evaluating the quality of, or developing a hazard control strategy based upon lead based paint testing. These groups include, but not limited to the following:

- State, Indian tribe, and local governments;
- The US Department of Housing and Urban Development (HUD);
- The US Environmental Protection Agency (EPA);
- Housing authorities;
- Homeowners and landlords; and
- Lead based paint inspectors, risk assessors, and hazard control contractors.

8.0 RADON

Radon is formed from the radioactive decay of radium, a breakdown product of uranium found in minute quantities in most soils. Because radon is an inert gas, it does not react with soil; soil merely serves as a channel through which the gas moves. Soil composition alone is not a good indicator of potential indoor radon problems because radon levels can vary considerably, by as much as a factor of 20 to 100, in the same geographic area.

The EPA regulates the maximum allowable exposure levels for radon and recommends that action be taken to reduce the levels if radon concentrations in a structure that exceeds 4 picocuries per liter (pCi/l) in air.

The objective of the Army Radon Reduction Program (ARRP) is to identify and modify all building structures owned or leased by the Army that have indoor radon concentrations greater then 4 pCi/l. According to the ARRP, if the radon concentration is 4 pCi/l or less and the measured building is geologically and structurally representative of the installation, no further action is required. ITI has conducted radon surveys at this site on 4 February 2003, which included placement, retrieval, and analysis of alpha track canisters, which detect alpha particles emitted from radon.

Based on sampling results, ITI has concluded that Radon results are below 4 piCu/1.

9.0 ACTION SUMMARY

ASBESTOS

Based on the findings above, ITI recommends the following:

- Observations for detected asbestos was based on visible and accessible materials; therefore, asbestos containing materials may be present in inaccessible areas such as ceiling plenums, crawl spaces, attics, etc.
- An imminent asbestos hazard was present at the facility during the site visit.
  - The material that presents a hazard is the window glazing on the windows of the OMS Building.
- Develop and Implement and O & M Plan.

Based on the asbestos present in the building, ITI recommends the following:

- Develop and implement an O & M Plan for all known and suspect ACM

There are three primary objectives of the O & M program: (1) clean up existing contamination (2) minimize further fiber release by controlling access to ACM, and (3) maintain ACM until it is eventually removed. Properly prepared and implemented, this plan will document the building owner's prudence in dealing with asbestos in the building.

PCB'S

Based on the findings above, ITI recommends the following:

- Observations for PCB's was based on visible and accessible materials, therefore, PCB's may be present in other ballasts not observed.
- No imminent PCB hazard was present at the facility during the site visit.
- Any ballast not labeled "Non PCB's" must be handled according to Federal and State regulations for proper disposal.

Based on the labels found on the transformers, ITI recommends the following:

Several light ballasts do not have a label stating the absence of PCBs. Without this statement the ballast is presumed to contain PCBs and must be handled accordingly. Additional testing may be required before this ballast is disturbed or disposed. At a minimum, requirements of 40 CFR 761 must be followed should sampling be required.

LEAD BASED PAINTS

Based on the findings above, ITI recommends the following:

- Observations for LBP's was based on visible and accessible materials, therefore, LBP's may be present in inaccessible areas.

- No imminent LBP hazard was present at the facility OMS during the site visit.
- Workers need to take appropriate safe guards when working, i.e., cutting, grinding, sanding, welding, etc., on areas identified with LBP.
- Conduct a TCLP for all areas identified with LBP prior to disposal.

RADON

Based on the findings above, ITI recommends the following:

- An imminent Radon hazard is not present at the facility.
- According to the survey data as provided in Appendix D, there were no results over 4 piCu/l for this location (USARC Building).

10.0 WARRANTY

The field and laboratory results reported herein (only if samples are collected and/or analyzed) are considered sufficient in detail and scope to determine the presence of accessible and/or exposed suspect asbestos, PCB's, LBPs or radon gas in the facility. ITI warrants that the findings contained herein have been prepared in general accordance with accepted professional practices at the time of its preparation as applied by similar professionals in the community. Changes in the state of the art or in applicable regulations cannot be anticipated and have not been addressed into this report.

The survey and analytical methods have been used to provide the client with information regarding the presence of accessible and/or exposed suspect asbestos, lead, PCB's or radon in the facility at the time of the inspection. Test results are valid only for material tested. There is a distinct possibility that conditions may exist which could not be identified within the scope of the study or which were not apparent during the site visit. This inspection covered only suspect accessible materials with no destructive survey techniques. The study is also limited to the information available from the client at the time it was conducted.

This report is not intended to be an asbestos, lead based paint, PCB or Radon risk assessment, management plan or project design document and should not be used for the purpose of obtaining quotes.

11.0 PHOTOS

OH-014 Whitehall Memorial Facility

(VFT-1) Flooring throughout is confirmed (ACM) Black Mastic Adhesive

TSI pipe insulation in boiler room is not ACM

Cauking found around OMS exterior door frames and light fixture is a confirmed ACM.

OH-014- OMS building

Window glazing throughout OMS windows is confirmed ACM

APPENDIX A

Asbestos Summary

FAC ID	Building	Confirmed ACM	Location	Condition
OH-014-001	USARC	Black Mastic Flooring Adhesive	Through out facility under all flooring	Good
		Caulking around door frames	Located on exterior of Mechanical room	Good
OH-014-002	OMS	Window glazing	Located on all window glass	Damaged
		Window caulking	Located on all exterior window frames	Good
		Caulking around door frames & light switch plates	Located on exterior of facility	Good

FAC ID	Building	Presumed ACM	Location	Condition
OH-014-001	USARC	Roofing Materials	Located throughout	Good
		Fire doors	Located throughout	Good
		Electrical coatings on wires	Located throughout	Good
OH-014-002	OMS	Roofing Materials	Located throughout	Good
		Fire doors	Located throughout	Good
		Electrical coatings on wires	Located throughout	Good

A. E. S. L.
Environmental
LABORATORY

800 North Mary Street • Tempe, Arizona 85281
(480) 966-7171 • Fax (480) 394-0188

BULK ASBESTOS ANALYSIS SUMMARY REPORT

CLIENT NAME: ITI
2710 Central Avenue
St. Petersburg, FL 33712

A.E.S.L. LAB #: 04-A1225

DATE OF RECEIPT: December 8, 2004
SAMPLE CONDITION: Good
DATE ANALYZED: December 8, 2004

PROJECT: ADECCO
OH-014 Administration
REPORT TO: Brian Gibson

A.E.S.L. LAB SAMPLE ID #	CLIENT SAMPLE ID #	SAMPLE DESCRIPTION & COLOR	TEST RESULTS Pos. / Neg.	% & Type	OTHER MATERIALS
A1225-1 a	OH-014 –1 a	VFT-1 – Pink Tile	Negative	---	100% Non-Fibrous
A1225-1 b	OH-014 –1 b	Black Mastic	Negative	---	100% Non-Fibrous
A1225-2	OH-014 –2	TSI-1-1 – Gray TSI	Negative	---	30% Cellulose 40% Mineral Wool 30% Non-Fibrous
A1225-3	OH-014 –3	CK - Gray Caulk	Trace	<1% Chrysotile	99% Non-Fibrous
A1225-4	OH-014 –4	DWC – White Drywall	Negative	---	10% Cellulose 90% Non-Fibrous
A1225-5	OH-014 –5	PWB – White WB	Negative	---	2% Cellulose 98% Non-Fibrous
A1225-6 a	OH-014 –6 a	VFT-1-2 – Pink Tile	Negative	---	100% Non-Fibrous
A1225-6 b	OH-014 –6 b	Black Mastic	Negative	---	100% Non-Fibrous
A1225-7 a	OH-014 –7 a	BB – Purple Cove	Negative	---	100% Non-Fibrous
A1225-7 b	OH-014 –7 b	Yellow Mastic	Negative	---	100% Non-Fibrous
A1225-8	OH-014 –8	CA – Yellow Adhesive	Negative	---	100% Non-Fibrous
A1225-9	OH-014 –9	TSI-1-2 – Gray TSI	Negative	---	30% Cellulose 30% Mineral Wool 40% Non-Fibrous

Method: Polarized Light Microscopy, EPA Method 600/R-93/116

The result quantitations reported are an estimation based on the methods of visual microscopic estimation, which is considered only a semi-quantitative technique. Also, this report is indicative only of the sample material A.E.S.L. Laboratory received. Results do not necessarily reflect the makeup of the entire span of the material from which the samples were derived. Sampling techniques and/or sample handling may affect the integrity of the sample/s before submission to A.E.S.L. Laboratory and hence the outcome of the laboratory results. Samples not destroyed by testing are retained a minimum of thirty days.

A.E.S.L. Laboratory, recommends re-analysis by point count or Transmission Electron Microscopy (TEM) for materials that are found to contain less than ten percent (<10%) asbestos by PLM.

Analyst: Shawn Kearney

C:\DATA\AESL\BULK\04-a000\04-A1225.doc

Turnaround: ☒ RUSH ☐ Same Day ☐ 24 Hour ☐ 48 Hour

☐ Stop @ First Positive
☑ Read All Samples

BULK ASBESTOS SAMPLE

CHAIN OF CUSTODY

A.E.S.L. LABORATORY # : 04-A1225

Page 1 of 1

Client Name: ITI of South Florida, Inc. Contact: Brian Gibson Phone: (727) 586-7500 Fax: (727) 681-0764

Address: 2710 Central Avenue City: St. Petersburg State: Florida Zip: 33712

PROJECT: ADECCO PROJECT ID: OH-014 Administration DATE SAMPLES TAKEN: 11-30-04

SAMPLES REC'D (#): _____ DATE REC'D: _____ CONDITION: _____ SAMPLES ACCEPTED (Y , N): _____ IF NO, WHY? _____

*** SAMPLES TO BE RETURNED TO CLIENT AFTER 30 DAYS OR DISPOSED OF BY A.E.S.L. (D R): _____ ***
(If NOT SPECIFIED WILL AUTOMATICALLY BE DISPOSED OF AFTER 30 DAYS)

A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description	A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description
	OH-014-1	HALL	VFT-1 PINK W/BLACK MASTIC				
	OH-014-2	STAIRA	TSI-1-1 GREY				
	OH-014-3	EXT. DOOR	CK				
	OH-014-4	MECH RM CLG.	DWC				
	OH-014-5	XO OFFICE	PWB				
	OH-014-6	Hall/Rm 24	VFT-1-2 Pink W/ Black Mastic				
	OH-014-7	Rm 24	BB				
	OH-014-8	Rm 21	CA				
	OH-014-9	STAIR B	TSI-1-2				

A.E.S.L. Environmental Laboratory
800 North Mary Street
Tempe, Arizona 85281

RELINQUISHED BY: Brian Gibson Time: 6:30 AM DATE: 12-7-04

RECEIVED BY: CM Time: DATE: 12-8-04

A. E. S. L.
Environmental
LABORATORY

1707 E. Weber Dr., Suite 6 Tempe, Arizona 85281
Phone:(480) 966-3714 Fax: (480) 394-0188
Toll Free: (877) 854-1767

BULK ASBESTOS ANALYSIS SUMMARY REPORT

CLIENT NAME: I.T.I. of South Florida, Inc.
514 First Avenue Southwest
Largo, Florida 33770

DATE OF RECEIPT: June 6, 2002
SAMPLE CONDITION: Good
DATE ANALYZED: June 6, 2002

A.E.S.L. LABORATORY #: 02-A446

PROJECT: Whitehall ARC
Columbus, OH

A.E.S.L. LAB SAMPLE ID #	CLIENT SAMPLE ID #	SAMPLE DESCRIPTION & COLOR	TEST RESULTS Pos. / Neg.	% & Type	OTHER MATERIALS
A446-1 a	WH 01 a	Pink Vinyl Floor Tile	Negative	---------	5% Cellulose 95% Non-Fibrous
A446-1 b	**WH 01 b**	**Black Mastic**	**Positive**	**10% Chrysotile**	**10% Cellulose** **80% Non-Fibrous**
A446-2 a	WH 02 a	Pink Vinyl Floor Tile	Negative	---------	5% Cellulose 95% Non-Fibrous
A446-2 b	**WH 02 b**	**Black Mastic**	**Positive**	**10% Chrysotile**	**10% Cellulose** **80% Non-Fibrous**
A446-3	WH 03	White and Gray Ceiling Tile	Negative	---------	30% Cellulose 70% Non-Fibrous
A446-4	WH 04	White and Gray Ceiling Tile	Negative	---------	30% Cellulose 70% Non-Fibrous
A446-5	WH 05	Pink Insulation	Negative	---------	20% Cellulose 80% Non-Fibrous
A446-6	WH 06	Pink Insulation	Negative	---------	20% Cellulose 80% Non-Fibrous

Legend: NAAPCR - Not analyzed as per customer request

Method: Polarized Light Microscopy, EPA Method 600/R-93/116

The result quantitations reported are an estimation based on the methods of visual microscopic estimation which is considered only a semi-quantitative technique. Also, this report is indicative only of the sample material A.E.S.L. Laboratory received. Results do not necessarily reflect the makeup of the entire span of the material from which the samples were derived. Sampling techniques and/or sample handling may affect the integrity of the sample/s before submission to A.E.S.L. Laboratory and hence the outcome of the laboratory results. Samples not destroyed by testing are retained a minimum of thirty days.

A.E.S.L. Laboratory, recommends re-analysis by point count or Transmission Electron Microscopy (TEM) for materials that are found to contain less than ten percent (<10%) asbestos by PLM.

This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

Analyst: R Keneson
Ronnie Keneson

C:\DATA\AESL\BULK\02-a000/02-A446.DOC

Turnaround Time: ☐ RUSH ☐ Same Day ☐ 24 Hour ☐ 48 Hour

☐ Stop @ First Positive
☐ Read All Samples

BULK ASBESTOS SAMPLE
CHAIN OF CUSTODY

A.E.S.L. LABORATORY # : 02-A4466

Page ___ of ___

Client Name: ITI Contact: G. Baiesiti Phone: (727) 502-9223 Fax: (727) 581-0764

Address: 514 1st Ave SW City: Largo State: FL Zip: 33770

PROJECT NAME: Whiteball ARC PROJECT ID: Columbus OH

Samples Collected By: A. Menendez DATE SAMPLES TAKEN: 5 June 02

SAMPLES REC'D (#): _____ DATE REC'D: _____ CONDITION: _____ SAMPLES ACCEPTED (Y , N): _____ IF NO, WHY? _____

*** SAMPLES TO BE RETURNED TO CLIENT AFTER 30 DAYS OR DISPOSED OF BY A.E.S.L. (D R): _____ ***
(IF NOT SPECIFIED WILL AUTOMATICALLY BE DISPOSED OF AFTER 30 DAYS)

A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description	A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description
WH01	—	Hallway	VFT-Pink	WH05	—	Boiler	Insulation
—	—	1st Floor	Good/20,000 S/FT			Room	Good/2000 S/FT
WH02	—	Hallway	VFT-Pink	WH06	—	Boiler	Insulation
WH03	—	Room 15	Ceiling Tile				
—	—		Good/400 S/FT				
WH04	—	Room 15	Ceiling Tile				

A.E.S.L. ENVIRONMENTAL LABORATORY
1707 East Weber Drive, Suite 6
TEMPE, ARIZONA 85281
PHONE (480) 966-3714 FAX (480) 394-0188

RELINQUISHED BY: [signature] Time: 1200 DATE: 5 Jun 02
Fedex 834894326 3472

RECEIVED AT A.E.S.L. BY: [signature] Time: 1330 DATE: 6/6/02

A. E. S. L.
Environmental
LABORATORY

800 North Mary Street • Tempe, Arizona 85281
(480) 966-7171 • Fax (480) 394-0188

POINT COUNT ASBESTOS ANALYSIS SUMMARY REPORT

CLIENT NAME: ITI
2710 Central Avenue
St. Petersburg, FL 33712

A.E.S.L. LAB #: 05-A024P

DATE OF RECEIPT: February 25, 2005
SAMPLE CONDITION: Good
DATE ANALYZED: February 25, 2005

PROJECT: ADECCO
OH-002-001
REPORT TO: B. Gibson

A.E.S.L. LAB SAMPLE ID #	CLIENT SAMPLE ID #	SAMPLE DESCRIPTION & COLOR	TEST RESULTS Pos. / Neg.	% & Type	OTHER MATERIALS
A024P-1 b	OH-002-001 b	Black Mastic	Negative	<0.10% Chrysotile *	100% Non-Fibrous
A024P-3 b	OH-002-001 b	Black Mastic	Negative	<0.10% Chrysotile *	100% Non-Fibrous

* No Points Counted

Method: Polarized Light Microscopy, EPA Method 600/R-93/116

The result quantitations reported are an estimation based on the methods of visual microscopic estimation, which is considered only a semi-quantitative technique. Also, this report is indicative only of the sample material A.E.S.L. Laboratory received. Results do not necessarily reflect the makeup of the entire span of the material from which the samples were derived. Sampling techniques and/or sample handling may affect the integrity of the sample/s before submission to A.E.S.L. Laboratory and hence the outcome of the laboratory results. Samples not destroyed by testing are retained a minimum of thirty days.

Analyst: _____
Shawn Kearney

C:\DATA\AESL\BULK\05-A000/05-A024P.doc

Turnaround Time: ☒ RUSH ☐ Same Day ☐ 24 Hour ☐ 48 Hour

☒ Stop @ First Positive
☐ Read All Samples
☒ PLEASE RETEST BLACK MASTIC w/ PT. Count Procedure

BULK ASBESTOS SAMPLE
CHAIN OF CUSTODY

A.E.S.L. LABORATORY # : _____

Page 1 of 1

Client Name: ITI of South Florida, Inc. Contact: B. Gibson Phone: (727) 586-7500 Fax: (727) 501-0764

Address: 2710 Central Avenue City: St. Petersburg State: Florida Zip: 33712

PROJECT: ADECCO PROJECT ID: 04-002-001 DATE SAMPLES TAKEN: 12-21-04

SAMPLES REC'D (#): _____ DATE REC'D: _____ CONDITION: _____ SAMPLES ACCEPTED (Y , N): _____ IF NO, WHY? _____

*** SAMPLES TO BE RETURNED TO CLIENT AFTER 30 DAYS OR DISPOSED OF BY A.E.S.L. (D R): _____ ***
(IF NOT SPECIFIED WILL AUTOMATICALLY BE DISPOSED OF AFTER 30 DAYS)

A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description	A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description
	04-002-001b	Halls	Black Mastic				
	04-002-001b	Halls Flr 2	Black Mastic 2				

A.E.S.L. Environmental Laboratory
800 North Mary Street
Tempe, Arizona 85281

RELINQUISHED BY: [signature] Time: Noon DATE 2-25-05

RECEIVED BY: _____ Time: _____ DATE: _____

A. E. S. L.
Environmental
LABORATORY
800 North Mary Street • Tempe, Arizona 85281
(480) 966-7171 • Fax (480) 394-0188

BULK ASBESTOS ANALYSIS SUMMARY REPORT

CLIENT NAME: ITI
514 1st Ave. SW
Largo, FL 33770

DATE OF RECEIPT: June 17, 2003
SAMPLE CONDITION: Good
DATE ANALYZED: June 18, 2003

A.E.S.L. LABORATORY #: 03-A595

PROJECT: USARC
B0306OH014001*

A.E.S.L. LAB SAMPLE ID #	CLIENT SAMPLE ID #	SAMPLE DESCRIPTION & COLOR	TEST RESULTS Pos. / Neg.	% & Type	OTHER MATERIALS
A595-1	001*1	CT-1 – White & Gray Ceiling Tile	Negative	---------	5% Cellulose 5% Mineral Wool 90% Non-Fibrous
A595-2	001*2	CT-1 – White & Gray Ceiling Tile	Negative	---------	5% Cellulose 5% Mineral Wool 90% Non-Fibrous
A595-3	001*3	CT-1 – White & Gray Ceiling Tile	Negative	---------	5% Cellulose 5% Mineral Wool 90% Non-Fibrous
A595-4	001*4	CM-1 – Off-White Material	Negative	---------	3% Cellulose 97% Non-Fibrous
A595-5	001*5	CM-1 – Off-White Material	Negative	---------	3% Cellulose 97% Non-Fibrous
A595-6	001*6	CM-1 – Off-White Material	Negative	---------	3% Cellulose 97% Non-Fibrous
A595-7	001*7	TI-1 – Pink & Gray Insulation	Negative	---------	2% Cellulose 10% Mineral Wool 88% Non-Fibrous
A595-8	001*8	TI-1 – Pink & Gray Insulation	Negative	---------	2% Cellulose 10% Mineral Wool 88% Non-Fibrous
A595-9	001*9	TI-1 – Pink & Gray Insulation	Negative	---------	2% Cellulose 10% Mineral Wool 88% Non-Fibrous

Legend: NAAPCR - Not analyzed as per customer request

Method: Polarized Light Microscopy, EPA Method 600/R-93/116

The result quantitations reported are an estimation based on the methods of visual microscopic estimation which is considered only a semi-quantitative technique. Also, this report is indicative only of the sample material A.E.S.L. Laboratory received. Results do not necessarily reflect the makeup of the entire span of the material from which the samples were derived. Sampling techniques and/or sample handling may affect the integrity of the sample/s before submission to A.E.S.L. Laboratory and hence the outcome of the laboratory results. Samples not destroyed by testing are retained a minimum of thirty days.

A.E.S.L. Laboratory, recommends re-analysis by point count or Transmission Electron Microscopy (TEM) for materials that are found to contain less than ten percent (<10%) asbestos by PLM.

This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

Analyst: R. Keneson
Ronnie Keneson

C:\DATA\AESL\BULK\03-a000/03-A595.DOC

0 H014001

Turnaround Time: ☐ RUSH ☐ Same Day ☐ 24 Hour ☐ 48 Hour

☑ Stop @ First Positive
☐ Read All Samples

B030604014001

BULK ASBESTOS SAMPLE
CHAIN OF CUSTODY

A.E.S.L. LABORATORY # : 03-A595

Page ___ of ___

Client Name: ITI Contact: GI/BAKSHI Phone: (727) 586-7500 Fax: (727) 581-0764

Address: 5141st Ave SW City: Largo State: FL. Zip: ~~33760~~ 33770

PROJECT NAME: _____ PROJECT ID: _____

Samples Collected By: [redacted] DATE SAMPLES TAKEN: _____

SAMPLES REC'D (#): _____ DATE REC'D: _____ CONDITION: _____ SAMPLES ACCEPTED (Y , N): _____ IF NO, WHY? _____

*** SAMPLES TO BE RETURNED TO CLIENT AFTER 30 DAYS OR DISPOSED OF BY A.E.S.L. (D R): ___ ___ ***
(IF NOT SPECIFIED WILL AUTOMATICALLY BE DISPOSED OF AFTER 30 DAYS)

A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description	A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description
1	001#1		CT-1	9	001#9		TI-1
2	001#2		CT-1				
3	001#3		CT-1				
4	001#4		CM-1				
5	001#5		CM-1				
6	001#6		CM-1				
7	001#7		TI-1				
8	001#8		TI-1				

A.E.S.L. ENVIRONMENTAL LABORATORY
1707 East Weber Drive, Suite 6
TEMPE, ARIZONA 85281
PHONE (480) 966-3714 FAX (480) 394-0188

RELINQUISHED BY: [redacted] Time: _____ DATE: _____

RECEIVED AT A.E.S.L. BY: B. Zuberg Time: _____ DATE: 6-17-03

A. E. S. L.
Environmental
LABORATORY

800 North Mary Street • Tempe, Arizona 85281
(480) 966-7171 • Fax (480) 394-0188

BULK ASBESTOS ANALYSIS SUMMARY REPORT

CLIENT NAME: ITI
2710 Central Avenue
St. Petersburg, FL 33712

A.E.S.L. LAB #: 04-A1224

DATE OF RECEIPT: December 8, 2004
SAMPLE CONDITION: Good
DATE ANALYZED: December 8, 2004

PROJECT: ADECCO
OH-014 OMS
REPORT TO: Brian Gibson

A.E.S.L. LAB SAMPLE ID #	CLIENT SAMPLE ID #	SAMPLE DESCRIPTION & COLOR	TEST RESULTS Pos. / Neg.	% & Type	OTHER MATERIALS
A1224-1	OH-014-1	TSI – Gray TSI	Negative	---------	30% Cellulose 40% Mineral Wool 30% Non-Fibrous
A1224-2	OH-014-2	WG – Gray Caulking	Positive	2% Chrysotile	98% Non-Fibrous
A1224-3	OH-014-3	WCK – Gray Caulking	Positive	4% Chrysotile	96% Non-Fibrous
A1224-4	OH-014-4	CK – Gray Caulking	Positive	3% Chrysotile	97% Non-Fibrous

Method: Polarized Light Microscopy, EPA Method 600/R-93/116

The result quantitations reported are an estimation based on the methods of visual microscopic estimation, which is considered only a semi-quantitative technique. Also, this report is indicative only of the sample material A.E.S.L. Laboratory received. Results do not necessarily reflect the makeup of the entire span of the material from which the samples were derived. Sampling techniques and/or sample handling may affect the integrity of the sample/s before submission to A.E.S.L. Laboratory and hence the outcome of the laboratory results. Samples not destroyed by testing are retained a minimum of thirty days.

A.E.S.L. Laboratory, recommends re-analysis by point count or Transmission Electron Microscopy (TEM) for materials that are found to contain less than ten percent (<10%) asbestos by PLM.

This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without the written consent of A.E.S.L.

Analyst: _____
Shawn Kearney

C:\DATA\AESL\BULK\04-a000/04-A1224.doc

Turnaround : ☒ RUSH ☐ Same Day ☐ 24 Hour ☐ 48 Hour

☐ Stop @ First Positive
☒ Read All Samples

BULK ASBESTOS SAMPLE

CHAIN OF CUSTODY

A.E.S.L. LABORATORY # : 04-A1224

Page 1 of 1

Client Name: ITI of South Florida, Inc. Contact: Brian Gibson Phone: (727) 586-7500 Fax: (727) 681-0764

Address: 2710 Central Avenue City: St. Petersburg State: Florida Zip: 33712

PROJECT: ADECCO PROJECT ID: OH-014 OMS DATE SAMPLES TAKEN: 11-30-04

SAMPLES REC'D (#): 4 DATE REC'D: 12-8-04 CONDITION: Good SAMPLES ACCEPTED (Y , N): Y IF NO, WHY? _____

*** SAMPLES TO BE RETURNED TO CLIENT AFTER 30 DAYS OR DISPOSED OF BY A.E.S.L. (D R): _____ ***
(IF NOT SPECIFIED WILL AUTOMATICALLY BE DISPOSED OF AFTER 30 DAYS)

A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description	A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description
	OH-014-1	GARAGE	TSI-Grey				
	OH-014-2	Ext Window	WG-Grey				
	OH-014-3	int window	WCK-Grey				
	OH-014-4	EXT. Elect.	CK-Grey				

A.E.S.L. Environmental Laboratory
800 North Mary Street
Tempe, Arizona 85281

RELINQUISHED BY: Brian Gibson Time: 10:30 AM DATE: 12-7-04

RECEIVED BY: CM Time: DATE: 12-8-04

A. E. S. L.
Environmental
LABORATORY

800 North Mary Street • Tempe, Arizona 85281
(480) 966-7171 • Fax (480) 394-0188

BULK ASBESTOS ANALYSIS SUMMARY REPORT

CLIENT NAME: ITI
514 1st Ave. SW
Largo, FL 33770

DATE OF RECEIPT: June 18, 2003
SAMPLE CONDITION: Good
DATE ANALYZED: June 18, 2003

A.E.S.L. LABORATORY #: 03-A592

PROJECT: USAR
B0306OH014002*

A.E.S.L. LAB SAMPLE ID #	CLIENT SAMPLE ID #	SAMPLE DESCRIPTION & COLOR	TEST RESULTS Pos. / Neg.	TEST RESULTS % & Type	OTHER MATERIALS
A592-1	002*1	Brown PI-1 – Insulation	Negative	---------	95% Cellulose 5% Non-Fibrous
A592-2	002*2	Brown PI-1 – Insulation	Negative	---------	95% Cellulose 5% Non-Fibrous
A592-3	002*3	Brown PI-1 – Insulation	Negative	---------	95% Cellulose 5% Non-Fibrous
A592-4	002*4	Gray TI-1 – Insulation	Negative	---------	10% Cellulose 20% Fibrous Glass 40% Mineral Wool 30% Non-Fibrous
A592-5	002*5	Gray TI-1 – Insulation	Negative	---------	10% Cellulose 30% Fibrous Glass 40% Mineral Wool 20% Non-Fibrous
A591-6	001*6	Gray TI-1 – Insulation	Negative	---------	30% Cellulose 10% Fibrous Glass 40% Mineral Wool 20% Non-Fibrous

Legend: NAAPCR - Not analyzed as per customer request

Method: Polarized Light Microscopy, EPA Method 600/R-93/116

The result quantitations reported are an estimation based on the methods of visual microscopic estimation which is considered only a semi-quantitative technique. Also, this report is indicative only of the sample material A.E.S.L. Laboratory received. Results do not necessarily reflect the makeup of the entire span of the material from which the samples were derived. Sampling techniques and/or sample handling may affect the integrity of the sample/s before submission to A.E.S.L. Laboratory and hence the outcome of the laboratory results. Samples not destroyed by testing are retained a minimum of thirty days.

A.E.S.L. Laboratory, recommends re-analysis by point count or Transmission Electron Microscopy (TEM) for materials that are found to contain less than ten percent (<10%) asbestos by PLM.

This report cannot be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.

Analyst: Shawn Kearney

C:\DATA\AESL\BULK\03-a000/03-A592.DOC

White Hall Memorial Mt. Tr-pool

Turnaround Time: ☐ RUSH ☐ Same Day ☐ 24 Hour ☐ 48 Hour - 5 DAY

☐ Stop @ First Positive
☐ Read All Samples

~~B030604013002*~~
B030604014002*

BULK ASBESTOS SAMPLE
CHAIN OF CUSTODY

A.E.S.L. LABORATORY # : 03-A592

Page ___ of ___

Client Name: ITI Contact: Gil BAKshi Phone (727) 586-7500 Fax (727) ___

Address: 514 1st AVE SW City: CARGO State: FL Zip: 33770

PROJECT NAME: USAR PROJECT ID: ___

Samples Collected By: N IN DATE SAMPLES TAKEN: ___

SAMPLES REC'D (#): ___ DATE REC'D: ___ CONDITION: ___ SAMPLES ACCEPTED (Y . N): ___ IF NO, WHY? ___

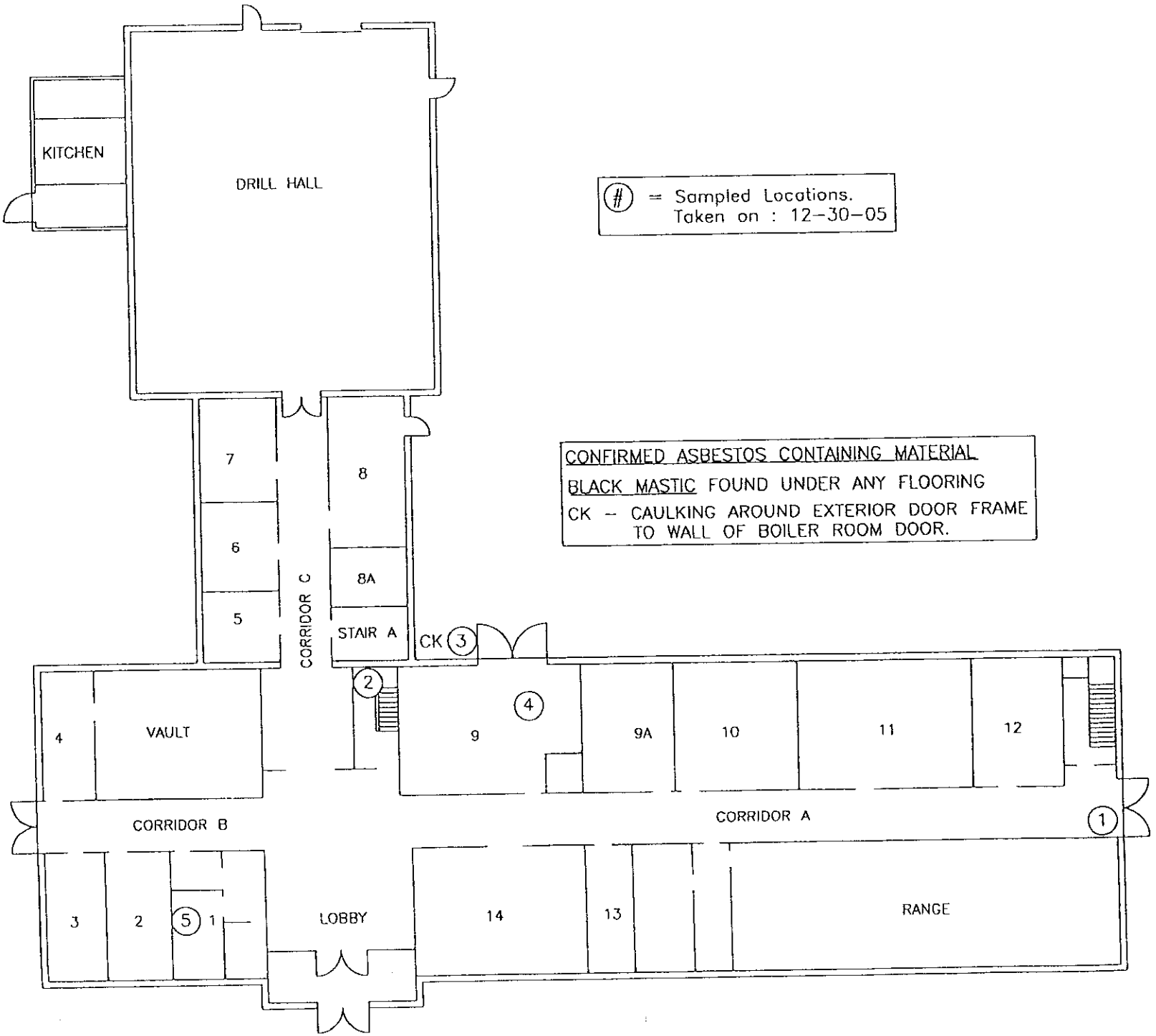
*** SAMPLES TO BE RETURNED TO CLIENT AFTER 30 DAYS OR DISPOSED OF BY A.E.S.L. (D R): ___ ___ ***
(IF NOT SPECIFIED WILL AUTOMATICALLY BE DISPOSED OF AFTER 30 DAYS)

A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description	A.E.S.L. Sample #	Client ID #	Sample Location	Sample Description
	002#1		PI-1				
	002#2	BAY	PI-1				
	002#3	area	PI-1				
	002#4		TI-1				
	002#5		TI-1				
	002#5		TI-1				

A.E.S.L. ENVIRONMENTAL LABORATORY
1707 East Weber Drive, Suite 6
TEMPE, ARIZONA 85281
PHONE (480) 966-3714 FAX (480) 394-0188

RELINQUISHED BY: Narciso A. Ortiz Time: ___ DATE: 06/13/03

RECEIVED AT A.E.S.L. BY: B Pulido Time: ___ DATE: 6-17-03



Confirmed & Sampled Asbestos Locations

USARC Whitehall
Building OH-014
First Floor Plan

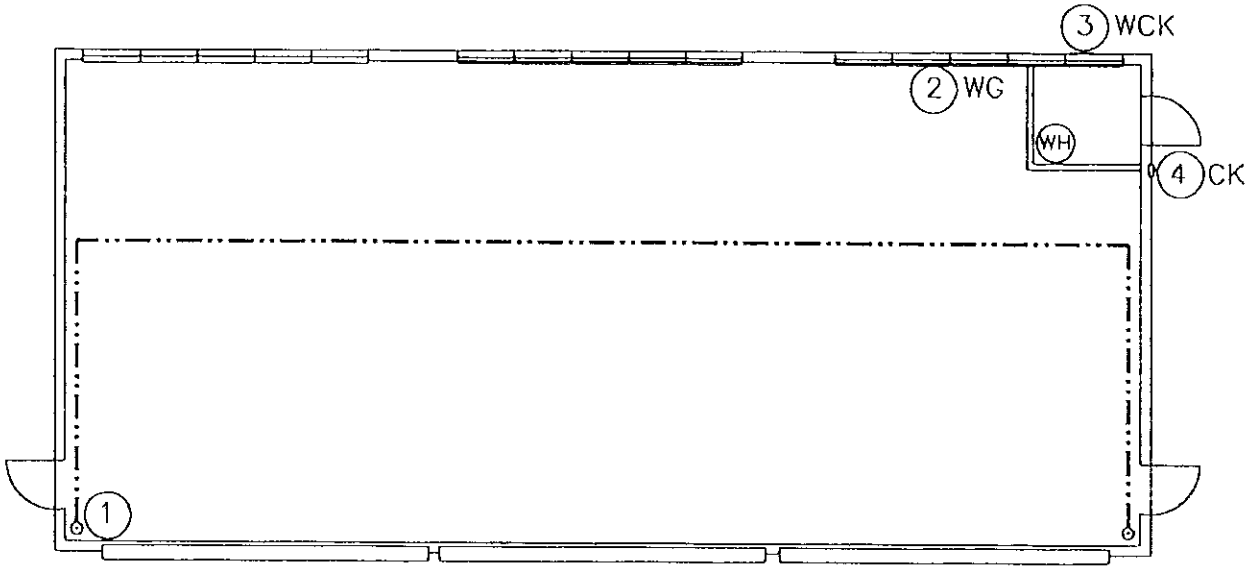
IIT
100 2nd. Ave S.
St. Petersburg. Fl 33701

(#) = Sampled Locations.
Taken on : 12-30-05

CONFIRMED ASBESTOS CONTAINING MATERIAL
BLACK MASTIC FOUND UNDER ANY FLOORING

IT 100 2nd. Ave S. St. Petersburg. Fl 33701	USARC Whitehall Mem. Building OH-014 Second Floor Plan	Confirmed & Sampled Asbestos Locations

(#) = Sampled Locations.
Taken on : 11-30-05



OMS VEHICLE
MAINTENANCE

CONFIRMED ASBESTOS CONTAINING MATERIAL

WG – WINDOW GLAZING ON ALL WINDOWS INTERIOR & EXTERIOR (15) JEALOUSY TYPE WINDOWS.

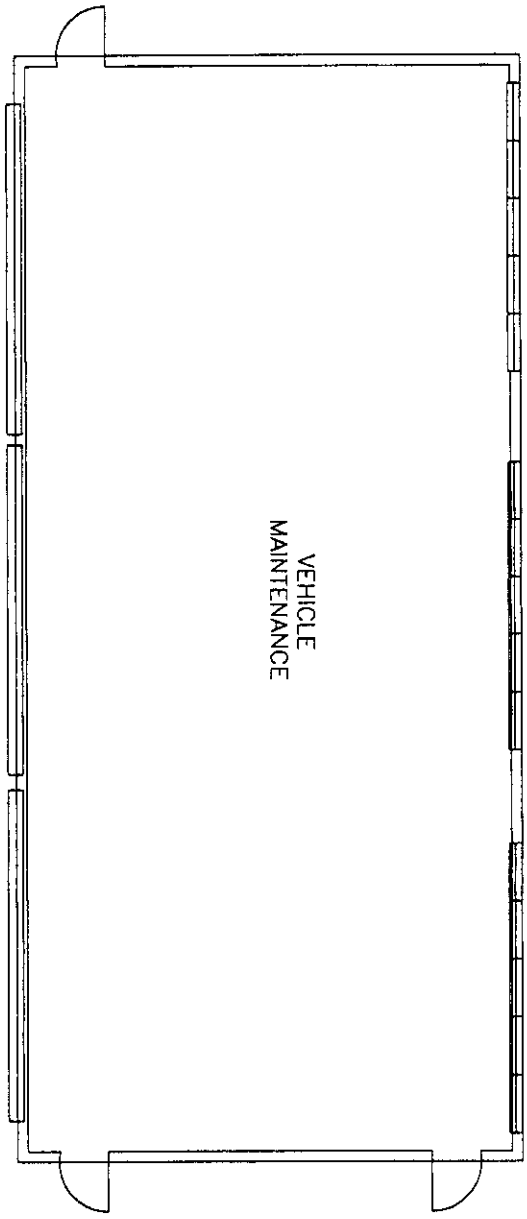
WCK – EXTERIOR WINDOW FRAME TO BRICK WALL CAULKING ON ALL WINDOWS.

CK – EXTERIOR CAULKING ON EXT. ELECTRICAL SWITCH.

Confirmed & Sampled Asbestos Locations

USARC Whitehall Mem.
OH-014-002
OMS

IIT
100 2nd. Ave S.
St. Petersburg, Fl 33701



[illegible] I 100 2nd. Ave S. St. Petersburg. Fl 33701	USARC Whitehall Mem. OH-014-002 OMS	Floor Plan NTS

APPENDIX B

OH 014-001 USARC

Administration & Training Facility

Room number/name	Ballast #/Manufacturer	Label Stating No PCB's
17 Office	Magnetek B232I120RH	Electronic
Classroom	Magnetek B232I120RH	Electronic
16 Office	Magnetek B232I120RH	Electronic
19 File room	Magnetek B232I120RH	Electronic
15 Office	Magnetek B232I120RH	Electronic
21 Classroom	Advance RCL-3P32-RH-TP	Yes
22 Classroom	Advance RCL-3P32-RH-TP	Yes
Mens rest room	Valvemont E132PI120601	Yes
D st Office	Advance RCL-3P32-RH-TP	Yes
D st Office	Advance RCL-3P32-RH-TP	Yes
Hallway	Advance RCL-3P32-RH-TP	Yes
Hallway	Magnetek B232I120RH	Electronic
Mechanical room	Valuemiser E132PI120601	Electronic
Womens rest room	Valuemiser E132PI120601	Electronic
Motorpool	Magnetek B232I120RH	Electronic
Mens rest room	Valuemiser E132PI120601	Electronic
copy room	Valuemiser E132PI120601	Electronic

OH 014-002 OMS

OMS

Garage Bay	Advance R-2E75-S-2TP	Yes

APPENDIX C

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Whitehall Memorial USARC

Inspection Date:	07/08/03	OH-014-001; Building CL002
Report Date:	12/17/2003	Columbus, OH
Abatement Level:	1.0	
Report No.	S#01908 - 07/08/03 11:41	
Total Readings:	77 Actionable: 0	
Job Started:	07/08/03 11:41	
Job Finished:	07/08/03 12:30	

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
Calibration Readings									
---- End of Readings ----									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Whitehall Memorial USARC

Inspection Date: 07/08/03
Report Date: 12/17/2003
Abatement Level: 1.0
Report No. S#01908 - 07/08/03 11:41
Total Readings: 77
Job Started: 07/08/03 11:41
Job Finished: 07/08/03 12:30

OH-014-001; Building CL002
Columbus, OH

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
Interior Room 003 Number Only									
004	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
011	A	Door	Ctr	Lft jamb	I	N/A	N/A	-0.1	QM
010	A	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
005	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
006	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
009	C	Window	Ctr	Rgt jamb	I	N/A	N/A	-0.6	QM
008	C	Window	Ctr	Lft jamb	I	N/A	N/A	-0.6	QM
007	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
Interior Room 004 Room XO									
012	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
017	A	Door	Ctr	Rgt jamb	I	N/A	N/A	-0.2	QM
016	A	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
013	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
014	C	Wall	L Ctr		I	N/A	N/A	-0.2	QM
015	D	Wall	L Ctr		I	N/A	N/A	-0.2	QM
Interior Room 006 Number Only									
036	A	Wall	L Ctr		I	N/A	N/A	-0.3	QM
041	A	Door	Ctr	Rgt jamb	I	N/A	N/A	-0.3	QM
040	A	Door	Ctr	U Ctr	I	N/A	N/A	-0.2	QM
037	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
038	C	Wall	L Ctr		I	N/A	N/A	-0.2	QM
039	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
Interior Room 016 Number Only									
060	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
065	A	Door	Lft	Rgt jamb	I	N/A	N/A	-0.1	QM
064	A	Door	Lft	U Ctr	I	N/A	N/A	-0.3	QM
061	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
062	C	Wall	L Ctr		I	N/A	N/A	-0.2	QM
063	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
Interior Room 017 Office									
072	A	Wall	L Ctr		I	N/A	N/A	-0.2	QM
077	A	Door	Ctr	Rgt jamb	I	N/A	N/A	-0.1	QM
076	A	Door	Ctr	U Ctr	I	N/A	N/A	-0.1	QM
073	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
074	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
075	D	Wall	L Ctr		I	N/A	N/A	-0.3	QM
Interior Room 018 Number Only									
066	A	Wall	L Ctr		I	N/A	N/A	-0.4	QM
071	A	Door	Ctr	Rgt jamb	I	N/A	N/A	-0.2	QM
070	A	Door	Ctr	U Ctr	I	N/A	N/A	-0.2	QM
067	B	Wall	L Ctr		I	N/A	N/A	-0.3	QM
068	C	Wall	L Ctr		I	N/A	N/A	-0.2	QM
069	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Whitehall Memorial USARC

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
Interior Room 020 Number Only									
054	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
059	A	Door	Lft	Rgt jamb	I	N/A	N/A	-0.1	QM
058	A	Door	Lft	U Ctr	I	N/A	N/A	-0.3	QM
055	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
056	C	Wall	L Ctr		I	N/A	N/A	-0.2	QM
057	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
Interior Room 025 Number Only									
030	A	Wall	L Ctr		I	N/A	N/A	0.4	QM
035	A	Door	Ctr	Rgt jamb	I	N/A	N/A	-0.3	QM
034	A	Door	Ctr	U Ctr	I	N/A	N/A	-0.2	QM
031	B	Wall	L Ctr		I	N/A	N/A	0.3	QM
032	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
033	D	Wall	L Ctr		I	N/A	N/A	0.2	QM
Interior Room 901 Number Only									
018	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
023	A	Door	Lft	Rgt jamb	I	N/A	N/A	-0.1	QM
022	A	Door	Lft	U Ctr	I	N/A	N/A	-0.2	QM
019	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
020	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
021	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
Interior Room 902 Room SSA									
024	A	Wall	L Ctr		I	N/A	N/A	0.0	QM
029	A	Door	Ctr	Rgt jamb	I	N/A	N/A	-0.2	QM
028	A	Door	Ctr	U Ctr	I	N/A	N/A	-0.3	QM
025	B	Wall	L Ctr		I	N/A	N/A	0.0	QM
026	C	Wall	L Ctr		I	N/A	N/A	0.0	QM
027	D	Wall	L Ctr		I	N/A	N/A	-0.2	QM
Interior Room 903 Break Room									
042	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
047	A	Door	Lft	Rgt jamb	I	N/A	N/A	-0.2	QM
046	A	Door	Lft	U Ctr	I	N/A	N/A	0.1	QM
043	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
044	C	Wall	L Ctr		I	N/A	N/A	0.1	QM
045	D	Wall	L Ctr		I	N/A	N/A	-0.1	QM
Interior Room 904 Drill Hall									
048	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
053	A	Door	Ctr	Rgt jamb	I	N/A	N/A	-0.1	QM
052	A	Door	Ctr	U Ctr	I	N/A	N/A	-0.2	QM
049	B	Wall	L Ctr		I	N/A	N/A	-0.2	QM
050	C	Wall	L Ctr		I	N/A	N/A	-0.1	QM
051	D	Wall	L Ctr		I	N/A	N/A	-0.3	QM
Calibration Readings									
001								1.0	Std
002								1.2	Std
003								0.9	Std

---- End of Readings ----

Copy

Facility number	OH014
Location (city and state)	Columbus
Building description	2 Level Red Brick
J&N file number	70803-1141

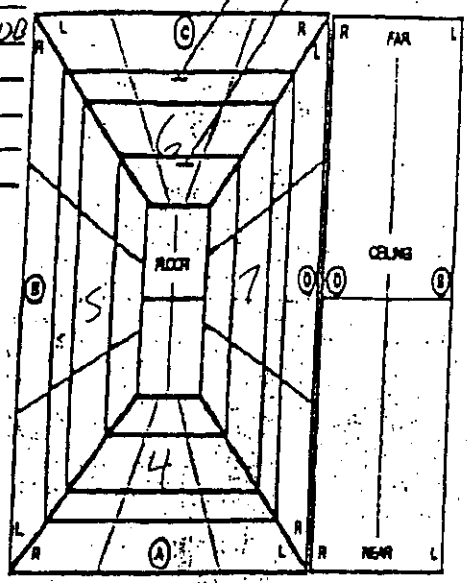
Reading #	Value	Room #	Substrate	Color	Condition	Notes

NO positive Readings

WHITEHALL MEMORIAL USARC
file # 70803-1141 UNIT 7

ADDRESS
721
COUNTRY CLUB
COLUMBUS
OHIO
JOB # OH014
CAL CHK 1,2,3

UNIT # 7
ROOM # 3

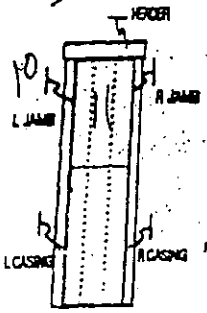


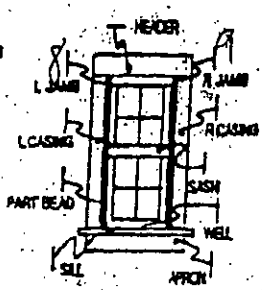
READINGS ON UNSOUND PAINT ARE CIRCLED

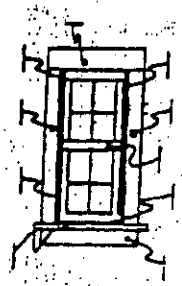
WALL A B C D
LEFT
RIGHT
JOB

WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER



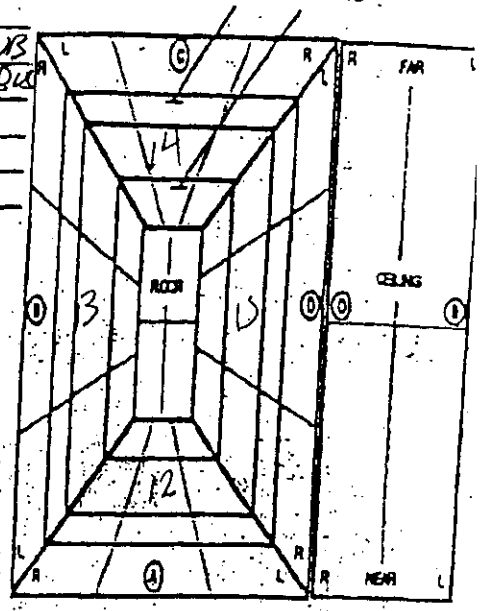




COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-COMP	BROWN	METAL
DOOR	PINK	WOOD
DOOR COMP	PINK	METAL

ADDRESS
721
COUNTRY CLUB
RD COLUMBUS
OHIO
JOB # OH014
CAL CHK

UNIT # 7
ROOM # 4

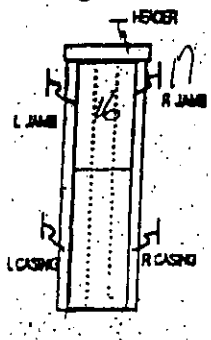


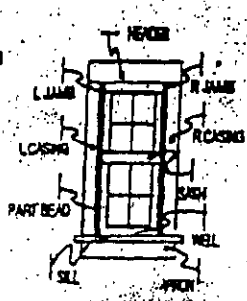
READINGS ON UNSOUND PAINT ARE CIRCLED

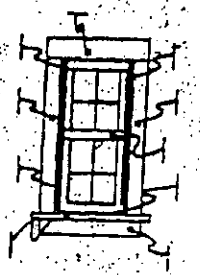
WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER







COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-COMP	BROWN	METAL
DOOR	PINK	WOOD
DOOR - COMP	PINK	METAL

WHITEHALL MEMORIAL USARC

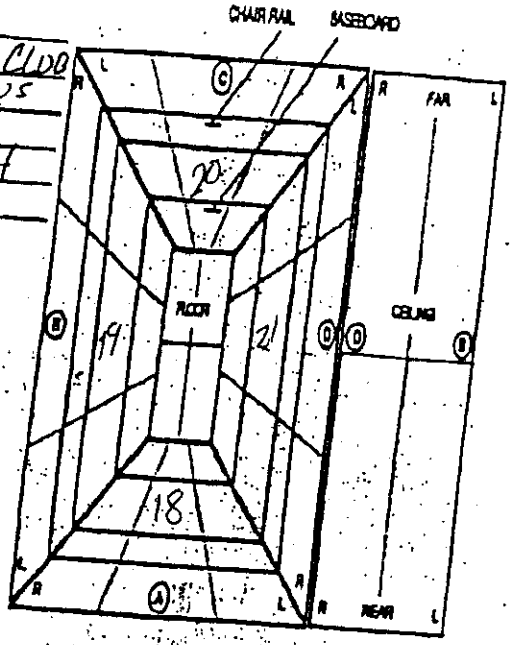
file # 70803-1141

UNIT 7

ADDRESS
721
COUNTRY CLUB
COLUMBUS
OHIO
JOB # OH014
CAL CHK

UNIT # 7
ROOM # KO
901

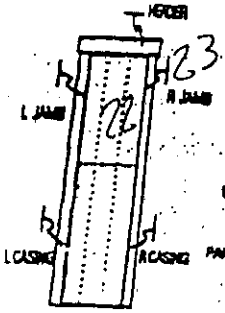
READINGS ON UNSOUND PAINT ARE CIRCLED

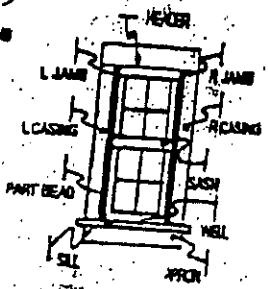


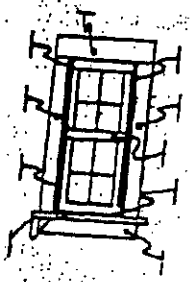
WALL Ⓐ Ⓑ Ⓒ Ⓓ
LEFT Ø
RIGHT ○
JER ○

WALL Ⓐ Ⓑ Ⓒ Ⓓ
LEFT ○
RIGHT ○
CENTER ○

WALL Ⓐ Ⓑ Ⓒ Ⓓ
LEFT ○
RIGHT ○
CENTER ○





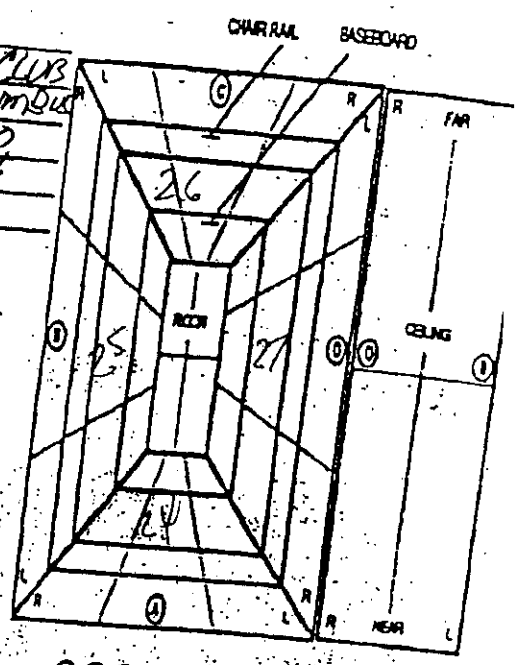


COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-Comp	Brown	METAL
DOOR	PINK	WOOD
DOOR Comp	PINK	METAL

ADDRESS
721
COUNTRY CLUB
RD COLUMBUS
OHIO
JOB # OH014
CAL CHK

UNIT # 7
ROOM # SSA
902

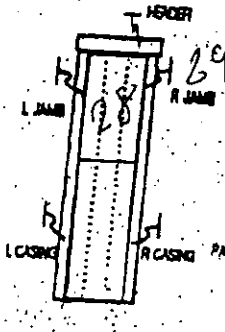
READINGS ON UNSOUND PAINT ARE CIRCLED

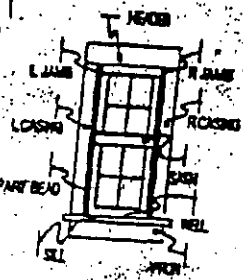


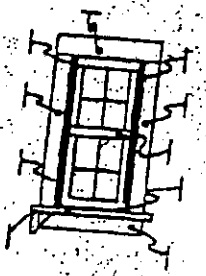
WALL Ⓐ Ⓑ Ⓒ Ⓓ
LEFT ○
RIGHT ○
CENTER Ø

WALL Ⓐ Ⓑ Ⓒ Ⓓ
LEFT ○
RIGHT ○
CENTER ○

WALL Ⓐ Ⓑ Ⓒ Ⓓ
LEFT ○
RIGHT ○
CENTER ○







COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-Comp	Brown	METAL
DOOR	PINK	WOOD
DOOR - Comp	PINK	METAL

WHITEHALL MEMORIAL USARC

file # 70803-1141 UNIT 7

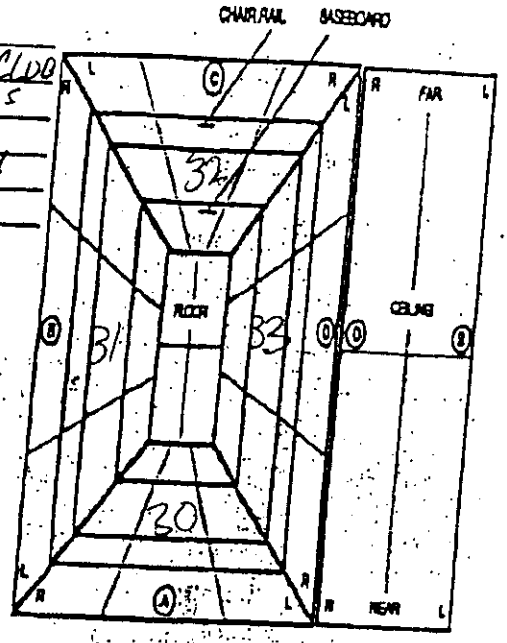
ADDRESS 721 COUNTRY CLUB COLUMBUS OHIO

JOB # OH014

CAL CHK

UNIT # 7

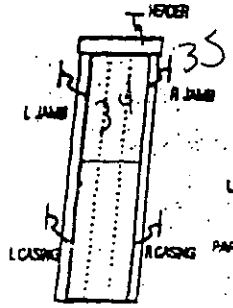
ROOM # 25

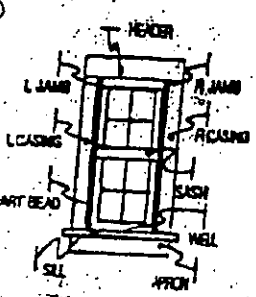


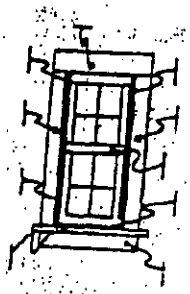
READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT
RIGHT
CENTER







COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-Comp	BROWN	METAL
DOOR	PINK	WOOD
DOOR Comp	PINK	METAL

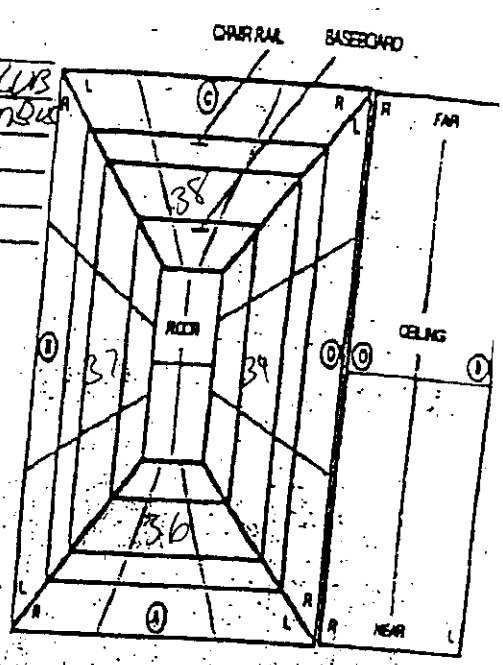
ADDRESS 721 COUNTRY CLUB RD COLUMBUS OHIO

JOB # OH014

CAL CHK

UNIT # 7

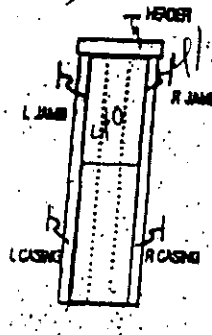
ROOM # 6

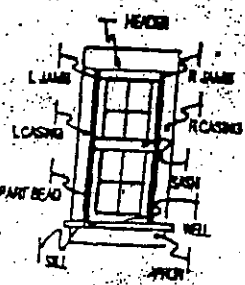


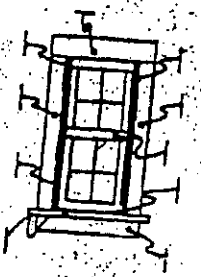
READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D

LEFT
RIGHT
CENTER







COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-Comp	BROWN	METAL
DOOR	PINK	WOOD
DOOR-Comp	PINK	METAL

WHITEHALL MEMORIAL USARC

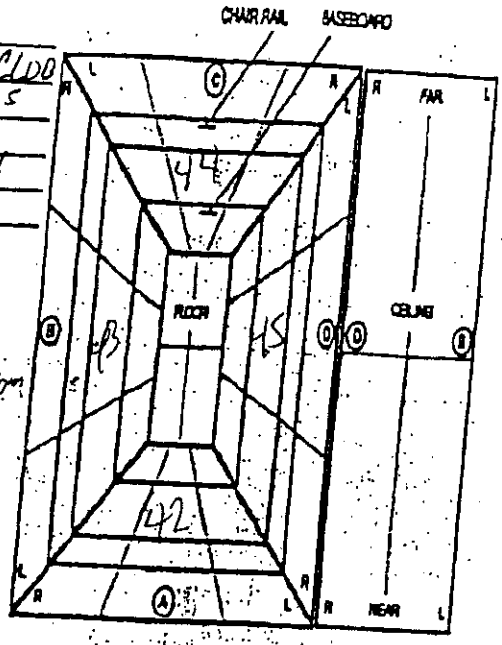
file # 70803-1141

UNIT 7

ADDRESS
721
Country Club
Columbus
Ohio
JOB # OH014
CAL CHK

UNIT # 7
ROOM # Brick Room
903

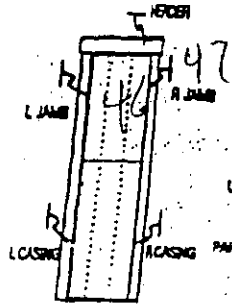
READINGS ON UNSOUND PAINT ARE CIRCLED

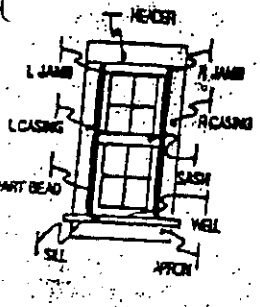


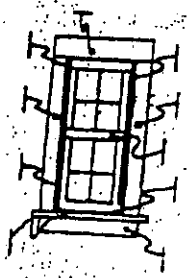
WALL A B C D
LEFT Ø
RIGHT ○
JER ○

WALL A B C D
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D
LEFT ○
RIGHT ○
CENTER ○





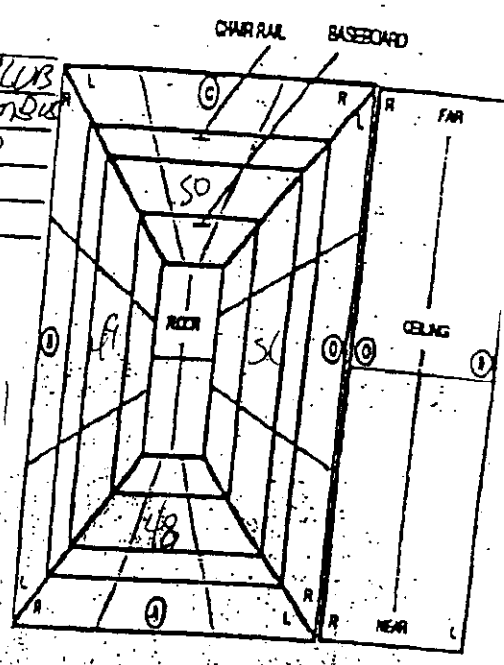


COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-Comp	BROWN	METAL
DOOR	PINK	WOOD
DOOR Comp	PINK	METAL

ADDRESS
721
Country Club
RD Columbus
Ohio
JOB # OH014
CAL CHK

UNIT # 7
ROOM # Drill Hall
904

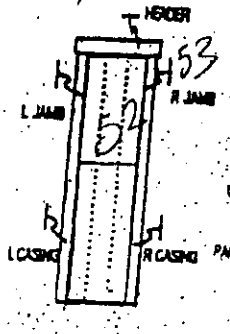
READINGS ON UNSOUND PAINT ARE CIRCLED

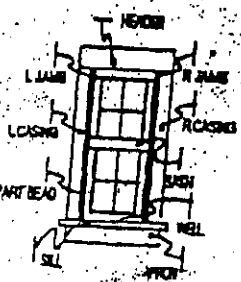


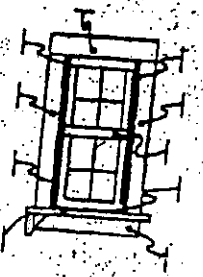
WALL A B C D
LEFT ○
RIGHT ○
CENTER Ø

WALL A B C D
LEFT ○
RIGHT ○
CENTER ○

WALL A B C D
LEFT ○
RIGHT ○
CENTER ○







COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-Comp	BROWN	METAL
DOOR	PINK	WOOD
DOOR - Comp	PINK	METAL

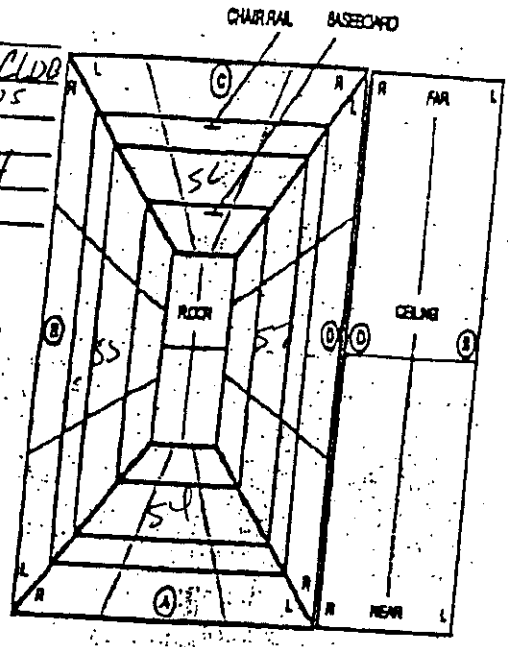
WHITEHALL MEMORIAL USARC

file # 70803-1141

UNIT 7

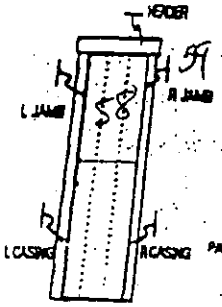
ADDRESS
721
Country Club
Columbus
Ohio
JOB # OH014
CAL CHK

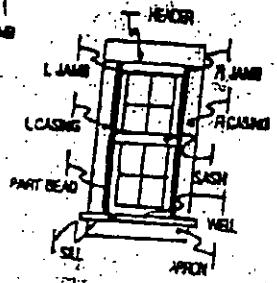
UNIT # 7
ROOM # 20

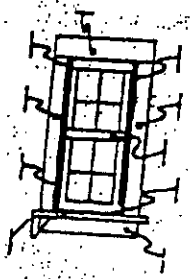


READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D
LEFT
RIGHT
CENTER



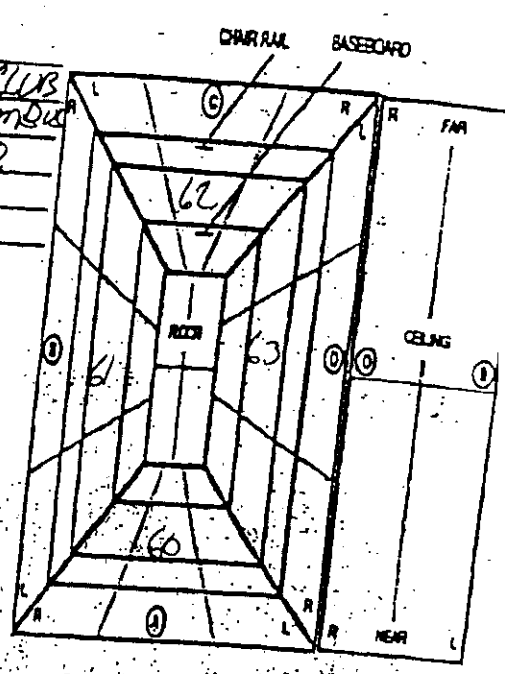




COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-Comp	BROWN	METAL
DOOR	PINK	WOOD
DOOR Comp	PINK	METAL

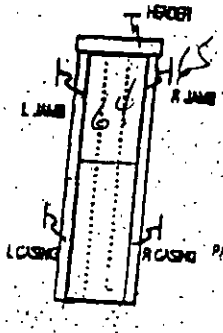
ADDRESS
721
Country Club
RD Columbus
Ohio
JOB # OH014
CAL CHK

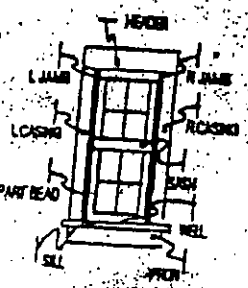
UNIT # 7
ROOM # 16

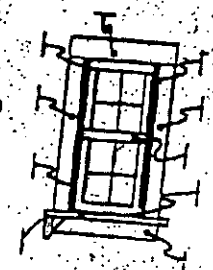


READINGS ON UNSOUND PAINT ARE CIRCLED

WALL A B C D
LEFT
RIGHT
CENTER







COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-Comp	BROWN	METAL
DOOR	PINK	WOOD
DOOR - Comp	PINK	METAL

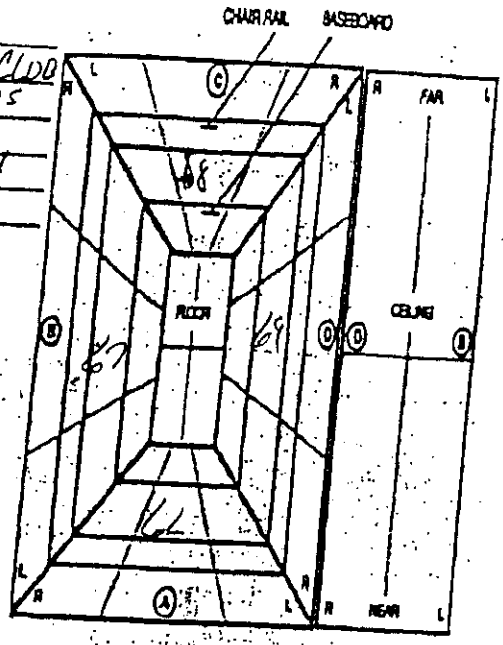
WHITEHALL MEMORIAL USARC

file # 70803-1141

UNIT 7

ADDRESS
721
Country Club
Columbus
Ohio
JOB # OH014
CAL CHK

UNIT # 7
ROOM # 18

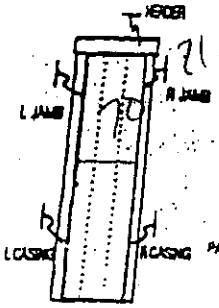


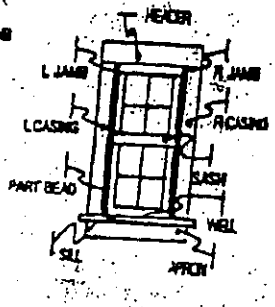
READINGS ON UNSOUND PAINT ARE CIRCLED

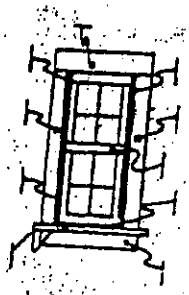
WALL Ø A B C D
LEFT
RIGHT
JOB Ø

WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER



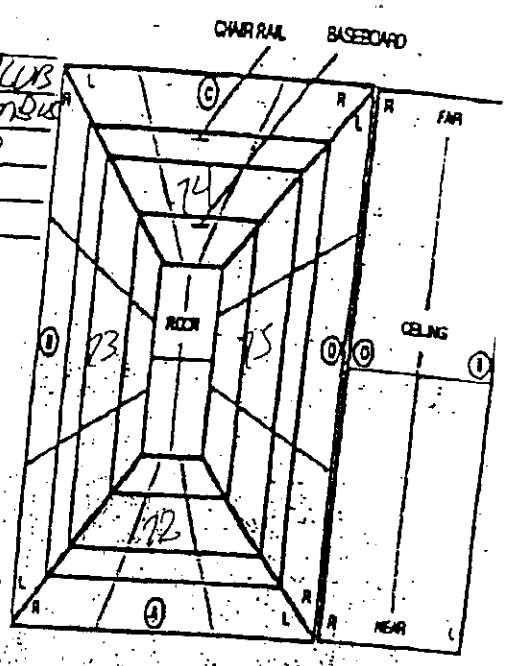




COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-Comp	BROWN	METAL
DOOR	PINK	WOOD
DOOR Comp	PINK	METAL

ADDRESS
721
Country Club
RD Columbus
Ohio
JOB # OH014
CAL CHK

UNIT # 7
ROOM # 17
office

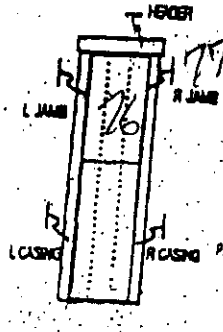


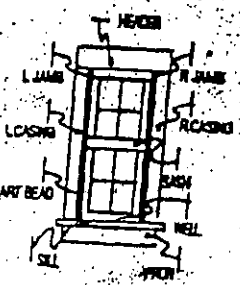
READINGS ON UNSOUND PAINT ARE CIRCLED

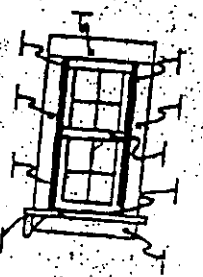
WALL Ø A B C D
LEFT
RIGHT
CENTER Ø

WALL A B C D
LEFT
RIGHT
CENTER

WALL A B C D
LEFT
RIGHT
CENTER







COMMENTS:	FINISH	SUBSTRATE
WALLS	Beige/PINK	CONCRETE BLOCK
WINDOWS	BROWN	METAL
WINDOW-Comp	BROWN	METAL
DOOR	PINK	WOOD
DOOR - Comp	PINK	METAL

SUMMARY REPORT OF LEAD PAINT INSPECTION FOR: Whitehall Memorial OMS

Inspection Date: 07/08/03
Report Date: 12/17/2003
Abatement Level: 1.0
Report No. S#01908 - 07/08/03 12:33
Total Readings: 13 Actionable: 4
Job Started: 07/08/03 12:33
Job Finished: 07/08/03 12:41

OH-014-002; Building CL003
Columbus, OH

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
Exterior Room 001 Number Only									
011	A	Door	Lft	Rgt jamb	F	Metal	Grey	>9.9	QM
010	A	Door	Lft	Lft jamb	F	Metal	Grey	7.0	QM
013	A	Door	Rgt	Rgt jamb	F	Metal	Grey	3.6	QM
012	A	Door	Rgt	Lft jamb	F	Metal	Grey	4.6	QM
Comment: Readings 10 through 12 were taken from the overhead door jambs.									
---- End of Readings ----									

DETAILED REPORT OF LEAD PAINT INSPECTION FOR: Whitehall Memorial OMS

Inspection Date: 07/08/03
Report Date: 12/17/2003
Abatement Level: 1.0
Report No. S#01908 - 07/08/03 12:33
Total Readings: 13
Job Started: 07/08/03 12:33
Job Finished: 07/08/03 12:41

OH-014-002; Building CL003
Columbus, OH

Reading No.	Wall	Structure	Location	Member	Paint Cond	Substrate	Color	Lead (mg/cm²)	Mode
Exterior Room 001 Number Only									
011	A	Door	Lft	Rgt jamb	F	Metal	Grey	>9.9	QM
010	A	Door	Lft	Lft jamb	F	Metal	Grey	7.0	QM
013	A	Door	Rgt	Rgt jamb	F	Metal	Grey	3.6	QM
012	A	Door	Rgt	Lft jamb	F	Metal	Grey	4.6	QM
Comment: Readings 10 through 12 were taken from the overhead door jambs.									
Interior Room 001 Bay Area									
004	A	Wall	L Ctr		I	N/A	N/A	-0.1	QM
009	A	Door	Lft	Rgt jamb	I	N/A	N/A	-0.2	QM
008	A	Door	Lft	U Ctr	I	N/A	N/A	-0.1	QM
005	B	Wall	L Ctr		I	N/A	N/A	-0.1	QM
006	C	Wall	L Ctr		I	N/A	N/A	-0.3	QM
007	D	Wall	L Ctr		I	N/A	N/A	-0.2	QM
Calibration Readings									
001								0.8	Std
002								0.9	Std
003								0.7	Std

---- End of Readings ----

COPY

Facility number	OH014
Location (city and state)	COLUMBUS OHIO
Building description	2 BAY GARAGE
JBN file number	70803-1233 UNIT 8

Reading #	Value	Room #	Substrate	Color	Condition	Notes
10	7.0	DOOR HEAD	METAL	GREY	FAIR	
11	9.9	〃	〃	〃	〃	
12	4.6	〃	〃	〃	〃	
13	3.6	〃	〃	〃	〃	

WHITE HALL MEMORIAL OMS

file # 70803-1233 UNIT 8

ADDRESS

JOB # OH014

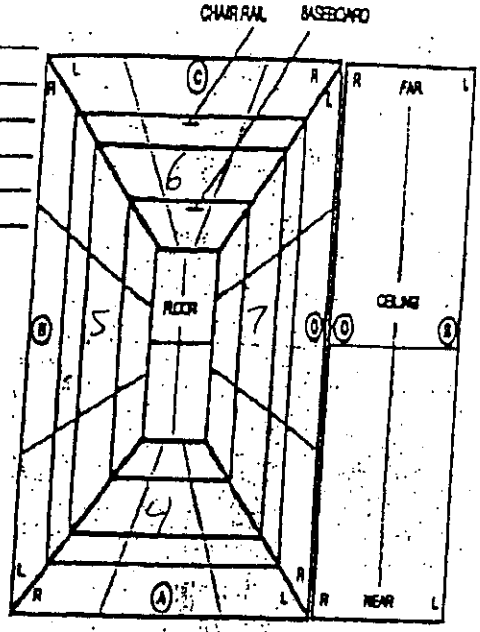
CALC'K 1, 2, 3

UNIT # 8

ROOM # 1

Bay 1

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

JAMB

WALL A B C D

LEFT

RIGHT

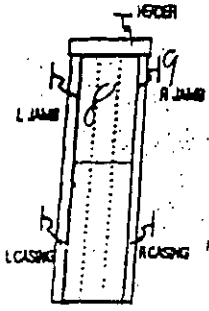
CENTER

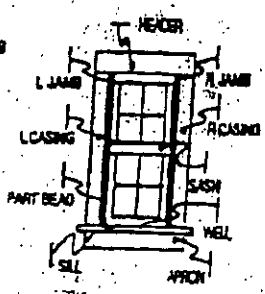
WALL A B C D

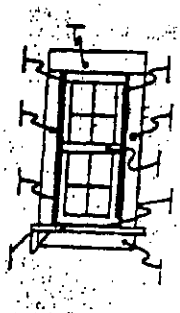
LEFT

RIGHT

CENTER







COMMENTS:	FINISH	SUBSTRATE
WALLS	WHITE	CONCRETE BLOCK
WINDOWS		
WINDOW-COMP		
DOOR	GREY	METAL
DOOR COMP	W	"

ADDRESS

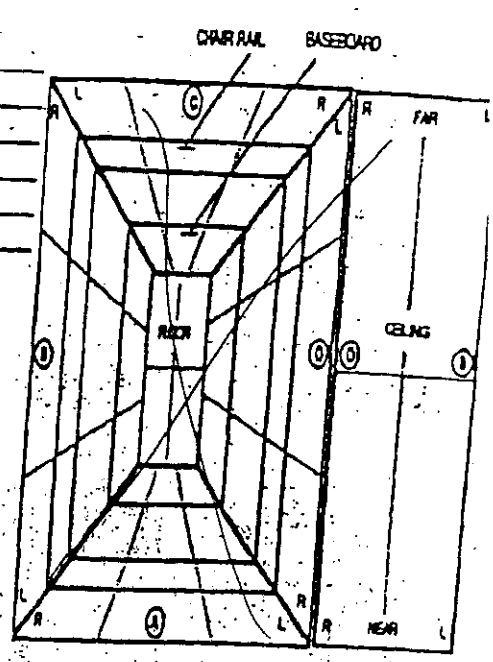
JOB # OH014

CALC'K

UNIT # 8

ROOM # 2

READINGS ON UNSOUND PAINT ARE CIRCLED



WALL A B C D

LEFT

RIGHT

CENTER

WALL A B C D

LEFT

RIGHT

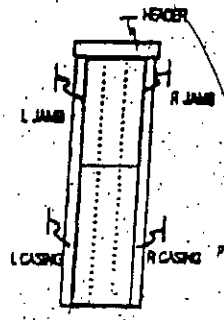
CENTER

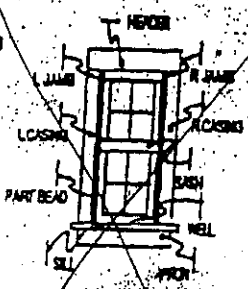
WALL A B C D

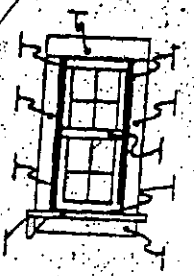
LEFT

RIGHT

CENTER







COMMENTS:	FINISH	SUBSTRATE
WALLS		
WINDOWS		
WINDOW-COMP		
DOOR		
DOOR - COMP		

TERIOR ..... (OR)

JOB # .....

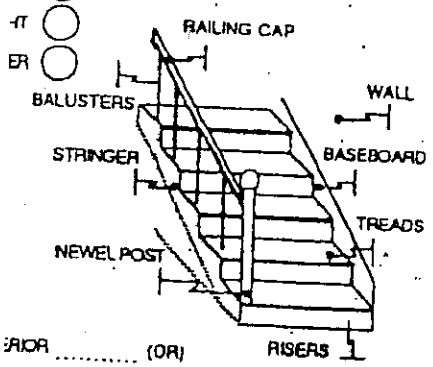
OM # .....

ALL (A) (B) (C) (D)

FT ◯

HT ◯

ER ◯



ERIOR ..... (OR)

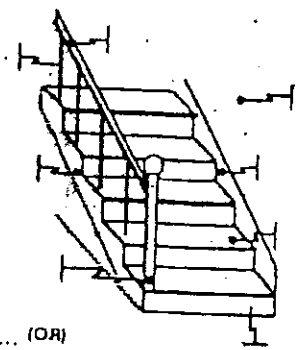
M # .....

T (A) (B) (C) (D)

T ◯

T ◯

R ◯



IOR ..... (OR)

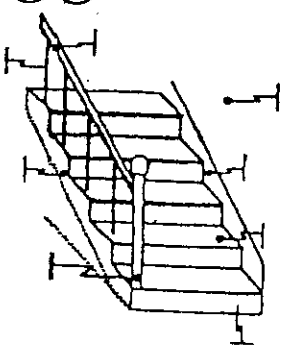
.....

(A) (B) (C) (D)

◯

◯

◯



EXTERIOR ..... (OR)

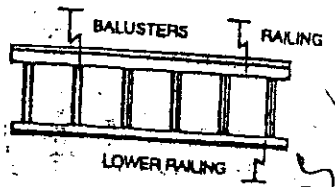
ROOM # .....

WALL (A) (B) (C) (D)

LEFT ◯

RIGHT ◯

CENTER ◯



EXTERIOR ..... (OR)

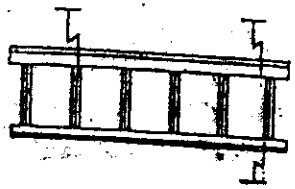
ROOM # .....

WALL (A) (B) (C) (D)

LEFT ◯

RIGHT ◯

CENTER ◯



EXTERIOR ..... (OR)

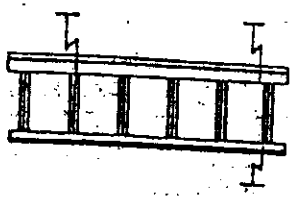
ROOM # .....

WALL (A) (B) (C) (D)

LEFT ◯

RIGHT ◯

CENTER ◯



EXTERIOR ..... (OR)

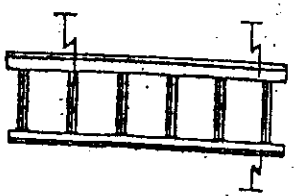
ROOM # .....

WALL (A) (B) (C) (D)

LEFT ◯

RIGHT ◯

CENTER ◯



WHITEHALL MANOR AMS

Ref# 20803-1833 UNIT 8

EXTERIOR ..... (OR)

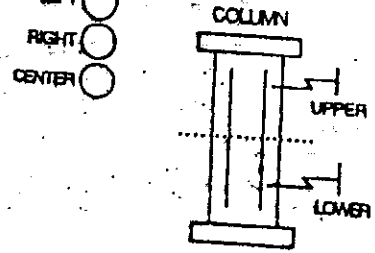
ROOM # .....

WALL (A) (B) (C) (D)

LEFT ◯

RIGHT ◯

CENTER ◯



EXTERIOR ..... (OR)

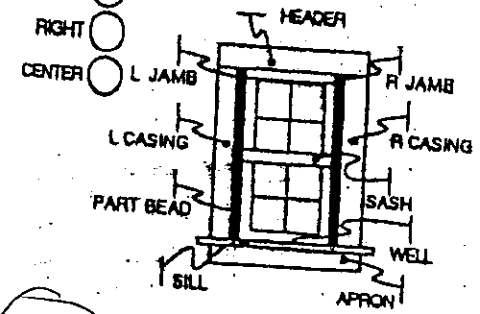
ROOM # .....

WALL (A) (B) (C) (D)

LEFT ◯

RIGHT ◯

CENTER ◯



EXTERIOR ..... (OR)

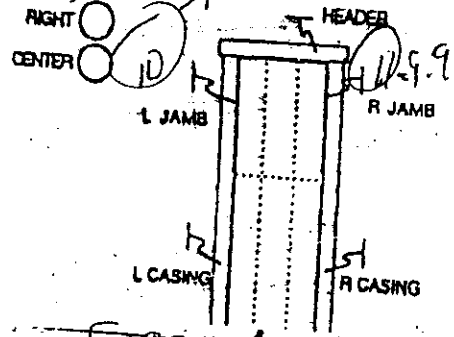
ROOM # .....

WALL (A) (B) (C) (D)

LEFT ◯

RIGHT ◯

CENTER ◯



EXTERIOR ..... (OR)

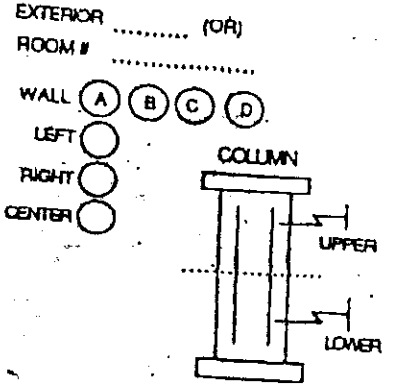
ROOM # .....

WALL (A) (B) (C) (D)

LEFT ◯

RIGHT ◯

CENTER ◯



EXTERIOR ..... (OR)

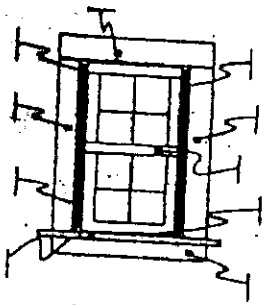
ROOM # .....

WALL (A) (B) (C) (D)

LEFT ◯

RIGHT ◯

CENTER ◯



EXTERIOR ..... (OR)

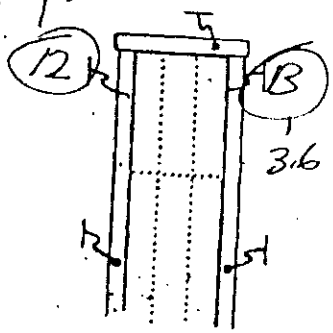
ROOM # .....

WALL (A) (B) (C) (D)

LEFT ◯

RIGHT ◯

CENTER ◯



COMMENTS:

Safety Colum	Finish NON	SUBSTRATE	
overhead door Comp		NONE	

APPENDIX D

AccuStar Labs

Radon in Air

NEHA NRPP #101193 AL
B #ARL0017

EPA Method #402-R-93-004 079
NEHA Device # 8205
NRSB Device # 12001

Laboratory Report For

International Training Institute of South Florida
514 1st Avenue SW
Largo FL 33770

Property Tested

OH 014

WhiteHall Memorial

Laboratory ID	Device Number	Area Tested	Test Start	Test End	Result pCi/L
549939	990581	Rm. 11	02/04/03	04/12/04	1.0
549940	990582	Rm. 11	02/04/03	04/12/04	1.1
549941	988366	Rm. 14	02/04/03	04/12/04	1.1
549942	988365	Rm. 14	02/04/03	04/12/04	1.0
549943	990545	Rm. 17	02/04/03	04/12/04	1.8
549944	988381	Rm. 1	02/04/03	04/12/04	2.0
549945	988346	Rm. 1	02/04/03	04/12/04	0.9
549946	988364	Rm. 1	02/04/03	04/12/04	0.9
549947	990579	Rm off of rm 1	02/04/03	04/12/04	0.6
549948	990585	Rm off of rm 1	02/04/03	04/12/04	0.7
549949	109962		02/04/03	04/12/04	< 0.4

Date Received: 4/23/2004 Date Analyzed: 4/28/2004 Date Reported: 5/7/2004

Report Reviewed By: _____

Disclaimer: The uncertainty of this radon measurement is -+/- 15 %. Factors contributing to uncertainty include, statistical variations, daily and seasonal variations in radon concentrations, and operation of the dwelling. Interference with test conditions may influence the test results.

This report may only be transferred to a third party in its entirety. Results shown on this report represent levels of radon gas measured between the dates shown in the room or area of the site identified above as "Property Tested". Incorrect information will affect results. The results may not be construed as either predictive or supportive of measurements conducted in any area of this structure at any other time. AccuStar Labs, its employees and agents are not responsible for the consequences of any action taken or not taken based upon the results reported or any verbal or written interpretation of the results.

11 Awl Street Medway MA 02053 508-533-8812 fax 508-533-8831

15-04-23 zip

OH01

AccuStar Alpha Track Field Data Sheet

Program OH014 Report Address WHITEHALL MEMORIAL LIBRARY Recorded by OH014 Page ___

Detector # (Small Bar Code Label)	Date Installed	Date Removed	Comments & Location (building, floor, room, etc.)
-9939 x990581x	2/4/03	04/12/04	Room 11 wall of Door to the right as you walk in.
19940 x990582x	2/4/03	04/12/04	Room 14 on bulletin board to your Left
-9941 x988366x	2/4/3	04/12/04	Room 17 Right wall as you walk in left side of the door on screen
9942 x988365x			
9943 990545x		04/12/04	
1944 x988381x	2/4/3	04/10/04	Room 1 Top of Push on Door
1945 x988346x	2/4/3	04/12/04	Room 1 Top of Room 1 Top of Door (Dry Erase)
1946 x988364x		04/12/04	
1947 x990579x	2/4/3	04/12/04	
1948 x990585x			
1 x109862x			
549949			

4/23/2004

International Training Institute of South Florida

549939 990581

Rev. 2/0.

OH014

AccuStar Alpha Track Field Data Sheet

WHITEHALL MEMORIAL WING

Program _____ Report Address _____ Recorded by OH014 Page ___

Detector # (Small Bar Code Label)	Date Installed	Date Removed	Comments & Location (building, floor, room, etc.)
990581	2/4		Room 11 wall of Doors to the right as you walk in.
990582			
988366	2/4		Room 14 on bulletin board to your Left
988365			
990545	2/4		Room 17 Right wall as you walk in Left side of file cabinet on screw
988381			
988346	2/4		Room 1 Top of Push Pin Board
988364			
990579	2/4		Room off of Room 1 Top of Dry Erase Board
990585			

Rev 12/0.

APPENDIX E

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC 17025:1999
ISO 9002:1994

Certificate of Accreditation

DEPARTMENT OF COMMERCE ★ UNITED STATES OF AMERICA ★

A.E.S.L. ENVIRONMENTAL LABORATORY
TEMPE, AZ

is recognized by the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria set forth in NIST Handbook 150:2001, all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994. Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:

BULK ASBESTOS FIBER ANALYSIS

March 31, 2005
Effective through

For the National Institute of Standards and Technology
NVLAP Lab Code: 200303-0

NVLAP-01C (06-01)

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC 17025:1999
ISO 9002:1994

Certificate of Accreditation

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

A.E.S.L. ENVIRONMENTAL LABORATORY
TEMPE, AZ

is recognized by the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria set forth in NIST Handbook 150:2001, all requirements of ISO/IEC 17025:1999, and relevant requirements of ISO 9002:1994. Accreditation is awarded for specific services, listed on the Scope of Accreditation, for:

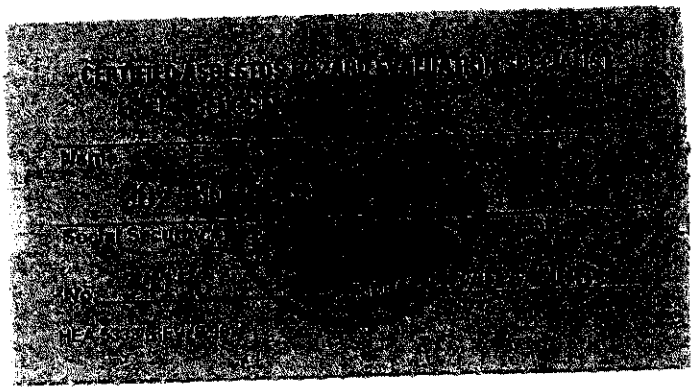
BULK ASBESTOS FIBER ANALYSIS

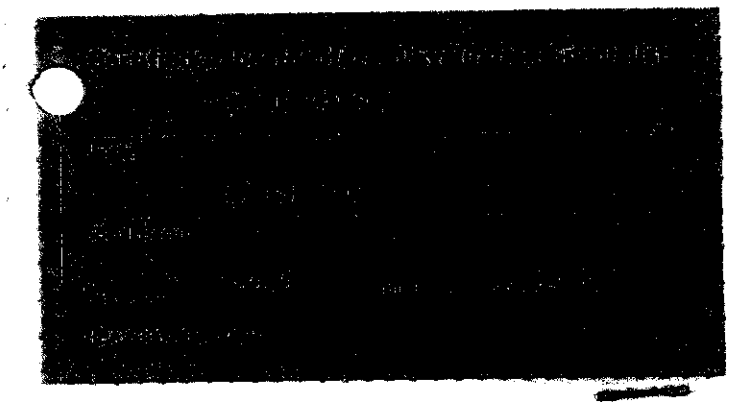
March 31, 2004
Effective through

For the National Institute of Standards and Technology
NVLAP Lab Code: 200303-0

NVLAP-01C (C 1

APPENDIX F





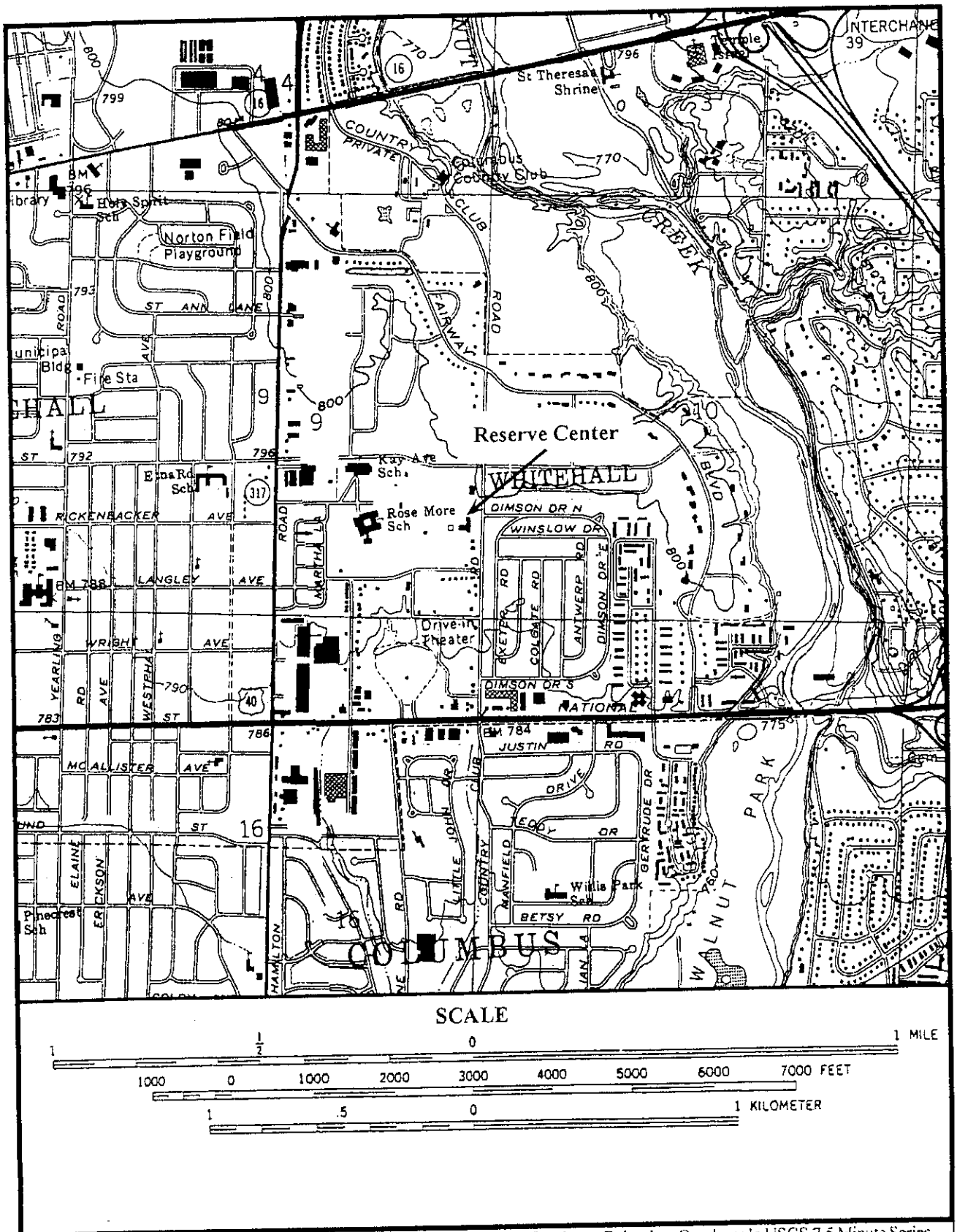
APPENDIX G

	Columbus, Ohio Whitehall Memorial USARC
Identification Information:	Identification Number: OH014/39860 Whitehall Memorial USARC 721 Country Club Rd., Columbus, Franklin County, Ohio 43213-2485 Telephone Number: (614) 692-5451 Reynoldsburg Quadrangle, Ohio, USGS 7.5 Minute Series, T12N R17W, Section 9 (Figure 228) UTM: Z17, 340665E, 4424895N Present Owner/Occupant: The facility is owned by the United States Government and controlled by the 88th RSC.
Setting and Landscape:	The Whitehall Memorial USARC consists of three buildings located on five acres of land (CL001) in a residential district in Columbus, Ohio (Figure 229). The facility is landscaped with grass, trees, and shrubs.
Archaeological Resources:	An archaeological records search at the Ohio State Historic Preservation Office determined that there are no known archaeological sites located within a one-mile radius of the Whitehall Memorial USARC.
Historical Information:	The Whitehall Memorial USARC was constructed in 1960.[1] There appear to have been no significant additions or alterations to the buildings since their original construction.
Security:	Security measures at the Whitehall Memorial USARC include chain-link fencing topped with barbed wire surrounding a military vehicle parking area, the east and south walls of the Organizational Maintenance Shop, and the west wall of the Reserve Center's drill hall. High intensity lighting is also present to illuminate military and civilian vehicle parking areas.
Architectural Information:	The Whitehall Memorial USARC consists of three concrete block buildings with red brick veneers. The buildings do not appear to exhibit significant

	historical or architectural character or merit that contributes to the historic context of the period associated with their construction.
Building Descriptions:	**Reserve Center** (CL002) The Reserve Center functions as an administrative office and drill hall for the Whitehall Memorial USARC. Constructed in1960, is a T-shaped, multiple-level building comprised of two-story rectangular building sections connected by a one-story enclosed corridor. It rests upon a poured concrete foundation with concrete block walls and a red brick veneer. A projecting entrance consisting of two pairs of glass pedestrian doors surrounded by multiple single light fixed transom and sidelights is located on the east side of the building (Figure 230). A second projecting entrance consisting of a metal pedestrian door and concrete porch covered by a metal awning is located on the southwest corner of the building (Figure 231). Pairs of metal pedestrian doors are located on the north, south, and west walls, and a metal overhead retractable bay door is located on the west wall of the drill hall. A series of one-over-one light double-hung windows with plain slip metal sills, and one-over-one light double-hung ribbon windows with continuous plain slip metal sills are located around the perimeter of the building (Figure 232). A flat roof covers the structure (Figure 233 & 234). **Organizational Maintenance Shop** (CL003) The Organizational Maintenance Shop functions as a vehicle maintenance facility for the Whitehall Memorial USARC. Constructed in 1960, the OMS is a one-story rectangular building that rests upon a poured concrete foundation with concrete block walls with red brick veneer. Entrances include three metal overhead retractable bay doors are located along the east wall of the building, and metal pedestrian doors located on the north and south walls (Figures 235 & 236). A series of one-over-one light double-hung awning ribbon windows with continuous plain slip sills are located along the west wall near the roof eaves (Figure 237). A flat roof covers the structure (Figure 238). **Utility Building** (OH014/39860)[2] The Utility Building functions as a storage facility for equipment serving the electrical and water systems at the Whitehall Memorial USARC. Constructed in 1960, it is a half-story rectangular building with a concrete foundation with brick walls. A metal pedestrian door is located on the east wall of the building (Figure 239). Fenestrations on the structure consist of

	metal vents located on the south and north walls (Figure 240). A low-pitch shed roof covers the building. The roof shows signs of deterioration along the west eaves (Figure 241 & 242).
Eligibility:	None of the buildings located at the Whitehall Memorial USARC meet the criteria for the National Register of Historic Places (NRHP), under Criterion A, B, C, or D, and thus are not recommended for nomination to the NRHP. A documentary and architectural investigation conducted at the facility determined there is no direct relationship between the facility and pre-historic or historic events in the Columbus area (criterion A), there is no association with significant persons involved in prehistoric or historic events (criterion B), buildings on the facility are not architecturally or technologically significant (criterion C), and the facility is unlikely to hold future research potential (criterion D).
Recommendations:	No additional review under Section 110 is recommended until the existing buildings at the Whitehall Memorial USARC reach the 50 year eligibility requirement for the NRHP in 2010, or unless specific undertakings require compliance with Section 106 of the National Historic Preservation Act (36 CFR 800).
Sources:	"Environmental Audit of Whitehall Memorial U.S. Army Reserve Center." Lexington, Kentucky: Howard K. Bell, Consulting Engineers, Inc. 1991. "Peters, Norris F. "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)." 14 April 1989. "Real Property Detail Report Criteria: Total Inventory," 88th RSC DSCEN Real Estate Division, March 1998. "Reynoldsburg Quadrangle." USGS 7.5 Minute Series Map. Denver, Colorado: United States Geological Survey. 1964, revised 1994. "Southeast Columbus Quadrangle." USGS 7.5 Minute Series Map. Denver, Colorado: United States Geological Survey. 1964, revised 1994. Warren, Benjamin H. "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)." 15 March 1985.

Notes:	[1] Norris F. Peters, "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)," 14 April 1989, p. 1 and Benjamin H. Warren "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)," 15 March 1985, p. 1. Copies of these reports are on file at the 88th RSC DSCEN Real Estate Division office, Fort Snelling, Minnesota. [2] "Real Property Detail Report Criteria: Total Inventory," 88th RSC DSCEN Real Estate Division, March 1998, p. 22-23. According to records maintained by real property specialists, the Utility Building at the Whitehall Memorial USARC has not been assigned a building number within the facility. A copy of this report is on file at the 88th RSC DSCEN Real Estate Division office, Fort Snelling, Minnesota.



Reynoldsburg Quadrangle & Southeast Columbus Quadrangle USGS 7.5 Minute Series

Figure 228. Location of the Whitehall Memorial USARC.

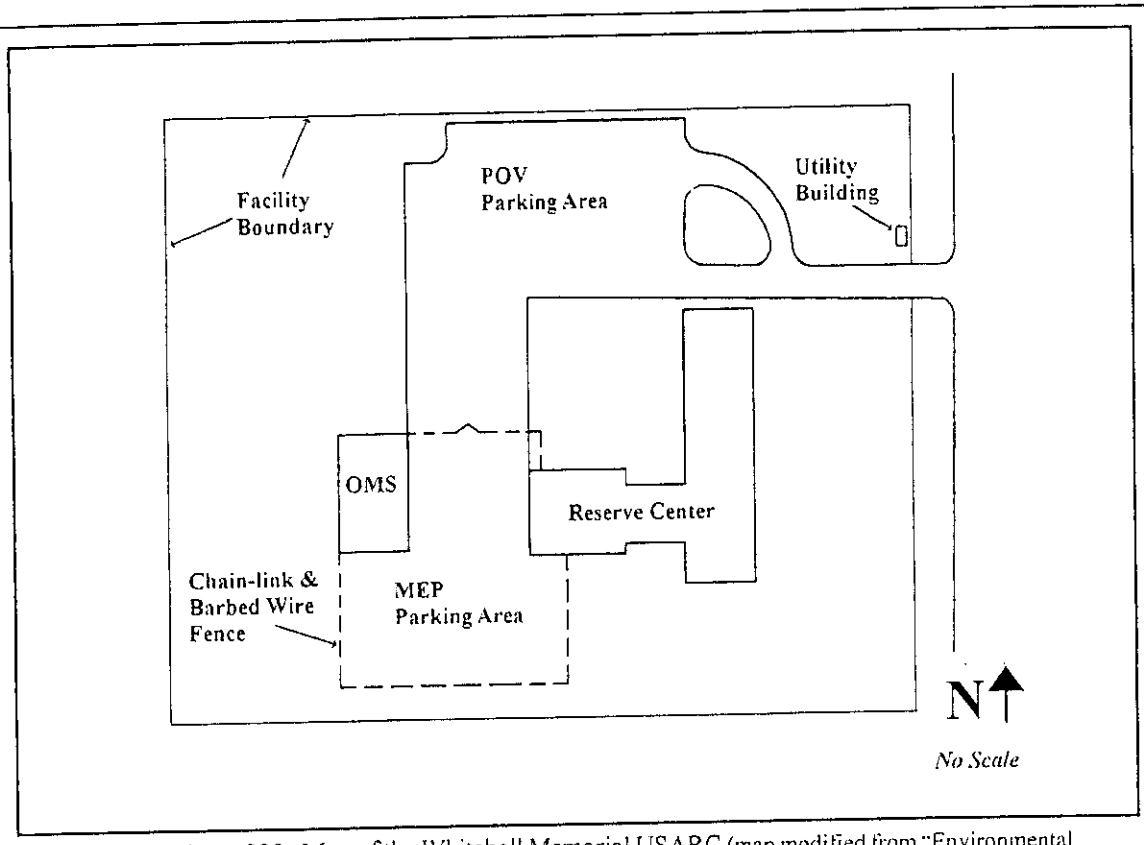


Figure 229. Map of the Whitehall Memorial USARC (map modified from "Environmental Audit Whitehall Memorial U.S. Army Reserve Center." Howard K. Bell, Consulting Engineers, Inc., Attachment No. 1).

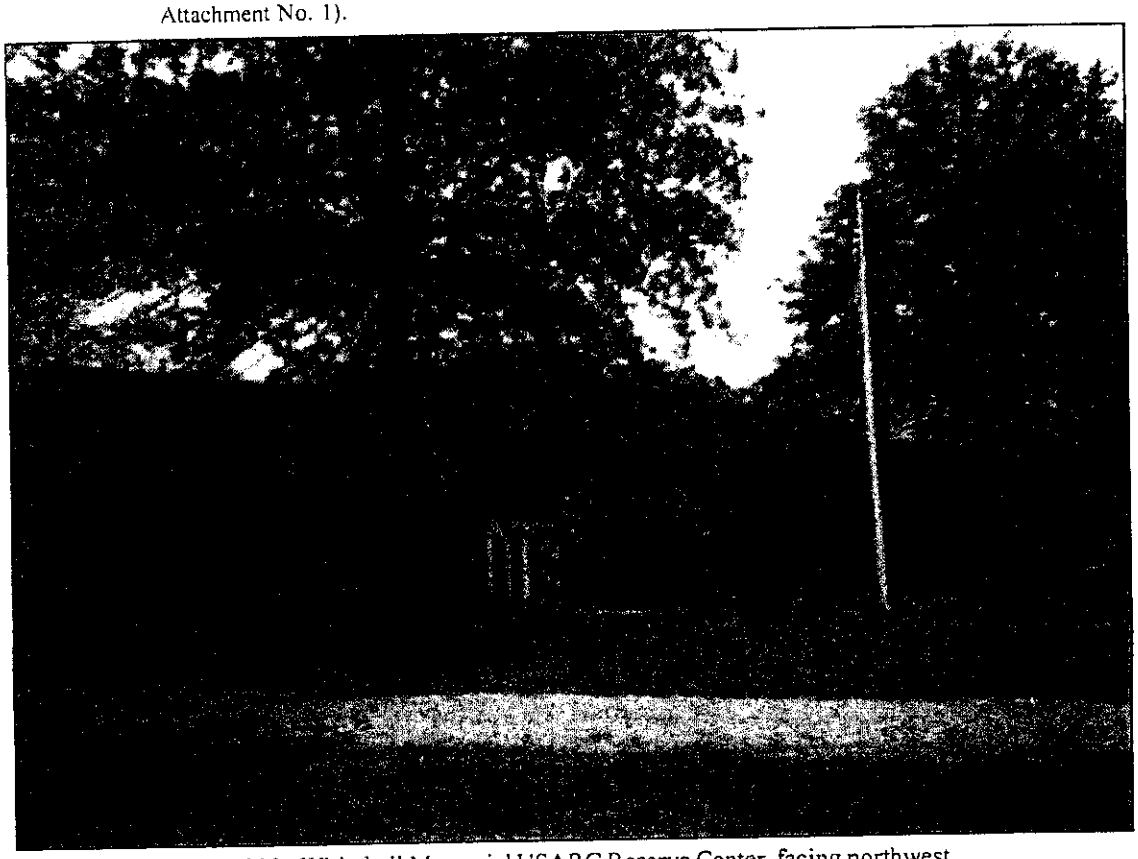


Figure 230. Whitehall Memorial USARC Reserve Center, facing northwest.

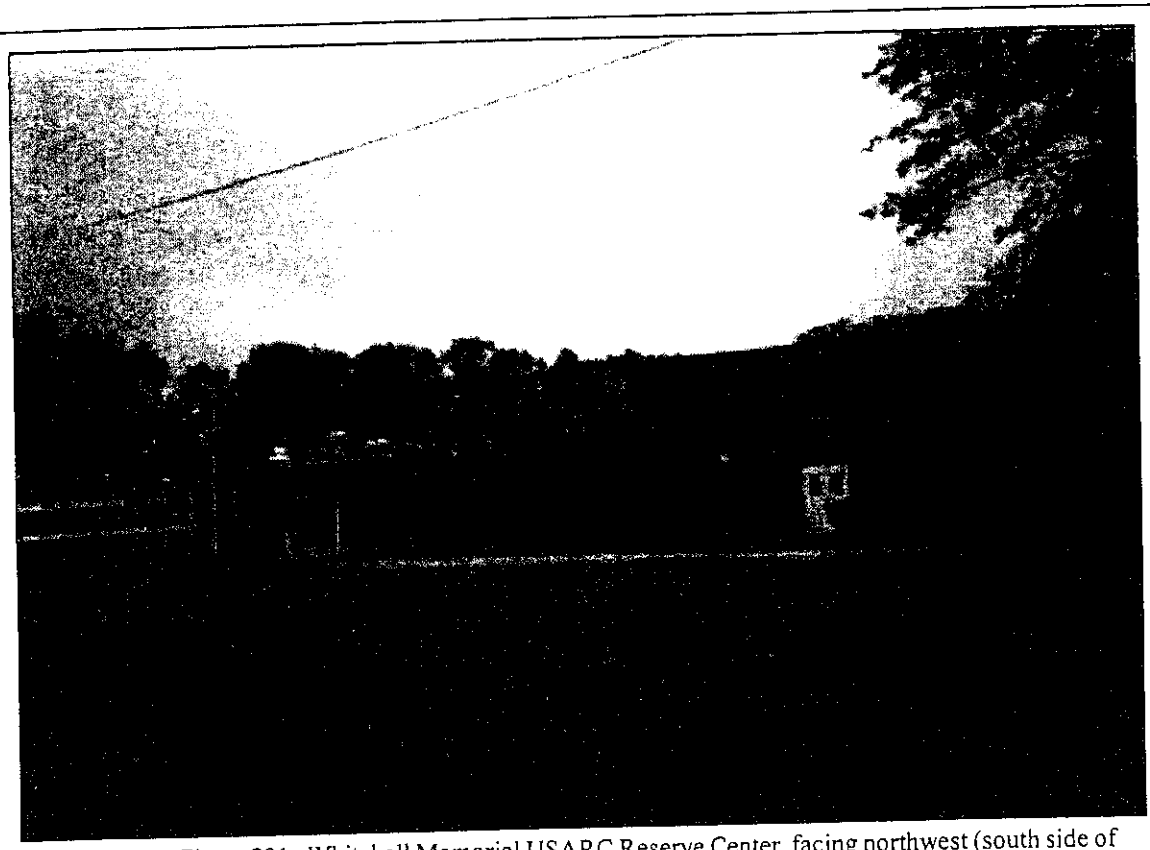


Figure 231. Whitehall Memorial USARC Reserve Center, facing northwest (south side of building).

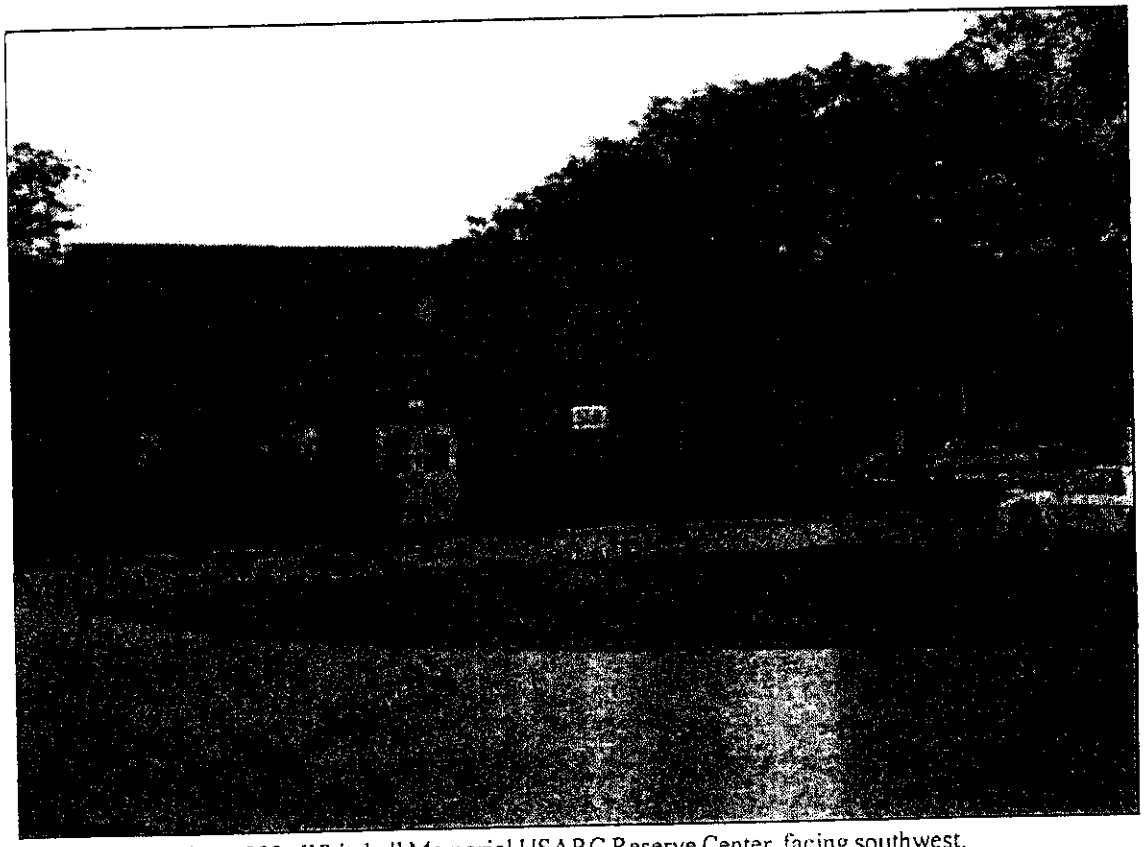


Figure 232. Whitehall Memorial USARC Reserve Center, facing southwest.

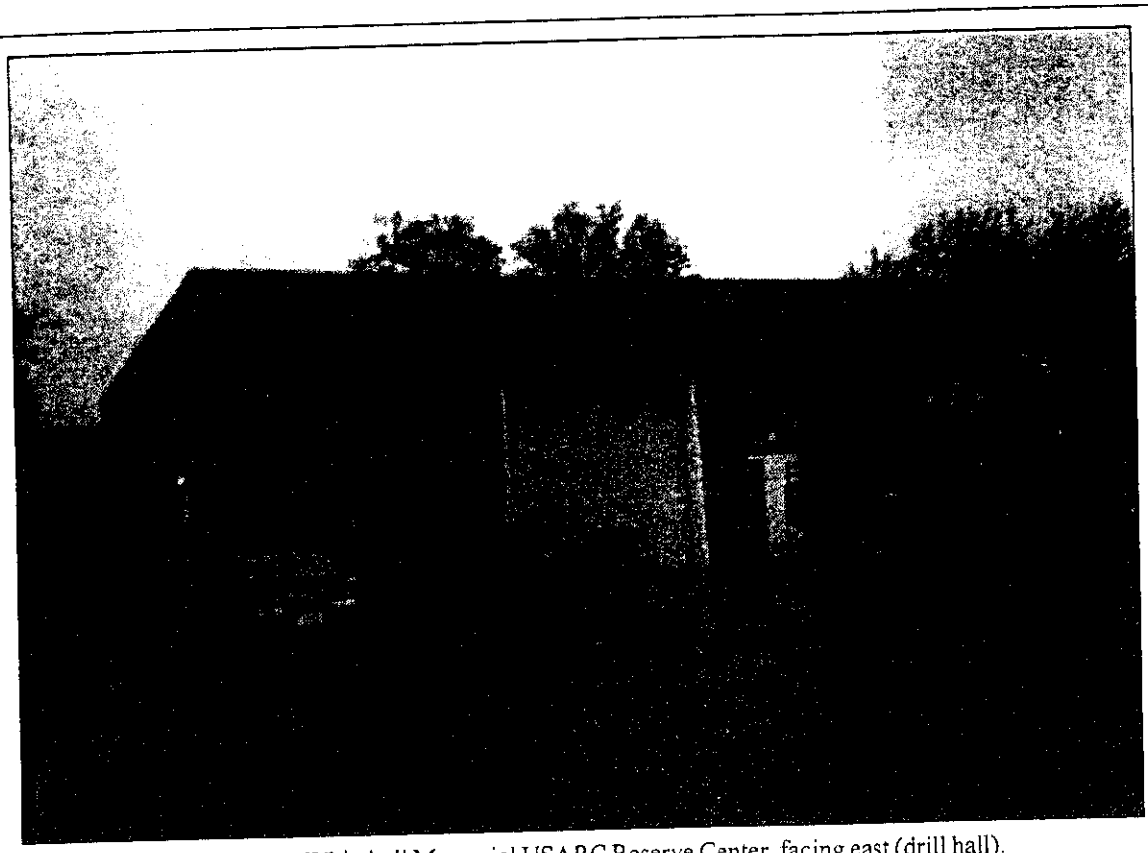


Figure 233. Whitehall Memorial USARC Reserve Center, facing east (drill hall).

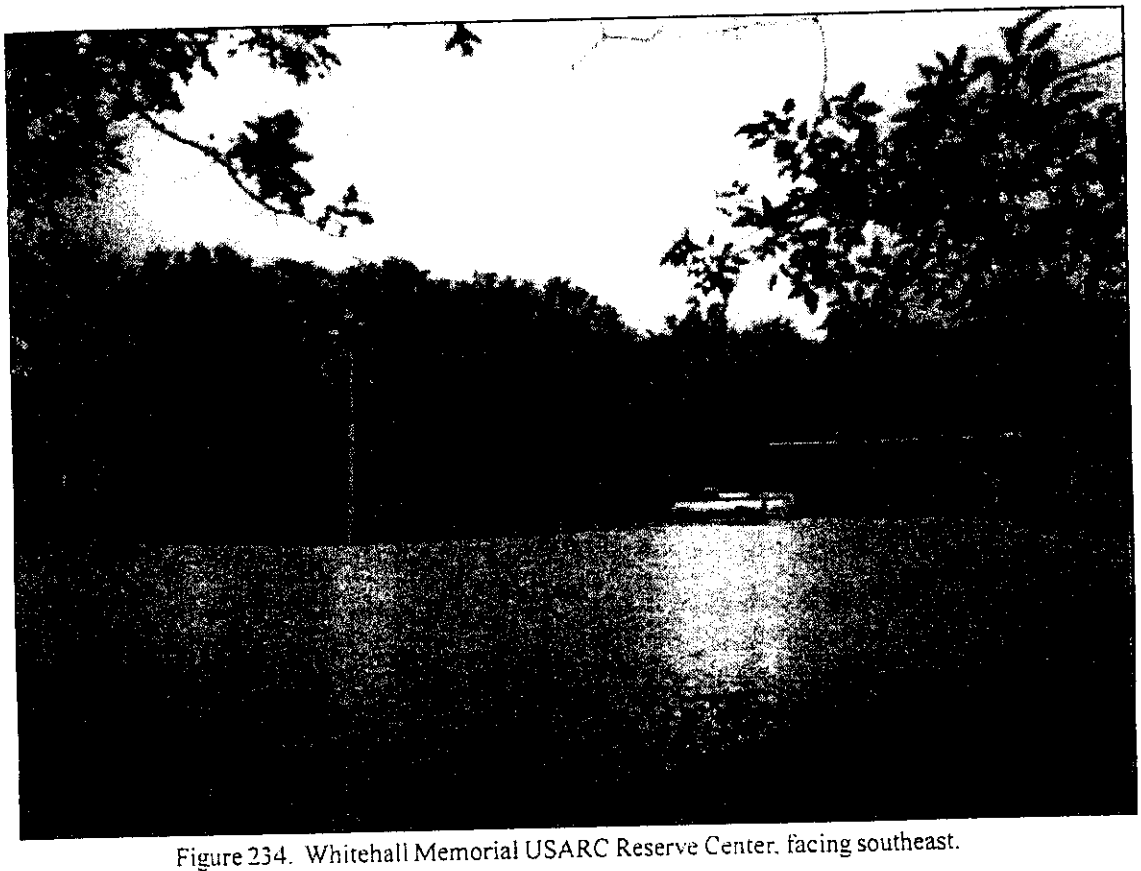


Figure 234. Whitehall Memorial USARC Reserve Center, facing southeast.

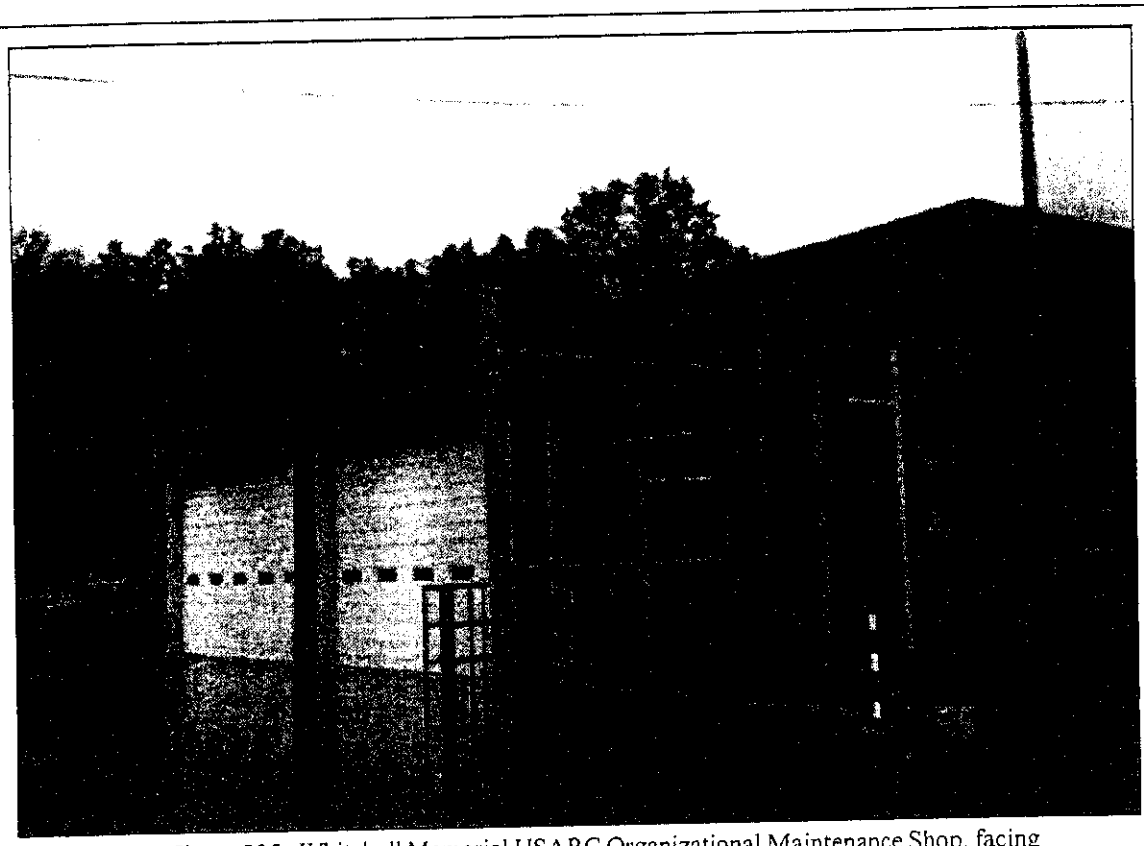


Figure 235. Whitehall Memorial USARC Organizational Maintenance Shop, facing southwest.

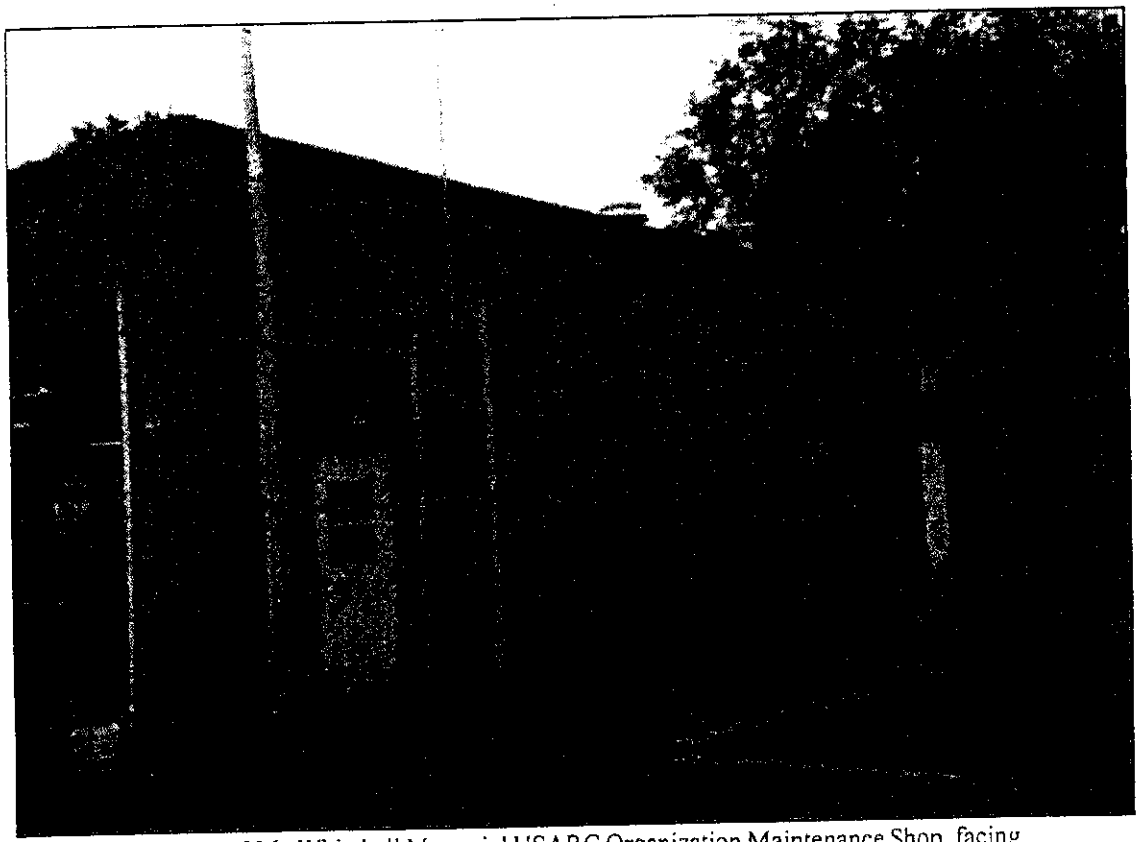


Figure 236. Whitehall Memorial USARC Organization Maintenance Shop, facing southwest.

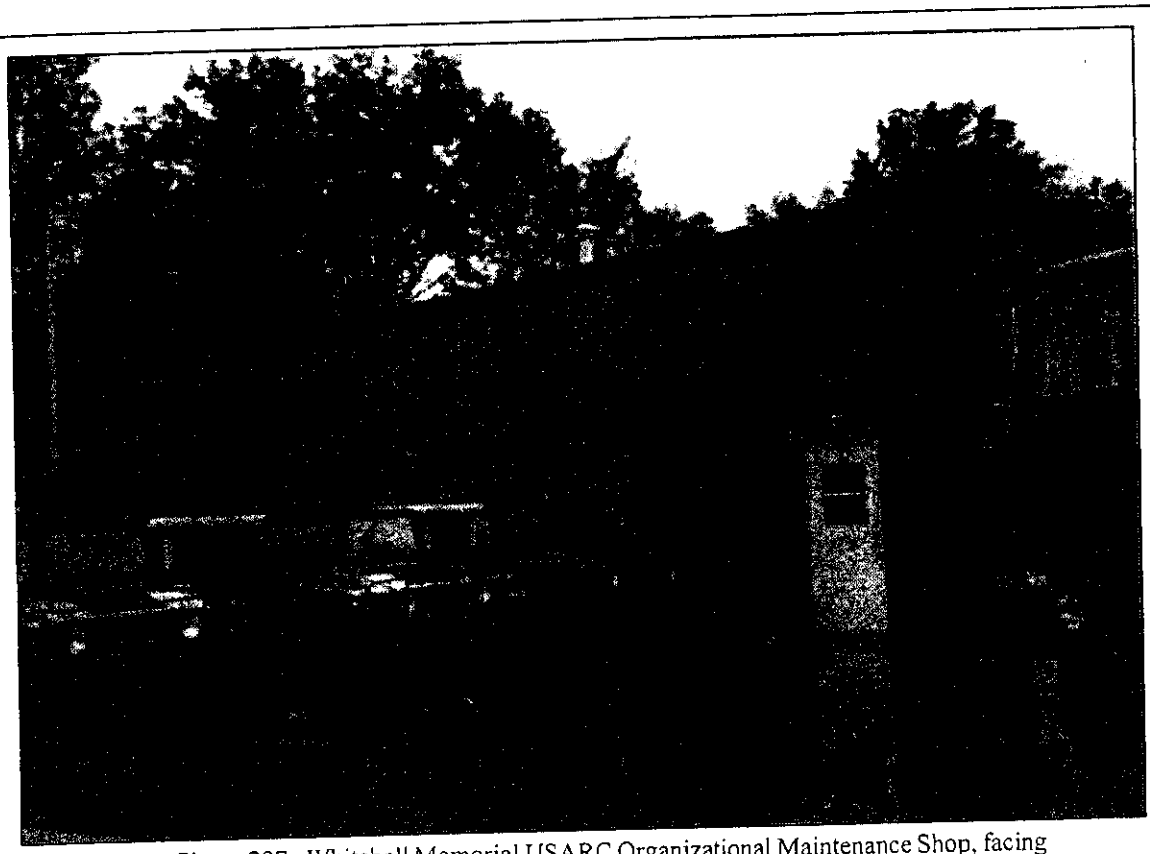


Figure 237. Whitehall Memorial USARC Organizational Maintenance Shop, facing northwest.

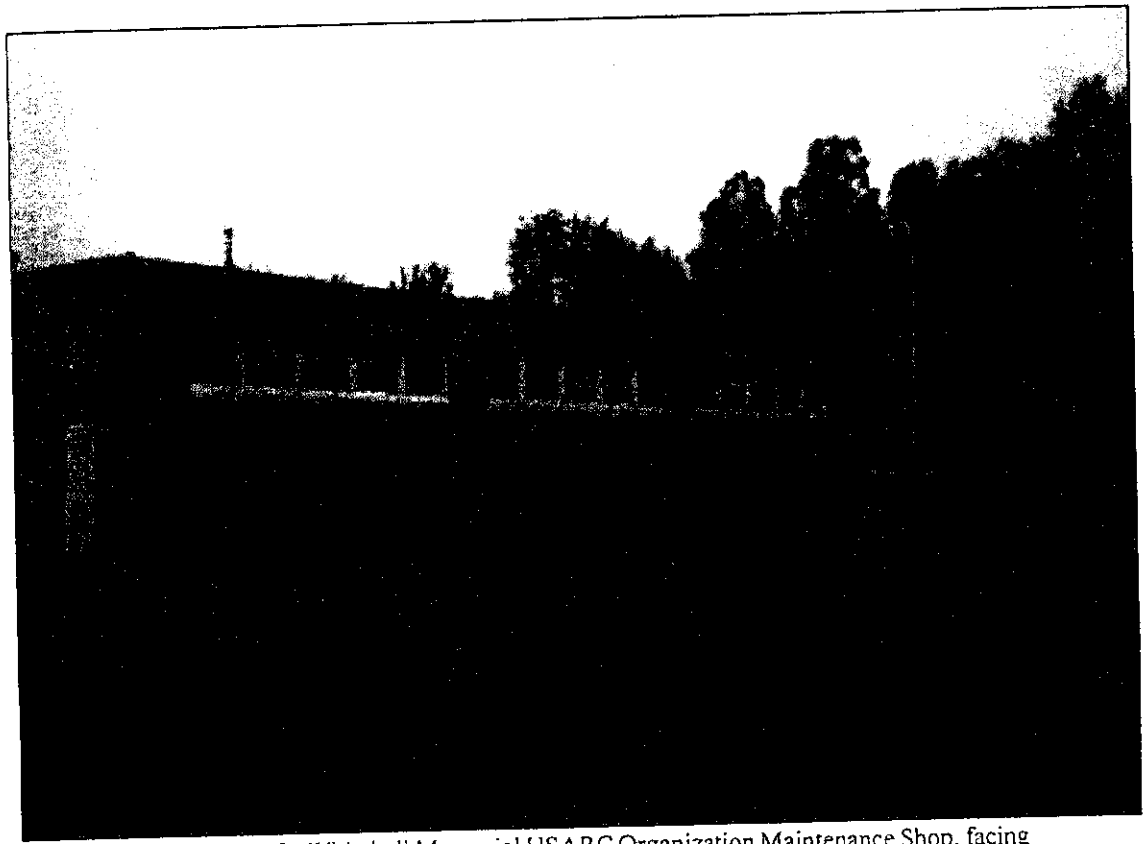


Figure 238. Whitehall Memorial USARC Organization Maintenance Shop, facing southeast.

Figure 239. Whitehall Memorial USARC Utility Building, facing west.

Figure 240. Whitehall Memorial USARC Utility Building, facing north.

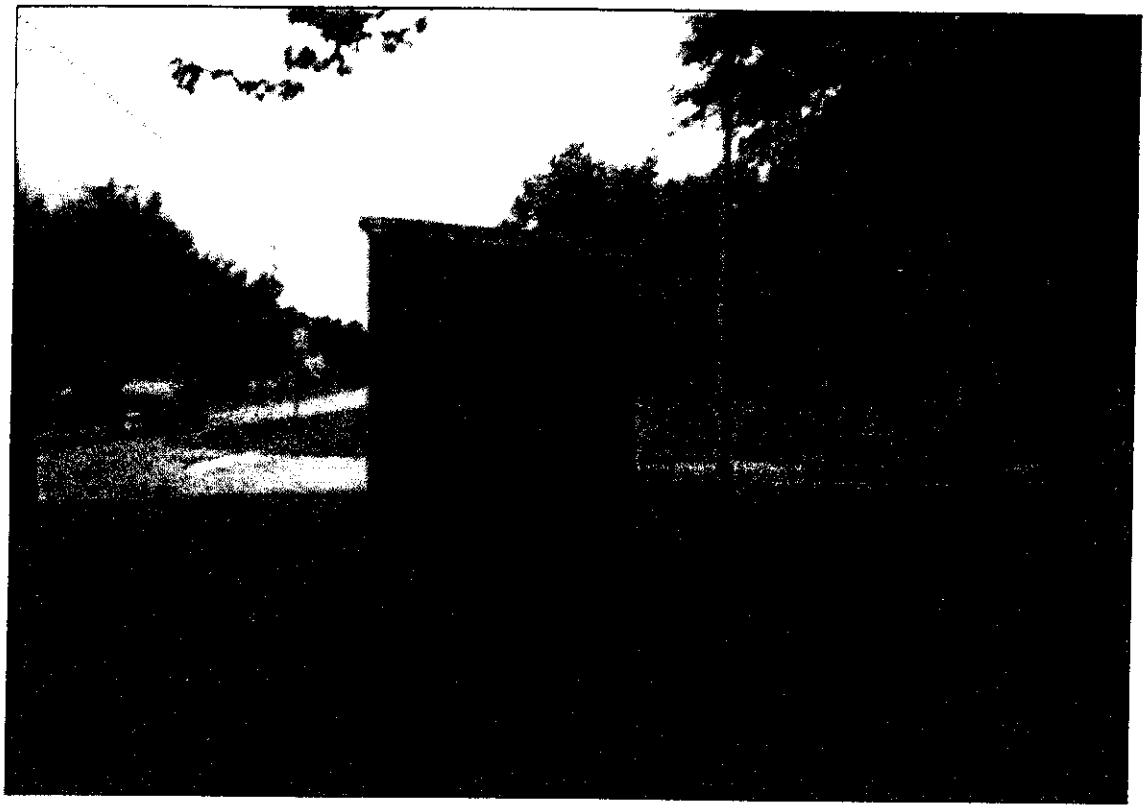


Figure 241. Whitehall Memorial USARC Utility Building, facing south.

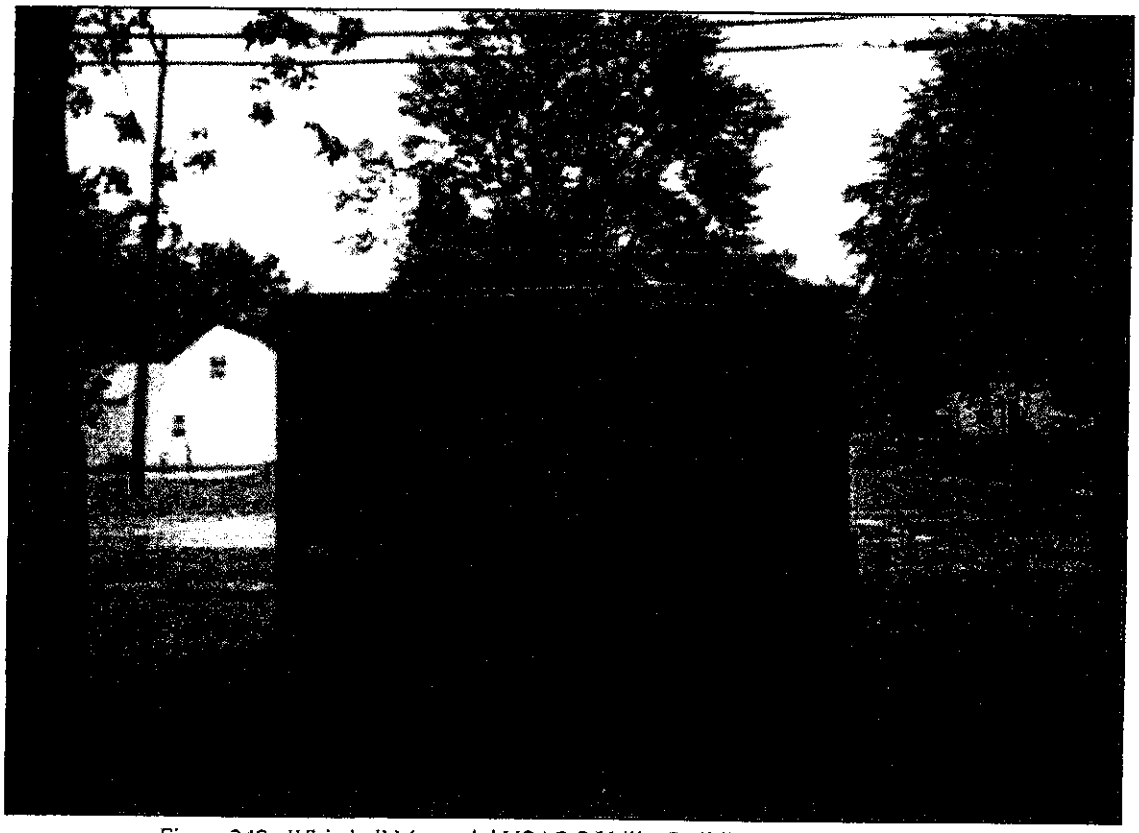


Figure 242. Whitehall Memorial USARC Utility Building, facing east.

ROOM SCHEDULE

WHITEHALL USARC, COLUMBUS, OH

FIRST FLOOR

ROOM NUMBER	NET SQ.FT.	FLOOR TYPE
1	280	Carpet
2	240	Carpet
3	160	Tile
4	149	Tile
5	166	Tile
6	132	Tile
7	NIC	
8	235	Tile
8A	150	Tile
9	NIC	
9A	261	Tile
10	NIC	
11	509	Tile
12	305	Tile
13	128	Tile
14	573	Tile
CORRIDOR A	791	Tile
CORRIDOR B	244	Carpet
CORRIDOR C	433	Tile
LOBBY	512	Tile
STAIR A	117	Concrete
STAIR B	121	Concrete
KITCHEN	NIC	
DRILL HALL	3485	Concrete
FOYER	77	Tile
VAULT	NIC	
RANGE	NIC	
TOTAL	9,068	

NIC = NOT IN CONTRACT

ROOM SCHEDULE

WHITEHALL USARC, COLUMBUS, OH

SECOND FLOOR

ROOM NUMBER	NET SQ.FT.	FLOOR TYPE
15	155	Tile
16	246	Tile
17	237	Tile
18	205	Tile
19	174	Tile
20	517	Tile
21	576	Carpet
22	576	Tile
23	613	Tile
24	541	Tile
25	454	Tile
26	372	Tile
27	372	Tile
27A	317	Tile
28	582	Tile
CORRIDOR D	791	Tile
CORRIDOR E	244	Tile
LOBBY	318	Tile
TOTAL	7,290	
1ST & 2ND FLOOR TOTAL	16,358	

NIC = NOT IN CONTRACT

Columbus, Ohio
Fort Hayes Memorial USARC

Identification Information:	Identification Number: OH013/39220 Fort Hayes Memorial USARC 530 Jack Gibbs Blvd., Columbus, Franklin County, Ohio 43215-1975 Telephone Number: (614) 692-5451 Southeast Columbus Quadrangle, Ohio, USGS 7.5 Minute Series, T5N R18W, Section 9 (Figure 213) UTM: Z17, 330017E, 4426666N Present Owner/Occupant: The facility is owned by the US Government and controlled by the 88th RSC.
Setting and Landscape:	The Fort Hayes Memorial USARC consists of three buildings on 10.78 acres of land (CO001) located in an industrial and commercial district in Columbus, Ohio (Figure 214).[1] One building on the facility, Building 118, is included in the Fort Hayes National Historic District (NHD) and is discussed in the "Former AMSA #56 & former 535th Military Police Battalion Headquarters" section of this report (Figure 133). The Fort Hayes Memorial USARC is located near the southeast corner of the Fort Hayes NHD. Vegetation on the site includes grass, trees, and shrubs.
Archaeological Resources:	An archaeological records search at the Ohio State Historic Preservation Office determined that there are no known documented archaeological sites within a one-mile radius of the Fort Hayes Memorial USARC.[2]
Historical Information:	The Fort Hayes Memorial USARC was constructed in 1965.[3] There appear to have been no significant additions or alterations to the buildings since their original construction.[4]
Security:	Security measures at the Fort Hayes Memorial USARC include chain-link fencing topped with barbed wire surrounding the Organizational Maintenance Shop, and two military vehicle parking areas. A second chain-link fence is located along the south and west sides of the Reserve Center along Cleveland Avenue and Jack Gibbs Boulevard (Figure 214).

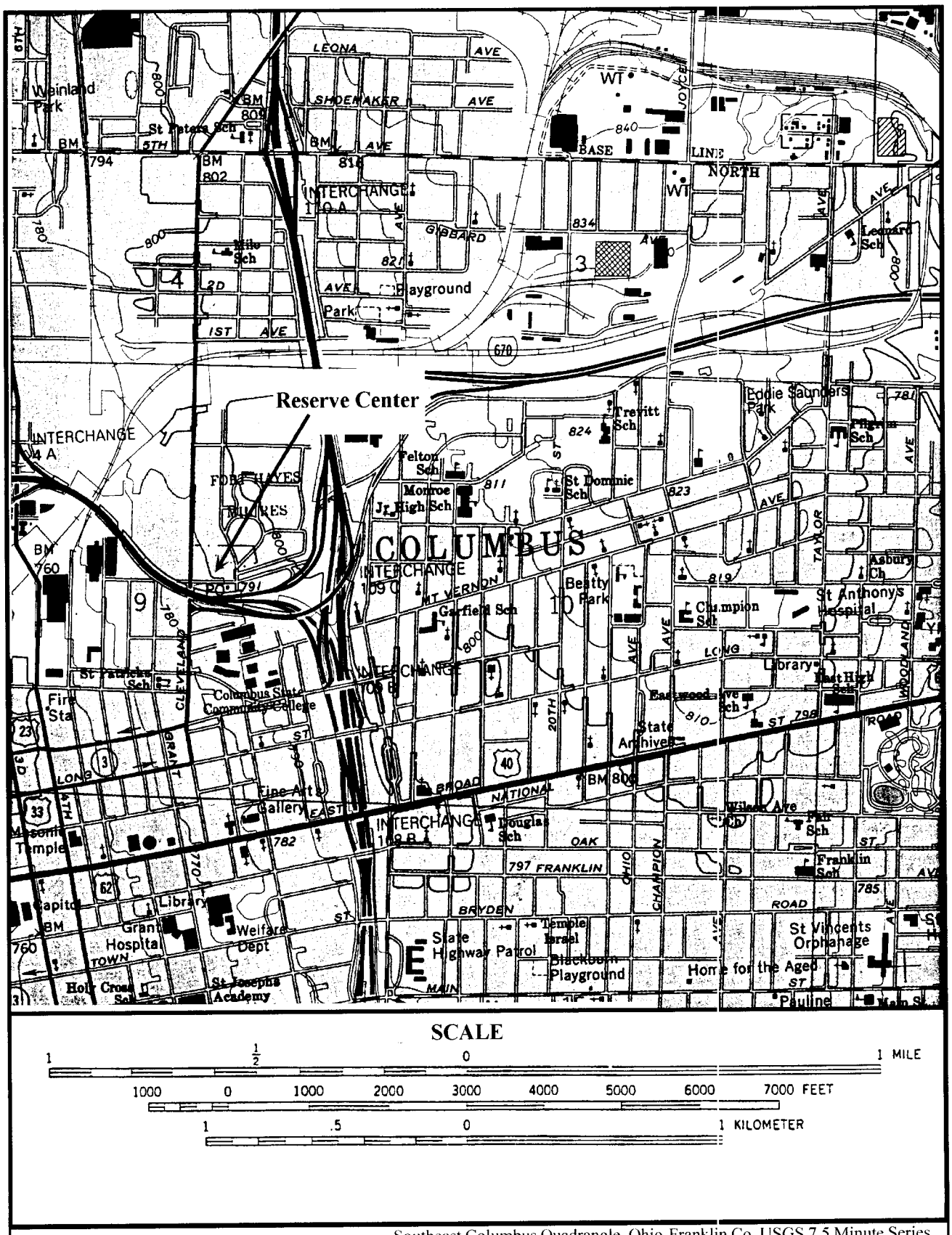
Architectural Information:	Modern structures at the Fort Hayes Memorial USARC consists of two concrete block buildings with red brick veneers. The buildings do not appear to exhibit significant historical or architectural character or merit that significantly contributes to the historic context of the period associated with their construction.
Building Descriptions:	**Reserve Center** (CO330) The Reserve Center functions as an administrative office and drill hall for the Fort Hayes Memorial USARC. Constructed in 1965, it is a multiple-level, irregular-shaped containing four rectangular one-story, one-and-one half-story, and two story building sections (Figures 215. 216, & 217). The Reserve Center rests upon a concrete foundation with concrete block walls and a brick veneer. A recessed entrance containing a pair of glass pedestrian doors with single-light sidelights is located on the west wall (Figure 218). Two additional recessed entrances containing pairs of glass pedestrian doors with single-light sidelights are located on the south wall (Figure 219). Single and paired glass and metal pedestrian doors are located on the north, south, and east walls. In addition, a metal overhead retractable bay door is located on the east wall (Figure 220). A series of one-over-one light casement ribbon windows with continuous plain slip concrete sills are located along the north, south, and west walls. A series of flat, low-pitch shed, and low-pitch gable roofs cover various sections of the building (Figures 221 & 222). **Organizational Maintenance Shop** (CO301) The Organizational Maintenance Shop functions as a vehicle maintenance facility for the Fort Hayes Memorial USARC. Constructed in 1965, it is a one-story rectangular building that rests upon a poured concrete foundation with concrete block walls and a brick veneer. Six metal overhead retractable bay doors with metal panel lintels located along the east wall (Figure 223), and several metal pedestrian doors are located on the north and south sides of the building (Figure 224). A short brick wall, approximately two or three meters in height, is located near the northwest corner of the building (Figures 225 & 226). A series of three-over-three light awning ribbon windows with metal panel lintels are located near the roof eaves along the west wall (Figure 227). A low-pitch gable roof covers the structure.
Eligibility:	None of the buildings located at the Fort Hayes Memorial USARC meet the criteria for the National Register of Historic Places (NRHP), under Criterion

Eligibility:	A, B, C, or D, and thus are not recommended for nomination to the NRHP. None of the buildings located at the Fort Hayes Memorial USARC meet the criteria for the National Register of Historic Places (NRHP), under Criterion A, B, C, or D, and thus are not recommended for nomination to the NRHP. A historic documentary and architectural investigation conducted at the facility determined there is no direct relationship between the facility and pre-historic or historic events in the Columbus area (criterion A), there is no association with significant persons involved in prehistoric or historic events (criterion B), buildings on the facility are not architecturally or technologically significant (criterion C), and the facility is unlikely to hold future research potential (criterion D).
Recommendations:	No additional review for Section 110 is recommended until the existing buildings at the Fort Hayes Memorial USARC reach the fifty year eligibility requirement for the NRHP in 2015, or unless specific undertakings require compliance with Section 106 of the National Historic Preservation Act (36 CFR 800).
Sources:	"Environmental Audit of Fort Hayes Memorial U.S. Army Reserve Center." Lexington, Kentucky: Howard K. Bell, Consulting Engineers, Inc. 1991. Koch, Candy. Facility Manager, Fort Hayes Memorial USARC. Personal Communication. 24 June 1998. Porter, Daniel R. "National Register of Historic Places Inventory Nomination Form: Fort Hayes/Columbus Arsenal/Columbus Barracks." 1 January 1970. "Real Property Detail Report Criteria." 88th RSC DSCEN Real Estate Division, Fort Snelling, Minnesota. March 1998. "Southeast Columbus Quadrangle, Ohio-Franklin Co." USGS 7.5 Minute Series Map. Denver, Colorado: United States Geological Survey. 1964, revised 1994.
Notes:	[1] "Real Property Detail Report Criteria," 88th RSC DSCEN Real Estate Division, Fort Snelling, Minnesota. A copy of this report can be obtained from the 88th RSC DSCEN Real Estate Division office in Fort Snelling, Minnesota.

[2] Daniel R. Porter, "National Register of Historic Places Inventory Nomination Form: Fort Hayes/Columbus Arsenal/Columbus Barracks," 1 January 1970. A copy of this nomination is on file at the Ohio State Historic Preservation Office, Columbus, Ohio.

[3] A cornerstone located on the Reserve Center dates the construction of the facility as 1965.

[4] Candy Koch, Facility Manager, Fort Hayes Memorial USARC, Personal Communication, 24 June 1998. According to Ms. Koch, the Reserve Center was constructed as a multiple-level, irregular-shaped building in the early 1960's and no additional building sections were added to the structure. A cornerstone on the Reserve Center specifies 1965 as the date of construction.



Southeast Columbus Quadrangle, Ohio-Franklin Co. USGS 7.5 Minute Series

Figure 213. Location of the Fort Hayes Memorial USARC.

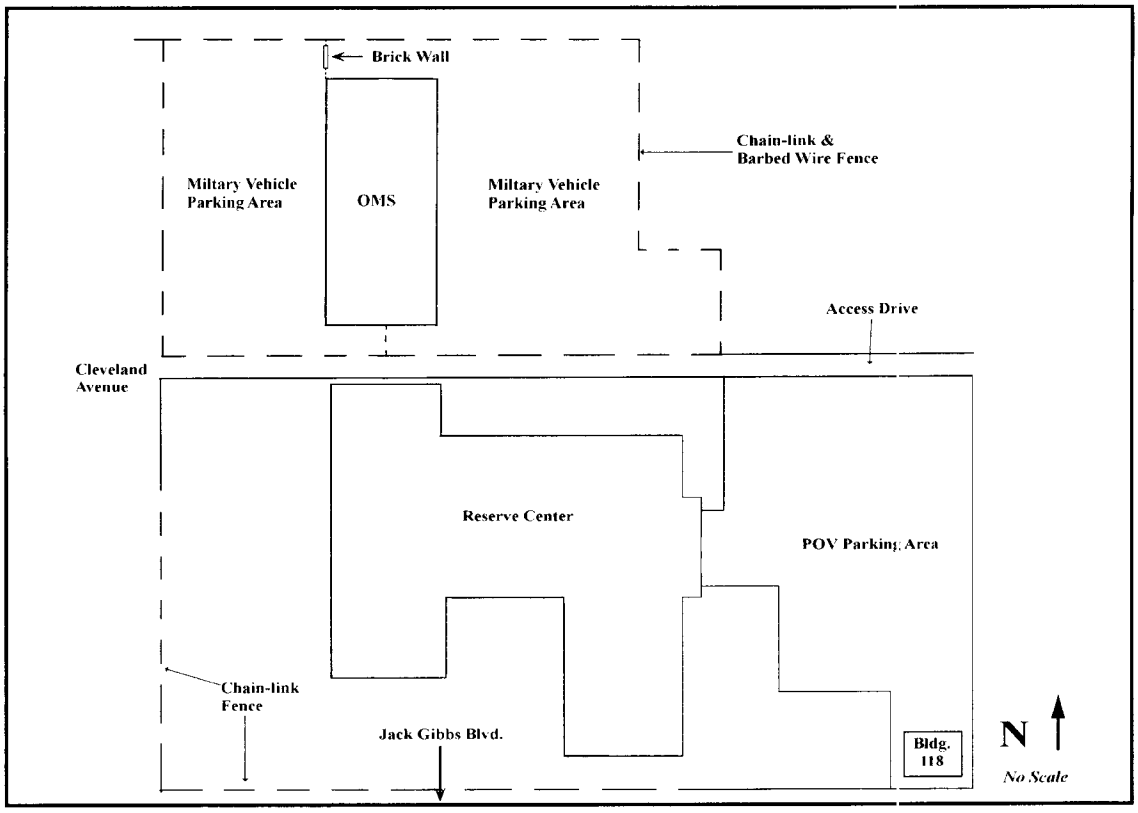


Figure 214. Map of the Fort Hayes Memorial USARC (map modified from Howard K. Bell, Consulting Engineers, Inc., "Environmental Audit of Fort Hayes Memorial U.S. Army Reserve Center," Attachment No. 1).

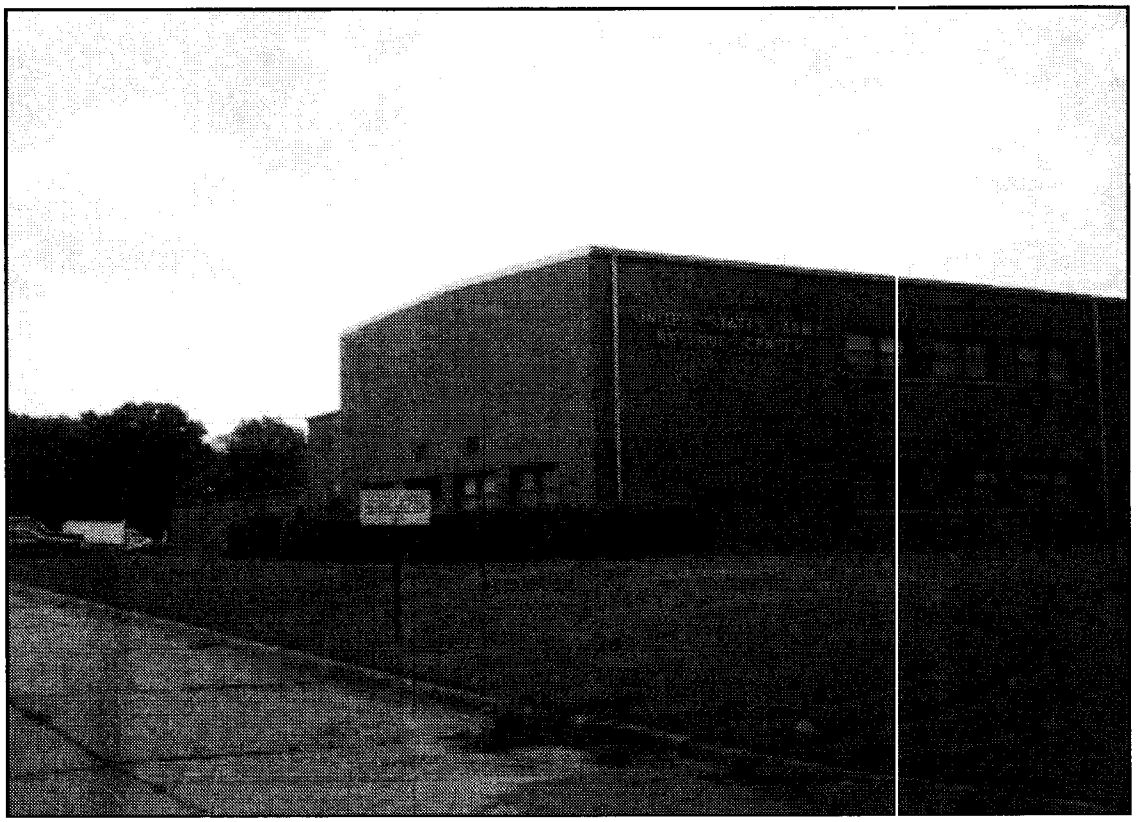


Figure 215. Fort Hayes Memorial USARC Reserve Center, facing southeast.

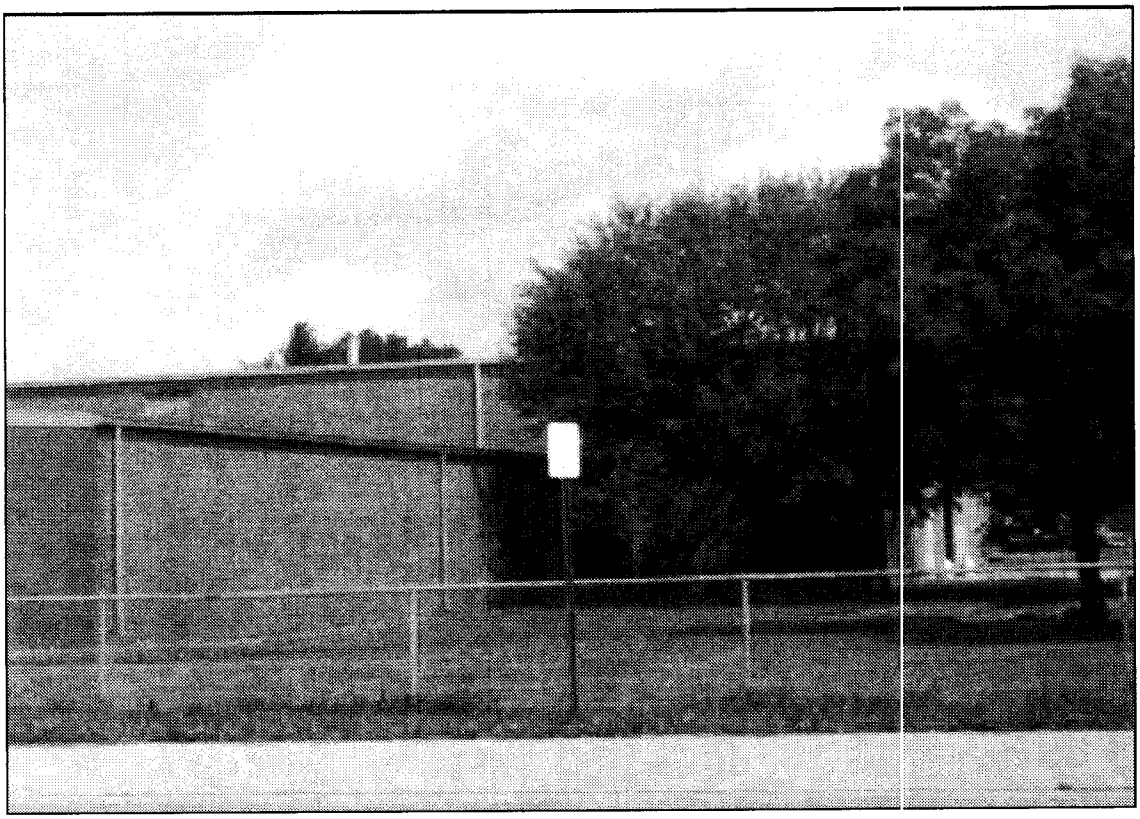


Figure 216. Fort Hayes Memorial USARC Reserve Center, facing northwest.

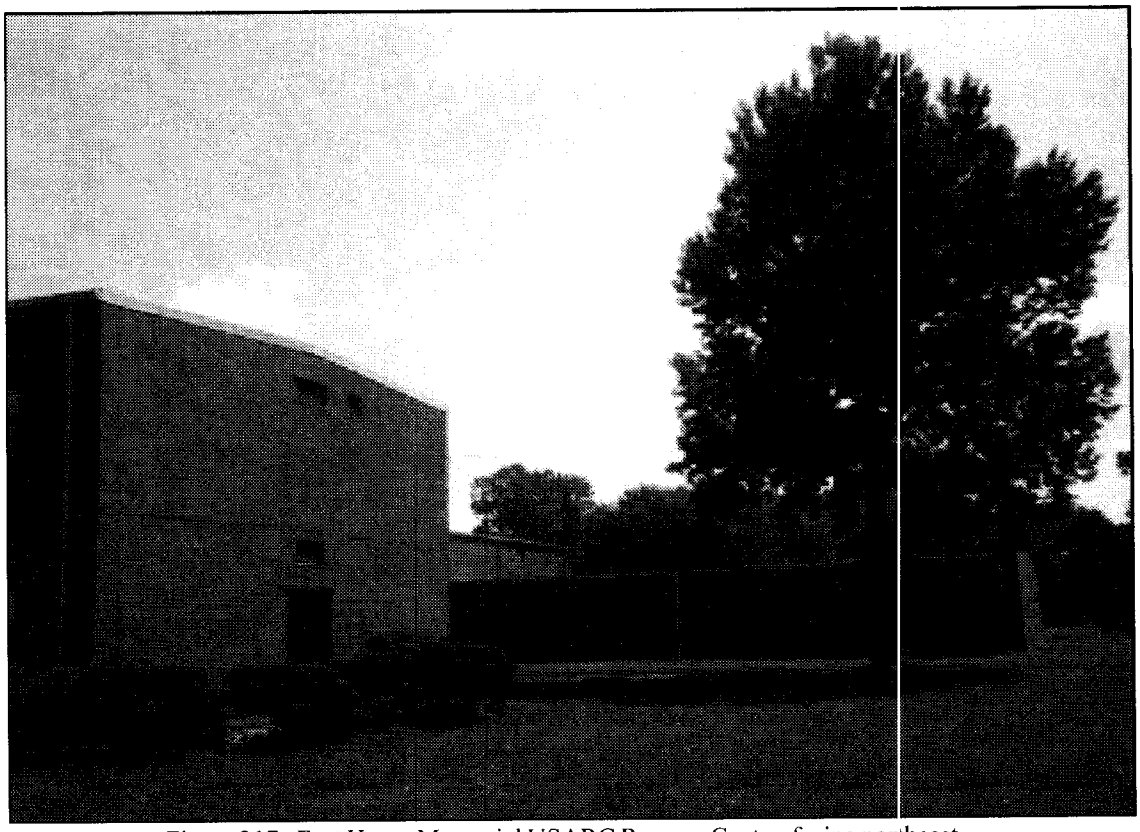


Figure 217. Fort Hayes Memorial USARC Reserve Center, facing northeast.

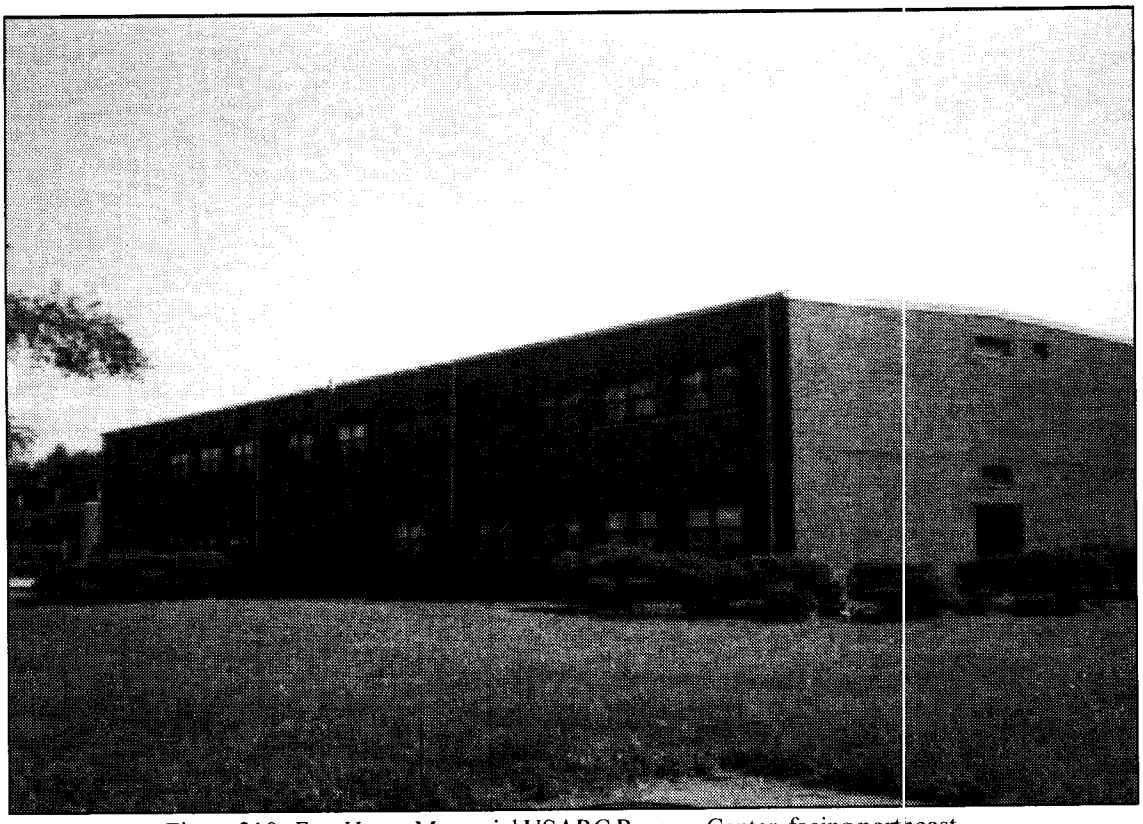


Figure 218. Fort Hayes Memorial USARC Reserve Center, facing northeast.

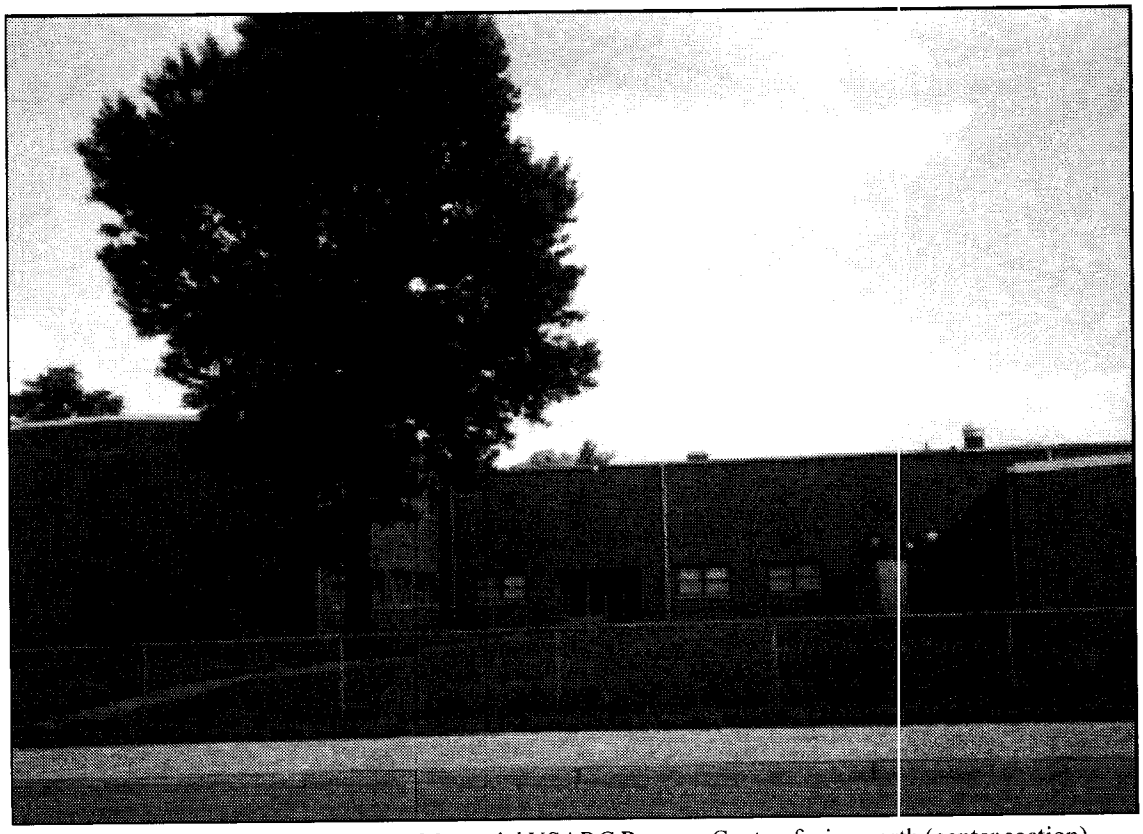


Figure 219. Fort Hayes Memorial USARC Reserve Center, facing north (center section).

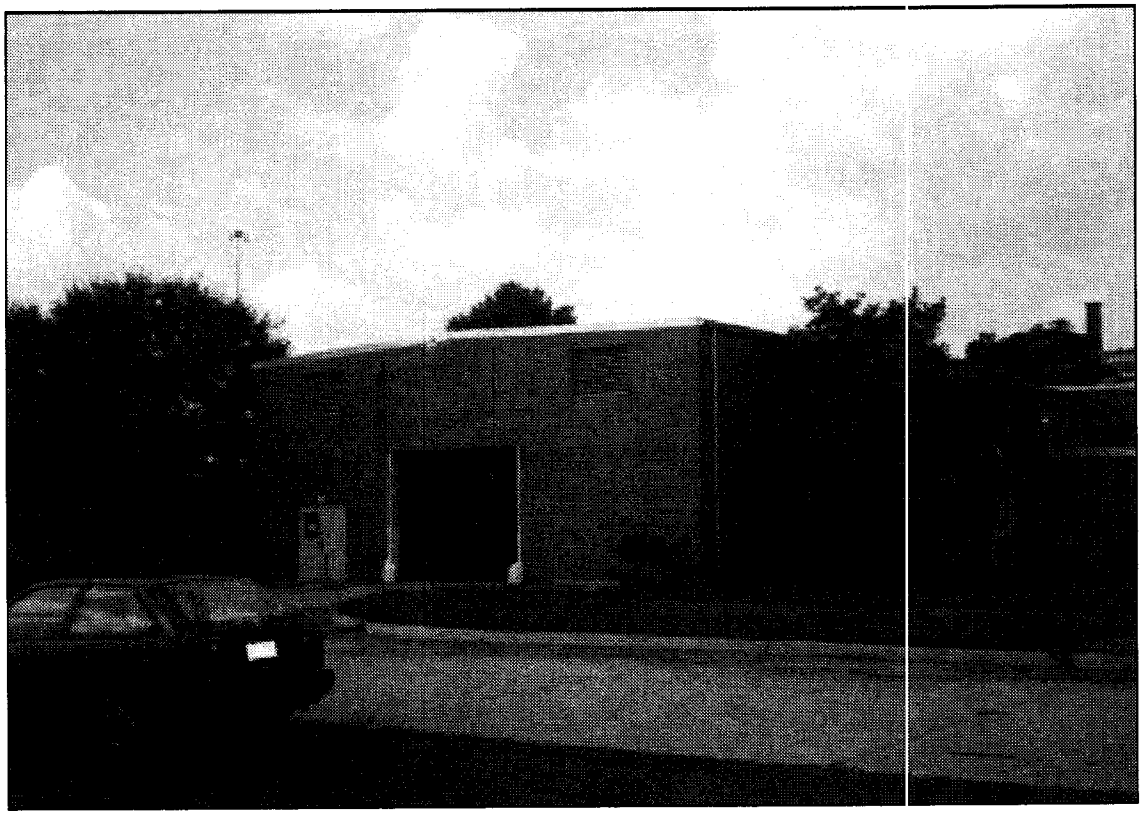


Figure 220. Fort Hayes Memorial USARC Reserve Center, facing southwest.

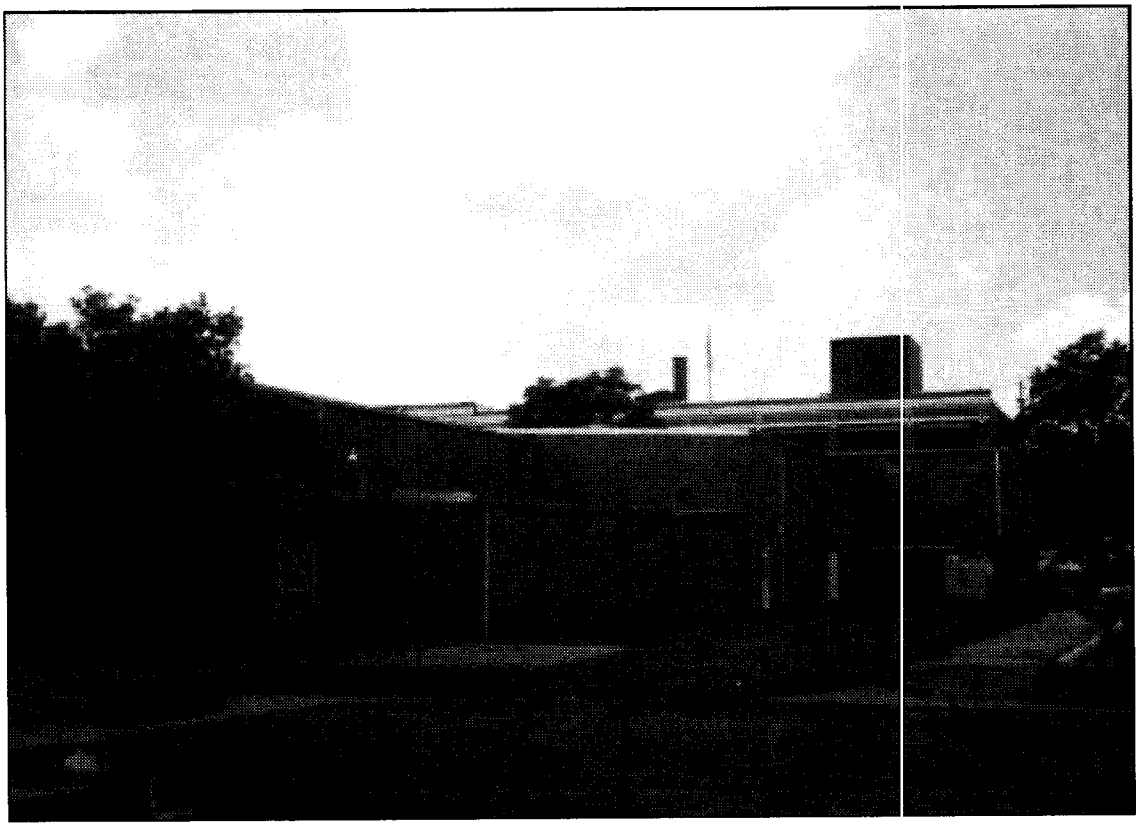


Figure 221. Fort Hayes Memorial USARC, facing southwest.

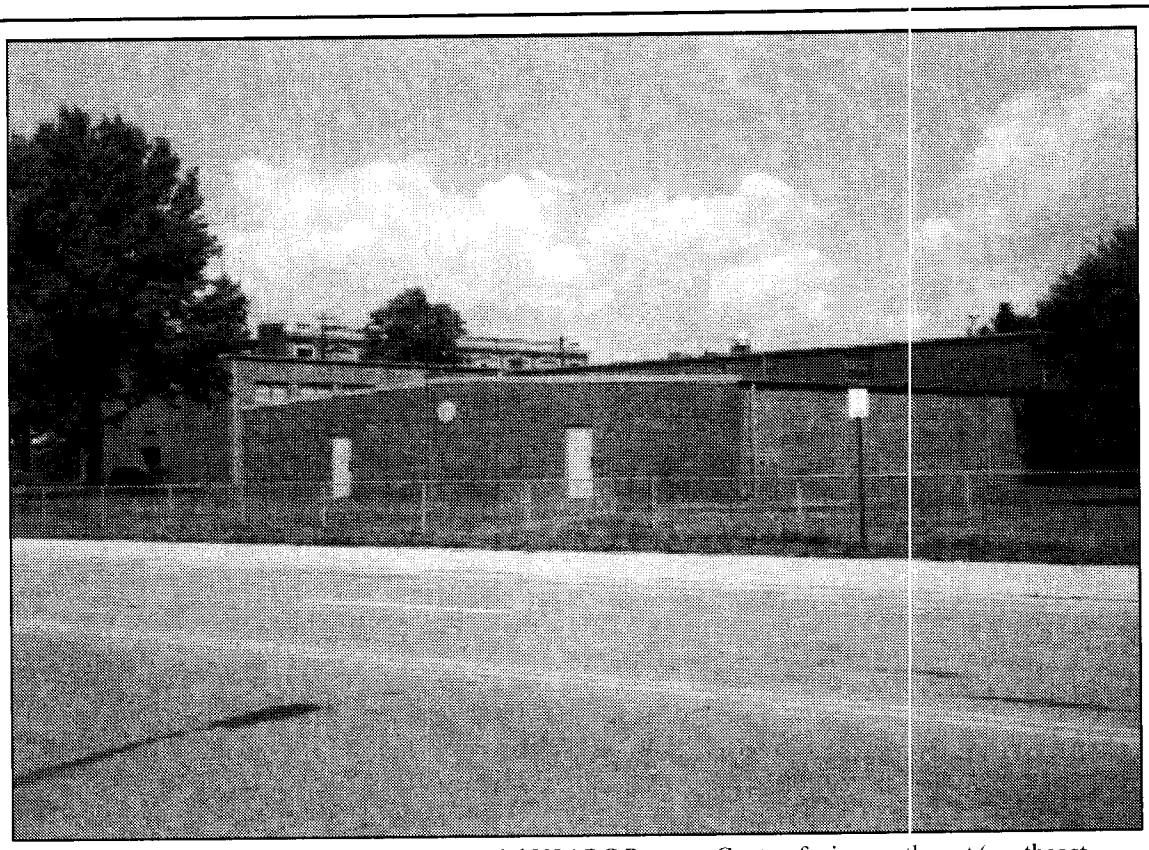


Figure 222. Fort Hayes Memorial USARC Reserve Center, facing northwest (southeast corner of building).

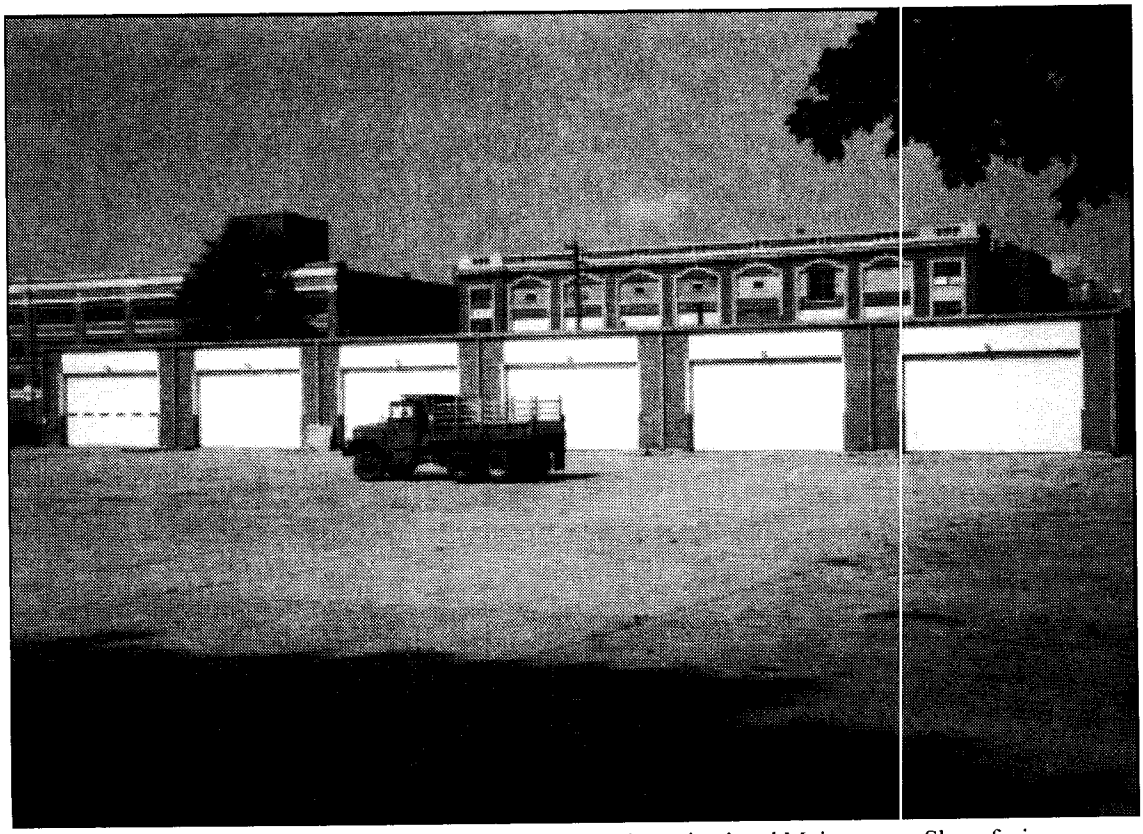


Figure 223. Fort Hayes Memorial USARC Organizational Maintenance Shop, facing southwest.

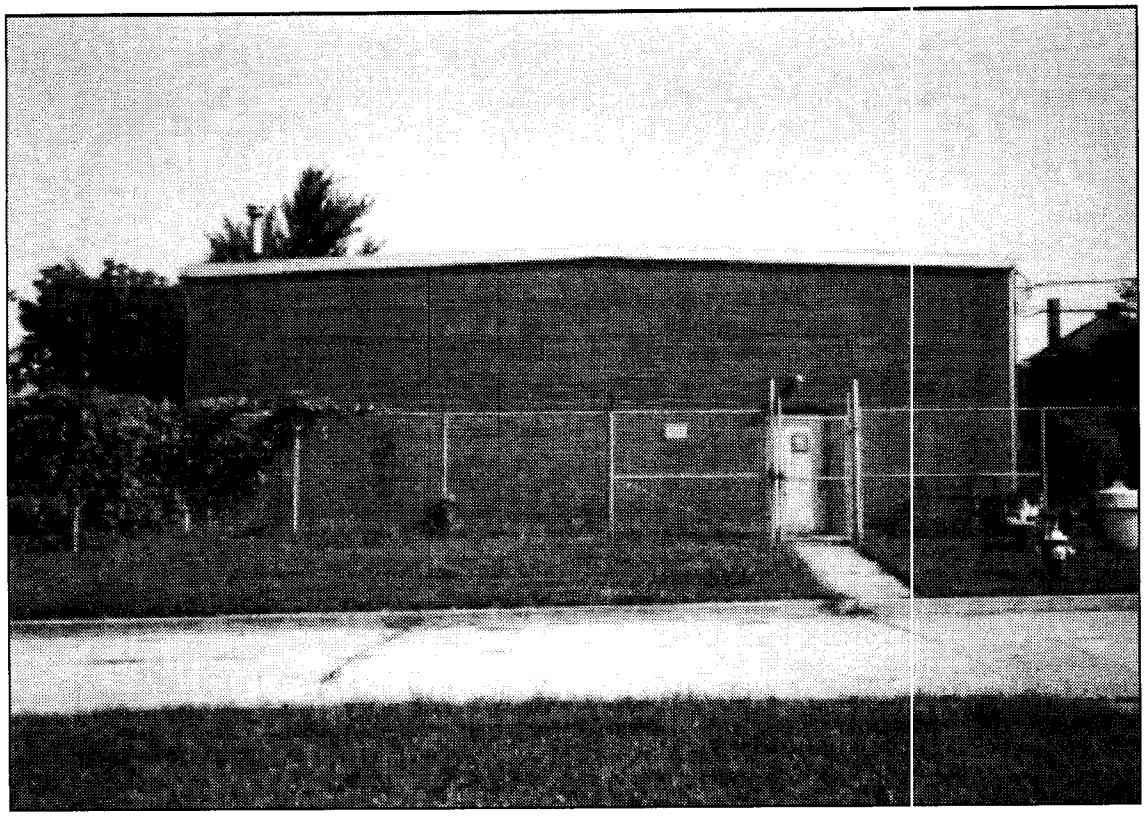


Figure 224. Fort Hayes Memorial USARC Organizational Maintenance Shop, facing north.

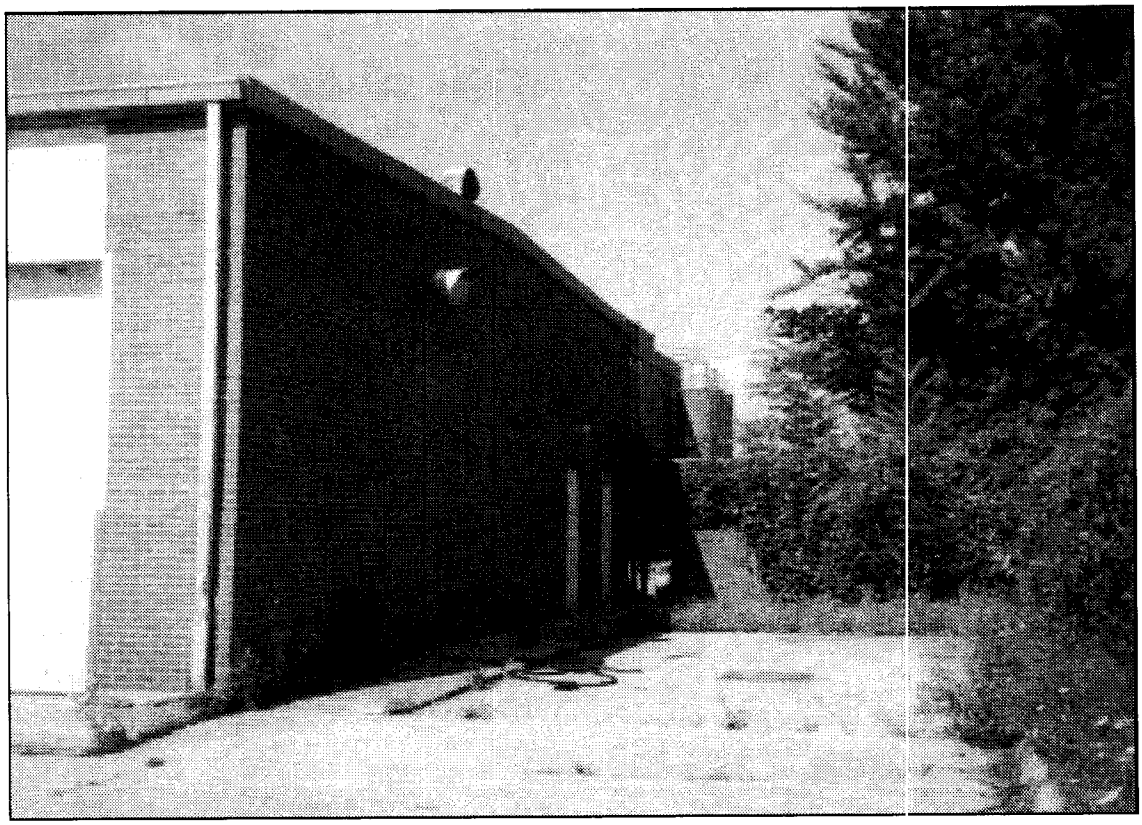


Figure 225. Fort Hayes Memorial USARC Organizational Maintenance Shop, facing southwest (oblique view of the north wall).

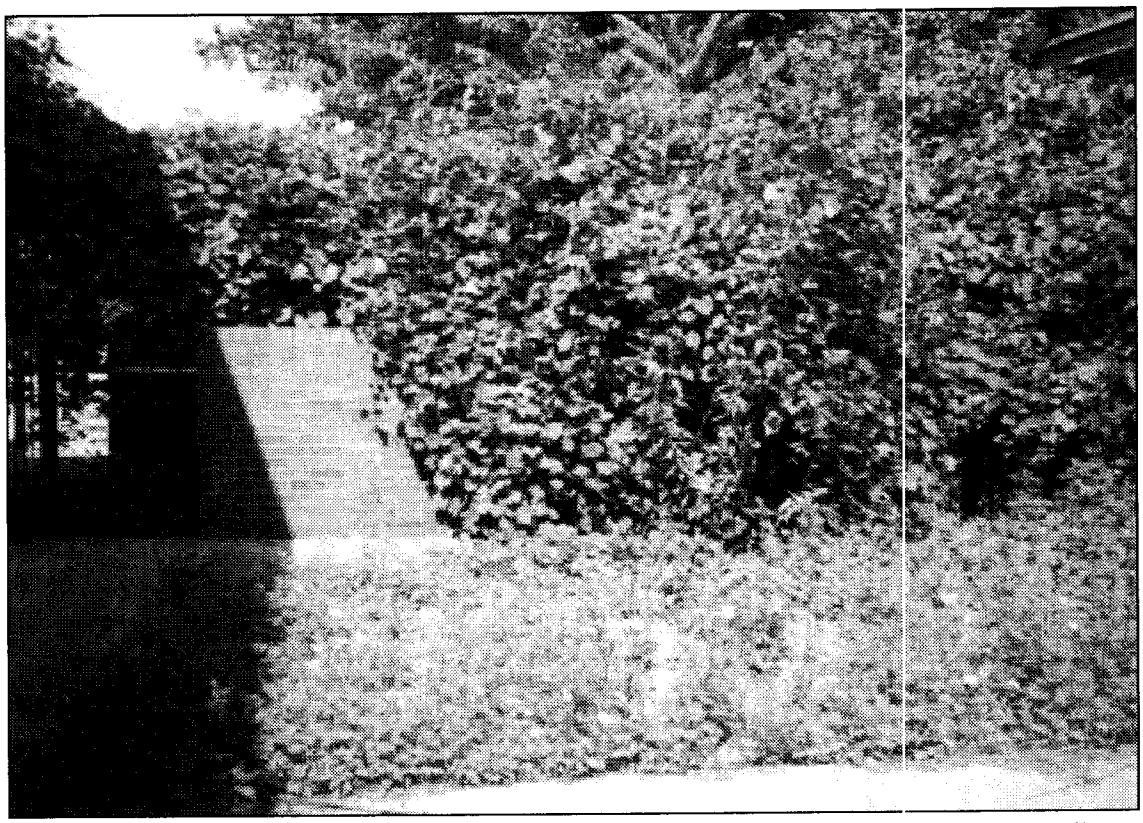


Figure 226. Fort Hayes Memorial USARC Organizational Maintenance Shop Brick Wall, facing west.

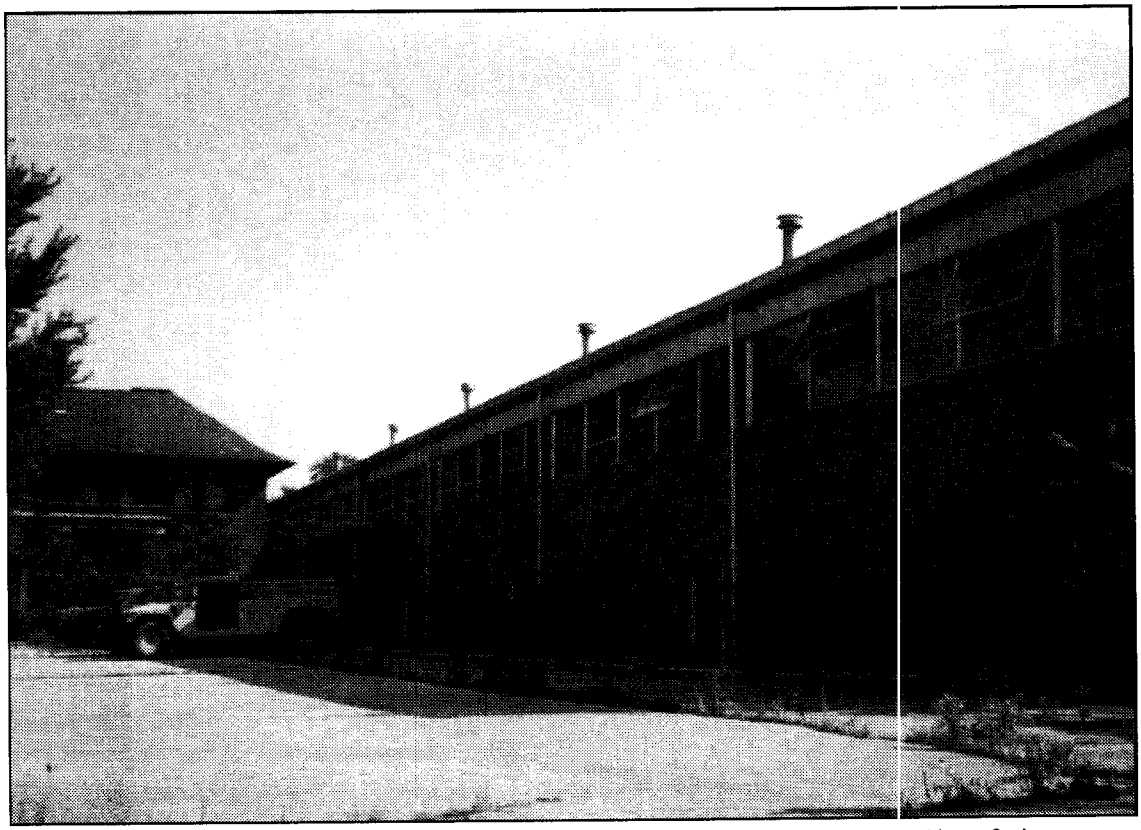


Figure 227. Fort Hayes Memorial USARC Organizational Maintenance Shop, facing northeast.

	Columbus, Ohio Whitehall Memorial USARC
Identification Information:	Identification Number: OH014/39860 Whitehall Memorial USARC 721 Country Club Rd., Columbus, Franklin County, Ohio 43213-2485 Telephone Number: (614) 692-5451 Reynoldsburg Quadrangle, Ohio, USGS 7.5 Minute Series, T12N R17W, Section 9 (Figure 228) UTM: Z17, 340665E, 4424895N Present Owner/Occupant: The facility is owned by the United States Government and controlled by the 88th RSC.
Setting and Landscape:	The Whitehall Memorial USARC consists of three buildings located on five acres of land (CL001) in a residential district in Columbus, Ohio (Figure 229). The facility is landscaped with grass, trees, and shrubs.
Archaeological Resources:	An archaeological records search at the Ohio State Historic Preservation Office determined that there are no known archaeological sites located within a one-mile radius of the Whitehall Memorial USARC.
Historical Information:	The Whitehall Memorial USARC was constructed in 1960.[1] There appear to have been no significant additions or alterations to the buildings since their original construction.
Security:	Security measures at the Whitehall Memorial USARC include chain-link fencing topped with barbed wire surrounding a military vehicle parking area, the east and south walls of the Organizational Maintenance Shop, and the west wall of the Reserve Center's drill hall. High intensity lighting is also present to illuminate military and civilian vehicle parking areas.
Architectural Information:	The Whitehall Memorial USARC consists of three concrete block buildings with red brick veneers. The buildings do not appear to exhibit significant

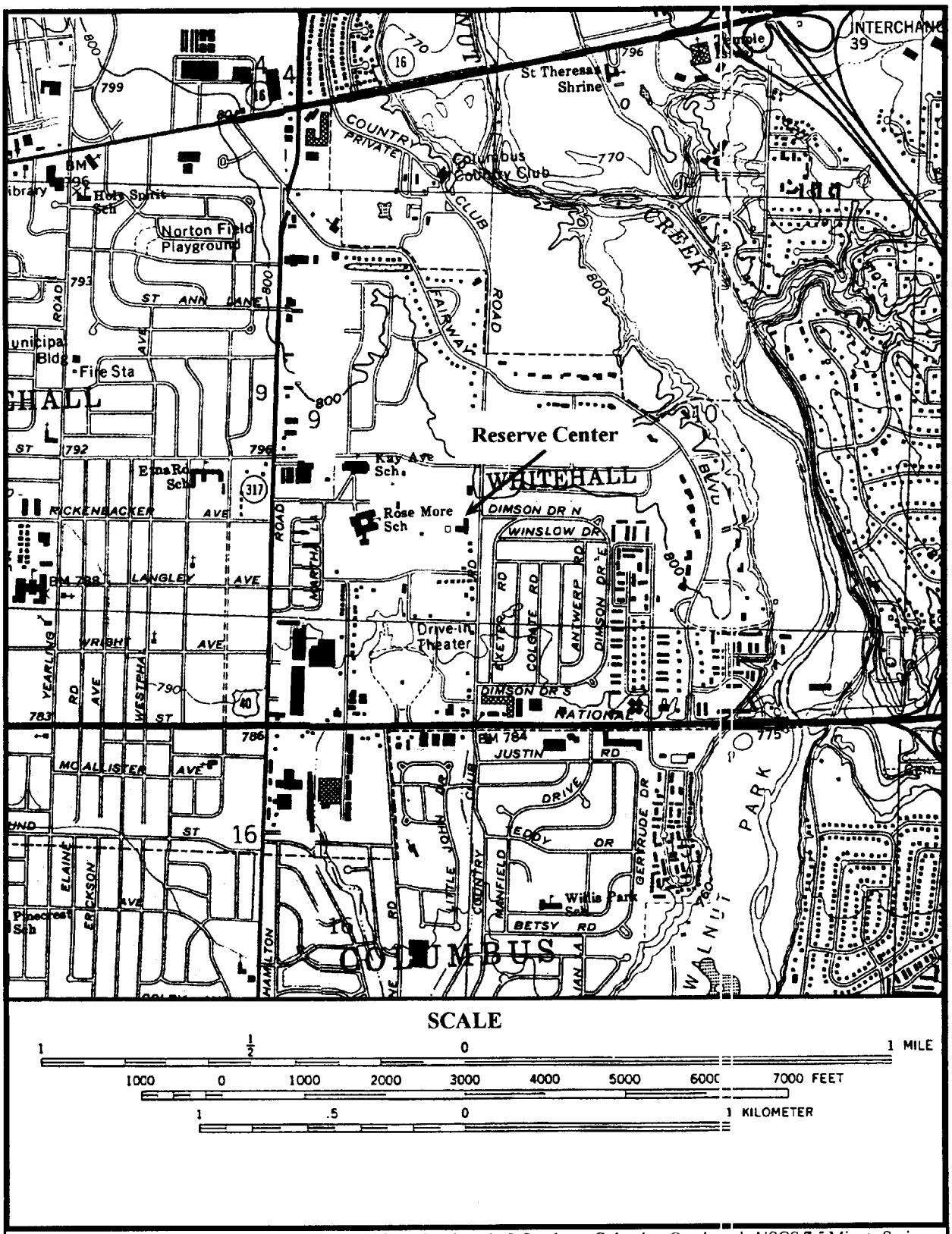
	historical or architectural character or merit that contributes to the historic context of the period associated with their construction.
Building Descriptions:	**Reserve Center** (CL002) The Reserve Center functions as an administrative office and drill hall for the Whitehall Memorial USARC. Constructed in1960, is a T-shaped, multiple-level building comprised of two-story rectangular building sections connected by a one-story enclosed corridor. It rests upon a poured concrete foundation with concrete block walls and a red brick veneer. A projecting entrance consisting of two pairs of glass pedestrian doors surrounded by multiple single light fixed transom and sidelights is located on the east side of the building (Figure 230). A second projecting entrance consisting of a metal pedestrian door and concrete porch covered by a metal awning is located on the southwest corner of the building (Figure 231). Pairs of metal pedestrian doors are located on the north, south, and west walls, and a metal overhead retractable bay door is located on the west wall of the drill hall. A series of one-over-one light double-hung windows with plain slip metal sills, and one-over-one light double-hung ribbon windows with continuous plain slip metal sills are located around the perimeter of the building (Figure 232). A flat roof covers the structure (Figure 233 & 234). **Organizational Maintenance Shop** (CL003) The Organizational Maintenance Shop functions as a vehicle maintenance facility for the Whitehall Memorial USARC. Constructed in 1960, the OMS is a one-story rectangular building that rests upon a poured concrete foundation with concrete block walls with red brick veneer. Entrances include three metal overhead retractable bay doors are located along the east wall of the building, and metal pedestrian doors located on the north and south walls (Figures 235 & 236). A series of one-over-one light double-hung awning ribbon windows with continuous plain slip sills are located along the west wall near the roof eaves (Figure 237). A flat roof covers the structure (Figure 238). **Utility Building** (OH014/39860)[2] The Utility Building functions as a storage facility for equipment serving the electrical and water systems at the Whitehall Memorial USARC. Constructed in 1960, it is a half-story rectangular building with a concrete foundation with brick walls. A metal pedestrian door is located on the east wall of the building (Figure 239). Fenestrations on the structure consist of

	metal vents located on the south and north walls (Figure 240). A low-pitch shed roof covers the building. The roof shows signs of deterioration along the west eaves (Figure 241 & 242).
Eligibility:	None of the buildings located at the Whitehall Memorial USARC meet the criteria for the National Register of Historic Places (NRHP), under Criterion A, B, C, or D, and thus are not recommended for nomination to the NRHP. A documentary and architectural investigation conducted at the facility determined there is no direct relationship between the facility and pre-historic or historic events in the Columbus area (criterion A), there is no association with significant persons involved in prehistoric or historic events (criterion B), buildings on the facility are not architecturally or technologically significant (criterion C), and the facility is unlikely to hold future research potential (criterion D).
Recommendations:	No additional review under Section 110 is recommended until the existing buildings at the Whitehall Memorial USARC reach the 50 year eligibility requirement for the NRHP in 2010, or unless specific undertakings require compliance with Section 106 of the National Historic Preservation Act (36 CFR 800).
Sources:	"Environmental Audit of Whitehall Memorial U.S. Army Reserve Center." Lexington, Kentucky: Howard K. Bell, Consulting Engineers, Inc. 1991. "Peters, Norris F. "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)." 14 April 1989. "Real Property Detail Report Criteria: Total Inventory," 88th RSC DSCEN Real Estate Division, March 1998. "Reynoldsburg Quadrangle." USGS 7.5 Minute Series Map. Denver, Colorado: United States Geological Survey. 1964, revised 1994. "Southeast Columbus Quadrangle." USGS 7.5 Minute Series Map. Denver, Colorado: United States Geological Survey. 1964, revised 1994. Warren, Benjamin H. "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)." 15 March 1985.

Notes:

[1] Norris F. Peters, "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)," 14 April 1989, p. 1 and Benjamin H. Warren "Installation Commander's Annual Real Property Utilization Survey (ICARPUS)," 15 March 1985, p. 1. Copies of these reports are on file at the 88th RSC DSCEN Real Estate Division office, Fort Snelling, Minnesota.

[2] "Real Property Detail Report Criteria: Total Inventory," 88th RSC DSCEN Real Estate Division, March 1998, p. 22-23. According to records maintained by real property specialists, the Utility Building at the Whitehall Memorial USARC has not been assigned a building number within the facility. A copy of this report is on file at the 88th RSC DSCEN Real Estate Division office, Fort Snelling, Minnesota.



Reynoldsburg Quadrangle & Southeast Columbus Quadrangle USGS 7.5 Minute Series

Figure 228. Location of the Whitehall Memorial USARC.

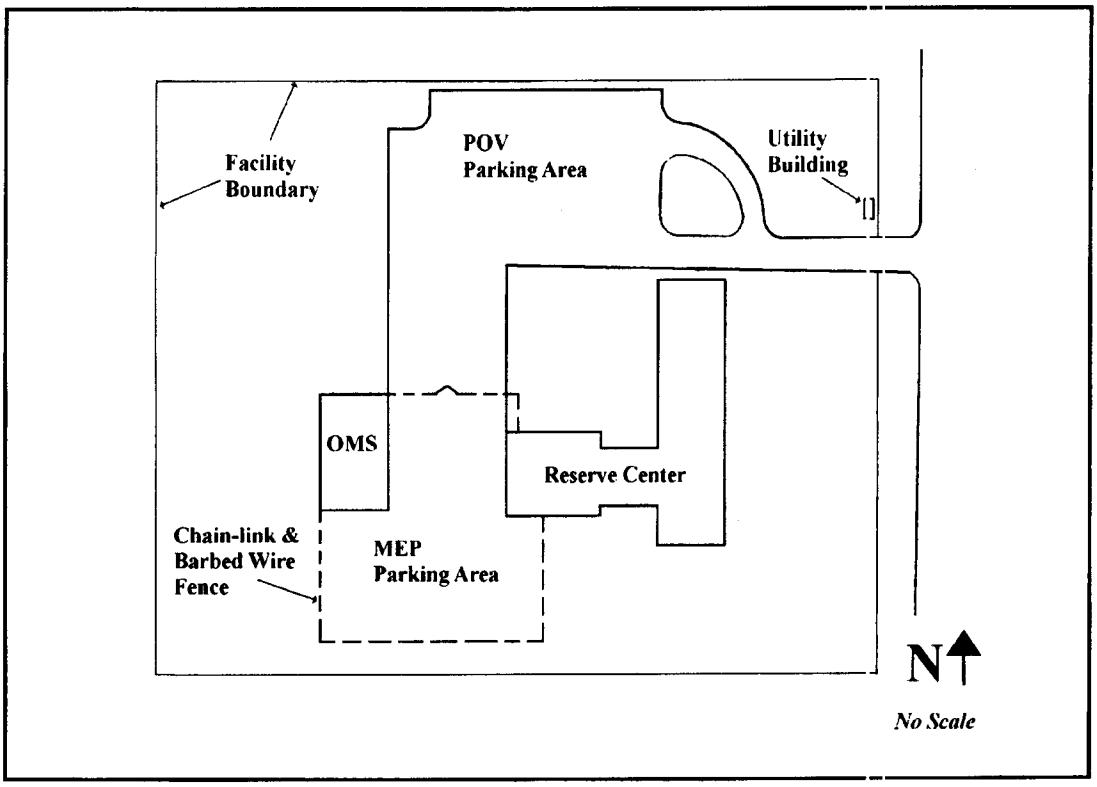


Figure 229. Map of the Whitehall Memorial USARC (map modified from "Environmental Audit Whitehall Memorial U.S. Army Reserve Center." Howard K. Bell. Consulting Engineers. Inc., Attachment No. 1).

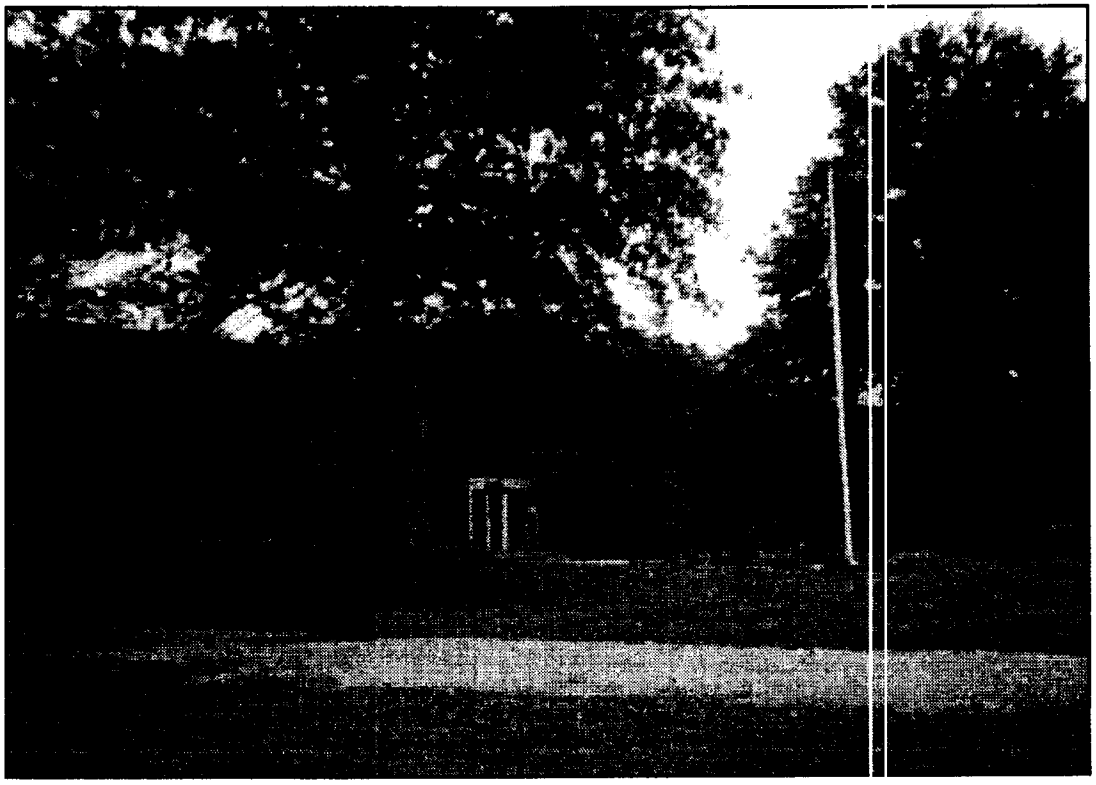


Figure 230. Whitehall Memorial USARC Reserve Center, facing northwest.

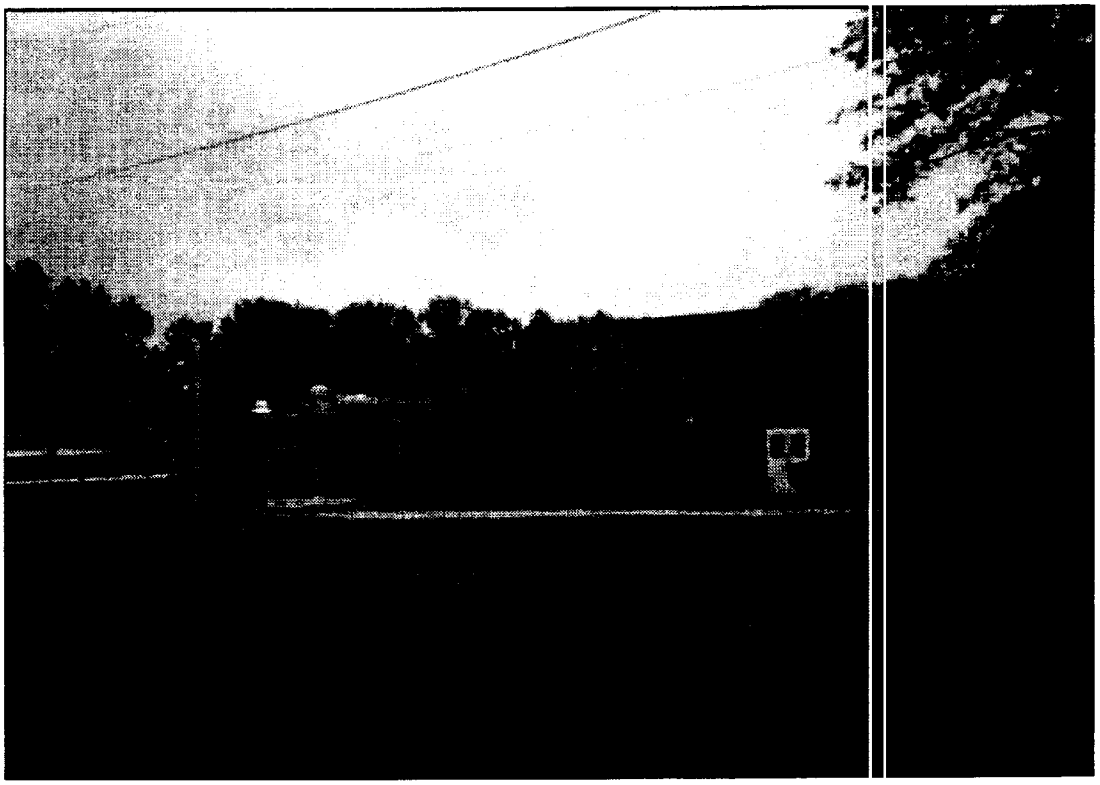


Figure 231. Whitehall Memorial USARC Reserve Center, facing northwest (south side of building).

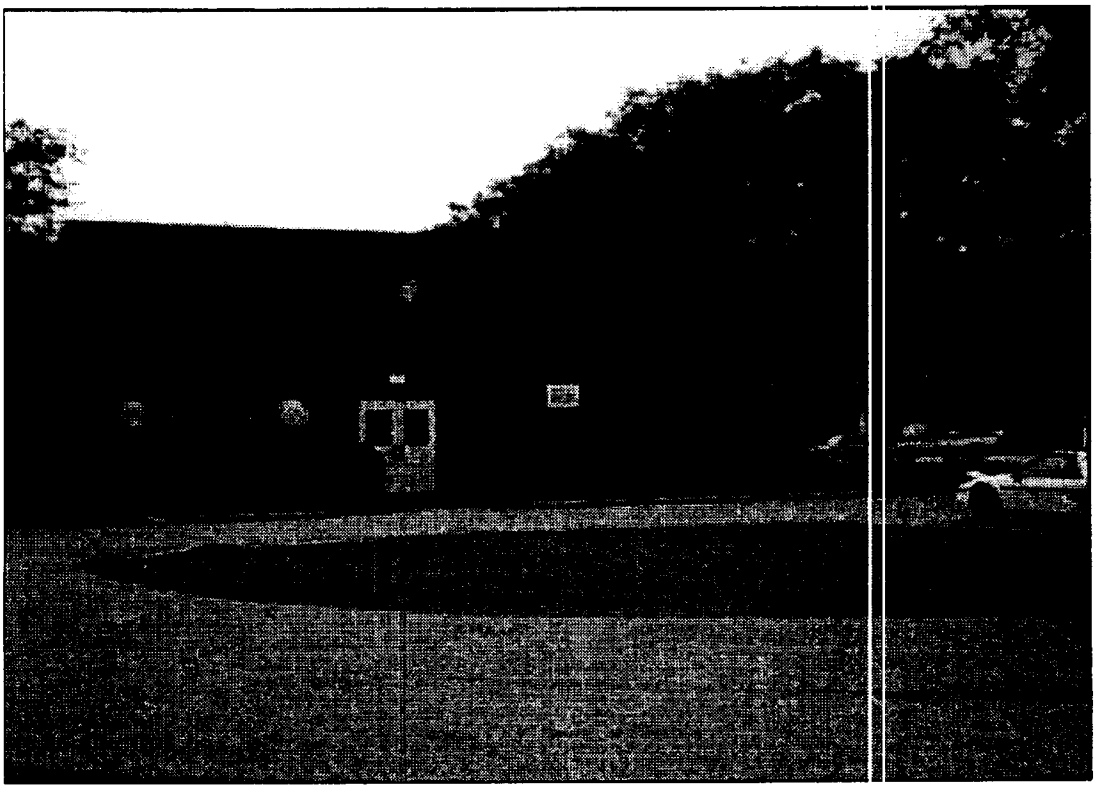


Figure 232. Whitehall Memorial USARC Reserve Center, facing southwest.

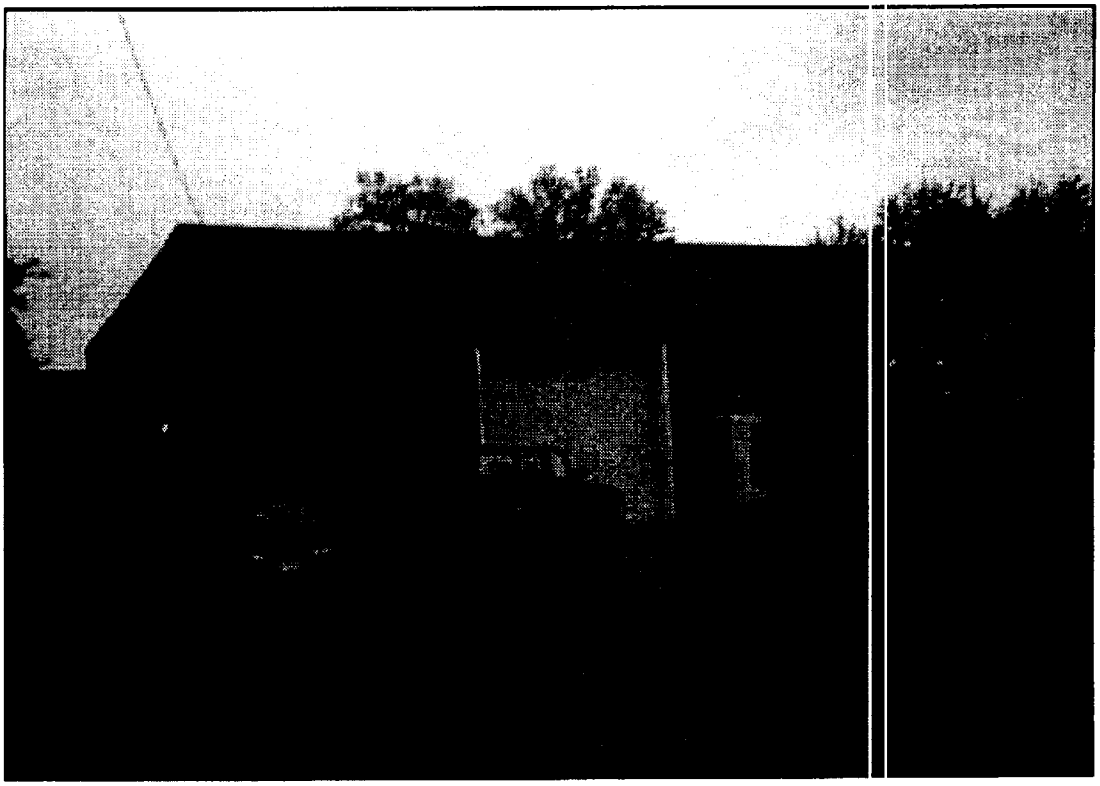


Figure 233. Whitehall Memorial USARC Reserve Center, facing east (drill hall).

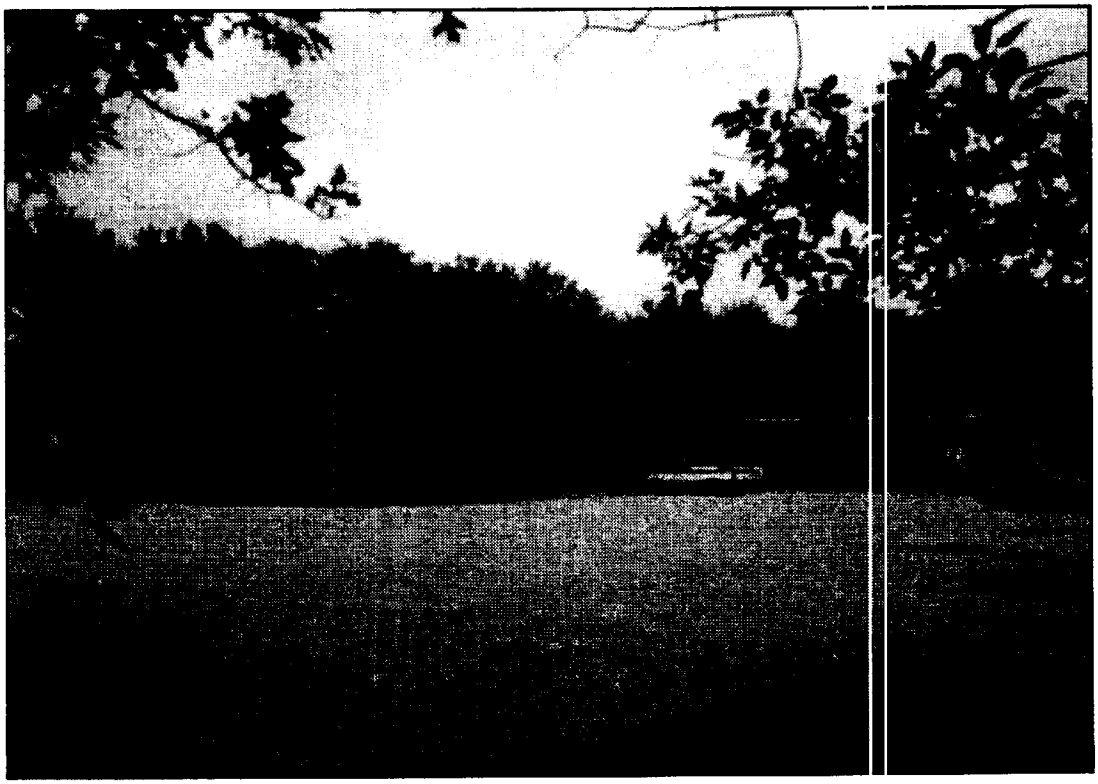


Figure 234. Whitehall Memorial USARC Reserve Center, facing southeast.

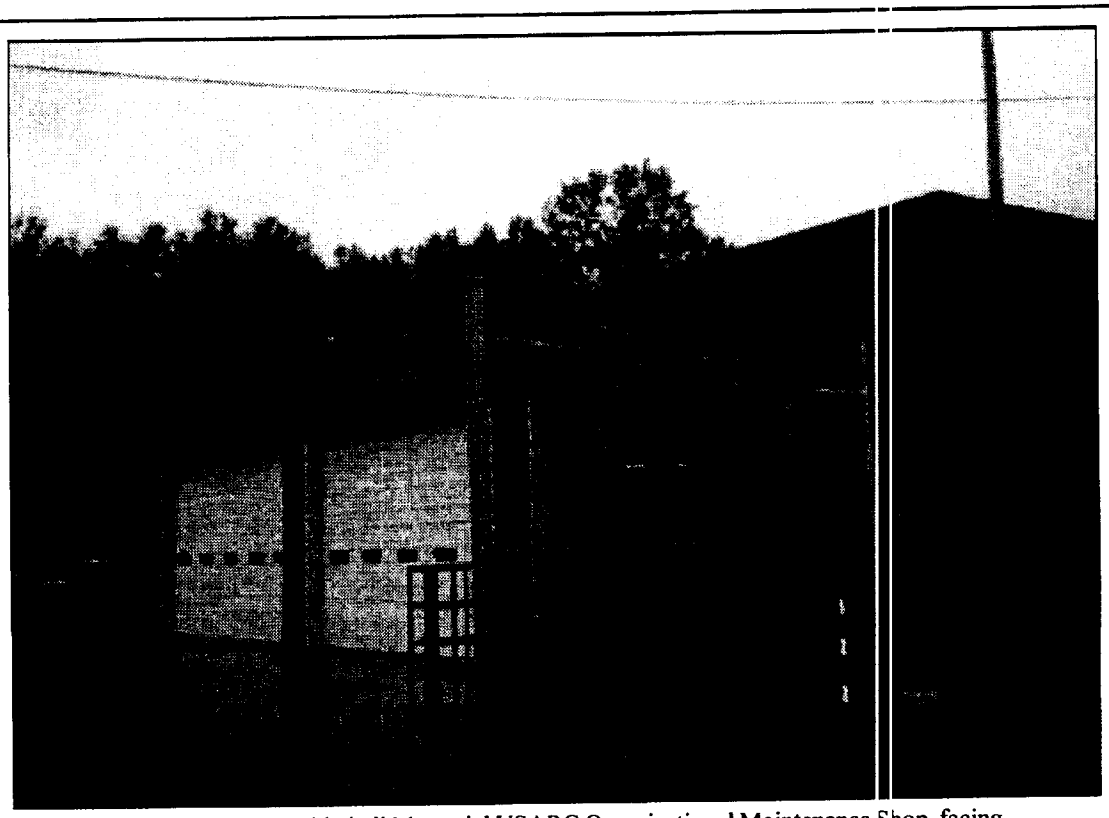


Figure 235. Whitehall Memorial USARC Organizational Maintenance Shop, facing southwest.

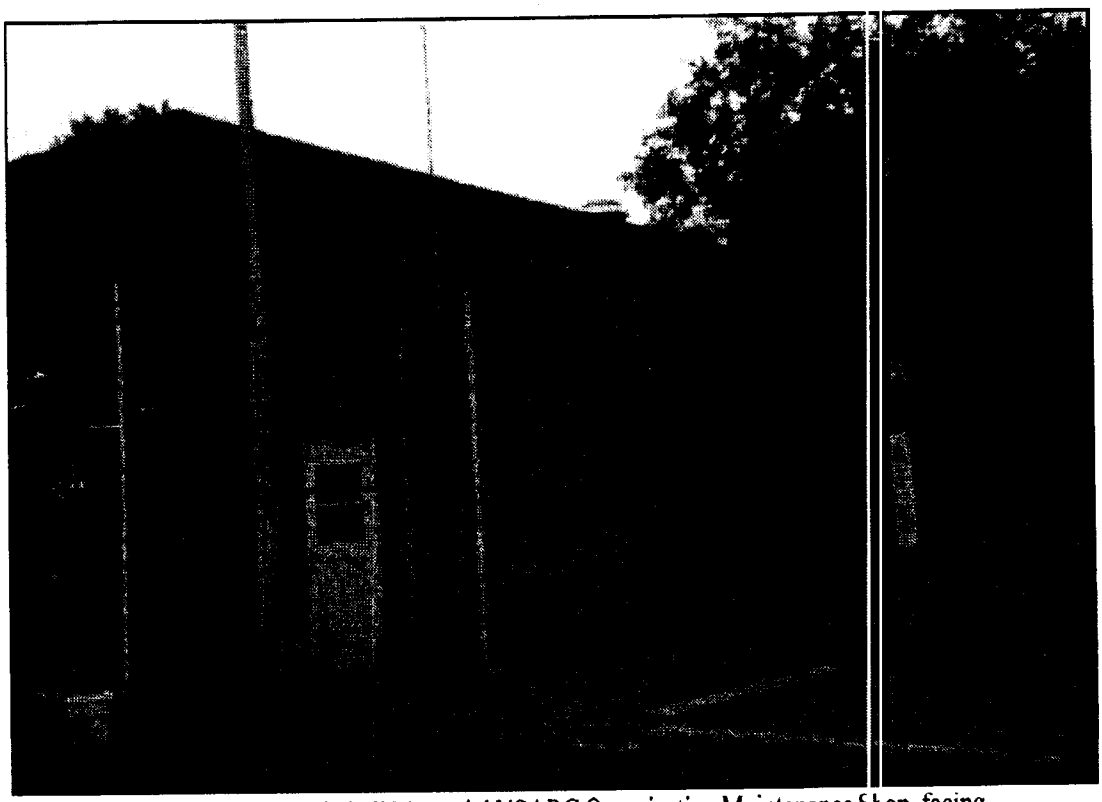


Figure 236. Whitehall Memorial USARC Organization Maintenance Shop, facing southwest.

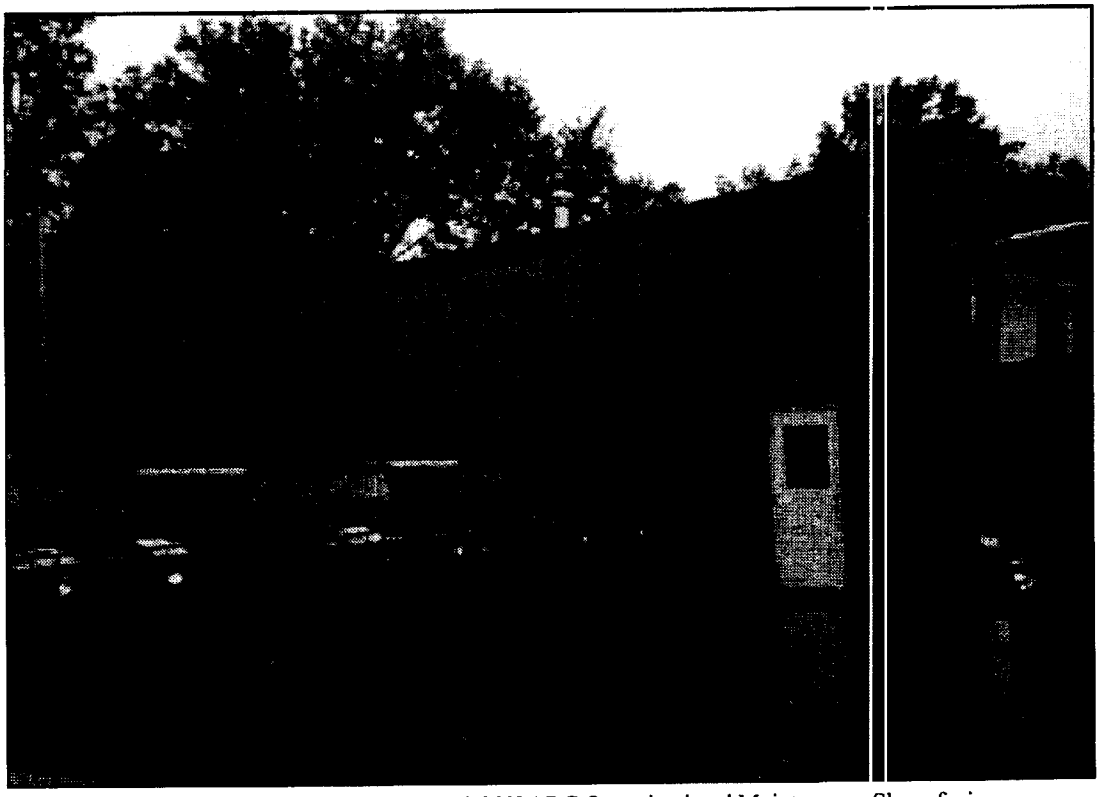


Figure 237. Whitehall Memorial USARC Organizational Maintenance Shop, facing northwest.

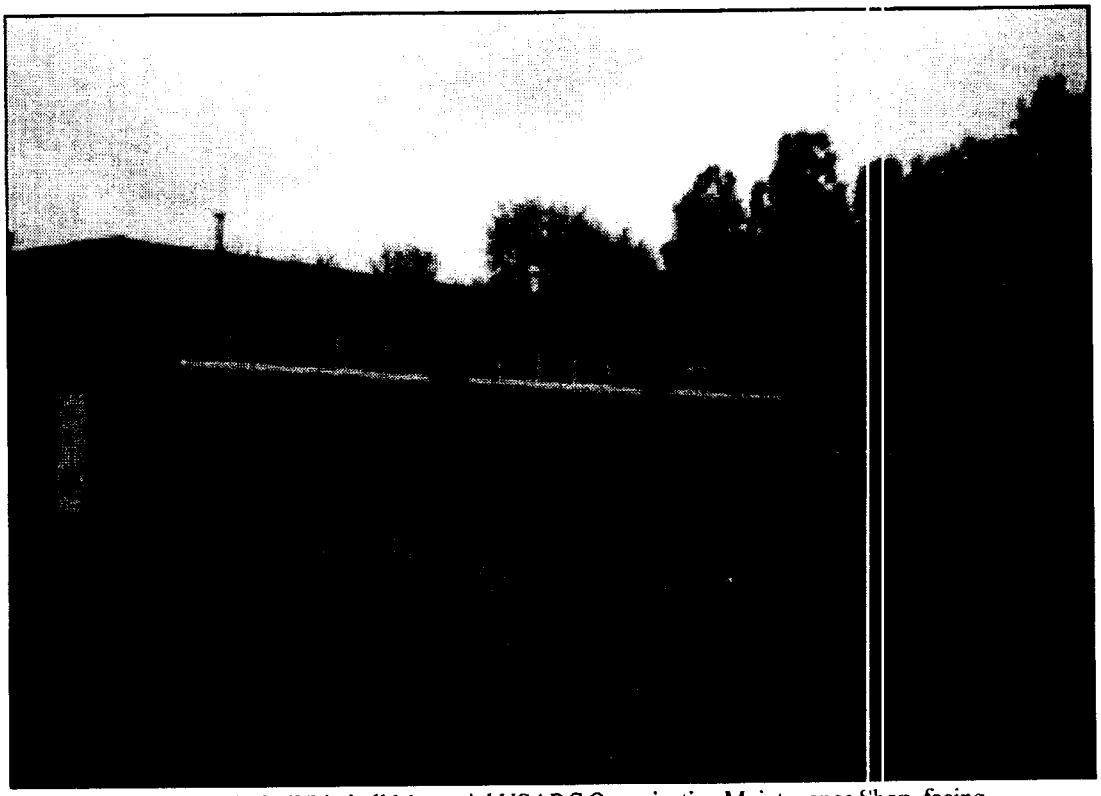


Figure 238. Whitehall Memorial USARC Organization Maintenance Shop, facing southeast.

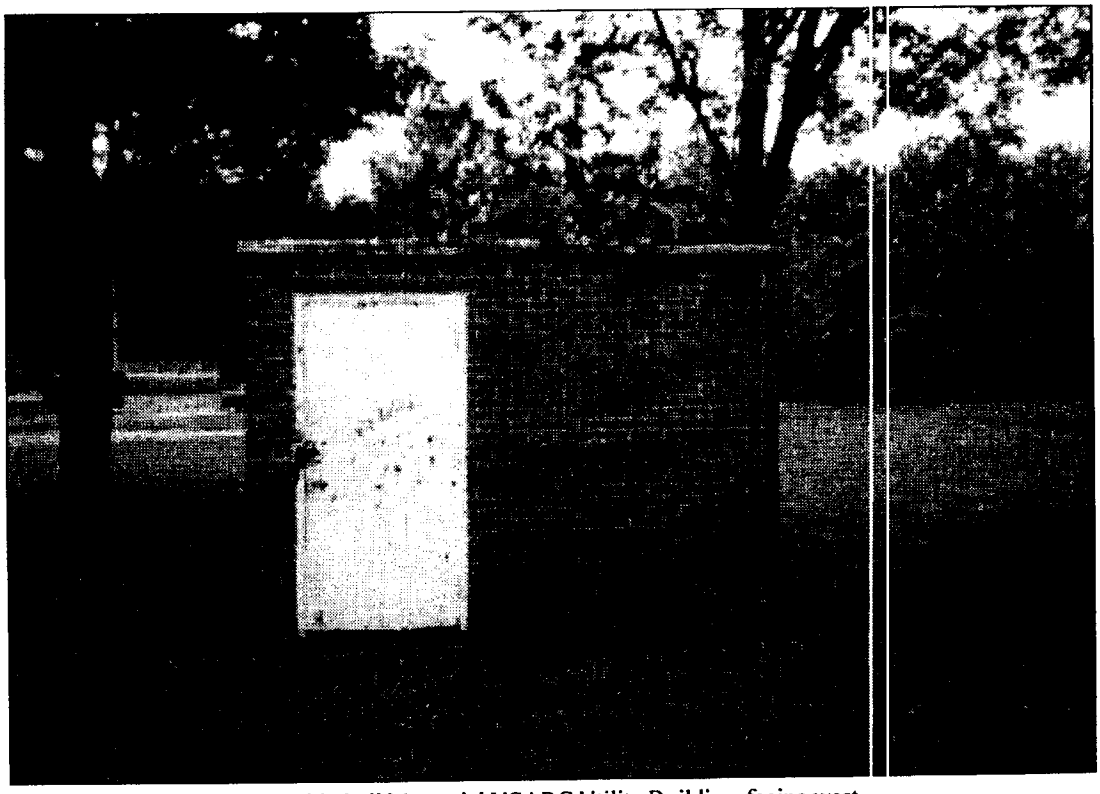


Figure 239. Whitehall Memorial USARC Utility Building, facing west.

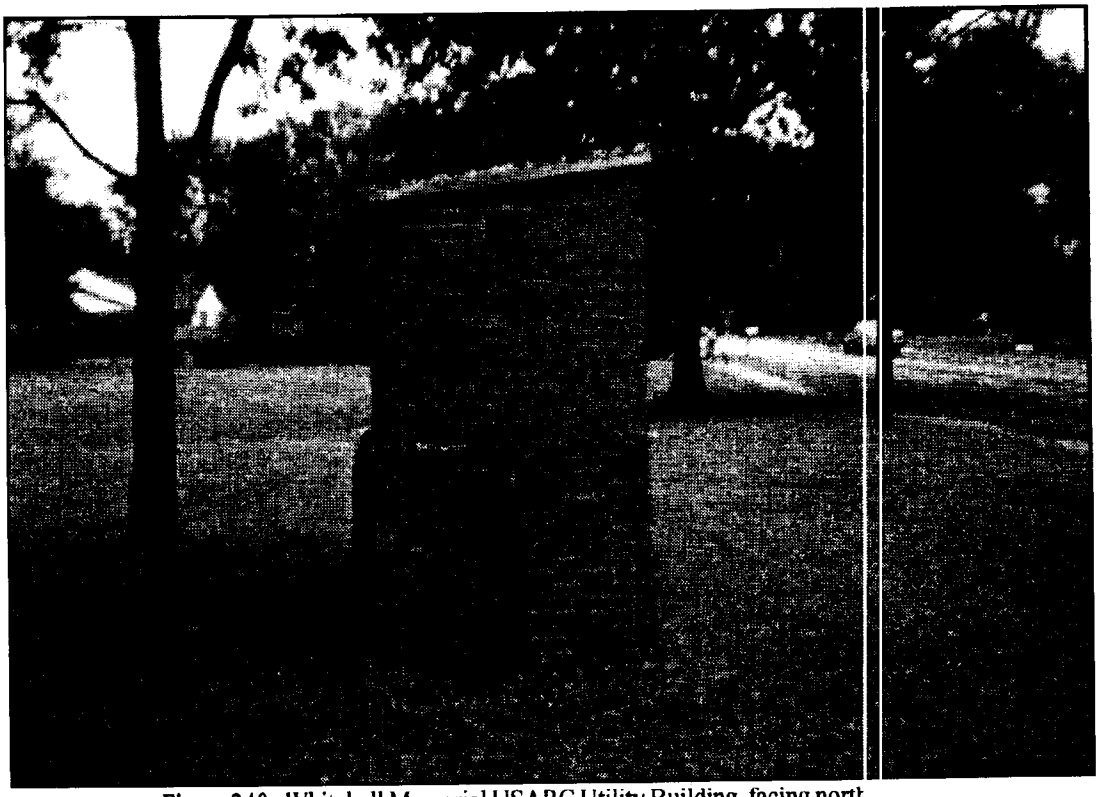


Figure 240. Whitehall Memorial USARC Utility Building, facing north.

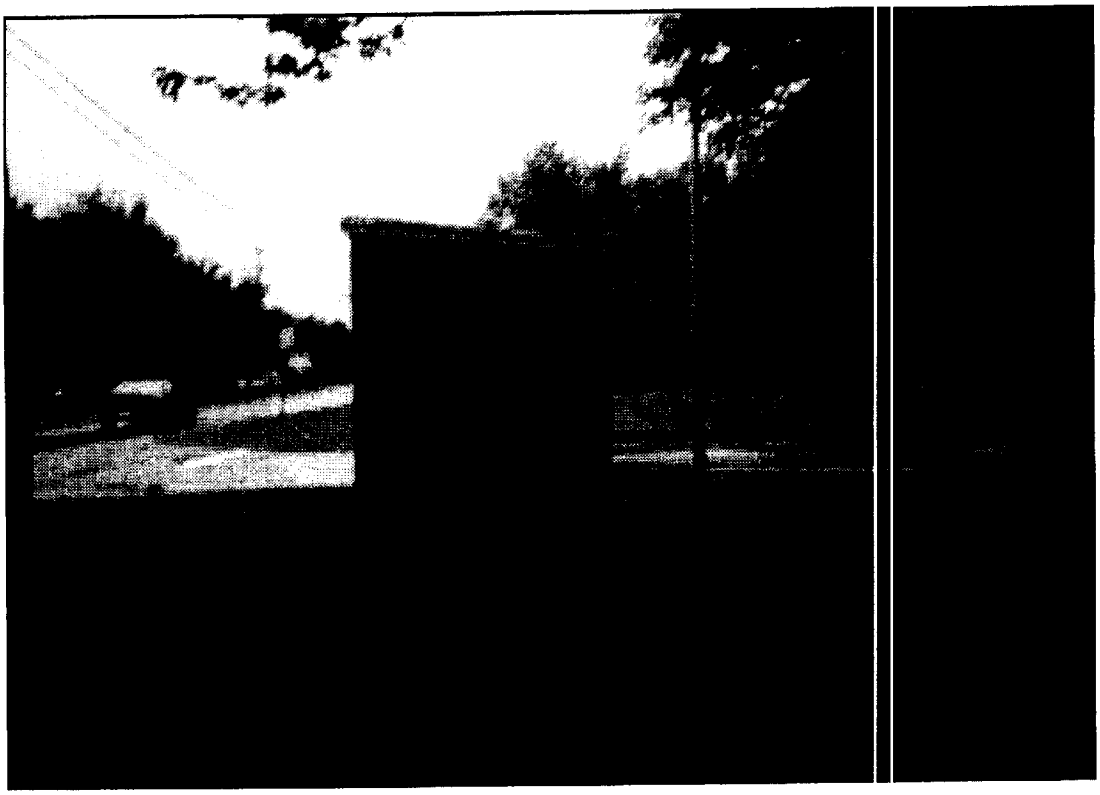


Figure 241. Whitehall Memorial USARC Utility Building, facing south

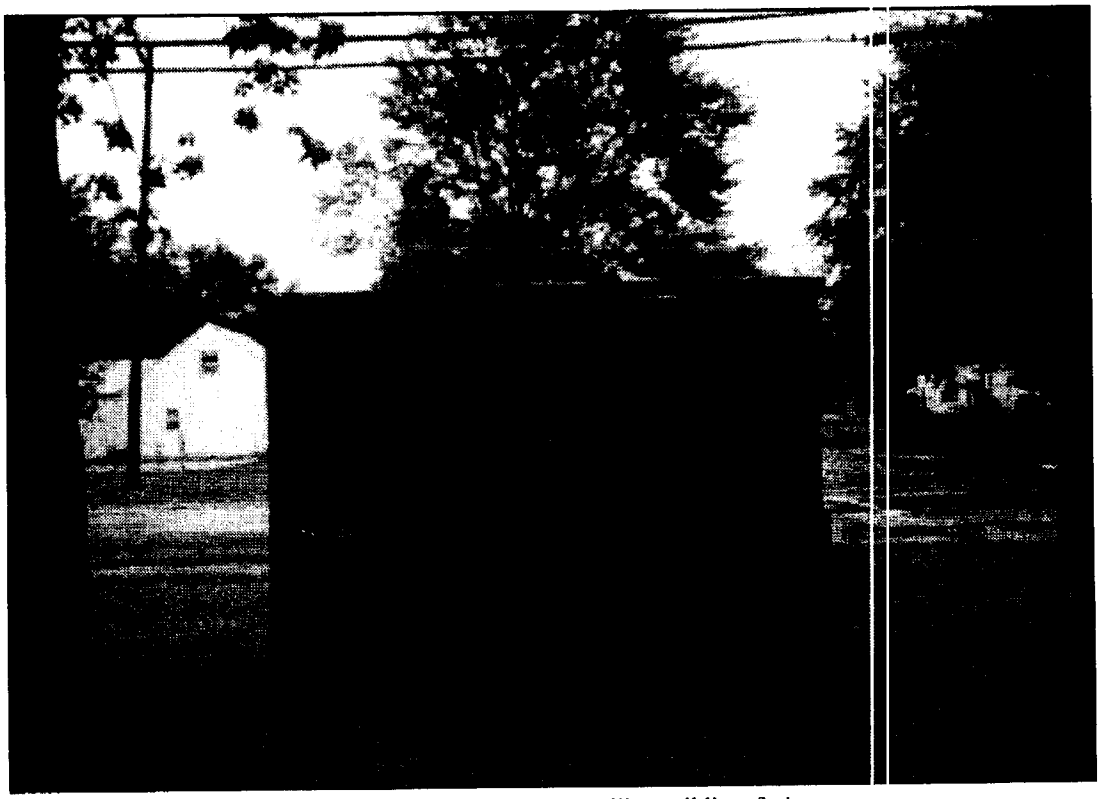
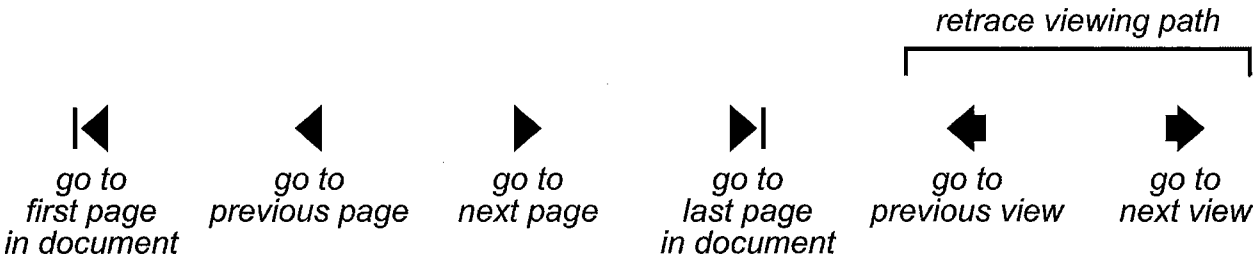


Figure 242. Whitehall Memorial USARC Utility Building, facing east.

Navigation notes:

For easiest navigation, extensive use of "bookmarks" has been made. To view a given Section, simply click on the desired Section heading. A "+" sign indicates collapsed subheadings can be found by clicking on the "+". To re-collapse the heading, click on the "–" sign. Use the *Page Up* and *Page Down* keys to move to adjacent pages. You can also navigate by single-clicking the arrow buttons on the toolbar at the top of the Acrobat Reader window (see the diagrams below for an explanation).



Range Cleanup - OH014, 88th RSC

Whitehall Memorial U.S. Army Reserve Center

Columbus, Ohio

Project Report

Prepared for

U.S. Army Corps of Engineers
Louisville District
Environmental Engineering Branch
Contract No. DACA27-99-D-0021 • Delivery Order No. 0014
IT Project Number 807744

Prepared by

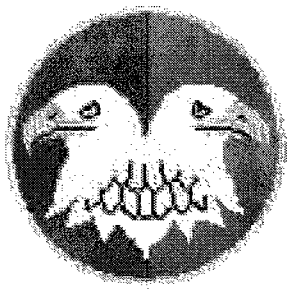
IT CORPORATION
312 Directors Drive
Knoxville, Tennessee 37923-4799

September 2003

INTERNATIONAL TECHNOLOGY CORPORATION

PROJECT REPORT

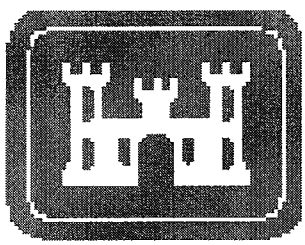
RANGE CLEANUP – OH014, 88th RSC
WHITEHALL MEMORIAL
U.S. ARMY RESERVE CENTER
COLUMBUS, OHIO



Contract No. DACA 27-99-D-0021
Delivery Order No. 0014

Submitted to:

U.S. Army Corps of Engineers
Louisville District
Environmental Engineering Branch



Prepared by:

IT Corporation
312 Directors Drive
Knoxville, Tennessee 37923-4799

September 2003

Table of Contents

List of Tables

List of Figures

List of Appendices

1.0 Introduction

This document presents the report for cleanup activities at the 88th RSC facility located at 721 Country Club Road, Columbus, Ohio 43113 (Figure 1-1). The cleanup activities were based on the Scope of Work (SOW) provided by the U.S. Army Corps of Engineers (USACE) Louisville District (CELRL) and a site inspection conducted on September 20, 2001.

1.1 Property/Project Identifiers

- Facility ID Number: OH014
- State: Ohio
- Facility Name: Whitehall Memorial U.S. Army Reserve Center
- City: Columbus.

1.2 Site Description

1.2.1 Inspection Information

Mr. Tim Kling of IT Corporation inspected the range on September 20, 2001. Figure 1-2 presents the facility layout. The four-position range with a manual target retrieval system was located on the first floor of the facility. No sand was present, but approximately 5 gallons of lead shot was observed in the bullet trap area. No lead dust was observed in the range.

The concrete block walls were partially covered with sound deadening material consisting of 12-inch ceiling tiles affixed to pegboard. The pegboard was screwed onto furring strips that are screwed into the concrete block walls. Fiberglass insulation was present between the furring strips for additional sound insulation. A false wall constructed of pegboard was located behind the firing line, separating the range from the intake vent. Metal trusses were affixed to a concrete ceiling. The trusses supported a drop ceiling made from steel plates. The drop ceiling protected insulated pipes that ran the length of the range. There was a partial drop ceiling above the firing line area covered with 12-inch tile sound deadening material affixed to furring strips. The floor, constructed of concrete, did not contain a drain.

An asbestos inspection was also conducted at the range (see Section 3.1).

1.2.2 Pre-Cleanup Characteristics

1.2.2.1 Number of Firing Points

The range had four firing points.

1.2.2.2 Bullet Trap Characteristics

The bullet trap was a steel deflector system without sand.

1.2.2.3 Range Characteristics

The range, which was located on the first floor, was constructed of the following:

- Floor – concrete
- Walls – concrete block, partially covered with 12-inch tile sound deadening material attached to pegboard and furring strips. A pegboard false wall was constructed behind the firing line.
- Ceiling – concrete, with metal trusses affixed to it. The trusses support a drop ceiling made from steel plates. The drop ceiling protects insulated pipes that run the length of the range. The drop ceiling above the firing line area was covered with 12-inch tile sound deadening material attached via furring strips.

Other features included:

- Stored items, including desks, cabinets, folding chairs, and targets
- Four-position, hardened steel bullet trap
- Hand-crank retrieval system
- Four radiant heaters hanging from the ceiling behind the firing line
- Fluorescent lights
- Bank of floodlights spaced across the ceiling.

1.2.2.4 Suspect Asbestos Containing Materials (ACM) Inventory

Prior to initiating cleanup, an ACM inspection was conducted on suspect materials. The results of that inspection are detailed in Section 3.1.

1.2.2.5 Air Handling Systems Description

The air handling system at the site consisted of the following:

- Wall-mounted air intake vent located behind the pegboard false wall in the firing line area
- Two wall-mounted air exhaust fans (unfiltered) located behind the bullet trap.

1.2.2.6 Access Points

Access to the firing range is via an entry door near the firing line and a smaller door behind the bullet trap.

1.3 Scope of Work

The SOW consisted of the following:

- Cleaning/removing stored items
- Removing sound deadening material on walls and ceiling
- Removing the bullet trap and associated lead shot fragments
- Cleaning the range
- Cleaning and removing the air handling system
- Collecting clearance samples
- Scabbling and sealing the floor, if necessary, based on clearance data.

The U.S. Army Reserve Command (USARC) recognized safety and health hazards from lead-dust in indoor rifle ranges; however, regulations supporting cleanup remedies dealt primarily with non-industrial standards. After reviewing information relative to cleaning methods and clearance sampling, the value of 200 micrograms per square foot (µg/sf) was derived as a value that would release the indoor ranges as a room that could be reoccupied as a non-lead work area. This value has also been selected by other federal agencies as acceptable.

2.0 Project Team

The project team involved with the cleanup activities included the following organizations and their representatives:

- Project Initiator - USARC
  Ken Coulter - Facility Support Branch, U.S. Army Reserve Engineer

- Client – 88th RSC

- Construction Manager – USACE, Louisville District
  Contracting Officer's Representative – David Dierken

- Contractor – IT Corporation
  Project Manager – Bill Scoville
  Site Supervisor – Mike Harrison
  Site Safety Officer/Construction Quality Control Engineer – Mark Wesney

- Subcontractors
  Asbestos Inspection – Diamond Environmental, Stow, Ohio
  Asbestos Abatement – Project Design Group (PDG) Environmental, Export, Pennsylvania
  Range Clearance Inspection and Sampling – EA Group, Mentor, Ohio
  Hazardous Decontamination Water Disposal Facility – Heritage Environmental, Indianapolis, Indiana
  Hazardous Debris Disposal Facility – Heritage Environmental, Indianapolis, Indiana
  Asbestos Disposal Facility – Valley Landfill, Irwin, Pennsylvania
  Recycled Metal Facility – Masser Metals, Columbus, Ohio
  Non-hazardous Debris Disposal Facility – RW-Reynolds Transfer, Columbus, Ohio
  Lead Shot Metal Facility – Masser Metals, Columbus, Ohio.

3.0 Project Activities

This section details the project activities performed at the 88th RSC facility located at 721 Country Club Road, Columbus, Ohio. The cleanup activities consisted of the following:

- Asbestos Inspection and Abatement (Section 3.1)
- Range Removal Activities (Section 3.2)
- Range Cleaning Activities (Section 3.3)
- Range Clearance Inspection and Sampling (Section 3.4)
- Waste Management, Transportation, and Disposal (Section 3.5)
- Site Monitoring (Section 3.6).

The following sections discuss the operational details associated with the implementation of each of these activities.

Range cleanup activities commenced on March 5, 2002, and continued until April 18, 2002. Photographs of cleanup activities are included in Appendix A. Major schedule milestones include:

- Commenced field work on March 5, 2002.
- Completed range cleanup activities on April 18, 2002.
- Conducted clearance sampling on April 29, 2002, and demobilized pending receipt of clearance sampling results. The results from the samples collected this day indicated that the cleanup performance standards had been attained.

In summary, the following work was performed:

- Double-washed and HEPA-vacuumed the range
- Achieved cleanup of range concrete floor surface to 200 µg/sf
- Removed and disposed of three drums (165 gallons) of lead-contaminated decontamination water

- Removed and disposed of 1 drum (55 gallons) of hazardous debris (PPE and rags)
- Removed and disposed of two pails (10 gallons) of hazardous debris (HEPA vacuum bags)
- Removed and disposed of 7 bags (1 cubic yard) of ACM pipe insulation
- Removed and recycled one roll-off box (4,280 pounds) of scrap steel
- Removed and disposed of one roll-off box (3,900 pounds) of non-hazardous debris
- Removed and disposed of 2 pails (weighed with scrap metal) of lead shot.

3.1 Asbestos Inspection and Abatement

Diamond Environmental, Stow, Ohio, under a subcontract to IT Corporation, conducted an asbestos inspection on November 15, 2001. Mr. Keith Bickel, Ohio Certified Asbestos Hazard Evaluation Specialist (CAHES), conducted the inspection and collected bulk samples. Diamond Environmental's report is presented in Appendix B.

The scope of Diamond Environmental's investigation was intended to provide a sufficient amount of information to estimate the quantity of ACM and included the following:

- An inspection for ACM by a State of Ohio Licensed Asbestos Hazard Evaluation Specialist. The survey included:

  - Identifying and sampling all suspect ACM in accordance with the Asbestos Hazard Emergency Response Act (AHERA).

  - Analyzing (using polarized-light microscopy) the suspect ACM samples using a laboratory accredited under the National Voluntary Laboratory Accreditation Program (NVLAP).

Nineteen samples of possible ACM were collected by Diamond Environmental and analyzed by a NVLAP-accredited laboratory. As shown by the analytical results in Table 3-1, asbestos was determined to be present in approximately 160 lineal feet of pipe insulation.

Seven bags (approximately 1 cubic yard) of abated ACM pipe insulation was double-bagged for landfilling at Valley Landfill in Irwin, Pennsylvania. PDG Environmental, a state licensed asbestos abatement company removed the ACM from April 8 through April 10, 2002. PDG Environmental transported the ACM on April 22, 2002. Mr. Tim Smith, CAHES (ID No. 33995), of IT Corporation provided oversight for the asbestos abatement activities. A copy of the asbestos abatement report is provided in Appendix C.

3.2 Range Removal Activities

The range was prepared for lead cleanup activities by completion of the following actions from March 5 through March 8, 2002:

- Wiped and cleaned stored items and moved them to a location identified by facility personnel.
- Removed and cut-up approximately 4,280 pounds of steel from the bullet trap, ceiling deflectors, and air exhaust fans (motor and blowers) and placed materials in a scrap steel roll-off box for recycling. All scrap steel was decontaminated using a lead-clean solution.
- Removed sound deadening material on ceiling and walls, and other range accessories (e.g., firing line).
- Removed, cleaned, and stored four gas heaters and two fluorescent light tubes.
- Capped gas lines where heaters were removed and sealed exhaust vents with metal plates.

3.3 Range Cleaning Activities

From March 8 through March 10, 2002, the firing range was cleaned. To remove as much dust and remaining debris as possible, the firing range was vacuumed using a HEPA vacuum. All surfaces were vacuumed, starting at the end farthest from the main entrance (the bullet trap area) and moving towards the main exit, beginning with the top of the room and working down. All vacuumed materials were containerized and later recycled with the scrap metal.

The walls and ceiling were washed with a commercial detergent. Primer and lead barrier paint were applied to the walls and ceiling of the entire range.

Floor cleaning activities consisted of the application of the following cleaning solutions:

- Detergent
- D-Lead™, manufactured by Esca-Tech
- HMCS-101, manufactured by Chemical Solutions, International.

These solutions were applied in accordance with the manufacturers' recommendations; floor scrubbers were used to increase the effectiveness of the solutions. After the excess solution was

removed with wet-dry vacuums, the floor was rinsed with hot water until the water being vacuumed was visibly clear of dirt and suds. All decontamination water was containerized in 55-gallon drums. Copies of the Material Safety Data Sheets for the cleaning solutions are provided in Appendix D.

Additional cleaning of the bullet trap area and exhaust vents was performed on April 18, 2002, using HMCS-101 (undiluted) and D-Lead™.

3.4 Range Clearance Inspection and Sampling

Upon completion of cleaning activities and prior to clearance sampling, a visual inspection was conducted of the areas potentially affected by the lead hazard control project. The inspection was conducted on April 29, 2002, by Edward Luiza Regovich, Certified Lead Risk Assessor (License No. OH000444) of the EA Group, Mentor, Ohio. The purpose of the inspection was to determine whether the work was completed as required on all interior surfaces treated, as specified in the original project scope and as indicated in the project report, and whether visible settled dust or debris was present.

The visual examination included a surface-by-surface examination to determine if known or suspected lead-dust surfaces were still present in the range. Lead hazard removal verification was documented on a Visual Clearance Form (Appendix E). All interim controls were verified visually to confirm stabilization of all lead dust surfaces, including any friction or impact surfaces treated during the project.

The visual examination verified the absence of visual dust in all rooms and on all surfaces treated. The absence of all waste and debris was also verified.

When acceptable visual examination results were received, clearance dust sampling commenced. Clearance dust sampling consisted of collecting single-surface dust wipe samples and analyzing them for lead content to determine whether lead concentrations exceeded clearance criteria (the clearance standard for this project is 200 µg/sf).

A total of twenty-two dust wipe samples were collected from the following locations:

- Twenty dust wipe samples from:
  - Firing line (003DT)
  - Middle of range (004DT)
  - Bullet trap, firing line side (005DT)
  - Bullet trap, wall side (006DT)
  - Ceiling, firing line (007DT)
  - Ceiling, middle of range (008DT)
  - Ceiling, bullet trap (009DT)
  - Wall, L side (010DT)
  - Wall, L side (012DT)
  - Wall, L side (014DT)
  - Wall, R side (015DT)
  - Wall, R side (016DT)
  - Wall, R side (017DT)
  - Front wall (018DT)
  - Front wall (019DT)
  - Front wall (020DT)
  - Back wall (021DT)
  - Back wall (022DT)
  - Back wall (023DT)
  - Floor, outside range (024DT)
- One spike sample (011DT)
- One field blank sample (013DT).

Figure 3-1 shows the locations where clearance samples were collected. The sampling procedures are discussed in Section 4.1; analytical results are presented on Table 4-1. The clearance inspection and dust wipe sample collection forms and the analytical report are included in Appendix E.

3.5 Waste Management, Transportation, and Disposal

Hazardous wastes generated during cleanup activities included:

- Three drums (165 gallons) of lead-contaminated decontamination water were transported by Heritage Transport, LLC on July 26, 2002, and taken to Heritage Environmental Services, LLC, Indianapolis, Indiana, for treatment.

- One drum (55 gallons) of lead-contaminated debris (PPE and rags), was transported by Heritage Transport, LLC on July 26, 2002, and taken to Heritage Environmental Services, LLC, Indianapolis, Indiana, for landfilling.

- Two pails (10 gallons) of lead-contaminated debris (HEPA vacuum bags), were transported by Heritage Transport, LLC on July 26, 2002, and taken to Heritage Environmental Services, LLC, Indianapolis, Indiana, for landfilling.

Table 3-2 summarizes this hazardous waste shipment. Copies of the waste profiles, Land Disposal Restriction (LDR) notification, and hazardous waste manifest are provided in Appendix F.

Non-hazardous waste generated during project activities and subsequently disposed of includes:

- Asbestos – Seven bags (approximately 1 cubic yard) of ACM pipe insulation was removed and transported by PDG Environmental and disposed of at Valley Landfill, Irwin, Pennsylvania, on April 22, 2002.

- Scrap metal from the bullet trap, ceiling deflectors and exhaust fan – one roll-off box (approximately 4,280 pounds) of scrap metal was transported by Masser Metals and taken to its facility Columbus, Ohio, on March 7, 2002, for recycling.

- Demolition debris, including sound deadening material – one roll-off box (3,900 pounds) of debris was transported by Republic Waste and taken to RW-Reynolds Transfer, Columbus, Ohio, on March 12, 2002, for landfilling.

- Lead shot – two pails (weighed with scrap metal) of lead shot were transported by Masser Metals and taken to its facility Columbus, Ohio, on March 7, 2002, for recycling.

Table 3-3 summarizes these non-hazardous waste shipments. Copies of the non-hazardous waste shipping documents are provided in Appendix G.

3.6 Site Monitoring

Asbestos clearance sampling was conducted to evaluate the absence or presence of airborne-asbestos fibers during the removal and disposal of bagged asbestos-containing pipe insulation. A copy of the PCM air sampling report is provided in Appendix C.

Personal and area air monitoring for lead was conducted during lead removal operations. Information on airborne lead sampling and analytical methods is presented in Section 4.2 of this report. A copy of the site monitoring data is provided in Appendix H.

4.0 Sample Collection and Analysis

4.1 Lead Wipe Sampling Summary

To confirm that the lead contamination had been removed from the floor of the range, on April 29, 2002, personnel from the EA Group collected the samples described in Section 3.3, following procedures presented in the project Work Plan.

Horizontal surfaces were sampled to determine total lead content in the settled dust. Lead-in-dust wipe samples were generally secured over a 1-sf area following an "S" pattern from side-to-side, folded in half, and wiped over the same area at a 90° angle to the first "S" pattern (top-to-bottom). Latex gloves were changed between sampling episodes. Samples were then returned to the vials, sealed, and labeled for transport to the laboratory.

One field blank sample and one spike sample was also prepared and submitted for analysis. The field blank was prepared by removing and replacing the cap of the vial in the sampling area. The spike sample was prepared in the laboratory by treating sampling media with a known quantity of lead dust.

All lead-in-dust wipe samples were acid digested in accordance with U.S. Environmental Protection Agency (USEPA) Method SW-846 6010B. Results of the wipe sample analyses are summarized in Table 4-1 and are detailed in the laboratory analytical report provided in Appendix E. Wipe sample locations are shown on Figure 3-1. Copies of the Visual Clearance Form and the Dust Sampling Form are also provided in Appendix E.

The analytical results in Table 4-1 may be summarized as follows:

- After cleaning, the range floor had lead levels from <2.5 µg/sf (six wall samples) to 114 µg/sf (front wall, 019DT). The floor outside the entrance door had a lead level of 11 µg/sf. These results showed that the range floor lead levels were below the clearance criteria of 200 µg/sf.

Thus, based on these results, the clearance criteria of 200 µg/sf has been attained.

Via a letter dated May 7, 2002, the facility was notified that the clearance levels were attained and that the range could be reoccupied. A copy of the clearance certification letter is provided in Appendix I.

4.2 Air Monitoring Sampling Summary

IT Corporation performed airborne lead monitoring. Monitoring was conducted on March 6 and March 7, 2002.

Air monitoring consisted of taking background, personal, excursion, and perimeter samples to comply with Occupational Safety and Health Administration (OSHA) and USEPA rules and regulations during lead clean-up.

All air samples were prepared and analyzed in accordance with NIOSH Method 7300 using a Thermo Jarrell Ash 61E (ICP) purged spectrometer. A copy of the air monitoring data is provided in Appendix H.

5.0 Conclusions

In total, all the range structures associated with the indoor range at the Whitehall Memorial U.S. Army Reserve Center, Columbus, Ohio, were successfully removed, characterized for disposal, and properly disposed of as indicated below:

- Hazardous, lead-contaminated waste – three drums (165 gallons) of water, one drum (55 gallons) of hazardous debris (PPE and rags), and two pails (10 gallons) of hazardous debris (HEPA vacuum bags)
- Asbestos – seven bags (1 cubic yard) of ACM pipe insulation
- Recycled Metal – one roll-off box (4,280 pounds) of scrap metal
- Non-hazardous Waste – one roll-off box (3,900 pounds) of debris
- Recycled Metal – two pails (weighed with scrap metal) of lead shot.

All removal activities were performed as specified in the project SOW and Work Plan, using direct Health and Safety support involving personal and area air monitoring.

Clearance wipe samples document that residual lead levels in the range concrete are below the clearance level of 200 µg/sf. At the completion of site operations for this activity, all planned objectives were met. Based on a review of the clearance wipe sample data, IT concludes that no further range cleanup is necessary for the Whitehall Memorial facility. IT further certifies that the range cleaning activities have successfully attained the project clearance objectives and the range is approved for reoccupancy. Range clearance procedures consisted of the following:

- A surface-by-surface visual examination to verify that:
  - The lead hazard control work was completed as required
  - No known or suspected lead dust surfaces are still present in the range at levels that exceed the project clearance level of 200 µg/sf.

- Clearance sampling consisting of collecting wipe samples from the floor surfaces and analyzing the samples for lead.

Please note that although the range has been cleaned to below the project clearance levels, small amounts of lead dust may be present in the range. The OSHA Construction Industry Standard for Lead (29 CFR 1926.62) should be reviewed before any remodeling activities that may cause a release of dust on wall and floor surfaces are undertaken. The OSHA standard requires certain

controls to reduce or maintain worker exposures less than the Permissible Exposure Limit (PEL) of 50 $\mu g/m^3$ of lead. The employer must protect the worker from lead.

TABLES

Table 3-1
Asbestos Sample Analytical Results
Whitehall Memorial U.S. Army Reserve Center, OH014
Columbus, OH

Sample Number	Material	Sample Date	Asbestos Content
11152001-01	Wall tile 2x2 with large holes	11/15/2001	None
11152001-02	Wall tile 2x2 with large holes	11/15/2001	None
11152001-03	Wall tile 2x2 with large holes	11/15/2001	None
11152001-04	Wall tile 2x2 with large holes	11/15/2001	None
11152001-05	Wall tile 2x2 with large holes	11/15/2001	None
11152001-06	Wall tile 2x2 with large holes	11/15/2001	None
11152001-07	Fiberboard	11/15/2001	None
11152001-08	Fiberboard	11/15/2001	None
11152001-09	Fiberboard	11/15/2001	None
11152001-10	4" pipe insulation	11/15/2001	None
	Jacket	11/15/2001	60% Chrysotile
11152001-11	4" pipe insulation	11/15/2001	None
	Jacket	11/15/2001	60% Chrysotile
11152001-12	4" pipe insulation	11/15/2001	None
	Jacket	11/15/2001	60% Chrysotile
11152001-13	6" pipe insulation	11/15/2001	None
	Jacket	11/15/2001	70% Chrysotile
11152001-14	6" pipe insulation	11/15/2001	None
	Jacket	11/15/2001	55% Chrysotile
11152001-15	6" pipe insulation	11/15/2001	None
	Jacket	11/15/2001	60% Chrysotile
11152001-16	4" - 6" Elbow	11/15/2001	None
	Jacket	11/15/2001	15% Chrysotile
11152001-17	4" - 6" T	11/15/2001	None
	Jacket	11/15/2001	15% Chrysotile
11152001-18	4" - 6" Elbow	11/15/2001	None
	Jacket	11/15/2001	15% Chrysotile
11152001-19	6" pipe insulation	11/15/2001	None

Table 3-2
Hazardous Waste Disposal Log
Whitehall Memorial U.S. Army Reserve Center, OH014
Columbus, OH

Waste Type	Code	Shipment Date	Volume/ Weight	Transporter	TSD Facility	Manifest	Doc. #	Disposal Method
Decontamination Water	D008	7/26/2002	3 Drums (165 gallons)	Heritage Transport, LLC	Heritage Environmental Services, Indianapolis, IN	HER 069514	72602	Treatment
Hazardous Debris (PPE and rags)	D008	7/26/2002	1 Drum (55 gallons)	Heritage Transport, LLC	Heritage Environmental Services, Indianapolis, IN	HER 069514	72602	Landfill
Hazardous Debris (HEPA vacuum bags)	D008	7/26/2002	2 Pails (10 gallons)	Heritage Transport, LLC	Heritage Environmental Services, Indianapolis, IN	HER 069514	72602	Landfill

Table 3-3
Non-Hazardous Waste Disposal Log
Whitehall Memorial U.S. Army Reserve Center, OH014
Columbus, OH

Waste Type	Shipment Date	Volume/ Weight	Transporter	TSD Facility	Documentaion	Disposal Method
Asbestos	4/22/2002	7 Bags (approx. 1 cy)	PDG Environmental	Valley Landfill, Irwin, PA	Manifest 000090	Landfill
Scrap metal	3/7/2002	1 Roll-off (4,280 lbs)	Masser Metals	Masser Metals, Columbus, OH	Weigh Ticket (no number)	Recycle
Demolition debris including sound deadening material	3/12/2002	1 Roll-off (3,900 lbs)	Republic Waste	RW-Reynolds Transfer, Columbus, OH	Ticket 100910	Landfill
Lead shot	3/7/2002	2 Pails (weighed with scrap metal)	Masser Metals	Masser Metals, Columbus, OH	Weigh Ticket (no number)	Recycle

Table 4-1
Lead Wipe Clearance Sample Results (µg/sf)[1]
Whitehall Memorial U.S. Army Reserve Center, OH014
Columbus, OH

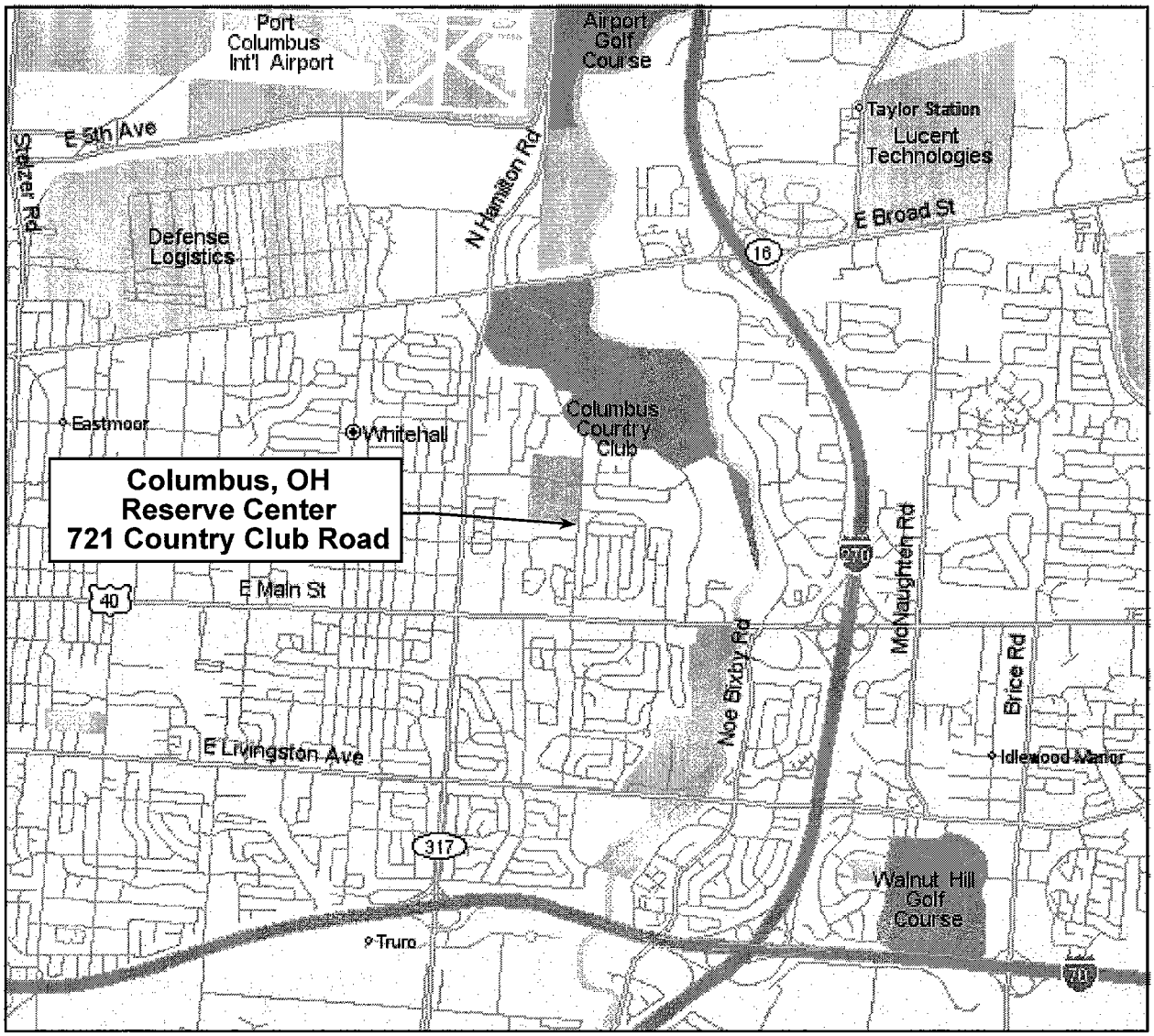
Site/Date Code	88OHCOL29APR02		
Sampler	EA Group		
Location	Sample ID	Result[2]	Comment
Exhaust fan, inlet	001DT	N/A	Could not be sampled[3]
Exhaust fan, outlet	002DT	N/A	Could not be sampled[3]
Firing line	003DT	**90**	
Middle of range	004DT	**57**	
Bullet trap, firing line side	005DT	**19**	
Bullet trap, wall side	006DT	**77**	
Ceiling, firing line	007DT	**2.9**	
Ceiling, middle of range	008DT	**2.72**	
Ceiling, bullet trap	009DT	**19**	
Wall, L side	010DT	**26**	
Spike	011DT	209	187 µg spike
Wall, L side	012DT	**<2.5**	
Field blank	013DT	<2.5	
Wall, L side	014DT	**<2.5**	
Wall, R side	015DT	**<2.5**	
Wall, R side	016DT	**<2.5**	
Wall, R side	017DT	**<2.5**	
Front wall	018DT	**6.51**	
Front wall	019DT	**114**	
Front wall	020DT	**7.62**	
Back wall	021DT	**<2.5**	
Back wall	022DT	**4.04**	
Back wall	023DT	**4.29**	
Floor, ouside range	024DT	**11**	

(1) = Results expressed in micrograms per square foot (µg/sf) of surface area, except Field Blank and Spike Sample, which are µg/wipe.

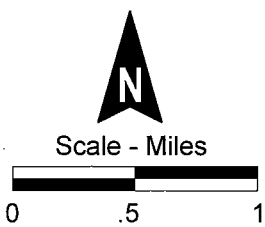
(2) = Results (other than blanks or spikes) in **bold** type are below the clearance level of 200 µg/sf .

(3) = Exhaust fan system no longer in place.

FIGURES



Source Map: MapQuest.com, Inc.

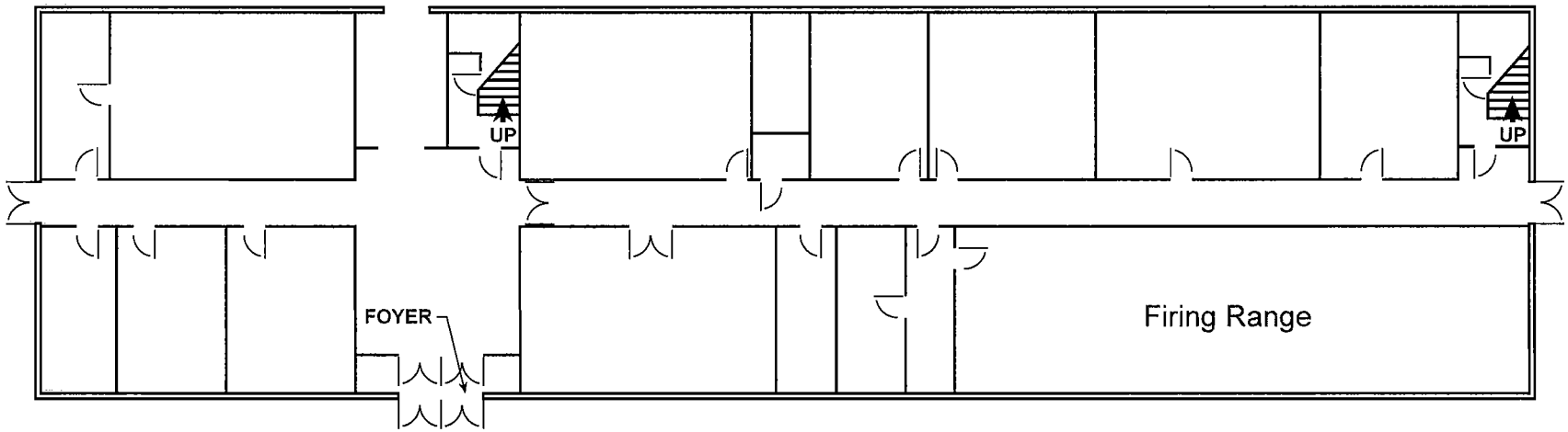


QUADRANGLE LOCATION

IT CORPORATION

Figure 1-1.
Site Location Map.
Columbus, OH (OH014) Reserve Center.

DRAWING NO.	CHECKED BY	APPROVED BY
K-807744-0301-11/02-w		
DRAWING BY	KMS	11/4/02



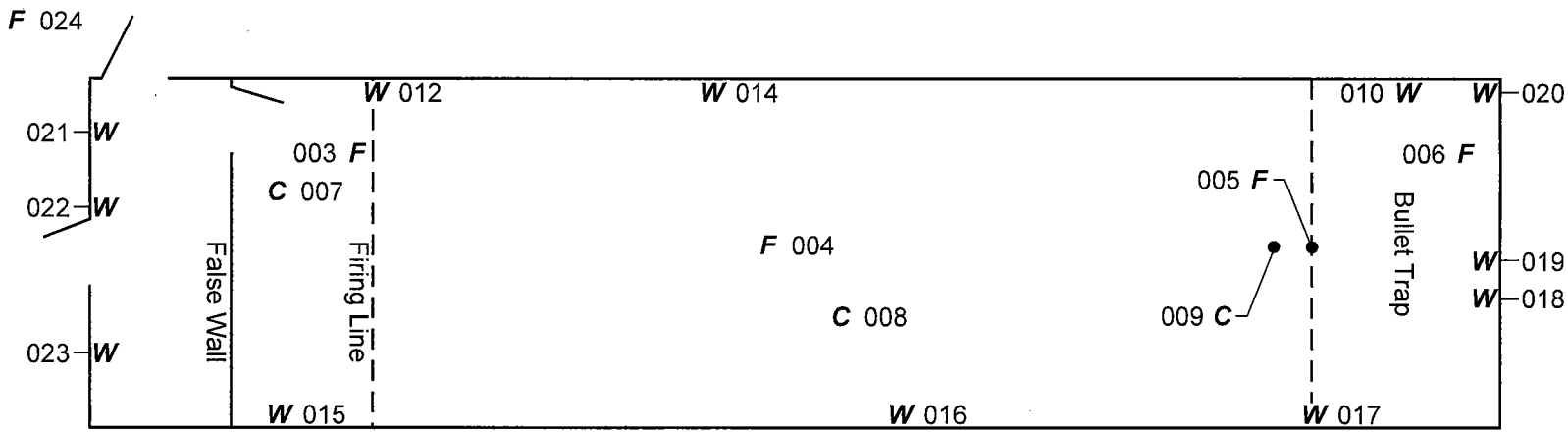
First Floor Plan

N

IT CORPORATION

Figure 1-2.
Facility Layout.
Columbus, OH (OH014) Reserve Center.

DRAWING BY	KMS	CHECKED BY			DRAWING NO.
	11/4.02	APPROVED BY			K-807744-0399-11/02-w



N

Scale - Feet

0 5 10

Legend

Sample Date
F/W/C 29 April 02

Notes: ***F*** (floor), ***W*** (wall), and ***C*** (ceiling) designate the location of the sample. Samples 011 and 013 were a spike and a blank, respectively.

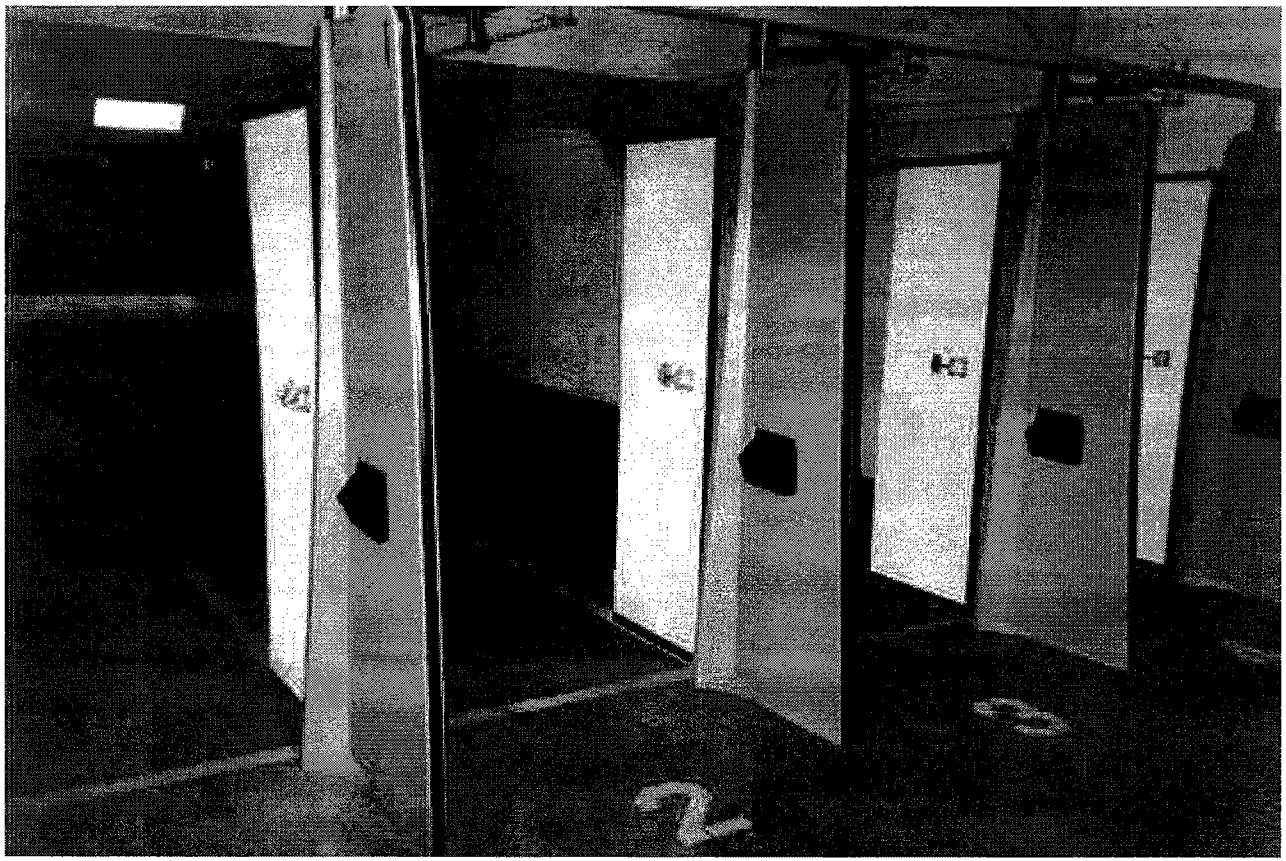
IT CORPORATION

Figure 3-1.
Clearance Wipe Sample Locations.
Columbus, OH (OH014) Reserve Center.

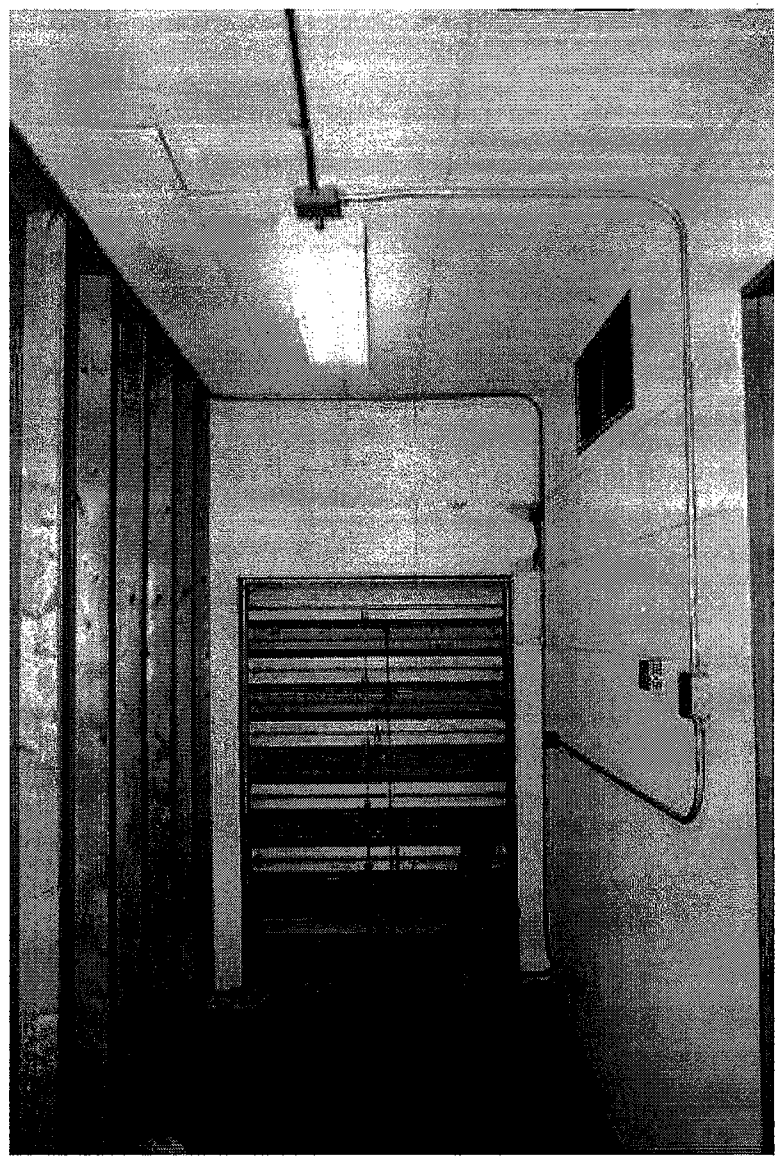
DRAWING BY	KMS	CHECKED BY			DRAWING NO.
	11/4/02	APPROVED BY			K-807744-0399-10/02-w

APPENDIX A
Photographs

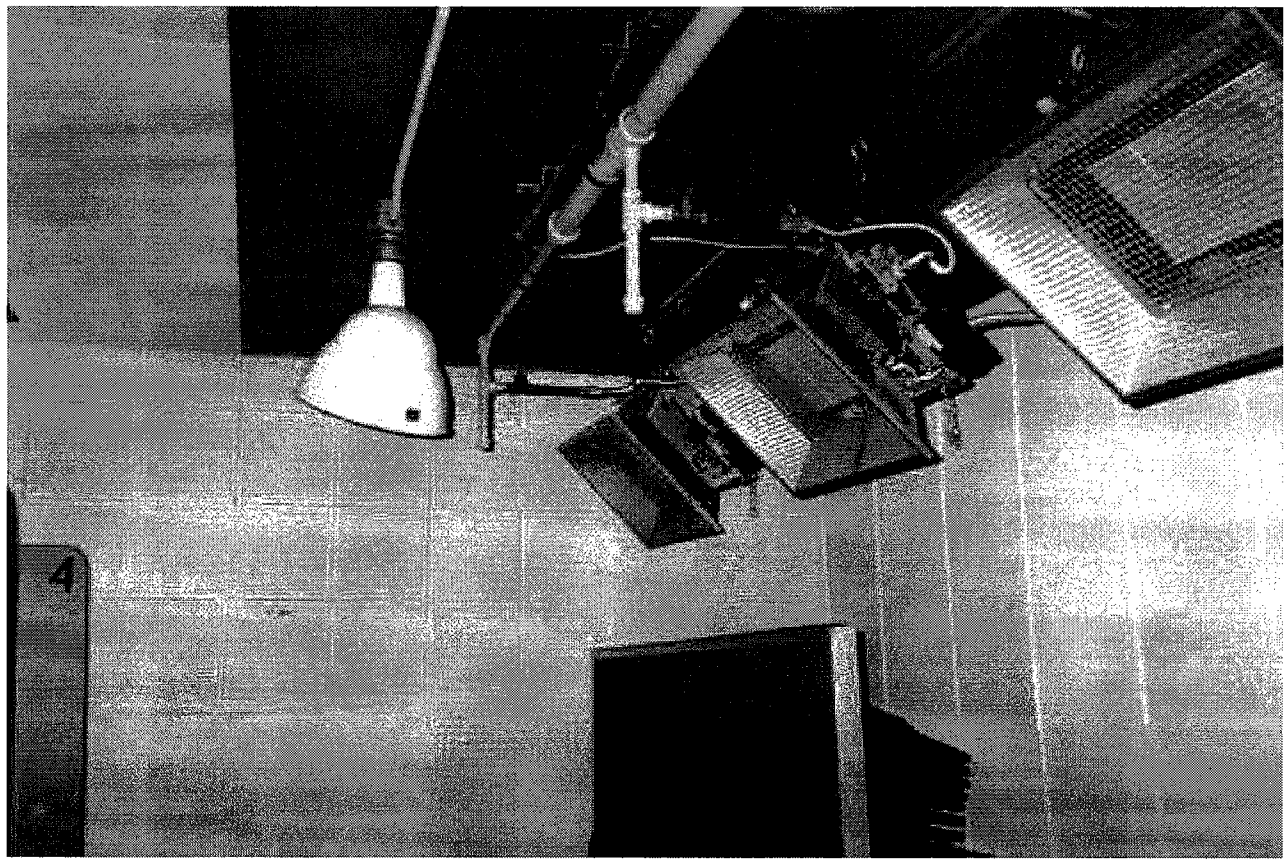
Columbus (OH014) Photo No. 1 - Close-up view of the firing line.



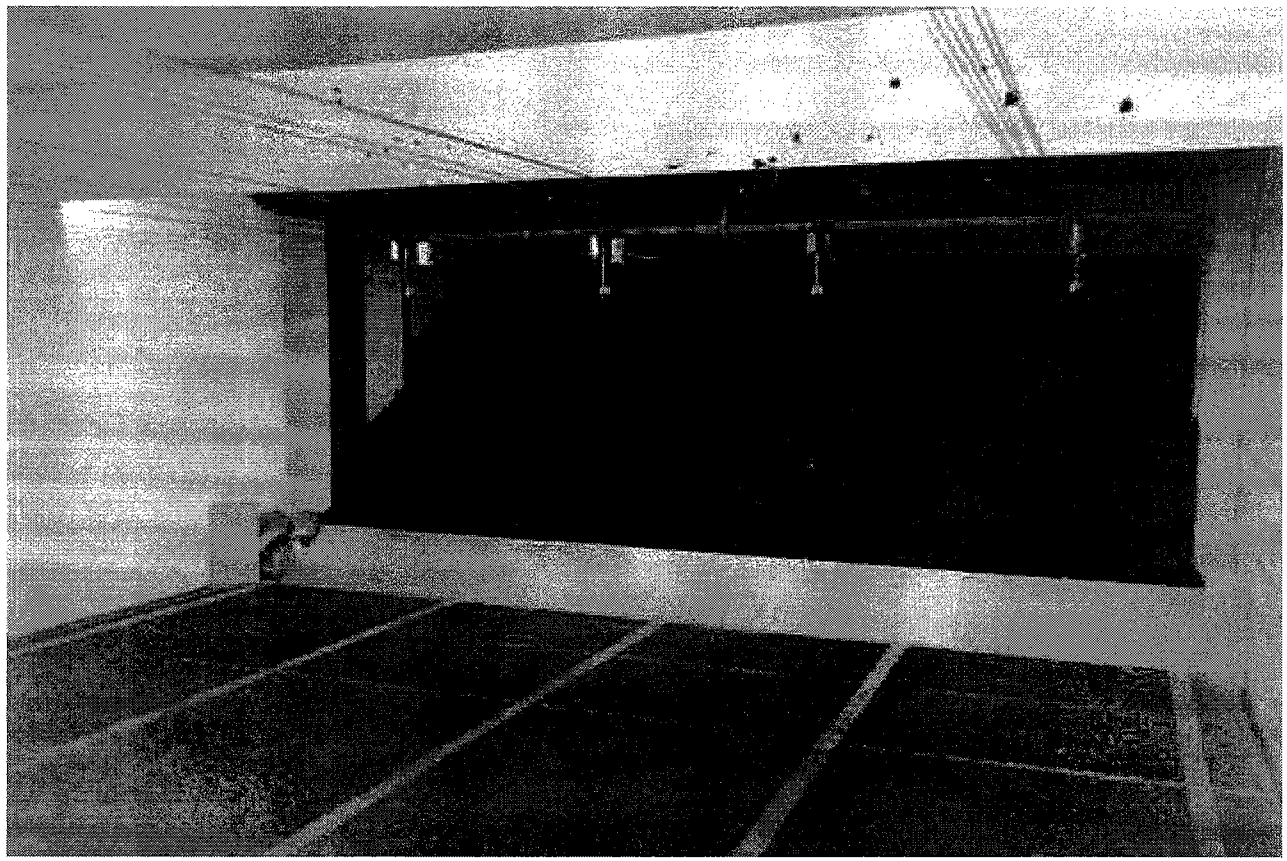
Columbus (OH014)
Photo No. 2 - View of the area behind the false wall in firing line area. Note intake vent and louver.



Columbus (OH014) Photo No. 3 - View of fiberboard sound deadening material on the walls and ceiling in the firing line area.

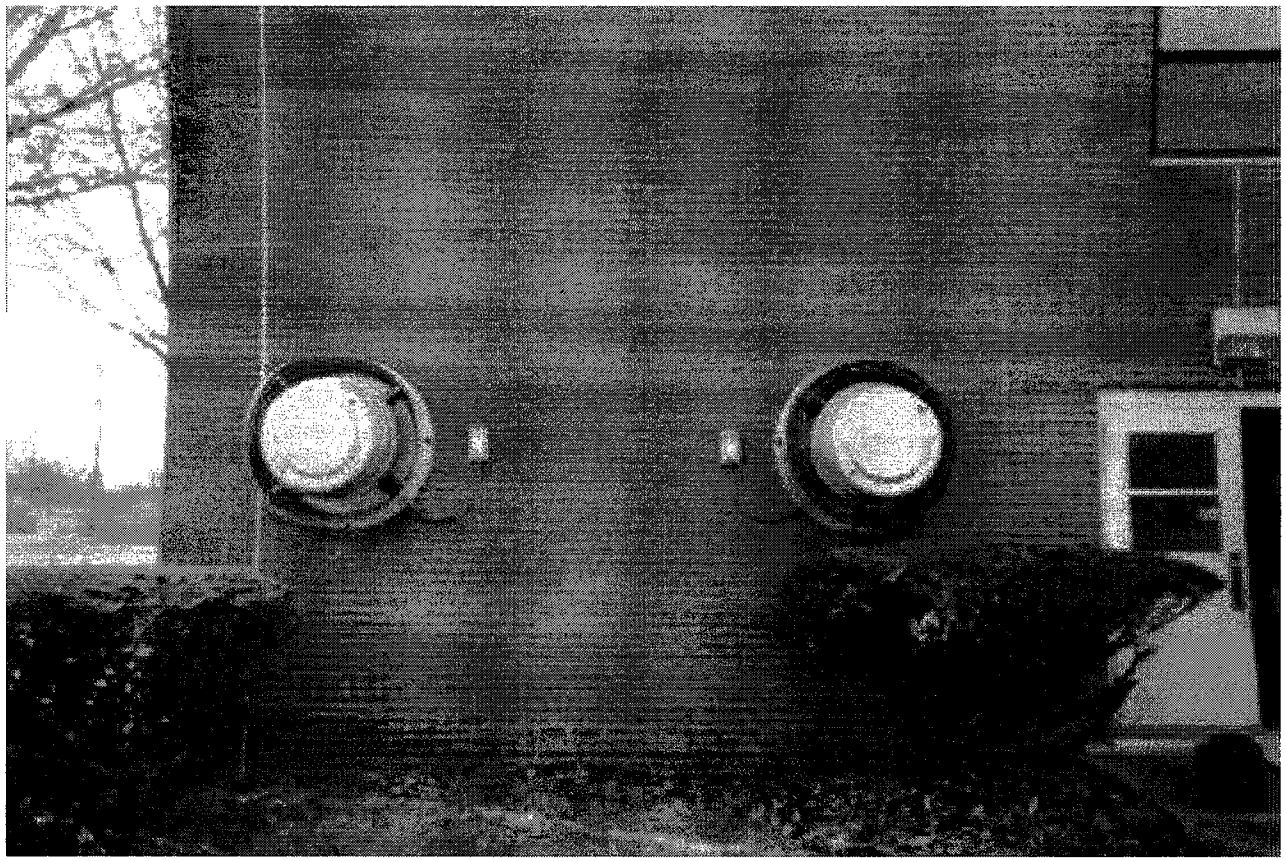


Columbus (OH014) Photo No. 4 - View of the bullet trap.

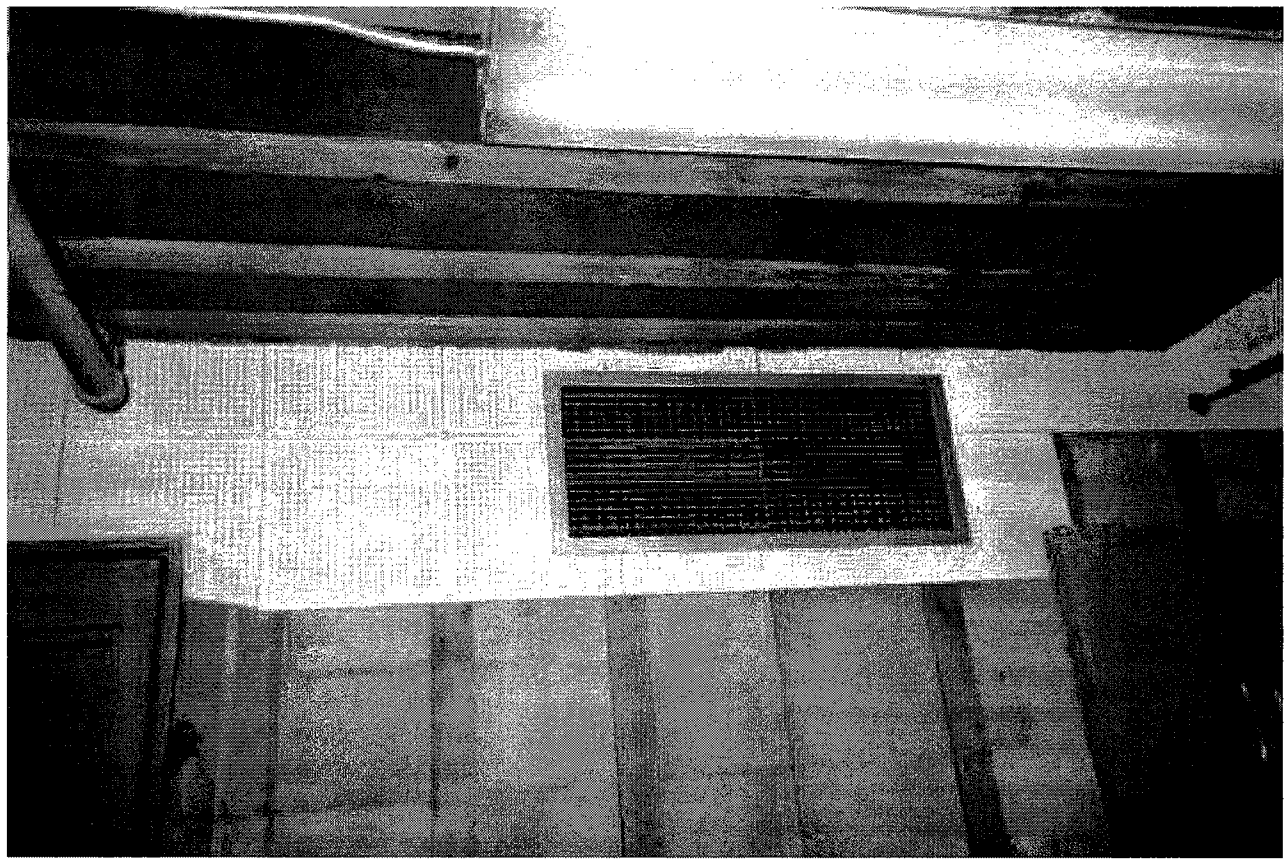


Columbus (OH014) Photo No. 5 - Area behind the bullet trap. Note the exhaust vents.

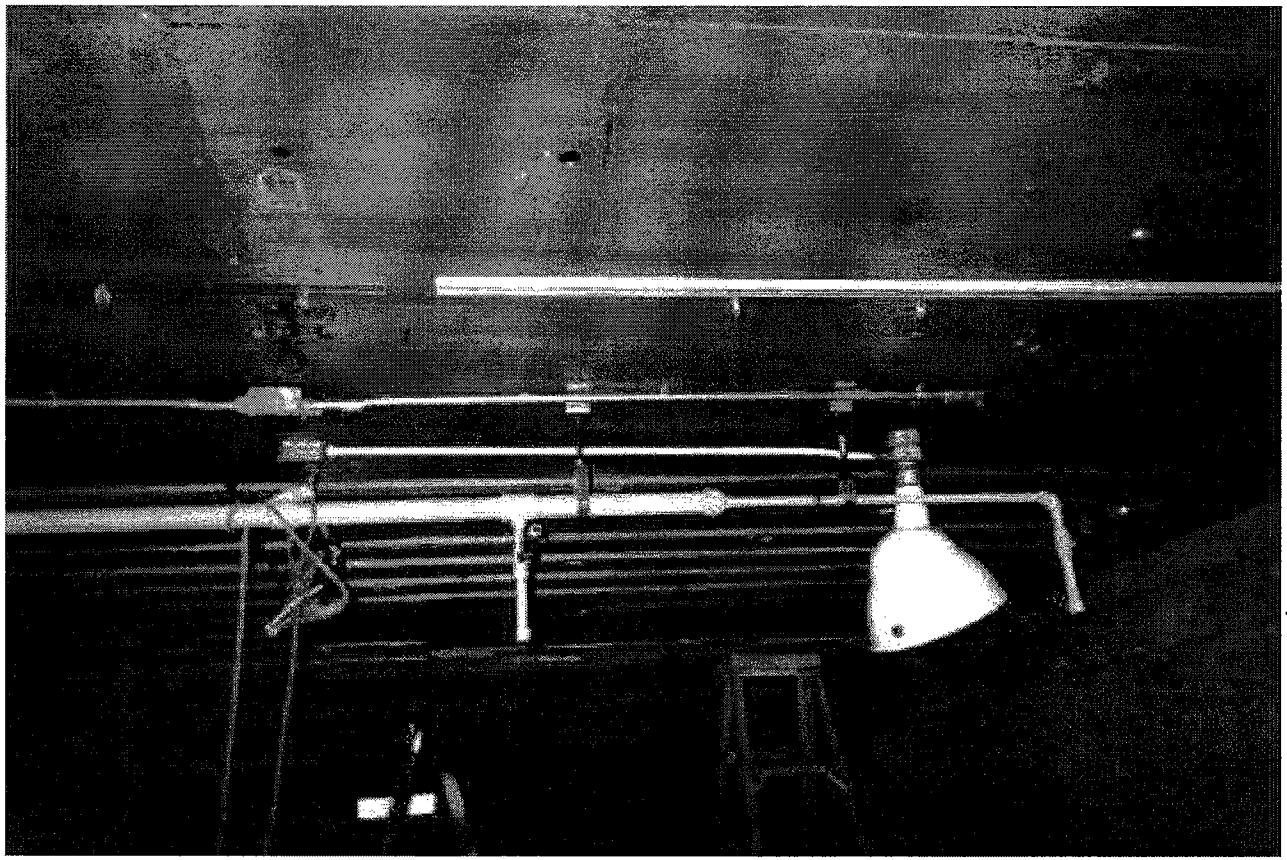
Columbus (OH014) Photo No. 6 - Wall-mounted exhaust vents behind the bullet trap area.



Columbus (OH014) Photo No. 7 - View of sound deadening material removal from the firing line area. Note the air intake vent.



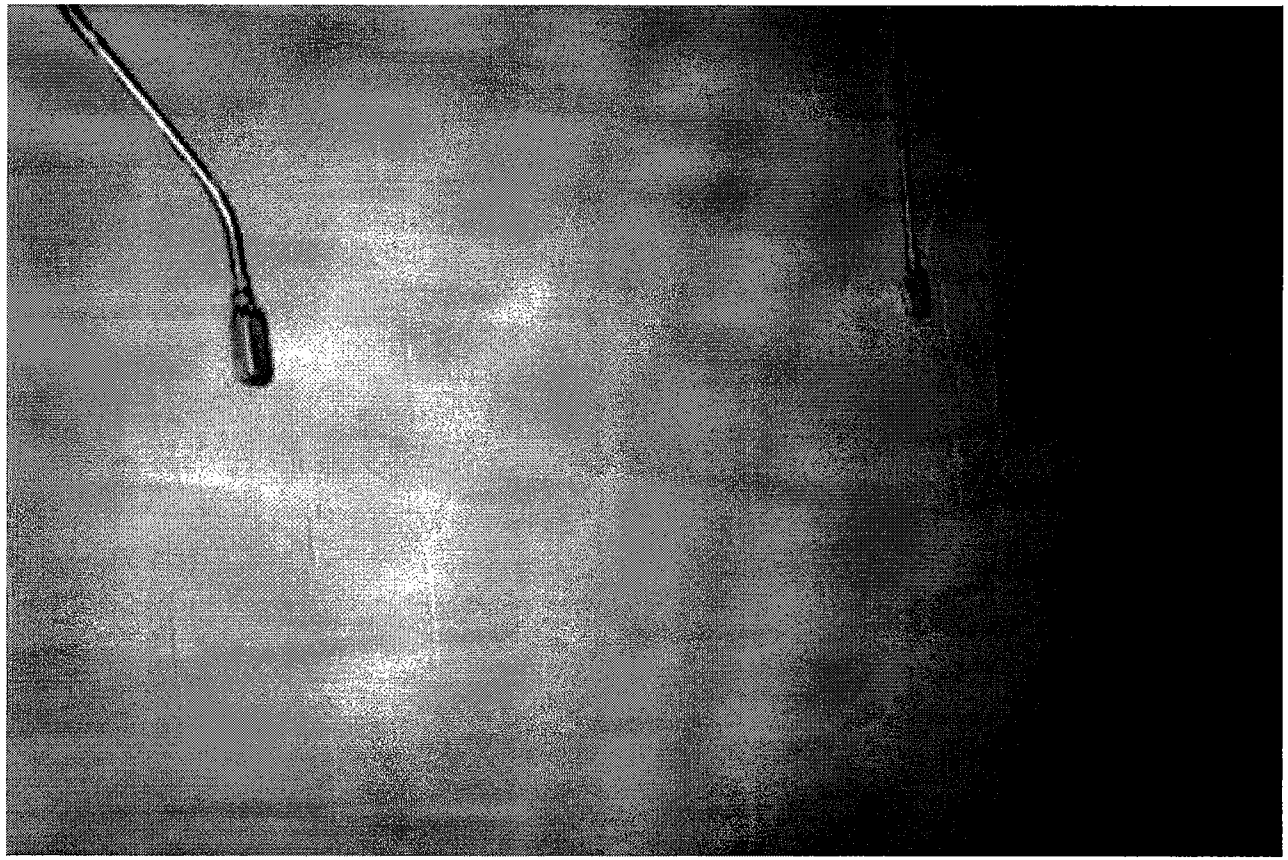
Columbus (OH014) Photo No. 8 - View of ceiling during removal activities.



Columbus (OH014) Photo No. 9 - View of removal activities.

Columbus (OH014) Photo No. 10 - View of the floor after cleanup activities.

Columbus (OH014) Photo No. 11 - View of the bullet trap area after cleanup activities and application of lead barrier paint.



APPENDIX B
Asbestos Survey and Sampling Report, Diamond Environmental, December 14, 2001

Environmental Industrial Hygiene Occupational Safety

Diamond Environmental

P.O. Box 2543 • Stow, Ohio 44224 • (330) 686-5996

December 14, 2001

Mr. Bill Scoville
IT Corporation
11499 Chester Road
Cinncinnati, Ohio 45246

RE: Asbestos Bulk Sampling
Diamond #1-0269

Description of Work

Diamond Environmental, LLC. was contracted by IT Corporation to perform bulk sampling in conjunction with the closure of the rifle range at the Whitehall USARC at 721 Country Club in Columbus, Ohio. Mr. Keith Bickel, CAHES of Diamond Environmental conducted bulk sampling on November 15, 2001.

Bulk Sampling

The project consisted of securing and analyzing nineteen (19) bulk samples of suspect asbestos containing material from the rifle range. Bulk sampling was performed following the EPA's AHERA asbestos sampling protocol.

Analytical Results

Nine (9) of the nineteen samples from the rifle range were positive for asbestos. All bulk samples were analyzed in an Industrial Hygiene Laboratory utilizing the current " EPA Method for the Determination of Asbestos in Bulk Building Materials", EPA 600/R-93/116, July 1993. The Laboratory is accredited by the American Industrial Hygiene Association.

Asbestos Containing Material

Approximately 160 lineal feet of asbestos containing pipe insulation is located in this rifle range above a metal drop ceiling and behind the sheet metal back stop.

For specific information regarding sampling locations and results, please refer to the enclosed sampling sheet. Please contact the undersigned if you require any additional information.

Thank you for consulting Diamond Environmental.

Sincerely,

Diamond Environmental, LLC.

Keith R Bickel

Keith R. Bickel, CHMM, REP, CAHES
Asbestos Project Coordinator

Environmental Industrial Hygiene Occupational Safety

Diamond Environmental

P.O. Box 2543 • Stow, Ohio 44224 • (330) 686-5996

ASBESTOS BULK SAMPLING SHEET

Client: IT Corporation
Project: Whitehall USARC
Work Order: 1-0269

Sampling Date: 11-15-01
Hygienist: Keith Bickel
Building: Rifle Range

Lab Number	Sample Number	Material	Functional Space	FRI/ NON	Analysis	
A77882	11152001 -01	Wall Tile 2x2 with large holes	Wall near shooting position.	FRI	Cellulose fibers Paint, Binder	95% 5%
A77883	11152001 -02	Wall Tile 2x2 with large holes	Wall near shooting position.	FRI	Cellulose fibers Paint, Binder	95% 5%
A77884	11152001 -03	Wall Tile 2x2 with large holes	Wall near shooting position.	FRI	Cellulose fibers Paint, Binder	95% 5%
A77885	11152001 -04	Wall Tile 2x2 with small holes	Wall near shooting position.	FRI	Cellulose fibers Paint, Binder	95% 5%
A77886	11152001 -05	Wall Tile 2x2 with small holes	Wall near shooting position.	FRI	Cellulose fibers Paint, Binder	95% 5%
A77887	11152001 -06	Wall Tile 2x2 with small holes	Wall near shooting position.	FRI	Cellulose fibers Paint, Binder	95% 5%
A77888	11152001 -07	Fiberboard	Panels between shooting positions.	FRI	Cellulose fibers Paint, Binder	90% 10%
A77889	11152001 -08	Fiberboard	Panels between shooting positions.	FRI	Cellulose fibers Paint, Binder	90% 10%
A77890	11152001 -09	Fiberboard	Panels between shooting positions.	FRI	Cellulose fibers Paint, Binder	90% 10%

Diamond Environmental

P.O. Box 2543 • Stow, Ohio 44224 • (330) 686-5996

ASBESTOS BULK SAMPLING SHEET

Client: IT Corporation
Project: Whitehall USARC
Work Order: 1-0269

Sampling Date: 11-15-01
Hygienist: Keith Bickel
Building: Rifle Range

Lab Number	Sample Number	Material	Functional Space	FRI/ NON	Analysis	
A77891A	11152001 -10	4" Pipe Insulation	Above Metal Ceiling and Behind Back Wall.	FRI	Cork Binder	95% 5%
A77891B		Jacket			**Chrysotile Asbestos** Cellulose fibers Binder, foil	**60%** 15% 25%
A77892A	11152001 -11	4" Pipe Insulation	Above Metal Ceiling and Behind Back Wall.	FRI	Cork Binder	95% 5%
A77892B		Jacket			**Chrysotile Asbestos** Cellulose fibers Binder, foil	**60%** 15% 25%
A77893A	11152001 -12	4" Pipe Insulation	Above Metal Ceiling and Behind Back Wall.	FRI	Cork Binder	95% 5%
A77893B		Jacket			**Chrysotile Asbestos** Cellulose fibers Binder, foil	**60%** 15% 25%
A77894A	11152001 -13	6" Pipe Insulation	Above Metal Ceiling and Behind Back Wall.	FRI	Cork Binder	95% 5%
A77895B 94B		Jacket			**Chrysotile Asbestos** Cellulose fibers Binder	**70%** 25% 5%
A77896A 95A	11152001 -14	6" Pipe Insulation	Above Metal Ceiling and Behind Back Wall.	FRI	Cork Binder	95% 5%
A77897B 95B		Jacket			**Chrysotile Asbestos** Cellulose fibers Binder	~~**70%**~~ 55% 25% 5%
A77898A 96A	11152001 -15	6" Pipe Insulation	Above Metal Ceiling and Behind Back Wall.	FRI	Cork Binder	95% 5%
A77898B 96B		Jacket			**Chrysotile Asbestos** Cellulose fibers Binder	~~**70%**~~ 60% 25% 5%

Corrected to match COC & lab reports.

W H Scruth
11/5/02

Environmental Industrial Hygiene Occupational Safety

Diamond Environmental

P.O. Box 2543 • Stow, Ohio 44224 • (330) 686-5996

ASBESTOS BULK SAMPLING SHEET

Client: IT Corporation
Project: Whitehall USARC
Work Order: 1-0269

Sampling Date: 11-15-01
Hygienist: Keith Bickel
Building: Rifle Range

Lab Number	Sample Number	Material	Functional Space	FRI/ NON	Analysis	
A77897A	11152001 -16	4" – 6" Elbow	Above Metal Ceiling and Behind Back Wall.	FRI	Cellulose Binder	95% 5%
A77897B		Jacket			**Chrysotile Asbestos** Cellulose fibers Binder, foil	**15%** 10% 75%
A77898A	11152001 -17	4" – 6" T	Above Metal Ceiling and Behind Back Wall.	FRI	Cellulose Binder	95% 5%
A77898B		Jacket			**Chrysotile Asbestos** Cellulose fibers Binder, foil	**15%** 10% 75%
A77899A	11152001 -18	4" – 6" Elbow	Above Metal Ceiling and Behind Back Wall.	FRI	Cellulose Binder	95% 5%
A77899B		Jacket			**Chrysotile Asbestos** Cellulose fibers Binder, foil	**15%** 10% 75%
A77900	11152001 -19	6" Pipe Insulation	Behind 2' x 2' Wall Tiles.	FRI	Fiber glass Binder	95% 5%

CAROLINA ENVIRONMENTAL, INC.
102-H Commonwealth Court, Cary, NC 27511
Phone: (919) 481-1413 Fax: (919) 481-1442

LABORATORY REPORT
ASBESTOS BULK ANALYSIS

Client: **Diamond Environmental**
P.O. Box 2543
Stow , OH 44224

Project: Army Reserve Base - Columbus, Ohio
Project # 1-0269

CEI Lab Code: A01-6174
Received: 12-06-01
Analyzed: 12-06-01
Reported: 12-06-01
Analyst: Gregory J. Hanes

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
11152001-01	A77882	WALL TILE Heterogeneous, Tan, White, Fibrous, Loosely Bound BIND 2 % CELL 95 % PAINT 3 %	ND
11152001-02	A77883	WALL TILE Heterogeneous, Tan, White, Fibrous, Loosely Bound BIND 2 % CELL 95 % PAINT 3 %	ND
11152001-03	A77884	WALL TILE Heterogeneous, Tan, White, Fibrous, Loosely Bound BIND 2 % CELL 95 % PAINT 3 %	ND
11152001-04	A77885	WALL TILE Heterogeneous, Tan, White, Fibrous, Loosely Bound BIND 2 % CELL 95 % PAINT 3 %	ND
11152001-05	A77886	WALL TILE Heterogeneous, Tan, White, Fibrous, Loosely Bound BIND 2 % CELL 95 % PAINT 3 %	ND
11152001-06	A77887	WALL TILE Heterogeneous, Tan, White, Fibrous, Loosely Bound BIND 2 % CELL 95 % PAINT 3 %	ND

CAROLINA ENVIRONMENTAL, INC.
102-H Commonwealth Court, Cary, NC 27511
Phone: 919-481-1413 Fax: 919-481-1442

Project: Army Reserve Base - Columbus, Ohio
Project # 1-0269
Lab Code: A01-6174

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
11152001-07	A77888	FIBERBOARD Heterogeneous, Grey, White, Fibrous, Loosely Bound BIND 10 % CELL 90 %	ND
11152001-08	A77889	FIBERBOARD Heterogeneous, Grey, White, Fibrous, Loosely Bound BIND 10 % CELL 90 %	ND
11152001-09	A77890	FIBERBOARD Heterogeneous, Grey, White, Fibrous, Loosely Bound BIND 10 % CELL 90 %	ND
11152001-10	A77891A	INSULATION Heterogeneous, Brown, Non-fibrous, Bound BIND 5 % CORK 95 %	ND
	A77891B	JACKET Heterogeneous, Grey, Silver, Fibrous, Bound CHRY 60 % BIND 5 % CELL 15 % FOIL 20 %	CHRY 60%
11152001-11	A77892A	INSULATION Heterogeneous, Brown, Non-fibrous, Bound BIND 5 % CORK 95 %	ND
	A77892B	JACKET Heterogeneous, Grey, Silver, Fibrous, Bound CHRY 60 % BIND 5 % CELL 15 % FOIL 20 %	CHRY 60%
11152001-12	A77893A	INSULATION Heterogeneous, Brown, Non-fibrous, Bound BIND 5 % CORK 95 %	ND

CAROLINA ENVIRONMENTAL, INC.
102-H Commonwealth Court, Cary, NC 27511
Phone: 919-481-1413 Fax: 919-481-1442

Project: Army Reserve Base - Columbus, Ohio
Project # 1-0269
Lab Code: A01-6174

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
	A77893B	JACKET Heterogeneous, Grey, Silver, Fibrous, Bound CHRY 60 % BIND 5 % CELL 15 % FOIL 20 %	CHRY 60%
11152001-13	A77894A	INSULATION Heterogeneous, Brown, Non-fibrous, Bound BIND 5 % CORK 95 %	ND
	A77894B	JACKET Heterogeneous, Grey, Fibrous, Bound CHRY 70 % BIND 5 % CELL 25 %	CHRY 70%
11152001-14	A77895A	INSULATION Heterogeneous, Brown, Non-fibrous, Bound BIND 5 % CORK 95 %	ND
	A77895B	JACKET Heterogeneous, Grey, Silver, Fibrous, Bound CHRY 55 % BIND 10 % CELL 15 % FOIL 20 %	CHRY 55%
11152001-15	A77896A	INSULATION Heterogeneous, Brown, Non-fibrous, Bound BIND 5 % CORK 95 %	ND
	A77896B	JACKET Heterogeneous, Grey, Silver, Fibrous, Bound CHRY 60 % BIND 5 % CELL 15 % FOIL 20 %	CHRY 60%
11152001-16	A77897A	INSULATION Heterogeneous, Brown, Fibrous, Loosely Bound BIND 5 % CELL 95 %	ND

CAROLINA ENVIRONMENTAL, INC.
102-H Commonwealth Court, Cary, NC 27511
Phone: 919-481-1413 Fax: 919-481-1442

Project: Army Reserve Base - Columbus, Ohio
Project # 1-0269
Lab Code: A01-6174

CLIENT ID	CEI LAB ID	SAMPLE DESCRIPTION	% ASBESTOS
	A77897B	MASTIC	CHRY 15%
	Heterogeneous,	Black, Fibrous, Bound	
		CHRY 15 % BIND 75 % CELL 10 %	
11152001-17	A77898A	INSULATION	ND
	Heterogeneous,	Brown, Fibrous, Loosely Bound	
		BIND 5 % CELL 95 %	
	A77898B	MASTIC	CHRY 15%
	Heterogeneous,	Black, Fibrous, Bound	
		CHRY 15 % BIND 75 % CELL 10 %	
11152001-18	A77899A	INSULATION	ND
	Heterogeneous,	Brown, Fibrous, Loosely Bound	
		BIND 5 % CELL 95 %	
	A77899B	MASTIC	CHRY 15%
	Heterogeneous,	Black, Fibrous, Bound	
		CHRY 15 % BIND 75 % CELL 10 %	
11152001-19	A77900	INSULATION	ND
	Heterogeneous,	Yellow, Fibrous, Loose	
		DEBR 2 % FBGL 98 %	

The following definitions apply to the abbreviations used in the ASBESTOS BULK ANALYSIS REPORT:

CHRY = Chrysotile	CELL = Cellulose	DEBR = Debris
AMOS = Amosite	FBGL = Fibrous Glass	BIND = Binder
CROC = Crocidolite	ORGN = Organics	SILI = Silicates
TREM = Tremolite	SYNT = Synthetics	GRAV = Gravel
ANTH = Anthophyllite	WOLL = Wollastonite	MAST = Mastic
ACTN = Actinolite	CERWL = Ceramic Wool	PLAS = Plaster
ND = None Detected	NTREM = Non-Asbestiform Tremolite	PERL = Perlite
NANTH = Non-Asbestiform Anthophyllite		RUBR = Rubber

CLIENT: Diamond Environmental

PROJECT: Army Reserve Base - Columbus, Ohio
Project # 1-0269

CEI LAB CODE: A01-6174

Stereoscopic microscopy and polarized light microscopy coupled with dispersion staining is the analytical technique used for sample identification. The percentage of each component is visually estimated by volume. These results pertain only to the samples analyzed. The samples were analyzed as submitted by the client and may not be representative of the larger material in question. Unless notified in writing to return samples, Carolina Environmental, Inc. will discard all bulk samples after 30 days.

Many vinyl floor tiles have been manufactured using greater than 1% asbestos. Often the asbestos was milled to a fiber size below the detection limit of polarized light microscopy. Therefore, a "None Detected" (ND) reading on vinyl floor tile does not necessarily exclude the presence of asbestos. Transmission electron microscopy provides a more conclusive form of analysis for vinyl floor tiles.

It is certified by the signature below that Carolina Environmental, Inc. is accredited by the National Voluntary Accreditation Program (NVLAP) for the analysis of asbestos in bulk materials. The accredited test method is EPA / 600 / M4-82 / 020 for the analysis of asbestos in building materials. Procedures described in EPA / 600 / R-93 / 116 have been incorporated where applicable. The detection limit for the method is 0.1% (trace amount). Carolina Environmental, Inc.'s NVLAP accreditation number is #101768-0. This report is not to be used to claim product endorsement by NVLAP or any agency of the U. S. Government. This report and its contents are only valid when reproduced in full. Dust and soil analyses for asbestos using PLM are not covered under NVLAP accreditation.

ANALYST _____

REVIEWED BY _____
Tianbao Bai, Ph.D.
Laboratory Director

End of Report

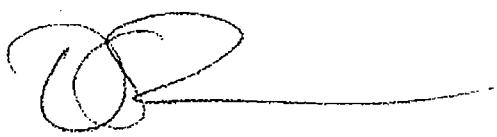
SPECIFICATION
for
ASBESTOS ABATEMENT
of
STRAIGHT PIPE AND FITTING INSULATION

PREPARED FOR:

_____
_____
_____

PREPARED BY:

_____
_____
_____



_____

Daniel C. Peders, CAHAPD #60377
Certified Asbestos Hazard Project Designer

December 2001

Project Number: _____

TABLE OF CONTENTS

SPECIFICATION FOR ASBESTOS ABATEMENT OF STRAIGHT PIPE AND FITTING INSULATION

1. SCOPE OF WORK

Location 1: _____
_____
_____

Owner: _____
_____
_____

1.1. The Scope of Work encompasses the following:

The removal and disposal of Asbestos-Containing Material (ACM) listed in Table 1 and as described in Section 4 of this specification.

1.2. The bid will reflect the following:

Task - The removal and disposal of asbestos-containing straight pipe insulation (jacket) and fitting insulation (mastic).

1.3. Diamond Environmental performed an Asbestos Building Survey for the Gun Range at the Army Reserve Center, Columbus, Ohio. The *Suspect Material Summary* from the Asbestos Building Survey is in Appendix A. A summary the estimated quantity of ACM at this location is provided in Table 1 of this section.

1.4. The following table provides general locations and estimated quantities of ACM by building:

Table 1: ACM Estimate Quantity Summary

Material Description	Estimated Quantity
4" O.D. straight pipe insulation	160 s.f.
6" O.D. straight pipe insulation	
Pipe fittings associated with the 4" and 6" straight pipe	

s.f. = square feet O.D. = Outer Diameter

NOTE: These quantities are estimations it will be the asbestos abatement contractors responsibility to verify the quantities and providing pricing for the actual amounts of ACM to be removed and disposed.

1.5. Asbestos abatement sequence is to be determined by the environmental site representative and the selected asbestos abatement contractor.

1.6. All work will be performed in accordance with all local, state and federal regulations including the Occupational Health and Safety Administration (OSHA), National Emission Standard for Hazardous Air Pollutants (NESHAPs) and Ohio Department of Health (ODH) as listed in the Abatement and Demolition Sections. Any deviation from the Work Methodology described in each of these Sections must be submitted in writing to be approved by the Building Owner's environmental site representative and an Ohio Department of Health Certified Asbestos Hazard Project Designer prior to implementation.

1.7. During the asbestos abatement _____ will be acting as the environmental site representative's behalf. The environmental site representative will have the authority to stop the abatement work at any time the environmental site representative determines that conditions are not within the established Work Methodology and applicable regulations. The stoppage of work shall continue until corrective steps have been taken to eliminate the problem or non-compliance.

1.8. Wherever the word "CONTRACTOR" occurs herein, it shall be taken to mean the party entering into the Contract for the performance of the asbestos abatement work herein required, and the duly authorized representative of said party in the performance of the work.

1.9. Specific Site Representatives are as follows:

Building Owner Contact Name:_____
Company Name:_____
Address:_____
City: _____, State:_____ Zip:_____
Phone:_____ Fax:_____

Site Contact Name:_____
Company Name:_____
Address:_____
City: _____, State:_____ Zip:_____
Phone:_____ Fax:_____

Environmental Site Representative:_____
Company Name:_____
Address:_____
City: _____, State:_____ Zip:_____
Phone:_____ Fax:_____

2. SUPPLEMENTARY INSTRUCTIONS

2.1. Schedule of Performance:

Start Date: _____
Shift Time: (Days and Shift Hours) _____
Completion Date: _____

2.2. Liquidated Damages:

Liquidated damages at a rate of $ ____.00 per day must be paid to the Building Owner by the CONTRACTOR that is awarded the contract for every day or portion of a day that asbestos abatement project runs past the completion date of (see above) _____.

2.3. The CONTRACTOR shall be prepared to file notification on (Day)_____, (Date)_____, 200_ for a start date on (see above)_____. The owner reserves the right to change the start date.

3. **GENERAL SITE REQUIREMENTS**

3.1. The CONTRACTOR must maintain a daily shift that will not exceed _____hours from _____ through _____.

3.2. The electric and water that has not been shut-off will remain connected until the asbestos abatement has been completed in the building.

3.3. The CONTRACTOR will be able to use the site toilet facilities during the shift.

3.4. The following equipment or procedures will be required of the CONTRACTOR for this project:

A. Electricity and water are available at or adjacent to all work areas. It will be the CONTRACTORS' responsibility to provide the necessary hook-ups to the provided utilities.

B. The CONTRACTOR will coordinate with _____ site contact for the Building Owner for location of utility hook-ups.

B. The CONTRACTOR will responsible to provide a source of hot water for the shower for the asbestos abatement decontamination unit and/or a separate temporary wash area for personal hygiene.

C. Temporary lighting will be provided to the site were needed.

3.5. An inspection of existing conditions of the work area will be performed prior to commencement of work. The Building Owners environmental site representative and the CONTRACTOR will inspect areas in which work will be performed and prepare a listing of damage to other adjacent structures, surfaces, or equipment which could be misconstrued as damage resulting from the work.

3.6. Dislocation of asbestos-containing materials may cause asbestos fibers to be released into the building's atmosphere, thereby creating a potential health hazard to workmen and building occupants. Its is the CONTRACTORS' responsibility to apprise all workers, supervisory personnel, subcontractors and consultants who will be at the job site of the seriousness of the hazard and of proper work procedures which must be followed.

3.7. Residual material from duct tape and spray adhesive will be required to be removed by the asbestos abatement CONTRACTOR.

4. ASBESTOS ABATEMENT

4.1. The scope of the asbestos removal of this project is as follows:

Remove and dispose of asbestos containing straight and fitting pipe insulation accessed by removing screwed-in metal ceiling panels. This work has been classified as OSHA Class I work and will be performed under a *regulated area* utilizing *wet methods* and *negative air glovebag* removal technique. Total pipe insulation and fittings for both 4-inch and 6-inch outer diameter is 160 linear feet.

4.2. Regulations

A. The current issue of each document shall govern and if a difference is encountered, the most stringent regulation will apply:

B. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA), including but not limited to:

1) Construction Standard, Code of Federal Regulations (CFR) 29, 1926.1101
2) General Industry Standard, CFR 29, 1926.1001
3) Respiratory Protection, CFR 29, 1910.134
4) Hazard Communication, CFR 29, 1910.1200

B. Environmental Protection Agency (EPA):

1) National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 61, Subpart A.
2) Ohio EPA, NESHAP, 3745-20

C. Ohio Department of Health (ODH), OAC 3701-34, amended February 1, 1994

4.3. The CONTRACTOR is required to perform the required OSHA compliance air monitoring with air sample results available within 24 hours of the sampling date. A laboratory enrolled in a recognized proficiency program will perform sampling and analysis of these samples.

4.5. The removal of the pipe insulation is to be performed utilizing the *glovebag technique*. No cutting, drilling or breaking of the panels will be permitted. *Full containment* can be utilized if appropriate and approved by the Building Owner's environmental site representative.

4.6. Containment Construction - The removal of the pipe insulation will be performed utilizing the *glovebag technique*, therefore no containment construction will be required.

4.7. **If a *full containment* is utilized and approved** (see Section 4.5) then the containment construction will involve establishing critical barriers (primary seals) around all openings that display a potential for fiber egress outside the containment, i.e. windows, doors vents, pipe penetrations, etc.

A. Entrance/Load-out - A two-chamber entrance and/or load-out will be required.

1) The first chamber is to be constructed adjacent to the removal area.

2) The second chamber is to be constructed adjacent to the first. The second chamber is for the storage of the necessary removal equipment and for removing contaminated, disposable protective clothing.

B. Negative Pressure - Negative pressure will be provided by Air Filtration Devices (AFD) installed with a *High Efficiency Particulate Air (HEPA) filter.* The number and location of AFDs should be sufficient enough to produce one (1) air change every fifteen (15) minutes in the containment area. Negative pressure will measure at least 0.02 inches of water on the manometer provided by the asbestos abatement CONTRACTOR. Manometer readings will be record at least every hour. The AFD intake will have a pre-filter which can be changed from inside the containment as needed or at least on a daily basis. The AFD exhaust will be vented to the outside atmosphere.

4.8. Decon - The removal of the pipe insulation will be performed utilizing the *glovebag technique* therefore a Decon is required but it does not have to be contiguous.

4.9. At this site, a non-contiguous decontamination unit will be established. A description of the double suit technique is described below. The removal of these suits will occur inside the regulated area for areas without a containment constructed.

A. Non-contiguous Decon Procedure - Provide all personnel throughout the abatement process with the specified protective clothing and gear. Ensure that all personnel entering and leaving the work space follow the following procedures.

B. Change from street clothes into two layers of protective clothing and wear clean protective gear. Exit Clean Room through entrance and go to work site.

C. Enter work site through first chamber and enter removal area.

D. Upon completion of work and inside work area, vacuum off outer layer of protective clothing and respirator. Dispose of all protective clothing into labeled plastic bags for asbestos waste. Do not take off the respirator. Enter the first chamber and remove outer layer of protective clothing still wearing the respirator. Vacuum off inner layer of protective clothing and put on a clean outer protective suit.

E. Proceed to the decontamination unit. Enter the dirty room and remove the clean outer protective suit.

F. Enter the shower and wash thoroughly. Showering is mandatory.

G. Remove respirator and wash and wipe thoroughly to decontaminate the respirator. Care must be taken to follow reasonable procedures in removing the respirator to avoid asbestos fibers while showering.

H. After drying, enter the Clean Room, store the decontaminated respirator in the assigned space and dress into street clothes.

4.9. The Decon will be established adjacent to the Work Area. Water and electric will be supplied to the Decon. All construction material that will come in contact with the interior of the Decon will be material that can be decontaminated. Overlapping poly doors will be located at the entrance to the clean room, at both ends of the shower, and at the entrance to the dirty room. Air flow utilizing *air filtration devices* will be provided. Air flow will be from the clean room through the shower into the dirty room.

A. The Dirty Room will have an asbestos waste bag for the disposal of asbestos-contaminated personnel protective equipment. Storage of any reusable personnel protective equipment such as boots or gloves will be in the dirty room.

B. The Shower will be constructed in such a manner that it has a shower head mounted at head height with separate hot and cold water controls. A sufficient number of working shower heads will be provided to assure that proper decontamination of personnel is being performed. The CONTRACTOR will provide hot and cold water to the shower. The shower will also be supplied with liquid soap and shampoo.

1) Shower water from the Decon will be filtered down to five (5) microns and dispensed into a sanitary drain. No filtered water will be dispensed into the storm sewer system.

2) The CONTRACTOR will coordinate with the Building Owner's site contact in identifying the location of the nearest sanitary drain to the Work Area.

3) The transportation of the shower water to the identified sanitary drain will be the responsibility of the CONTRACTOR.

C. The Clean Room shall be constructed in such a way that it will provide room for the workers to change from street clothes into disposable protective clothing. A supply of disposable protective clothing, disposable towels, and a waste bag for towels will be the only materials stored in the clean room. Equipment and other supplies will be stored on an equipment truck or in separate securable location. The clean room will also provide a place for the workers' street clothes to be kept dry and off of the ground.

4.10. Demarcation - Demarcation of the site will consist of two types:

A. Red barricade tape with the lettering "Danger Asbestos Hazard" and signs stating: "Danger. Asbestos. Cancer and Lung Disease Hazard. Authorized Personnel Only. Respirators and Protective Clothing Required in This Area."

B. Red barricade tape will be used during load-out of the asbestos waste. The barricade tape will be strung to give the workers an adequate pathway from the containment to the vehicle hauling the waste.

C. Red barricade tape will be strung to restrict access to the regulated areas and the Decon area.

D. Signs will be placed on the following locations:

1) The exterior of all access ways into the work areas.

2) The first flap on any poly entrances into the work areas.

3) The two sides and the back of the vehicle hauling the waste during loading and while asbestos is stored in the vehicle while on site.

4) The entrance to the dirty room of decontamination unit.

E. Additional non-asbestos regulated work areas will be demarcated with yellow CAUTION tape.

4.11. Removal

The removal technique for this material has been listed in Section 4.1 the italicized procedures are defined in Section 4.22.

A. The following work practices will be complied with regardless of the classification of work [1926.1101(g)(1)(i-iii)]:

1) A HEPA vacuum will be provided to collect dust and debris.

2) Wet methods will be used to control employee exposure.

3) Immediate clean-up and disposal of all asbestos waste.

B. The following prohibitions will apply [1926.1101(g)(3)(i-iii)]:

1) Any cutting or grinding apparatus will be equipped with point of work HEPA ventilation.

2) Compressed air will not be used.

3) No dry sweeping, shoveling or other dry clean-up of dust and debris containing ACM.

C. All removal will comply with the above Sections 4.11 A & B. No variances for dry removal are anticipated. Any changes to the above requirements are to be submitted in writing to be approved by the Building Owner's environmental site representative and a state licensed Project Designer prior to implementation.

4.12. Final Cleaning and Visual Clearance

A. Final cleaning will be begin when all gross material has been bagged and loaded out of the containment.

B. Final cleaning will involve cleaning all horizontal surfaces and wiping of all poly.

C. Final cleaning is complete and ready for a visual clearance when the following criteria have been met:

1) All equipment has been decontaminated and loaded out.

2) All standing water has been HEPA vacuumed.

3) Any poly drop cloths have been removed, bagged and loaded out.

D. Once completed, a visual inspection will be performed by the environmental site representative and/or an Ohio Department of Health certified asbestos hazard evaluation specialist.

E. Once the area has passed visual inspection then appropriate surfaces will be encapsulated. The CONTRACTOR may spray encapsulant to exposed non-ACM to prevent any materials from biasing the post abatement samples. Garden sprayers or an airless sprayer must be used for the application of the encapsulant.

4.13. Tear Down

A. Upon receiving a passing visual clearance inspection and/or post-removal air monitoring, the CONTRACTOR will remove all poly and any construction materials that cannot be decontaminated and dispose of them as asbestos waste.

B. The Building Owner's environmental site representative will perform a final inspection of the area for completion of the job.

4.14. Personnel Protective Equipment

A. Protective Suits - Personnel decontamination will involve suiting up with disposable protective clothing such as *DuPont* Blockade Tyveks (Tyvek) or its equivalent. Undergarments worn below protective clothing are to be disposable or decontaminated. Protective suits will have hoods and booties or additional disposable hoods and booties will be provided.

B. Protective Footwear - **Steel toe boots will be required.** Plastic or rubber boots that have a washable surface can be worn over Tyveks. All other boots are to be worn under Tyvek or incorporated with a disposal rubber overboot.

C. Protective Head Gear - **Hard hats will be required.**

D. Gloves - **Gloves are required.** All cloth gloves will be disposed of at the end of the project. Rubber or leather gloves may be decontaminated.

E. Respiratory protection - All OSHA Class I work will require a **full face powered air purifying respirator** as minimum respirator protection. The respirators will be equipped with the appropriate HEPA cartridges. If a negative exposure assessment is provided showing that similar work performed on similar material using similar skilled workers has been performed below the respiratory protection of a half mask then 1/2 mask dual cartridge negative pressure respirator can be worn upon approval by the Building Owner's environmental site representative.

F. Site requirements - **Eye protection, via safety glasses or full-face respirator face shield, is required at this site.**

G. While in containment, wearing of the above mentioned personnel protective suits and equipment will require the taping of the following: gloves to suit, boots to suit, and respirator to suit. Seams need to be taped to ensure a protective seal. It is also recommended that zippers and high stress areas such as the knees and crotch be reinforced with tape.

H. Any torn or fatigued protective suits or improperly functioning respirator will require the worker to decon out and replace the failing protective suit or faulty respirator.

4.15. Personnel Decontamination

At this site, a non-contiguous decontamination unit will be established. A description of the double suit technique is described below. The removal of these suits will occur inside the regulated area for areas without a containment constructed and in the second chamber of the areas with a constructed containment. **Decontamination will be required when the ceiling tile mastic is no longer intact or if a more aggressive removal procedure is utilized.**

A. Non-contiguous Decon Procedure - Provide all personnel throughout the abatement process with the specified protective clothing and gear. Ensure that all personnel entering and leaving the work space follow the following procedures.

B. Change from street clothes into two layers of protective clothing and wear clean protective gear. Exit Clean Room through entrance and go to work site.

C. Enter work site through first chamber and enter removal area.

D. Upon completion of work and inside work area, vacuum off outer layer of protective clothing and respirator. Dispose of all protective clothing into labeled plastic bags for asbestos waste. Do not take off the respirator. Enter the first chamber and remove outer layer of protective clothing still wearing the respirator. Vacuum off inner layer of protective clothing and put on a clean outer protective suit.

E. Proceed to the decontamination unit. Enter the dirty room and remove the clean outer protective suit.

F. Enter the shower and wash thoroughly. Showering will be mandatory if the ceiling tile mastic is no longer intact or if a more aggressive removal procedure is utilized.

G. Remove respirator and wash and wipe thoroughly to decontaminate the respirator. Care must be taken to follow reasonable procedures in removing the respirator to avoid asbestos fibers while showering.

H. After drying, enter the Clean Room, store the decontaminated respirator in the assigned space and dress into street clothes.

4.16. Waste Load Out and Disposal

A. All waste will be immediately bagged as removed. Once full, the air in the bag will be evacuated by a HEPA vacuum and taped closed.

B. Material that might penetrate the disposal bag such as wire or broken wood pieces will be wrapped in cardboard and then bagged or drummed.

C. All waste will be double bagged.

D. All waste bags or drums will be appropriately labeled according to the NESHAPs regulation requiring the name of the waste generator.

E. A truck or dumpster will be located as near to the site as possible. Asbestos barricade tape is to be strung in an area surrounding the waste hauling vehicle during loading. Workers handling the poly wrapped and the double-bagged waste will not be required to wear any protective clothing or respirator at this time.

F. A waste shipment record is required to be filled out, signed by the waste hauler and the waste disposal site. This completed waste shipment record will be submitted to the Building Owner's environmental site representative before the project can be complete.

4.17. All air samples are to be analyzed by Phase Contrast Microscopy (PCM) unless otherwise noted. All environmental air monitoring will be performed by trained and licensed air monitoring technicians certified in the State of Ohio as an Asbestos Hazard Evaluation Specialist or Air Monitoring Technician. All analysis will be performed according to OSHA and ODH regulations and NIOSH Method 7400.

4.18 OSHA compliance air monitoring

A. Sampling and analysis of the CONTRACTORS' OSHA air samples is the CONTRACTORS' responsibility. All OSHA compliance air monitoring will be performed by appropriately trained and State of Ohio certified Asbestos Hazard Abatement Specialist.

B. The following Permissible Exposure Level (PEL) sampling will occur:

1) An eight hour Time Weighted Average (TWA) sample for at least 25% of the work force with sample(s) duration totaling at least 360 minutes but not to exceed 480 minutes. Appropriate corresponding sampling will be used for a 10 hour shift.

2) An Excursion Limit (EL) air sample is to be run for 30 minutes on the most aggressive worker to establish the greatest potential for exposure. One (1) sample per shift.

C. Results for OSHA compliance will be submitted to the Building Owner's environmental site representative within twenty-four (24) hours from the sampling day.

D. Any personnel samples exceeding 1.0 f/cc during containment work and 0.1 f/cc during other type clean up/removal work will result in work stoppage and the addition of the necessary engineering controls to lower the fiber levels.

4.19. Pre-, During and Post-Removal Sampling **(Optional)**

A. Three (3) pre-removal samples will be taken in the Work Area. These samples will be taken to establish a baseline for the Work Area to compare against background samples during the abatement activity and post-removal samples.

B. Three (3) post-removal air clearance samples will be taken in the Work Area and compared to the baseline established by the pre-removal samples.

C. If the post-removal samples fail, it will be the CONTRACTORS' choice to perform one of these options at the CONTRACTORS' cost:

3) Re-clean and encapsulate the Work Area and run a second set of post-removal samples. The CONTRACTORS' labor and material will be at no cost to the Building Owner, and the labor and analysis costs of additional post-removal samples will be billed by the Building Owner to the CONTRACTOR.

2) Restrict outside air contamination by filtering the make-up air through Decon and install an additional AFD to "scrub" the air then run another set of three (3) PCM clearance samples. The asbestos abatement CONTRACTORS' labor and material will be at no cost to the Building Owner, and the labor and analysis costs of additional post-removal samples will be billed by the Building Owner to the CONTRACTOR.

4.20. Other air monitoring

A. During abatement, samples will be taken outside the access/egress to the containment areas and outside the regulated area during other removal and clean up activities. Levels exceeding <u>half</u> the PEL (0.05 f/cc TWA_8 or 0.5 EL) will result in work stoppage and finding the cause of the escalated fiber counts.

B. Additional samples will be taken in the dirty room of the decon. Levels exceeding <u>half</u> the PEL (0.05 f/cc TWA_8 or 0.5 EL) will result in work stoppage and finding the cause of the escalated fiber counts.

C. Perimeter samples will be taken in any occupied areas adjacent to the Work Area during the duration of the removal in that area. Levels exceeding <u>half</u> the PEL (0.05 f/cc TWA_8 or 0.5 EL) will result in work stoppage and finding the cause of the escalated fiber counts.

4.21. Notifications and Permits

The intact and non-aggressive removal of the ceiling tile mastic does not require notification. If the ceiling tile mastic becomes non-intact during removal or if a more aggressive procedure is utilized then notification by the CONTRACTOR on behalf of the Building Owner will be submitted via certified mail to the following:

Ohio EPA
Central District Office
323 Alum Creek Drive
Columbus, Ohio 43207

Ohio Department of Health
Division of State Environmental Health Services
Box 118
Columbus, Ohio 43266-0118

4.22. Definitions

Adequately Wet - Sufficiently mixed or coated with water or an aqueous solution to prevent dust emissions.

Aggressive Method - Removal or disturbance of building material by sanding, abrading, grinding or other method that breaks, crumbles or disintegrates intact ACM.

Air Cell Pipe Insulation - A white or gray corrugated, multi-layered, paper insulation used for pipe lagging comprised of corrugated cardboard which frequently contains asbestos combined with cellulose or refractory binders. This paper is moderately friable; it does not crumble to a powder and does not readily release fibers. However, the paper is soft and is easily cut with a knife. This pipe insulation is covered with a cloth jacket to maintain its integrity.

Category I Non-friable ACM - Asbestos-containing packing, gaskets, resilient floor coverings, and asphalt roofing products containing more than one percent asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy.

Category II Non-friable ACM - Any material, excluding Category I Non-friable, containing more than one percent asbestos as determined using the method specified in Appendix A, Subpart F, 40 CFR Part 763, Section 1, Polarized Light Microscopy that, when dry, cannot be crumbled, pulverized, or reduced to a powder by hand pressure.

Class I Asbestos Work - Activities involving the removal of thermal system insulation (TSI) and surfacing ACM or presumed asbestos containing materials (PACM).

Class II Asbestos Work - Activities involving the removal ACM which is not TSI or surfacing material. These materials include, but are not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

Class III Asbestos Work - Repair and maintenance operations, where ACM, including TSI and surfacing material, is likely to be disturbed.

Class IV Asbestos Work - Maintenance and custodial activities during which employees come into contact with ACM and PACM, and activities to clean up waste and debris containing ACM and PACM.

Clean Room - Uncontaminated room having facilities for storage of employees' street clothing and uncontaminated materials and equipment.

Containment - Isolation of the work area from the rest of the building to prevent the escape of asbestos fibers.

Critical Barriers - The primary poly barrier applied to windows, doors, drains and vents prior to the addition of poly walls and floors. Critical because it is the final barrier between the outside area and the inside contamination. Also defines a removal technique where just the windows, doors, drains, vents, etc. are covered with poly and negative air is established. Used on projects with expected low levels of fiber release and in containment areas which have surfaces (walls, ceiling and floors) that are smooth and easily decontaminated. One or more layers of plastic sealed over all openings into a work area or any other similarly placed barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

Curtained Doorway - A device to allow ingress or egress from one room to another while permitting one-way air movement between the rooms, typically constructed by placing three layered sheets of plastic over an existing or temporarily framed doorway. One sheet shall be secured at the top and left side, the second sheet at the top and right side, and the third sheet at the top. All sheets shall have weights attached to the bottom to ensure that the sheets hang straight and maintain a seal over the doorway when not in use.

Cutting - To penetrate with a sharp-edged instrument which includes sawing, but does not include shearing, slicing, or punching.

Decontamination Area - An enclosed area adjacent and connected to the regulated area and consisting of an equipment room, shower area, and clean room, which is used for decontamination of workers, materials, and equipment contaminated with asbestos.

Disposal Bag - A properly labeled 6 mil thick leak-tight plastic bag used for transporting asbestos waste from work area and to the disposal site.

Encapsulant - A material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers.

Bridging encapsulant: an encapsulant that forms a discrete layer on the surface of an in situ asbestos matrix.

Penetrating encapsulant: an encapsulant that is absorbed by the in situ asbestos matrix without leaving a discrete surface layer.

Removal encapsulant: a penetrating encapsulant specifically designed to minimize fiber release during removal of asbestos-containing materials rather than for in situ encapsulation.

Encapsulation - The treatment of ACM with a material that surrounds or embeds asbestos fibers in an adhesive matrix to prevent the release of fibers. The encapsulant creases a membrane over the surface(bridging encapsulant) or penetrates the material and binds its components together (penetrating encapsulant).

Enclosure - An airtight, impermeable, permanent barrier around ACM to prevent the release of asbestos fibers into the air.

Equipment Room (change room) - A room located within the decontamination area that is supplied with impermeable bags or containers for the disposal of contaminated protective clothing and equipment.

Excursion Limit - An airborne asbestos concentration of 1.0 f/cc as averaged on a sampling period of thirty (30) minutes.

Friable - Capable of being crumbled, pulverized, or reduced to a powder by hand pressure. This may also include previously non-friable material which becomes broken or damaged by mechanical force.

Glovebags - A polyethylene or polyvinyl chloride bag-like enclosure affixed around an asbestos-containing source (most often, TSI) so that the material may be removed while minimizing release of airborne fibers to the surrounding atmosphere. A sealed compartment with attached inner gloves used for handling the ACM, properly installed and used, glovebags provide a small work area enclosure typically used for small-scale asbestos stripping operations. An impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which the material and tools may be handled.

Glovebag Technique - A method for removing friable asbestos-containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces within a self-contained bag enclosure. The glovebag assembly is a manufactured or fabricated device consisting of a glovebag (typically constructed of 6-mil transparent polyethylene or polyvinyl chloride plastic), two inward projecting long sleeves, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or material to be removed and contains all asbestos fibers during the process. All workers permitted to use glovebag technique must be highly trained, experienced and skilled in this method.

Ground Fault Circuit Interrupter - A device which automatically de-energizes any high voltage system component which has developed a fault in the ground line.

High Efficiency Particulate Air (HEPA) Filter - Filters which are rated to trap at least 99.97% of all particles 0.3 microns in diameter or larger.

Leak-tight - Solids or liquids cannot escape or spill out. Also means dust-tight.

Negative Air Glovebag - Negative air (pressure) is established inside the glovebag during the entire removal process. The greatest success with negative air glovebags is when used in conjunction with an adjustable flow negative air machine.

Permissible Exposure Limit - An airborne concentration of asbestos of 0.1 f/cc of air calculated as an 8-hour Time-Weighted Average.

Personal Air Samples - An air sample taken with a sampling pump directly attached to the worker with the collecting filter and cassette placed in the worker's breathing zone. These samples are required by the OSHA asbestos standards and the EPA Worker Protection Rule.

Phase Contrast Microscopy - An optical microscopic technique used for the counting of fibers in air samples, but does not distinguish fiber types.

Pipe Lagging - ACM used to insulate pipes carrying heated or refrigerated liquids or vapors.

Regulated Asbestos-Containing Material - Friable asbestos material, Category I Non-friable ACM that has become friable, Category I Non-friable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or Category II Non-friable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of the demolition or renovation operations regulated by 40 CFR Part 61.140.

Regulated Area - An area established by the employer to demarcate areas where Class I, II, and III asbestos work is conducted, any adjoining area where debris and waste from such asbestos work accumulate, and a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the Permissible Exposure Limit. Requirements for regulated areas are set out in paragraph. Also the area established around the removal area to prevent entrance by unprotected workers. Regulated area is sometimes all that is established during a non-friable removal project that includes materials that are expected to stay non-friable.

Visual Inspection - A walk-through type inspection of the work area to detect incomplete work, damage, or inadequate clean up of a worksite.

Wet Cleaning - The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning utensils which have been dampened with amended water or diluted removal encapsulant which are thoroughly decontaminated or disposed of as asbestos-contaminated waste after use.

APPENDIX A

Asbestos-Containing Material Summary

Wet Methods - Handling asbestos materials which have been wetted is one of the most reliable methods of ensuring that asbestos fibers do not become airborne, and therefore, this practice should be used whenever feasible. Only in cases where asbestos work must be performed on live electrical equipment, on live steam lines, or in other areas where water will seriously damage materials or equipment may dry removal be performed. Amended water or another wetting agent should be applied by means of an airless sprayer to minimize the extent to which the asbestos-containing materials is disturbed. Asbestos-containing materials should be wetted from the initiation of the maintenance or renovation operation and the wetting agent should be used continually throughout the work period to ensure that asbestos-containing materials exposed in the course of work are wet and remains wet until final disposal. Wet methods or wetting agents to control employee exposure during asbestos handling, mixing, removal, cutting, application, and cleanup should be used except where employers demonstrate that the use of wet methods is unfeasible due to the creation of electrical hazards, equipment malfunction, and, in roofing, slipping hazards. See the *adequately wet* and *wet cleaning* definition.

Work Area - The area where asbestos-related work or removal operations are performed which is defined and/or isolated to prevent the spread of asbestos dust, fibers or debris, and entry by unauthorized personnel. Work area is a Regulated Area as defined by 29 CFR 1926.1101.

Table 1 – Summary of Asbestos-Containing Materials

Sample Number	Sample Description	Asbestos (Y/N)	Location	RACM (Y/N)	Analytical Results
11152001-10 to 12	4" pipe insulation	Y	Above metal ceiling behind backwall	Y	Jacket, 60% Chrysotile
11152001-13 to 15	6" pipe insulation	Y		Y	Jacket, 60% Chrysotile
11152001-16 to 18	Elbows and tees	Y		Y	Mastic, 15% Chrysotile

APPENDIX C
Project Report – Asbestos Abatement, IT Corporation

IT CORPORATION
A Member of The IT Group

PROJECT REPORT – ASBESTOS ABATEMENT

General Information

SITE LOCATION: 721 Country Club Road, Columbus, Ohio
RESERVE CENTER NAME: Whitehall USARC
CLIENT : U.S. Army Corps of Engineers
IT PROJECT MANAGER: William Scoville
PREPARED BY: Timothy Smith, Certified Asbestos Hazard Evaluation Specialist (33995)

1.0 Introduction

Tim Smith, IT Corporation (IT), provided project oversight and air monitoring during the removal of 48 lineal feet of asbestos containing pipe insulation. The pipe insulation covered four and six-inch pipes near the ceiling, by the back wall of the gun range at the Whitehall Reserve Center, Columbus, Ohio. Jeff Bucholtz and Mark Ernst of Project Design Group (PDG) Environmental, Export, Pennsylvania, performed the abatement of the pipe insulation. Work was initiated on 8 April 2002 and completed on 10 April 2002. A copy of Daily Logs and associated paperwork is provided in Attachment 1. Copies of Tim Smith's, Jeff Bucholtz's, and Mark Ernst's certifications are provided in Attachment 2.

Once the pipe insulation was removed, it was double-bagged, taped shut, and labeled as asbestos waste. The abatement contractor (PDG Environmental) transported the waste to Valley Landfill, Irwin, Pennsylvania. A copy of the waste manifest is provided in Attachment 3.

2.0 Asbestos Air Sampling and Analyses

A total of 12 Phase Contrast Microscopy (PCM) air samples were collected during the project. Samples were collected at a rate of 10 liters per minute for a minimum duration of 120 minutes and a volume of at least 1,200 liters (L) of air. Typically 1,200 L of air is sufficient for laboratory analysis. Flow rates were checked before and after sampling periods with a rotameter.

Samples for PCM were collected in accordance with the National Institute for Occupational Safety and Health (NIOSH) Method 7400, Issue 2, Fourth Edition, August 15, 1994. Representative air was drawn through a mixed cellulose ester filter (25-millimeter [mm] diameter, 0.8-micron pore size for PCM analysis) that had been placed in a three-piece, open face cassette attached to a sampling pump by tubing.

PCM is a laboratory technique that quantifies airborne fibers; it does not identify specific material content. Because specific content is not identified, the fibers counted may include particulate from sources other than asbestos, such as glass, paper, fiberglass insulation, and carpet. PCM microscopists count all fibers measuring greater than or equal to 5 micrometers in length, with a length to width ratio of 3:1. The interpretation of PCM results assumes that a low concentration (<0.01 fibers per cubic centimeter [f/cc]) of relatively large airborne fibers indicates that the concentration of smaller fibers is also low. The limit of detection (LOD) for this method has been determined to be 7 Fibers/mm^2.

All samples were sent to DataChem Laboratories, Cincinnati, Ohio, for analysis. A copy of the Lab accreditation, analytical procedure certification, and laboratory reports is provided in Attachment 4.

A total of five clearance samples were collected and submitted to the lab for analysis. A summary of the final clearance sampling results is provided in Table 1.

TABLE 1
SUMMARY OF PCM SAMPLES

Sample ID	Location	Fibers/mm^2	Fibers/mL
88OHCOLAPR02001CL	West end of range	7	0.002
88OHCOLAPR02002CL	Center of range	<7	<0.002
88OHCOLAPR02003CL	East end of range	<7	<0.002
88OHCOLAPR02004CL	Blank	<7	NA
88OHCOLAPR02005CL	Blank	<7	NA

Note: All results are at 0.002 fibers/mL, which is below the EPA "clean air" guideline of 0.01 fibers/mL.

3.0 Conclusions and Recommendations

On 5 April 2002 Tim Smith (IT), Jeff Bucholtz (PDG), and Staff Sergeant Timothy Wardrop (the Facility Manager) conducted a walk-through of the work area. It was noted that all material identified for removal had been removed and the work area was left in an acceptable manner. Based on the PCM analytical results the asbestos levels in the gun range were below EPA clearance standards. Therefore, no further action is required.

Timothy J. Smith
Certified Asbestos Hazard Evaluation Specialist

Attachment 1

1 Sender Account Number: 179479857 | Preprint Format No.

3 Payment: Sender will be billed unless marked otherwise | Origin | Airbill Number: 6047474694

FROM (Company): IT CORP

Street Address: 11499 CHESTER RD

City: CINTI | State: OH | ZIP CODE (Required): 45246

Sent by (Name/Dept): T. SMITH | Phone (Required): 9373677475

Bill to: Receiver / 3rd Party | Account No. (Required if 3rd Party)

Paid in Advance | Check No. | Amount

Billing Reference (will appear on invoice)

5 # of Pkgs: 1 | 6 Weight (LBS) REQUIRED: 1 SUBJECT TO CORRECTION | 7 Packaging: Letter / Express Pack (X) / Other Packaging — One box must be checked

4 Service Type — One box must be checked. Assumed Express unless noted.

- Express (Letter - 150 lbs): X
- Next Afternoon (Letter - 5 lbs): X — Next Afternoon over 5 lbs charged at the Express rate. Next Afternoon to Bold Red destinations only.
- Second Day (Letter - 150 lbs): X

2 TO (Company) PLEASE PRINT NEATLY: DATA CHEM

Street Address: 4388 GLENDALE MILFORD RD

City: CINTI | State: OH | ZIP CODE (Required): 45242

Attention: (Name/Dept): ASBESTOS LAB | Phone (Required): 5137335336

Description: RUSM CLEARANCE SAMPLES

Special Instructions:
- Saturday Delivery — Extra charge, Express only, Not available to all locations
- Hold at Airborne
- Lab Pack Service

Declared Value or Asset Protection | Shipment Valuation: $ .00

Sender's Signature: J Arnold | Date: 4/9/02 | Airborne Signature | Date

ABSENT A HIGHER SHIPMENT VALUATION, CARRIER'S LIABILITY IS LIMITED TO $100 PER PACKAGE, OR ACTUAL VALUE, WHICHEVER IS LESS, SPECIAL OR CONSEQUENTIAL DAMAGES ARE NOT RECOVERABLE. SEE TERMS AND CONDITIONS ON REVERSE SIDE OF THIS NON-NEGOTIABLE AIRBILL. SCAC-AIRB FED I.D. NO. 91-0637469

001 (12/01) S-09 USE THE INTERNATIONAL AIR WAYBILL FOR SHIPMENTS TO PUERTO RICO

AIRBORNE EXPRESS.

PO BOX 662, SEATTLE, WA 98111-0662

1-800-247-2676

www.airborne.com

SENDER'S COPY

---

1 Sender Account Number: 179479857 | Preprint Format No.

3 Payment: Sender will be billed unless marked otherwise | Origin | Airbill Number: 6047474790

FROM (Company): IT CORP

Street Address: 11499 CHESTER RD

City: CINTI | State: OH | ZIP CODE (Required): 45246

Sent by (Name/Dept): T. SMITH | Phone (Required): 9373677475

Bill to: Receiver / 3rd Party | Account No. (Required if 3rd Party)

Paid in Advance | Check No. | Amount

Billing Reference (will appear on invoice)

5 # of Pkgs: 1 | 6 Weight (LBS) REQUIRED: 1 SUBJECT TO CORRECTION | 7 Packaging: Letter / Express Pack (X) / Other Packaging — One box must be checked

4 Service Type — One box must be checked. Assumed Express unless noted.

- Express (Letter - 150 lbs): X
- Next Afternoon (Letter - 5 lbs): X — Next Afternoon over 5 lbs charged at the Express rate. Next Afternoon to Bold Red destinations only.
- Second Day (Letter - 150 lbs): X

2 TO (Company) PLEASE PRINT NEATLY: DATA CHEM

Street Address: 4388 GLENDALE MILFORD RD

City: CINTI | State: OH | ZIP CODE (Required): 45242

Attention: (Name/Dept): ASBESTOS LAB | Phone (Required): 5137335336

Description: COL BG SAMPLES

Special Instructions:
- Saturday Delivery — Extra charge, Express only, Not available to all locations
- Hold at Airborne
- Lab Pack Service

Declared Value or Asset Protection | Shipment Valuation: $ .00

Sender's Signature: A Arnold | Date: 4/8/02 | Airborne Signature | Date

ABSENT A HIGHER SHIPMENT VALUATION, CARRIER'S LIABILITY IS LIMITED TO $100 PER PACKAGE, OR ACTUAL VALUE, WHICHEVER IS LESS, SPECIAL OR CONSEQUENTIAL DAMAGES ARE NOT RECOVERABLE. SEE TERMS AND CONDITIONS ON REVERSE SIDE OF THIS NON-NEGOTIABLE AIRBILL. SCAC-AIRB FED I.D. NO. 91-0637469

001 (12/01) S-09 USE THE INTERNATIONAL AIR WAYBILL FOR SHIPMENTS TO PUERTO RICO

AIRBORNE EXPRESS.

PO BOX 662, SEATTLE, WA 98111-0662

1-800-247-2676

www.airborne.com

SENDER'S COPY

TECHNOLOGY CORPORATION

Field Activity Daily Log Continuation Sheet

Project Name: USARC COLUMBUS GUN RANGE		No.
Project No.: 833093	Date: 4/8/02	Sheet 1 of 2

Field Activity Subject: ASBESTOS

Description on Daily Activities and Events:

0700 - TS ON SITE

0740 - FACILITY P.O.C. SGT TIM WARDROP ON SITE. VIEWED RANGE AREA & DISCOSSED WHAT WOULD BE DONE & PRECAUTIONS TAKEN TO PREVENT BLDG OCCUPANT EXPOSURE.

0810 - TS SET UP BACKGROUND SAMPLES 880HCOLAPR02001BG, 880HCOLAPR02002BG & 880HCOLAPR02003BG IN THE RANGE.

0910 - JEFF BUCHOLTZ (JB) & MARK ERNST (ME) OF PDG ENV. ON SITE. TS, JB & ME DISCUSSED WORK TO BE DONE & REQUIREMENTS OF THE JOB. JEFF'S CELL 724 433 3833

1010 - JB & ME DEPART TO OBTAIN SUPPLIES (AFD TUBING ETC.)

1013 - TS PULLS BG SAMPLES

1040 - JB & ME RETURN. OFFLOAD EQUIPMNT & BEGIN SITE PREPARATION

1300 - SITE PREP COMPLETE, LUNCH

1340 - BACK FROM LUNCH JB & ME BEGIN HANGING GLOVEBAGS AND REMOVING PIPE INSULATION. APPROX 33 LINEAL' TO REMOVE.

1345 - TS SET UP AREA SAMPLE 880HCOLAPR02001AR AT THE DECON ENTRY/EXIT & SAMPLE 880HCOLAPR02002AR IN THE AFD EXHAUST.

Supervisor: T. SMITH | Date: 4/8/02

Original, Central Files — File E
CC: Project Manager

TECHNOLOGY CORPORATION

Field Activity Daily Log Continuation Sheet

Project Name: USARC COLUMBUS GUN RANGE		No.
Project No.: 833093	Date: 4/8/02	Sheet 2 of 2

Field Activity Subject: ASBESTOS

Description on Daily Activities and Events:

1450- ALL TSI DOWN, JB EXITS WORK AREA

1455- TS PULLS SAMPLE 001 AR. ALL WASTE DOUBLE BAGGED. JB + ME CONDUCT BAG-OUT.

1500 - BAG-OUT COMPLETE, 6 BAGS TOTAL. ME CLEANING/VAC WORK AREA.

1510 - CLEAN-UP COMPLETE, ME APPLYING ENCAP.

1525 - ENCAP COMPLETE, ME EXITS & WORK AREA W/ BAG OF WASTE, NOW 7 TOTAL.

1530 - TS PULLS AREA SAMPLE 002 AR, JB + ME OFF SITE FOR THE DAY, ENROUTE TO PA.

1540 - TS PREPARING DATA CHEM LAB REQUEST, C.O.C. & AIRBORNE AIRBILL.

1600 - TS OFF SITE, ENROUTE TO AIRBORNE.

Supervisor: J Smith Date: 4/8/02

Original, Central Files — File E
CC: Project Manager

Air Monitoring Sample Collection Log

Site: USARC COLUMBUS, OH **Project Number:** 832093

Date: 4/8/02 **Sampler:** T. SMITH

Substance Being Sampled: _____ **Chain-of-Custody :** _____

SAMPLE ID NUMBER	PUMP NUMBER	BEGINNING FLOW RATE (L/min)	ENDING FLOW RATE (L/min)	START TIME (24 HR)	STOP TIME (24 HR)	TOTAL RUN TIME (minutes)	TOTAL ~~FLOW~~ (L/~~min~~.) VOLUME	LOCATION OF SAMPLING PUMP
880HCOLAPR02 001 BG	2451	10L/MIN	10L/MIN	0806	1011	125	1,250	N END OF RANGE
880HCOLAPR02 002 BG	14211	10L/MIN	10L/MIN	0808	1012	124	1,240	MIDDLE OF RANGE
880HCOLAPR02 003 BG	14082	10L/MIN	10L/MIN	0810	1013	123	1,230	S END OF RANGE
880HCOLAPR02 004 BG	—	—	—	—	—	—	0	BLANK
880HCOLAPR02 005 BG	—	—	—	—	—	—	0	BLANK
880HCOLAPR02 001 AR	14082	10L/MIN	~~1344~~	~~1455~~ 1344	1455	71	710	DECON ENTRY/EXIT
880HCOLAPR02 002 AR	14211	10L/MIN	~~1345~~	1345	1530	105	1,050	AFD EXHAUST

DATA CHEM LABORATORIES
A SORENSON COMPANY

ANALYTICAL REQUEST FORM

☐ **REGULAR** Status (10 working days from receipt)

☐ **RUSH** Status Required -ADDITIONAL CHARGE
RESULTS REQUIRED BY SAME DAY (DATE)
CONTACT DATACHEM LABS PRIOR TO SENDING SAMPLES

Date 4/8/02 Purchase Order No. 8302093
Company Name IT CORP
Address 11499 CHESTER RD
CINTI. OH 45246
Person to Contact BILL SCOLVILLE
Telephone (513) 782-4964
Fax Telephone (513) 782-4663
Billing Address (if different from above)
IT CORP 312 DIRECTORS DR
KNOXVILLE, TN

Quote No.
Sample Collection
Sampling Site USARC COLUMBUS
Industrial Process ASBESTOS ABATEMENT
Date of Collection 4/8/02
Time Collected
Date of Shipment 4/8/02
QC Requirements ☐ Standard ☐ Other
Collector's Name TIM SMITH (937) 367-74
Signature Timothy J. Smith

REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Media Type*	Sample Volume (Liters)	ANALYSES REQUESTED – Use Method Number if Known
	880HCOLAPR02 001 BG		1,250	PCM
	880HCOLAPR02 002 BG		1,240	PCM
	880HCOLAPR02 003 BG		1,230	PCM
	880HCOLAPR02 004 BG		Ø	PCM
	880HCOLAPR02 005 BG		Ø	PCM
	880HCOLAPR02 001 AR		710	PCM
	880HCOLAPR02 002 AR		1,050	PCM

CHAIN OF CUSTODY

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Timothy J. Smith	4/8/02		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

4388 Glendale Milford Road / Cincinnati, OH 45242 800-458-1493 or 513-733-5336 / FAX: 513-733-5347

DISTRIBUTION: WHITE–LABORATORY COPY CANARY–CUSTOMER COPY

TECHNOLOGY CORPORATION

Field Activity Daily Log Continuation Sheet

Project Name: USARC COLUMBUS GUN RANGE		No.
Project No.: 832093	Date: 4/9/02	Sheet 1 of 1

Field Activity Subject: ASBESTOS

Description on Daily Activities and Events:

1000 – TS ON SITE

1015 - TS SET UP CLEARANCE SAMPLES 880HCOLAPR02001CC, 880HCOLAPR02002CL & 880HCOLAPR02003CL IN THE WORK AREA

1215 - TS PULLED CLEARANCE SAMPLES

1225 - TS PREPID LAB REQUEST, C.O.C. & AIRBORNE AIRBILL

1235 - TS PACKING UP PUMPS & EQUIPMENT

1300 - TS OFF SITE, ENROUTE TO AIRBORNE & TOTAL SAFETY

Supervisor: T. SMITH | Date: 4/9/02

Original, Central Files — File E
CC: Project Manager

Air Monitoring Sample Collection Log

Site: USARC COLUMBUS

Project Number: 832093

Date: 4/9/02

Sampler: T. SMITH

Substance Being Sampled: _____

Chain-of-Custody : TO DATA CHEM

SAMPLE ID NUMBER	PUMP NUMBER	BEGINNING FLOW RATE (L/min)	ENDING FLOW RATE (L/min)	START TIME (24 HR)	STOP TIME (24 HR)	TOTAL RUN TIME (minutes)	TOTAL ~~FLOW~~ (L/~~min~~) VOLUME	LOCATION OF SAMPLING PUMP
880HCOLAPR02 001 CL		10L/MIN	10L/MIN	1013	1213	120	1,200	W END WORK AREA
880HCOLAPR02 002 CL		10L/MIN	10L/MIN	1014	1214	120	1,200	CENTER OF WORK AREA
880HCOLAPR02 003 CL		10L/MIN	10L/MIN	1015	1215	120	1,200	E END WORK AREA
880HCOLAPR02 004 CL	—	—	—	—	—	—	0	BLANK
880HCOLAPR02 005 CL	—	—	—	—	—	—	0	BLANK

DATA CHEM LABORATORIES
A SORENSON COMPANY

ANALYTICAL REQUEST FORM

☐ **REGULAR Status (10 working days from receipt)**

☒ **RUSH Status Required -ADDITIONAL CHARGE**
RESULTS REQUIRED BY * ASAP * DATE
CONTACT DATACHEM LABS PRIOR TO SENDING SAMPLES

Date 4/9/02 Purchase Order No. 832093
Company Name IT CORP
Address 11499 CHESTER RD
CINTI, OH 45246
Person to Contact BILL SCOLVILLE
Telephone (513) 782-4964
Fax Telephone (513) 782-4663
Billing Address (if different from above)
IT CORP 312 DIRECTORS DR
KNOXVILLE, TN

Quote No.
Sample Collection
Sampling Site USARC COLUMBUS
Industrial Process ASBESTOS ABATEMENT
Date of Collection 4/9/02
Time Collected
Date of Shipment 4/9/02
QC Requirements ☐ Standard ☐ Other
Collector's Name TIM SMITH, (937) 367-7473
Signature T J Smith

REQUEST FOR ANALYSES

Laboratory Use Only	Client Sample Number	Media Type*	Sample Volume (Liters)	ANALYSES REQUESTED – Use Method Number if Known
	880HCOLAPR02 001 CL		1,200	PCM
	880HCOLAPR02 002 CL		1,200	PCM
	880HCOLAPR02 003 CL		1,200	PCM
	880HCOLAPR02 004 CL		0	PCM
	880HCOLAPR02 005 CL		0	PCM

CHAIN OF CUSTODY

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
T J Smith	4/9/02		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

4388 Glendale Milford Road / Cincinnati, OH 45242 800-458-1493 or 513-733-5336 / FAX: 513-733-5347

DATACHEM LABORATORIES – A SORENSON COMPANY

DISTRIBUTION: WHITE–LABORATORY COPY CANARY–CUSTOMER COPY

TECHNOLOGY CORPORATION

Field Activity Daily Log Continuation Sheet

Project Name: USARC COLUMBUS, OH		No.
Project No.: 832093	Date: 4/10/02	Sheet 1 of

Field Activity Subject: ASBESTOS

Description on Daily Activities and Events:

0900 - TS DEPARTS FOR USARC COLUMBUS

1030 - TS ON SITE

1040 - TS TX TO JB. STATED ENROUTE, 40 MINS OUT.

1045 - TS RCV'S FAX FROM B.S. CINTI OFFICE, CAB RESULTS INDICATE SAMPLES PASSED.

1115 - JB & ME ON SITE. GAVE TS COPY OF WASTE MANIFEST. TS GAVE JB COPY OF LAB RESULTS. TS GAVE SGT TW COPY OF MANIFEST

1120 - JB & ME BEGIN TEAR-DOWN & LOAD-UP.

1140 - LOAD-UP COMPLETE

1143 - TS, JB & SGT TW CONDUCT WALK-THRU. TW STATES ALL IN ORDER.

1145. ALL OFF SITE. PROJECT COMPLETE

Supervisor: T. SMITH Date: 4/10/02

Original, Central Files — File E
CC: Project Manager

Attachment 2

CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST

TIMOTHY M. SMITH

Name

369-70-7981

Social Security #

No. 33995 Expires 05/07/2002

HEA 5333 (REV. 8/98)

THE ENVIRONMENTAL Training Center

210 N. Wayne Avenue, Suite 204 • Cincinnati, Ohio 45215 • 513-821-7772

CERTIFIES THAT

TIMOTHY J. SMITH

SSN 369-70-7981

has successfully completed
The EPA-APPROVED AHERA ASBESTOS COURSE for
BUILDING INSPECTOR
and has passed the required examination in that discipline

This course is EPA-Approved under Section 206 of the Toxic Substances Control Act (TSCA)

Course date	04/16/01-04/18/01
Exam date	04/18/01
Certificate No.	C041801-03
Expires	04/18/02
CEU	2.1

Authorized Signature

Training Location: 210 N. Wayne Avenue
Cincinnati, OH 45215

THE ENVIRONMENTAL

Training Center

210 N. Wayne Avenue, Suite 204 • Cincinnati, Ohio 45215 • 513-821-7772

CERTIFIES THAT

TIMOTHY J. SMITH
SSN 369-70-7981

has successfully completed
The EPA-APPROVED AHERA ASBESTOS COURSE for
MANAGEMENT PLANNER
and has passed the required examination in that discipline

This course is EPA-Approved under Section 206 of the Toxic Substances Control Act (TSCA)

Course date	04/19/01-04/20/01
Exam date	04/20/01
Certificate No.	C042001-03
Expires	04/20/02
CEU	2.1

Authorized Signature

Training Location: 210 N. Wayne Avenue
Cincinnati, OH 45215

ATTACHMENT 5
RESPIRATOR FIT TEST FORM

NAME (Please Print): TIMOTHY J. SMITH SIGNATURE: Timothy J. Smith
SSN: 369 - 70 - 7981 HOME DEPT: CINCINNATI, OH DATE: 5/3/04
CONDUCTED BY: BOB GOODMAN LOCATION: CINCINNATI, OH

FIT TEST PROTOCOL

QUANTITATIVE:
Fit Factor _____

QUALITATIVE:
Irritant Smoke: +
Other (specify):

TYPE OF RESPIRATOR
(Circle Appropriate One)

APR/HF (APR/FF) SCBA
SAR/EGS PAPR OTHER

Respirator Manufacturer: Survivair
Model: Twenty - Twenty
Size: Medium

		INITIAL:
1.	I understand why respiratory protection is needed and where and when it should be used.	TJS
2.	I know how to use this respirator properly.	TJS
3.	I know how to clean and inspect this respirator.	TJS
4.	I understand the limitations and restrictions of this respirator.	TJS
5.	I wore this respirator in normal air and performed the user seal.	TJS
6.	I wore this respirator equipment in a test atmosphere.	TJS
7.	I understand that a good gas-tight face seal cannot be achieved with obstructions such as facial hair or glasses.	TJS
8.	I understand that corrective lenses compatible with the full facepiece are available by my manager.	TJS

ATTACHMENT 6

CERTIFIED ASBESTOS HAZARD ABATEMENT SPECIALIST

Jeffery Bucholtz

NAME

168-52-6131

Social Security #

NO. 27156 EXPIRES 03/28/2003

HEA 5322 (Rev. 7/92)

EAST *Environmental and Safety Training, Inc.*

12013 Frankstown Road
Pittsburgh, PA 15235
Phone: (412) 795-5532
FAX: (412) 795-1415

This is to certify that

JEFFREY W. BUCHOLTZ
168-52-6131

has successfully completed the following training course
with a passing score of 70 percent or better
for asbestos accreditation under TSCA Title II
ASBESTOS CONTRACTOR/SUPERVISOR RECERTIFICATION COURSE

J6131K
Certificate Number

Oct. 26, 2001
Course Date

Oct. 26, 2001
Exam Date

Oct. 27, 2002
Expiration Date

Joseph W. Grad
Director of Training

Attachment 1

STATEMENT BY A MEDICAL DOCTOR

I have performed a comprehensive medical examination of JEFFREY BUCHOLTZ on 12/26/01, which included, as a minimum, a medical work history, completion of a standardized questionnaire, a physical examination and all other tests required for compliance with 29 CFR 1926.1101 m(2)(ii). Additionally these examinations and tests comply with the requirements of 29 CFR 1910.134(b) (10). These examinations also assess the employee's ability to withstand the heat stress associated with the employee's job function.

JEFFREY BUCHOLTZ is physically able to perform the work and use the equipment (including the respiratory protection equipment) required in performing his/her work with no limitations.

The employer has provided to me the following:

(1) A copy of OSHA regulation standard 29 CFR, 1926.1101 and Appendices D, E, G, and I.

(2) A description of the affected employee's duties as they relate to the employee's exposure, including the potential for heat stress and asbestos exposures.

(3) The employee's representative asbestos exposure level and heat stress exposure or anticipated asbestos exposure level and heat stress exposure.

(4) A description of any personal protective and respiratory equipment used or to be used; and

(5) Information from previous medical examinations of the affected employee that would not otherwise be available to me.

JEFFREY BUCHOLTZ has been informed of the results of the examination and of any medical conditions that may result from asbestos exposure.

Signature of M.D.

12/26/01
Date

FACILITIES CONSTRUCTION
SPECIFICATIONS
JOB NUMBER 1661
P.O. NO. 2112798

PDG Environmental, Inc.

QUALITATIVE RESPIRATOR FIT TEST RESULT

Name: JEFF BUCHOLTZ Date: 10-26-01

Social Security # 168-52-6131 Location: EXPORT WHSE

RESPIRATOR

Manufacturer: North Size: M Model: 7700 Series

Type: Half Face Filter Cartridge Approval # TC-84A-0592

PRE TEST

Postitive / Negative Pressure (Circle One)	(Pass)	Fail

FIT TEST PROTOCOL (Circle One)

Isoamyl Acetate	(BITREX)	Saccharin

RESPIRATOR FIT

EXERCISE	RESPONSE (Circle One)	
1 Normal Breathing	(Pass)	Fail
2 Deep Breathing	(Pass)	Fail
3 Turn Head Side to Side	(Pass)	Fail
4 Move Head Up and Down	(Pass)	Fail
5 Talk	(Pass)	Fail
6 Frown / Smile	(Pass)	Fail
7 Normal Breathing	(Pass)	Fail

This quantitative fit testing must be repeated at least every 12 months and must be repeated when an employee has any one of the following:

1 Weight change of 20 or more pounds
2 Significant facial scarring in the area of the face-piece seal
3 Significant dental changes
4 Reconstruction or cosmetic surgery
5 Any other condition that may interfere with face piece sealing

Test Conductor Name: GENE T. ORRIS JR Test Date: 10-26-01

Test Conductor Signature: Gene T. Orris Expire Date: 10-26-02

CERTIFIED ASBESTOS WORKER

Mark Ernst

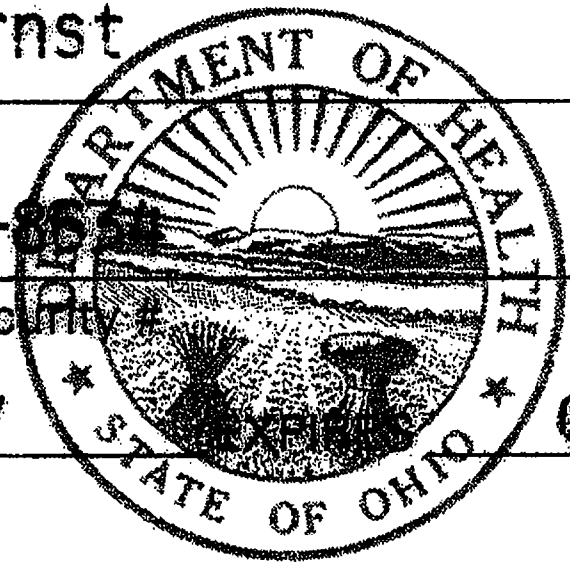
NAME

197-52-[illegible]

Social Security #

NO. 512657 EXPIRES 03/28/03

HEA 5337



EAST *Environmental and Safety Training, Inc.*

12013 Frankstown Road
Pittsburgh, PA 15235
Phone: (412) 795-5532
FAX: (412) 795-1415

This is to certify that

MARK A. ERNST
197-52-8634

has successfully completed the following requisite training course with a passing score of 70 percent or better for asbestos accreditation under TSCA Title II

ASBESTOS WORKER RECERTIFICATION COURSE

F8634K
Certification Number

June 16, 2001
Course Date

June 16, 2001
Exam Date

June 17, 2002
Expiration Date

Joseph W. Grad
Director of Training

PDG Environmental

STATEMENT BY A MEDICAL DOCTOR

I have performed a comprehensive medical examination of Mark Ernst on 5-21-2001, which included, as a minimum, a medical work history, completion of a standardized questionnaire, a physical examination and all other tests required for compliance with 29 CFR 1926.1101 (m) (2) sections (A), (B), (C), and (D) respectively. Additionally these examinations and tests comply with the requirements of 29 CFR 1910.134(e) (10). These examinations also assess the employee's ability to withstand the heat stress associated with the employee's job function.

Mark Ernst is physically able to perform the work and use the equipment (including the respiratory protection equipment) required in performing his/her work with no limitations.

The employer has provided to me the following:

(1) A copy of OSHA regulation standard 29 CFR, 1926.1101 and Appendices D, E and I.

(2) A description of the affected employee's duties as they relate to the employee's exposure, including the potential for heat stress and asbestos exposures.

(3) A description of any personal protective and respiratory equipment used or to be used.

(4) Information from previous medical examinations of the affected employee that would not otherwise be available to me.

Mark Ernst has been informed of the results of the examination and of any medical conditions that may result from asbestos exposure.

Signature of M.D.

5/21/01

Date

PDG Environmental, Inc.

QUALITATIVE RESPIRATOR FIT TEST RESULT

Name: MARK ERNST Date: 1-17-02

Social Security # 197-52-8634 Location: EXPORT

RESPIRATOR

Manufacturer: North Size: M Model: 7700 Series

Type: Half Face Filter Cartridge Approval # TC-84A-0592

PRE TEST

Postitive / Negative Pressure (Circle One)	(Pass)	Fail

FIT TEST PROTOCOL (Circle One)

Isoamyl Acetate	(BITREX)	Saccharin

RESPIRATOR FIT

EXERCISE	RESPONSE (Circle One)	
1 Normal Breathing	(Pass)	Fail
2 Deep Breathing	(Pass)	Fail
3 Turn Head Side to Side	(Pass)	Fail
4 Move Head Up and Down	(Pass)	Fail
5 Talk	(Pass)	Fail
6 Frown / Smile	(Pass)	Fail
7 Normal Breathing	(Pass)	Fail

This qualitative fit testing must be repeated at least every 12 months and must be repeated when an employee has any one of the following:

1 Weight change of 20 or more pounds
2 Significant facial scarring in the area of the face-piece seal
3 Significant dental changes
4 Reconstruction or cosmetic surgery
5 Any other condition that may interfere with face piece sealing

Test Conductor Name: GENE ORRIS JR Test Date: 1-17-02

Test Conductor Signature: Gene Orris Jr Expire Date: 1-17-03

Attachment 3

PDG Environmental, Inc. **ASBESTOS WASTE DISPOSAL MANIFEST/SHIPPING FORM** **Manifest No.** 000090

PDG Project No. 011233

REGULATED ASBESTOS MATERIAL: EPA WASTE SHIPMENT RECORD
R.Q. Hazardous Substance: (asbestos) : Class 9: NA - 2212 Packing Group III

1. Generator Name, Address, Contact Person — Phone
   US Army Reserve Command, 506 Roeder Circle, Fort Snelling, MN 55711, Bill Scoville — 513-782-4984
2. Waste Location Name and Address
   Whitehall USARC, Rifle Range 721 Country Club, Columbus., OH 43213
3. Waste disposal site (WDS) name, mailing address, and physical site location — Phone
   Valley Landfill, RD #2 Box 282A, Irwin, Pa. 15642 — 724-744-7446
4. Name and address of agency responsible for administering the asbestos NESHAP program.
   Ohio EPA, Central District Office, 2305 Westbrooke Dr, Bldg C, Columbus, OH 43266

5a. Category I and/or Category II Non Friable ACM (Brief description of ACM, container quantity and type)	Quantity in cubic yards
	Cubic Yards
	Cubic Yards
	Cubic Yards

5b. Friable ACM (Brief description of ACM, container quantity and type)	Quantity in cubic yards
Pipe Insulation 7 B965	1 Cubic Yards
	Cubic Yards
	Cubic Yards
	1 Total Cubic Yards

6. Abatement Company Name: PDG Environmental Inc. — Address: 102 Technology Lane, Export, PA 15632
   Supervisor Name: Jeff Bucholtz — Signature: Jeff Bucholtz — Phone: 724-326-1449
7. OPERATORS CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international government regulations.

Printed/typed Name	Title	Signature	Date
Jeff Bucholtz	Project Supervisor	Jeff Bucholtz	4/8/02

8. Transporter 1 (Acknowledgement of receipt of materials)
   Address and telephone No. — Project Development Group, Inc. 724-325-1449, 102 Technology Lane, Export, PA 15632

Printed/typed Name	Title	Signature	Date
	Driver		4/22/02

9. Transporter 2 (Acknowledgement of receipt of materials)
   Address and telephone No.

Printed/typed Name	Title	Signature	Date
	Driver		

10. Discrepancy Indication space

11. Waste disposal site owner or operator: Certification of receipt of asbestos materials covered by this manifest except as noted in Item #10.

Printed/typed Name	Title	Signature	Date
Cheryl m Baker		Cheryl mBaker	4-22-02

WHITE - Transporter's Copy CANARY - Generator's Copy PINK - Disposal Facility Copy GOLD - PDG Copy

Attachment 4

United States Department of Commerce
National Institute of Standards and Technology

NVLAP®

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

DEPARTMENT OF COMMERCE * UNITED STATES OF AMERICA *

DATACHEM LABORATORIES
CINCINNATI, OH

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

AIRBORNE ASBESTOS FIBER ANALYSIS

September 30, 2002
Effective through

David F. Alderman
For the National Institute of Standards and Technology

NVLAP Lab Code: 101917-0

NVLAP-01C (11-95)

The American Industrial Hygiene Association

is proud to acknowledge that

DataChem Laboratories, Inc.

Cincinnati, OH

has fulfilled the requirements for and has been formally recognized by AIHA
and is technically competent to perform the analyses listed in the following

SCOPE OF ACCREDITATION

INDUSTRIAL HYGIENE Originally Accredited: 03/07/89		ENVIRONMENTAL LEAD Originally Accredited: 01/03/95		ENVIRONMENTAL MICROBIOLOGY
_X_Metals	___Silica	_X_Paint Chips	___Air	___Bacteria
_X_Asbestos PCM	_X_Asbestos PLM	_X_Dust Wipes	_X_Soil	___Fungi
X Organic Solvents	_X_Passive Monitors			

The above named laboratory agrees to perform all analyses listed above in the scope of accreditation according to applicable policy requirements and acknowledges that continued accreditation is dependent on successful participation in the appropriate proficiency testing programs. This laboratory may be contacted to verify the current scope of accreditation, proficiency testing performance and accreditation status. Accreditation by AIHA is not a guarantee of the validity of the data generated by the laboratory.

Laboratory # 100921

Certificate # 382

Accreditation Expires: 01/01/03

Colleen Becker, CIH, CSP
Chair, Analytical Accreditation Board

Steven P. Levine, Ph.D., CIH
President, AIHA

DATA CHEM LABORATORIES

A SORENSON COMPANY

4/9/02

SUBMITTED TO:

Bill Scoville
IT Corporation
11499 Chester Rd.
Cincinnati, OH 45246

REFERENCE DATA:

Client Sample Nos.:	88OHCOLAPR02001BG through 88OHCOLAPR02002AR
P.O. Number:	832093
Sample Location:	USARC Columbus
Sample Type:	MCE Air Filters
Method Reference:	Airborne Fibers by Phase Contrast Microscopy (PCM) NIOSH Method 7400, Fourth Edition, (dated 8/15/94)
DCL Sample Set ID No.:	02-A-1627
DCL Sample Nos.:	02-10075 through 02-10081

The samples indicated on the following data sheet(s) were analyzed in accordance with the NIOSH Method 7400 outlined in the NIOSH Manual of Analytical Methods (NMAM), Fourth Edition, dated 8/15/94. This method requires that samples have a minimum volume of 400 Liters on a single sample or on consecutive samples and that 2 field blanks (or 10% of the total samples, whichever is greater) be submitted with each set. The results reported are not field blank corrected. Blanks receive a 100-field count, and data are reported as Fibers/Field for use in background correction.

Results are tabulated on the following page(s). Results are reported in Fibers/mm^2, Fibers per Filter and Fibers/mL (Fibers/cc). Concentrations in Fibers/mL are based on sample volumes or flow rates and times provided by the client. Results for all samples are based on the use of a 0.8-µm pore size, 25-millimeter diameter filter having an effective collection area of 385 mm^2. Report applies only to portion(s) of sample(s) analyzed. Samples will be disposed of after 60 days unless otherwise instructed.

The limit of detection (LOD) for this method has been determined to be 7 Fibers/mm^2 for a sample volume of approximately 1200 Liters.

DataChem Laboratories adheres to the QA/QC guidelines set forth in this method which calls for 10% blind replicate analysis. All QA/QC data are maintained at our laboratory by the QA/QC officer.

DataChem Laboratories is NVLAP and AIHA accredited. Laboratory accreditation by the National Institute of Standards and Technology (NIST) does not in any way constitute approval or endorsement by NIST.

Pamela Johnson
Analyst

Anna Marie Ristich
Reviewer

CINCINNATI OFFICE
4388 GLENDALE-MILFORD ROAD
CINCINNATI, OHIO 45242-3706
513 733-5336, FAX 513 733-5347

WEST COAST OFFICE
11 SANTA YORMA COURT
NOVATO, CALIFORNIA 94945
800 280-8071, FAX 415 893-9469

4/9/02

DataChem Laboratories Phase Contrast Microscopy Analytical Report

DCL Sample Set ID: 02-A-1627
Client: IT Corporation
Sample Location: USARC Columbus P.O. No.: 832093

ANALYSIS INFORMATION								
Graticule Area (mm^2):	0.00817							
SAMPLE INFORMATION			*SAMPLE RESULTS*				*LOD*	
Client Sample Nos.	DCL Nos.	Vol. (L)	Fib/Field	Fib/mm^2	**Fib/Filter**	**Fib/mL**	*(Fib/mm^2)*	*(Fib/mL)*
88OHCOLAPR02001BG	02-10075	1,250.00	0.015	<LOD	**<LOD**	**<LOD**	7	0.002
88OHCOLAPR02002BG	02-10076	1,240.00	0.050	<LOD	**<LOD**	**<LOD**	7	0.002
88OHCOLAPR02003BG	02-10077	1,230.00	0.060	7	**2,827**	**0.002**	7	0.002
88OHCOLAPR02004BG	02-10078	NA	0.020	<LOD	**<LOD**	**NA**	7	NA
88OHCOLAPR02005BG	02-10079	NA	0.015	<LOD	**<LOD**	**NA**	7	NA
88OHCOLAPR02001AR	02-10080	710.00	0.075	9	**3,534**	**0.005**	7	0.004
88OHCOLAPR02002AR	02-10081	1,050.00	0.040	<LOD	**<LOD**	**<LOD**	7	0.003

**Comments*:

*NOTES: "NA" indicates no volume was given or the sample is a blank.
All samples counted using the "A" rules.

Pamela Johnsen
Analyst

Anna Marie Ristich
Reviewer

DATA CHEM LABORATORIES
A SORENSON COMPANY

ANALYTICAL REQUEST FORM

☐ **REGULAR** Status (10 working days from receipt)

☐ **RUSH** Status Required -ADDITIONAL CHARGE
RESULTS REQUIRED BY SAME DAY (DATE)
CONTACT DATACHEM LABS PRIOR TO SENDING SAMPLES

Date 4/8/02 Purchase Order No. 8302093
Company Name IT CORP
Address 11499 CHESTER RD
CINTI. OH 45246
Person to Contact BILL SCOLVILLE
Telephone (513) 782-4964
Fax Telephone (513) 782-4663
Billing Address (if different from above)
IT CORP 312 DIRECTORS DR
KNOXVILLE, TN

PUSH
Quote No.

Sample Collection
Sampling Site USARC COLUMBUS
Industrial Process ASBESTOS ABATEMENT
Date of Collection 4/8/02
Time Collected
Date of Shipment 4/8/02
QC Requirements ☐ Standard ☐ Other
Collector's Name TIM SMITH (937) 367-74
Signature Timothy J. Smith

REQUEST FOR ANALYSES 02-A-1627

Laboratory Use Only	Client Sample Number	Media Type*	Sample Volume (Liters)	ANALYSES REQUESTED – Use Method Number if Known
10675	880HCOLAPR02 001 BG		1,250	PCM
10076	880HCOLAPR02 002 BG		1,240	PCM
10077	880HCOLAPR02 003 BG		1,230	PCM
10078	880HCOLAPR02 004 BG		0	PCM
10079	880HCOLAPR02 005 BG		0	PCM
10080	880HCOLAPR02 001 AR		710	PCM
10081	880HCOLAPR02 002 AR		1,050	PCM

CHAIN OF CUSTODY

Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Timothy J. Smith	4/8/02		4/9/02 0855
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time

DATA CHEM LABORATORIES
A SORENSON COMPANY

4/10/02

SUBMITTED TO:

Bill Scoville
IT Corporation
11499 Chester Rd.
Cincinnati, OH 45246

REFERENCE DATA:

Client Sample Nos.:	88OHCOLAPR02001CL through 88OHCOLAPR02005CL
P.O. Number:	832093
Sample Location:	USARC Columbus
Sample Type:	MCE Air Filters
Method Reference:	Airborne Fibers by Phase Contrast Microscopy (PCM) NIOSH Method 7400, Fourth Edition, (dated 8/15/94)
DCL Sample Set ID No.:	02-A-1654
DCL Sample Nos.:	02-10236 through 02 10240

The samples indicated on the following data sheet(s) were analyzed in accordance with the NIOSH Method 7400 outlined in the NIOSH Manual of Analytical Methods (NMAM), Fourth Edition, dated 8/15/94. This method requires that samples have a minimum volume of 400 Liters on a single sample or on consecutive samples and that 2 field blanks (or 10% of the total samples, whichever is greater) be submitted with each set. The results reported are not field blank corrected. Blanks receive a 100-field count, and data are reported as Fibers/Field for use in background correction.

Results are tabulated on the following page(s). Results are reported in Fibers/mm^2, Fibers per Filter and Fibers/mL (Fibers/cc). Concentrations in Fibers/mL are based on sample volumes or flow rates and times provided by the client. Results for all samples are based on the use of a 0.8-µm pore size, 25-millimeter diameter filter having an effective collection area of 385 mm^2. Report applies only to portion(s) of sample(s) analyzed. Samples will be disposed of after 60 days unless otherwise instructed.

The limit of detection (LOD) for this method has been determined to be 7 Fibers/mm^2 for a sample volume of approximately 1200 Liters.

DataChem Laboratories adheres to the QA/QC guidelines set forth in this method which calls for 10% blind replicate analysis. All QA/QC data are maintained at our laboratory by the QA/QC officer.

DataChem Laboratories is NVLAP and AIHA accredited. Laboratory accreditation by the National Institute of Standards and Technology (NIST) does not in any way constitute approval or endorsement by NIST.

Pamela Johnson
Analyst

Anna Marie Ristich
Reviewer

1388 GLENDALE-MILFORD ROAD
CINCINNATI, OHIO 45240-3706
513 733-5336, FAX 513 733-5347

OFFICE
11 SANTA YORMA COURT
NOVATO, CALIFORNIA 94945
800 280-8071, FAX 415 892-9469

4/10/02

DataChem Laboratories Phase Contrast Microscopy Analytical Report

DCL Sample Set ID: 02-A-1654
Client: IT Corporation
Sample Location: USARC Columbus P.O. No.: 832093

ANALYSIS INFORMATION								
Graticule Area (mm^2):	0.00817							
SAMPLE INFORMATION			**SAMPLE RESULTS**				**LOD**	
Client Sample Nos.	DCL Nos.	Vol. (L)	Fib/Field	Fib/mm^2	Fib/Filter	Fib/mL	(Fib/mm^2)	(Fib/mL)
88OHCOLAPR02001CL	02-10236	1,200.00	0.060	7	2,827	0.002	7	0.002
88OHCOLAPR02002CL	02-10237	1,200.00	0.015	<LOD	<LOD	<LOD	7	0.002
88OHCOLAPR02003CL	02-10238	1,200.00	0.055	<LOD	<LOD	<LOD	7	0.002
88OHCOLAPR02004CL	02-10239	NA	0.020	<LOD	<LOD	NA	7	NA
88OHCOLAPR02005CL	02-10240	NA	0.030	<LOD	<LOD	NA	7	NA

**Comments:

*NOTES: "NA" indicates no volume was given or the sample is a blank.
All samples counted using the "A" rules.

Pamela Johnson
Analyst

Anna Marie Ristich
Reviewer

APPENDIX D
Material Safety Data Sheets

MATERIAL SAFETY DATA SHEET

Product Name or Number(as it appears on the label)
Spic and Span

Section I - Product Identification

Manufacturer's Name
Procter & Gamble
Address(No, Street,City,State & Zip Code)
Foodservice & Lodging Products Division
Winton Hill Technical Center
6071 Center Hill Road
Cincinnati, OH 45224

Date
03/01/88
Emergency Telephone No.
1-513-562-1100
Telephone No. for Information

Trade Name: Institutional Pack (Spic &Span) Brand code 08056
Material Safety Data Sheet ID #457010

Section II - Hazardous Ingredients

Hazardous Components (Specific Chemical Identity, Common Name)	OSHA Pel	ACGIH Tlv	Other Limits	% Optional

Sodium carbonate, anionic surfactant, sodium silicate, perfume, sodium sulfate and colorants.
This mixture when tested as a whole, is considered an eye irritant within the meaning of the OSHA hazard communication standard.

Section III - Physical Data

Boiling Point _____F ____C
N/A
Vapor Pressure - N/A
@___F ____C ___mm Hg____psi
Vapor Density (Air=1)
N/A
Solubility in Water
Completely

Specific Gravity (H2O=1)
0.4 g/cc (Bulk density)
% Volatile by Volume
1%
Evaporation Rate (but. ace.=1)
N/A
Appearance and Odor
Green Powder/Pine Odor

Section IV - Fire & Explosion Hazard Data

Flash Point (Method Used)
N/A

Flammable Limits

LEL	UEL
N/A	N/A

Extinguishing Media
CO2,Water,Dry Chemical
Special Fire Fighting Procedures
None required.
Unusual Fire And Explosion Hazards
None known.

Section V - Reactivity Data

Stability
Unstable
Stable X

Conditions to Avoid
None known.

Incompatability (Materials to Avoid)
None known.

Hazardous Decomposition of Byproduct
None known.

Hazardous Polymerization
Will not Occur

Conditions to Avoid
None known.

Section VI - Health Hazard Data

Route(s) of Entry Inhalation_ _ Skin_x_ Ingestion_x_ Other(Specify)Eyes

Health Hazards (Acute and Chronic)
Mild Skin, Eye and Mucous Membrane Irritant

Carcinogenicity Ntp IARC Monographs OSHA Regulated
None listed.

Signs and Symptoms of Exposure
May cause eye irritation. Prolonged skin contact may result in transient superficial effects similar to those produced by mild toilet soaps and detergents. Oral ingestion may result in mild gastrointestinal irritation with nausea, vomiting, and diarrhea.

Medical Conditions Aggravated by Exposure
Use on irritated or extremely dry skin may aggravate the existing condition.

Emergency and First Aid Procedures
IN CASE OF ACCIDENTAL EYE CONTACT: Flush thoroughly with water for 15 minutes. FOR ORAL INGESTION: Dilute with fluids and treat symptomatically FOR SKIN IRRITATION: Rinse exposed area and discontinue use.

Section VII - Precautions for Safety Handling and Use

Steps to be Taken in Case Material is Released or Spilled
Sweep up and dispose.

Waste Disposal Method
Large quantity: Dispose at approved landfill.
Small quantity: Flush down sewer drain with excess water or dispose of as dry scrap. Disposal is to be in compliance with all regulations.

Precautions to be Taken in Handling and Storing
Avoid moisture to prevent caking.

Other Precautions
Product package states: DANGER: In case of eye contact, flush with water for 15 minutes. Get prompt medical attention. KEEP OUT OF THE REACH OF CHILDREN.

Section VIII - Control Measures

Respiratory Protection (Specify Type)
None required for normal use. For bulk banding or other dusty conditions, use respiratory protection approved by NIOSH for dust.

Ventilation Local Exhaust - None required for normal use. Special - None

Mechanical (General) - Acceptable Other - None

Protective Gloves Eye Protection

None required. None required with normal use.

Other Protective Clothing or Equipment None Required

N.A. - Not Applicable N.K. - Not Known

The Submission of this MSDS may be required by law, but this is not an assertion the the substance is hazardous when used in accordance with proper safety practices and normal handling procedures. Data supplied is for use only in connection with occupational safety and health.

Material Safety Data Sheet

Issue Date: March 20, 1991; Revisions: Rev 1: 01/01/94; Rev 2: 05/01/97; Rev 3: 06/09/97, Rev 4: 01/28/98: Rev 5: 09/22/00; Rev 6: 01/29/02

Product Name: D-Lead® Equipment Cleaner

Product Code #: 3102ES

Product Information: (414) 962-5323
Manufacturer: ESCA Tech, Inc.
3747 North Booth Street
Milwaukee, WI 53212
Fax: (414) 962-7003

Transportation Emergency Phone:
1-800-535-5053 Info Trac
(24 hours, during transportation only)

email: eti@execpc.com

Section 1: Material Identification

Proper Shipping Name:	(49 CFR 172.101) Compound, Cleaning Liquid, N.O.S.	
D.O.T. Hazard Name:	(49 CFR 172.101) None	
D.O.T. ID No.:	Same as above	
D.O.T. Hazard Class:	Same as above	
RCRA Hazard Class:	(40 CFR 261) (As Received) None	
E.P.A. Priority Pollutants:	(40 CFR 401.15) None	
Generic Description:	Liquid, concentrated alkaline detergent	
NFPA: None	Health (NFPA): N.A.	Flammability (NFPA): N.A.
Reactivity (NFPA): N.A.	CAS No.: Mixture	OSHA Subpart Z. No
OSHA 1910.119: No	SARA Title III, Sec.312; 313; 372: Yes	TPQ: No
Reportable Quantity: None	State Lists: None	Proposition 65: No
Reproductive Hazard: No	Carcinogen: No	WHMIS (Canada): No
Extremely Hazardous Substances List: No		

Section 2: Ingredients and Hazards

Hazardous Ingredients

Ingredient CAS Number	Max %	SARA applies			Air contaminant levels			Skin Agent
	w/w	312	313	372	TWA/TLV (ppm)	STIEL (ppm)	CEILING (ppm)	
Ethylene Glycol Monobutyl Ether (CAS#: 111-76-2)	4.8	Y	Y	Y	25	None	None	OSHA - Y ACGIH - Y

Other Recommended Limits: None ♦ Contains: Nonionic surfactants, complexing alkali and builders. Does not contain EDTA, chelates, phosphates, stearates, solvents, free alkalies, abrasives, citrates, tartrates, or acetates. Contains 2.0 % silicates. All ingredients are listed with EPA TSCA Inventory of Chemical Substances.

Section 3: Physical Data

Boiling Point:	208° F
Vapor Pressure:	17mm Hg.
Vapor Density (Air = 1):	>1, same as water
Melting Point:	28° F, -2° C
Specific Gravity (H_2O = 1):	1.033 (8.60 lbs./gal.)
Evaporation Rate (Butyl Acetate = 1):	0.36, (Slower)
Solubility in Water:	Infinite
Appearance and Odor:	Purple liquid, moderately viscous, characteristic odor
pH:	11.5 to 11.8 - undiluted; 10.5 at a 4:1 dilution with water

Section 4: Fire and Explosion Hazard Data

Flash Point (method used): NA ◆ Flammable Limits: Material will not burn ◆ LEL: NA ◆ UEL: NA ◆ Extinguishing Media: Material is not flammable ◆ Special Fire Procedures: None ◆ Unusual Hazards: None Material will not support combustion.

Section 5: Reactivity Data

Stable/Unstable: Stable ◆ Conditions to Avoid: Do not mix with other chemicals ◆ Hazardous Decomposition/Byproducts: Thermal decomposition may produce carbon monoxide ◆ Hazardous Polymerization: Will not occur ◆ Incompatibility: Strong oxidizing agent such as bleach. Should not be mixed with other chemicals.

Section 6: Health Hazard Data

Routes of entry:	Ingestion possible. No inhalation normally. Eye contact possible if splashed.
Acute/Chronic Health Effects:	**INHALATION:** Does not generate vapors at normal temperatures of use. **SKIN:** May defat the skin. **INGESTION:** Nausea, dizziness, fatigue.
Carcinogenicity:	None known. NTP? No IARC Monographs? No OSHA Regulated? No
Signs/Symptoms of Exposure:	SKIN: De-fatting of the skin. EYES: Burning. ORAL: Nausea, dizziness, fatigue.
Emergency and First Aid:	SKIN: Remove from source. Rinse with water. Treat as a caustic burn. EYES: Flush thoroughly with cool water for 15 minutes, lifting lids. Get medical attention. Treat as a caustic burn. INHALATION: Remove to fresh air. ORAL: Do not induce vomiting, keep quiet, get medical attention immediately. Treat as alkaline detergent.
Medical Condition Generally Aggravated by Exposure:	None known.

Section 7: Spill, Leak, and Disposal Procedures

Steps to be Taken in Case Material is Released or Spilled: Stop leak at source. Small spills can be mopped up, and floor rinsed with water. For large spills, stop leak at source and absorb onto inert medium for disposal. Collect in an approved container. Material is an alkaline detergent, do not release to streams, lakes, storm sewer, etc. ◆ Waste Disposal Method: According to all local, state and federal regulations.

Section 8: Special Protection Information

Respiratory Protection: None required ◆ Ventilation: Not needed ◆ Protective Gloves: Neoprene, nitrile, natural rubber or PVC ◆ Eye Protection: Chemical safety goggles or faceshield ◆ Other Protective Clothing or Equipment: Eye wash and safety shower, impervious clothing ◆ Work/Hygienic Practices: Wash with soap and water. Discard contaminated clothing according to state or EPA regulations.

Section 9: Special Precautions and Comments

Storage Requirements: Store above 32°F. Keep from freezing. If frozen, product should thaw without adverse effects. Product may appear cloudy. Keep out of extreme heat. Generally stored at temperatures between 40° and 90°F, out of direct sunlight. Heat buildup will cause product to cloud and separate irreversibly.

Comments: Product has a shelf life of 9-12 months. Keep containers tightly closed when not in use. Keep out of reach of children. For professional use only. After use, solution will contain dissolved and suspended heavy metals along with fats, oils and greases. Discharge waste water in accordance with all applicable local, state and federal regulations and in accordance with all water discharge permits.

D:\My Documents\Safety\SDAF EQUIPMW5DS\Equip5 .pd

Heavy Metal Cleaning Solution (HMCS-101)

(Catalog # RP-104)

General Information - Application Information - MSDS

I Product: HEAVY METAL CLEANING SOLUTION (HMCS-101)

Description: Clear Liquid
Manufacturer:

Chemical Solutions Int'l. Corp.
P.O. Box 891185
Houston, TX 77289-1185

Date Prepared: July 2000.
Emergency Telephone No.
(281) 992-3031
(800) 424-4804
E-mail: jimarnold@chemicalsolutionsintl.com
Home Page: www.chemicalsolutionsintl.com

II Health Hazard Data:
Health Hazards (Acute & Chronic)
EYES: May cause discomfort.
SKIN: Concentrate will dry out and chap sensitive skin as would detergent.
INHALATION of fumes may upset stomach.

SIGNS & SYMPTOMS OF EXPOSURE:

EYES:Redness, tearing, blurred vision.
SKIN: Dryness, redness, chapping.
INGESTION may cause vomiting.

FIRST AID: EYES: Flush 15 minutes with water.
SKIN: Wash with soap and water.
INHALATION: Move to fresh air. Apply artificial respiration if breathing has stopped.
INGESTION: Do not induce vomiting. If any irritation persists, seek medical atttention.

III Precautions for Safe Handling & Use:

If material is spilled, remove leaking package to safe area. Flush with water.
Disposal: Any approved method for dilute cleaner.
Surfactants are highly biodegradable.

IV Physical Data:

pH.....10

V Hazardous Ingredients:

Hg Cleaning Solutions is a proprietary formulation which contains small amounts of minerals and organics.
This product should be handled accordingly.
Complies with OSHA 29 CFR XVIII-1910.1200 Section (I) "Trade Secrets"
Contains no hazardous components under current OSHA
definitions.

VI Special Protection & Precautions:

Hygienic Practices: Wash after each shift.
Remove and wash contaminated clothing before re-used.
Work Practices: Wear goggles or face shield.
Rubber gloves.
Other Protective Clothing: Long sleeved shirt buttoned at neck is desirable. Rubber boots.

VII Reactivity Data:

Stable under normal use and storage conditions.
Incompatible with strong oxidizing agents.
Hazardous decomposition or byproducts - oxides of carbon.

VIII Fire & Explosion Data:

Flash Point/Method Used..... None/COC.

IX Control Measures:

Solubility in water.....100% Boiling Point..... 212°F Vapor Pressure/Density..... Same as water Evaporation Rate (Butyl Acetate=1).....<1 Appearance & Odor: Clear liquid with medium viscosity and synthetic cleaner odor. Specific Gravity..... 1.06	Respiratory Protection: Not Necessary. Ventilation: Local Exhaust/Desirable. Mechanical/Helpful in congested areas. (Complies with OSHA 174, Sep. 1985.)

HMIS CODE: Health 1 Flammability 0 Reactivity 0 Personal Protection B

Back to Main Catalog

APPENDIX E
Inspection and Clearance Sampling Report, EA Group, May 14, 2002

EA GROUP

EA GROUP 20 ANNIVERSARY 1982-2002

May 14, 2002

Mr. William Scoville
IT Corporation
11499 Chester Road
Cincinnati, Ohio 45246

RE: **Wipe Sampling for Ambient Lead in Dust**
Whitehall Memorial USARC, 721 Country Club, Columbus, Ohio
P.O. No. 190113; Tracking No. 832095.18
OH30745

Description of Work

EA Group, Mentor, Ohio was contracted by IT Corporation, Cincinnati, Ohio to perform ambient lead in dust sampling in the firing range at Whitehall Memorial USARC, at 721 Country Club in Columbus, Ohio. Horizontal surfaces selected by IT Corporation were sampled to determine total lead content in the settled dust. All sampling was conducted by EA Group's Certified Lead Risk Assessor Mr. Edward Luiza Regovich (OH000444) on April 29, 2002.

Lead in Dust Wipe Sampling

Sampling was conducted in accordance with IT Corporation's *Wipe Sampling for Settled Lead-Contaminated Dust* protocol, portions of which were provided to EA Group. Lead in dust wipe samples were generally secured over a 1 square-foot area following an "S" pattern from side-to-side, folded in half, and wiped over the same area at a 90° angle to the first "S" pattern (top-to-bottom). Latex gloves were changed between sampling episodes. Samples were then returned to the glass scintillation vials, sealed, and labeled for transport to the laboratory. Chain-of-custody protocol was maintained.

One field blank and one spike sample were also prepared and submitted for analysis. The field blank was prepared by removing and replacing the cap of the vial in the sampling area. A spike sample, which was provided to EA Group by IT Corporation, was prepared in the laboratory by treating sampling media with a known quantity of lead dust. The spike sample was taken into the field during sampling, and submitted blindly to the analytical laboratory.

Sample Analysis

All lead in dust wipe samples were acid digested in accordance with U.S. EPA Method SW-846 6010B by a Corps of Engineers certified laboratory (EnviroData Group, Lexington, Kentucky).

7118 Industrial Park Boulevard • Mentor, Ohio 44060-5314
440-951-3514 • 800-875-3514 • Fax: 440-951-3774 • www.eagroup-ohio.com

EA GROUP 20th ANNIVERSARY 1982-2002

EA GROUP
Consultants

May 14, 2002
IT Corporation
Wipe Sampling for Ambient Lead in Dust
Whitehall Memorial USARC, 721 Country Club, Columbus, Ohio
P.O. No. 190113; Tracking No. 832095.18
OH30745

Results of the wipe sample analyses are summarized in the attached table and are detailed in the attached Laboratory Analytical Report. All results are expressed in micrograms per square foot ($\mu g/ft^2$) for lead in dust samples, except the blank and spike, which are in μg/wipe.

The result for the spike sample was 209 μg/wipe. The sample was spiked with 187 μg lead; therefore, the laboratory achieved a 112% recovery on the sample, which is within acceptable range.

All surface wipe samples passed the clearance criterion of 200 $\mu g/ft^2$ for uncarpeted floors, walls, and ceiling.

Also attached to this report are the *Visual Clearance Form* and the *Dust Sampling Form*, and a figure illustrating the sampling locations. It is noted that a sample from the exhaust fan inlet could not be secured because the system had been removed and sealed with a metal plate. Similarly, a sample from the exhaust fan outlet could not be secured because the outlet had been capped with a metal cover.

If you require any additional information, please contact the undersigned. Thank you for consulting EA Group.

Sincerely,

EA Group

Timothy S. Bowen,
Vice President-Operations

Summary of Wipe Sample Analyses
IT Corporation: Whitehall Memorial USARC, 721 Country Club, Columbus, Ohio

Sample Date: **April 29, 2002**

Sample ID	Location	Lead
88OHCOL 29APR02- 001 DT	Exhaust Fan, Inlet	
88OHCOL 29APR02- 002 DT	Exhaust Fan, Outlet	
88OHCOL 29APR02- 003 DT	Firing Line	90
88OHCOL 29APR02- 004 DT	Middle of Range	57
88OHCOL 29APR02- 005 DT	Bullet Trap, firing line side	19
88OHCOL 29APR02- 006 DT	Bullet Trap, wall side	77
88OHCOL 29APR02- 007 DT	Ceiling, firing line	2.90
88OHCOL 29APR02- 008 DT	Ceiling, middle of range	2.72
88OHCOL 29APR02- 009 DT	Ceiling, bullet trap	19
88OHCOL 29APR02- 010 DT	Wall, L side	26
88OHCOL 29APR02- 011 DT	Spike Sample [187 µg]	209
88OHCOL 29APR02- 012 DT	Wall, L side	ND
88OHCOL 29APR02- 013 DT	Field Blank	< 2.50
88OHCOL 29APR02- 014 DT	Wall, L side	ND
88OHCOL 29APR02- 015 DT	Wall, R side	ND
88OHCOL 29APR02- 016 DT	Wall, R side	ND
88OHCOL 29APR02- 017 DT	Wall, R side	ND
88OHCOL 29APR02- 018 DT	Front Wall	6.51
88OHCOL 29APR02- 019 DT	Front Wall	114
88OHCOL 29APR02- 020 DT	Front Wall	7.62
88OHCOL 29APR02- 021 DT	Back Wall	ND
88OHCOL 29APR02- 022 DT	Back Wall	4.04
88OHCOL 29APR02- 023 DT	Back Wall	4.29
88OHCOL 29APR02- 024 DT	Floor, outside Range	11

Notes: Results expressed in micrograms per square foot (µg/ft²) of surface area, except Field Blank and Spike Sample, which are µg/wipe.

Exhaust Fan inlet removed and covered with metal, could not be sampled.
Exhaust Fan outlet capped with metal cover, could not be sampled.

ND = not detected (< 2.5 µg/ft²).

Spike sample had 112% recovery (acceptable).

Dust Sampling Form

Installation WHITEHALL MEMORIAL USARC Army POC SGT. WARDROP
Building Address or Location 721 COUNTRY CLUB, COLUMBUS, OHIO
Range Unit No. OH 014
Date Cleanup Completed _____ Time Cleanup Completed _____ Date and Time Sampling Initiated 4-29-02 1000

Clearance Categories:

1. Interior treatment without containment
2. Interior treatment with containment
3. Exterior work (including soil)
4. Routine Maintenance

38 OHCOL 29APR02 ### AT

Sample No.	Sample Location	Clearance Category No.	Sample Area Dimensions	Sample Area (ft^2)	Lab Results ($\mu g/ft^2$)	Pass or Fail
-001	EXHAUST FAN INLET	NO SAMPLE SECURED - SEE COMMENTS				
-002	EXHAUST FAN OUTLET	NO SAMPLE SECURED - SEE COMMENTS				
-003	FIRING LINE	1	12" X 12"	1 SQ FT	90	P
-004	MID-RANGE	1			57	P
-005	BULLET TRAP (FIRING LINE)	1			19	P
-006	BULLET TRAP (WALL SIDE)	1			77	P
-007	CEILING	2			2.90	P
-008	CEILING	2			2.72	P
-009	CEILING	2			19	P
-010	SIDEWALL - LEFT	2			26	P
-011	SPIKE	N/A			209	P (FROM)
-012	SIDEWALL - LEFT	2			<2.50	P
-013	BLANK	N/A			<2.50	P
-014	SIDEWALL - LEFT	2			<2.50	P
-015	" RIGHT	2			<2.50	P
-016	"	2			<2.50	P
-017	"	2			<2.50	P
-018	FRONT WALL	2			6.51	P
-019	"	2			114	P
-020	"	2			7.62	P
-021	BACK WALL	2			<2.50	P
-022	"	2			4.04	P
-023	"	2			4.29	P
-024	FLOOR OUTSIDE RANGE	1	"	"	11	P

Comments EXHAUST FAN INLET REMOVED AND COVERED WITH METAL. EXHAUST FAN OUTLET CAPPED WITH METAL COVER

Date of Sample Collection 4-29-02 Date Shipped to Lab 4-29-02
(Attach a Copy of the Chain of Custody to this Form)

Name of Lab and Phone No. ENVIRODATA CORPORATION 800-489-3506
Name of Clearance Examiner (print) EDWARD LUIZA
Certification Title and License Number (EPA, State, or both, if applicable) OH 000444 LEAD RISK ASSESSO
Signature: E.R. Luiza Date 4-29-02

Visual Clearance Form

Installation WHITEHALL MEMORIAL USARC Army POC SGT. WARDROP
Building Address or Location 721 COUNTRY CLUB, COLUMBUS, OHIO
Range Unit No. OH014

Date Cleanup Completed _____ Time Cleanup Completed _____ Date and Time Inspection Initiated 4-29-02 1000

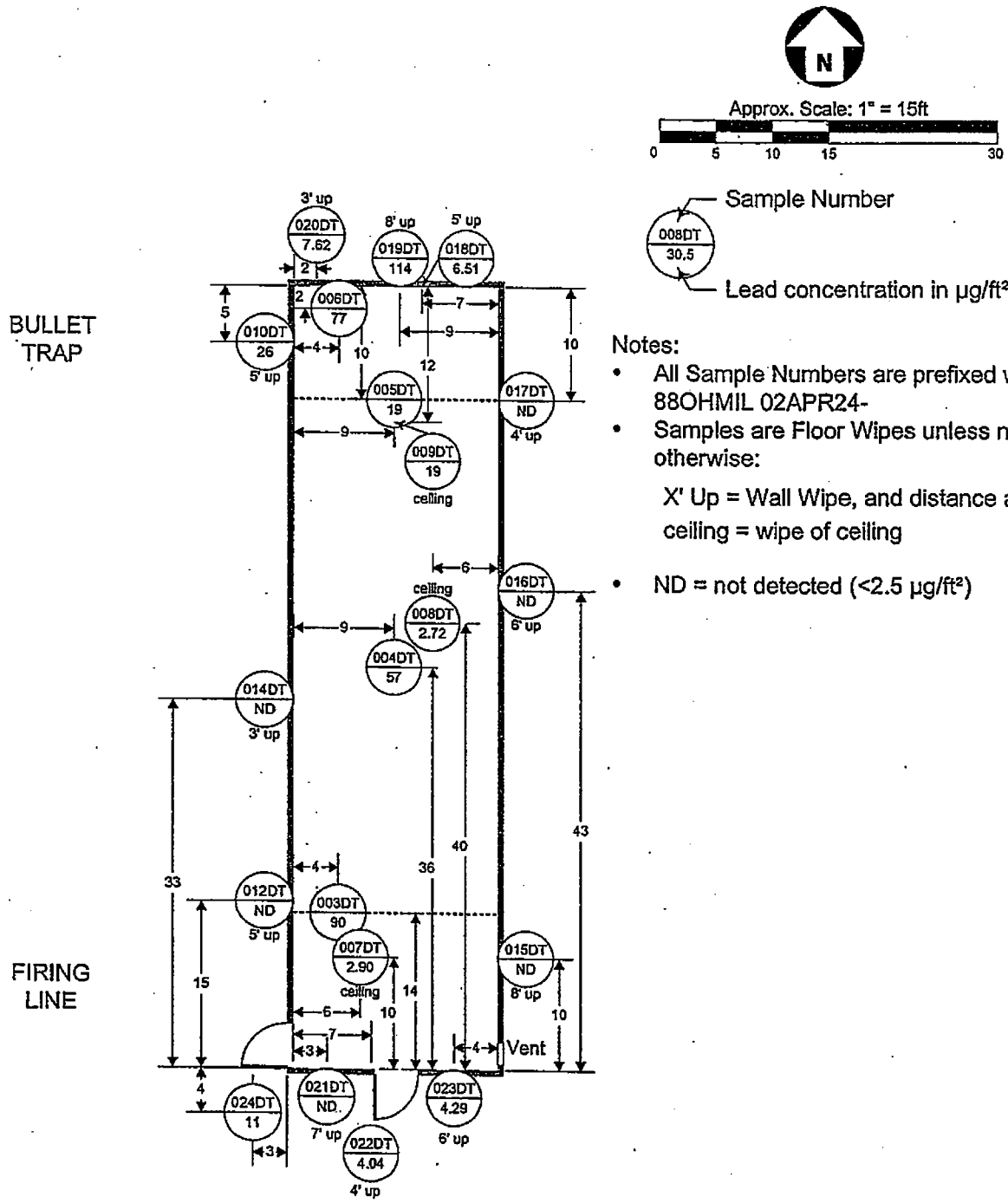
Lead Hazard Control Contractor name IT CORPORATION
Address 11499 CHESTER RD.
CINCINNATI, OHIO
Telephone No. 513-782-4700

Location within Range	Work Completed? (yes/no)	Visible Dust Seen? (yes/no)	More Work Required? (yes/no)	Comments
Firing Line Floor	✓	NO	NO	
Floor between Firing Line and Bullet Trap	✓	NO	NO	
Bullet Trap Floor	✓	NO	NO	
Ceiling	✓	NO	NO	
Sidewalls	✓	NO	NO	
Front Wall	✓	NO	NO	
Back Wall	✓	NO	NO	
Ventilation System	REMOVED	NO	NO	

Does range venting discharge to soil? ✓ Yes ___ No
Was contaminated soil removed? ___ Yes ___ No
Is additional soil treatment required? ___ Yes ___ No

Other Comments: _____

Name of Clearance Examiner (print) EDWARD LUIZA
Certification Title and License Number OH00444 LEAD RISK ASSESSOR
(EPA, State, or both, if applicable)
Signature: E.R. Luiza Date 4/29/02



Notes:

- All Sample Numbers are prefixed with 88OHMIL 02APR24-
- Samples are Floor Wipes unless noted otherwise:

  X' Up = Wall Wipe, and distance above floor

  ceiling = wipe of ceiling

- ND = not detected (<2.5 µg/ft²)

P.O. No. 190113
Tracking No. 832095.18

General Site Features and Sample Location Diagram
Whitehall Memorial USARC, 721 Country Club, Columbus, Ohio

IT Corporation - Cincinnati, Ohio

Drawn by: VMB	Reviewed by: TSB	EAG Project No. OH30745	Date: May 2, 2002	Rev. No. 0	Figure No. 1

F:\PROJECTS\PB\OH30745\30745PBW.VSD

EA GROUP

EA GROUP
Laboratories

Laboratory Analytical Report

IT Corporation
11499 Chester Rd.
Cincinnati, OH 45246

Attention:
Bill Scoville

Project Identification
Lead Inspection

OH30745
Purchase Order:

EA Group
Order Number
0204-00363

Donald R. Richner, CIH
Laboratory Manager

May 1, 2002

EA GROUP
Laboratories

Project Summary

The following analytical report contains the results as requested for samples submitted to EA Group. The results included in this report have been reviewed for compliance with the analytical methods indicated in this report. All data have been found to be compliant with accepted laboratory protocol. Exceptions, if any, are noted below. Analytes appearing in bold type were analyzed at a subcontract facility. EA Group is AIHA and ELAP accredited. Those accreditations require we state the following: As an analytical result progresses above the reporting limit, it has less variability than a result reported at or near the reporting limit.

Data Interpretation

For assistance with report interpretation or questions regarding regulatory limits, please contact Client Services at 440-951-3514 or customerservice@eagroup-ohio.com.

Sample Summary

Sample Receive Date: 4/29/02

EAG Sample Identification	Client Sample Identification	EAG Sample Identification	Client Sample Identification
020400363 - 001	88OHCOL29APR02003DT	020400363 - 002	88OHCOL29APR02004DT
020400363 - 003	88OHCOL29APR02005DT	020400363 - 004	88OHCOL29APR02006DT
020400363 - 005	88OHCOL29APR02007DT	020400363 - 006	88OHCOL29APR02008DT
020400363 - 007	88OHCOL29APR02009DT	020400363 - 008	88OHCOL29APR02010DT
020400363 - 009	88OHCOL29APR02011DT	020400363 - 010	88OHCOL29APR02012DT
020400363 - 011	88OHCOL29APR02013DT	020400363 - 012	88OHCOL29APR02014DT
020400363 - 013	88OHCOL29APR02015DT	020400363 - 014	88OHCOL29APR02016DT
020400363 - 015	88OHCOL29APR02017DT	020400363 - 016	88OHCOL29APR02018DT
020400363 - 017	88OHCOL29APR02019DT	020400363 - 018	88OHCOL29APR02020DT
020400363 - 019	88OHCOL29APR02021DT	020400363 - 020	88OHCOL29APR02022DT
020400363 - 021	88OHCOL29APR02023DT	020400363 - 022	88OHCOL29APR02024DT

Quality Control Narrative

 Unless noted, soil, sludge, and sediment results are reported on dry weight basis. The "Sample Reporting Limit" is based on the method used for analysis and does not refer to any regulatory limit.

EA GROUP
Laboratories

EAG Workorder: 0204-00363

Client Project: Lead Inspection

EAG ID: 0204-00363-1 Client ID: 88OHCOL29APR02003DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	90	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-2 Client ID: 88OHCOL29APR02004DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	57	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-3 Client ID: 88OHCOL29APR02005DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	19	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-4 Client ID: 88OHCOL29APR02006DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	77	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-5 Client ID: 88OHCOL29APR02007DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	2.90	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-6 Client ID: 88OHCOL29APR02008DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	2.72	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-7 Client ID: 88OHCOL29APR02009DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	19	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EA GROUP
Laboratories

EAG Workorder: 0204-00363

Client Project: Lead Inspection

EAG ID: 0204-00363-8 Client ID: 88OHCOL29APR02010DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	26	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-9 Client ID: 88OHCOL29APR02011DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	209	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-10 Client ID: 88OHCOL29APR02012DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	<2.50	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-11 Client ID: 88OHCOL29APR02013DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	<2.50	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-12 Client ID: 88OHCOL29APR02014DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	<2.50	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-13 Client ID: 88OHCOL29APR02015DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	<2.50	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-14 Client ID: 88OHCOL29APR02016DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	<2.50	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EA GROUP
Laboratories

EAG Workorder: 0204-00363

Client Project: Lead Inspection

EAG ID: 0204-00363-15 Client ID: 88OHCOL29APR02017DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	<2.50	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-16 Client ID: 88OHCOL29APR02018DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	6.51	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-17 Client ID: 88OHCOL29APR02019DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	114	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-18 Client ID: 88OHCOL29APR02020DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	7.62	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-19 Client ID: 88OHCOL29APR02021DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	<2.50	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-20 Client ID: 88OHCOL29APR02022DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	4.04	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EAG ID: 0204-00363-21 Client ID: 88OHCOL29APR02023DT Sampled: 4/29/2002 Received: 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	4.29	2.50	ug/ft2	5/01/2002	5/01/2002	REF

EA GROUP
Laboratories

EAG Workorder: 0204-00363

Client Project: Lead Inspection

EAG ID: 0204-00363-22 **Client ID:** 88OHCOL29APR02024DT **Sampled:** 4/29/2002 **Received:** 4/29/2002

Parameter	Result	Sample Reporting Limit	Units	Prep Date	Analysis Date	Analys
Lead, Wipe: SW846-6010B	11	2.50	ug/ft2	5/01/2002	5/01/2002	REF

APPENDIX

FIELD REQUEST FOR LABORATORY ANALYSIS

Company Name: IT CORPORATION

Address: 11499 CHESTER RD.
CINCINNATI, OH 45246

Attention: Bill Scoville

Results Needed By: 5-02 1630

Normal: _____ RUSH: X (TAT)

Priority: _____ (confirm w/ lab)

Date: _____ Time: _____

Telephone: 513-782-4700 Fax No: 513-782-4663

Sampled by: E.L.

Project Name: LEAN INSP. Project Number OH 30745

Rush Authorized by: _____ Project Category: Pb

Special Billing/Reporting: MINIMUM DETECTION - 200 ug/ft²
PER IT CORP PROTOCOLS

Internal Contact: T.B

CHAIN OF CUSTODY

Relinquished by		Received by	
Name	Date/Time	Name	Date/Time
E. Lunga	4/29/02 1530	T. Bowen	4-29-02 1530
T. Bowen	4-29-02 1700	[signature]	4/29 1700

EA GROUP FIELD OPERATIONS - REQUEST FOR LABORATORY ANALYSIS

Page: 1 of 2

Sample No.	Split ID	Date/Time Collected	Matrix/ Media	Area/Vol. (units)	1	2	3	4	5	6	7	8	9	Comments
080HCOL29APR02	003 DT	4-29-02	SW	1 SQ/FT	V									
	004													
	005													
	006													
	007													
	008													
	009													
	010													
	011													
	012													
	013													
	014													
	015													
	016													
	017													
	018													
	019													
	020													
	021													
	022													

Media:

A1	Air (25 mm)	A6	Air (impinger)	SL	Sludge/Slurry
A2	Air (37 mm)	B	Bulk	SW	Swab
A3	Air (sorbent)	R/CC	Char. Canister	O	Oil
A4	Air (badge)	R/AT	Alpha track	W	Water/Liquid
A5	Air (bag)	S	Soil	DW	Drinking Water

Sample condition upon receipt:
Intact _____
Not Intact _____

Analytes:

1 LEAD - EPA SW-846 METHOD 6010B
2 _____
3 _____
4 _____
5 _____
6 _____
7 _____
8 _____
9 _____

EA GROUP FIELD OPERATIONS - REQUEST FOR LABORATORY ANALYSIS

Sample No.	Split ID	Date/Time Collected	Matrix/ Media	Area/Vol. (units)	1	2	3	4	5	6	7	8	9	Comments
~~OH~~ 88OHCOL79APR02023DT		4-29-02	SL	1 SQ/PT	✓									
OH ↓ ↓	024 DT	↓	↓	↓	✓									
OH														
OH														
OH														
OH														
OH														
OH														
OH														
OH														
OH														
OH														
OH														
OH														
OH														
OH														
OH														
OH														
OH														
OH														

Media:

A1	Air (25 mm)	A6	Air (impinger)	SL	Sludge/Slurry
A2	Air (37 mm)	B	Bulk	SW	Swab
A3	Air (sorbent)	R/CC	Char. Canister	O	Oil
A4	Air (badge)	R/AT	Alpha track	W	Water/Liquid
A5	Air (bag)	S	Soil	DW	Drinking Water

Sample condition upon receipt:
Intact _____
Not Intact _____

Analytes:

1 LEAD EPA SW846-6010B
2 _____
3 _____
4 _____
5 _____
6 _____
7 _____
8 _____
9 _____

EnviroData Group
Accredited Lab Data for Today's Environment

2520 Regency Road
Lexington, KY 40503-2921
Phone: 859-276-3506
Toll Free: 800-489-3506
Fax: 859-278-5665
Email: info@envirodatagroup.com
www.envirodatagroup.com

May 1, 2002

Mr. Timothy Bowen
EA Group
7118 Industrial Park Blvd
Mentor, OH 44060

RE: Data Package and Narrative
IT Range Project
COC 12219

Dear Mr. Bowen:

Enclosed is the case narrative, which summarizes any issues encountered with the analyses for the samples referenced below.

General

Twenty-two (22) samples were received by EnviroData Group (EDG) on April 30, 2002. The samples were received at 24°C and intact. The temperature of the samples was measured upon receipt and was noted on the Chain of Custody Form #12219.

The individual client sample name and laboratory sample name cross-reference list is provided, as follows:

EnviroData Group Lab Number	Client Sample ID
114235	020400363-1
114236	020400363-2
114237	020400363-3
114238	020400363-4
114239	020400363-5
114240	020400363-6
114241	020400363-7
114242	020400363-8
114243	020400363-9
114244	020400363-10
114245	020400363-11
114246	020400363-12
114247	020400363-13

114248	020400363-14
114249	020400363-15
114250	020400363-16
114251	020400363-17
114252	020400363-18
114253	020400363-19
114254	020400363-20
114255	020400363-21
114256	020400363-22

Metals- Lead

Samples 114235 - 114256 were analyzed for Total Lead by Method SW6010B on 05/01/2002.

Instrument Calibration: The calibration criteria were within the corresponding QC limits.

Initial Calibration Verification (ICV): The ICV was within the corresponding QC limits for all project analytes.

Initial Calibration Blanks (ICB): The ICB was below the corresponding reporting limits for all project analytes.

ICS A/ICS AB: The ICS A and AB at the beginning and end of the run were within acceptable limits.

Continuing Calibration Verification (CCV): All CCVs were within the corresponding QC limits for all project analytes.

Continuing Calibration Blanks (CCB): All CCBs were below the corresponding reporting limits for all project analytes.

Method Blank (MB): The MB results were below the corresponding reporting limits for all project analytes.

Laboratory Control Sample (LCS): The LCS percent recovery was within the corresponding QC limits for all project analytes.

Matrix Spike/Matrix Spike Duplicate (MS/MSD): The MS/MSD samples' percent recoveries and relative percent differences were within corresponding QC limits for all project analytes.

Post Digestion Spike (PDS): The Post Digestion Spike was within the acceptance criteria for the target analyte.

If you have any questions regarding the enclosed information, please contact Lisa Sexton at (859) 276-3506 ext. 57.

Sincerely,
EnviroData Group

Lisa Sexton
Project Manager

EnviroData Group
Accredited Lab Data for Today's Environment

2520 Regency Rd
Lexington, KY 4050
Phone: 859-276-350
Toll Free: 800-489-35C
Fax: 859-278-566
E-mail: info@envirodatagroup.co

Analytical Results

EA Group
Attn: Mr. Timothy Bowen
7118 Industrial Park Blvd
Mentor, OH 44060

Project Name:
Project Number:
Chain of Custody: 12219

cc:

Date Received: 04/30/2002 Collector: Client Temperature Received: 24
Project Manager: Lisa Sexton

	Result	Units	Client Limit	RL	Qualifiers	Analyzed/Analyst	Extracted
Laboratory Sample #: 114235 Client Sample ID: 020400363-1							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	90	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114236 Client Sample ID: 020400363-2							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	57	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114237 Client Sample ID: 020400363-3							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	19	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114238 Client Sample ID: 020400363-4							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	77	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114239 Client Sample ID: 020400363-5							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	2.90	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114240 Client Sample ID: 020400363-6							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	2.72	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114241 Client Sample ID: 020400363-7							Sampled: 04/29/2002
Client Sample #:							

EnviroData Group

Chain of Custody: 12219
Project Name:
Project Number:

	Result	Units	Client Limit	RL	Qualifier	Analyzed/Analyst	Extracted
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	19	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/2002
Laboratory Sample #: 114242 Client Sample ID: 020400363-8						Sampled: 04/29/2002	
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	26	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/2002
Laboratory Sample #: 114243 Client Sample ID: 020400363-9						Sampled: 04/29/2002	
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	209	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/2002
Laboratory Sample #: 114244 Client Sample ID: 020400363-10						Sampled: 04/29/2002	
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	< 2.50	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/2002
Laboratory Sample #: 114245 Client Sample ID: 020400363-11						Sampled: 04/29/2002	
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	< 2.50	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/2002
Laboratory Sample #: 114246 Client Sample ID: 020400363-12						Sampled: 04/29/2002	
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	< 2.50	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/2002
Laboratory Sample #: 114247 Client Sample ID: 020400363-13						Sampled: 04/29/2002	
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	< 2.50	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/2002
Laboratory Sample #: 114248 Client Sample ID: 020400363-14						Sampled: 04/29/2002	
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	< 2.50	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/2002
Laboratory Sample #: 114249 Client Sample ID: 020400363-15						Sampled: 04/29/2002	
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	< 2.50	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114250 Client Sample ID: 020400363-16						Sampled: 04/29/2002	
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	6.51	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200

EnviroData Group

Chain of Custody: 12219
Project Name:
Project Number:

	Result	Units	Client Limit	RL	Qualifier	Analyzed/Analyst	Extracted
Laboratory Sample #: 114251 Client Sample ID: 020400363-17							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	114	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114252 Client Sample ID: 020400363-18							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	7.62	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114253 Client Sample ID: 020400363-19							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	< 2.50	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114254 Client Sample ID: 020400363-20							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	4.04	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114255 Client Sample ID: 020400363-21							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	4.29	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200
Laboratory Sample #: 114256 Client Sample ID: 020400363-22							Sampled: 04/29/2002
Client Sample #:							
ICP TOTAL		**Method: SW6010B**				**Prep. Method: SW 3050B**	
Total Lead	11	ug/Wipe	N/A	2.50		05/01/2002 / JDS	04/30/200

All samples were received intact and properly preserved unless otherwise noted.
The results reported relate only to the samples tested.
This report shall not be reproduced except in full, without written approval of this laboratory.

ACCREDITED IN ACCORDANCE WITH nelac
Lab# E87286

ACCREDITED
Lab#: 100343

Submitted by: Lisa Sexton
Project Manager: Lisa Sexton

APPENDIX F
Hazardous Waste Management Records

IT Corporation
11499 Chester Road
Cincinnati, OH 45246-4012
Tel. 513.782.4700
Fax. 513.782.4807

A Member of The IT Group

To: Heritage Environmental Services, LLC

CC: File PN826183-03991801

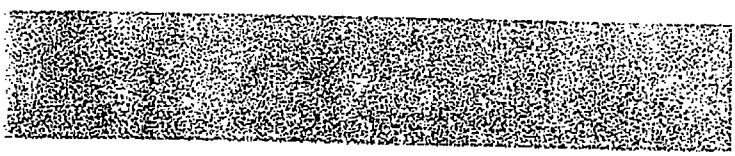
From: Anthony W. Ashcraft

Date: 08/30/01

Re: Profiles for the USARC Indoor Firing Ranges

Please let this serve as authorization for Heritage personnel to copy the profiles for all indoor firing range projects. It is understood that the waste streams for this project are constant and consistent from one range to the next. If IT Corporation generates any additional waste stream(s) IT Corporation will notify Heritage and complete a separate profile to cover the additional waste stream(s).

Anthony W. Ashcraft
8/30/01



HERITAGE ENVIRONMENTAL SERVICES, LLC
WASTESTREAM SURVEY FORM
(877)436-8778
Heritage Form HERWS01

Heritage Use Only	
Quote #	Approval Fee
Ws#	P.O.
Sample #	Heritage Contact

Preferred Service Location:
Indianapolis, IN ☒ Charlotte, NC ☐ Kansas City, MO ☐ Lemont, IL ☐ Coolidge, AZ ☐ Williston, VT ☐ Louisville, KY ☐
Heritage Hazardous Landfill (Roachdale, IN) ☐ Heritage Non-Hazardous Landfill (Roachdale, IN) ☐ Toledo, OH ☐

1. GENERATOR INFORMATION

Heritage Generator Number (if known)	
Generator Name	USARC
Address	
City, State, Zip	
Tech. Contact	
Phone	Fax
E-mail	
US EPA ID	
State ID Numbers	

Generator Status
LQG ☐ SQG ☐ CESQG ☒ Non-hazardous ☐

2. BILLING INFORMATION

Quote to: Generator ☐ Customer ☒ Other ☐

Customer	IT Corporation
Address	312 Directors Drive
City, State, Zip	Knoxville, TN 37923-4799
Contact Name	Tony Ashcraft
Phone 513-782-4557	Fax 513-782-4807
E-mail	

3. MANIFEST MAIL ADDRESS *Generator* ☐ *Billing* ☒

Contact Name	Tony Ashcraft
Company	IT Corporation
Address	11499 Chester Road
City, State, Zip	Cincinnati, OH 45246-4012

4. SIC Code wastestream was generated under (If code is 2911, 28—,or 3312 complete form HERWS03) 9711

5. Common Name Lead Contaminated Rinse Water

6. Process Generating Waste Demo / Cleaning of Indoor Firing Range

7. DOT Description (*if available*) Hazardous Waste, liquid, n.o.s., 9, NA3082, PG III, (D008) ERG#171

8. Chemical Composition: Using specific chemical names, list all constituents present in the wastestream. Attach available analyses or MSDSs. Remember to identify Form R/TRI Toxic Chemicals. **Total composition must equal or exceed 100%.**

Constituent	Range	Units
Water	98-100	%
Lead	0-2	%

9. Identify US EPA waste codes D008

10. US EPA Form Code B110 US EPA Source Code A03

11. Identify state waste codes NA

12. Color Clear Appearance Liquid Odor none

13. %Solids 0 %Liquids 100

14. Physical State at 70 °F Solid ☐ Liquid ☒ Sludge ☐ Semi-solid ☐ Powder ☐ Gas ☐
If solid, are there free liquids? Yes ☐ No ☐ (If no, will waste dump from the drum? Yes ☐ No ☐)
Is the wastestream pumpable? Yes ☒ No ☐

15. pH or pH range (*If wastestream is solid, give pH of 10% slurry*): 5-9
Flash Point : <100°F ☐ 100-140°F ☐ 141-200°F ☐ >200°F ☒
Boiling Point: <100°F ☐ >100°F ☒
Fuel Value (Btu/lb): <2000 ☒ 2000-6000 ☐ 6000-10,000 ☐ > 10,000 ☐

16. Is the waste generated from, or associated with, metal finishing or other plating activities? Yes ☐ No ☒

Common Name (same as Item #5):

17. If the waste is federally hazardous, is this waste subject to Subpart CC regulation at 40 CFR 265.1080-1091 (i.e. contains greater than 500 ppm VOCs) ? Yes ☐ No ☐ NA ☒

18. Does this material meet the definition of a used oil (40 CFR 279)? Yes ☐ No ☒ If yes, has the waste been mixed with hazardous waste? Yes ☐ No ☐

19. Does the wastestream contain asbestos? Yes ☐ No ☒ If Yes, is the asbestos friable? Yes ☐ No ☐
Does the wastestream contain human sanitary, biological, or infectious waste? Yes ☐ No ☒
Does the wastestream contain dioxins or furans or dioxin-precursors? Yes ☐ No ☒
Does the wastestream contain radioactive wastes? Yes ☐ No ☒
Does the wastestream contain PCBs? Yes ☐ No ☒ If Yes, what concentration? _____ ppm
Is the wastestream air reactive, autoignitable, pyrophoric or spontaneously combustible? Yes ☐ No ☒
Is the wastestream water reactive? Yes ☐ No ☒
Does the wastestream present other compatibility concerns? Yes ☐ No ☒ If yes, specify _____
Is the wastestream dusty? Yes ☐ No ☒

20. List all Attachments

21 a. Transporter: Heritage Transport ☒ Other ☐
24 Hour Emergency Number _____
If transporter is not Heritage Transport, complete the following:
Transporter Name _____
Address _____
City, State, Zip _____
Contact/Phone _____
US EPA ID No. _____

21b. Packaging:
Bulk Solid ☐ Bulk Liquid ☐
Container ☒
Container Type DF
Container Size 55 gallon
Annual Volume (units) _____

22. **CERTIFICATION** *Sign and date the certification.*
I hereby certify that all information submitted herein and attached contains true, accurate and complete descriptions of this waste. Any sample submitted for analysis is representative of the waste material being offered for approval. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I have reviewed the physical facilities, administrative practices, and operational procedures (or have directed the completion of such a review) and based on this review do willingly make this certification. I authorize Heritage to obtain a sample from any waste shipment for purposes of recertification. I will notify Heritage Environmental Services, LLC if the generator status or any other information on this form changes.

Signature _____ Date 8/30/01 Company ITCorp

23. If wastestream carries F001, F002, F003, F004, and/or F005, identify concentration in mg/l or mg/kg for each constituent, if constituent is present, but concentrations are unknown, check the line.

Acetone		2-Ethoxyethanol		2-Nitropropane	
Benzene		Ethyl Acetate		Pyridine	
n-Butyl Alcohol		Ethyl Benzene		Tetrachloroethylene	
Carbon Disulfide		Ethyl Ether		Toluene	
Carbon Tetrachloride		Isobutanol		1,1,1-Trichloroethane	
Chlorobenzene		Methanol		1,1,2-Trichloroethane	
Cresol (m and p)		Methylene Chloride		Trichloroethylene	
o-Cresol		Methyl Ethyl Ketone		1,1,2-Trichloro-1,2,2-trifluoroethane	
Cyclohexanone		Methyl Isobutyl Ketone		Trichlorofluoroethane	
1,2-Dichlorobenzene		Nitrobenzene		Xylenes (total)	

24. Complete for Williston, VT Coolidge, AZ

System Type	M141	Total Alkalinity	TOC	Halogens	Sulfides	Zn
Hex Chrome		Total Acidity	HOC	Cyanides	Ni	

Toxicity Characteristic Constituents *Provide the TCLP results for the following constituents in mg/l:*

D004 Arsenic		D014 Methoxychlor		D024 m-Cresol		D034 Hexachloroethane	
D005 Barium		D015 Toxaphene		D025 p-Cresol		D035 Methyl Ethyl Ketone	
D006 Cadmium		D016 2,4-D		D026 Cresol		D036 Nitrobenzene	
D007 Chromium		D017 2,4,5-TP(Silvex)		D027 1,4-Dichlorobenzene		D037 Pentachlorophenol	
D008 Lead		D018 Benzene		D028 1,2-Dichloroethane		D038 Pyridine	
D009 Mercury		D019 Carbon Tetrachloride		D029 1,1-Dichloroethylene		D039 Tetrachloroethylene	
D010 Selenium		D020 Chlordane		D030 2,4-Dinitrotoluene		D040 Trichloroethylene	
D011 Silver		D021 Chlorobenzene		D031 Heptachlor		D041 2,4,5-Trichlorophenol	
D012 Endrin		D022 Chloroform		D032 Hexachlorobenzene		D042 2,4,6-Trichlorophenol	
D013 Lindane		D023 o-Cresol		D033Hexachlorobutadiene		D043 Vinyl Chloride	

HERITAGE ENVIRONMENTAL SERVICES, LLC
WASTESTREAM SURVEY FORM
(877)436-8778
Heritage Form HERWS01

Heritage Use Only	
Quote #	Approval Fee
Ws#	P.O.
Sample #	Heritage Contact

Preferred Service Location:
Indianapolis, IN ☒ Charlotte, NC ☐ Kansas City, MO ☐ Lemont, IL ☐ Coolidge, AZ ☐ Williston, VT ☐ Louisville, KY ☐
Heritage Hazardous Landfill (Roachdale, IN) ☐ Heritage Non-Hazardous Landfill (Roachdale, IN) ☐ Toledo, OH ☐

1. GENERATOR INFORMATION

Heritage Generator Number (if known)	
Generator Name	USARC
Address	
City, State, Zip	
Tech. Contact	
Phone	Fax
E-mail	
US EPA ID	
State ID Numbers	

Generator Status
LQG ☐ SQG ☐ CESQG ☒ Non-hazardous ☐

2. BILLING INFORMATION

Quote to: Generator ☐ Customer ☒ Other ☐

Customer	IT Corporation
Address	312 Directors Drive
City, State, Zip	Knoxville, TN 37923-4799
Contact Name	Tony Ashcraft
Phone 513-782-4557	Fax 513-782-4807
E-mail	

3. MANIFEST MAIL ADDRESS *Generator* ☐ *Billing* ☒

Contact Name	Tony Ashcraft
Company	IT Corporation
Address	11499 Chester Road
City, State, Zip	Cincinnati, OH 45246-4012

4. SIC Code wastestream was generated under (If code is 2911, 28—,or 3312 complete form HERWS03) 9711

5. Common Name Lead Contaminated Debris

6. Process Generating Waste Clean-up

7. DOT Description (*if available*) Hazardous Waste, solid, n.o.s., 9, NA3077, PG III, (D008) ERG#171

8. Chemical Composition: Using specific chemical names, list all constituents present in the wastestream. Attach available analyses or MSDSs. Remember to identify Form R/TRI Toxic Chemicals. **Total composition must equal or exceed 100%.**

Constituent	Range	Units
Lead Contaminated Debris	100	%
(Hepa Filter Bags)		
(PPE)		

9. Identify US EPA waste codes D008

10. US EPA Form Code B310 US EPA Source Code A92

11. Identify state waste codes NA

12. Color varies Appearance debris Odor none

13. %Solids 100 %Liquids 0

14. Physical State at 70 °F Solid ☒ Liquid ☐ Sludge ☐ Semi-solid ☐ Powder ☐ Gas ☐
If solid, are there free liquids? Yes ☐ No ☒ (If no, will waste dump from the drum? Yes ☒ No ☐)
Is the wastestream pumpable? Yes ☐ No ☒

15. pH or pH range (*If wastestream is solid, give pH of 10% slurry*): 3-10
Flash Point : <100°F ☐ 100-140°F ☐ 141-200°F ☐ >200°F ☒
Boiling Point: <100°F ☐ >100°F ☒
Fuel Value (Btu/lb): <2000 ☒ 2000-6000 ☐ 6000-10,000 ☐ > 10,000 ☐

16. Is the waste generated from, or associated with, metal finishing or other plating activities? Yes ☐ No ☒

Common Name (same as Item #5):

17. If the waste is federally hazardous, is this waste subject to Subpart CC regulation at 40 CFR 265.1080-1091 (i.e. contains greater than 500 ppm VOCs) ? Yes ☐ No ☐ NA ☒

18. Does this material meet the definition of a used oil (40 CFR 279)? Yes ☐ No ☒ If yes, has the waste been mixed with hazardous waste? Yes ☐ No ☐

19. Does the wastestream contain asbestos? Yes ☐ No ☒ If Yes, is the asbestos friable? Yes ☐ No ☐
Does the wastestream contain human sanitary, biological, or infectious waste? Yes ☐ No ☒
Does the wastestream contain dioxins or furans or dioxin-precursors? Yes ☐ No ☒
Does the wastestream contain radioactive wastes? Yes ☐ No ☒
Does the wastestream contain PCBs? Yes ☐ No ☒ If Yes, what concentration? _____ ppm
Is the wastestream air reactive, autoignitable, pyrophoric or spontaneously combustible? Yes ☐ No ☒
Is the wastestream water reactive? Yes ☐ No ☒
Does the wastestream present other compatibility concerns? Yes ☐ No ☒ If yes, specify _____
Is the wastestream dusty? Yes ☐ No ☒

20. List all Attachments

21 a. Transporter: Heritage Transport ☒ Other ☐
24 Hour Emergency Number _____
If transporter is not Heritage Transport, complete the following:
Transporter Name _____
Address _____
City, State, Zip _____
Contact/Phone _____
US EPA ID No. _____

21b. Packaging:
Bulk Solid ☐ Bulk Liquid ☐
Container ☒
Container Type DF
Container Size 5 gallon
Annual Volume (units) _____

22. **CERTIFICATION** *Sign and date the certification.*
I hereby certify that all information submitted herein and attached contains true, accurate and complete descriptions of this waste. Any sample submitted for analysis is representative of the waste material being offered for approval. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I have reviewed the physical facilities, administrative practices, and operational procedures (or have directed the completion of such a review) and based on this review do willingly make this certification. I authorize Heritage to obtain a sample from any waste shipment for purposes of recertification. I will notify Heritage Environmental Services, LLC if the generator status or any other information on this form changes.

Signature _____ Date 8/30/01 Company IT Corp

23. If wastestream carries F001, F002, F003, F004, and/or F005, identify concentration in mg/l or mg/kg for each constituent, if constituent is present, but concentrations are unknown, check the line.

Acetone		2-Ethoxyethanol		2-Nitropropane	
Benzene		Ethyl Acetate		Pyridine	
n-Butyl Alcohol		Ethyl Benzene		Tetrachloroethylene	
Carbon Disulfide		Ethyl Ether		Toluene	
Carbon Tetrachloride		Isobutanol		1,1,1-Trichloroethane	
Chlorobenzene		Methanol		1,1,2-Trichloroethane	
Cresol (m and p)		Methylene Chloride		Trichloroethylene	
o-Cresol		Methyl Ethyl Ketone		1,1,2-Trichloro-1,2,2-trifluoroethane	
Cyclohexanone		Methyl Isobutyl Ketone		Trichlorofluoroethane	
1,2-Dichlorobenzene		Nitrobenzene		Xylenes (total)	

24. Complete for Williston, VT Coolidge, AZ

System Type	*M141*	Total Alkalinity	TOC	Halogens	Sulfides	Zn
Hex Chrome		Total Acidity	HOC	Cyanides	Ni	

Toxicity Characteristic Constituents *Provide the TCLP results for the following constituents in mg/l:*

D004 Arsenic		D014 Methoxychlor		D024 m-Cresol		D034 Hexachloroethane	
D005 Barium		D015 Toxaphene		D025 p-Cresol		D035 Methyl Ethyl Ketone	
D006 Cadmium		D016 2,4-D		D026 Cresol		D036 Nitrobenzene	
D007 Chromium		D017 2,4,5-TP(Silvex)		D027 1,4-Dichlorobenzene		D037 Pentachlorophenol	
D008 Lead		D018 Benzene		D028 1,2 –Dichloroethane		D038 Pyridine	
D009 Mercury		D019 Carbon Tetrachloride		D029 1,1-Dichloroethylene		D039 Tetrachloroethylene	
D010 Selenium		D020 Chlordane		D030 2,4-Dinitrotoluene		D040 Trichloroethylene	
D011 Silver		D021 Chlorobenzene		D031 Heptachlor		D041 2,4,5-Trichlorophenol	
D012 Endrin		D022 Chloroform		D032 Hexachlorobenzene		D042 2,4,6-Trichlorophenol	
D013 Lindane		D023 o-Cresol		D033Hexachlorobutadiene		D043 Vinyl Chloride	

HER 069514

PLEASE PRINT OR TYPE (Form designed for use on elite (12-pitch) typewriter.) Form Approved: OMB No. 2050-0039 Expires 9-30-99

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's U.S. EPA ID Number: O.H.7.2.1.0.4.9.0.5.0.7 | Manifest Document No.: 7.2.6.0.2 | 2. Page 1 of 1 | Information in the shaded areas is not required by Federal Law.

3. Generator's Name and Mailing Address
USARC
721 COUNTRY CLUB ROAD, COLUMBUS, OH 43213

A. State Manifest Document Number

4. Generator's Phone (614) 861-8460

5. Transporter 1 Company Name: HERITAGE TRANSPORT, LLC | 6. U.S. EPA ID Number: I.N.D.0.5.8.4.8.4.1.1.4

7. Transporter 2 Company Name | 8. U.S. EPA ID Number

9. Designated Facility Name and Site Address
HERITAGE ENVIRONMENTAL SERVICES LLC
7901 WEST MORRIS STREET
INDIANAPOLIS, IN 46231

10. U.S. EPA ID Number: I.N.D.0.9.3.2.1.9.0.1.2

11. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol.
a. RQ, HAZARDOUS WASTE, LIQUID, N.O.S., 9, NA3082, PG III, (LEAD) (D008)ERG# 171	003	P M	0.0.1.6.5	G
b. RQ, HAZARDOUS WASTE, SOLID, N.O.S., 9, NA3077, PGIII, (LEAD) (D008) ERG# 171	001	P M	0.0.0.8.0	P
c. RQ, Hazardous Waste, Solid, N.O.S., 9, NA3077 PG III, (Lead) (D008) ERG# 171	002	D F	0.0.0.6.0	P
d.				

15. Special Handling Instructions and Additional Information
24 HOUR EMERGENCY PHONE #: 614-861-8460

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

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed /Typed Name: WARDROP, Timothy J. | Signature: Timothy J Wardrop | Date: Month 0.7 Day 2.6 Year 0.2

TRANSPORTER

17. Transporter 1 - Acknowledgement of Receipt of Materials

Printed /Typed Name: Robert Price | Signature: Robert Price | Date: Month 0.7 Day 2.6 Year 0.2

18. Transporter 2 - Acknowledgement of Receipt of Materials

Printed /Typed Name | Signature | Date: Month . Day . Year .

FACILITY

19. Discrepancy Indication Space

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

Printed /Typed Name: Tom Pope | Signature: Tom Pope | Date: Month 0.8 Day 0.5 Year 0.2

... spills, call the National Response Center at 800 / 424-8802 or 202 / 426-2675

L OF LADING FOR STOP: 511442
ip Code: 346022
tomer: 25159 SHAW ENVIRONMENTAL & INFRAST
tact: SUZANNE KEY (502)473-0638
number(s): 194157 OP
ation(s) : 48-22

HERITAGE

Pg: 1

HERITAGE ENVIRONMENTAL SERVICES, LLC
7901 WEST MORRIS STREET INDIANAPOLIS IN 46231
(317)243-0811 http://www.heritage-enviro.com

nature Judith Twardrop Name (please print) WARDROP, Timothy Date 020726
s is to certify that the materials listed below are properly classified, described, packaged, marked and labeled and are proper condition for transportation according to the applicable regulations of the Department of Transportation.

SGT. WARDROP
USARC
***** 721 COUNTRY CLUB ROAD
XTRA* COLUMBUS OH 43213

STATE ID:
EPA ID: OH7210490507
Phone: (614)861-8460
GENERATOR: 73255

INTL
LINER
PUMP/HOSE
DEMURRAGE
EMER RATE

NSPORTER: 8000
ITAGE TRANSPORT, LLC

EPA ID: IND058484114
Phone: (317)381-6848

DRIVER# 3051
TRACTOR# 1390
ROLLOFF#
TRAILER# 31-12

nature Robert Price Name (please print) Robert Price Date 7/26/02
ransporter, I accept this material for transportation in accordance with all applicable regulations.

: 9000
ITAGE ENVIRONMENTAL SERVICES LLC
WEST MORRIS STREET
ANAPOLIS IN 46231

EPA ID: IND093219012
Phone: (317)243-0811

INTL
DEMURRAGE

ature Tom Pope Name (please print) Tom Pope Date 8-05-02
he receiving facility, I accept this material for treatment, storage or disposal in accordance with all applicable regulations.

Prod	HES Doc	Common Name	RCRA	GenDoc	State Manifest	Pg	Ln	Ordered Qty	Ordered Unit	Shipped Quantity	Shipped Unit	Received Qty in 55 GAL DRM
3053	1130443	LEAD CONTAMINATED RINSE WATER	Y	72602	HER-069514							
: RQ, HAZARDOUS WASTE, LIQUID, N.O.S., 9, NA3082, PG III, (LEAD) (D008)ERG# 171							3		DM	3		3
] D008												
IL Auth# N/A		Tank:	Quote: 273217		Approval:					Gallons:		LBS: 1116
Prod	HES Doc	Common Name	RCRA	GenDoc	State Manifest	Pg	Ln	Ordered Qty	Ordered Unit	Shipped Quantity	Shipped Unit	Received Qty in 55 GAL DRM
6064	1130444	LEAD CONTAMINATED DEBRIS	Y	Same								
: RQ, HAZARDOUS WASTE, SOLID, N.O.S., 9, NA3077, PG III, (LEAD) (D008) ERG# 171							2		DM	1 DM		3
] D008										2 OP		
IL Auth# N/A		Tank:	Quote: 273218		Approval:					Gallons:		LBS: 104
Prod	HES Doc	Common Name	RCRA	GenDoc	State Manifest	Pg	Ln	Shipped Quantity				Received Qty
IL Auth#		Tank:	Quote:		Approval:					Gallons:		LBS:
rod	HES Doc	Common Name	RCRA	GenDoc	State Manifest	Pg	Ln	Shipped Quantity				Received Qty
IL Auth#		Tank:	Quote:		Approval:					Gallons:		LBS:

ENCY CHEMICAL ASSISTANCE TELEPHONE NUMBER: 1-800-827-5221

LAST PAGE

HESLDR1 NOTICE AND CERTIFICATION

(1) Waste Does Not Meet Applicable Treatment Standards - This is a restricted waste that does not meet the applicable treatment standards set forth in Subpart D of 40 CFR Part. 268.

I certify that the information provided on this and any additional pages of this LDR notification is true, accurate and complete.

Authorized Signature: [signature] Print or Type Name: WARDROP Timothy
Company/Title: 346PA R3Op Co (TAC/TABN) Date: 02 02 26

Heritage does not warrant the acceptability of this form for any specific purpose, waste or treatment method and does not warrant that its use will constitute compliance with applicable law and expressly disclaims responsibility or liability, for any penalties, damages or other costs which may arise out of or be related to use of this document.

Columbus, OH

Generator Name: USARC EPA I.D. No: OH2210490526

Manifest Doc. No: 72602 State Manifest No: HER-069514

(1) Manifest Page/Line Item	(2) Hazardous Waste Code (One per line)	(3) Waste Water	(4) Non-Waste Water	(5) Subcategory (if applicable)	(6) Underlying Constituents?	(7) Applicable Certification (One per line)
1/A	D008		Y	1	NA	1
1/B	D008		Y	2	NO	1

Subcategory Description

1) D008 TC WASTE MANAGED IN CWA SYSTEM
2) D008 TC WASTE MANAGED IN NON_CWA SYSTEM

APPENDIX G
Non-hazardous Waste Management Records

PDG Environmental, Inc.
PDG Project No. 011233

ASBESTOS WASTE DISPOSAL MANIFEST/SHIPPING FORM

Manifest No. 000090

REGULATED ASBESTOS MATERIAL: EPA WASTE SHIPMENT RECORD
R.Q. Hazardous Substance: (asbestos) : Class 9: NA - 2212 Packing Group III

1. Generator Name, Address, Contact Person — Phone
US Army Reserve Command, 506 Roeder Circle, Fort Snelling, MN 55711, Bill Scoville — 513-762-4984

2. Waste Location Name and Address
Whitehall USARC, Rifle Range 721 Country Club, Columbus., OH 43213

3. Waste disposal site (WDS) name, mailing address, and physical site location — Phone
Valley Landfill, RD #2 Box 282A, Irwin, Pa. 15642 — 724-744-7446

4. Name and address of agency responsible for administering the asbestos NESHAP program.
Ohio EPA, Central District Office, 2305 Westbrooke Dr, Bldg C, Columbus, OH 43266

5a. Category I and/or Category II Non Friable ACM (Brief description of ACM, container quantity and type)	Quantity in cubic yards
	Cubic Yards
	Cubic Yards
	Cubic Yards

5b. Friable ACM (Brief description of ACM, container quantity and type)	Quantity in cubic yards
Pipe Insulation 7 Bags	1 Cubic Yards
	Cubic Yards
	Cubic Yards
	1 Total Cubic Yards

6. Abatement Company Name — Address
PDG Environmental Inc. — 102 Technology Lane, Export, PA 15632

Supervisor Name: Jeff Bucholtz — Signature: Jeff Bucholtz — Phone: 724-325-1449

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

Jeff Bucholtz (Printed/typed Name) — Project Supervisor (Title) — Jeff Bucholtz (Signature) — 4/8/02 (Date)

8. Transporter 1 (Acknowledgement of receipt of materials)
Address and telephone No. — Project Development Group, Inc. 724-325-1449
102 Technology Lane, Export, PA 15632

(Printed/typed Name) — Driver (Title) — (Signature) — 4/22/02 (Date)

9. Transporter 2 (Acknowledgement of receipt of materials)
Address and telephone No.

(Printed/typed Name) — Driver (Title) — (Signature) — (Date)

10. Discrepancy Indication space

11. Waste disposal site owner or operator: Certification of receipt of asbestos materials covered by this manifest except as noted in Item #10.

Cheryl m Baker (Printed/typed Name) — (Title) — Cheryl m Baker (Signature) — 4-22-02 (Date)

WHITE - Transporter's Copy — CANARY - Generator's Copy — PINK - Disposal Facility Copy — GOLD - PDG Copy

MASSER METALS & RECYCLING, INC.

3103 LAMB AVE. / COLUMBUS, OHIO 43219
Telephone (614) 471-3195

Date 3-7

Customer's Name Whitehall (Country Club #1)

Address

Commodity Misc Steel

37 700
33 420

4280

lbs. Gross

lbs. Tare — Driver On ____ Off 1

lbs. Net @ _____ Per lb. Price _____

Shipper _____

Weigher _____

2 Bucket Lead Shot included in this Wgt.

RS-REYNOLDS TRANSFER
805 REYNOLDS AVE
COLUMBUS OHIO
614-308-3000

TICKET: 100910
DATE: 03/12/2002
TIME: 08:09 - 08:16

CUSTOMER: RWS / REPUBIC WASTE SERVICES
GENERATOR: NA / Non App PROFILE #: NA P.O.:
ORIGIN: FRAN / FRANKLIN CTY GROSS: 40320 LBS
TRUCK: 402 YARDS: 30 TARE: 36420 LBS
TRAILER: WO: NET: 3900 LBS
COMMENT: JEFF HAULCUST: NA

WASTE	QUANTITY	UNIT
CD / CONST & DEMO	1.95	T

Driver: Weighmaster: CHRIS KENNEDY

APPENDIX H
Lead Monitoring Analytical Results

ACCURA ANALYTICAL LABORATORY

6017 Financial Drive, Norcross, Georgia, 30071, Phone (770) 449-8800
FL Certification #E87429 NC Certification #483 SC Certification #98015
USACE-MRD Approved

Case Narrative

AAL Work Order # 1598

Client Project: Columbus, OH / 832093

The following items were noted concerning this project:

1. Accura Analytical Laboratory certifies that the results meet all requirements of the NELAC Standards.

2. The data package includes a 1 page case narrative and 2 summary report pages.

3. Due to limitations of the software, multiple decimal places are reported for the analyses; however the results and reporting limits are accurate to two significant figures.

This Case Narrative has been generated and reviewed by:

Camden L. Robinson
Quality Assurance Officer

3/19/02
Date

A2LA Accredited-ID: 120261 •Certificate #-1365.1•Exp 7/31/02 Effective 8/14/00•Scope: Testing Technologies Potable & Non-potable Water-Solid/Hazardous Waste

AAL Certificate of Analysis Summary WO# 1598

Client : IT Corporation - Cincinnati, ,

Client Project Name: Columbus, OH

Client Project #: 832093
Client Contact: Bill Scoville
Project Location: Ohio
Quote Number:
Email / Fax Number: william.scoville@theitgroup.com

Date Received in Lab: 03/13/02 10:40
Report Date: 03/18/02 15:31
AAL Contact: Michael Trinidad
e-Mail: miket@accura.com

Analysis Requested		1598-001		1598-002		1598-003		1598-004		1598-005		1598-006	
	Lab ID :	1598-001		1598-002		1598-003		1598-004		1598-005		1598-006	
	Field ID :	88OHCOL02MAR06001		88OHCOL02MAR06002		88OHCOL02MAR06003		88OHCOL02MAR06004		88OHCOL02MAR07001		88OHCOL02MAR07002	
	Depth :	N/A		N/A		N/A		N/A		N/A		N/A	
	Matrix :	AIR, VAPOR EXTR		AIR, VAPOR EXTR		AIR, VAPOR EXTR		AIR, VAPOR EXTR		AIR, VAPOR EXTR		AIR, VAPOR EXTR	
	Sampled :	03/06/02 17:00		03/06/02 17:00		03/06/02 17:00		03/06/02 17:00		03/07/02 17:00		03/07/02 17:00	
Metals- Lead (per cartridge) by NIOSH Method 7300	*Prep Date:*	03/13/02 15:00		03/13/02 15:00		03/13/02 15:00		03/13/02 15:00		03/13/02 15:00		03/13/02 15:00	
	Analyzed:	03/14/02 17:25		03/14/02 17:29		03/14/02 17:33		03/14/02 17:37		03/14/02 17:40		03/14/02 17:44	
	Units:	mg/m3		mg/m3		mg/m3		mg/m3		mg/m3		mg/m3	
		Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
Lead		0.600	0.0500	0.125	0.0500	<RL	0.0500	<RL	0.0500	<RL	0.0500	<RL	0.0500
Metals- Lead (per cartridge) by NIOSH Method 7300	*Prep Date:*	03/13/02 15:00		03/13/02 15:00		03/13/02 15:00		03/13/02 15:00		03/13/02 15:00		03/13/02 15:00	
	Analyzed:	03/14/02 17:25		03/14/02 17:29		03/14/02 17:33		03/14/02 17:37		03/14/02 17:40		03/14/02 17:44	
	Units:	ug/filter		ug/filter		ug/filter		ug/filter		ug/filter		ug/filter	
		Results	RL	Results	RL	Results	RL	Results	RL	Results	RL	Results	RL
Lead		714	2.50	147	2.50	44.5	2.50	36.6	2.50	14.1	2.50	7.50	2.50

RL = Reporting Limit, U = Below Reporting Limit

AAL Certificate of Analysis Summary WO# 1598

Client : IT Corporation - Cincinnati, ,

Client Project Name: Columbus, OH

Client Project #: 832093
Client Contact: Bill Scoville
Project Location: Ohio
Quote Number:
Email / Fax Number: william.scoville@theitgroup.com

Date Received in Lab: 03/13/02 10:40
Report Date: 03/18/02 15:31
AAL Contact: Michael Trinidad
e-Mail: miket@accura.com

Analysis Requested	*Lab ID :* / *Field ID :* / *Depth :* / *Matrix :* / *Sampled :*	1598-007 / 88OHCOL02MAR07003 / N/A / AIR, VAPOR EXTR / 03/07/02 17:00					
Metals- Lead (per cartridge) by NIOSH Method 7300	*Prep Date:* / *Analyzed:* / *Units:*	03/13/02 15:00 / 03/14/02 17:48 / mg/m3					
		Results RL					
Lead		<RL 0.0500					
Metals- Lead (per cartridge) by NIOSH Method 7300	*Prep Date:* / *Analyzed:* / *Units:*	03/13/02 15:00 / 03/14/02 17:48 / ug/filter					
		Results RL					
Lead		<RL 2.50					

BRL = Below Reporting Limit, RL = Reporting Limit, U = Below Reporting Limit

the i group

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD*

18 of 18 WO# 1598

Reference Document No. 569645
Page 1 of 1

Project Name/No.[1] Columbus OH 832093
Sample Team Members[2] M. Harrison
Profit Center No.[3] 5511001
Project Manager[4] Bill Scoville
Purchase Order No.[6] 832093
Required Report Date[11] 3/18/02

Samples Shipment Date[7] 3/12/02
Lab Destination[8] Accon
Lab Contact[9] Mike Tincher
Project Contact/Phone[12] Bill Scoville 513-782-4964
Carrier/Waybill No.[13] AirBorne

Bill to:[5] IT Corp
312 Directors Dr.
Knoxville TN. 37923

Report to:[10] IT Corp.
11499 Chester Rd.
Cincinnati OH 45246
ATTN. Bill Scoville

ONE CONTAINER PER LINE

Sample Number[14]	Sample Description/Type[15]	Date/Time Collected[16]	Container Type[17]	Sample Volume[18]	Preservative[19]	Requested Testing Program[20]	Condition on Receipt[21]	Disposal Record No.[22]
88OHCOL02MAR06	001 AIR	3/6/02 1700	CASSETTE	1.19 m^3	—	Lead Niosh 7300		1598-001
88OHCOL02MAR06	002 AIR	3/6/02 1700	CASSETTE	1.17 m^3	—	Lead Niosh 7300	FOR LAB USE ONLY	-002
88OHCOL02MAR06	003 AIR	3/6/02 1700	CASSETTE	1.21 m^3	—	Lead Niosh 7300		-003
88OHCOL02MAR06	004 AIR	3/6/02 1700	CASSETTE	1.20 m^3	—	Lead Niosh 7300		-004
88OHCOL02MAR07	001 AIR	3/7/02 1700	CASSETTE	1.11 m^3	—	Lead NIOSH 7300	FOR LAB USE ONLY	-005
88OHCOL02MAR07	002 AIR	3/7/02 1700	CASSETTE	1.09 m^3	—	Lead NIOSH 7300		-006
88OHCOL02MAR07	003 AIR	3/7/02 1700	CASSETTE	1.06 m^3	—	Lead NIOSH 7300		-007

Special Instructions:[23]

Possible Hazard Identification:[24]
Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☒

Sample Disposal:[25]
Return to Client ☐ Disposal by Lab ☒ Archive _____ (mos.)

Turnaround Time Required:[26]
Normal ☐ Rush ☒ 48 hr

QC Level:[27]
I. ☐ II. ☐ III. ☐ Project Specific (specify): _____

1. Relinquished by[28] (Signature/Affiliation) Michael R. Harrison	Date: Time:	1. Received by[28] (Signature/Affiliation) C. Hayes	Date: 3/12/02 Time: 1400
2. Relinquished by (Signature/Affiliation) UPS	Date: Time:	2. Received by (Signature/Affiliation) 03/13/02	Date: 03/13/02 Time: 10:40Am
3. Relinquished by (Signature/Affiliation)	Date: Time:	3. Received by (Signature/Affiliation)	Date: Time:

Comments:[29]

White: To accompany samples (1) Yellow: Field copy

*See back of form for special instructions.

APPENDIX I
Clearance Certification Letter

IT Corporation
11499 Chester Road
Cincinnati, OH 45246-4012
Tel. 513.782.4700
Fax. 513.782.4807

A Member of The IT Group

the IT group

May 7, 2002

SGT Wardrop
Facility Manager
Whitehall Memorial US Army Reserve Center
721 Country Club
Columbus, OH 43113

RE: Range Cleaning Clearance Certification – Facility ID OH014, 88th RSC
USARC Nationwide Indoor Rifle Range Cleanup Project
Contract No. DACA 27-99-D-0021, Delivery Order No. 14

Dear SGT Wardrop:

With this letter, IT Corporation certifies that the recent range cleaning activities have successfully attained the project clearance objectives and the range is approved for your reoccupancy. Range clearance procedures consisted of the following:

- A surface-by-surface visual examination to verify that:
  - The lead hazard control work was completed as required
  - No known or suspected lead-dust surfaces are still present in the range at levels that exceed the project clearance level of 200 µg/sf.
- Clearance sampling consisting of collecting wipe samples from the floor surfaces and analyzing the samples for lead.

A formal project report for the range cleanup will be submitted upon completion of all waste disposal activities and receipt of disposal certificates.

Please note that although the range has been cleaned to below the project clearance levels, small amounts of lead dust may be present in the range. Any remodeling activities that may cause a release of dust on wall and floor surfaces should be undertaken in consideration of the Occupational Safety and Health Administration (OSHA) Construction Industry Standard for Lead (29 CFR 1926.62). This OSHA standard should be reviewed before any remodeling activities are conducted. The OSHA standard requires certain controls to reduce or maintain worker exposures less than the Permissible Exposure Limit (PEL) of 50 µg of lead per cubic meter (m^3). The employer must protect the worker from lead.

We appreciated your cooperation and support during the range cleanup. Should you have any questions, please contact the undersigned at (513) 782-4700.

Sincerely,

IT CORPORATION

William H. Scoville, P.E.
Project Manager

cc: David Dierken, U.S. Army Corps of Engineers, Louisville District
Kurt Zacharias, 88th RSC Environmental Engineer
Steven Angerthal, 88th RSC Environmental Engineer
Mr. Dave Ayers, 88th RSC State Environmental Manager – Ohio

Appendix E

Regulatory Database Search Reports

The EDR Radius Map
with GeoCheck®

Whitehall Memorial USARC, OH
721 COUNTRY CLUB ROAD
COLUMBUS, OH 43213

Inquiry Number: 01714247.122r

July 12, 2006

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

TABLE OF CONTENTS

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

721 COUNTRY CLUB ROAD
COLUMBUS, OH 43213

COORDINATES

Latitude (North):	39.962200 - 39° 57' 43.9''
Longitude (West):	82.866600 - 82° 51' 59.8''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	340570.6
UTM Y (Meters):	4425020.0
Elevation:	798 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	39082-H7 REYNOLDSBURG, OH
Most Recent Revision:	1994
West Map:	39082-H8 SOUTHEAST COLUMBUS, OH
Most Recent Revision:	1994

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following government records. For more information on this property see page 6 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
US ARC WHITEHALL MEMORIAL 721 COUNTRY CLUB RD COLUMBUS, OH 43213	RCRA-SQG FINDS	OH7210490507

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL ---------- National Priority List

EXECUTIVE SUMMARY

Proposed NPL Proposed National Priority List Sites
Delisted NPL National Priority List Deletions
NPL RECOVERY Federal Superfund Liens
CERC-NFRAP CERCLIS No Further Remedial Action Planned
CORRACTS Corrective Action Report
RCRA-TSDF Resource Conservation and Recovery Act Information
RCRA-LQG Resource Conservation and Recovery Act Information
ERNS Emergency Response Notification System
HMIRS Hazardous Materials Information Reporting System
US ENG CONTROLS Engineering Controls Sites List
US INST CONTROL Sites with Institutional Controls
DOD Department of Defense Sites
FUDS Formerly Used Defense Sites
US BROWNFIELDS A Listing of Brownfields Sites
CONSENT Superfund (CERCLA) Consent Decrees
ROD Records Of Decision
UMTRA Uranium Mill Tailings Sites
ODI Open Dump Inventory
TRIS Toxic Chemical Release Inventory System
TSCA Toxic Substances Control Act
FTTS FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS Section 7 Tracking Systems
ICIS Integrated Compliance Information System
PADS PCB Activity Database System
MLTS Material Licensing Tracking System
MINES Mines Master Index File
RAATS RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

SHWS This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
DERR Division of Emergency & Remedial Response's Database
TOWNGAS DERR Towngas Database
MSL Master Sites List
SWF/LF Licensed Solid Waste Facilities
HIST LF Old Solid Waste Landfill
UST Underground Storage Tank Tank File
ARCHIVE UST Archived Underground Storage Tank Sites
OH Spills Emergency Response Database
ENG CONTROLS Sites with Engineering Controls
INST CONTROL Sites with Institutional Engineering Controls
VCP Voluntary Action Program Sites
DRYCLEANERS Drycleaner Facility Listing
BROWNFIELDS Ohio Brownfield Inventory
CDL Clandestine Drug Lab Locations
NPDES NPDES General Permit List
USD Urban Setting Designation Sites
HIST INST CONTROLS Institutional Controls Database
HIST ENG CONTROLS Operation & Maintenance Agreements Database
HIST USD Urban Setting Designations Database

TRIBAL RECORDS

INDIAN RESERV Indian Reservations

EXECUTIVE SUMMARY

EDR PROPRIETARY RECORDS

Manufactured Gas Plants EDR Proprietary Manufactured Gas Plants
EDR Historical Auto Stations EDR Proprietary Historic Gas Stations
EDR Historical Cleaners EDR Proprietary Historic Dry Cleaners

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

FEDERAL RECORDS

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 02/01/2006 has revealed that there is 1 CERCLIS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
WHITEHALL OHIO MERCURY SPILL	4735 KAE AVENUE	1/4 - 1/2 W	2	6

STATE AND LOCAL RECORDS

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Commerce Division of State Fire Marshal's List of Reported Petroleum Underground Storage Tank Release Incidents.

A review of the LUST list, as provided by EDR, and dated 03/15/2006 has revealed that there are 4 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Dist / Dir	Map ID	Page
SPEEDWAY #9151	***4901 E MAIN ST***	***1/4 - 1/2 S***	***A3***	***6***
Facility Status: Active FR Status: Tier 2				
CUMBERLAND GULF #124103	4900 E MAIN ST	1/4 - 1/2 S	A4	7
Facility Status: Inactive FR Status: No Further Action letter issued				
UNITED DAIRY FARMERS #663	***4890 E MAIN ST***	***1/4 - 1/2 S***	***A5***	***8***
Facility Status: Inactive FR Status: No Further Action letter issued				

EXECUTIVE SUMMARY

Lower Elevation	Address	Dist / Dir	Map ID	Page
BP OIL CO. #07827 Facility Status: Active FR Status: Tier 2	4865 E MAIN ST	1/4 - 1/2 S	6	9

UNREG LTANKS: A suspected or confirmed release of petroleum from a non-regulated UST.

A review of the UNREG LTANKS list, as provided by EDR, and dated 08/25/1999 has revealed that there is 1 UNREG LTANKS site within approximately 0.5 miles of the target property.

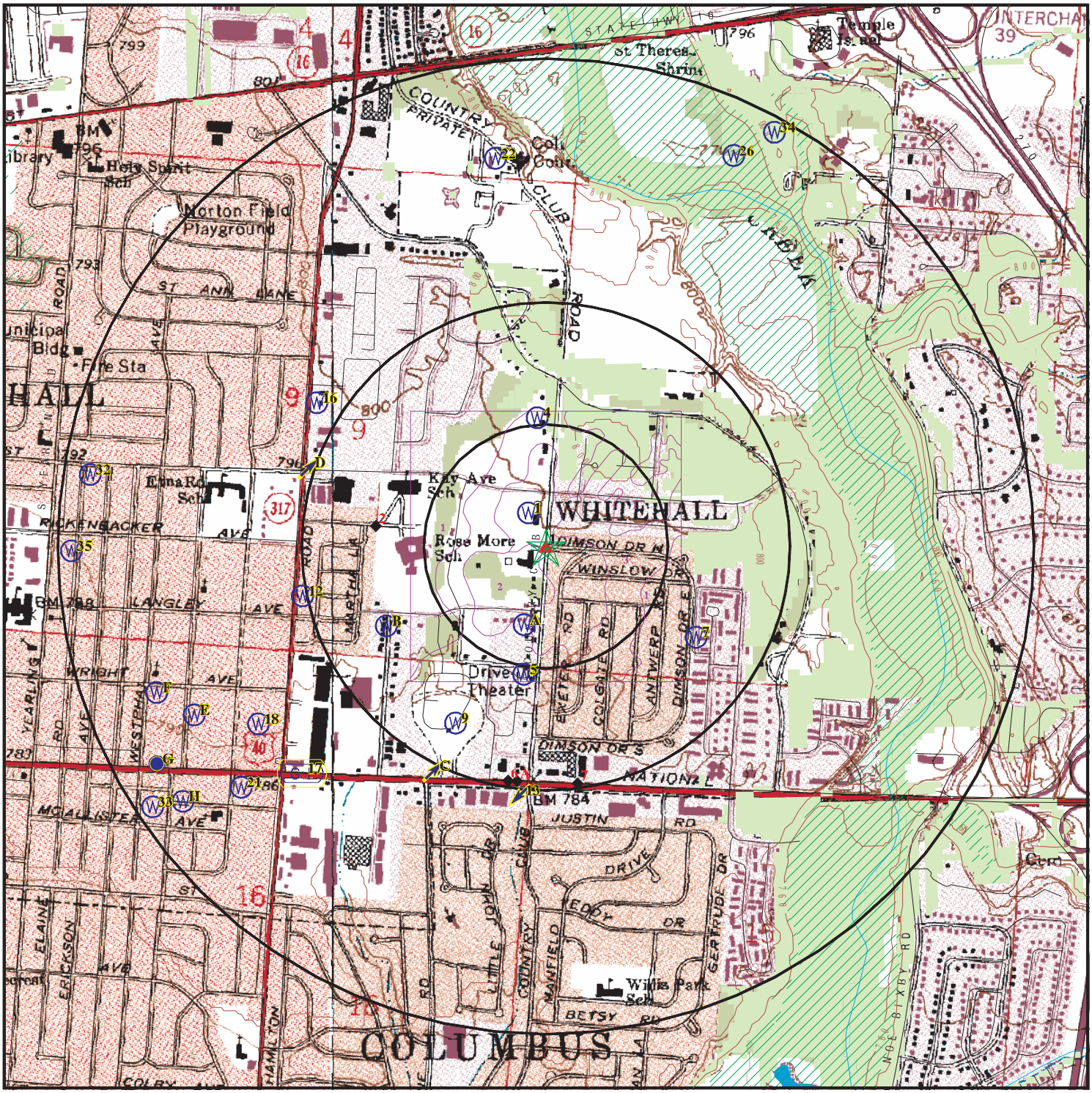
Lower Elevation	Address	Dist / Dir	Map ID	Page
FORMER HOWARD JOHNSON Facility Status: RPT	5000 E MAIN	1/4 - 1/2 S	7	9

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
CITY OF COLUMBUS LDFL AKA JACKSON P	HIST LF
GOWDY PARK LANDFILL	HIST LF
WHITEHALL SHELL CAR WASH	LUST
U.S. 42, 1 MILE NORTH OF PLAIN CITY OH.	ERNS
HEINZERING MEMORIAL	OH Spills
DONGERS XENIA OH	OH Spills
WHITEHALL CITY SCHOOLS	OH Spills
WHITEHALL CITY OF (SUSPECTED)	OH Spills
ADJ WHITEHALL SUNOCO	UNREG LTANKS
WHITEHALL GARAGE REAR	EDR Historical Auto Stations
OH IER SINCLAIR SERVICE STATION	EDR Historical Auto Stations
WHITEHALL CLEANERS	EDR Historical Cleaners
TARGET - WHITEHALL OH	NPDES

OVERVIEW MAP - 01714247.122r

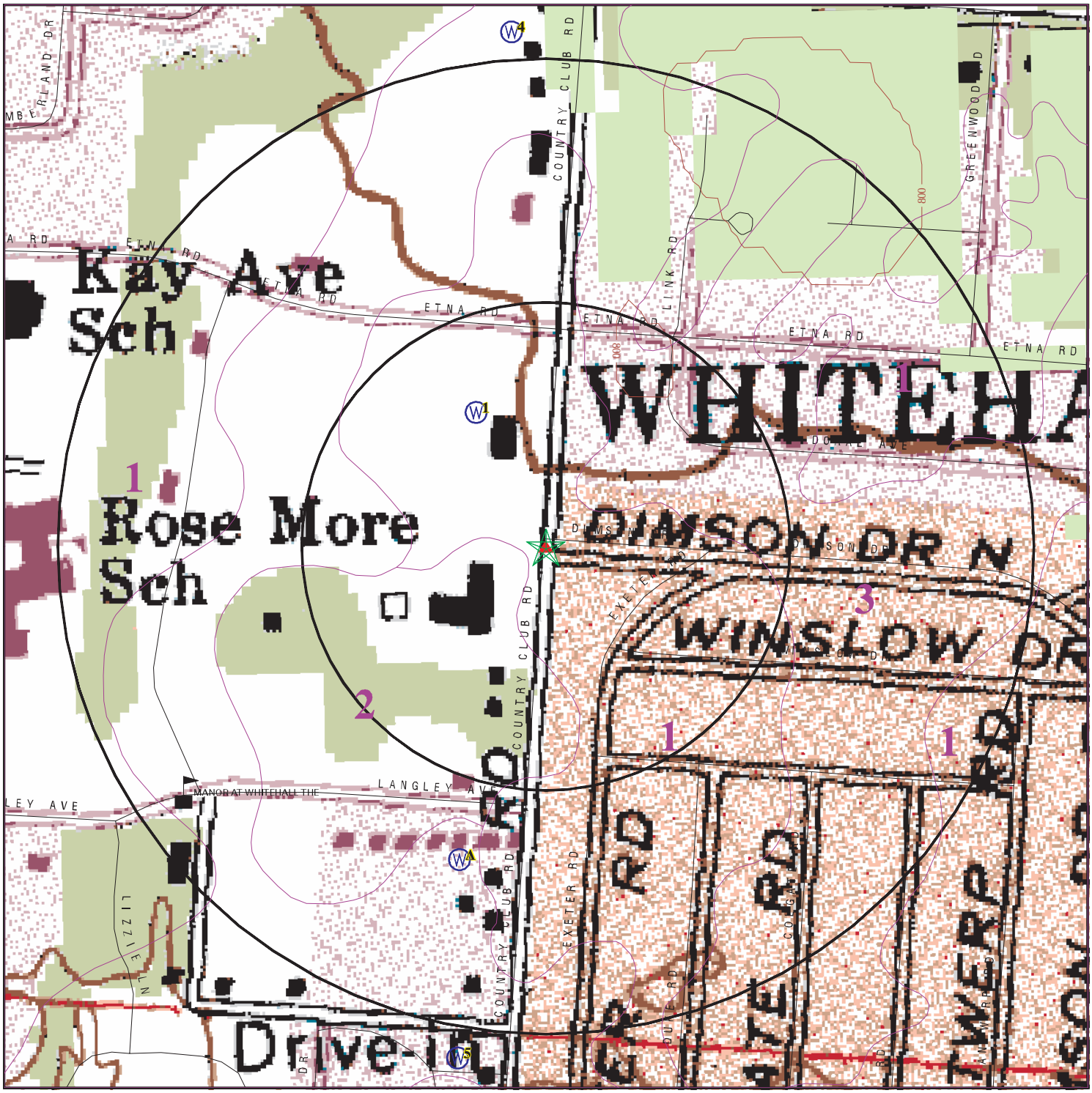


- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Whitehall Memorial USARC, OH	CLIENT:	CH2M Hill
ADDRESS:	721 COUNTRY CLUB ROAD COLUMBUS OH 43213	CONTACT:	Mary Beth Jacques
LAT/LONG:	39.9622 / 82.8666	INQUIRY #:	01714247.122r
		DATE:	July 12, 2006

DETAIL MAP - 01714247.122r



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Whitehall Memorial USARC, OH	CLIENT:	CH2M Hill
ADDRESS:	721 COUNTRY CLUB ROAD COLUMBUS OH 43213	CONTACT:	Mary Beth Jacques
LAT/LONG:	39.9622 / 82.8666	INQUIRY #:	01714247.122r
		DATE:	July 12, 2006

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL RECORDS								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
Delisted NPL		1.000	0	0	0	0	NR	0
NPL RECOVERY		TP	NR	NR	NR	NR	NR	0
CERCLIS		0.500	0	0	1	NR	NR	1
CERC-NFRAP		0.500	0	0	0	NR	NR	0
CORRACTS		1.000	0	0	0	0	NR	0
RCRA TSD		0.500	0	0	0	NR	NR	0
RCRA Lg. Quan. Gen.		0.250	0	0	NR	NR	NR	0
RCRA Sm. Quan. Gen.	X	0.250	0	0	NR	NR	NR	0
ERNS		TP	NR	NR	NR	NR	NR	0
HMIRS		TP	NR	NR	NR	NR	NR	0
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
FINDS	X	TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
STATE AND LOCAL RECORDS								
State Haz. Waste		N/A	N/A	N/A	N/A	N/A	N/A	N/A
DERR		1.000	0	0	0	0	NR	0
TOWNGAS		1.000	0	0	0	0	NR	0
MSL		1.000	0	0	0	0	NR	0
State Landfill		0.500	0	0	0	NR	NR	0
HIST LF		0.500	0	0	0	NR	NR	0
LUST		0.500	0	0	4	NR	NR	4
UNREG LTANKS		0.500	0	0	1	NR	NR	1
UST		0.250	0	0	NR	NR	NR	0
ARCHIVE UST		0.250	0	0	NR	NR	NR	0
OH Spills		TP	NR	NR	NR	NR	NR	0
ENG CONTROLS		0.500	0	0	0	NR	NR	0
INST CONTROL		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
BROWNFIELDS		0.500	0	0	0	NR	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
USD		0.500	0	0	0	NR	NR	0
HIST INST CONTROLS		0.500	0	0	0	NR	NR	0
HIST ENG CONTROLS		0.500	0	0	0	NR	NR	0
HIST USD		0.500	0	0	0	NR	NR	0
TRIBAL RECORDS								
INDIAN RESERV		1.000	0	0	0	0	NR	0
EDR PROPRIETARY RECORDS								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0
EDR Historical Auto Stations		0.250	0	0	NR	NR	NR	0
EDR Historical Cleaners		0.250	0	0	NR	NR	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

1
Target Property
Actual: 798 ft.

US ARC WHITEHALL MEMORIAL
721 COUNTRY CLUB RD
COLUMBUS, OH 43213

Database(s): RCRA-SQG, FINDS
EDR ID Number: 1000834448
EPA ID Number: OH7210490507

RCRAInfo:
Owner: 83D ARCOM HQ
(614) 692-1936
EPA ID: OH7210490507
Contact: NORRIS PETERS
(614) 861-8460
Classification: Small Quantity Generator
TSDF Activities: Not reported

Violation Status: No violations found

FINDS:
Other Pertinent Environmental Activity Identified at Site:
The OH-CORE (Ohio - Core) database contains information commonly shared among the Ohio EPA environmental programs. The information is facility-based, general in nature, and used to support specific programmatic systems while simultaneously maintaining an inventory of common facility-related data. Specific programmatic details are maintained in programmatic databases.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

2
West
1/4-1/2
1850 ft.

Relative: Lower

Actual: 794 ft.

WHITEHALL OHIO MERCURY SPILL
4735 KAE AVENUE
WHITEHALL, OH 43213

Database(s): CERCLIS
EDR ID Number: 1006932020
EPA ID Number: OHN000508892

CERCLIS Classification Data:
Federal Facility: Not a Federal Facility
Non NPL Status: Removal Only Site (No Site Assessment Work Needed)
NPL Status: Not on the NPL
Contact: JOSEPH J. FREDLE Contact Tel: (216) 522-7260
Contact Title: Not reported
Site Description: Mercury spill in a Junior High School. The school hired a contractor to conduct the cleanup. U.S. EPA supplied air monitoring support.
CERCLIS Assessment History:
Assessment: PRP EMERGENCY REMOVAL Completed: 05/15/2003
CERCLIS Site Status:
Cleaned up

A3
South
1/4-1/2
2552 ft.

Site 1 of 3 in cluster A

Relative: Lower

Actual: 786 ft.

SPEEDWAY #9151
4901 E MAIN ST
COLUMBUS, OH 43213

Database(s): LUST, UST
EDR ID Number: U000687792
EPA ID Number: N/A

SPEEDWAY #9151 (Continued) **U000687792**

LUST:
Owner: DANNY D. COFFEY
LTF Status: 1 SUS/CON from regulated UST
Release Number: 25000229-N00001
Owner Address: PO BOX 1500
SPRINGFIELD, OH 45501
Facility Status: Active
FR Status: Tier 2
Old Facility Id: 250229
Former Lust Release Number: Not reported
Release Date: 1992-04-16 00:00:00

UST:

Facility ID:	25000229	Tank ID:	T00002
Owner:	SPEEDWAY SUPERAMERICA LLC		
Owner Address:	PO BOX 1500 SPRINGFIELD, OH 45501		
Capacity:	8000	Tank Status:	Currently In Use
Install Date:	01/01/84		
Content:	Diesel		
Tank Type:	Cathodically Protected Steel;Polyethylene Jacket		

Facility ID:	25000229	Tank ID:	T00003
Owner:	SPEEDWAY SUPERAMERICA LLC		
Owner Address:	PO BOX 1500 SPRINGFIELD, OH 45501		
Capacity:	12000	Tank Status:	Currently In Use
Install Date:	01/01/84		
Content:	Gasoline		
Tank Type:	Cathodically Protected Steel;Polyethylene Jacket		

Facility ID:	25000229	Tank ID:	T00004
Owner:	SPEEDWAY SUPERAMERICA LLC		
Owner Address:	PO BOX 1500 SPRINGFIELD, OH 45501		
Capacity:	12000	Tank Status:	Currently In Use
Install Date:	01/01/84		
Content:	Gasoline		
Tank Type:	Cathodically Protected Steel;Polyethylene Jacket		

Facility ID:	25000229	Tank ID:	T00001
Owner:	SPEEDWAY SUPERAMERICA LLC		
Owner Address:	PO BOX 1500 SPRINGFIELD, OH 45501		
Capacity:	8000	Tank Status:	Currently In Use
Install Date:	01/01/84		
Content:	Gasoline		
Tank Type:	Cathodically Protected Steel;Polyethylene Jacket		

A4 **CUMBERLAND GULF #124103** **LUST** **S104776261**
South **4900 E MAIN ST** **N/A**
1/4-1/2 **WHITEHALL, OH 43213**
2552 ft.

Site 2 of 3 in cluster A

Relative:
Lower

Actual:
786 ft.

CUMBERLAND GULF #124103 (Continued) **S104776261**

LUST:
Owner: CUMBERLAND FARMS, INC.
LTF Status: 6 Closure of regulated UST
Release Number: 25001563-N00001
Owner Address: 777 DEDHAM ST
CANTON, MA 02021
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 251563
Former Lust Release Number: 254028000.0
Release Date: Not reported

A5 **UNITED DAIRY FARMERS #663** **LUST U000891676**
South **4890 E MAIN ST** **UST N/A**
1/4-1/2 **COLUMBUS, OH 43213**
2560 ft.

Site 3 of 3 in cluster A

Relative:
Lower

Actual:
786 ft.

LUST:
Owner: WAYNE PATRICK
LTF Status: 1 SUS/CON from regulated UST
Release Number: 25001694-N00001
Owner Address: 3955 MONTGOMERY RD
CINCINNATI, OH 45212
Facility Status: Inactive
FR Status: No Further Action letter issued
Old Facility Id: 251694
Former Lust Release Number: 250130400.0
Release Date: Not reported

UST:

Facility ID:	25001694	Tank ID:	T00001
Owner:	UNITED DAIRY FARMERS		
Owner Address:	3955 MONTGOMERY RD CINCINNATI, OH 45212		
Capacity:	12000	Tank Status:	Currently In Use
Install Date:	06/01/91		
Content:	Gasoline		
Tank Type:	Fiberglass Reinforced Plastic		
Facility ID:	25001694	Tank ID:	T00002
Owner:	UNITED DAIRY FARMERS		
Owner Address:	3955 MONTGOMERY RD CINCINNATI, OH 45212		
Capacity:	10000	Tank Status:	Currently In Use
Install Date:	06/01/91		
Content:	Gasoline		
Tank Type:	Fiberglass Reinforced Plastic		
Facility ID:	25001694	Tank ID:	T00003
Owner:	UNITED DAIRY FARMERS		
Owner Address:	3955 MONTGOMERY RD CINCINNATI, OH 45212		
Capacity:	4000	Tank Status:	Currently In Use
Install Date:	06/01/91		
Content:	Kerosene		
Tank Type:	Fiberglass Reinforced Plastic		

6
South
1/4-1/2
2569 ft.

BP OIL CO. #07827
4865 E MAIN ST
COLUMBUS, OH 43213

LUST **S104776235**
N/A

Relative:
Lower

Actual:
786 ft.

LUST:
Owner: SAM PATTERSON
LTF Status: 1 SUS/CON from regulated UST
Release Number: 25001445-N00001
Owner Address: P.O. BOX 6038
ARTESIA, CA 90702
Facility Status: Active
FR Status: Tier 2
Old Facility Id: 251445
Former Lust Release Number: 253037500.0
Release Date: 1993-04-01 00:00:00

7
South
1/4-1/2
2588 ft.

FORMER HOWARD JOHNSON
5000 E MAIN
WHITEHALL, OH 43213

UNREG LTANKS **S100555223**
N/A

Relative:
Lower

Actual:
787 ft.

UNREG LTANKS:

Report Number :	2501660	Facility Track :	0
Incident Number :	250166000	Facility Id :	Not reported
Owner Name :	Not reported	Owner Phone :	Not reported
Facility Phone :	Not reported	Rp Status :	Not reported
Inspector :	Not reported	Revised Date :	09/19/90
Operator Name :	Not reported		
Operator Address	Not reported OH		
Operator Phone :	Not reported		
Fiscal Tracking :	F900	Coordinator :	COCA
Facility Status :	**RPT**		
Class :	D		
Priority :	2	Lust Trust Fund :	2
Emrgncy Resp:	2	ER By :	Not reported
Vacant :	Not reported	Authorized By :	GILL
Authorized Date :	09/18/90		
Remarks :	0		
Summary :	Not reported		
Owner Address :	Not reported OH		
Added Date :	08/01/90		
Entry By :	UNGER	Facility County # :	049
RP Search Date :	Not reported		

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
COLUMBUS	900102389	U.S. 42, 1 MILE NORTH OF PLAIN CITY OH.	U.S. 42, 1 MILE NORTH OF PLAIN CITY OH.		ERNS
COLUMBUS	1009038923	WHITEHALL GARAGE REAR	3588 E MAIN ST		EDR Historical Auto Stations
COLUMBUS	1009154912	WHITEHALL CLEANERS	3592 E MALIN DR		EDR Historical Cleaners
COLUMBUS	S106295771	HEINZERING MEMORIAL	N/A		OH Spills
COLUMBUS	S106285962	DONGERS XENIA OH	N/A		OH Spills
COLUMBUS	S105859217	CITY OF COLUMBUS LDFL AKA JACKSON P	EAST OF SR-104		HIST LF
COLUMBUS	S105859219	GOWDY PARK LANDFILL	SR-315		HIST LF
COLUMBUS	1009039421	OH IER SINCLAIR SERVICE STATION	275 W WOODSDALE AVE		EDR Historical Auto Stations
WHITEHALL	S107761027	TARGET - WHITEHALL OH	E BROAD ST / ROBIN WOOD AVE	43213	NPDES
WHITEHALL	S107556745	WHITEHALL SHELL CAR WASH	4780 E BROAD ST	43213	LUST
WHITEHALL	S105903626	ADJ WHITEHALL SUNOCO	C/O BROAD / HAMILTON	43213	UNREG LTANKS
WHITEHALL	S106960134	WHITEHALL CITY SCHOOLS	ETNA ROAD ELEMENTARY SCHOOL 4531 ETNA RD	43213	OH Spills
WHITEHALL	S105728875	WHITEHALL CITY OF (SUSPECTED)	GROVES RD / HAMILTON RD	43213	OH Spills

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 04/19/2006
Date Data Arrived at EDR: 05/05/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 17

Source: EPA
Telephone: N/A
Last EDR Contact: 05/05/2006
Next Scheduled EDR Contact: 07/31/2006
Data Release Frequency: Quarterly

NPL RECOVERY: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 05/23/2006
Next Scheduled EDR Contact: 08/21/2006
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 02/01/2006
Date Data Arrived at EDR: 03/21/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 23

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 06/22/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 02/01/2006
Date Data Arrived at EDR: 03/21/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 23

Source: EPA
Telephone: 703-413-0223
Last EDR Contact: 06/23/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 04/13/2006
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 05/21/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/09/2006
Date Data Arrived at EDR: 04/27/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 33

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 08/21/2006
Data Release Frequency: Quarterly

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 40

Source: National Response Center, United States Coast Guard
Telephone: 202-260-2342
Last EDR Contact: 04/26/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 04/14/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Annually

US ENG CONTROLS: Engineering Controls Sites List
A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/21/2006
Date Data Arrived at EDR: 03/27/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls
A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/21/2006
Date Data Arrived at EDR: 03/27/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 703-603-8905
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

DOD: Department of Defense Sites
This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 05/12/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites
The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 01/19/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 33

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 04/26/2006
Date Data Arrived at EDR: 04/27/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/12/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Semi-Annually

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/14/2004
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 04/25/2005
Number of Days to Update: 69

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 04/13/2006
Date Data Arrived at EDR: 04/28/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 32

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 07/06/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 11/04/2005
Date Data Arrived at EDR: 11/28/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 63

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 06/21/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 07/13/2005
Date Made Active in Reports: 08/17/2005
Number of Days to Update: 35

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 06/22/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 04/12/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/29/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 06/19/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Date of Government Version: 03/31/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 06/19/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Quarterly

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 05/11/2006
Date Made Active in Reports: 05/22/2006
Number of Days to Update: 11

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 02/13/2006
Date Data Arrived at EDR: 04/21/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 20

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 04/11/2006
Next Scheduled EDR Contact: 07/17/2006
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/27/2005
Date Data Arrived at EDR: 02/08/2006
Date Made Active in Reports: 02/27/2006
Number of Days to Update: 19

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/12/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 34

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/03/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Quarterly

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/09/2006
Date Data Arrived at EDR: 03/29/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 62

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/28/2006
Next Scheduled EDR Contact: 09/25/2006
Data Release Frequency: Semi-Annually

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 04/27/2006
Date Data Arrived at EDR: 05/02/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 28

Source: EPA
Telephone: N/A
Last EDR Contact: 04/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 06/17/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 48

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/30/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Biennially

STATE AND LOCAL RECORDS

SHWS: This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.
State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: Ohio EPA
Telephone: 614-644-2924
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: N/A

DERR: Division of Emergency & Remedial Response's Database
The DERR listings contains sites from all of Ohio that are in the Division of Emergency and Remedial Response (DERR) database, which is an index of sites for which our district offices maintain files. The database is NOT a record of contaminated sites or sites suspected of contamination. Not all sites in the database are contaminated, and a site's absence from the database does not imply that it is uncontaminated.

Date of Government Version: 03/14/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 15

Source: Ohio EPA, Div. of Emergency and Remedial Response
Telephone: 614-644-3538
Last EDR Contact: 06/12/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Semi-Annually

TOWNGAS: DERR Towngas Database
The database includes 82 very old sites (circa 1895) which produced gas from coal for street lighting. Most visual evidence of these sites has disappeared, however the potential for buried coal tar remains. The database is no longer in active use.

Date of Government Version: 07/28/1992
Date Data Arrived at EDR: 02/21/2003
Date Made Active in Reports: 03/05/2003
Number of Days to Update: 12

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 02/12/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

MSL: Master Sites List
Ohio EPA no longer maintains or publishes the MSL, which was a list of sites with known or suspected contamination. Please be advised that this report does not constitute a determination that any site identified in the report is or may be contaminated.

Date of Government Version: 03/01/1999
Date Data Arrived at EDR: 03/29/1999
Date Made Active in Reports: 04/21/1999
Number of Days to Update: 23

Source: Ohio Environmental Protection Agency
Telephone: 614-644-2068
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

SWF/LF: Licensed Solid Waste Facilities
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/23/2006
Date Data Arrived at EDR: 05/24/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 35

Source: Ohio Environmental Protection Agency
Telephone: 614-644-2621
Last EDR Contact: 05/11/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Annually

HIST LF: Old Solid Waste Landfill

A list of about 1200 old abandoned dumps or landfills. This database was developed from Ohio EPA staff notebooks and other information dating from the mid-1970s

Date of Government Version: 01/01/1980
Date Data Arrived at EDR: 07/01/2003
Date Made Active in Reports: 07/17/2003
Number of Days to Update: 16

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/26/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

LUST: Leaking Underground Storage Tank File

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 15

Source: Department of Commerce
Telephone: 614-752-7924
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Quarterly

UNREG LTANKS: Ohio Leaking UST File

A suspected or confirmed release of petroleum from a non-regulated UST.

Date of Government Version: 08/25/1999
Date Data Arrived at EDR: 08/19/2003
Date Made Active in Reports: 08/26/2003
Number of Days to Update: 7

Source: Department of Commerce
Telephone: 614-752-7938
Last EDR Contact: 08/01/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST: Underground Storage Tank Tank File

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 04/03/2006
Number of Days to Update: 19

Source: Department of Commerce
Telephone: 614-752-7938
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Quarterly

ARCHIVE UST: Archived Underground Storage Tank Sites

Underground storage tank records that have been removed from the Underground Storage Tank database.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 03/15/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 15

Source: Department of Commerce, Division of State Fire Marshal
Telephone: 614-752-7938
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Quarterly

SPILLS: Emergency Response Database

Incidents reported to the Emergency Response Unit. The focus of the ER program is to minimize the impact on the environment from accidental releases, spills, and unauthorized discharges from any fixed or mobile sources. Incidents involving petroleum products, hazardous materials, hazardous waste, abandoned drums, or other materials which may pose as a pollution threat to the state?s water, land, or air should be reported immediately. Not all incidents included in the database are actual SPILLS, they can simply be reported incidents.

Date of Government Version: 06/05/2006
Date Data Arrived at EDR: 06/06/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 22

Source: Ohio EPA
Telephone: 614-644-2084
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Varies

ENG CONTROLS: Sites with Engineering Controls
A database that tracks properties with engineering controls.

Date of Government Version: 03/20/2006
Date Data Arrived at EDR: 04/04/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 30

Source: Ohio EPA
Telephone: 614-644-2324
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

INST CONTROL: Sites with Institutional Engineering Controls
A database that tracks properties with institutional controls.

Date of Government Version: 03/20/2006
Date Data Arrived at EDR: 04/06/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 28

Source: Ohio Environmental Protection Agency
Telephone: 614-644-2324
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

VCP: Voluntary Action Program Sites
Site involved in the Voluntary Action Program.

Date of Government Version: 03/06/2006
Date Data Arrived at EDR: 03/06/2006
Date Made Active in Reports: 03/30/2006
Number of Days to Update: 24

Source: Ohio EPA, Voluntary Action Program
Telephone: 614-644-1298
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

DRYCLEANERS: Drycleaner Facility Listing
A listing of drycleaner facility locations.

Date of Government Version: 04/20/2006
Date Data Arrived at EDR: 04/26/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 15

Source: Ohio EPA
Telephone: 614-644-3469
Last EDR Contact: 04/20/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Varies

BROWNFIELDS: Ohio Brownfield Inventory
A statewide brownfields inventory. A brownfield is an abandoned, idled or under-used industrial or commercial property where expansion or redevelopment is complicated by known or potential releases of hazardous substances and/or petroleum.

Date of Government Version: 04/11/2006
Date Data Arrived at EDR: 05/19/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 40

Source: Ohio EPA
Telephone: 614-644-3748
Last EDR Contact: 04/11/2006
Next Scheduled EDR Contact: 07/10/2006
Data Release Frequency: Varies

CDL: Clandestine Drug Lab Locations
A list of clandestine drug lab sites with environmental impact. This list is extracted from the SPILLS database based on the "product" type.

Date of Government Version: 03/22/2006
Date Data Arrived at EDR: 04/10/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 24

Source: Ohio EPA
Telephone: 614-644-2080
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

NPDES: NPDES General Permit List

General information regarding NPDES (National Pollutant Discharge Elimination System) permits.

Date of Government Version: 05/02/2006
Date Data Arrived at EDR: 06/02/2006
Date Made Active in Reports: 06/28/2006
Number of Days to Update: 26

Source: Ohio EPA
Telephone: 614-644-2031
Last EDR Contact: 06/02/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Semi-Annually

USD: Urban Setting Designation Sites

A USD may be requested for properties participating in the VAP when there is no current or future use of the ground water by local residents for drinking, showering, bathing or cooking. In these areas, an approved USD would lower the cost of cleanup and promote economic redevelopment while still protecting public health and safety. If these USDs were to be approved, the ground water cleanup or response requirements for the areas could be lessened. The Ohio EPA director may approve a USD request based on a demonstration that the USD requirements are met and an evaluation of existing and future uses of ground water in the area. The Ohio EPA director's decision on approval or denial of the request is needed before cleanup requirements for the site can be determined.

Date of Government Version: 03/15/2006
Date Data Arrived at EDR: 04/25/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 16

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/07/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: Varies

HIST INST CONTROLS: Institutional Controls Database

"Institutional control" is a restriction that is recorded in the same manner as a deed which limits access to or use of the property such that exposure to hazardous substances or petroleum are effectively and reliably eliminated or mitigated. Examples of institutional controls include land and water use restrictions. This database is no longer updated or maintained by the state agency.

Date of Government Version: 05/10/2005
Date Data Arrived at EDR: 04/06/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 28

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

HIST ENG CONTROLS: Operation & Maintenance Agreements Database

Volunteers that complete a voluntary action that relies on the ongoing operation and maintenance (O&M) of an engineered control to make the site protective (e.g" cap systems and ground water treatment systems) must enter into a legally binding agreement with the Ohio EPA before the director issues a covenant not to sue. This O&M Agreement must describe how the remedy is constructed and how itwill be monitored, maintained and repaired. It also lays out inspection opportunities for the agency. Companies must document that they have the financial capability to operate any remedy relied on, before the agency will agree to enter into the O&M Agreement. The statute requires that the agency be notified of any change in ownership. This database is no longer updated or maintained by the state agency.

Date of Government Version: 05/10/2005
Date Data Arrived at EDR: 04/04/2006
Date Made Active in Reports: 05/04/2006
Number of Days to Update: 30

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

HIST USD: Urban Setting Designations Database

A USD may be requested for properties participating in the VAP when there is no current or future use of the ground water by local residents for drinking, showering, bathing or cooking. In these areas, an approved USD would lower the cost of cleanup and promote economic redevelopment while still protecting public health and safety. If these USDs were to be approved, the ground water cleanup or response requirements for the areas could be lessened. The Ohio EPA director may approve a USD request based on a demonstration that the USD requirements are met and an evaluation of existing and future uses of ground water in the area. The Ohio EPA director's decision on approval or denial of the request is needed before cleanup requirements for the site can be determined. This database is no longer updated or maintained by the state agency.

Date of Government Version: 05/10/2005
Date Data Arrived at EDR: 04/25/2006
Date Made Active in Reports: 05/11/2006
Number of Days to Update: 16

Source: Ohio EPA
Telephone: 614-644-3749
Last EDR Contact: 06/05/2006
Next Scheduled EDR Contact: 09/04/2006
Data Release Frequency: No Update Planned

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 05/12/2006
Next Scheduled EDR Contact: 08/07/2006
Data Release Frequency: Semi-Annually

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Historical Auto Stations: EDR Proprietary Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Historical Cleaners: EDR Proprietary Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/17/2006
Date Made Active in Reports: 04/07/2006
Number of Days to Update: 49

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 06/14/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 04/24/2006
Date Made Active in Reports: 05/02/2006
Number of Days to Update: 8

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/05/2006
Next Scheduled EDR Contact: 10/02/2006
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 05/02/2006
Date Data Arrived at EDR: 05/31/2006
Date Made Active in Reports: 06/27/2006
Number of Days to Update: 27

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/31/2006
Next Scheduled EDR Contact: 08/28/2006
Data Release Frequency: Annually

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 05/04/2006
Date Made Active in Reports: 06/06/2006
Number of Days to Update: 33

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/12/2006
Next Scheduled EDR Contact: 09/11/2006
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 09/30/2005
Date Data Arrived at EDR: 05/09/2006
Date Made Active in Reports: 05/24/2006
Number of Days to Update: 15

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 06/19/2006
Next Scheduled EDR Contact: 09/18/2006
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data

Hazardous waste manifest information.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 05/17/2006
Number of Days to Update: 61

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 05/15/2006
Next Scheduled EDR Contact: 08/14/2006
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/17/2006
Date Made Active in Reports: 05/02/2006
Number of Days to Update: 46

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 07/11/2006
Next Scheduled EDR Contact: 10/09/2006
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Child Day Care Facilities
Source: Department of Job & Family Services
Telephone: 614-466-6282

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources
Telephone: 614-265-1044

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Scanned Digital USGS 7.5' Topographic Map (DRG)

Source: United States Geologic Survey

A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

WHITEHALL MEMORIAL USARC, OH
721 COUNTRY CLUB ROAD
COLUMBUS, OH 43213

TARGET PROPERTY COORDINATES

Latitude (North):	39.96220 - 39° 57' 43.9''
Longitude (West):	82.8666 - 82° 51' 59.8''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	340570.6
UTM Y (Meters):	4425020.0
Elevation:	798 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	39082-H7 REYNOLDSBURG, OH
Most Recent Revision:	1994
West Map:	39082-H8 SOUTHEAST COLUMBUS, OH
Most Recent Revision:	1994

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

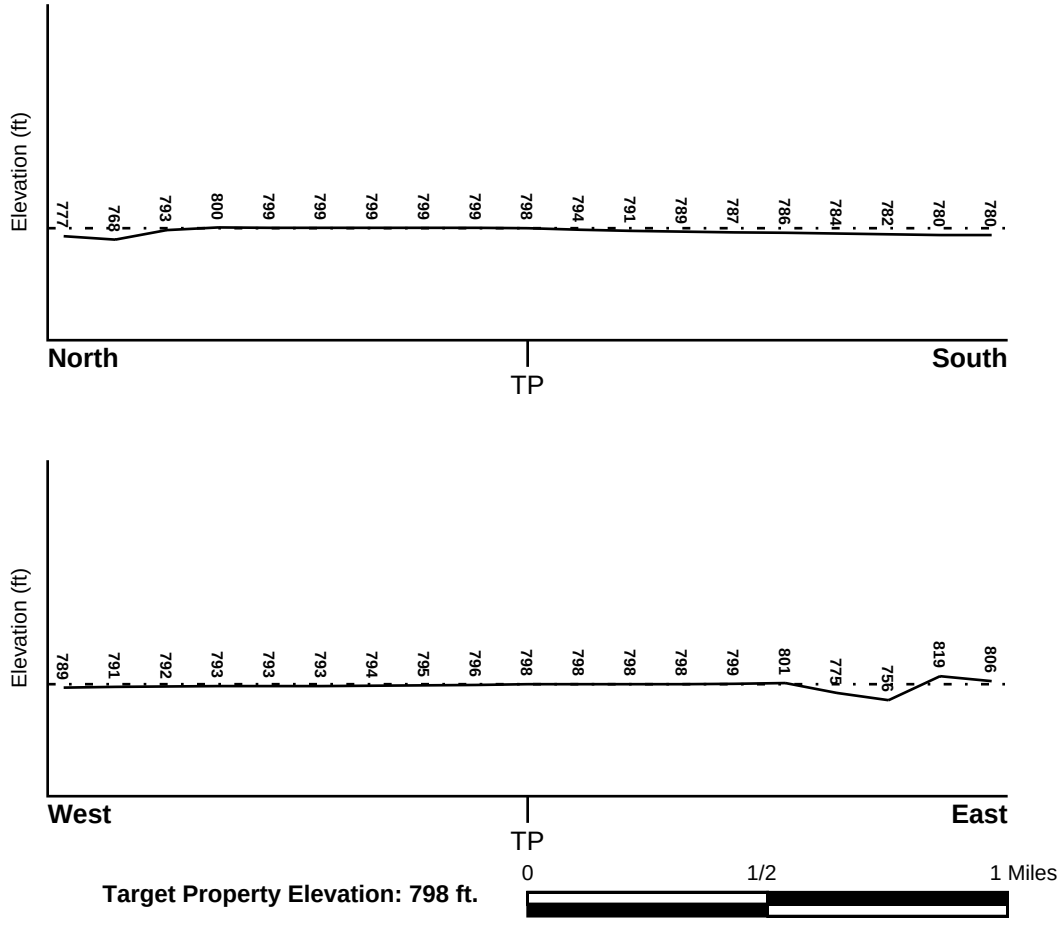
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
FRANKLIN, OH	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 39049C0278G

Additional Panels in search area: 39049C0276G
39049C0260G

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
REYNOLDSBURG	Not Available

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
13	1/2 - 1 Mile South	SW
D14	1/2 - 1 Mile WNW	NE
C15	1/2 - 1 Mile SSW	NE

For additional site information, refer to Physical Setting Source Map Findings.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

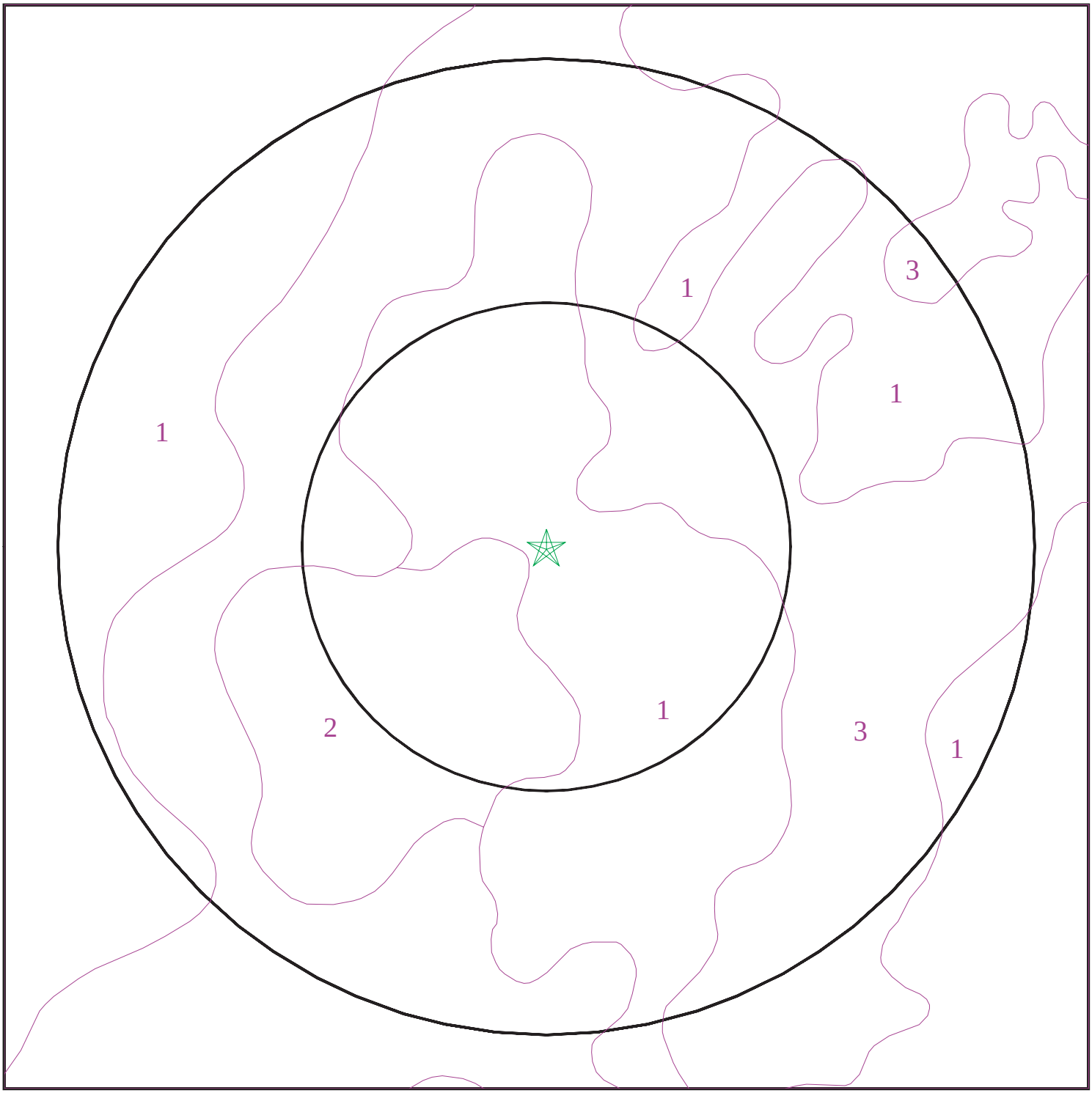
Era:	Paleozoic
System:	Devonian
Series:	Upper Devonian
Code:	D3 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 01714247.122r



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Whitehall Memorial USARC, OH	CLIENT:	CH2M Hill
ADDRESS:	721 COUNTRY CLUB ROAD COLUMBUS OH 43213	CONTACT:	Mary Beth Jacques
LAT/LONG:	39.9622 / 82.8666	INQUIRY #:	01714247.122r
		DATE:	July 12, 2006

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Bennington

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat poorly. Soils commonly have a layer with low hydraulic conductivity, wet state high in profile, etc. Depth to water table is 1 to 3 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	9 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 7.30 Min: 4.50
2	9 inches	35 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.60 Min: 0.06	Max: 7.80 Min: 4.50
3	35 inches	70 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.20 Min: 0.06	Max: 8.40 Min: 7.40

Soil Map ID: 2

Soil Component Name: Bennington

Soil Surface Texture: silt loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Somewhat poorly. Soils commonly have a layer with low hydraulic conductivity, wet state high in profile, etc. Depth to water table is 1 to 3 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information

	Boundary			Classification			
Layer	**Upper**	**Lower**	**Soil Texture Class**	**AASHTO Group**	**Unified Soil**	**Permeability Rate (in/hr)**	**Soil Reaction (pH)**
1	0 inches	9 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 7.30 Min: 4.50
2	9 inches	35 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.60 Min: 0.06	Max: 7.80 Min: 4.50
3	35 inches	70 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.20 Min: 0.06	Max: 8.40 Min: 7.40

Soil Map ID: 3

Soil Component Name: Pewamo

Soil Surface Texture: silty clay loam

Hydrologic Group: Class B/D - Drained/undrained hydrology class of soils that can be drained and are classified.

Soil Drainage Class: Very poorly. Soils are wet to the surface most of the time. Depth to water table is less than 1 foot, or is ponded.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Soil meets the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: HIGH

Depth to Bedrock Min: > 0 inches

Depth to Bedrock Max: > 0 inches

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	13 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 2.00 Min: 0.60	Max: 7.30 Min: 6.10
2	13 inches	50 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.60 Min: 0.20	Max: 7.80 Min: 5.60
3	50 inches	70 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 0.60 Min: 0.20	Max: 8.40 Min: 7.40

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

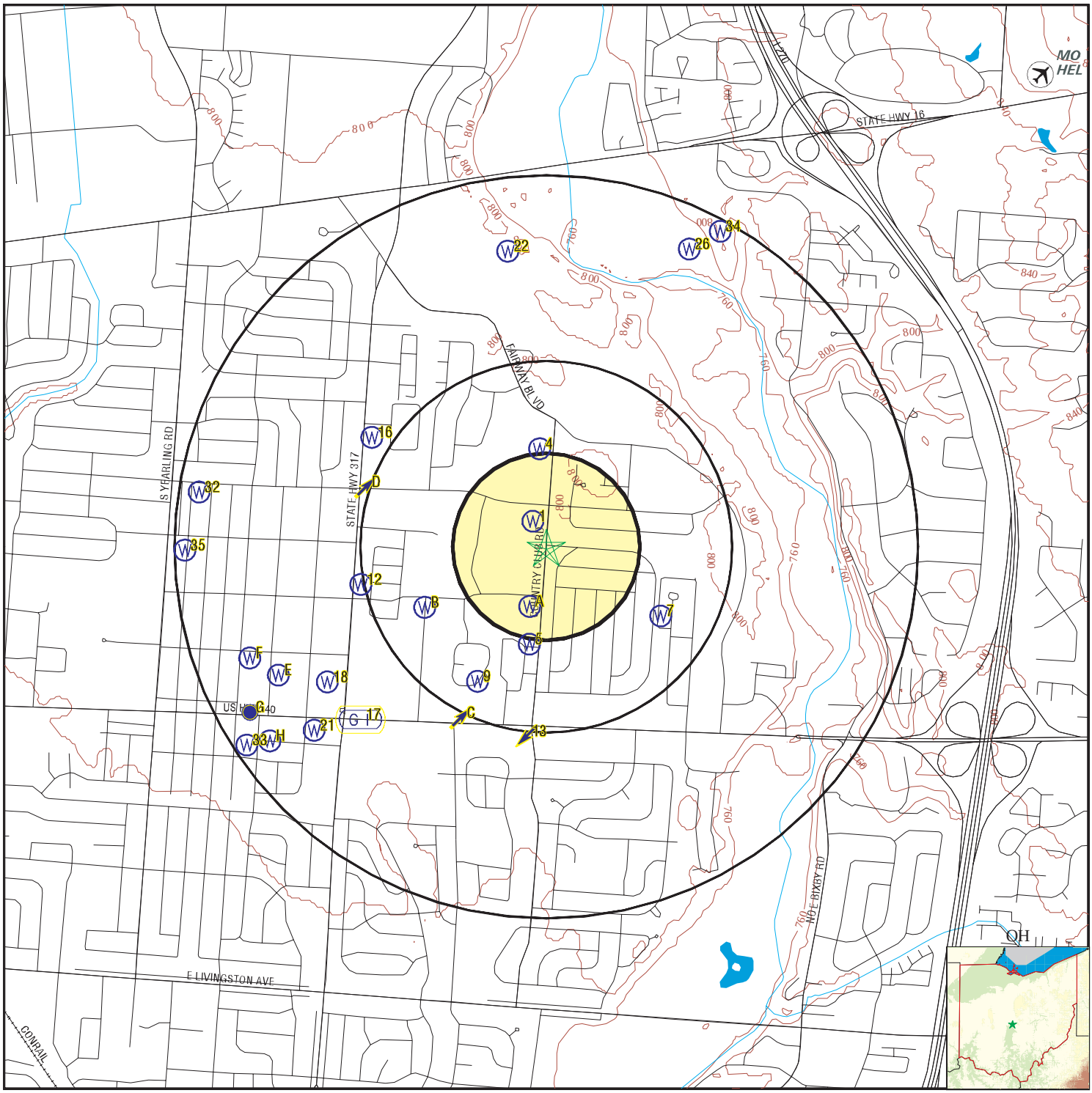
MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	OHD100000020141	0 - 1/8 Mile NNW
A2	OHD100000019959	1/8 - 1/4 Mile SSW
A3	OHD100000019924	1/8 - 1/4 Mile SSW
4	OHD100000020347	1/4 - 1/2 Mile North
5	OHD100000019808	1/4 - 1/2 Mile South
B6	OHD100000019954	1/4 - 1/2 Mile WSW
7	OHD100000019917	1/4 - 1/2 Mile ESE
B8	OHD100000019930	1/4 - 1/2 Mile WSW
9	OHD100000019687	1/4 - 1/2 Mile SSW
C10	OHD100000019593	1/4 - 1/2 Mile SSW
D11	OHD100000020292	1/2 - 1 Mile WNW
12	OHD100000019993	1/2 - 1 Mile WSW
16	OHD100000020371	1/2 - 1 Mile WNW
18	OHD100000019685	1/2 - 1 Mile WSW
E19	OHD100000019716	1/2 - 1 Mile WSW
E20	OHD100000019717	1/2 - 1 Mile WSW
21	OHD100000019517	1/2 - 1 Mile SW
22	OHD100000020917	1/2 - 1 Mile North
E23	OHD100000019691	1/2 - 1 Mile WSW
F24	OHD100000019764	1/2 - 1 Mile WSW
F25	OHD100000019763	1/2 - 1 Mile WSW
26	OHD100000020926	1/2 - 1 Mile NNE
H28	OHD100000019506	1/2 - 1 Mile SW
H29	OHD100000019486	1/2 - 1 Mile SW
H30	OHD100000019469	1/2 - 1 Mile SW
G31	OHD100000019565	1/2 - 1 Mile WSW
32	OHD100000020252	1/2 - 1 Mile West
33	OHD100000019474	1/2 - 1 Mile WSW
34	OHD100000021000	1/2 - 1 Mile NNE
35	OHD100000020081	1/2 - 1 Mile West

PHYSICAL SETTING SOURCE MAP - 01714247.122r



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location

SITE NAME:	Whitehall Memorial USARC, OH	CLIENT:	CH2M Hill
ADDRESS:	721 COUNTRY CLUB ROAD COLUMBUS OH 43213	CONTACT:	Mary Beth Jacques
		INQUIRY #:	01714247.122r
LAT/LONG:	39.9622 / 82.8666	DATE:	July 12, 2006

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **NNW** **0 - 1/8 Mile** **Higher**	**OH WELLS**	**OHD100000020141**

Well log n:	162184	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	GEORGE	Orig own 1:	MECHLING
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	Not Reported	St no:	711
St name:	COUNTRY CLUB	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1897019.31
Horiz y:	715217.7	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	75

A2 **SSW** **1/8 - 1/4 Mile** **Lower**	**OH WELLS**	**OHD100000019959**

Well log n:	306048	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	JOHN	Orig own 1:	CURRIE
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	Not Reported	St no:	783
St name:	COUNTRY CLUB	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1896962.21
Horiz y:	714115.26	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	89

A3 **SSW** **1/8 - 1/4 Mile** **Lower**	**OH WELLS**	**OHD100000019924**

Well log n:	97163	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	WILLIAM	Orig own 1:	HILL
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	Not Reported	St no:	799
St name:	COUNTRY CLUB	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1896976.49
Horiz y:	713900.51	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	50

---

4 **North** **1/4 - 1/2 Mile** **Higher**	**OH WELLS**	**OHD100000020347**

Well log n:	132066	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	Not Reported	Orig own 1:	ALEXANDRE
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	Not Reported	St no:	555
St name:	COUNTRY CLUB	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1897119.22
Horiz y:	716247.1	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	85

5
South
1/4 - 1/2 Mile
Lower

OH WELLS **OHD100000019808**

Well log n:	234415	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	Not Reported	Orig own 1:	MIDWESTERN BOOKING
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	Not Reported	St no:	863
St name:	COUNTRY CLUB	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1896962.21
Horiz y:	713470.99	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	53

B6
WSW
1/4 - 1/2 Mile
Lower

OH WELLS **OHD100000019954**

Well log n:	146507	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	ROMAN	Orig own 1:	JOHNSON
Well use c:	Not Reported	Aquifer ty:	SND
St dir cod:	Not Reported	St no:	802
St name:	ROSEMORE	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1895634.76
Horiz y:	714072.31	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	59

7
ESE
1/4 - 1/2 Mile
Lower

OH WELLS **OHD100000019917**

Well log n:	927311	Well type :	W
Cnty code:	49	Twp code:	1355
Orig owner:	Not Reported	Orig own 1:	COLUMBUS AP GOLF COU
Well use c:	AGR	Aquifer ty:	SHA
St dir cod:	Not Reported	St no:	Not Reported
St name:	HAMILTON	St type co:	RD
City:	COLUMBUS	State code:	OH
Zip:	Not Reported	Horiz x:	Not Reported
Horiz y:	Not Reported	Latitude:	39.9595
Longitude:	-82.860833	Total dept:	80

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
B8 **WSW** **1/4 - 1/2 Mile** **Lower**	**OH WELLS**	**OHD100000019930**

Well log n:	125882	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	GEORGE	Orig own 1:	SCHMIDT
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	Not Reported	St no:	839
St name:	ROSEMORE	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1895320.74
Horiz y:	713929.14	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	59

---

9 **SSW** **1/4 - 1/2 Mile** **Lower**	**OH WELLS**	**OHD100000019687**

Well log n:	81382	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	BYNAM	Orig own 1:	HAYES
Well use c:	Not Reported	Aquifer ty:	SND
St dir cod:	Not Reported	St no:	Not Reported
St name:	COUNTRY CLUB	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1896221.73
Horiz y:	712946.11	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	31

C10 **SSW** **1/4 - 1/2 Mile** **Lower**	**OH WELLS**	**OHD100000019593**

Well log n:	28535	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	Not Reported	Orig own 1:	OUT DOOR THEATRE
Well use c:	Not Reported	Aquifer ty:	SGR
St dir cod:	E	St no:	Not Reported
St name:	MAIN	St type co:	ST
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1896052.39
Horiz y:	712591.58	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	39

D11 **WNW** **1/2 - 1 Mile** **Lower**	**OH WELLS**	**OHD100000020292**

Well log n:	155353	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	S	Orig own 1:	CARSON
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	Not Reported	St no:	526
St name:	HAMILTON	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1894721.25
Horiz y:	715860.53	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	201

12
WSW
1/2 - 1 Mile
Lower

OH WELLS **OHD100000019993**

Well log n:	104874	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	Not Reported	Orig own 1:	CAPITAL SWIFT HOMES
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	Not Reported	St no:	786
St name:	HAMILTON	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1894571.36
Horiz y:	714329.73	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	45

13
South
1/2 - 1 Mile
Lower

AQUIFLOW **13507**

Site ID:	2530375-00
Groundwater Flow:	SW
Shallow Water Depth:	14.95
Deep Water Depth:	17.16
Average Water Depth:	Not Reported
Date:	11/93

D14
WNW
1/2 - 1 Mile
Lower

AQUIFLOW **13723**

Site ID:	2591091-00
Groundwater Flow:	NE
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	12-16
Date:	5/1993

C15
SSW
1/2 - 1 Mile
Lower

AQUIFLOW **13428**

Site ID:	2551167-00
Groundwater Flow:	NE
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	14-18
Date:	7/1995

16
WNW
1/2 - 1 Mile
Higher

OH WELLS **OHD100000020371**

Well log n:	605864	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	JOHN	Orig own 1:	WOLFE
Well use c:	AGR	Aquifer ty:	SHA
St dir cod:	S	St no:	460
St name:	HAMILTON	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1894735.52
Horiz y:	716418.9	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	30

17
SW
1/2 - 1 Mile
Lower

Site ID:	258464-00
Groundwater Flow:	NOT REPORTED
Shallow Water Depth:	Not Reported
Deep Water Depth:	11.35
Average Water Depth:	Not Reported
Date:	10/1989

AQUIFLOW **13718**

18
WSW
1/2 - 1 Mile
Lower

OH WELLS **OHD100000019685**

Well log n:	44961	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	R	Orig own 1:	WAGNER
Well use c:	Not Reported	Aquifer ty:	GRA
St dir cod:	E	St no:	4540
St name:	MAIN	St type co:	ST
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1894089.79
Horiz y:	712946.11	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	26

E19
WSW
1/2 - 1 Mile
Lower

OH WELLS **OHD100000019716**

Well log n:	132089	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	LEWIS	Orig own 1:	SAVA
Well use c:	Not Reported	Aquifer ty:	GRA
St dir cod:	Not Reported	St no:	870
St name:	BERNHARD	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1893422.34
Horiz y:	713082.97	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	30

E20
WSW
1/2 - 1 Mile
Lower

OH WELLS **OHD100000019717**

Well log n:	123925	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	Not Reported	Orig own 1:	SABO
Well use c:	Not Reported	Aquifer ty:	GRA
St dir cod:	Not Reported	St no:	870
St name:	BERNHARD	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1893422.34
Horiz y:	713082.97	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	33

21
SW
1/2 - 1 Mile
Lower

OH WELLS **OHD100000019517**

Well log n:	41831	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	O	Orig own 1:	LACHER
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	E	St no:	4525
St name:	MAIN	St type co:	ST
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1893899.43
Horiz y:	712260.3	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	35

22
North
1/2 - 1 Mile
Lower

OH WELLS **OHD100000020917**

Well log n:	187933	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	Not Reported	Orig own 1:	COLUMBUS COUNTRY CLU
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	E	St no:	4831
St name:	BROAD	St type co:	ST
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1896678.16
Horiz y:	719056.86	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	165

E23
WSW
1/2 - 1 Mile
Lower

OH WELLS **OHD100000019691**

Well log n:	74417	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	VERNON	Orig own 1:	BOWERS
Well use c:	Not Reported	Aquifer ty:	SGR
St dir cod:	Not Reported	St no:	833
St name:	WESTPHAL	St type co:	AVE
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1893338.58
Horiz y:	712972.91	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	36

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database | EDR ID Number

F24
WSW
1/2 - 1 Mile
Lower

OH WELLS **OHD100000019764**

Well log n:	74403	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	J. S.	Orig own 1:	TRAGS
Well use c:	Not Reported	Aquifer ty:	SGR
St dir cod:	Not Reported	St no:	854
St name:	PIERCE	St type co:	AVE
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1892989.07
Horiz y:	713290.9	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	54

F25
WSW
1/2 - 1 Mile
Lower

OH WELLS **OHD100000019763**

Well log n:	28833	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	Not Reported	Orig own 1:	FRECKER ICE CREAM CO
Well use c:	Not Reported	Aquifer ty:	LST
St dir cod:	Not Reported	St no:	Not Reported
St name:	MAIN	St type co:	ST
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1892989.07
Horiz y:	713290.9	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	300

26
NNE
1/2 - 1 Mile
Lower

OH WELLS **OHD100000020926**

Well log n:	57867	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	LEIGH	Orig own 1:	KOEBEL
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	Not Reported	St no:	Not Reported
St name:	751	St type co:	SR
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1899255.99
Horiz y:	719077.03	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	50

G27
WSW
1/2 - 1 Mile
Lower

AQUIFLOW **17199**

Site ID:	2561297-00
Groundwater Flow:	NOT REPORTED
Shallow Water Depth:	Not Reported
Deep Water Depth:	Not Reported
Average Water Depth:	10.0 FT
Date:	8/96

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
H28 **SW** **1/2 - 1 Mile** **Lower**	**OH WELLS**	**OHD100000019506**

Well log n:	78533	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	JOE	Orig own 1:	BIMHARDT
Well use c:	Not Reported	Aquifer ty:	HDP
St dir cod:	Not Reported	St no:	968
St name:	BERNHARD	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1893300.5
Horiz y:	712204.43	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	33

	Database	EDR ID Number
H29 **SW** **1/2 - 1 Mile** **Lower**	**OH WELLS**	**OHD100000019486**

Well log n:	37416	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	C	Orig own 1:	STOUT
Well use c:	Not Reported	Aquifer ty:	GRA
St dir cod:	Not Reported	St no:	988
St name:	BERNHARD	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1893293.78
Horiz y:	712119.16	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	24

	Database	EDR ID Number
H30 **SW** **1/2 - 1 Mile** **Lower**	**OH WELLS**	**OHD100000019469**

Well log n:	141734	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	ROBERT	Orig own 1:	MCCALLISTER
Well use c:	Not Reported	Aquifer ty:	GRA
St dir cod:	Not Reported	St no:	986
St name:	BERNHARD	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1893212.51
Horiz y:	712010.58	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	26

	Database	EDR ID Number
G31 **WSW** **1/2 - 1 Mile** **Lower**	**OH WELLS**	**OHD100000019565**

Well log n:	42071	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	POTTERS SHOP	Orig own 1:	HUFFMAN
Well use c:	Not Reported	Aquifer ty:	GRA
St dir cod:	Not Reported	St no:	Not Reported
St name:	Not Reported	St type co:	Not Reported
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1892872.56
Horiz y:	712474.72	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	27

32
West
1/2 - 1 Mile
Lower

OH WELLS **OHD100000020252**

Well log n:	62385	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	JAMES	Orig own 1:	COLLINS
Well use c:	Not Reported	Aquifer ty:	GRA
St dir cod:	Not Reported	St no:	Not Reported
St name:	PIERCE	St type co:	AVE
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1892280.21
Horiz y:	715652.65	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	34

33
WSW
1/2 - 1 Mile
Lower

OH WELLS **OHD100000019474**

Well log n:	141735	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	RICHARD	Orig own 1:	MYERS
Well use c:	Not Reported	Aquifer ty:	GRA
St dir cod:	Not Reported	St no:	985
St name:	BERNHARD	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1892941.31
Horiz y:	712053.53	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	25

34
NNE
1/2 - 1 Mile
Higher

OH WELLS **OHD100000021000**

Well log n:	57866	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	LEIGH	Orig own 1:	KOEBEL
Well use c:	Not Reported	Aquifer ty:	SHA
St dir cod:	Not Reported	St no:	Not Reported
St name:	751	St type co:	SR
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1899697.49
Horiz y:	719327.42	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	125

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
35 **West** **1/2 - 1 Mile** **Lower**	**OH WELLS**	**OHD100000020081**

Well log n:	28504	Well type :	W
Cnty code:	49	Twp code:	2865
Orig owner:	O	Orig own 1:	SPRINGBORN
Well use c:	Not Reported	Aquifer ty:	SGR
St dir cod:	Not Reported	St no:	Not Reported
St name:	ELAINE	St type co:	RD
City:	Not Reported	State code:	OH
Zip:	Not Reported	Horiz x:	1892074.18
Horiz y:	714827.85	Latitude:	Not Reported
Longitude:	Not Reported	Total dept:	27

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: OH Radon

Radon Test Results

Zip	Total Sites	Median	1st Quartile	3rd Quartile	Min.	Max.
43213	355	6.7	3	13.1	0.1	79.6

Federal EPA Radon Zone for FRANKLIN County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 43213

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	4.400 pCi/L	50%	50%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	12.900 pCi/L	0%	100%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Scanned Digital USGS 7.5' Topographic Map (DRG)
Source: United States Geologic Survey
A digital raster graphic (DRG) is a scanned image of a U.S. Geological Survey topographic map. The map images are made by scanning published paper maps on high-resolution scanners. The raster image is georeferenced and fit to the Universal Transverse Mercator (UTM) projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources
Telephone: 614-265-1044

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Public Water System Data
Source: Ohio Environmental Protection Agency
Telephone: 614-644-3677
The database includes community, transient noncommunity and nontransient noncommunity water wells; and source treatment unit locations.

Water Well Database
Source: Department of Natural Resources
Telephone: 614-265-6747

OTHER STATE DATABASE INFORMATION

RADON

State Database: OH Radon
Source: Department of Health
Telephone: 614-644-2727
Radon Statistics for Zip Code Areas

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

Fax To: CH2M Hill
Contact: Mary Beth Jacques
Fax : 404-229-9152
Date: 07/12/2006

Fax From: Bart Sobieralski
EDR
Phone: 1-800-352-0050

EDR PUR-IQ® Report

"the intelligent way to conduct historical research"

for
Whitehall Memorial USARC, OH
721 COUNTRY CLUB ROAD
COLUMBUS, OH 43213
Lat./Long. 39.96220 / 82.86660
EDR Inquiry # 01714247.122r

The EDR PUR-IQ report facilitates historical research planning required to complete the Phase I ESA process. The report identifies the *likelihood* of prior use coverage by searching proprietary EDR-Prior Use Reports® comprising nationwide information on: city directories, fire insurance maps, aerial photographs, historical topographic maps, flood maps and National Wetland Inventory maps.

Potential for EDR Historical (Prior Use) Coverage - Coverage in the following historical information sources may be used as a guide to develop your historical research strategy:

1. City Directory: Coverage exists for the TP address for 2002

2. Fire Insurance Map: When you order online any EDR Package or the EDR Radius Map with EDR Sanborn Map Search/Print, you receive site specific Sanborn Map coverage information at no charge.

3. Aerial Photograph: Coverage exists for portions of Franklin County for 1940, 1956, 1964, 1972, 1980, 1988, 1994 Shipping time 3-5 business days.

4. Topographic Map: The USGS 7.5 min. quad topo sheet(s) associated with this site:

Historical: Coverage exists for Franklin County

Current: Target Property: TP | 1994 | 39082-H7 Reynoldsburg, OH

Additional required for 1 Mile radius: W | 1994 | 39082-H8 Southeast Columbus, OH

EDR's network of professional researchers, located throughout the United States, accesses the most extensive national collections of city directory, fire insurance maps, aerial photographs and historical topographic map resources available for COLUMBUS, OH. These collections may be located in multiple libraries throughout the country. To ensure maximum coverage, EDR will often assign researchers at these multiple locations on your behalf. Please call or fax your EDR representative to authorize a search.

EDR - HISTORICAL SOURCE(S) ORDER FORM

CH2M Hill
Mary Beth Jacques
Account # 1592163

Whitehall Memorial USARC, OH
721 COUNTRY CLUB ROAD
COLUMBUS, OH 43213
Franklin County
Lat./Long. 39.96220 / 82.86660
EDR Inquiry # 01714247.122r

Should you wish to change or add to your order, fax this form to your EDR account executive:

Bart Sobieralski
Ph: 1-800-352-0050 Fax: 1-800-231-6802

Reports

___ EDR Sanborn Map® Search/Print

___ EDR Fire Insurance Map Abstract

___ EDR Multi-Tenant Retail Facility® Report

___ EDR City Directory Abstract

___ EDR Aerial Photo Decade Package

___ USGS Aerial 5 Package

___ USGS Aerial 3 Package

___ EDR Historical Topographic Maps

___ Paper Current USGS Topo (7.5 min.)

___ Environmental Lien Search

___ Chain of Title Search

___ NJ MacRaes Industrial Directory Report

___ EDR Telephone Interview

Shipping:

___ Email
___ Express, Next Day Delivery — RUSH SERVICE IS AVAILABLE
___ Express, Second Day Delivery
___ Express, Next day Delivery — Customer Account — Acct # _____
___ Express, Second Day Delivery — Customer Account — Acct # _____
___ U.S. Mail

Thank you

"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Mary Beth Jacques
CH2M Hill
1569 Stampmill Way
Lawrenceville, GA 30043

Order Date: 7/12/2006 **Completion Date:** 7/12/2006
Inquiry #: 1714247.123
P.O. #: NA
Site Name: Whitehall Memorial USARC, OH
Address: 721 COUNTRY CLUB ROAD
City/State: COLUMBUS, OH 43213
Cross Streets:

Customer Project: NA

1592163BAS 770-338-1589

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

The EDR Aerial Photo Decade Package

Whitehall Memorial USARC, OH
721 COUNTRY CLUB ROAD
COLUMBUS, OH 43213

Inquiry Number: 1714247.125

July 13, 2006

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDRs professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Date EDR Searched Historical Sources:

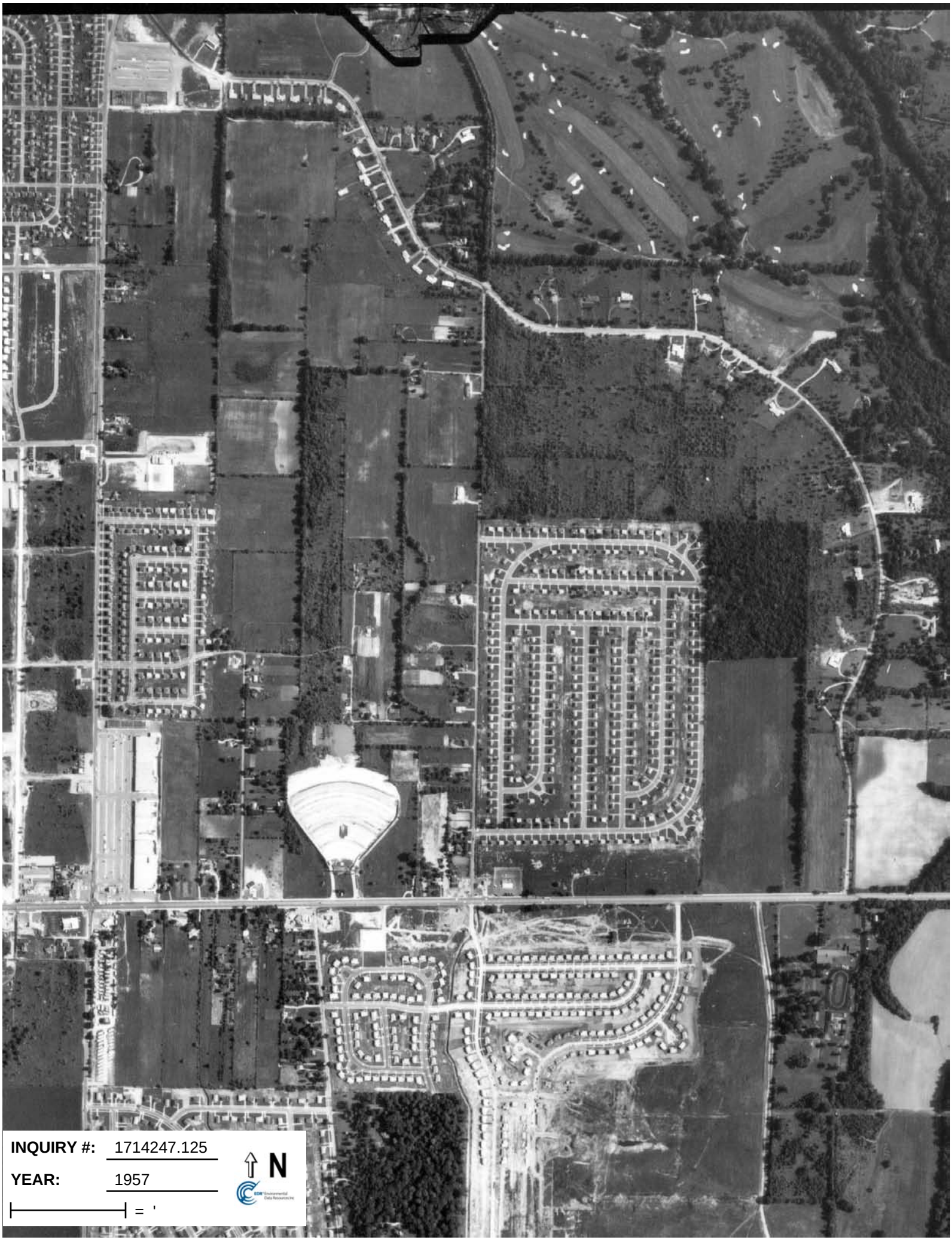
Aerial Photography July 13, 2006

Target Property:

721 COUNTRY CLUB ROAD
COLUMBUS, OH 43213

Year	***Scale***	***Details***	***Source***
1938	Aerial Photograph. Scale: 1"=750'	Panel #: 2439082-H7/Flight Date: August 13, 1938	EDR
1957	Aerial Photograph. Scale: 1"= '	Panel #: 2439082-H7/Flight Date: June 21, 1957	EDR
1964	Aerial Photograph. Scale: 1"= '	Panel #: 2439082-H7/Flight Date: June 11, 1964	EDR
1971	Aerial Photograph. Scale: 1"= '	Panel #: 2439082-H7/Flight Date: October 01, 1971	EDR
1988	Aerial Photograph. Scale: 1"=833'	Panel #: 2439082-H7/Flight Date: April 09, 1988	EDR
1994	Aerial Photograph. Scale: 1"=833'	Panel #: 2439082-H7/Flight Date: March 23, 1994	EDR


INQUIRY #: 1714247.125
YEAR: 1938
= 750'
N

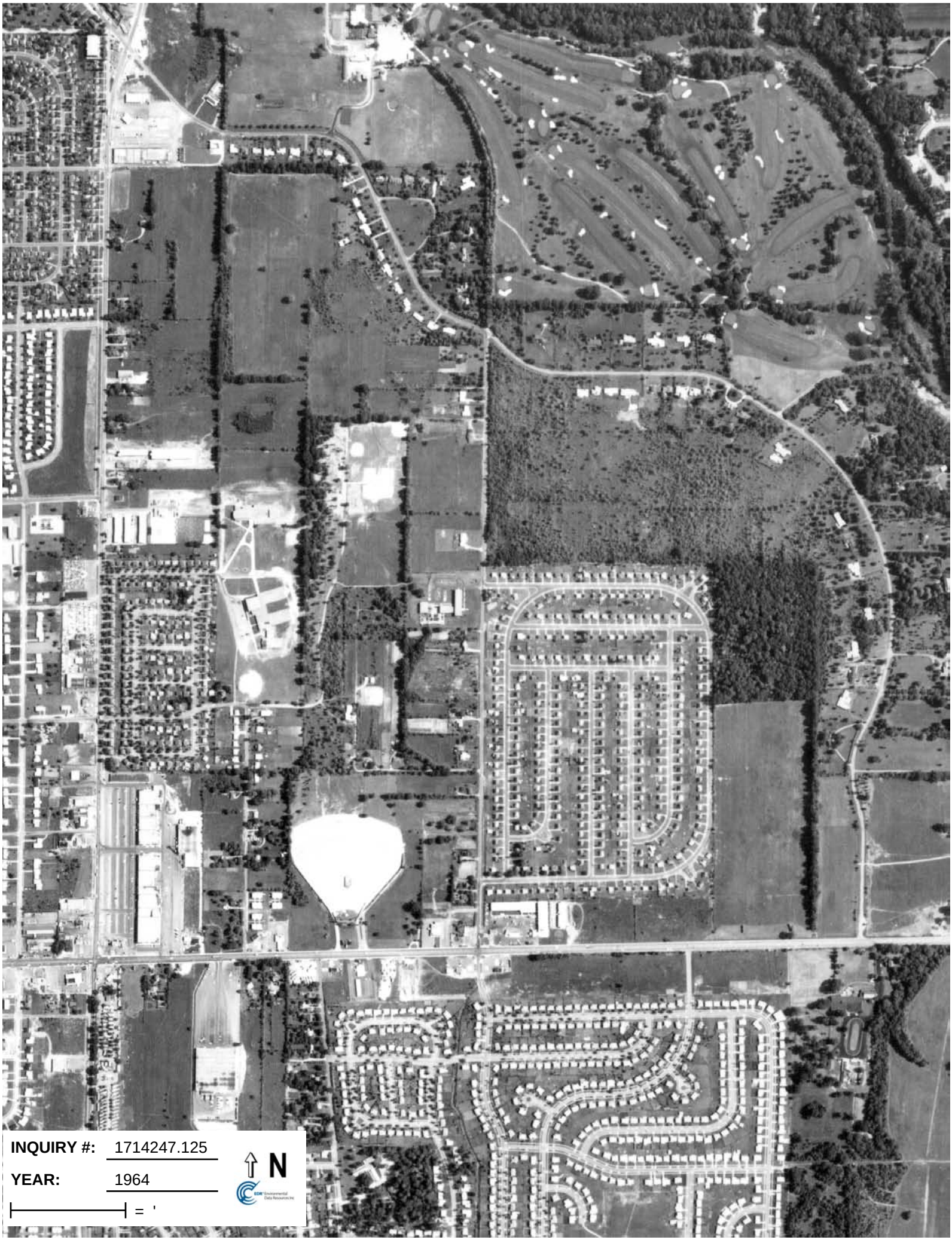


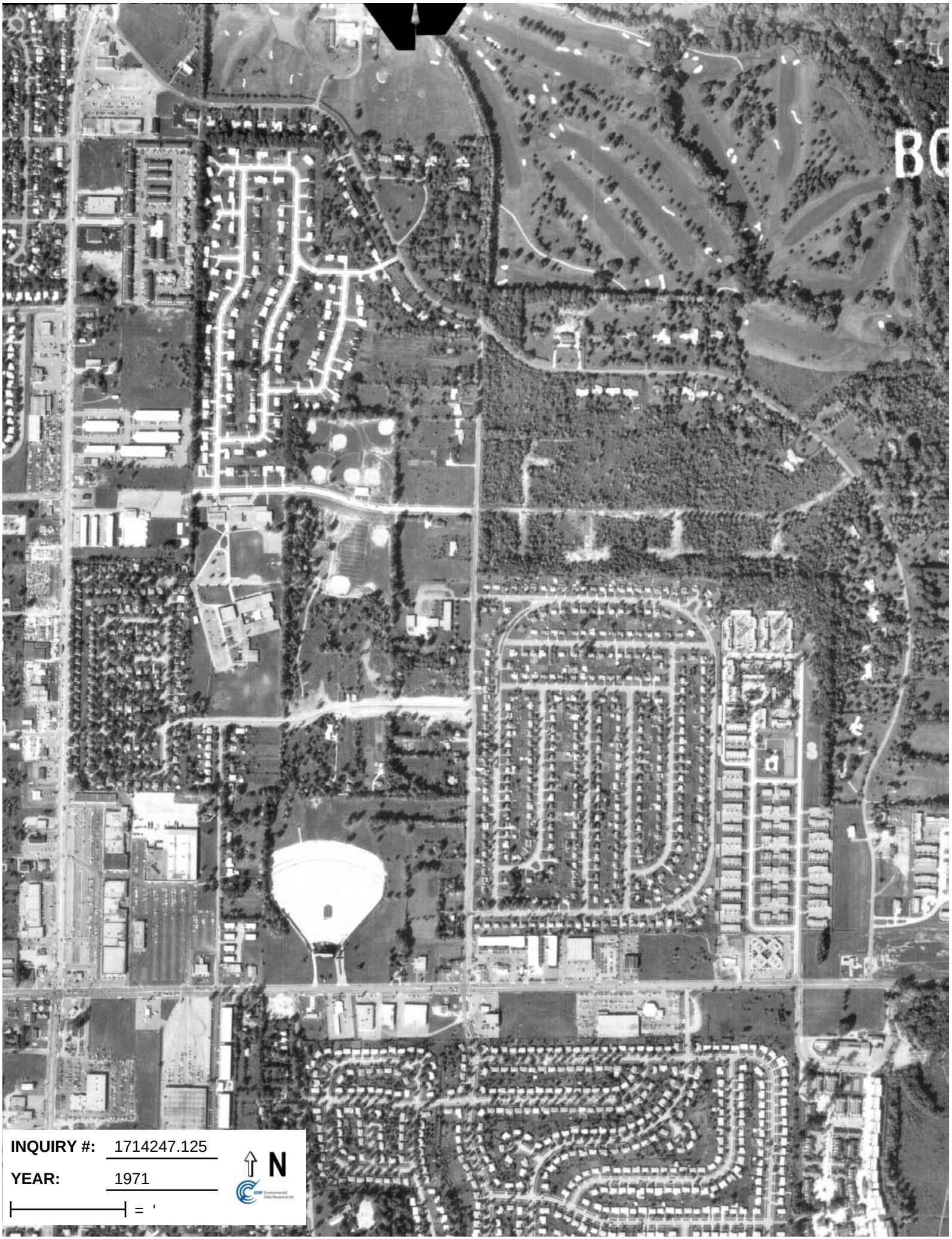
INQUIRY #: 1714247.125

YEAR: 1957

= '

N


INQUIRY #: 1714247.125
YEAR: 1964
= '
N


INQUIRY #: 1714247.125
YEAR: 1971
= '
N

INQUIRY #: 1714247.125

YEAR: 1988

= 833'

N


INQUIRY #: 1714247.125
YEAR: 1994
= 833'
N

The EDR-City Directory
Abstract

Whitehall Memorial USARC, OH
721 COUNTRY CLUB ROAD
COLUMBUS, OH 43213

Inquiry Number: 1714247.126

Wednesday, July 12, 2006

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR City Directory Abstract

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening report designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

SUMMARY

- ***City Directories:***

Business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1923 through 2002. (These years are not necessarily inclusive.) A summary of the information obtained is provided in the text of this report.

This report compiles information by geocoding the subject properties (that is, plotting the latitude and longitude for such subject properties and obtaining data concerning properties within 1/8th of a mile of the subject properties). There is no warranty or guarantee that geocoding will report or list all properties within the specified radius of the subject properties and any such warranty or guarantee is expressly disclaimed. Accordingly, some properties within the aforementioned radius and the information concerning those properties may not be referenced in this report.

Date EDR Searched Historical Sources: July 12, 2006

Target Property:
721 COUNTRY CLUB ROAD
COLUMBUS, OH 43213

Year	***Uses***	***Source***
1923	Address Not Listed in Research Source	R. L. POLK & CO.
1927	Address Not Listed in Research Source	R. L. POLK & CO.
1932	Address Not Listed in Research Source	R. L. POLK & CO.
1937	Address Not Listed in Research Source	R. L. POLK & CO.
1942	Address Not Listed in Research Source	R. L. POLK & CO.
1947	Address Not Listed in Research Source	R. L. POLK & CO.
1952	Address Not Listed in Research Source	R. L. POLK & CO.
1956	Address Not Listed in Research Source	R. L. POLK & CO.
1957	Address Not Listed in Research Source	R. L. POLK & CO.
1960	Address Not Listed in Research Source	R. L. POLK & CO.
1962	Address Not Listed in Research Source	R. L. POLK & CO.
1965	Address Not Listed in Research Source	R. L. POLK & CO.
1971	Address Not Listed in Research Source	R. L. POLK & CO.
1976	Address Not Listed in Research Source	R. L. POLK & CO.
1981	Address Not Listed in Research Source	R. L. POLK & CO.

Year	Uses	Source
1985	Address Not Listed in Research Source	OHIO BELL
1992	Address Not Listed in Research Source	OHIO BELL
2002	****COUNTRY CLUB RD****	HAINES X- REF DIRECTORY
	PSYOPCO (721)	
	USARMYRES 348TH (721)	

Adjoining Properties

SURROUNDING

Multiple Addresses
COLUMBUS, OH 43213

Year	Uses	Source
1923	Address Not Listed in Research Source	R. L. POLK & CO.
1927	Address Not Listed in Research Source	R. L. POLK & CO.
1932	Address Not Listed in Research Source	R. L. POLK & CO.
1937	Address Not Listed in Research Source	R. L. POLK & CO.
1942	Address Not Listed in Research Source	R. L. POLK & CO.
1947	Address Not Listed in Research Source	R. L. POLK & CO.
1952	Address Not Listed in Research Source	R. L. POLK & CO.
1956	Address Not Listed in Research Source	R. L. POLK & CO.
1957	****DIMSON DR N****	R. L. POLK & CO.
	ACKLEY AUTBXER JR (4936)	
	BURKE THEO (4937)	
	SRNALL CEO S (4944)	
	RUSSELL BARNEY H (4945)	
	GOBLE ROGER C (4952)	
	EXETER RD BE (4953)	
	MARTIN WILEY L (4953)	

Year	Uses	Source
1957 (continued)		
	HINGTGEN HAROLD V (4960)	
	FU KERWON GLENN D (4968)	
	JACKSON ROY C (4976)	
	NO RETURN (4977)	
	CORNERAS REUBEN (4984)	
	POE E!UG M (4985)	
	LEW 19 LIONEL Q (4992)	
	SHORT LASLEY E (4993)	
	BRUCK FRANK C W (5000)	
	PREINFI ATIT K (5001)	
	BROWNN XARREL C (5008)	
	DAY WTNX D (5009)	
	KNOX ART C (5016)	
	STOA CORNELIUSA D (5017)	
	****COUNTRY CLUB RD****	R. L. POLK & CO.
	BOGERS VANDO L (545)	
	THOINPSON EDW (549)	
	DORST FRED W (555)	
	N DTLISON C AR IN (601)	
	VACANT (601)	
	TERSECTS (601)	
	GARDNER WXN A (731)	
1960	Address Not Listed in Research Source	R. L. POLK & CO.
1962	****DIMSON DR N****	R. L. POLK & CO.
	MC FADYN JAMES S BE (4915)	
	NEAL HERMAN Z (4928)	
	SNOKE HARRY L (4931)	
	COUNTRY CLUB VILLAGE REAL EST BE (4936)	
	GOLD THOS BE (4936)	
	BURKE THEO R BE (4937)	
	STOUT HENCEL C (4939)	
	DEHL FRANCIS (4944)	
	VACANT (4944)	
	WORTMAN HARRY JR (4945)	
	FERRANTE MARIO BE (4947)	

Year	Uses	Source
1962 (continued)		
	GRUNDY FRANK BE (4952)	
	RADER EDW L BE (4952)	
	HOUT JOHN W BE (4953)	
	FISK JACKIE L (4955)	
	CAMPBELL RAY H (4960)	
	EVANS MONT V (4960)	
	BERKLEY WM H (4963)	
	WOODCOX GORDON BE (4968)	
	VACANT (4971)	
	MILLER RALPH D (4976)	
	HICKLE ROBT M (4977)	
	RIFFE TALMADGE E 0 BE (4979)	
	STRINGER JAMES E (4984)	
	NO RETURN (4985)	
	VACANT (4987)	
	MARTIN MARCUS (4992)	
	DI PASQUALE COSIME (4993)	
	ARMINBRUSTER RAYMOND E BES 2675 (4995)	
	CUMMINS ROBT I TRUCKING BE (4996)	
	KENNEDY JAMES BEE (5000)	
	LECHLER RAYMNOND E BE (5001)	
	SADEIK RICHD (5003)	
	BROWNING DARREL C BE (5008)	
	SCOTT DONALD D (5009)	
	KLINGLER JESSE H BE (5011)	
	HANSEN HARRY H BE (5016)	
	CONKLIN ORMOND G (5017)	
	NEAL JIMMY G 0 BE (5019)	
	****COUNTRY CLUB RD****	R. L. POLK & CO.
	UNDER CONSTN (551)	
	VACANT (555)	
	WATSON ALEX 0 BES (711)	
	GARDNER WNM A BE (731)	
	KEARNEY JAS A BE (733)	
1965	Address Not Listed in Research Source	R. L. POLK & CO.

Year	***Uses***	***Source***
1971	Address Not Listed in Research Source	R. L. POLK & CO.
1976	Address Not Listed in Research Source	R. L. POLK & CO.
1981	Address Not Listed in Research Source	R. L. POLK & CO.
1985	****ETNA RD****	OHIO BELL
	CHARLE S JAYN E S PLMBN G (5020)	
	CHARLE S PE N ZON E HAIR DE S IGN E RS (5020)	
	CHARLES PENZONE HAIR DESIGNER1977 E DUBLIN GRANVILLE RD (5020)	
	JAYN E S CHARLE S PLMBN G (5020)	
	****LINK CT****	OHIO BELL
	DESSIN STANLEY (5024)	
	DESSINI CORPORATION (5024)	
	****LINK RD****	OHIO BELL
	JONES CHROMATOGRAPHY INC (649)	
	****N DIMSON DR****	OHIO BELL
	BURKE TED R (4937)	
	SALYERA JESSIE JR (4945)	
	PREECE HAT D (4953)	
	TARQUINTO TONY (4968)	
	HARTMAN HERB (4976)	
	SEELEY JUDY (4985)	
	LECHLERB BRAD (4993)	
	LECHLERB (5001)	
	WEAVER EARL E (5017)	
	****ETNA RD****	OHIO BELL
	SMITH RONALD E (4929)	
	GOLDSTEIN DAVID L (4975)	
	CARLEA GARRY (5015)	
	NEWMAN JD (5027)	
	CORNELLA AUSTIN A (5038)	
	****ETNA ST****	OHIO BELL
	SMITH RONALD (4919)	
	JAYNES CHAS R (5020)	

Year	Uses	Source
1985 (continued)		
	****LINK CT****	OHIO BELL
	MEYERS FRITZ (5021)	
	DESSIN STANLEY (5024)	
	DESSYB IANE5706 FOREST ELM LN (5024)	
	****LINK RD****	OHIO BELL
	ZIMPFER ROBT (611)	
	MENDELL WM N (619)	
	ANGELETTI WM M (629)	
	BERKEY K (650)	
	****LINK****	OHIO BELL
	CANINIAL DOMINIC (630)	
	ROUSEA DAVID M (639)	
	POLLOCK WM KURT (649)	
	****COUNTRY CLUB RD****	OHIO BELL
	ROGERS EDITH HARRLON (545)	
	MCDADE PHELON (547)	
	PARKERA AUGUSTUS GJR (551)	
	WEAVER GILBERT S (555)	
	LAUDERDALE AZO MAI (565)	
	COCKREL SYEJR & HARRIET (602)	
	GRANT MARSHALL L JR (616)	
	MARIN HAROLD W (626)	
	SADAUSKAS RAYMOND (676)	
	GRBEVSKI TRAJAN (686)	
	CVETKOVSKI STEFAN (696)	
	WATSON ALEXANDER (711)	
	KEARNEYA JAS (733)	
1992	****ETNA RD****	OHIO BELL
	CHARLE S JAYN E S PLMBN G RESIDENTIAL COMMERCIAL (5020)	
	JAYN E S CHARLE S PLMBN G RESIDENTIAL COMMERCIAL (5020)	
	****LINK RD****	OHIO BELL
	ANGCO CO (629)	
	****N DIMSON DR****	OHIO BELL
	RAUSCH PAT (4937)	
	SALYER JESSIE JR (4945)	

Year	Uses	Source
1992 (continued)		
	PREECE HAL D (4953)	
	TARQUINTO TONY (4968)	
	HARTMAN HERB (4976)	
	SHARP TIMOTHY (4984)	
	SEELEY JUDY (4985)	
	LECHLER BRAD (4993)	
	JONES JEFFREY W (5000)	
	LECHLER B (5001)	
	MOELLER RICHARD LEE (5009)	
	****ETNA RD****	OHIO BELL
	SMITH RONALD E (4929)	
	SCHICK S D (5001)	
	CARLE GARRY (5015)	
	KALTENBACH JAS R (5027)	
	CORNELL AUSTIN A (5038)	
	****ETNA ST****	OHIO BELL
	SMITH RONALD (4919)	
	JAYNES CHAS R (5020)	
	****LINK CT****	OHIO BELL
	MEYERS FRITZ (5021)	
	DESSIN STANLEY (5024)	
	EADER NORMAN (5043)	
	MORRISON GEO (5048)	
	****LINK RD****	OHIO BELL
	ANGELETTI WM M (629)	
	MAXFIELD SEAN H (639)	
	BERKEY K (650)	
	****LINK****	OHIO BELL
	CANINI DOMINIC (630)	
	POLLOCK WM KURT (649)	
	****COUNTRY CLUB RD****	OHIO BELL
	ROGERS EDITH HARRISON (545)	
	MCDADE PHELON (547)	
	PARKER AUGUSTUS G JR (551)	
	TALLEY WM III (555)	

Year	Uses	Source
1992	(continued)	
	LAUDERDALE AZO MAJ (565)	
	LEWIS JOHN M (588)	
	COCKREL SYE JR & HARRIET (602)	
	GRANT MARSHALL L JR (616)	
	FRANCIS W GLEN (626)	
	KRSTESKI SIMON & MARA (676)	
	GRBEVSKI TRAJAN (686)	
	CVETKOVSKI S (696)	
	CVETKOVSKI STEFAN (696)	
	WATSON ALEXANDER (711)	
	KEARNEY JAS (733)	
2002	****N DIMSON DR****	HAINES X- REF DIRECTORY
	MINNEHANWENDY (4903)	
	OMINNEHANCHARNES (4903)	
	HARRISWILLAM (4909)	
	MEORIMANDOANALD (4915)	
	HAASRRCHARD L (4920)	
	OQ 0 ENDOE (4923)	
	NEENANJOHN (4928)	
	XXXX (4930)	
	KENTJAMES A (4931)	
	CITY OF WHITEHALL (4937)	
	FULTZGARY 614A (4937)	
	FULTZPAL (4937)	
	WHITEHALL CSO (4937)	
	JONES ROSE (4939)	
	MERRIMAN DONRAD (4939)	
	PINES JERRY 00 A (4944)	
	SALYERJESS IER JR (4945)	
	WINNESTAFFERR (4952)	
	SALMONSSLACY 814 SLLL A IJI II (4953)	
	HARTWENDY S (4963)	
	GUNTERALLY 00 A (4966)	
	TARQUINTOTOERY 614 861 U (4968)	
	CARPENTER DAROTHY (4971)	
	HARTMANHERB 614 864 6 B (4976)	

Year	Uses	Source
2002 (continued)		
	RAYBURN MICHAEL (4977)	
	OSIGMON BARBARA (4979)	
	WATERSJAS R 514 B (4979)	
	FULLER TARY (4984)	
	SEELEYJUDY (4985)	
	SMITH FRANCIS (4985)	
	COHEN DAVID 00 H (4987)	
	LITTLETONJEAN IOE (4992)	
	LECOLEIIBRADLORD (4993)	
	DARNELLJALL IRY (4995)	
	OCLARK MARCUS (4995)	
	MCKELVEYCHAILOLL 814 B (5003)	
	KIRK THOMAS (5008)	
	0 MAYNARDFLARA (5011)	
	MAYNARD (5011)	
	PECKGERY 00 R (5016)	
	MORRISGAWRRCK (5017)	
	FANROYA (5019)	
	WINNESTAFFERR (5019)	
	****ETNA RD****	HAINES X- REF DIRECTORY
	SMITH RONALD (4919)	
	WHITEHALL FIREDEPT (4924)	
	SSMITH RONALD E (4929)	
	STARTALR 614 861 83944 C (4975)	
	TARTALK 614 861 8394 C (4975)	
	OSCHICKSD (5001)	
	BOUAHOMBOULSY (5014)	
	CARLEA (5015)	
	CARLEANNE L (5015)	
	CHARLESJAYNES (5020)	
	JAYNESCHASPLMBNG (5020)	
	JAYNESCHASN (5020)	
	PLUMBING (5020)	
	DESKINSJANICN (5027)	
	SDESKINSJL (5027)	
	CORNELL AUSTIN A (5038)	

Year	Uses	Source
2002 (continued)	BERKEYCALVIN (5039)	
	****LINK CT****	HAINES X- REF DIRECTORY
	CITY OF WHITEHALL (5021)	
	MEYERSFRITZ (5021)	
	WHITEHALL CSD (5021)	
	DESSINSIANLEY (5024)	
	OEADERNORMAN (5043)	
	MORRISON 3EN (5048)	
	****LINK RD****	HAINES X- REF DIRECTORY
	WOODWARDJAMES (611)	
	MBNDELLWM N (619)	
	ANOCOCO (629)	
	SANGELETTIWM M (629)	
	CANIN 1 DOMIN IC (630)	
	BUSSARDDGJR (639)	
	BERKEYK 614 R (650)	
	****COUNTRY CLUB RD****	HAINES X- REF DIRECTORY
	ROGERS ED 0H HARRIAON (545)	
	MORTONPA (547)	
	PARKERAUGUSLUS GJ (551)	
	TALLEYWM 3D (555)	
	LAUDERDALEAZO MAJ (565)	
	SLEWISJOHN M (588)	
	SCOCKRELLSYE (602)	
	KUMBAYAINC 614 A (616)	
	SGRANTMARAHEALL LJR (616)	
	SFRANCISWGIEN (626)	
	PHIILLIPS 81 1 4 I LI (629)	
	RUFFTI IA (640)	
	KRSTESK (676)	
	KRSTESKI SIMON (676)	
	GRBEVSKITRAJAN 614 861R (686)	
	CVETKOVSKI SELAN (696)	
	CVETKOVSKIS (696)	
	WATSONROSE (711)	

Year	***Uses***	***Source***
2002	(continued)	
	XXXX (731)	
	KEARN (733)	