DRAFT

PHASE I PROPERTY ASSESSMENT
OTTERBEIN COLLEGE EQUINE FACILITY

Prepared for
Otterbein College, Westerville, Ohio
June 15, 2007

Latitude 40° 08' 26" N
Longitude 82° 54' 08" W

Ohio Voluntary Action Program
OAC 3745-300-06

Certified Professional
Scott M. Blanchard, C.P.G., CP #292

This is a draft and is not intended to be a final representation
of the work done or recommendations made by Brown and Caldwell.
It should not be relied upon; consult the final report.

BROWN AND CALDWELL

4700 Lakehurst Court, Suite 100
Columbus, Ohio 43016

TABLE OF CONTENTS

LIST OF FIGURES (PROVIDED AT THE END OF THE TEXT)

LIST OF TABLES (PROVIDED AT THE END OF THE TEXT)

LIST OF ACRONYMS

AOC	Area of Concern
bgs	below ground surface
BUSTR	Bureau of Underground Storage Tank Regulations
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CNS	Covenant Not To Sue
CORF	Clean Ohio Revitalization Fund
CP	Ohio Voluntary Action Program Certified Professional
CPG	Certified Professional Geologist
EDR	Environmental Data Resources
M&E	Metcalf & Eddy of Ohio, Inc.
msl	mean sea level
NFA	No Further Action
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
OAC	Ohio Administrative Code
ODNR	Ohio Department of Natural Resources
ODOT	Ohio Department of Transportation
Ohio EPA	Ohio Environmental Protection Agency
PAHs	Polycyclic Aromatic Hydrocarbons
PND	Planned Neighborhood District (zoning)
RCRA	Resource Conservation and Recovery Act
RR	Rural Residential (zoning)
SVOCs	Semivolatile Organic Compounds
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
VAP	Voluntary Action Program
VOCs	Volatile Organic Compounds

PHASE I PROPERTY ASSESSMENT
OTTERBEIN COLLEGE EQUINE FACILITY

EXECUTIVE SUMMARY

In October 2005, Otterbein College Board of Trustees formed an *ad hoc* committee to study options related to the establishment of a permanent home for the Equine Science Department field operations (the stables) which have occupied rented facilities since the program's inception. One option for the new facility was to utilize existing land already owned by Otterbein College (Otterbein).

In December 1941, in response to the needs of the Army Chemical Warfare Service, Kilgore Manufacturing purchased the undeveloped property near the Franklin County / Delaware County, Ohio border. The former farm site was converted to a pyrotechnics and ordnance manufacturing facility consisting of a network of magazines, concrete buildings, Quonset huts, a water tower, and other ancillary support facilities. Onsite activities conducted by Kilgore Manufacturing included experimental work, the manufacture and assembly of incendiary items and detonation, burning and disposal of waste material.

Otterbein owns the 111-acre former Kilgore Farms Property ("the Property") located off Spring Road approximately one-half mile north of County Line Road in Westerville, Ohio. In March 2007, Otterbein successfully obtained a zoning change from Rural Residential (RR) to Planned Neighborhood District (PND) for the entire 111 acres. This new zoning is consistent with the PND designation for other Otterbein properties within Westerville's jurisdiction and will allow the site to be used for college expansion to include classrooms, a residence (the equine caretaker), an animal facility, and events areas. This Phase I Report will address the historical operations conducted on the entire 111-acre property, but will focus and specifically discuss item #2 above; the 69.145 acres of the property that will be the future location of Otterbein's equine science field operations.

Brown and Caldwell Ohio, LLC (Brown and Caldwell) was retained by Otterbein to prepare and submit a No Further Action Letter (NFA) to Ohio Environmental Protection Agency (Ohio EPA) consistent with Ohio Administrative Code (OAC) 3745-300-06, the requirements of Ohio's Voluntary Action Program (VAP). As described in Ohio Administrative Code (OAC) Section 3745-300-02, Paragraph C, the equine facility property owned by Otterbein College is eligible for entry into the Ohio VAP.

This Phase I report describes the methodologies used, the current and historical information that was reviewed, summaries of people interviewed, and Brown and Caldwell's findings and conclusions during the preparation of the NFA Letter.

The Phase I review has not identified any areas or containers containing hazardous substances or petroleum at the 69-acre Site. The Phase I Property Assessment for this Site meets all of the requirements of OAC 3745-300-06 and therefore, requires no further action.

1. INTRODUCTION

In October 2005, Otterbein College Board of Trustees formed an *ad hoc* committee to study options related to the establishment of a permanent home for the Equine Science Department field operations (the stables) which have occupied rented facilities since the program's inception. One option for the new facility was to utilize existing land already owned by Otterbein College (Otterbein).

Otterbein owns the 111-acre former Kilgore Farms Property ("the Property") located off Spring Road approximately one-half mile north of County Line Road in Westerville, Ohio (Figure 1). In March 2007, Otterbein successfully obtained a zoning change from Westerville City Council from Rural Residential (RR) to Planned Neighborhood District (PND) for the entire 111 acres. This new zoning is consistent with the PND designation for other Otterbein properties within Westerville's jurisdiction and will allow the site to be used for college expansion to include classrooms, a residence (the equine caretaker), an animal facility, and events areas. The surrounding community strongly supports Otterbein's development of a state of the art equine facility on the former Kilgore Farms Property.

The 111-acre property has been parceled into the following three separate sites:

1. Otterbein currently owns to the centerline of Spring Road, since the City has not yet acquired the 40' half right-of-way for Spring Road. However, the Phase I acreage excludes the Spring Road right-of-way, since the City will request this property at the time of development and it will eventually become the property of the City of Westerville (2.249 acres);
2. Phase I of the site development consisting of the Equine Science facility (69.145 acres); and
3. Phase II site development of the eastern portion of the former Kilgore Farms property site (39.818 acres).

This Phase I Report will address the historical operations conducted on the entire 111-acre property, but will focus and specifically discuss item #2 above; the 69.145 acres of the property that will be the future location of Otterbein's equine science field operations.

Brown and Caldwell Ohio, LLC (Brown and Caldwell) was retained by Otterbein to prepare and submit a No Further Action Letter (NFA) to Ohio Environmental Protection Agency (Ohio EPA) consistent with Ohio Administrative Code (OAC) 3745-300-06, the requirements of Ohio's Voluntary Action Program (VAP). This Phase I report describes the methodologies used, the current and historical information that was reviewed, summaries of people interviewed, and Brown and Caldwell's findings and conclusions during the preparation of the NFA Letter.

1.1 Eligibility

As described in Ohio Administrative Code (OAC) Section 3745-300-02, Paragraph C, the equine facility property owned by Otterbein College is eligible for entry into the Ohio VAP.

- The Site or a portion of the Site has not been listed on the NPL.
- There are no "injection wells" as defined in OAC 3745-34-01 located on the Site.

- The Site is not the subject of any state or federal obligations to perform corrective action pursuant to a permit issued under RCRA or ORC Chapter 3734, and rules adopted thereunder.
- The Site is not the subject of a federal enforcement action requiring site assessment, removal, or remedial activities, pursuant to any federal laws and regulations.
- The Site is not a licensed or permitted "solid waste facility" that is the subject of a permit, license, or order requirement to conduct "closure" or "post-closure care", as the terms are defined in ORC Chapter 3734 and rules adopted thereunder.
- Treatment, storage, or disposal of hazardous wastes, as defined in ORC Chapter 3734 and the rules adopted thereunder, have not occurred at the Site on or after November 19, 1980.
- There have never been any petroleum UST systems, as defined at OAC 1301:7-9-02(B)(35), located on the property.
- There are no oil and gas wells, as defined in ORC Chapter 1509 and any rules thereunder, located on the Site.
- The Site is not subject to an enforcement letter as defined in OAC 3745-300-02(B) relating to a release or threatened release of hazardous substances or petroleum.

1.2 Project Personnel

Personnel from Brown and Caldwell who worked on this project are listed below along with their respective project responsibilities. A copy of each person's resume and affidavit, as applicable, is provided in Appendix A.

Scott Blanchard, C.P.G.	Certified Professional (#292)
Barry Nelson, C.P.G.	Project Manager
Todd Aebie, C.P.G.	Project Geologist
Jeff DeLaet, P.E.	Certified Professional (#257) [reviewer]

2. HISTORY OF THE 111-ACRE KILGORE FARMS SITE

2.1 Historical Site Overview

Otterbein College has owned the 111-acre former Kilgore Farm Property since it was donated to them in May 1962. Prior to Otterbein's ownership of the Site, Kilgore Manufacturing had purchased the 111-acre farm from Joe and Eva Morris in 1941 for the manufacture and storage of explosives, pyrotechnics, and other incendiary munitions. Appendix B.1 contains a copy of the May 1962 Deed of Gift from Kilgore to Otterbein and the October 9, 1992 survey plat of the entire 111-acre property that is presently owned by the College. Also included in Appendix B.1 is the current chain-of-title for the entire Otterbein property.

In December 1941, in response to the needs of the Army Chemical Warfare Service, Kilgore Manufacturing purchased the undeveloped property near the Franklin County / Delaware County, Ohio border. The former farm site was converted to a pyrotechnics and ordnance manufacturing facility consisting of a network of magazines, concrete buildings, Quonset huts, a water tower, and other ancillary support facilities. Onsite activities conducted by Kilgore Manufacturing included experimental work, the manufacture and assembly of incendiary items and detonation, burning and disposal of waste material.

Kilgore Manufacturing had several production contracts with the War department. In 1962, Commercial Credit Corporation, the owner of Kilgore Manufacturing, made a gift to Otterbein of the entire 111 acres. Concurrent with and as a prerequisite to Otterbein's receipt of the gift, Otterbein sought assistance from Joliet Arsenal to supervise the decontamination of the Site and demilitarization of live ordnance disposed at the Site. This was completed in the summer of 1962.

A Voluntary Action Program (VAP) compliant Phase I was initially completed by Metcalf & Eddy, Inc. (M&E) in May 1988 on behalf of the Keethler Company and Otterbein, but was not formally submitted to Ohio EPA. Fourteen Areas of Concern (AOCs) were originally identified by M&E as having potential issues, but this was reduced to 11 based on a thorough review of the aerial photographs, historical operations records, employee interviews, and existing analytical data from earlier work at the Site. Four of the eleven AOCs (3 areas around the Quonset huts impacted by flare casings and canisters on the surface and the farmhouse area) were investigated and determined to require no further action.

The seven remaining AOCs that required additional investigation, plus the burial trench area (a.k.a. the southeast landfill area) resulted in eight total AOCs that would require phase II work to evaluate the areas for energized materials (unexploded ordnance) and to evaluate the soils for chemicals of concern that could potentially exceed the Ohio VAP residential standards. The AOCs were confined to the eastern one-third of the 111-acre site and consisted of the following areas (Figure 2):

1. Burn Pit – reportedly excavated to 10 feet depth and filled. The metal concentrations were below VAP unrestricted use standards.
2. Cinder Area – coal fragments and slag were below VAP unrestricted use standards for semi-volatile organic compounds (SVOCs) and metals, but had orange and red fragments in the cinders and slag.

3. Burn Area SE of Burn Pit – drums, drum fragments, metal debris, wood, white crystalline substance, purple powder, ash, bright red silty material and some ordnance (flares, blasting caps, canisters) were noted. Analytical data indicates the area exceeds VAP unrestricted use standards for metals and perchlorate.
4. UST in former Manufacturing area – hydrocarbon odor at 24 ft depth in early borings from former heating oil tank (removed earlier).
5. Experimental Area – drum fragments, construction debris, burned debris, ash, slag, cinders, black granular material with lead and polycyclic aromatic hydrocarbons (PAHs) exceeding VAP unrestricted use standards.
6. Drainage Ditch Area – trenching in this area identified ordnance, gray and purple silt-like material, black granular material, white crystalline material, red and orange stained soils, metal, glass and ceramic. Several metals exceeded the VAP unrestricted use standards.
7. Horizontal features – geophysical results showed several anomalies attributed to surface metal debris so trenching was performed with no finding of buried items. A green silty material was present and it exceeded the unrestricted residential use standards under VAP for several metals.
8. Landfill Area – the area was trenched in 1996 to a depth of 10 feet or native material was encountered. Representatives of the Wright Patterson Explosive Ordnance Division identified empty M112 photoflash casings, M56 projectile fuses, various pyrotechnic debris, and 2-55 gallon drums of reddish material assumed to be red phosphorous. Groundwater in this area was sampled for VOCs, SVOCs and RCRA metals and only some of the metals were present above the laboratory method detection limits.

In June 2005, Otterbein submitted a Clean Ohio Revitalization Fund (CORF) grant application for 107 acres; the 111-acre Site, minus about four acres of the Landfill Area. The submittal strategy was based on increasing the chances of obtaining Department of Development funding for the cleanup of the Site, minus the Landfill Area, however the residents of the surrounding neighborhoods were looking for an entire site cleanup approach. After the Westerville City Council (the grant application Sponsor) failed to approve the motion to authorize the city manager to file the grant application with the State, the application was removed from the public library and the application process was halted by Otterbein.

2.2 Results of Historical Investigations and Reviews

Brown and Caldwell determined that the Kilgore Manufacturing operations were generally concentrated along the eastern portion (30-35 acres) of the entire 111-acre site with the "landfill" or disposal area (2-3 acres) located in the southeast corner of the property. The Phase I and Phase II Property Assessment Amendment completed by M&E (2005) for the original Clean Ohio Revitalization Fund application, contains portions of and discussions on the historical environmental activities conducted on the property immediately east of the Site.

Historical operations that occurred in the "clean" 65-70 acres of the western portion of the property involved a series of Quonset huts (about 25 acres) that were used for storage of assembled munitions/flares, packing materials, and raw manufacturing materials. Portions of this Quonset hut area were historically farmed or used for pasture (cattle) during and after the operation of Kilgore Manufacturing, Inc. Numerous environmental investigations and personnel interviews conducted by M&E in the late 1990's did not uncover evidence (employee interviews, aerial photographs, manufacturing records, etc.) to suggest that waste materials were handled in the Quonset Hut area. Solid waste consisting of reinforced concrete debris and general demolition debris (metal and wood) have been observed in piles near the former location of the westernmost Quonset huts.

In December 1996, Ohio EPA received a No Further Action letter from Lawhon & Accociates for the 2.3-acre parcel in the southwestern corner of the Site. Based on the findings in the NFA letter, Ohio EPA issued a Covenant Not To Sue for the parcel on May 22, 1997. This parcel is included in this Phase I for the Equine Facility (M&E, 2005).

Based on the historical evidence presented in the earlier environmental reports and the additional historical evidence obtained by Brown and Caldwell (Section 3), Otterbein has parceled the 111-acre former Kilgore Farms Property into the Otterbein Equine Parcel (west) and the former operations area containing the Areas of Concern (east). A third parcel, the right-of-way parcel along Spring Street, will be transferred to the City of Westerville in the near future. A copy of the legal description for each of the three parcels is provided in Appendix B.2.

2.3 Equine Facility Property

2.3.1 Current Status and Zoning

The Equine Facility Property (the "Site") is approximately 69 acres in area and is currently vacant. Today, the Site is partially wooded and overgrown in several areas by dense grass and brush. The aboveground structures have been removed and since 1986, approximately 70 acres of the Site (western portion) was leased to local farmers for growing soybeans and corn. Agricultural activities at the Site have ceased since about 2000, but Otterbein College has contracted brush mowing companies several times to clear the westernmost 85 acres of the entire property in support of the numerous environmental investigations at the site. A legal description of the facility is contained in Appendix B.2.

The Site was historically zoned RR (Rural Residential), however Otterbein obtained a zoning change to PND (Planned Neighborhood District) for the entire 111 acres upon the City of Westerville's recommendation (Appendix B.3). The zoning change is consistent with the PND designation for other Otterbein properties within Westerville's jurisdiction and specifically allows the Site to be used for college expansion to include classrooms, a residence (equine facility caretaker), an animal facility, and events arena. Over the past six months, Otterbein and their environmental technical experts have met with local residents to present the conceptual plan for the Equine Facility. These small, neighborhood meetings were held at local residents' homes located adjacent to the Site in Mariner's Cove and The Landings and across Spring Road in Mill Stone Creek. The surrounding community strongly supports Otterbein's efforts to develop a state of the art equine facility at the former Kilgore Farms Site.

2.3.2 Surrounding Property Use

The Property is located in a rapidly growing residential area of Westerville and is surrounded by a mix of residential and school properties. The following land usage surrounds the Property.

North: The Property is bounded by undeveloped wooded lots and residential properties.

South: The Westerville School District owns the land south of the Property. Westerville North High School, Heritage Middle School, and their athletic fields bound the Site. Residential neighborhoods are within one half mile.

East: Approximately 40 acres of mixed woods and overgrown grass areas containing the eight AOCs identified in previous environmental studies at the Kilgore Farms Property (owned by Otterbein College) are immediately east of the Site.

West: Spring Road bounds the Site with residential developments immediately west of the road.

3. REVIEW OF HISTORICAL SITE INFORMATION

Brown and Caldwell conducted an exhaustive review of available information for the 69-acre Equine Facility property to identify the specific location of historical operations on the Site. This information has been obtained in part from Otterbein College's Phase I Property Assessment Amendment for the Kilgore Farm Property (M&E, June 2005) that was submitted for the CORF grant application package, interviews conducted by Brown and Caldwell, and additional information identified by Brown and Caldwell during this assessment. Information obtained from the June 2005 Phase I document, such as aerial photographs, topographic maps, and previous environmental reports, have also been reviewed and the information expanded on by Brown and Caldwell and comments are included in the following sections.

3.1 Aerial Photographs

The aerial photographs for the 69-acre Equine Facility property reviewed by Brown and Caldwell (Appendix C) originated from those provided in the updated EDR, Inc. database package, Delaware County Historic Aerial Photos (some are also included in the original M&E Phase I, dated June 2005), and Ohio Department of Transportation (ODOT) photos acquired by Brown and Caldwell. The observations made by Brown and Caldwell are presented as a bulleted summary.

EDR Report: August 13, 1938 Aerial, Scale: 1"=750', Panel # 2440082-B8

- The property consists of farmland, crop patterns, or pasture
- A farm house and related support buildings are present and surrounded by trees
- Gravel roads are present and a few areas of ponded water are visible
- The surrounding properties are predominately farm lands or wooded

Delaware County Ohio Historical Aerial Photography 1939-1940

- The property consists of farmland, crop patterns, or pasture
- A farm house, roadways, and support buildings are present
- Trees are located around the farm buildings
- The surrounding properties remain predominately farm lands or wooded

Delaware County Ohio Historical Aerial Photography 1951

- Quonset huts are on the Site and appear spread out with roadways between each hut
- Trees are present near the farmhouse and the majority of the property and surrounding areas appear to be farmed or pasture
- An "out" building is present next to one of the Quonset huts
- Adjacent property to the east has unidentifiable bare areas on the ground

Delaware County Ohio Historical Aerial Photography 1957-58

- 11 Quonset huts are spread out with gravel roadways between each
- Some of the trees have been removed from the area of the farm house
- Several structures are present near the farm building
- An "out" building is present next to one of the Quonset huts

- Majority of the property continues to be farmed or used as pasture
- Adjacent property to the east has multiple structures on it, small buildings and associated roadways
- Burial trenches are present on the southeast portion of the adjacent east property
- Several more structures and features than before are on the adjacent property to the east
- Property to the north, south, and west still appears to be farmland

Ohio Department of Transportation Aerial, June 1956, 1"=800', Roll 356, Frame 104

- 11 Quonset huts are spread out with gravel roadways between each
- Some trees have been removed from the farm house area and several structures are now present
- Water tower is present next to the farmhouse
- An "out" building is present next to one of the Quonset huts
- Majority of the property appears to be farmed or used as pasture
- Adjacent property to the east has multiple structures on it, small buildings and associated roadways
- Burial trenches are present on the southeast portion of the adjacent property to the east, along with a burn pit, trenches to the east, other buildings on the northeast portion of the adjacent property
- Several more structures and features are noted on the adjacent property to the east
- Property to the north, south, east, and further east still appears to be rural farmland

EDR Report: June 21, 1957 Aerial, Scale: 1"=750', Panel # 2440082-B8

- 11 Quonset huts are spread out with gravel roadways between each
- Trees have been removed from the area of the farm house
- Several structures are present near the farm building
- An "out" building is present next to one of the Quonset huts
- Majority of the Site appears to be farmed or used pasture
- Adjacent property to the east has multiple structures on it, small buildings, unidentifiable structures and associated roadways
- Property to the north, south, and west remains farmland

M&E Phase I Report: 1962 Columbus Dispatch Photograph

- 11 Quonset huts are spread out with gravel roadways between each
- A water tower is present near the farmhouse
- Several "out" buildings are present near a Quonset hut and farm house areas
- Gravel roadways are present
- Majority of the Site remains farmed or used as pasture
- The adjacent property to the east has burial trenches on the southeast corner, two clusters of buildings for manufacturing, burn pit area, and other unidentifiable structures
- Farming is present on the surrounding property to the north and west

Delaware County Ohio Historical Aerial Photography 1964

- 11 Quonset huts are spread out with gravel roadways between each, and may be in disrepair
- Water tower is present at the farmhouse
- Several "out" buildings are present near a Quonset hut and farm house
- Majority of the property continues to be farmed or used as pasture only
- Standing water is present northwest of the farmhouse
- The adjacent property to the east has burial trenches on the southeast corner, two clusters of buildings, a burn pit area, and several other unidentifiable structures
- Farming is present on the property to the north

Ohio Department of Transportation Aerial, April 1964, 1"=1000', Roll 966, Frame 559

- 11 Quonset huts are spread out with gravel roadways between each, and may be in disrepair
- Several "out" buildings are present near a Quonset hut and farm house
- Majority of the property appears to be farmed or used as pasture
- Standing water appears northwest of the farmhouse and the Site appears to not be in use
- The adjacent property to the east has burial trenches on the southeast corner, two clusters of buildings for manufacturing, burn pit area, and other unidentifiable structures
- Farming is present on the property to the north, south, and west of the property

M&E Phase I Report: 1967 Aerial

- The Quonset huts are spread out with gravel roadways between each appear to be in disrepair or they have been razed and the foundations remain
- Water tower and gravel roadways are present near the farmhouse
- Majority of the property appears to be farmed and the Site appears to not be in use
- The adjacent property to the east has unidentifiable structures present and is covered in vegetation
- Farming activities continue on the property to the north and south

M&E Phase I Report: 1970 Aerial

- The Quonset huts appear to be in disrepair or razed with foundations present
- Trees and/or brush are noted next to the former Quonset huts
- Water tower, gravel roads and trees are present near the farmhouse
- Majority of the Site appears to be farmed and not in use otherwise
- The adjacent property to the east has unidentifiable structures and is still covered in vegetation
- Farming activities continue on the property to the north and south

EDR Report: October 1, 1971 Aerial, Scale: 1"=750', Panel # 2440082-B8

- Trees and gravel roads are still present near the farmhouse
- The Quonset huts have either been removed or are razed with foundations still present
- The middle portion of the Site appears overgrown with a noticeable absence of underbrush and trees and no farming activities
- North, south and western portions of the Site continue to be farmed
- Farming continues on surrounding properties to the north, south, further east, and west
- Adjacent property to the east is overgrown with brush and trees and miscellaneous structures are present in the northern portion of that property
- Standing water is present on the adjacent eastern property in the southwest corner
- A very visible path (like a roadway) enters the eastern adjacent property from the east and appears to go directly to the burial trench area (trees were cut to define the access way)

Ohio Department of Transportation Aerial, March 1973, 1"=1000', Roll 1429, Frame 205

- Trees are present near the farmhouse
- The Quonset huts have either been removed or are razed with foundations present
- Middle portion of the Site is still overgrown with no apparent farming activities
- North, south and western portions of the Site appear to be farmed
- Gravel roadways are still present
- Farming continues on surrounding properties to the north, south, further east, and west
- Adjacent property to the east is overgrown with brush and trees and miscellaneous structures are present in the northern portion of that property

- An old landing strip may be adjacent to the property to the east (not verified)
- Standing water is seen northwest of the farmhouse

Ohio Department of Transportation Aerial, November 1979, 1"=1000', Roll 292, Frame 16

- Trees and the water tower are present near the farmhouse
- The Quonset huts have been razed (foundations only)
- North, south and western portions of the Site appear to be farmed only
- Farming continues on surrounding properties to the north and west
- More residential development is occurring to the west and north of the Site
- A school and related venues have been constructed immediately south of the Site
- Adjacent property to the east is overgrown and dense trees and miscellaneous structures are present in the northern portion of that property
- Area of standing water is present to the northwest of the farmhouse

EDR Report: October 1, 1980 Aerial, Scale: 1"=833', Panel # 2440082-B8 and Delaware County Ohio Historical Aerial Photography 1980

- The Quonset huts are gone but the foundations and scars remain
- North, south and western portions (about 2/3) of the Site is clear and being farmed
- Gravel roadways are still present
- Farming continues on surrounding properties to the north, south, east, and west
- More residential development is occurring to the west and north of the Site
- A school and related venues have been constructed south of the Site
- Adjacent property to the east is overgrown; miscellaneous structures are present in the northern portion of the property and the trees and low vegetation appear to be more dense

Ohio Department of Transportation Aerial, March 1986, 1"=1000', Roll 1783, Frame 17

- Trees are present near the farmhouse and there is more vegetation next to roadways and the former Quonset hut areas
- North, south, middle, and western portions of the property appear to be farmed
- Farming continues on surrounding properties to the north, further east, and west
- More residential development is occurring to the north, and southwest of the Site
- Additional development on the adjacent property to the south - a school has been constructed along with the related venues
- Adjacent property to the east is overgrown and the miscellaneous structures are not visible or present in the northern portion of the property
- Standing water is noted on the northwest portion of the Site near the farmhouse
- Standing water appears to be present in several areas of the adjacent property to the east

EDR Report: April 9, 1988 Aerial, Scale: 1"=833', Panel # 2440082-B8 and Delaware County Ohio Historical Aerial Photography 1988

- Gravel roadways are still visible but the farmhouse may have been removed
- The Quonset huts are gone and much more vegetation is next to roadways
- North, south and west parts of the Site still appear to be farmed along with the middle 2/3 portion
- Farming continues on surrounding properties to the north, south, further east, and west
- More residential development is occurring to the west, north, and southwest of the Site
- Additional development is taking place on the adjacent property to the south

- Adjacent property to the east remains overgrown and miscellaneous structures are not visible or present in the northern portion of the property
- Burial trench area on the eastern adjacent property is more visible (water in depressions?)

Ohio Department of Transportation Aerial, December 1989, 1"=1000', Roll 1950, Frame 1180

- Trees are present near the farmhouse and more vegetation is next to the old roadways
- North, south, middle and western portions of the Site appear to be farmed
- Farming continues on surrounding properties to the North, East, and West
- More residential development is occurring to the north, and east of the Site
- Adjacent property to the east is very dense and overgrown

Ohio Department of Transportation Aerial, September 1992, 1"=1000', Roll 1950, Frame 43

- Generally the same as 1989
- More residential development is occurring to the west, north, and southwest of the Site
- Additional development continues on the adjacent property to the south
- Adjacent property to the east remains dense and overgrown

Ohio Department of Transportation Aerial, December 1994, 1"=1000', Roll 146, Frame 40/16

- Generally the same as 1992
- More residential development is occurring to the west, north, and southwest of the Site
- Additional development continues on the adjacent property to the south
- Adjacent property to the east remains dense and overgrown

Delaware County Ohio Historical Aerial Photography 1997

- Same as ODOT description (December 1994) above

Ohio Department of Transportation Aerial, March 2000, 1"=1000', Roll 2181, Frame 40/16

- Trees are present near the farm house and all portions of the Site appear to be overgrown
- Farming continues on the property to the west
- More residential development is occurring to the west, north, east, and southwest of the Site
- Additional development is occurring on the adjacent properties to the south and southeast
- Adjacent property to the east is very dense and overgrown
- Standing water is visible on the southwest portion of the Site

Delaware County Ohio Historical Aerial Photography 2002 and 2004

- Same as the ODOT description for 2000, above

3.2 Historical Topographic Maps

The historical topographic maps for the 69-acre Equine Facility property reviewed by Brown and Caldwell (Appendix D) were obtained through EDR, Inc. The observations made by Brown and Caldwell are presented below as a bulleted summary.

Year 1904; USGS 15 minute Topographic Map, Westerville, Ohio Quad.

- The map shows a structure (farmhouse) on the Site
- Little to no development has occurred in the area

Year 1912; USGS 30 minute Topographic Map, Columbus, Ohio Quad.

- The map shows the farmhouse on the Site
- A few more houses are observed in the area along major, nearby roadways

Year 1955; USGS 7.5 minute Topographic Map, Galena, Ohio Quad.

- The Site is developed and 11 Quonset hut structures, a water tower, and roadways are shown
- Adjacent property to the east has a complex of buildings and appears developed
- Surrounding properties remain undeveloped

Year 1964; USGS 7.5 minute Topographic Map, Galena, Ohio Quad.

- Roadways are present, Quonset hut structures are no longer shown, however the farmhouse and water tank are still present on the Site
- Adjacent property to the east has roadways present, but structures have been removed
- Standing water is depicted on the southwest corner of the adjacent property
- Some development has occurred in the area to the south

Year 1973; USGS 7.5 minute Topographic Map, Galena, Ohio Quad. (Photorevised from 1964)

- Roadways are present along with the farmhouse and water tower
- On the adjacent property to the east, roadways are present, but structures have been removed
- Standing water is depicted on the southwest corner of the adjacent property
- Some development in the area to the south and to the north continues

Year 1983; USGS 7.5 minute Topographic Map, Galena, Ohio Quad. (Photorevised from 1964)

- Same as 1973 USGS Quad described above
- Property to the east is being subdivided
- School and related venues are present directly to the south of the Site

Year 1995; USGS 7.5 minute Topographic Map, Galena, Ohio Quad.

- Roadways are present along with the farmhouse and water tower
- Adjacent property to the east shows roadways, but structures have been removed
- Standing water is depicted on the southwest corner of the adjacent property
- Development has continued in the area to the south, west, north and east
- Property to the east is residential developed
- School and related venues are present directly to the south of the Site

3.3 EDR Database Review

On February 28, 2007, Brown and Caldwell requested that Environmental Data Resources, Inc.(EDR) perform a search of publicly available databases and records to satisfy OAC 3745-300-06(D)(2)(c) and OAC 3745-300-06(D)(2)(e). The target property for the site was listed as: Kilgore Farms, 800 Tussic Street, Westerville, Ohio 43082. An approximation of the site boundaries was drawn on the target property identification map. EDR's maximum target property size is 64 acres. A 64 acre rectangle was drawn over the target property. To ensure that the search distance radius for each database met the 0.5 mile distance requirements as specified in the OAC, a 0.75 miles search radius from the drawn 64-acre property boundary was used (visually pictured on the maps on pages 6 and 7 of the EDR Radius Report in Appendix E). The searched databases were updated within the time frame set forth by USEPA in the All Appropriate Inquiry and ASTM E-1527-05 standards.

The EDR Radius search was requested to include all of the standard database searches, with a custom search radius to satisfy Ohio VAP requirements, to satisfy the USEPA All Appropriate Inquiry (ASTM E-1527-05).

3.3.1 Database Searches Performed by EDR

Federal Records:

- National Priority List (NPL)
- Proposed National Priority List Sites (Proposed NPL)
- National Priority List Deletions(Delisted NPL)
- Federal Superfund Liens (NPL RECOVERY)
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)
- CERCLIS No Further Remedial Action Planned (CERCLIS-NFRAP)
- Corrective Action Report (CORRACTS)
- Resource Conservation and Recovery Act Information – Transport, Storage or Disposal Facility (RCRA-TSDF)
- Resource Conservation and Recovery Act Information – Large Quantity Generator (RCRA-LQG)
- Resource Conservation and Recovery Act Information – Small Quantity Generator (RCRA-SQG)
- Emergency Response Notification System (ERNS)
- Hazardous Material Information Reporting System (HMIRS)
- Engineering Controls Site List (US ENG CONTROLS)
- Sites with Institutional Controls (US INST CONTROLS)
- Department of Defense Sites (DOD)
- Formerly Used Defense Sites (FUDS)
- Listing of Brownfields Sites (US BROWNFIELDS)
- Superfund (CERCLA) Consent Decree (CONSENT)
- Record of Decision (ROD)
- Uranium Mill Tailings Site (UMTRA)
- Open Dump Inventory (ODI)
- Toxic Chemical Release Inventory System(TRIS)
- Toxic Substance Control Act (TSCA)
- Federal Insecticide, Fungicide, & Rodentcide Act/ Toxic Substance Control Act Tracking System (FTTS)
- Section 7 Tracking Systems (SSTS)
- Integrated Compliance Information System (ICIS)
- Land Use Control Information System (LUCIS)
- Radiation Information Database (RADINFO)
- Clandestine Drug Labs (US CDL)
- PCB Activity Database Database System (PADS)
- Material Licensing tracking System (MLTS)
- Mines Master Index File (MINES)
- Facility Index System/Facility Registry System (FINDS)
- Resource Conservation Recovery Act Action Tracking System (RAATS)

State and Local Records:

- Division of Emergency & Remedial Response's Database (DERR)

- Division of Emergency & Remedial Response Towngas Database (TOWNGAS)
- Master Site List (MSL)
- Licensed Solid Waste Facilities (SWF/LF)
- Old Solid Waste Landfill (HIST LF)
- Leaking Underground Storage Tank File (LUST)
- Ohio Leaking Underground Storage Tank File (UNREG LTANKS)
- Archived Underground Storage Tank Sites (Archive UST)
- Sites with Engineering Controls (ENG CONTROLS)
- Sites with Institutional Controls (INST CONTROLS)
- Voluntary Action Program Sites (VCP)
- Drycleaner Facility Listing (DRYCLEANERS)
- Ohio Brownfield Inventory (BROWNFIELDS)
- Clandestine Drug Lab Locations (CDL)
- National Pollution Discharge Elimination System (NPDES)
- Urban Setting Designation Sites (USD)
- Institutional Controls Database (HIST INST CONTROLS)
- Operation & Maintenance Agreements Database (HIST ENG CONTROLS)
- Urban setting Designations Database (HIST USD)

Tribal Records:

- Indian Reservations (INDIAN RESERV)
- Leaking Underground Storage Tanks on Indian Land (INDIAN LUST)
- Underground Storage Tanks on Indian Land (INDIAN UST)

EDR Proprietary Records:

- EDR Proprietary Manufactured gas Plants (Manufactured Gas Plants)
- EDR Proprietary Historic Gas Stations (EDR Historical Auto Stations)
- EDR Proprietary Historic Dry Cleaners (EDR Historical Dry Cleaners)

3.3.2 Identified Sites on the EDR's Radius Search (within 1/2-mile Radius of the Site)

- **Heritage Middle School** (390 North Spring Road, Westerville, Ohio) is listed within the FINDS database as an education center and is located on the adjacent southern property. No release of hazardous substances or petroleum was listed in the database search.
- **Heritage Christian Church** (7413 Maxtown Road, Westerville, Ohio) is listed within the Ohio NPDES database and approximately 4.2 acres were affected with a start date of November 1, 2004 and an end date November 1, 2005. The receiving waters of the NPDES discharge were not listed within the database entry. The Ohio EPA Central District Office Minor NPDES permit webpage (http://www.epa.state.oh.us/dsw/permits/Minors_districts/CDOminor.html) was checked by Mr. Scott Blanchard, CP on March 6, 2007 and a NPDES permit was not listed for Heritage Christian Church, the company contact Mike Stonerock, or the facility contact Mike Smith. No release of hazardous substances or petroleum was listed in the database search.
- **Unknown** (708 Bay Drive, Westerville, Ohio) is listed in the Ohio Spills database as spill number 0503-21-1328 and was reported on March 22, 2005 by James Ross. The product spilled is listed as "Algae control chemicals; possible." An Ohio EPA file review was requested on 3-6-07 and the results are provided in correspondence in Appendix F.

- **Hovey** (655 Grist Run, Westerville, Ohio; latitude 4008031/ longitude 8254297) is listed in the Ohio Spills Database as spill number 0410-21-4503 and was reported by Wendy Hovey on October 21, 2004. The product spilled was listed as mercury. An Ohio EPA file review was requested on 3-6-07 and the results are provided in correspondence in Appendix F.
- **Westerville North High School** (950 County Line Road, Westerville, Ohio) is listed in both the FINDS and SPILLS database. An unknown origin spill of hydrocarbon sheen is listed in the Ohio Spill database as spill number 9902-25-0706 and was reported by Jim Tharp on March 25, 1999. The latitude is listed as 401399.0 and the longitude as 828934.0 for the spill. An Ohio EPA file review was requested on 3-6-07 and the results are provided in correspondence in Appendix F.
- **Building and Grounds Services** (816 County Line Road, Westerville, Ohio) is listed as a 550-gallon steel, gasoline underground storage tank (UST) in the Ohio BUSTR UST database. The Facility ID is 25008137 and the tank is T00002 and was installed on October 1, 1986. The tank is listed as "currently in use." No release of hazardous substances or petroleum was listed in the database.
- **Angie Barna** (8100 Dunaway Lane, Westerville, Ohio) is listed in the Ohio Spills database for a broken mercury thermometer (spill number 0501-25-0062) on January 3, 2005. The latitude and longitude for the spill are reported as 4008546 and 8253118, respectively. This spill is de minimis and does not affect the Site.
- **Rachel Bierdeman** (8288 Chateau Lane, Westerville, Ohio) is listed in the Ohio Spills database for a spill of mercury associated with a fever thermometer (spill number 0504-21-1989) on April 28, 2005. The latitude and longitude for the spill are reported as 4009008 and 8253163, respectively. This spill is de minimis and does not affect the Site.
- **Glassburn Body Shop, Inc.** (750 Northfield Road, Westerville, Ohio) is listed in the RCRA Generator database and the FINDS database. The Owner and contact is listed as Dennis Glassburn. The EPA ID number is OHR000029462. Two violations are listed in the database both of which resulted in informal written enforcement action on December 15, 2004. Generator recordkeeping requirements (regulation OAC 3745-52-42(B)) and generator pre-transport requirements (regulation OAC 3745-52-34(C)(1)(b)) were determined to be violated on November 9, 2004. Compliance was achieved on December 7, 2004 with no enforcement penalty noted. No release of hazardous substances or petroleum was listed in the database search.

3.3.3 Additional Sites on the EDR's Radius Search (beyond 1/2-mile Radius of the Site)

The following sites were listed within the ¾-mile database search but were determined to be located beyond the ½-mile search radius stipulated in OAC 3745-300-06(D)(2)(c) and OAC 3745-300-06(D)(2)(e). They are included in this evaluation since they are listed in the EDR Radius Report.

- **Omega Oil CO.** (7010 Sunbury Road, Westerville, Ohio) is listed in the OEPA Spills database as spill number 8405-25-1212 for a spill of gasoline reported on May 3, 1984. This facility is located about 4,000 feet east-northeast of the Site and well outside of the 2,640 feet radius required in the VAP rules for a radius search. Due to the age and location of the release, the Equine Facility is not expected to be impacted by the spill.
- **Red Bank Harbor** (7001 Sunbury Road, Westerville, Ohio) is listed in the Ohio NPDES database with start and end date for discharges of March 31, 2004 and January 31, 2004. The Ohio EPA Central District Office Minor NPDES permit webpage (http://www.epa.state.oh.us/dsw/permits/Minors_districts/CDOminor.html) was checked by Mr. Scott Blanchard, CP on March 6, 2007 and a NPDES permit was not listed for this facility. This facility is about 4,000 feet east-northeast of the Site and well outside of the 2,640 feet radius requirement in the VAP rules. No release of hazardous substances or petroleum was listed in the database search.

- **Villas at Canterbury Woods Ph 2** (Westdale Ave. / Northfield Rd., Westerville, Ohio) is listed in the OEPA NPDES database with a start date for discharge of October 5, 2005 and an end date of October 1, 2007. The permit covers drainage from 10.5 acres and the receiving waters are not reported. The Ohio EPA Central District Office Minor NPDES permit webpage (http://www.epa.state.oh.us/dsw/permits/Minors_districts/CDOminor.html) was checked by Mr. Scott Blanchard, CP on March 6, 2007 and a NPDES permit was not listed for this facility. This facility is about 4,000 feet east-northeast of the Site and well outside of the 2,640 feet radius requirement in the VAP rules. No release of hazardous substances or petroleum was listed in the database search.

3.3.4 Orphan Sites

Sixteen sites were identified by EDR as orphans on the database searches (page 12 of the EDR Radius Search Report). An orphan is a site where the site address and location information is not sufficient to map the site. Site addresses listed in the orphan summary were mapped using Mapquest® (www.mapquest.com) with "Westerville" listed as the city. Based upon the results of the search the following three orphans were located within a ½-mile radius of the Site:

- **McCorkle Subdivision** (EDR ID S107758052) located at Maxtown Rd./Spring St. this includes the adjacent properties to the north of the Site. The McCorkle Subdivision is listed in the Ohio NPDES database, but no additional information was provided on the Ohio EPA minor NPDES permit webpage (http://www.epa.state.oh.us/dsw/permits/Minors_districts/CDOminor.html) that was checked by Mr. Scott Blanchard, CP on March 6, 2007. A NPDES permit was not listed on the website and no release of hazardous substances or petroleum was listed in the database search.
- **Maxtown Road Improvement Project** (EDR ID S107758035) located on Maxtown Road between State Route 3 and Tussic Street is listed in the NPDES database. The Ohio EPA Minor NPDES permit webpage (http://www.epa.state.oh.us/dsw/permits/Minors_districts/CDOminor.html) was checked by Mr. Scott Blanchard, CP on March 6, 2007. A NPDES permit was not listed for this facility and no release of hazardous substances or petroleum was listed in the database search.
- **Meadows at Harvest Wind** (EDR ID S107758110) located at Tussic St. / Maxtown Road is listed on the Ohio NPDES website. The Ohio EPA Central District Office Minor NPDES permit webpage (http://www.epa.state.oh.us/dsw/permits/Minors_districts/CDOminor.html) was checked by Mr. Scott Blanchard, CP on March 6, 2007. A NPDES permit was not listed for this facility and no release of hazardous substances or petroleum was listed in the database search.

3.4 Public Records Requests

Brown and Caldwell performed several public records request as part of the Phase I due diligence activities for the Site. The request letters sent by Brown and Caldwell and the responses, when provided, are in Appendix F. A summary of the requests and responses is provided below.

3.4.1 Bureau of Underground Storage Tank Regulations (BUSTR)

Copies of all associated files, records, inspection reports, etc. for the Site were requested on March 5, 2007. BUSTR does not have any records or files pertaining to the Site.

3.4.2 Delaware General Health District

The records do not indicate outstanding complaints, violations or health hazards, sewage disposal, water supply, indoor/outdoor air quality, or hazardous material storage and/or disposal.

3.4.3 United States Environmental Protection Agency

On March 5, 2007, Brown and Caldwell sent a file review request letter (Appendix F) to the Freedom of Information Officer at USEPA Region 5 in Chicago, Illinois. As of June 8, 2007, USEPA has not responded to this request.

3.4.4 Ohio EPA Division of Hazardous Waste Management

No documentation is available at the Ohio EPA Central Office.

3.4.5 Ohio EPA Division of Drinking and Groundwater

There is no file information on the facility.

3.4.6 Ohio EPA (CO) Division of Solid and Infectious Waste Management

The Central Office does not have any records for the Site.

3.4.7 Ohio EPA Director's Office

There are no records on file for the Site.

3.4.8 Ohio EPA Central District Office (All Divisions)

Ohio EPA CDO DERR provided files for review to Mr. Blanchard on April 2, 2007. The majority of the files consisted of previous VAP submittals by Lawhon & Associates and M&E's reports for the entire 111-acre Kilgore Farms property.

Brown and Caldwell requested additional information on the three spills that were identified on the Ohio Spills Database (see Appendix F). It was determined that the three sites do not currently or have not impacted the Site in the past.

3.4.9 Westerville Division of Fire

Prior to annexation, the Site was not under their jurisdiction and therefore, they have no records.

3.5 Key Personnel Interviews

3.5.1 Mr. Leonard Day, Jr. (April 7, 1998)

On April 7, 1998, while employed at M&E, Project Geologist (now with Brown and Caldwell) Todd Aebie interviewed Mr. Leonard Day, Jr. Mr. Day was a resident at the farm from 1945 to 1949 and later worked at the Kilgore Manufacturing property from 1952 to 1954. Mr. Day's father was the head chemist for Kilgore and caretaker of the Kilgore Farm Property. A record of the M&E interview with Mr. Day is located in Appendix G.

Mr. Day confirmed that the water lines ran from the water tower to the Quonset huts to provide potable water and fire suppression and steam lines ran from the farmhouse to each of the Quonset huts for heating. Lawhon and Associates reported that the lines were removed in 1996 and there was no evidence of contamination. Mr. Day also stated that the Quonset huts were used to house finished materials, packing

crates, cardboard and some raw material. No assembly or manufacturing took place in the metal storage bunkers. Mr. Day also stated that cattle were allowed to graze in the Quonset hut storage areas during the period of manufacturing and that he had no knowledge of buried waste in the area.

3.5.2 Mr. John Kirkpatrick (April 14, 2007)

On April 14, 2007, Mr. Scott Blanchard, CPG, CP#292, interviewed Mr. John Kirkpatrick of Westerville, Ohio. His family farmed the Kilgore Farm property for approximately 15 to 20 years during the 1970s and 1980s. Mr. Kirkpatrick was unsure of the exact dates that the farming took place, but confirmed that the family had leased the farm land from Otterbein College during this time period. He stated that he was unaware of any releases of hazardous materials or petroleum products to the property. Mr. Kirkpatrick could not recall any specific pesticide or herbicides used on the Site and did not recall any spills or improper releases of pesticides or herbicides during their farming of the property.

3.5.3 Mr. David Bell, Otterbein College (May 22, 2007)

Mr. Bell is the Director of Physical Plant & Telecommunications at Otterbein College in Westerville, Ohio. Along with his other responsibilities, Mr. Bell is directly responsible for the day-to-day oversight of the environmental and site development portions of the Equine Facility.

In his May 22, 2007 response to Brown and Caldwell, Mr. Bell stated that the Site has been used as a holding area for top soil and a laydown area for material from an off-site construction project at the College. He also stated that Otterbein has not stored hazardous or petroleum products on this property. A record (e-mail) of Mr. Bell's responses to Scott Blanchard, CP, is provided in Appendix G.

4. ENVIRONMENTAL SETTING

4.1 Hydrogeology

The Site is located within the Columbus Lowland of the Till Plains Section of the Central Lowlands Province of the Interior Plains (Brockman, 1998). The geology of this physiographic region is characterized by loamy, medium-lime Wisconsinan-age till over deep Devonian- to Mississippian-age carbonate rocks, shales and siltstones (Brockman, 1998). The bedrock underlying the Site is Devonian-age Ohio Shale that may range from 400 to 500 feet thick in this area of Ohio. The regional flow of groundwater in this area is east-southeast and groundwater wells completed in the shale typically have yields of less than 5 gallons per minute. Sand and gravel glacial overburden deposits in the area are capable of producing enough water for single residential use. The bedrock map for the Site is provided in Appendix H.1, Figure 1.

The Site is mapped in an area that contains thin lenses of sand and gravel interbedded in thick layers of clay and silt (Haiker, 1994). Domestic and farm supplies are generally available to properly drilled and screened wells with an average well depths reported to be 100 feet or less (Haiker, 1994). However, the site is located immediately southwest and adjacent to an area that is mapped as "clay overlying impermeable shale bedrock yields, meager, often inadequate supplies of ground water. Dry holes are common. Additional storage tanks or hauled water may be necessary to provide sufficient water for daily use. (Haiker, 1994)." This area is only defined by 4 well data points with no data points located on the Site or the adjacent properties. Thus, the southwestern boundary of this meager ground water area is poorly defined by the paucity of data.

Previous site investigations conducted by SEA, Inc., Lawhon and Associates, and M&E have noted the presence of discontinuous sand seams in the glacial till, however none of the identified sand seams were found to be extensive. M&E installed ten monitoring wells in 2005 in an effort to characterize ground water in the proximity to the identified AOCs east of the Equine Facility property (M&E, 2005). Based upon the stratigraphy recorded on the boring logs and historical water level data reported on their field logs, the M&E wells were screened in several different ground water flow zones. It is very likely that the clay-rich nature of the glacial overburden would retard the vertical movement of contaminants and the groundwater occurs only in discontinuous thin sand seams therefore the potential for contaminant migration at the Site is low.

4.2 Soils

According to the Drift Thickness Map of Delaware County (Vormelker, 1982), there is about 50 feet of glacial drift above the shale bedrock. Site soils are brown weathered silty clay with varying amounts of sand and gravel/shale fragments. The weathered soil horizon extends from the surface to about 10 feet below ground surface. The monitoring wells placed in the Landfill Area were screened in discontinuous sand seams that produced limited yields of water and could be hand-bailed dry rather quickly.

Based on information from the Soil Survey of Delaware County (USDA, October 2005), three different soil types make up the site soils: 1) Cardington silt loam (CaB); 2) Pewamo silty clay loam (PwA); and 3) Udorthents (Uc). Each of the soil types originate from a glacial till (silty clay) parent material. A map of the Site soil area is provided in Appendix H.2.

The Cardington silt loam is a moderately well drained silty clay with low permeability and it generally exhibits perched water tables. This soil comprises roughly 80% of the Equine Facility area with a concentration in the central most portion of the 69-acre Site.

The Pewamo silty clay loam is generally located along the four sides of the Site and it intrudes into the Cardington soil as "fingers". The Pewamo soil is generally found on flat areas or depressions and this poorly drained soil is often subject to ponding. The soil has a low permeability as a result of the glacial origin.

Udorthents are characterized as "made land" and may have resulted from areas previously excavated for borrow material (possibly cover material for the landfill area on the adjacent parcel to the east). The Udorthent soil is noted on the eastern central boundary of the Equine Facility and comprises less than 5% of the Site area.

4.3 Ohio Department of Natural Resources (ODNR) Groundwater Wells

The regional flow of groundwater in the general area of the Site is to the east-southeast. The groundwater wells completed in the shale bedrock typically yield less than five gallons per minute so most of the private wells that have been drilled in the vicinity of the Site are completed in the glacial overburden. It is here that the potential exists to intercept one of the many discontinuous sand and gravel lenses and possibly have a well that may locally produce yields greater than those commonly found in the underlying shale. A copy of the ODNR well logs and location map are provided in Appendix H.3.

A total of 20 well log records were identified for located wells within 0.5-mile radius of the Site. Seventeen (17) of the wells are screened in unconsolidated sand and gravel units and three (3) are completed within the bedrock. The total depths of the 17 wells screened in the unconsolidated units range from greater than 30 feet to less than 140 feet below surface, with associated casing depths ranging from 32.5 to 126.5 feet. The average casing depth of wells screened in sand units is 84.7 feet below surface. The three bedrock wells have total depths less than 40 feet bgs with casing depths ranging from 7.5 to 38 feet bgs. For well logs with sufficient data, specific capacity was calculated by dividing the rate of discharge by the drawdown of water level in the well during pumping (Fetter, 1994). It is generally recognized that specific capacity diminishes with the duration of pumping as drawdown increases (Fetter, 1994). Specific capacity in the wells screened in the unconsolidated units ranged from 7 to 20 gallons per minute per saturated foot with an average of 11.7 gpm/ft. Specific capacity in the wells completed in bedrock ranged from 10 to 30 gallons per minute per saturated foot with an average of 20 gpm/ft.

4.4 Surface Water

There are no permanently flowing rivers or streams on the Site, but there is a drainage ditch on the northern portion of the property which has some flow after precipitation events. Ponded surface water in on the southern portion of the property and small wetland areas have been identified and roughly delineated on two portions of the Site along the southern and western property lines. Hoover Reservoir, located about 2,000 feet east of the Site, is the nearest surface water body to the Site.

5. GROUNDWATER DEMONSTRATION

Brown and Caldwell performed an extensive soil boring program along the western boundary of the Equine Facility site to define the presence or absence of groundwater flow zones between the Site and the adjacent eastern parcel that contains the eight identified AOCs resulting from the past Kilgore Manufacturing activities. This demonstration was conducted to satisfy OAC 3745-300(7)(D)(3)(b).

5.1 Demonstration Background

Otterbein College has ownership and direct control of both subdivided parcels within the boundaries of the 111-acre Kilgore Farms Site. Otterbein, as the Volunteer, must demonstrate that OAC 3745-300-07(D)(3) is met at the site boundary of the Equine Science Facility. OAC 3745-300-7(D)(3) requires determination of whether the provisions for protection of ground water meeting unrestricted potable use standards apply. This regulation states:

> The volunteer must determine whether the provisions contained in paragraph (D)(4) of this rule and paragraph (E) of rule 3745-300-10 of the Administrative Code apply to ground water zones underlying the property. For each ground water zone underlying the property, the volunteer must demonstrate whether the ground water in the zone meets or exceeds unrestricted potable use standards.

This determination may be made by sampling the ground water zones beneath the property (or in this case at the subdivision property line) to determine if the ground water meets or exceeds unrestricted potable use standards (UPUS). OAC 3745-300(7)(D)(3)(b) states:

> The volunteer may justify that sampling of a ground water zone underlying the property is not necessary to determine that the ground water in the zone does not contain concentrations of any chemicals of concern exceeding unrestricted potable use standards. Based on this justification, the volunteer may apply the provisions for protecting ground water meeting potable use standards contained in paragraph (D)(4) of this rule and paragraph (E) of rule 3745-300-10 of the Administrative Code. As part of this justification, the volunteer must document that it is reasonable to assume ground water does not exceed the unrestricted potable use standards based on a weight-of-evidence approach using relevant property-specific information, including, as necessary:

BC has taken a weight of evidence approach that involves the following subparts of this rule:

> (iii) The physical and chemical characteristics of the soil or bedrock beneath the property including, but not limited to, the secondary features, soil or bedrock type, heterogeneity of the subsurface soil or bedrock, or the integrity of any confining layers separating ground water zones;
>
> (iv) The separation distance between the source and ground water, or the separation distance between ground water zones;

> (vi) The presence or absence of off-property sources that may have impacted ground water on, underlying, or emanating from the property. The impact of off-property sources must be determined in accordance with paragraph (D)(10) of this rule; and

(4) Demonstration of continuing compliance with the provisions for protecting ground water meeting unrestricted potable use standards.

(a) When the provisions for protecting ground water apply to a ground water zone, the volunteer must demonstrate that chemicals of concern from sources on the property, or environmental media impacted by sources on the property, will not migrate to the ground water zone at concentrations that exceed unrestricted potable use standards. To demonstrate this, the volunteer must:

> (ii) Demonstrate that the provisions for protecting ground water meeting potable use standards will not be violated, using a weight-of-evidence approach. As part of this weight-of-evidence approach, the volunteer must document that it is reasonable to assume the ground water zone will not exceed unrestricted potable use standards in the future using relevant property-specific information, including, as necessary:

5.2 Previous Investigations and Demonstration Methods

The Site is mapped in an area that contains thin lenses of sand and gravel interbedded in thick layers of clay and silt (Haiker, 1994). Domestic and farm supplies are generally available to properly drilled and screened wells with an average well depths reported to be 100 feet or less (Haiker, 1994). However, the site is located immediately southwest and adjacent to an area that is mapped as "clay overlying impermeable shale bedrock yields, meager, often inadequate supplies of ground water. Dry holes are common. Additional storage tanks or hauled water may be necessary to provide sufficient water for daily use. (Haiker, 1994)." This area is only defined by 4 well data points with no data points located on the Site or the adjacent properties. Thus, the southwestern boundary of this meager ground water area is poorly defined by the paucity of data.

Previous site investigations conducted by SEA, Inc., Lawhon and Associates, and M&E have noted the presence of discontinuous sand seams in the glacial till, however none of the identified sand seams were found to be extensive. M&E installed ten monitoring wells in 2005 in an effort to characterize ground water in the proximity to the identified AOCs on the parcel immediately east of the Site. Based upon the stratigraphy recorded on the boring logs and historical water level data reported on their field logs, the M&E wells were screened in several different ground water flow zones (M&E, 2005).

Brown and Caldwell delineated the potential ground water flow zones that might cross from the AOCs to the eastern property line of the Site. Existing monitoring wells on the adjacent property to the east were field-located by BC and surveyed by Bird and Bull, Inc. Former wells MW-5, MW-6, MW-7, MW-9, and MW-10 were determined to be abandoned at the end of the earlier M&E investigations and were not located by BC personnel. The five remaining M&E wells (MW-1, MW-2, MW-3, MW-4, and MW-8) were re-developed by BC to ensure that an adequate hydraulic connection was present between the surrounding formation and each well's filter pack.

EnviroCore, Ltd. was contracted by BC to provide direct push drilling services under the supervision of a BC geologist. A Geoprobe® 6600 model drill rig mounted on a tracked ATV chassis and macrocore® sampler with dedicated, 1.375-inch diameter acetate liner sleeves was used to continuously sample the lithology at each soil boring location. Soil borings were drilled to a maximum depth of 40 feet (BC-12 and BC-13 were drilled to 44 feet bgs) or refusal and continuously logged by BC's geologist (Todd Aebie, C.P.G.) following the

protocol set forth in the *Technical Guidance Manual for Hydrogeological Investigations and Ground Water Monitoring* (OEPA, 2006). Each soil boring was backfilled to grade with Pure Gold™ medium bentonite chips and hydrated in lifts with potable water.

Specific ground water zones identified in the soil borings were targeted for monitoring well placement. When placed, the monitoring wells were installed within a few feet (less than 3 feet) from the corresponding soil boring using an ATV-mounted Diedrich D-50 drill rig and 4.25- inch inside diameter hollow-stem augers with a Teflon® knock-out plate. This yielded a 6.5-inch diameter borehole into which a 2-inch schedule 40 PVC well was installed. Each well was screened with 10 feet of 0.010-inch factory slotted screen and #5 Global Filter Pack washed silica sand was installed around the screen and extended to about two feet above the top of the screen interval. Pure Gold™ medium bentonite chips were installed from the top of the filter pack to grade. Bentonite chips were hydrated in lifts with potable water. A lockable protective casing was installed around the top of the well and set in concrete. Augers and drill tooling were decontaminated between drilling locations with a soap and potable wash followed by a potable water rinse. Monitoring wells continued the naming convention started by M&E. Thus, BC installed wells MW-11 through MW-14.

Well development was conducted in each of the BC installed wells and the existing M&E wells. New, dedicated, polyethylene 0.75-inch diameter bailers and nylon rope were used to surge and remove water from the existing 1.5-inch diameter wells. Water quality parameters (pH, specific conductance, temperature and turbidity) were measured with a calibrated Oakton 10 meter and Hach 2100P turbidimeter upon the removal of each successive standing well volume. Development waters were containerized in 5-gallon buckets at each well and carried to the 100-gallon poly tank located between MW-13 and MW-4. Development was considered complete once water quality parameters had stabilized, 5 standing well volumes were removed or the well purged dry.

The northing, easting, and elevation of each soil boring and the northing, easting, top of casing elevation, and ground elevation of each monitoring well were surveyed by a licensed professional surveyor from Bird and Bull, Inc. Survey was accomplished through global positioning system and Total Station® measurement relative to established site benchmarks that are tied to USGS benchmarks. Survey coordinates are reported in Ohio State Planar Coordinates and relative to North American Vertical Datum 1988 (NAD 88). Survey resolution was within 0.1 feet in the X and Y direction and 0.01 feet in the vertical (Z) direction.

Existing monitoring wells MW-1 through -4 and MW-8 were re-developed by BC personnel on March 27, 2007. Newly installed wells MW-11 through MW-14 were developed on March 28, 2007. Potentiometric head measurements were obtained in monitoring wells by measuring the depth to water relative to a survey point on the top of the PVC riser casing with a Solinist® electronic water level meter. The water level meter was cleaned prior to and after use in each well with a liquinox water spray wash followed by a spray rinse with de-ionized water.

5.3 Precipitation

The precipitation total for March 2007 (6.67 inches) reflects a 41% increase above the normal average precipitation of 2.89 inches, as recorded by the National Weather Service at Port Columbus Airport (www.weatherunderground.com, 2007). The 2007 year total precipitation (January 1 through March 31, 2007) of 12.98 inches reflects a 58% increase from the normal average of 7.62 inches of precipitation within that same time frame as recorded at the Port Columbus Airport(www.weatherunderground.com, 2007). The time frame of the BC investigation to delineate the extent of the ground water flow zones along the eastern boundary of the Equine Facility parcel was undertaken in exceptionally wet and high ground water conditions. It is expected that these wet conditions would enhance the ability of the field geologist to detect even subtle flow zones moving between the Site and adjacent property to the east.

5.4 Demonstration Findings

The rationale for limiting ground water flow zones is based upon stratigraphy, the presence and absence of permeable units at similar elevation, and potentiometric measurements in the borings and wells. Figure 3 presents a map of the investigation-related borings and monitoring wells relative to existing Site features and property lines. Figure 4 is a map of the scaled cross-sections BC prepared for this demonstration and Figures 5 through 8 present the geologic cross-sections for the eastern Site boundary. Soil boring logs, well construction diagrams, and well development forms from the recent Brown and Caldwell fieldwork and existing M&E wells are presented in Appendix H. Table 1 presents the survey information for each soil boring and the corresponding elevations of saturated permeable units encountered. Table 2 and Figure 9 present the recent (February – April 2007) Site potentiometric measurements. Copies of the soil and monitoring well construction logs are provided in Appendix I.

5.4.1 First Mobilization (March 22 and 23, 2007)

During the first mobilization (March 22 and 23, 2007), 12 soil borings were installed along the eastern property line of the Equine Facility. Borings were installed on the eastern Kilgore Farms parcel with the exception of soil boring BC-9 which was installed on the Equine Science Facility parcel due to limited access (standing water and dense vegetation) east of BC-7 and BC-8. Based upon the results of the borings BC-1 through BC-13, four locations were targeted for monitoring well placement: BC-1, BC-2, BC-12 and BC-12. MW-11 through MW-14 were installed within three feet of the original soil boring on March 26 and 27, 2007.

Existing wells MW-1 through MW-4 and MW-8 were used along with MW-11 through MW-14 to determine hydraulic flow direction through analysis of potentiometric measurements and groundwater elevations. Potentiometric measurements were obtained on March 30, April 2, April 3, April 6 and April 9. A significant rainfall event (totaling approximately 0.51 inches) occurred between March 31 and April 2 (www.weatherunderground.com, accessed April 8, 2007). Response to this rainfall event was observed in the monitoring wells, including MW-14 which was dry previous to measurement on April 2, 2007. Table 2 and Figure 8 present the potentiometric measurements taken within the wells.

- BC-7 has saturated sand and gravel between 857.5 and 854.3 feet msl, with tight, silty clay till present above and below this sand lens (from 0 to 32 feet bgs and 36.2 to 44 feet bgs). However, this sand and gravel unit was not encountered in BC-8 or BC-9.
- Borings BC-5 and BC-6 have silty clay till from the surface to 40 feet bgs with no permeable saturated units identified to a depth of 40 feet bgs.
- BC-8 has silty sand at an elevation of 866.26 to 866.06 and saturated gravel (no sand present) between 865.56 to 865.16 feet msl. Neither of these permeable units is identified in BC-5, BC-6, BC-7, or BC-9.
- BC-9 has thin silt with gravel interbedded with clay at 856.46 to 855.46 feet msl. These zones were moist to wet, not saturated. The thixatropic nature of the silt would allow drilling-induced pore water to be present in the sampler however, in the absence of vibration, the pore water would be distributed through out the matrix and no or very limited free water would yield to a well. This interbedded clay and silt unit does not match the saturated sand and gravel unit at a comparable elevation in BC-7.
- Borings BC-5 and BC-6 have silty clay till from the surface to 40 feet bgs with no identified permeable silt, sand or gravel.

- BC-10 has poorly sorted silty sand and gravel at 870.29 to 868.59 feet msl. No permeable saturated zones were present in BC-5 or BC-6. A tight, saturated silty gravel zone was identified at a 2.3 feet higher elevation at BC-4.
- BC-4 encountered a tight, saturated silty gravel zone with questionable water producing capability (thixatropic) between 873.10 and 872.50 feet msl. This unit is 2.3 feet higher than the poorly sorted silty sand and gravel reported at BC-10 and1.2 feet lower than the saturated sand and gravel reported in BC-11.
- BC-11 has saturated sand and gravel between 877.64 and 874.24 feet msl that was not reported in BC-4 or BC-3. Approximately one feet of clay till separates the vertical elevations of the sand units identified in BC-11 and BC-12. MW-14 was installed next to boring BC-11, with a screen interval of 884.13 to 874.13 feet msl and was notably dry on March 28 and 30, 2007. On April 2, 2007, 0.83 feet of water was measured in the well and by April 6, 2007, 3.49 feet of water had accumulated in the well reflecting a standing volume of approximately 0.6 gallons over a week's time. It is highly unlikely that this well is capable of yielding, within eight hours after purging, a minimum of one and one-half gallons of water and thus would not meet the definition of ground water in OAC 3745-300-01(A)(19). Approximately 18 to 20 feet of potentiometric head difference was observed between the water levels in MW-14 and MW-13 (BC-12) showing a distinct hydraulic separation between these two saturated units.
- BC-3 has silty clay to a total depth of 40 feet bgs (895.09 to 853.03 feet msl).
- BC-12 has saturated sand and gravel from 883.55 to 878.05 feet msl. MW-13 was installed next to BC-12 with a screen interval of 886.77 to 876.77 feet msl. The BC-12 sand and gravel is 5 feet higher than the well sorted fine sand reported in MW-4. Potentiometric differences between MW-13 and MW-4 ranged from approximately 3 to 5 feet, demonstrating a hydraulic separation between the two units. No sand and gravel was observed in BC-3 to a final elevation of 853.03 feet msl. Four feet of clay till separation exists between the saturated sand gravel in BC-12 and the saturated sand and gravel encountered in BC-14. Approximately 18 to 20 feet of potentiometric head difference was observed between MW-13 and MW-14 demonstrating a distinct hydraulic separation between these two saturated units.
- MW-4 has well sorted fine sand between an elevation of 873.25 and 870.25 and is screened between 875.25 and 870.25 feet msl. The BC-12 sand and gravel is approximately 5 feet higher in elevation than the well sorted fine sand observed in MW-4. Potentiometric measurement differences between MW-4 and MW-13 range from approximately 3 to 5 feet, clearly indicating a hydraulic separation between the two units. The well sorted fine sand reported in MW-4 is approximately 2.2 feet higher in elevation than the sand and gravel unit in BC-2. Potentiometric head differences between MW-4 and MW-12 range between 17 and 20 feet showing a distinct hydraulic separation between the two units.
- BC-2 has a saturated sand and gravel lens between 868.09 and 863.39 feet msl. MW-12 was installed within a few feet of BC-2, with a screen interval between 873.48 and 863.48 feet in elevation. The BC-2 sand and gravel unit is approximately 2.2 feet lower in elevation than the well sorted fine sand reported in MW-4. Potentiometric head differences between MW-12 and MW-4 are between 17 and 20 feet showing a distinct hydraulic separation between the two units. The sand and gravel in BC-2 aligns stratigraphically with the sand and gravel unit at BC-1 (between 867.51 and 863.51 feet msl). However, the distinct difference of 18 to 20 feet in potentiometric head measurements between MW-12 and MW-11 clearly shows a distinct hydraulic separation between the two units. About 8.5 feet of elevation difference is found between the lowest poorly sorted sand encountered in MW-3 and the top of the sand gravel unit reported in BC-2. Eighteen to 20 feet of potentiometric difference is measured in MW-3 versus MW-12, clearly showing the hydraulic separation of these two units.

- BC-1 has: saturated sandy gravel between 872.31 and 872.01 feet msl; saturated sand and gravel between 871.51 and 870.71feet msl; saturated silt and fine sand between 870.71 and 869.51 feet msl; and, saturated sand and gravel between 867.51 and 863.5 feet msl. MW-11 was installed next to boring BC-1, with a screen interval of 878.76 to 868.76 feet msl.
- The lowest saturated sand and gravel unit in BC-1 aligns stratigraphically with the only sand and gravel unit reported in BC-2 (868.09 to 863.39 feet msl). However, MW-11 is not screened within this unit so a comparison of potentiometric water levels between MW-11 and MW-12 can not be made. There is approximately 4 feet of stratigraphic elevation between the lowest sand in MW-3 and the uppermost sandy gravel in BC-1. Potentiometric head differences between MW-3 and MW-11 range from 0.8 to 0.08 feet.
- Existing well MW-3 has poorly sorted sand 878.53 to 878.53 feet and 877.23 to 876.73 feet msl. There is approximately 4 feet of stratigraphic elevation between the lowest sand in MW-3 and the uppermost sandy gravel in BC-1. Potentiometric head differences between MW-3 and MW-11 range from 0.8 to 0.08 feet. Approximately 8.5 feet of stratigraphic elevation difference is found between the lowest poorly sorted sand encountered in MW-3 and the top of the sand gravel unit reported in BC-2. Approximately 18 to 20 feet of potentiometric difference is measured in MW-3 versus MW-12, clearly showing the hydraulic separation of these two units.

Based upon the findings above and BC's technical assistance meetings with Ohio EPA-CDO DERR and DDGW staff, a plan was developed to stagger borings on 100 feet centers along two lines approximately 50 feet and 100 feet west of the proposed eastern parcel boundary. This boring placement would yield an effective resolution of 50 feet between borings and the borings could be added or removed from the plan based upon the stratigraphy encountered.

5.4.2 Second Mobilization (April 5 and 6, 2007)

A second field mobilization (April 5 and 6, 2007) installed 16 soil borings to further define the extent and flow direction of the ground water flow zones associated with MW-4, MW-11, MW-12, and MW-13 along the northern portion of the eastern Equine Facility parcel boundary.

BC-12 had saturated sand and gravel from 883.55 to 878.05 feet msl. MW-13 was installed next to BC-12 with a screen interval of 886.77 to 876.77 feet msl. As described above, delineation of the lens in BC-12/MW-13 was completed to the north (MW-4) and east (BC-3 and BC-11/MW-14). Further delineation of potential groundwater flow paths was needed to define the areas south and west. This delineation was accomplished through the installation of soil borings BC-14, BC-15, BC-16, BC-18, BC-19, and BC-27.

- BC-16 has no saturated permeable units to a depth of 40 feet (855.64 feet msl). No water was present/measured in this boring.
- BC-18 has no permeable units to a depth of 40 feet (856.43 feet msl). No water was present/measured in this boring.
- BC-15 has wet (not saturated) silty sand 876.87 to 873.37 feet msl. There is approximately 2.2 feet of silty clay separation between the wet silty sand lens encountered in BC-15 and the saturated sand and gravel lens in BC-12. The depth to water was 28 feet in BC-15 once the drill tooling was removed. This water level may reflect surface water infiltration into the borehole, but despite surface water infiltration, this depth to water in BC-15 (868.87 feet msl) is 25.8 feet lower than the potentiometric level in MW-13 (894.67 feet msl as measured on April 9, 2207).
- BC-19 has no permeable units to a depth of 40 feet (857.49 feet msl). No water was present/measured in this boring.

- BC-27 has wet (not saturated) sandy silt at 877.61 to 877.31 feet msl. No water was present in the BC-27 borehole when the drill tooling was removed as compared to 894.67 feet msl in MW-13, measured on April 9, 2207.
- BC-14 encountered: saturated gravel 874.53 to 874.23 feet msl and saturated sand and gravel between 871.73 and 869.53 feet msl. There is 3.52 feet of silty clay between the bottom of the sand and gravel lens encountered in BC-12/MW-13 and the top of the saturated gravel in BC-14. BC-14 was a dry hole to 40 feet (858.53 feet msl) with no water present in the borehole once the drill tooling was removed from the hole as compared to an 894.67 feet elevation potentiometric level in MW-13, as measured on April 9, 2207.

Existing well MW-4 has well sorted fine sand between an elevation of 873.25 and 870.25 feet msl and is screened at an elevation of 875.25 to 870.25 feet msl. Delineation of this ground water zone had been accomplished to the east (BC-3), to the south (BC-12/MW-13) and to the north (BC-2/MW-12). Delineation to the west was established through the installation of BC-13, BC-14, BC-15, BC-18, BC-19, BC-20, BC-27, and BC-28.

- BC-18 has no permeable units to a depth of 40 feet (856.43 feet msl). No water was present/measured in this boring.
- BC-15 has wet (not saturated) silty sand between 876.87 and 873.37 feet msl. Stratigraphically, this wet silty sand aligns with the saturated sand and gravel lens in BC-12, but the lithologic description and potentiometric head of the two units is different. The depth to water was at 28 feet in BC-15 with the drill tooling removed. This water level may reflect surface water infiltration into the borehole, but despite surface water infiltration, this depth to water in BC-15 (868.87 feet msl) is 23.19 feet lower than the potentiometric level in MW-4 (892.06 feet msl measured on April 9, 2207).
- BC-19 has no permeable units to a depth of 40 feet (857.49 feet msl). No water was present/measured in this boring.
- BC-27 has wet (not saturated) sandy silt between 877.61 and 877.31 feet msl. No water was present in the BC-27 borehole when the drill tooling was removed as compared to 892.06 feet msl potentiometric level in MW-4, as measured on April 9, 2207.
- BC-14 has: saturated gravel at 874.53 to 874.23 feet msl and saturated sand and gravel between 871.73 and 869.53 feet msl. There is 0.98 feet of silty clay between the bottom of the saturated gravel in BC-14 and the top of the sand and gravel lens encountered in MW-4. BC-14 was dry to 40 feet (858.53 feet msl) with no water present in the borehole once the drill tooling was removed from the hole as compared to 892.06 feet elevation potentiometric level in MW-4, as measured on April 9, 2207.
- BC-20 has a wet (not saturated sand) between 869.06 and 868.46 feet msl. There is 1.21 feet of silty clay separation between the bottom of the saturated sand and gravel lens in MW-4 and the top of the sand lens encountered in BC-20. The BC-20 borehole was dry to 40 feet bgs (859.46 feet msl) as compared to 892.06 feet msl in MW-4, as measured on April 9, 2207.
- BC-13 has a silty sand lens between 878.54 and 874.44 feet msl. There is 1.19 feet of silty clay separation between the bottom of the silty sand lens encountered in BC-13 and the top of the sand and gravel lens in MW-4.

BC-2 has a saturated sand and gravel lens at 868.09 to 863.39 feet msl. MW-12 was installed within a few feet of BC-2, with a screen interval between 873.48 and 863.48 feet msl. As discussed above, delineation of the sand lens in BC-2/MW-12 had been achieved to the north (BC-1/MW-11), east (previously conducted geoprobe borings within AOC 5 (M&E, 2005); MW-1, MW-2, MW-3, and BC-3), and to the south (MW-4).

Western delineation of the potential groundwater flow was achieved through the installation of borings BC-13, BC-21, BC-17, and BC-28.

- BC-13 has a silty sand lens between 878.54 and 874.44 feet msl. There is 6.35 feet of silty clay separation between the bottom of the silty sand lens encountered in BC-13 and the top of the sand and gravel lens in BC-2/MW-12.
- BC-21 has sand between 882.59 and 882.19 feet msl. There is 14.1 feet of silty clay separation between the bottom of the sand lens in BC-21 and the top of the sand and gravel lens in BC-2/MW-12.
- BC-17 has sand between 875.26 and 871.36 feet msl. The bottom of this sand lens is 3.27 feet higher than the top of the sand and gravel in BC-2/MW-12.
- BC-28 has wet (not saturated) sand between 879.09 and 876.09 feet msl. There is 8 feet of silty clay separation between the bottom of the wet sand lens in BC-28 and the top of the sand and gravel lens in BC-2/MW-12. When the drill tooling was removed from BC-28 it was dry. The 0.8 feet of water had accumulated (864.29 feet elevation) in BC-28 45 minutes after the drill tooling had been removed. This water level may reflect surface water infiltration into the borehole once the drill tooling was removed. Even, despite surface water infiltration, this depth to water in BC-15 (864.29 feet elevation) is 13.46 feet lower than the potentiometric level in MW-12 (877.75 feet msl as measured on April 9, 2207).

BC-1 has: saturated sandy gravel at 872.31 to 872.01 feet msl; saturated sand and gravel between 871.51 and 870.71 feet msl; saturated silt and fine sand between 870.71 and 869.51 feet msl; and, saturated sand and gravel between 867.51 and 863.5 feet msl. MW-11 was installed next to boring BC-1, with a screen interval of 878.76 to 868.76 feet msl. Delineation of the saturated sandy gravel lens in BC1/MW-11 had been achieved to the south (BC-2/MW-12) and to the east (previously conducted geoprobe borings within AOC#5 (Metcalf & Eddy, 2005); MW-1, MW-2, and MW-3). Delineation of this lens to the west and north was achieved through the installation of borings: BC-22, BC-23, BC-24, BC-25, and BC-26.

- BC-22 has no permeable units to a depth of 30 feet (865.62 feet msl). No water was present/measured in this boring.
- BC-23 has no permeable units to a depth of 40 feet (856.45 feet msl). No water was present/measured in this boring.
- BC-24 has no permeable units to a depth of 40 feet (857.39 feet msl). No water was present/measured in this boring.
- BC-25 has wet (not saturated) coarse sand and gravel between an elevation of 888.79 and 883.79 feet msl. There is 11.48 feet of silty clay separation between the bottom of the wet coarse sand and gravel in BC-25 and the top of the saturated sandy gravel in BC-1/MW-11.
- BC-26 has no permeable units to a depth of 40 feet (858.21 feet msl). No water was present/measured in this boring.

5.5 Results of the Hydrogeologic Demonstration

The findings of the BC hydrogeologic investigation to characterize ground water units that maybe flowing onto the Equine Facility parcel from the adjacent eastern (Kilgore) parcel agree with regional hydrogeologic studies and previous Site investigations. No outwash, esker, kame or thick sand and gravel assemblages were identified to occur in the area of the eastern boundary of the Equine Facility in regional geologic and hydrogeologic reports. The 28 soil borings or 14 monitoring wells installed onsite support the overall

conclusion that thin, discontinuous sand and gravel seams in the thick silty clay (glacial till) are of limited extent.

Based upon the stratigraphic and potentiometric data collected during the two field mobilizations, hydraulic isolation of the MW-11, MW-12, MW-4 and MW-13 ground water zones is achieved with the Equine Science Parcel along a north-south line extending south from the northern property line through BC-28, BC-21, BC-14 and BC-27. The southern isolation of the MW-13 ground water flow zone is achieved via an east-west line extending from BC-18 to the transect line extending from BC-3 to BC-11. Since the eastern boundary line of the Site is located west of the east-west and north-south lines described above, there are no identified ground water pathways between the Equine Science parcel and the eastern Kilgore Farms parcel. Thus, OAC 3745-300(7)(D)(3)(b) is satisfied due to:

- the absence of ground water connection between the Equine Science parcel and the eastern Kilgore Farms parcel;
- the absence of any other Areas of Concern on the subject property as supported by the site history; and,
- the lack of any off-site sources that maybe affecting the Equine Science parcel from the north, south or west.

6. SITE INSPECTION AND IDENTIFIED DEMINIMUS AREAS

6.1 April 2007 CP Site Inspection

On April 20, 2007 and May 22, 2007, Mr. Scott Blanchard, CPG, CP 292 (Senior Geologist at Brown and Caldwell of Ohio, LLC) conducted the property inspection as required by OAC 3745-300(6)(D)(5). The Site is located at 300 North Spring Street in Westerville, Delaware County, Ohio. The Site's legal description is provided in Appendix B.2 A copy of the photographic log is provided in Appendix K.

The purpose of this inspection was to determine if any releases of hazardous substances or petroleum may have occurred on, underlying or emanating from the property. This report was finalized on May 22, 2007.

6.1.1 Methodology

Mr. Blanchard performed the inspection with a handheld global positioning system unit that allowed him to record the latitude and longitude of any identified site features or items specified in OAC 3745-300-06(D)(5). These features included:

- Areas containing hazardous substances or petroleum or areas where hazardous substances or petroleum were located;
- Evidence of a release of hazardous substances or petroleum;
- Any other evidence of current and past uses of the property or evidence of practices regarding the management, handling, treatment, storage, or disposal of hazardous substances or petroleum;
- General topographic conditions of the Site and surrounding area;
- Evidence of current and past uses of adjoining properties;
- Identifiable migration conduits for hazardous substances or petroleum; and,
- Any physical obstructions that limit visibility of conditions on the property.

The inspection was performed by first walking the Site perimeter and then walking a sinuous pattern in a general north-south direction across the interior of the Site. The spacing between transects allowed continuous observation of the ground, vegetation and site features and use of the GPS unit track line function insured that the entire Site was inspected by the CP. In areas of dense vegetation, or where site features or items of interest were located, the spacing of transects was reduced so as to provide adequate coverage to insure a complete inspection. The Site inspection was performed prior to substantial leaf development on the trees and undergrowth (including grasses in the open fields), thereby avoiding these common physical obstructions.

6.1.2 Findings

The weather on April 20, 2007 ranged from approximately 45° to 78° F with bright sun and calm winds. The weather on the morning of May 22, 2007 was approximately 70° F with bright sun and calm winds. Weather was not considered a detriment to the performance of the site inspection on either day.

The Site currently consists of woods and grass field with no buildings or similar site structures currently located on the Site. Evidence of the former farmhouse, including small piles of building debris (concrete,

brick, glass, scrap metal fragments, dirt, and wood) was observed at different areas of the Site. Figure 10 provides an overview of the site inspection findings and major identified features.

The following site features and items specified in OAC 3745-300-06(D)(5)(a) were identified:

6.1.2.1 Areas Containing Hazardous Substances or Petroleum

No such areas or containers containing hazardous substances or petroleum were identified.

6.1.2.2 Observed Containers

6.1.2.2.1 Drums

- Eight 55 gallon metal drums in good condition were observed in the staging area near the former farmhouse (40°08.451' W82°54.025'). Each drum was labeled as containing soil cuttings with the associated soil boring/monitoring well and accumulation date on lid. These drums contained investigation derived waste (soil cuttings) from the ground water investigation along the eastern property line. The drums were hauled to Penn Ohio Corporation (Ashtabula, Ohio) on May 15, 2007 under non-hazardous waste manifests. On the May 22, 2007 site inspection, Mr. Blanchard verified that these drums were no longer onsite.

- Two small areas of metal 55-gallon drum fragments were observed at N 40°08.361' W 82°53.918' and at N 40° 08.369' 82°53.928'. These drum fragments and a small amount of soil were excavated and over-packed into a new, steel 55-gallon drum by Brown and Caldwell on May 7, 2007. Confirmatory soil samples were collected at a depth of about 9 inches to 1-foot bgs under the each drum area. The two soil samples were analyzed for TCL volatile organic compounds, TCL semi-volatile organic compounds, and TAL metals at STL-North Canton, North Canton, Ohio (CL# 0024) per VAP protocols. Quality assurance samples included a trip blank for volatile organic compounds. During the May 22, 2007, site inspection, Mr. Blanchard verified that the earlier noted drum fragments were no longer present.

- A new 55 –gallon steel drum containing the excavated soil and drum fragments is located in the staging area near the former farmhouse (40°08.451' W82°54.025'). On May 22, 2007, Mr. Blanchard observed this drum and noted that the lid was labeled "Otterbein 050913-03" and the side labeled a green and white non-hazardous waste label stating: *"Contents: Rusty drum debris + soil, Accumulation Date: 5/7/07."*

6.1.2.2.2 Cans

Several empty containers were observed on April 20, 2007, but no stressed vegetation, soil staining or residue (inside the containers) was noted. No odors or liquids were observed around these containers and evidence of a hazardous substances or petroleum release was not present. The inventory of cans included:

- 1-gallon rusty can (N 40°08.210' W 82°53.909');
- 1-gallon metal can upside down (N 40°08.475' W 82°54.017');
- 1-gallon rusty can (N 40°08.516' W 82°53.989');
- Small pile of empty, metal, marine flare packaging tubes (N 40°08.355' W 82°53.938');
- 1-gallon rusty metal can (N 40°08.489' W 82°54.013'); and,
- A 2-gallon black paint can and a rusty white paint can (N 40°08.381' W 82°54.003').

6.1.2.2.3 Piles

- Excavated sand, gravel, and cobble material from recent Otterbein campus construction activities (trucked in by Otterbein) is present within the area defined by the following coordinates: N 40°08.420' W 82°54.016, N 40°08.420' W 82°54.010, N 40°08.440' W 82°53.989, N 40°08.449' W 82°53.990', N 40°08.442' W 82°54.013, and N 40°08.430' W 82°54.019.

- Fill dirt from other Otterbein campus construction activities consists of primarily sand and gravel with minor amounts of silt, brick, glass, concrete, and asphalt fragments (trucked in by Otterbein) is also present on the Site. The material was place onsite by Otterbein for use as future road base or structural fill for the Equine Facility. It is staged in an area defined by : N 40°08.432' W 82°54.039', N 40°08.432' W 82°54.061', N 40°08.425' W 82°54.061', N 40°08.416' W 82°54.053', and N 40°08.420' W 82°54.036'.
- Historical construction/demolition debris:
    - Demolition debris pile (N 40°08.455' W 82°54.012');
    - Dirt, concrete, wood, sheet metal, and steel scrap (N 40°08.464' W 82°54.004');
    - Building debris related to the former farmhouse was observed within the polygon defined by: N 40°08.468' W 82°54.035', N 40°08.461' W 82°54.050', N 40°08.478' W 82°54.032';
    - Slag, dirt and glass debris (N 40°08.472' W 82°54.019');
    - Wood scrap, rubber, sheet metal fragments, degraded cardboard (N 40°08.517' W 82°53.908'); and,
    - Sheet metal fragments, flattened blue metal pail, steel conduit scrap/fragments, brick, and wood (N 40°08.369' W 82°54.843').

The lack of old vegetation in the above construction and demolition debris piles and their location with respect to the former farm house, water tower, and Quonset huts suggests that this debris is related to demolition activities performed in the 1990s.

6.1.2.2.4 Pipes

A partially-buried 1-inch diameter steel pipe (does not appear connected to anything) was observed at N 40°08.455' W 82°54.012'. This pipe is in close proximity to demolition debris piles associated with the farm house and water tower.

6.1.2.2.5 Storm Sewer

A City of Westerville storm sewer was observed along the eastern and western sides of North Spring Street.

6.1.2.2.6 Sanitary Sewer

A City of Westerville sanitary sewer was observed along the eastern side of North Spring Street. A 6-inch diameter PVC cleanout set within a 2 feet by 2 feet concrete pad was observed at N 40°08.369' W82°54.117'. A connection to the sanitary sewer was not observed from any on-site structures.

6.1.2.2.7 Storm Water Swale

A dirt swale, approximately 10 feet across in a northwest to southeast orientation, channels storm water from northern domestic housing parcels and channels the storm water flow onto the Site (N 40°08.593' W 82°53.862'). The storm water flows east along the northern property line in a shallow stream to an apparent drain tile on the adjacent eastern parcel (N 40°08.598' W 82°53.837').

6.1.2.3 Evidence of Release

No evidence of a release of hazardous substances or petroleum was observed including observation of spilled materials, stressed vegetation, or discolored soils.

Some litter (paper, plastic wrappers and containers, plastic bags, styrofoam cups, food wrappers, empty soda cans, aerosol cans, beer cans, etc.) was observed in the wooded area in the vicinity of the former farmhouse, in the trees immediately adjacent to the southern fence line, and in the surface water east of the swale along the northern property line. Litter on the interior of the property may be an indication of trespassing. Some littered material may have been windblown from the adjacent properties, transported by surface water from the adjacent northern houses/drainage swale or thrown from vehicles traveling along North Spring Street.

6.1.3 Topography

Site topography is generally level with relief less than 10 feet. Topographic low spots were noted immediately north of the driveway and approximately 80 feet northeast of the southwest corner of the property as indicated by ponded water. The surrounding area is generally level with topography dipping to the east towards Hoover Reservoir.

6.1.4 Adjacent Properties

As observed from the Site property lines, the following adjacent property use was noted:

- North: vacant wooded land, domestic housing;
- East: vacant field and wooded land;
- South: Westerville North High School and Heritage Middle Schools;
- East: North Spring Street and domestic housing.

No evidence of emanating hazardous substances or petroleum onto the Site from any of the adjacent parcels was observed. No evidence of historical land use on the adjacent properties was observed from the property lines of the Site.

6.1.5 Contaminant Migration Conduits

No contamination was physically observed on or emanating from the Site. Potential migration conduits observed includes:

- Storm sewer along North Spring Street;
- Sanitary sewer along North Spring Street (A 6-inch diameter PVC cleanout set within a 2 feet by 2 feet concrete pad was observed at N 40°08.369' W82°54.117'; however, no connection to the sanitary sewer was observed from any on-site structure)
- Infiltration to discontinuous sand lenses in the glacial till overburden;
- Former dug well at N 40°08.464' W 82°54.039';
- Monitoring well at: N 40°08.256' W 82°54.101';
- Surface water migrating onto the property form the drainage swale on the northern property line at N 40°08.593' W 82°53.862'.
- Surface water runoff to eastern adjacent parcel and to storm sewer along North Spring Street.

6.1.6 Limitations

Physical obstructions that limited the observation of property conditions include:

- Sand and gravel dump piles located south of the driveway;
- Fill dump piles located south of the driveway;
- Standing water up to approximately 1 foot deep north of driveway;
- Standing water up to approximately 8 inches deep, approximately 80 feet northeast of the southwest corner of the property; and
- Dense vegetation, limiting clear visibility of the ground surface, within the immediate area of a few of the southern Quonset huts.

None of the above physical obstructions were judged to preclude the completion of the site inspection. The perimeter of each of the above limiting areas was walked during the site inspection by Mr. Blanchard.

6.2 De Minimis Areas (Drum Fragments)

During the site reconnaissance walk performed by the Certified Professional, two small areas of rusted drum fragments were identified at N 40°08.361' W 82°53.918' and N 40° 08.369' 82°53.928'. On May 7, 2007, the drum fragments were over-packed into a new, steel 55-gallon drum by Brown and Caldwell. Confirmatory soil samples were obtained from under the each of the two drum fragment areas. The soil samples were analyzed for TCL volatile organic compounds, TCL semi-volatile organic compounds, and TAL metals at STL-North Canton, North Canton, Ohio (CL# 0024) per VAP protocols. Quality assurance samples included a trip blank for volatile organic compounds.

The results of the analysis indicated that there was no impact to the soils immediately underlying the drum fragments and therefore no evidence of a release. The analytical results were non-detect for VOCs and SVOCs. The TAL metals analysis were below the VAP's generic residential standard for direct contact for each of the metals with the exception of arsenic. The arsenic results exceeded the residential direct contact standard of 6.8 mg/kg with findings of 17.0 mg/kg at sample location D-1 and 22.0 mg/kg at location D-2. A complete copy of the analytical report for the deminimus drum fragment sampling is provided in Appendix J.1.

In response to the exceedences, eight arsenic background samples and one duplicate sample were collected from the shallow soils on the 2.31-acre VAP parcel located on the southwest corner of the current Equine Facility (Figure 11). Soils were obtained from the 9-inch to 1-foot depth interval and were generally representative of the same soils present beneath the deminimus drum fragment area. The analytical report for the background samples (BKGD-1 through BKGD-9) is provided in Appendix J.2.

6.2.1 Statistical Evaluation of Arsenic Background

The background concentration limit for arsenic in soil was determined using an upper tolerance limit (UTL). The background arsenic data are presented in Appendix J.3, Table 1.

A tolerance interval states that a given percentage of all future measurements will fall in the interval with a specified level of confidence, if in fact, there is no difference from background levels. For example, an upper, one-sided, 95 percent tolerance interval with 99 percent coverage means that a data analyst can be 95 percent confident that 99 percent of all future measurements will fall below the UTL. This type of interval is commonly expressed as a (95, 99) UTL. A (95, 95) UTL was calculated for arsenic.

Distributional testing was conducted on the arsenic data prior to calculating the UTL. The Shapiro-Wilk test (U.S. EPA, 2006) was used, and calculations were performed in Statistica (StatSoft, 2004). Results of the Shapiro-Wilk tests are presented in Appendix J.3, Table 2.

The following steps were used to conduct the Shapiro-Wilk tests:

1. The null and alternative hypotheses were stated as follows:

   $\mathbf{H_o}$: the population has a normal (lognormal) distribution

   $\mathbf{H_A}$: the population does not have a normal (lognormal) distribution

2. The test statistic "W" was calculated from the data.

3. The test statistic and sample size were used to determine the p-value. The p-value is the actual significance level achieved by the test. For example, a p-value of 0.001 indicates that if H_o is true, and the distribution is normal, there would be a 1 in 1000 chance of obtaining that particular test statistic.

4. The null hypothesis was rejected if $p \leq \alpha$, where α is the selected significance level for the test.

Distributional results indicate that the arsenic data are both normally and lognormally distributed at a significance level of 5 percent. However, the p-value is higher for the lognormal data indicating a better fit.

A one-sided (95, 95) tolerance limit was calculated for arsenic using the equation presented below, which is discussed in Gibbons (1994).

$$UTL = \exp [LNmean + (factor * LN\ standard\ deviation)]$$

In this equation, LN indicates log-transformed data, and "exp" specifies that the quantity in the brackets should be exponentiated. The one-sided UTL factor was obtained from Table 4.2 in Gibbons. Estimates of the mean and standard deviation were calculated using standard formulas in Excel®. Calculations are shown in Appendix J.3, Table 3.

The resulting UTL for arsenic is 25.3 mg/kg. Therefore, the soil samples (D-1 and D-2) collected from beneath the drum fragments at Equine Facility are below background concentrations.

6.3 Identified Areas

No Identified Areas, as defined as a location where a release of hazardous substances or petroleum has or may have occurred, were observed on the Site.

During the site reconnaissance walk by Mr. Blanchard, several of the items that were previously identified on the M&E Site Inspection Map (1998) were not present on the site. These items included flares, canisters, and black caps that were previously found around a few of the Quonset huts. These materials were removed or destroyed during onsite-testing by UXB personnel during their Fall 1999 site investigation that was primarily directed towards the AOCs on the east parcel immediately adjacent to the Site.

6.4 Farm Area Pesticide / Herbicide Sampling (2004)

(from M&E Preliminary Phase II Property Assessment, June 2005)

A Covenant Not to Sue pertaining to the 2.31 acre farm area in the southwest corner of the Site was granted by Ohio EPA in 1997. This area is not considered an AOC, however, as part of the Preliminary Phase II Assessment, M&E collected confirmatory near-surface soil samples to determine the impact of historical farming operations and to assist in the remedial costing determination (for the CORF grant application). The soil samples were analyzed for pesticides and herbicides. Minor detections were reported for β –BHC, dieldrin, 4,4-DDE, α- chlordane, and γ- chlordane, however all detections were below applicable VAP residential standards.

The results reported by M&E provide further evidence that the 69-acre Equine Facility has not been impacted by historical site operations (farming). The May 19, 2004 analytical data package from Severn Trent Laboratories is provided in Appendix J.4.

Parameter	VAP Residential Standard (mg/kg)	Farm 001 (mg/kg)	Farm 002 (mg/kg)	Farm 003 (mg/kg)
β –BHC	None	<0.0022	0.0025 PG	<0.0022
dieldrin	None	0.0049	0.0085 PG	0.022
4,4-DDE	29	<0.0022	0.005 J	0.0017 J
α- chlordane	28	<0.0022	0.00047 J	<0.0022
γ- chlordane	28	0.0018 J	0.0011 J	<0.0022

J – estimate; reported result is between the method detection limit and the reporting limit

PG – peak interference; the highest result was reported

Samples collected by M&E on April 29, 2004 and analyzed for Pesticides (8081) and Herbicides (8151)

7. FINDINGS AND CONCLUSIONS

7.1 Impact from Historical Site Operations

Based on the exhaustive review of historical site records (aerial photographs, topographic maps, interviews, etc.) there has been no impact to the Site from the historical Kilgore Manufacturing activities or subsequent farming activities.

7.2 Potential Migration Pathways

No identified areas (source areas) are present at the Site based on the historical reviews of Site and observed site conditions.

Potential migration conduits observed includes (see Section 6.1.5):

- Storm sewer along North Spring Street;
- Sanitary sewer along North Spring Street
- Infiltration to discontinuous sand lenses in the glacial till overburden;
- Former dug well;
- Monitoring well;
- Surface water migrating onto the property form the drainage swale on the northern property line; and
- Surface water runoff to eastern adjacent parcel and to storm sewer along North Spring Street.

7.3 Identified Areas of Concern

The Site currently consists of woods and grass fields with no buildings or similar site structures currently located on the Site. Evidence of the former farmhouse, including small piles of building debris (concrete, brick, glass, scrap metal fragments, dirt, and wood) was observed at different areas of the Site. There are no identified areas of concern at the Site.

7.4 Conclusions

The Phase I review has not identified any areas or containers containing hazardous substances or petroleum at the 69-acre Site. The Phase I Property Assessment for this Site meets all of the requirements of OAC 3745-300-06 and therefore, requires no further action.

8. REFERENCES

- Brockman, S., April 1998, *Physiographic Regions of Ohio (Map)*: Ohio Department of Natural Resources, Division of Geological Survey.
- Environmental Data Resources (EDR), February 28, 2007, *Aerial Photo Decade Package*
- Environmental Data Resources (EDR), February 28, 2007, *Historical Topographic Map Report*
- Environmental Data Resources (EDR), February 28, 2007, *Radius Map with Geocheck*
- Fetter, C.W., 1994, *Applied Hydrogeology:* Merrill Publishing Company, Columbus, Ohio, pp. 80-81
- Gibbons, R.D. 1994. *Statistical Methods for Groundwater Monitoring.* John Wiley & Sons, Inc., New York, NY, 286 pages.
- Haiker, W.C., 1994, *The Groundwater Resources of Delaware County (after Schmidt, J.J., 1979):* Ohio Department of Natural Resources, Division of Water, Groundwater Resources Map.
- Lawhon and Associates, 1997, *Additional Phase II Sampling Report, Kilgore Farm Property*
- Lawhon and Associates, 1997, *Phase I Property Assessment Report, Kilgore Farm Property*
- Metcalf & Eddy of Ohio, Inc., June 2005, *Phase I Property Assessment Amendment, Kilgore Farm Property*
- Metcalf & Eddy of Ohio, Inc., June 2005, *Phase II Property Assessment Amendment, Kilgore Farm Property*
- U.S. EPA. 2006. *Data Quality Assessment: Statistical Methods for Practitioners EPA QA/G-9S.* Office of Environmental Information, United States Environmental Protection Agency, Washington D.C. February 2006. Document number EPA/240/B-06/003.
- United States Department of Agriculture (USDA), October 2005, *Soil Survey of Delaware County:* Soil Conservation Service
- United States Geological Survey, 1983, *Galena Quadrangle*: 7.5 Minute Series Topographic Map
- Volmelker, J., 1982, *Bedrock Topography Map of Delaware County:* Ohio Department of Natural Resources Geological Survey

9. REPORT LIMITATIONS

This document was prepared solely for Otterbein College in accordance with professional standards at the time the services were performed and in accordance with the contract between Otterbein College and Brown and Caldwell Ohio, LLC, dated May 23, 2006. This document is governed by the specific scope of work authorized by Otterbein College; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by Otterbein College and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

The findings presented herein are based upon observations of Site conditions as of the date the assessment was performed and a review of *reasonably ascertainable* standard records sources. The findings and conclusions presented herein should not be assumed to apply to conditions or operating practices on this property occurring subsequent to Brown and Caldwell's actual on-site investigation.

The scope of work commissioned for this project represents a reasonable inquiry, consistent with good commercial practice, in accordance with Ohio Voluntary Action Program regulations in Ohio Administrative Code 3745-300-06. In the course of this assessment, Brown and Caldwell has relied on information provided by outside parties, such as regulatory agencies and interview sources. For the purposes of this assessment, such third-party information is assumed to be accurate unless contradictory evidence is noted, and Brown and Caldwell does not express or imply any warranty regarding information provided by third-party sources.

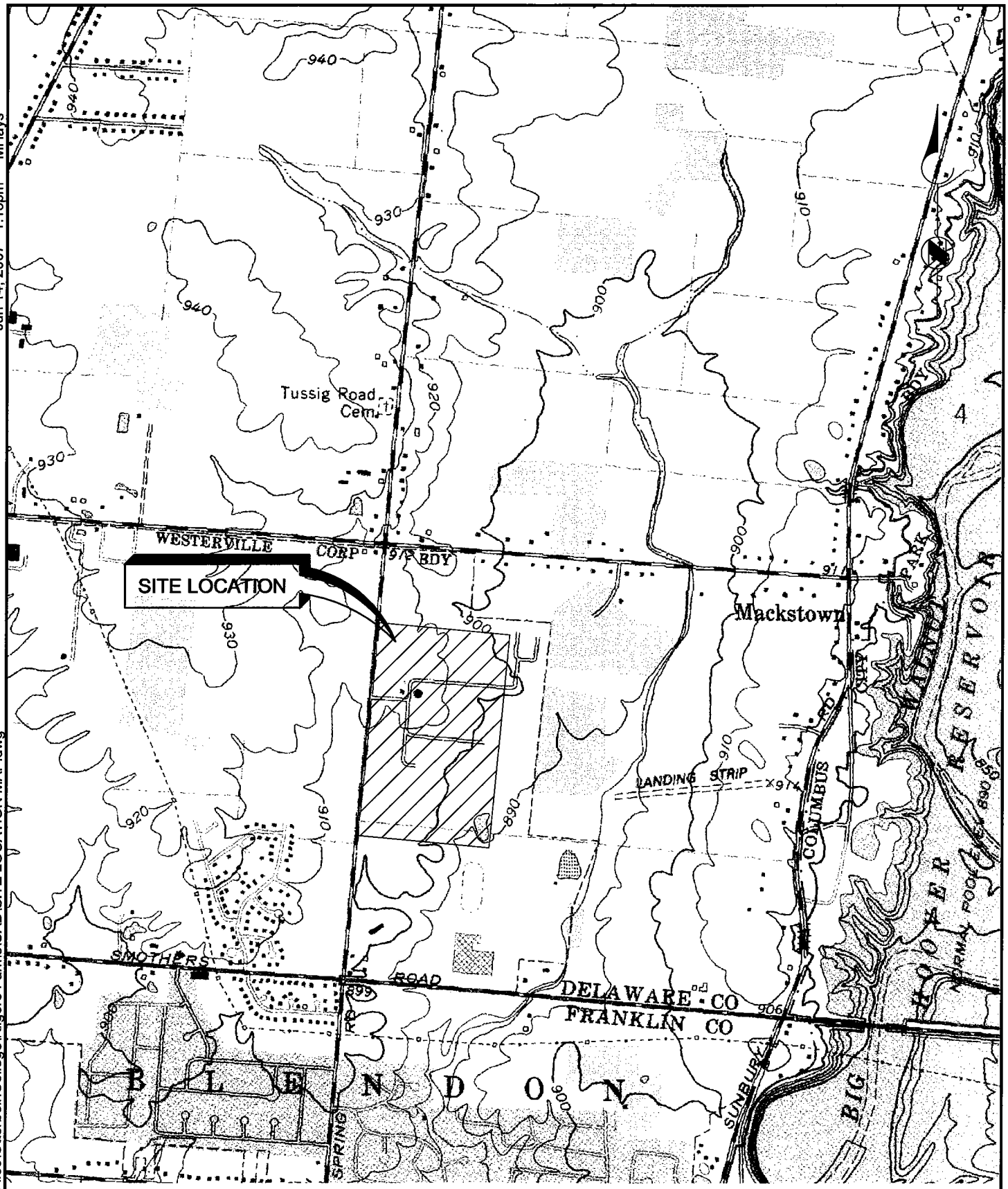
Limitations and assumptions for this assessment include:

1. The proposed scope of work represents an appropriate, commercially prudent, and reasonable level of effort. In accordance with the Ohio Voluntary Action Program 3745-300-06 regulations, this assessment is intended to reduce, but not eliminate, the level of uncertainty regarding the potential for recognized environmental conditions on the Site.

2. The availability of data may be limited, particularly in regard to historical Site uses.

3. Brown and Caldwell cannot verify the accuracy of data obtained from government agencies, commercial sources, interview subjects, and other third-party sources.

4. Brown and Caldwell's proposal to complete these services within the quoted cost and time are based upon certain assumptions. These include the cooperation of the Site owners and occupants, and full access to the entire Site without delay or re-work. Brown and Caldwell also assumes that if Otterbein College is aware of any specialized knowledge or experience that is material to *recognized environmental conditions* or *historical recognized environmental conditions* in connection with the property, Otterbein College will communicate any information based on such specialized knowledge or experience to Brown and Caldwell prior to the Site visit.



ADAPTED FROM U.S. GEOLOGICAL SURVEY MAP
GALENA QUADRANGLE
OHIO
7.5 MINUTE SERIES (TOPOGRAPHIC)

NOT TO SCALE

P:\Project Working Files\OtterbeinCollege\Kilgore Farms\CAD\SITE LOCATION MAP.dwg Jun 14, 2007 - 1:15pm MHays

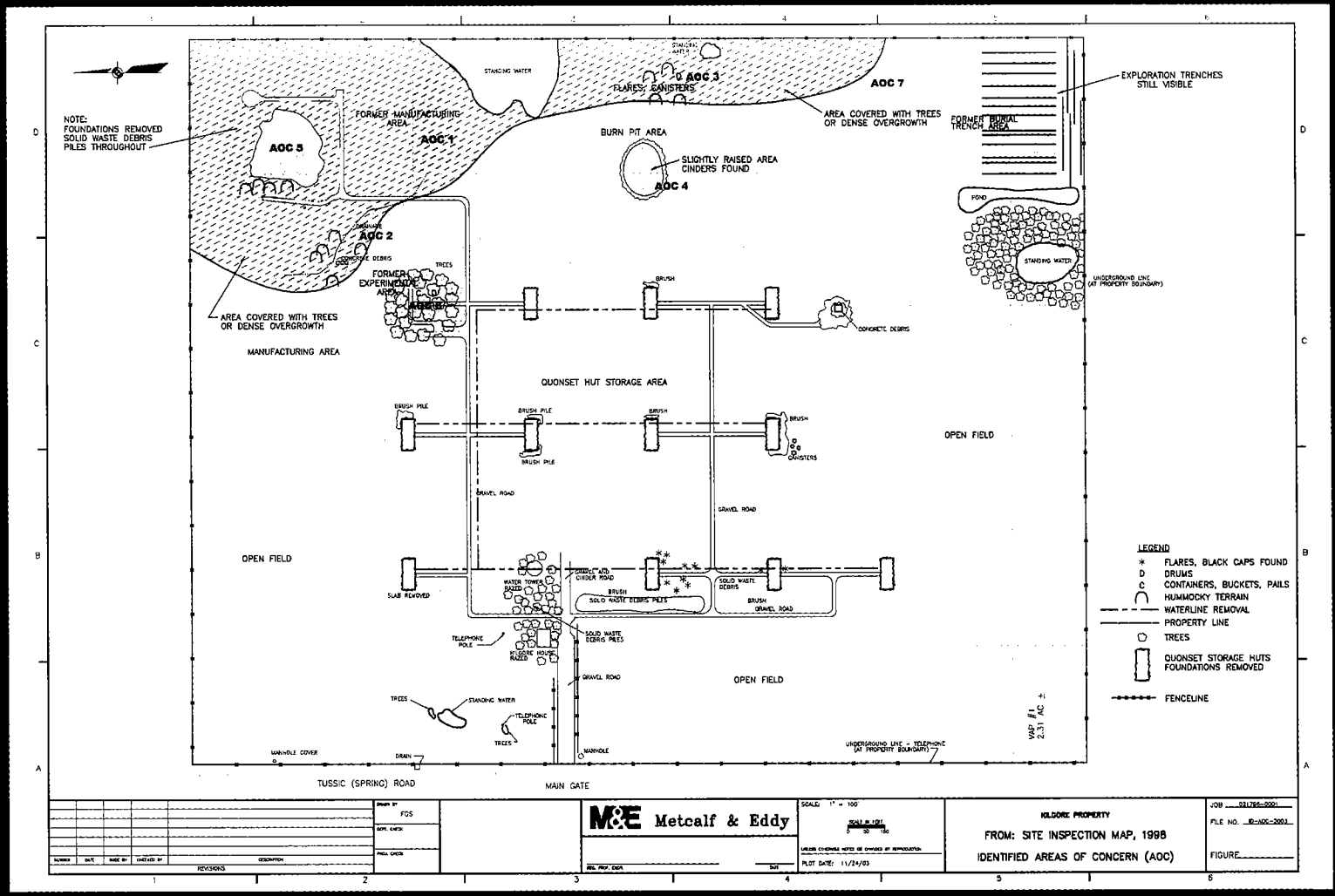
BROWN AND CALDWELL

OTTERBEIN EQUINE FACILITY
SITE LOCATION MAP
FIGURE 1

Figure 2

Preliminary Phase II AOCs

(from M&E, June 8, 2005 Public Meeting at Westerville Community United Church)



WILLSTONE CREEK
PHASE I, SECTION I
P.C. 3, SLDS. 467, 467A – 467D

RESERVE "B"

KESTREL TERRACE DRIVE

SPRING ROAD

Prop. Right-of-Way

Topsoil and Rock Stockpiles in this Area

SCALE: 1" = 100'
0 100 200 300
GRAPHIC SCALE

REFERENCE BENCH MARK
Designation: 97–044

The station is a brass tablet set in concrete and stamped "97–044". The station is located on Kienle Road, 5' east of South Spring Road and 3' North of the edge of pavement of Kienle Road.

Elev. 895.6'
(NAVD 88 Reference Datum)

BENCH MARK #1

Arrow Bolt on Fire Hydrant Located on the West Side of Spring Road and Northwest of the Southwest Corner of Site.

Elev. 900.97'

BENCH MARK #2

Arrow Bolt on Fire Hydrant Located on the West Side of Spring Road and South of Keyham Terrace Drive.

Elev. 906.65'

BENCH MARK #3

Arrow Bolt on Fire Hydrant Located on the West Side of Spring Road and Northwest of the Northwest Corner of Site.

Elev. 909.41'

NOTES:

The proposed storm water management and post-construction water quality facilities show the general intent based on preliminary development concepts. The final locations, configurations, grading and details will be developed during the design process.

Area of Concern (AOCs) are shown based on either field locations of areas flagged by Brown and Caldwell in December 2006 or an approximation of areas delineated on a Site Inspection Map prepared by Metcalf & Eddy in 1998.

AOC 6 – Field Location
(AOC 5) – Site Inspection Map Location

Test Bore 27 Ground – 898.31
Test Bore 21 Ground – 896.68
Test Bore 17 Ground – 896.29
Test Bore 20 Ground – 899.46
Test Bore 28 Ground – 897.09
Test Bore 19 Ground – 897.98
Test Bore 15 Ground – 898.87
Test Bore 18 Ground – 896.43
Test Bore BC-9 Ground – 891.46
Test Bore BC-8 Ground – 890.58
Relocated Test Bore BC-6 Ground – 891.94
Relocated Test Bore BC-7 Ground – 890.53
Water Level 890.2 (Per. Aerial Survey)
Relocated Test Bore BC-5 Ground – 893.33
Water's Edge
Test Bore BC-10 Ground – 893.89
Possible Water Quality Basin Bottom 893.0±
Test Bore BC-4 Ground – 895.50
North: 172814.5909 East: 1857550.1685
PHASE I SITE DEVELOPMENT (66.1± AC. – Excluding Spring Road R/W)
PHASE II SITE DEVELOPMENT (38.8± AC.)
AOC #4 StakEast:
North: 172575.1054 East: 1857607.4450
Test Bore BC-12 Ground – 895.55
Monitoring Well #4 Top of PVC Pipe – 897.
Ground @ Well – 894.
North: 173281.6705 East: 1857317.3599
Monitoring Well #13 Top of PVC Pipe – 895.
Ground @ Well – 895.67
Top of Steel Casing – 898.66
North: 173179.1870 East: 1857341.5959
Test Bore 16 Ground – 898.64
Test Bore BC-11 Ground – 893.94
Monitoring Well #14 Top of PVC Pipe – 898.69
Ground @ Well – 895.73
Top of Steel Casing – 897.07
North: 172858.5472 East: 1857577.5168
Monitoring Well #6 Top of PVC Pipe – 895.90
Ground @ Well – 894.06
North: 172605.9700 East: 1857781.0431
AOC #7 StakEast:
North: 172241.4823 East: 1857774.0376
AOC #3 StakEast:
North: 172536.4839 East: 1857894.0810
(AOC 4)
(AOC 7)
(AOC 3)
Monitoring Well T-1 Top of PVC Pipe – 893.90 Ground @ Well – 891.70 North: 171776.5629 East: 1857861.0872
(BURIAL TRENCH AREA)
Monitoring Well T-2 Top of PVC Pipe – 893.03 Ground @ Well – 890.76 North: 171588.2544 East: 1857836.0314
Prop. Detention & Water Quality Basin Bottom 893.0±
North: 173234.9164 East: 1857696.6557
North: 173189.0127 East: 1857698.1824
North: 173213.1846 East: 1857532.1787
Test Bore BC-3 Ground – 893.03
AOC 1
AOC 2
AOC 6
Test Bore 22 Ground – 895.62
North: 173228.4917 East: 1857332.2588
Prop. Retention Basin Normal Pool Elev. 902.0± Bottom 894.0±
North: 173375.2502 East: 1857325.6980
Test Bore BC-1 Ground – 893.
North: 173367.2980 East: 1857423.9746
Relocated Test Bore BC-2 Ground – 895.0
North: 173427.3278 East: 1857456.0523
Test Bore 26 Ground – 894.41
North: 173438.0534 East: 1857593.9001
North: 173591.0125 East: 1857563.0676
Monitoring Well #3 Top of PVC Pipe – 898.17 Ground @ Well – 896.23 North: 173879.2708 East: 1857681.4800
North: 173516.0138 East: 1857636.9472
North: 173262.4846 East: 1857728.5425
Test Bores within: AOC #5
(AOC 5)
North: 173524.4120 East: 1857743.3886
North: 173662.5627 East: 1857838.2357
Monitoring Well #1 Top of PVC Pipe – 893.27 Ground @ Well – 893.32 North: 173728.6143 East: 1857991.2310
North: 173286.8175 East: 1857862.8949
North: 173178.7809 East: 1857878.8157
Monitoring Well #2 Top of PVC Pipe – 893.78 Ground @ Well – 891.74 North: 173507.4398 East: 1858096.4529
Monitoring Well #11 Top of PVC Pipe – 898.00 Ground @ Well – 895.76 Top of Steel Casing – 898.93 North: 173705.7578 East: 1857398.1923
Test Bore 23 Ground – 896.42
Test Bore 24 Ground – 897.39
Test Bore 25 Ground – 898.79
Test Bore 29 Ground – 896.21
Monitoring Well #12 Top of PVC Pipe – 897.43 Ground @ Well – 895.68 Top of Steel Casing – 897.73 North: 173434.1058 East: 1857340.6935
North: 173781.9076 East: 1857492.2028
North: 173703.9838 East: 1857540.2854
North: 173704.6979 East: 1857754.9190
SEAGULL CT.
SURF CT.
SANDPIPER CT.
MARINERS COVE, SECTION 6 P.C. 2, SLDS. 8–8B
Ex. 15" Cte Field Tile (per Plan)
Ex. 27" Storm Sewer (per Plan)
Ex. 30" Storm Sewer (per Plan)
Ex. 15" Storm Sewer (per Plan)
Ex. 24" Storm Sewer (per Plan)
Ex. 42" Storm Sewer (per Plan)
Ex. Storm Sewer Located Per Plans
Ex. Storm Sewer Located
Ex. Storm Sewer (per Plan)
Ex. 8" Sanitary Sewer (per Plan)
Ex. Sanitary Manhole (4'-0" Diam.)
Ex. Sanitary Sewer (per Plan)
Ex. Sanitary Manhole
Ex. Sanitary Sewer Located
Ex. Sanitary Sewer Located Per Plans
THE LANDINGS AT HOOVER PHASE I P.B. 23, PG. 14–15
THE LANDINGS AT HOOVER PHASE 2, PART 1 P.B. 24, PG. 65–66
MARINERS COVE SECTION 1 P.C. 1, SLD. 226
MARINERS COVE (per plan) P.C. 2, SLDS. 298–298A
RESERVE "B"

C.F. BIRD & R.J. BULL, INC.
ENGINEERS / SURVEYORS
2979 W. DUBLIN-GRANVILLE RD. COLUMBUS, OHIO 43235 (614) 781-1981

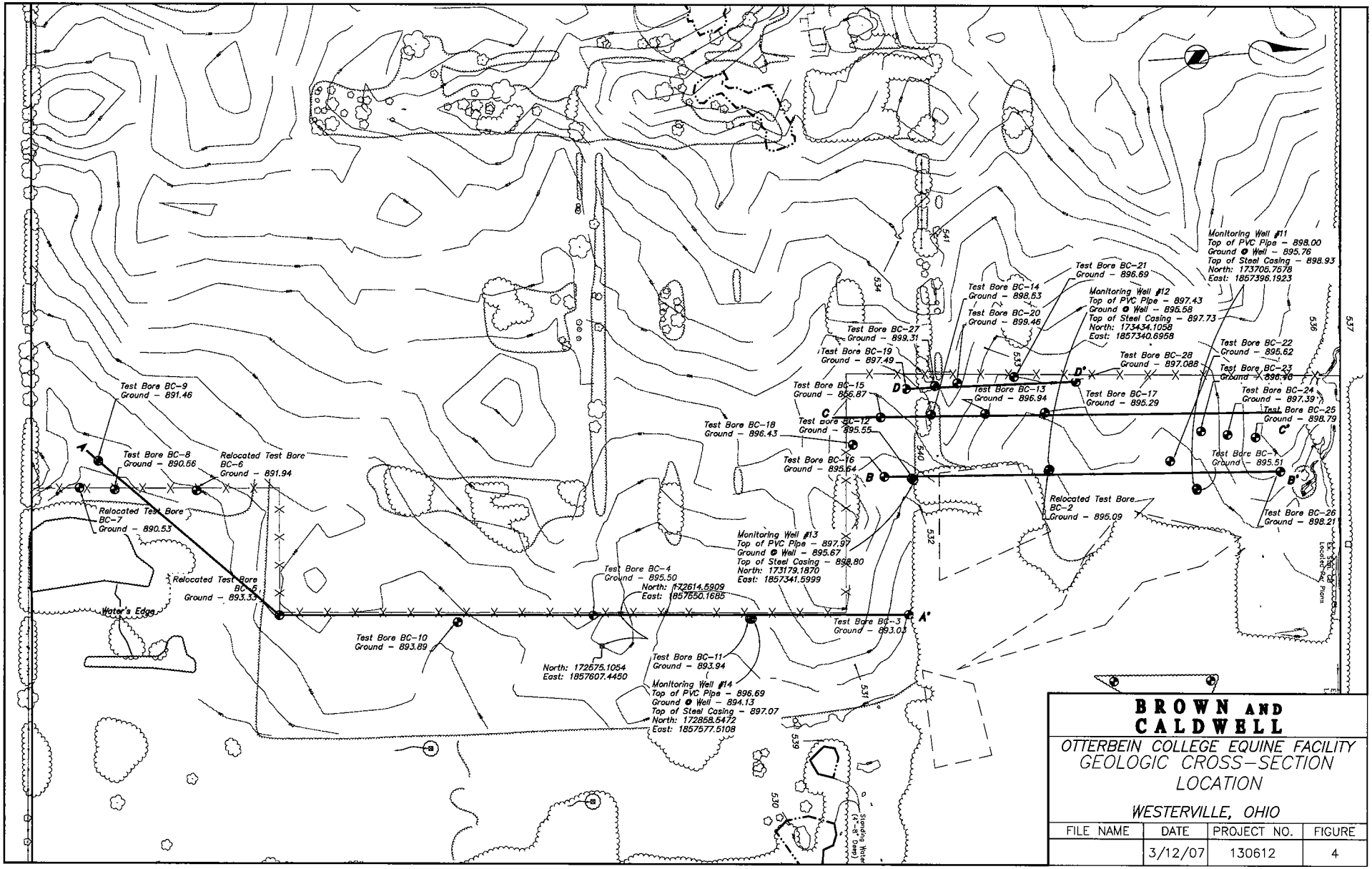
OTTERBEIN COLLEGE

DEVELOPMENT EXHIBIT FOR OTTERBEIN EQUINE FACILITY ALONG THE EAST SIDE OF SPRING ROAD, SOUTH OF MAXTOWN ROAD, WESTERVILLE, OHIO

SCALE: 1" = 100' | JOB NO. 06-100 | 1 of 1
DWN: WSM | CKD: DMB | DATE: 5/1/07

H:\Jobs\2006\100\ACAD\dwg\Engineering Exhibits\EPA Development Exhibit.dwg 06/01/2007

FIGURE 3

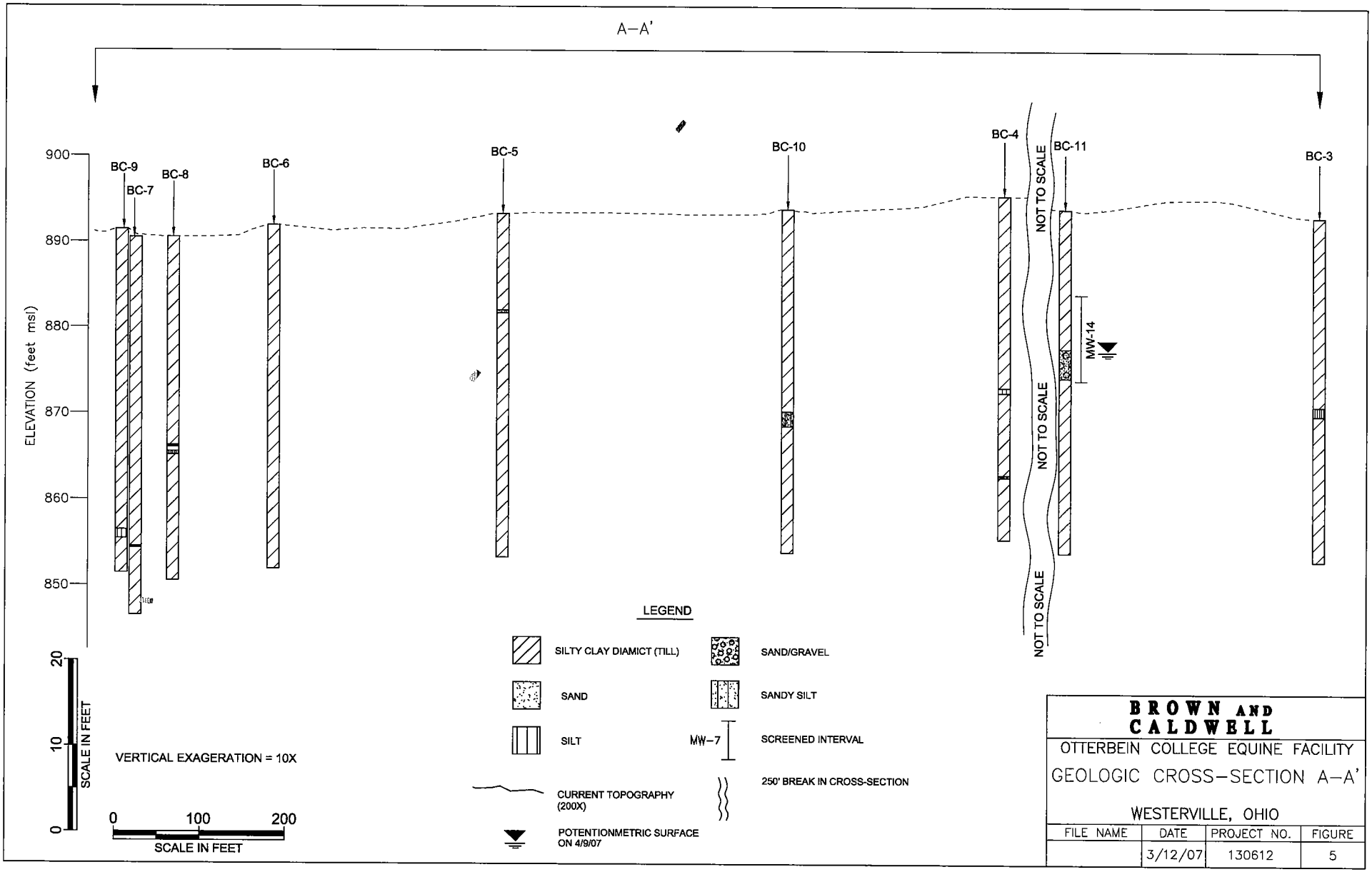


BROWN AND CALDWELL

OTTERBEIN COLLEGE EQUINE FACILITY
GEOLOGIC CROSS-SECTION LOCATION

WESTERVILLE, OHIO

FILE NAME	DATE	PROJECT NO.	FIGURE
	3/12/07	130612	4



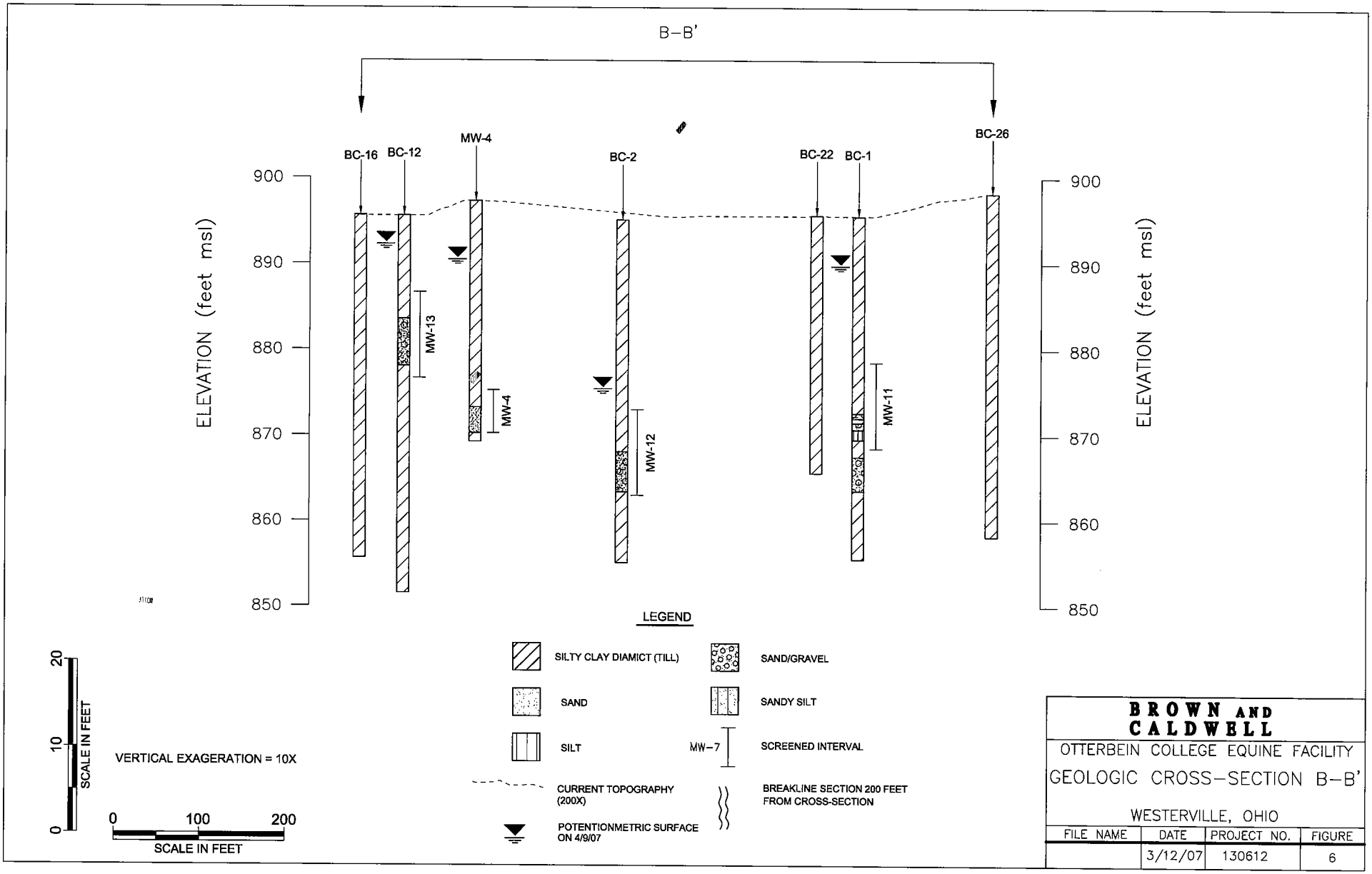
BROWN AND CALDWELL

OTTERBEIN COLLEGE EQUINE FACILITY

GEOLOGIC CROSS–SECTION A–A'

WESTERVILLE, OHIO

FILE NAME	DATE	PROJECT NO.	FIGURE
	3/12/07	130612	5



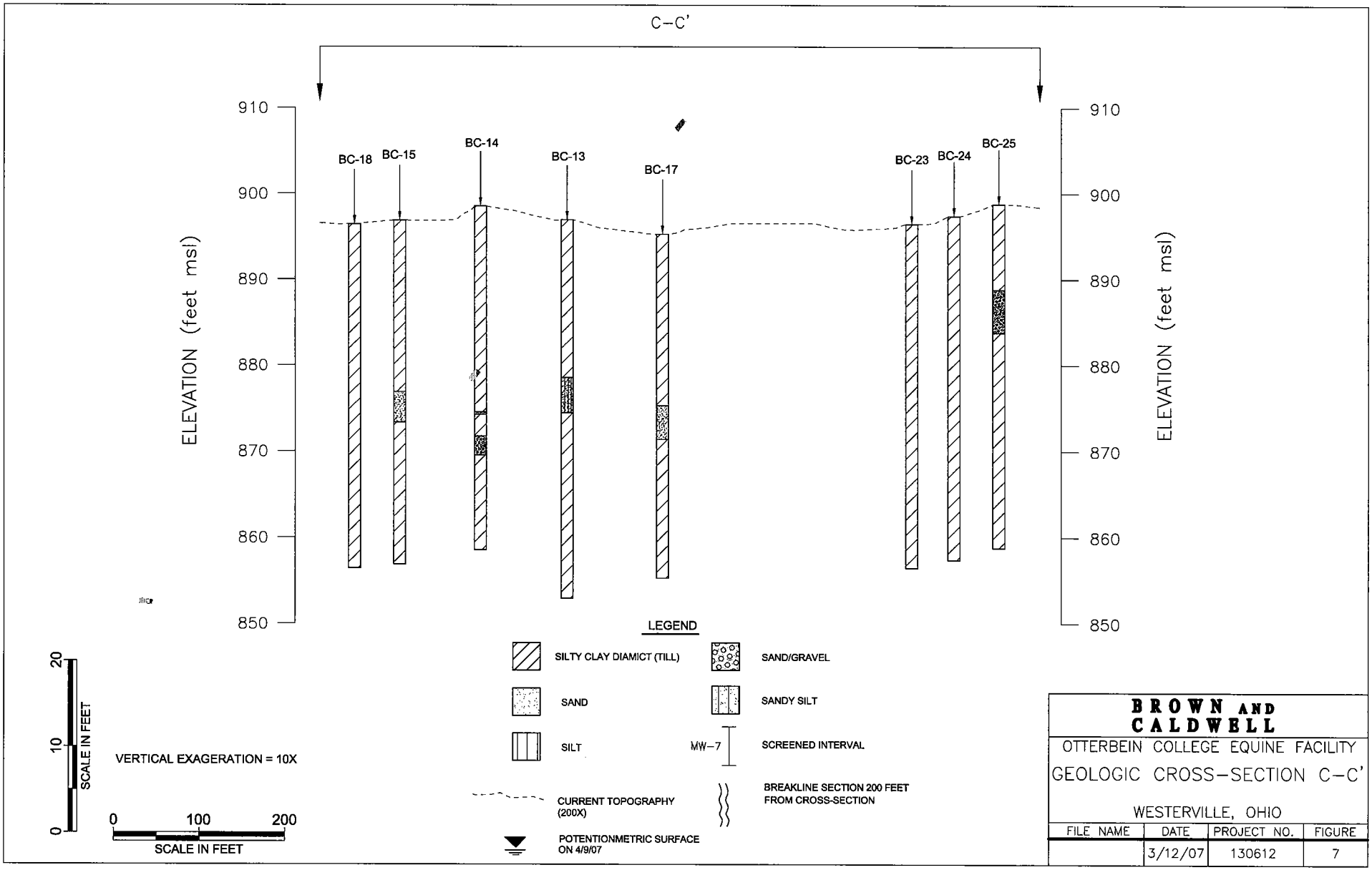
BROWN AND CALDWELL

OTTERBEIN COLLEGE EQUINE FACILITY

GEOLOGIC CROSS–SECTION B–B'

WESTERVILLE, OHIO

FILE NAME	DATE	PROJECT NO.	FIGURE
	3/12/07	130612	6



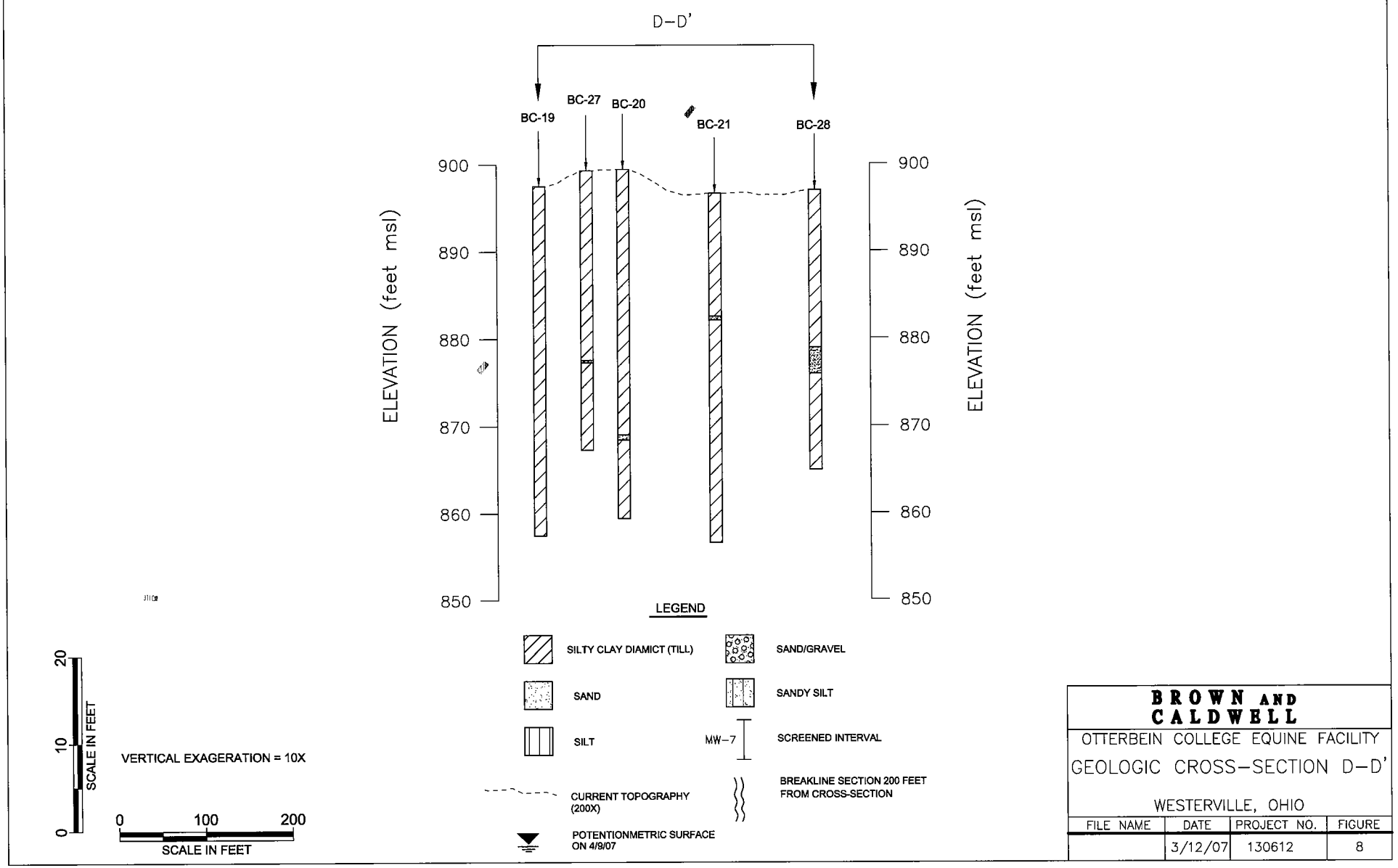
BROWN AND CALDWELL

OTTERBEIN COLLEGE EQUINE FACILITY

GEOLOGIC CROSS–SECTION C–C'

WESTERVILLE, OHIO

FILE NAME	DATE	PROJECT NO.	FIGURE
	3/12/07	130612	7



BROWN AND CALDWELL

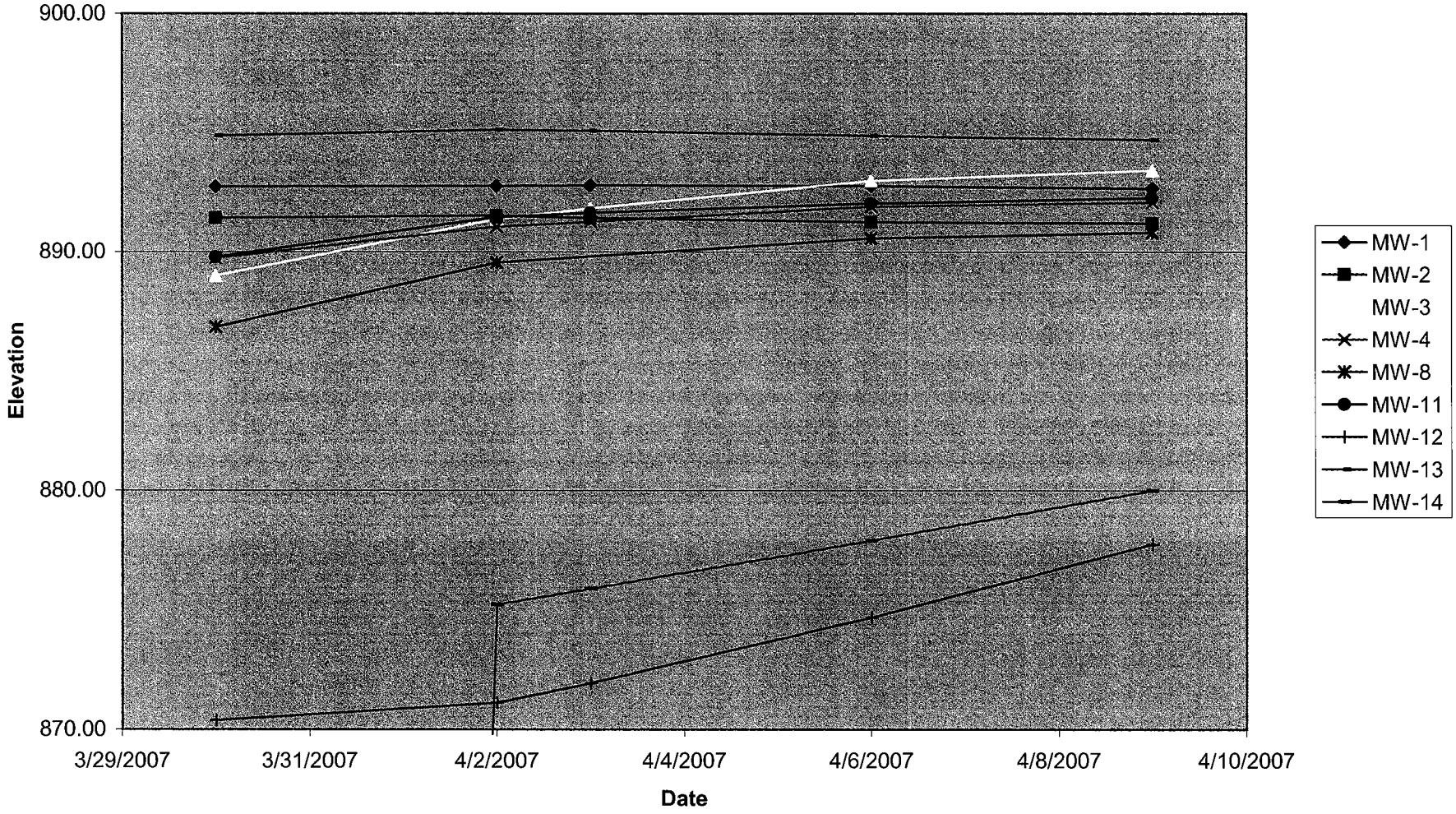
OTTERBEIN COLLEGE EQUINE FACILITY

GEOLOGIC CROSS–SECTION D–D'

WESTERVILLE, OHIO

FILE NAME	DATE	PROJECT NO.	FIGURE
	3/12/07	130612	8

Figure 9
Site Potentiometric Data
Otterbein College - Equine Science Facility



SANITARY SEWER

SAND, GRAVEL, AND COBBLE FILL PILE

APPROXIMATE VAP #1 BOUNDARY

FILL DIRT WITH DEBRIS PILE

PIPE

STORM WATER SWALE

LEGEND

- IDW STAGING AREA
- RUSTED DRUM FRAGMENTS
- CONSTRUCTION/DEMOLITION DEBRIS
- MISCELLANEOUS CANS EMPTY
- POTENTIAL CONTAMINANT MIGRATION CONDUIT
- PROPOSED FENCE (EASTERN PROPERTY BOUNDARY)

0 150 300

SCALE IN FEET

BROWN AND CALDWELL

OTTERBEIN COLLEGE EQUINE FACILITY

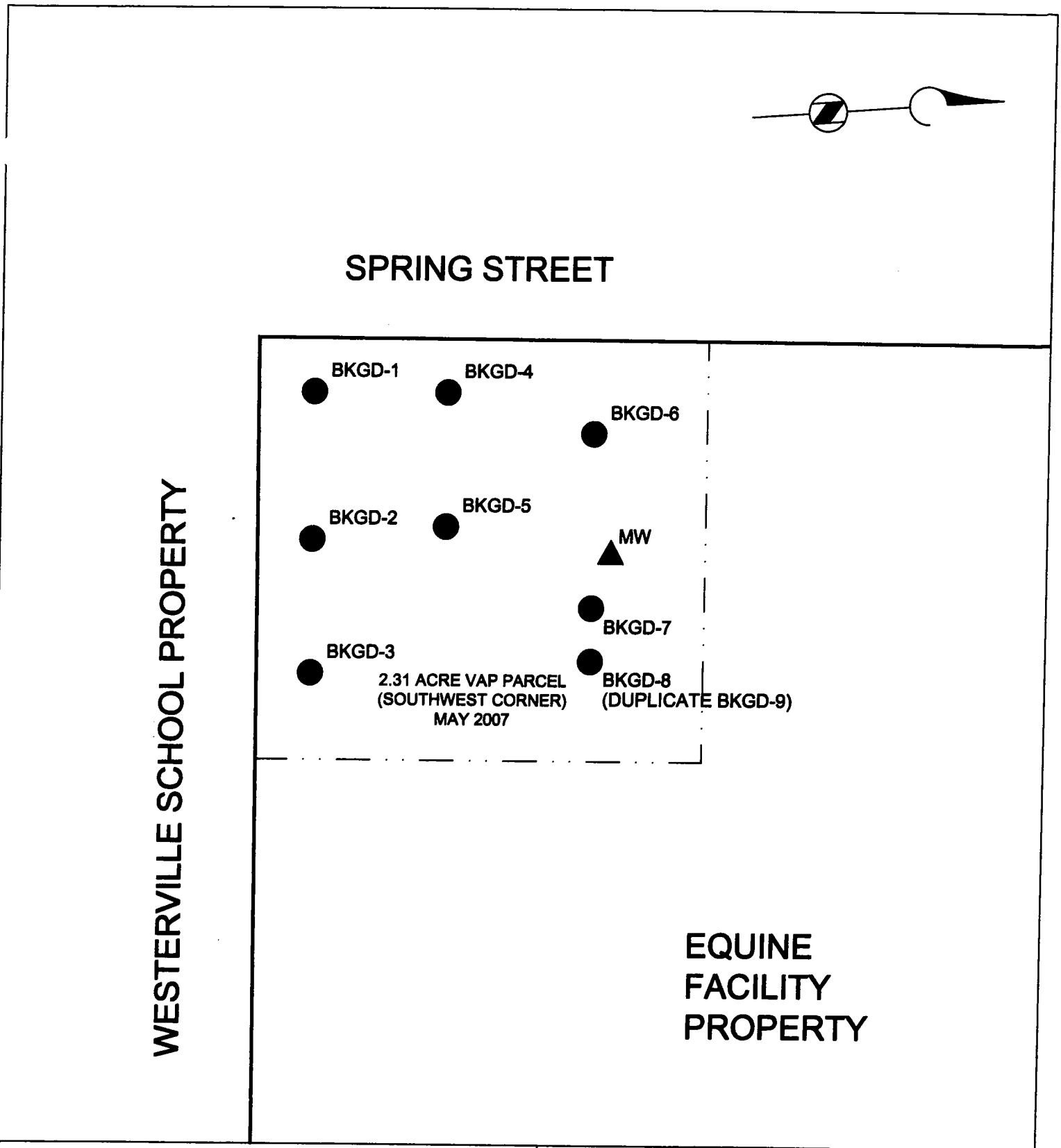
PHASE I PROPERTY ASSESSMENT

SITE INSPECTION OBSERVATIONS

APRIL-MAY 2007

WESTERVILLE, OHIO

DRAWN BY	DATE	PROJECT NO.	FIGURE
EGM	6/14/07	130612	10



- EQUINE FACILITY PROPERTY LINE

MW - EXISTING MONITORING WELL

BKGD-6 - BACKGROUND SOIL SAMPLE (9 INCHES-1 FT. DEPTH)

BROWN AND CALDWELL

OTTERBEIN COLLEGE EQUINE FACILITY
ARSENIC BACKGROUND SOIL SAMPLE LOCATIONS

WESTERVILLE, OHIO

DRAWN BY	DATE	PROJECT NO.	FIGURE
EGM	5/29/07	130612	11

TABLE 1
SOIL BORING SURVEY AND SATURATED PERMEABLE LITHOLOGIC UNIT SUMMARY
OTTERBEIN COLLEGE - EQUINE SCIENCE CENTER
WESTERVILLE, OHIO

Soil Boring	State Planar Coordinates Northing	Easting	Ground Elevation	Total Depth ft bgs	Elevation	Saturated Permeable Lithologic Units Ltihology	Top elevation	Bottom Elevatation	Comments
BC-1	173705.9554	1857398.9141	895.51	40	855.51	sandy gravel	872.61	872.01	MW-11 installed
						sand and gravel	871.51	870.71	
						silt and fine sand	870.71	869.51	
						sand and gravel	867.51	863.51	
BC-2	173432.2484	1857343.7744	895.09	40	855.09	sand and gravel	868.09	863.39	MW-12 installed
BC-3	173151.2200	1857591.4280	893.03	40	853.03	NE	NE	NE	Dry hole
BC-4	172562.8790	1857549.3062	895.50	40	855.50	tight, gravelly silt	873.10	872.50	Gravelly silt was tight with limited water producing capability-- thixatropic
BC-5	171977.7935	1857505.7772	893.33	40	853.33	NE	NE	NE	Dry hole
BC-6	171840.9670	1857262.4111	891.94	40	851.94	NE	NE	NE	Dry hole
BC-7	171623.3149	1857241.5159	890.53	44	846.53	sand and gravel	857.53	854.33	
BC-8	171688.5125	1857249.5114	890.56	40	850.56	silty sand	866.26	866.06	
						gravel	865.56	865.16	
BC-9	171661.9733	1857193.9917	891.46	40	851.46	thin interbeded silt	856.46	855.46	Thin interbedded silt zones were noted to be thixatropic with limited watter producing capability
BC-10	172309.3605	1857543.4922	893.89	40	853.89	sand and gravel	870.29	868.59	
BC-11	172854.7008	1857577.3513	893.94	40	853.94	sand and gravel	877.64	874.24	MW-14 installed
BC-12	173176.3037	1857338.5013	895.55	44	851.55	sand and gravel	883.55	878.05	MW-13 installed
BC-13	173322.1810	1857228.6300	896.94	44	852.94	silty sand	878.54	874.44	
BC-14	173221.0000	1857222.8740	898.53	40	858.53	gravel	874.53	874.23	Dry hole with tooling out
						sand and gravel	871.73	869.53	
BC-15	173127.0980	1857221.1510	896.87	40	856.87	silty sand	876.87	873.37	Silty sand was wet not saturated; DTW = 28 feet with tooling out
BC-16	173125.5290	1857331.7700	895.64	40	855.64	NE	NE	NE	Dry hole
BC-17	173433.6520	1857234.7030	895.26	40	855.26	sand	875.26	871.36	
BC-18	173071.2980	1857268.4940	896.43	40	856.43	NE	NE	NE	Dry hole
BC-19	173178.2220	1857171.4750	897.49	40	857.49	NE	NE	NE	Dry hole
BC-20	173274.8330	1857168.1980	899.46	40	859.46	sand	869.06	868.46	Sand is wet not saturated; Dry hole with all tooling out
BC-21	173381.1460	1857164.1030	896.69	40	856.69	sand	882.59	882.19	
BC-22	173660.1080	1857341.3640	895.62	30	865.62	NE	NE	NE	Dry hole; refusal at 30 feet
BC-23	173721.8100	1857290.5510	896.45	40	856.45	NE	NE	NE	Boring/drill tooling dry to 40 ft bgs; DTW = 7 ft bgs with tooling out-- surface water
BC-24	173770.6160	1857300.4810	897.39	40	857.39	NE	NE	NE	Dry hole
BC-25	173822.5260	1857309.1870	898.79	40	858.79	coarse sand and gravel	888.79	883.79	Coarse sand & gravel is wet not saturated;
BC-26	173863.9150	1857375.8060	898.21	40	858.21				
BC-27	173232.6710	1857170.0190	899.31	32	867.31	sandy silt	877.61	877.31	Sandy silt was wet not saturated; Dry hole with tooling out
BC-28	173495.7230	1857181.4660	897.09	32	865.09	sand	879.09	876.09	Sand is wet not saturated; toling was dry; 0.8 feet of water in boring after 45 minutes with tooling out
MW-1	173728.6143	1857991.2310	893.32	20	873.32	poorly sorted sand	878.82	873.32	MW-1 installed
MW-2	173507.4388	1858096.4529	891.74	28	863.74	fine sand	878.74	878.44	MW-2 installed
MW-3	173879.2708	1857681.1800	896.23	28	868.23	poorly sorted sand	878.73	878.53	MW-3 installed
						poorly sorted sand	877.23	876.73	
MW-4	173261.6705	1857317.3599	897.25	28	869.25	well sorted fine sand	873.25	870.25	MW-4 installed
MW-8	172605.9700	1857761.0431	894.06	28	866.06	poorly sorted sand	873.36	869.26	MW-8 installed

Notes:
NE = No saturated permeable units encountered
ft bgs = feet below ground surface
MW-1, -2, -3, -4, and -8 were installed by Metcalf & Eddy, Inc. Corresponding stratigraphy is based upon boring logs presented in (Metcalf & Eddy, 2006).
Borings and wells surveyed by Bird & Bull, Inc.

TABLE 2
SITE POTENTIOMETRIC DATA
OTTERBEIN COLLEGE - EQUINE SCIENCE CENTER
WESTERVILLE, OHIO

Monitoring Well	Ground Elevation	Total Measured Depth (ft)	Top of Riser Elevation	Depth To Water Prior to Development (ft)	Groundwater Measurements									
					3/30/2007 DTW	3/30/2007 Elevation	4/2/2007 DTW	4/2/2007 Elevation	4/3/2007 DTW	4/3/2007 Elevation	4/6/2007 DTW	4/6/2007 Elevation	4/9/2007 DTW	4/9/2007 Elevation
MW-1	893.32	22.31	895.27	2.54	2.54	892.73	2.52	892.75	2.50	892.77	2.52	892.75	2.63	892.64
MW-2	891.74	16.92	893.78	3.02	2.37	891.41	2.27	891.51	2.38	891.40	2.54	891.24	2.61	891.17
MW-3	896.23	22.82	898.17	3.20	9.19	888.98	6.80	891.37	6.35	891.82	5.19	892.98	4.76	893.41
MW-4	897.25	28.41	898.86	5.65	9.12	889.74	7.82	891.04	7.62	891.24	6.98	891.88	6.80	892.06
MW-8	894.06	27.97	895.90	5.49	9.07	886.83	6.36	889.54	NM	NM	5.35	890.55	5.12	890.78
MW-11	895.76	28.90	898.00	9.42	8.23	889.77	6.55	891.45	6.38	891.62	5.98	892.02	5.76	892.24
MW-12	895.58	34.01	897.43	24.86	27.04	870.39	26.31	871.12	25.50	871.93	22.75	874.68	19.68	877.75
MW-13	895.67	21.07	897.97	3.55	3.11	894.86	2.86	895.11	2.91	895.06	3.12	894.85	3.30	894.67
MW-14	894.13	22.29	896.69	Dry	Dry	Dry	21.46	875.23	20.81	875.88	18.80	877.89	16.71	879.98

Notes:
DTW = Depth to water measurements relative to the survey mark on the top of the well riser casing.
Monitoring wells surveyed by Bird & Bull, Inc. These reflect a NAD 1983 mean sea level datum.
MW-14 has not been developed due to the limited volume of water.

APPENDIX B

B.1 Deed of Gift from Kilgore Manufacturing and the 111-acre Survey Plat and Updated Chain-of-Title

B.2 Legal Description and Survey for the Three New Site Parcels

B.3 Feb. 20, 2007 Westerville City Council Meeting Minutes on Changing the Zoning to Planned Neighborhood Development (PND)

B.4 Chain-of-Title (2007)

APPENDIX B.1

Deed of Gift from Kilgore Manufacturing and the 111-acre Survey Plat

APPROVED
FOR TRANSFER
CHARLES E. ELIOT
Delaware County Engineer

DEED OF GIFT

439

KNOW ALL MEN BY THESE PRESENTS: That KILGORE, INC., Grantor, a corporation duly incorporated under the Laws of the State of Ohio, of the City of Westerville, County of Franklin, and State of Ohio, as a gift, donation, and contribution to OTTERBEIN COLLEGE, a corporation duly organized, and existing under the Laws of the State of Ohio, of the City of Westerville, County of Franklin, and State of Ohio, doth hereby REMISE, RELEASE, AND FOREVER QUIT-CLAIM, to the said Grantee, OTTERBEIN COLLEGE, its successors and assigns forever, the following real estate, situated in the County of Delaware, in the State of Ohio, and in the Township of Genoa, and bounded and described as follows:

> Situated in the County of Delaware, State of Ohio, and in the Township of Genoa, in Range 17, Township 3, Section 4, and Lot 9, and bounded and described as follows:
>
> Beginning at a stone on a post at the Southwest corner of said Lot 9 in the center of the County Road, and on the section line between Sections 3 and 4 of said Township at a point "A" on a plat of a survey of said lands made by James Eaton, County Surveyor of Delaware County, Ohio, November 20, 1839, and recorded in the Surveyor's Records, of said County in Vol. 3, page 509; thence North 1° East along said Section line 147.56 poles to a stone on a post at the Northwest corner of said Lot 9; thence South 89° East 119.26 poles to a stone on a post; thence South 1° West 147.56 poles to a post; thence North 89° West 119.26 poles on the South line of said Lot 9 to the place of beginning, containing 110 acres of land, and being the premises conveyed by the Kilgore Manufacturing Company to Kilgore, Inc. in Deed Record 237, page 512, Recorder's Office, Delaware County, Ohio.

This conveyance is delivered by the Grantor and accepted by the Grantee with full knowledge that the premises herein conveyed have been used for the storage, burial and disposal of explosives, pyrotechnics, chemicals and other materials having explosive and incendiary characteristics, and that as a result thereof said premises contain such materials, some of which may be exposed and visible and some of which is buried or otherwise concealed; and Grantee, by the acceptance or recording of this deed, for itself, its successors and assigns, covenants and agrees to save and hold harmless Grantor, its successors and assigns, officers, directors, agents and employees, past or present, from any and all claims and demands, including cost of defense, for any damage or injury occurring after the date hereof and asserted by reason of the premises having been so used or because of any such materials being on said premises at the date hereof and further agrees this covenant and agreement shall be perpetually personal to Grantee and shall also run with the land and shall inure to the benefit of and be binding upon the successors and assigns of the parties hereto.

TO HAVE AND TO HOLD said premises, with all the privileges and appurtenances

thereunto belonging but subject to the foregoing terms, provisions and agreements, to the said OTTERBEIN COLLEGE, its successors and assigns forever.

IN WITNESS WHEREOF, the said Kilgore, Inc., in pursuance of a resolution adopted by its Board of Directors, has hereunto caused its corporate seal to be affixed and these presents to be subscribed by its President and Secretary this 7th day of May, 1962.

Signed and acknowledged in presence of:

KILGORE, INC.

By James P. Wray
President

By John L Wagner
Secretary

STATE OF TENNESSEE, HARDEMAN COUNTY, ss.

BE IT REMEMBERED, That on this 7th day of MAY, 1962, before me, the subscriber, a notary public, in and for said county, personally came the above named Kilgore, Inc., the Grantor in the foregoing Deed, by JAMES P. WRAY, its President, and JOHN L. WAGNER, its Secretary, and as such President and Secretary duly authorized by resolution adopted by the Board of Directors of said corporation, acknowledged the signing of the same to be their voluntary act and deed and as the act and deed of said corporation, for the uses and purposes therein mentioned.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed my official seal, on the day and year first aforesaid.

Mrs. Willie Lee
Notary Public
My Commission Expires October 12, 1963

This instrument was prepared by George, Greek, King & McMahon, Attorneys at Law, 44 East Broad Street, Columbus 15, Ohio.

Transferred May 17, 1962
Daniel R. Thomas
County Auditor
By

92916

DELAWARE COUNTY, OHIO
FILED FOR RECORD MAY 17 1962
AT 2:15 O'CLOCK P.M.
RECORDED May 24 1962
VOL. 299 PAGE 440

SURVEY PLAT OF

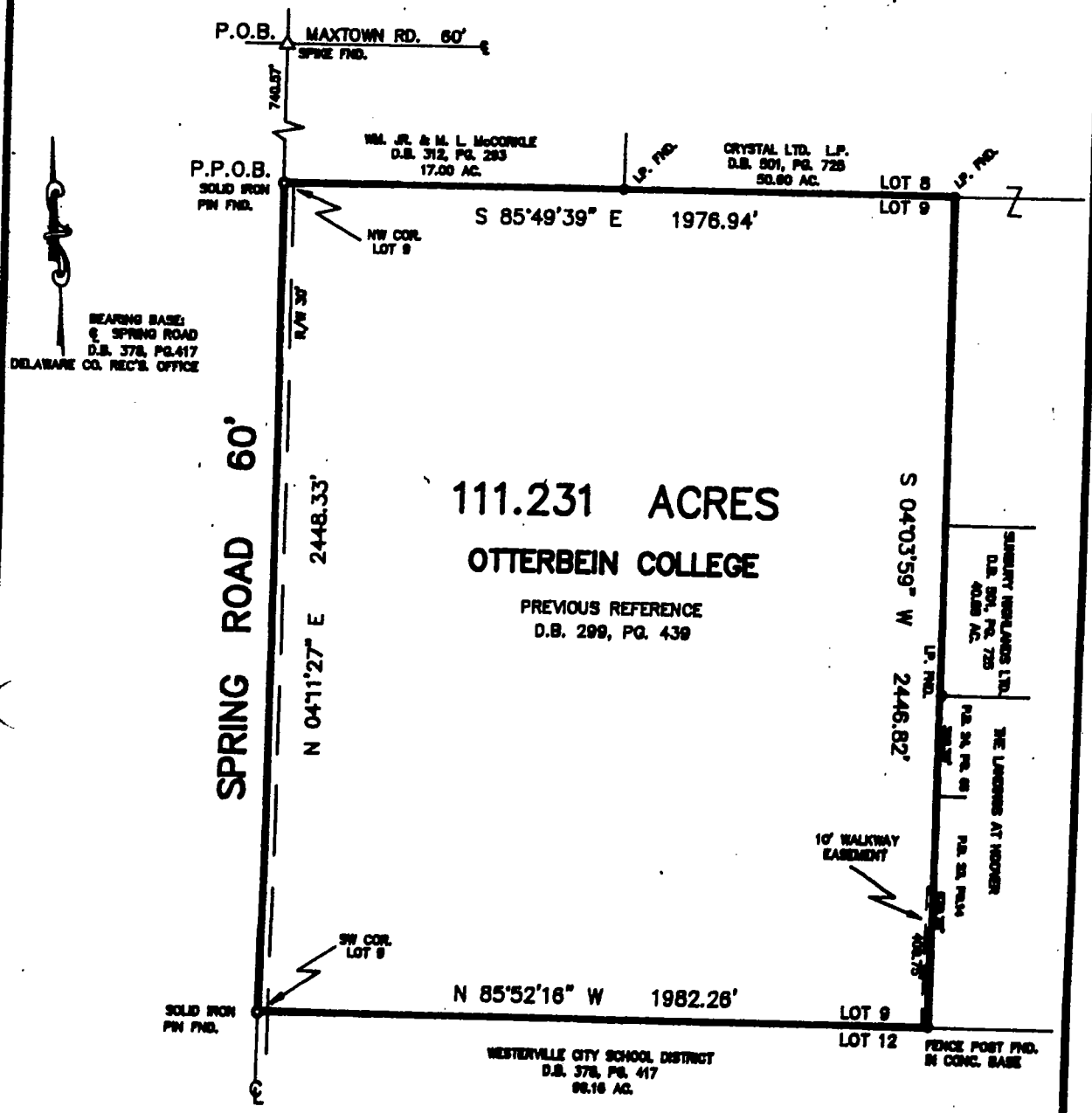
111.231 ACRES

SITUATED IN

CITY OF WESTERVILLE, COUNTY OF DELAWARE, STATE OF OHIO

LOCATED IN

GENOA TOWNSHIP, RANGE 17, TOWNSHIP 3, SECTION 4, LOT 9,
UNITED STATES MILITARY LANDS



REFERENCES:

D.B. 312, PG. 283
D.B. 501, PG. 725
D.B. 378, PG. 417
D.B. 299, PG. 439
P.B. 23, PG. 14
P.B. 24, PG. 68

400' 200 0 200 400 800

SCALE 1" = 400'

OCTOBER 9, 1992

CERTIFICATION: We hereby certify that the foregoing boundary survey was actually made upon the ground, that it and the information, courses and distances shown thereon are accurate. This survey was made in accordance with the Minimum Standard Detail Requirements for Land Title Surveys" jointly established by ALTA and ACSM in 1988.

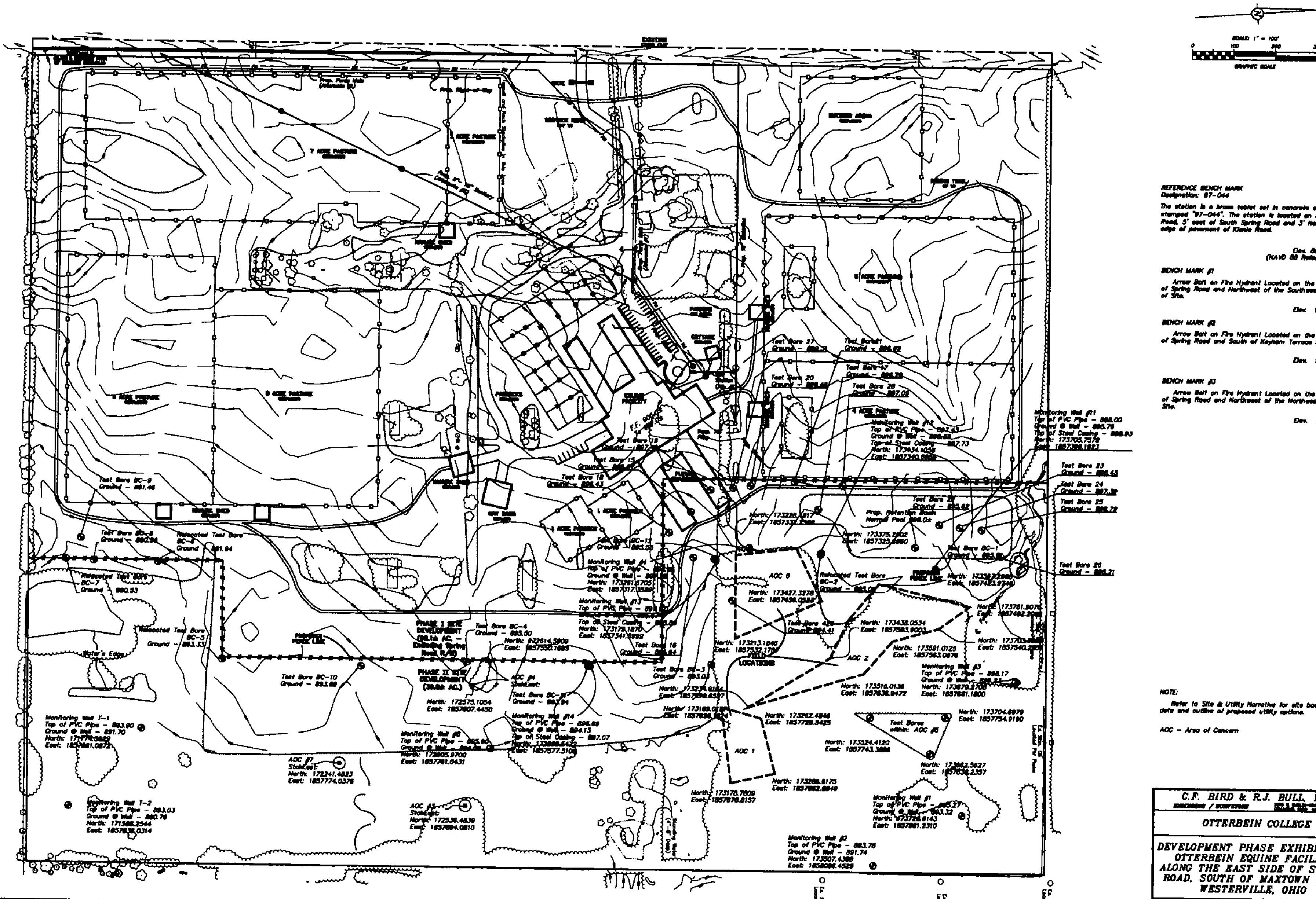
STATE OF OHIO
STEVEN A. SOLOMON
#7243
REGISTERED PROFESSIONAL SURVEYOR

SAS Surveying
60 Ridgecliff Rd.
Columbus, Ohio
614-538-8600
Professional Land Surveying

STEVEN A. SOLOMON, P.S. No. 7243

APPENDIX B.2

Legal Description and Survey for the Three New Site Parcels



REFERENCE BENCH MARK
Designation: 97-044

The station is a brass tablet set in concrete and stamped "97-044". The station is located on Kienle Road, 5' east of South Spring Road and 3' North of the edge of pavement of Kienle Road.

Elev. 885.6'
(NAVD 88 Reference Datum)

BENCH MARK #1

Arrow Bolt on Fire Hydrant Located on the West Side of Spring Road and Northwest of the Southwest Corner of Site.

Elev. 900.97'

BENCH MARK #2

Arrow Bolt on Fire Hydrant Located on the West Side of Spring Road and South of Keyham Terrace Drive.

Elev. 906.65'

BENCH MARK #3

Arrow Bolt on Fire Hydrant Located on the West Side of Spring Road and Northwest of the Northwest Corner of Site.

Elev. 909.41'

NOTE:

Refer to Site & Utility Narrative for site backround data and outline of proposed utility options.

AOC – Area of Concern

C.F. BIRD & R.J. BULL, INC.
ENGINEERS / SURVEYORS

OTTERBEIN COLLEGE

DEVELOPMENT PHASE EXHIBIT FOR OTTERBEIN EQUINE FACILITY ALONG THE EAST SIDE OF SPRING ROAD, SOUTH OF MAXTOWN ROAD, WESTERVILLE, OHIO

SCALE: 1" = 100'			JOB NO. 06-100	1 / 1
DWN: WSM	CKD: DMB	DATE: 5/1/07		

Rev. May 1, 2007
February 28, 2007

DESCRIPTION OF A 69.145 ACRE TRACT
EAST OF SPRING ROAD,
NORTH OF COUNTY LINE ROAD,
WESTERVILLE, OHIO

Situate in the State of Ohio, County of Delaware, City of Westerville in Farm Lot 9, Section 4, Township 3, Range 17, United States Military Lands and being a 73.673 acre tract out of a 110 acre tract of land conveyed to Otterbein College by deed of record in Deed Book 299, Pg. 439, all records referencing Recorder's Office, Delaware County, Ohio, said tract bounded and described as follows:

Beginning, for reference, at a point in the centerline of Spring Road, at the southwest corner of said 110 acre tract, at the northwest corner of a 99.164 acre tract of land conveyed to Board of Education – City of Westerville by deeds of record in Deed Book 204, Page 297 and Deed Book 206, Page 454, at the southwest corner of said Farm Lot 9, at the northwest corner of Farm Lot 12 and in the east line of Farm Lot 7;

thence S 85° 46' 48" E along a portion of the south line of said 110 acre tract, along a portion of the north line of said 99.164 acre tract, along a portion of the south line of said Farm Lot 9 and along a portion of the north line of said Farm Lot 12 a distance of 40.00 feet to a point at the true place of beginning of the tract herein intended to be described;

thence N 04° 21' 09" E crossing a portion of said 110 acre tract a distance of 1527.50 feet to a point;

thence N 04° 25' 02" E crossing a portion of said 110 acre tract a distance of 921.13 feet to a point in the north line of said 110 acre tract, in the north line of said Farm Lot 9 and in the south line of Farm Lot 8;

thence S 85° 39' 06" E along a portion of the north line of said 110 acre tract, along the south line of a 17.264 acre tract of land conveyed to M/I Schottenstein Homes, Inc. by deed of record in Official Record 361, Page 1271, along the south line of Lot Number 231 as shown upon the plat of Mariners Cove, Section 6 of record in Plat Cabinet 2, Slides 8 through 8B, along a portion of the south line of Lot No. 230 as shown upon said plat of Mariners Cove, Section 6, along a portion of the north line of said Farm Lot 9 and along a portion of the south line of said Farm Lot 8 a distance of 995.74 feet to a point;

thence S 04° 13' 29" W crossing a portion of said 110 acre tract a distance of 925.62 feet to a point;

thence S 85° 46' 00" E crossing a portion of said 110 acre tract a distance of 443.04 feet to a point;

thence S 04° 14' 00" W crossing a portion of said 110 acre tract a distance of 1057.37 feet to a point;

thence N 85° 46' 00" W crossing a portion of said 110 acre tract a distance of 231.92 feet to a point;

thence S 04° 13' 11" W crossing a portion of said 110 acre tract a distance of 463.35 feet to a point in the south line of said 110 acre tract, in the north line of said 99.164 acre tract, in the south line of said Farm Lot 9 and in the north line of said Farm Lot 12;

thence N 85° 46' 48" W along a portion of the south line of said 110 acre tract, along a portion of the north line of said 99.164 acre tract, along a portion of the south line of said Farm Lot 9 and along a portion of the north line of said Farm Lot 12 a distance of 1213.23 feet to the point of beginning;

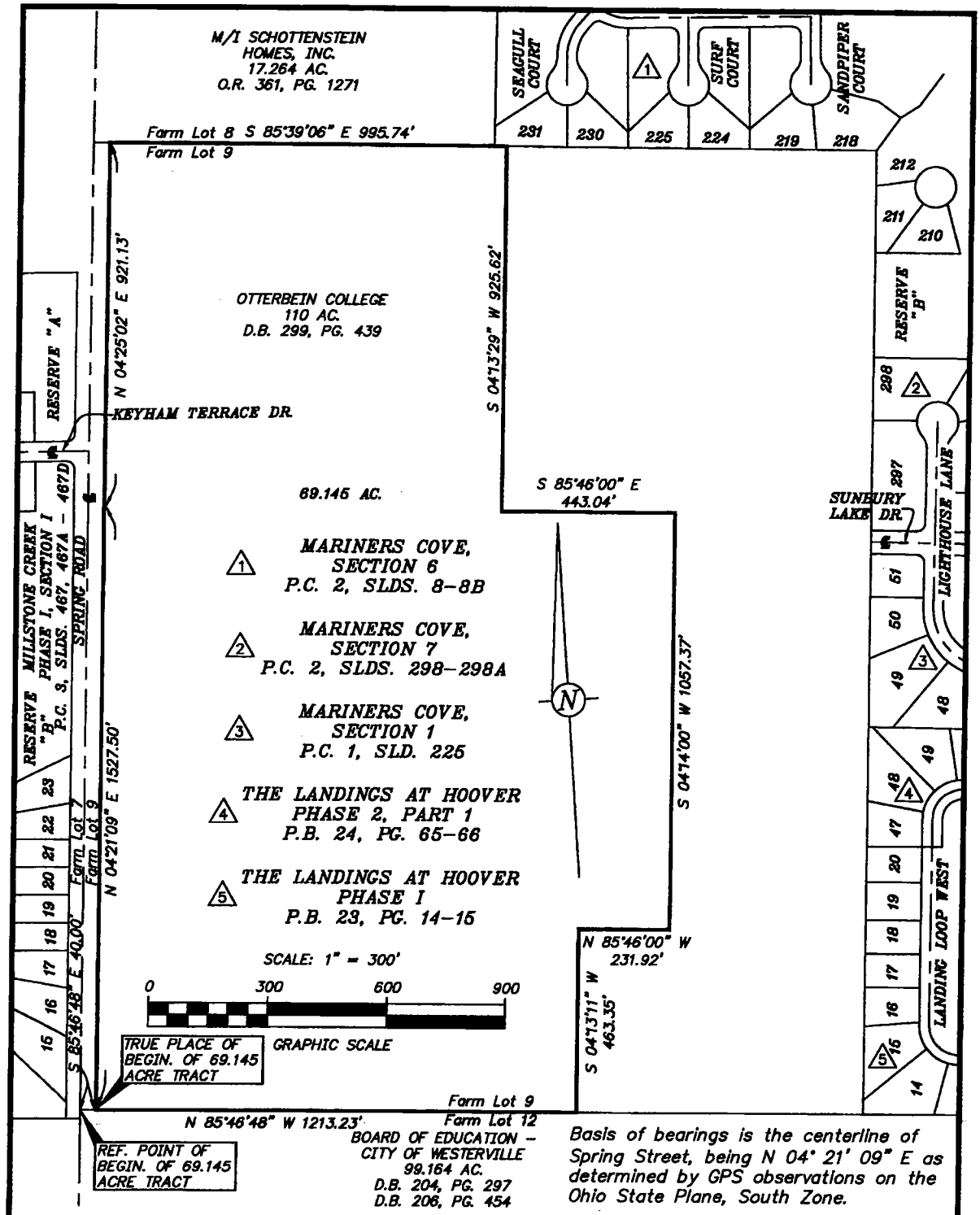
containing 69.145 acres of land, more or less, and subject to all easements and restrictions of record.

The above description was prepared by Jay R. Miller, Ohio Surveyor No. 8061, of C.F. Bird & R.J. Bull, Inc., Consulting Engineers & Surveyors, Columbus, Ohio, from best an actual field survey conducted under his supervision in November, 2006 and from best available Court House information in February, 2007. Basis of bearings is the centerline of Spring Street, being N 04° 21' 09" E as determined by GPS observations on the Ohio State Plane, South Zone.

J. RAYMOND MILLER REGISTERED PROFESSIONAL SURVEYOR

Jay R. Miller ~ Ohio Surveyor No. 8061

06-100/EPAPhaseIDesc.doc



Basis of bearings is the centerline of Spring Street, being N 04° 21' 09" E as determined by GPS observations on the Ohio State Plane, South Zone.

Rev. May 1, 2007
February 28, 2007

BOUNDARY EXHIBIT OF A 69.145 ACRE TRACT OF LAND ALONG THE EAST SIDE OF SPRING STREET, NORTH OF COUNTY LINE ROAD, WESTERVILLE, OHIO

STATE OF OHIO
J. RAYMOND MILLER
S-8061
REGISTERED
PROFESSIONAL SURVEYOR

C.F. Bird & R.J. Bull, Inc.
2875 W. Dublin-Granville Rd.
Columbus, Ohio 43235

By Jay R. Miller ~ Ohio Surveyor No. 8061

\Exhibits\EPA Bndy.dwg (Phase I)

06-100

Rev. May 1, 2007
February 28, 2007

DESCRIPTION OF A 39.818 ACRE TRACT
EAST OF SPRING ROAD,
NORTH OF COUNTY LINE ROAD,
WESTERVILLE, OHIO

Situate in the State of Ohio, County of Delaware, City of Westerville in Farm Lot 9, Section 4, Township 3, Range 17, United States Military Lands and being a 39.818 acre tract out of a 110 acre tract of land conveyed to Otterbein College by deed of record in Deed Book 299, Pg. 439, all records referencing Recorder's Office, Delaware County, Ohio, said tract bounded and described as follows:

Beginning, for reference, at a point in the centerline of Spring Road, at the southwest corner of said 110 acre tract, at the northwest corner of a 99.164 acre tract of land conveyed to Board of Education – City of Westerville by deeds of record in Deed Book 204, Page 297 and Deed Book 206, Page 454, at the southwest corner of said Farm Lot 9, at the northwest corner of Farm Lot 12 and in the east line of Farm Lot 7;

thence S 85° 46' 48" E along a portion of the south line of said 110 acre tract, along a portion of the north line of said 99.164 acre tract, along a portion of the south line of said Farm Lot 9 and along a portion of the north line of said Farm Lot 12 a distance of 1253.23 feet to a point at the true place of beginning of the tract herein intended to be described;

thence N 04° 13' 11" E crossing a portion of said 110 acre tract a distance of 463.35 feet to a point;

thence S 85° 46' 00" E crossing a portion of said 110 acre tract a distance of 231.92 feet to a point;

thence N 04° 14' 00" E crossing a portion of said 110 acre tract a distance of 1057.37 feet to a point;

thence N 85° 46' 00" W crossing a portion of said 110 acre tract a distance of 443.04 feet to a point;

thence N 04° 13' 29" E crossing a portion of said 110 acre tract a distance of 925.62 feet to a point in the north line of said 110 acre tract, in the north line of said Farm Lot 9, in the south line of said Farm Lot 8 and in the south line of Lot Number 230 as shown upon the plat of Mariners Cove, Section 6 of record in Plat Cabinet 2, Slides 8 through 8B;

thence S 85° 39' 06" E along a portion of the north line of said 110 acre tract, along a portion of the north line of said Farm Lot 9, along a portion of the south line of said Farm Lot 8, along a portion of the south line of said Lot No. 230 and along the south lines of Lot Numbers 225, 224, 219 and 218 as shown upon said plat of Mariners Cove, Section 6 a distance of 940.71 feet to a point at the northeast corner of said 110 acre tract at the southeast corner of said Lot No. 218 and at the northwest corner of Lot No. 212 as shown upon said plat of Mariners Cove, Section 6;

thence S 04° 13' 11" W along an east line of said 110 acre tract, along the west line of said Lot No. 212, along the west lines of Lot No. 211 and Reserve "B" as shown upon said plat of Mariners Cove, Section 6, along Lot Nos. 298 and 297 as shown upon the plat of Mariners Cove, Section 7, of record in Plat Cabinet 2, Slides 298 & 298A, along the west line of Sunbury Lake Drive as shown upon the plat of Mariners Cove, Section 1 of record in Plat Cabinet 1, Slide 225, along the west lines of Lot Nos. 51, 50 and 49 as shown upon said plat of Mariners Cove, Section 1, along the west lines of Lot Nos. 48 and 47 as shown upon the plat of The Landings at Hoover, Phase 2, Part 1 of record in Plat Book 24, Pages 65 and 66, along the west lines of Lot Nos. 20, 19, 18, 17, 16, 15 and 14 as shown upon the plat of The Landings at Hoover, Phase I of record in Plat Book 23, Pages 14 and 15 distance of 2444.28 feet to a point at the southeast corner of said 110 acre tract, at the southwest corner of said Lot No. 14, in the south line of said Farm Lot 9 and in the north line of said Farm Lot 12 and in the north line of said 99.164 acre tract;

thence N 85° 46' 48" W along a portion of the south line of said 110 acre tract, along a portion of the north line of said 99.164 acre tract, along a portion of the south line of said Farm Lot 9 and along a portion of the north line of said Farm Lot 12 a distance of 729.93 feet to the point of beginning;

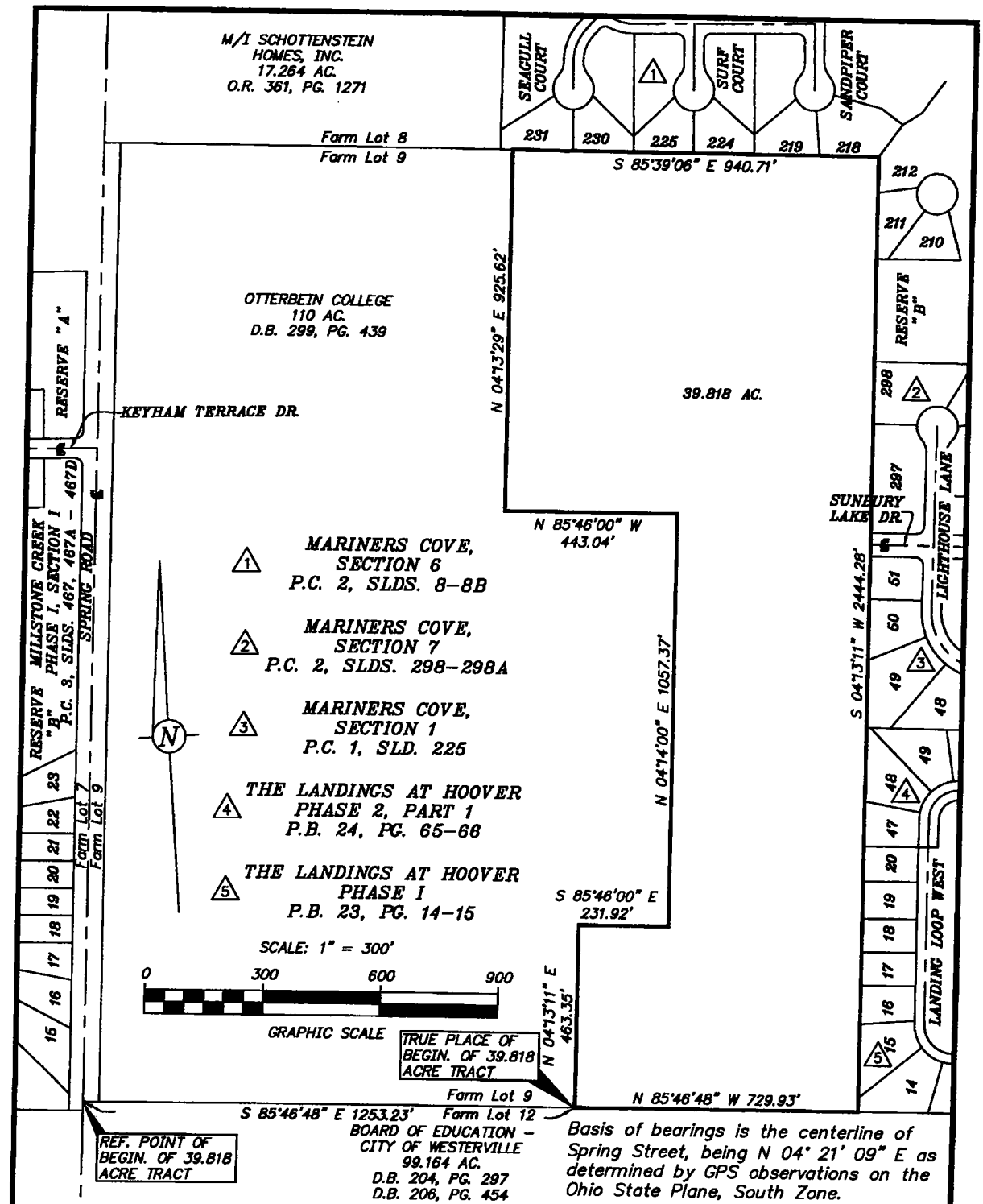
containing 39.818 acres of land, more or less, and subject to all easements and restrictions of record.

The above description was prepared by Jay R. Miller, Ohio Surveyor No. 8061, of C.F. Bird & R.J. Bull, Inc., Consulting Engineers & Surveyors, Columbus, Ohio, from best an actual field survey conducted under his supervision in November, 2006 and from best available Court House information in February, 2007. Basis of bearings is the centerline of Spring Street, being N 04° 21' 09" E as determined by GPS observations on the Ohio State Plane, South Zone.

STATE OF OHIO
JAY R. MILLER
8061
REGISTERED
PROFESSIONAL SURVEYOR

Jay R. Miller ~ Ohio Surveyor No. 8061

06-100/EPAPhaseIIDesc.doc



Basis of bearings is the centerline of Spring Street, being N 04° 21' 09" E as determined by GPS observations on the Ohio State Plane, South Zone.

Rev. May 1, 2007
February 28, 2007

BOUNDARY EXHIBIT OF A 39.818 ACRE TRACT OF LAND ALONG THE EAST SIDE OF SPRING STREET, NORTH OF COUNTY LINE ROAD, WESTERVILLE, OHIO

STATE OF OHIO
J. RAYMOND MILLER
S-8061
REGISTERED
PROFESSIONAL SURVEYOR

C.F. Bird & R.J. Bull, Inc.
2875 W. Dublin-Granville Rd.
Columbus, Ohio 43235

By Jay R. Miller
Jay R. Miller ~ Ohio Surveyor No. 8061

\Exhibits\EPA Bndy.dwg (Phase II)

06-100

APPENDIX B.3

Feb. 20, 2007 Westerville City Council Meeting Minutes on Changing the Zoning to Planned Neighborhood Development (PND)

MINUTES
REGULAR SESSION
WESTERVILLE CITY COUNCIL
Council Chambers, February 20, 2007, 7:00 p.m.

1. ***CALL TO ORDER***

2. ***ROLL CALL***
Council met in regular session February 20, 2007 with Council Members, Damon Wetterauer, Jr., Craig Treneff, Kathy Cocuzzi, Anne Gonzales, William Highfield, Michael Heyeck, Diane Fosselman, City Manager G. David Lindimore and Staff, Law Director Bruce E. Bailey and Clerk of Council Mary Johnston present.

3. ***INVOCATION***
The invocation was given by Rev. Danny Lambert of First Baptist Church.

4. ***PLEDGE OF ALLEGIANCE***
The Pledge of Allegiance was recited.

5. ***MINUTES***
The Minutes of the February 6, 2007 Regular Meeting were presented for approval.

Mr. Highfield moved, Mrs. Cocuzzi seconded to approve the Minutes as provided.

Yeas: Mrs. Cocuzzi, Mayor Fosselman, Mrs. Gonzales, Mr. Treneff, Mr. Highfield, Chairman Wetterauer

Nays: None

Abstention: Mr. Heyeck due to an excused absence

The motion carried.

6. ***CITY MANAGER'S REPORT***
Mr. Lindimore conducted the Oath of Office for firefighter Christopher McConnell. Frank Wiseman, Public Service Director, asked residents to clean the curb inlets on city streets to prevent flooding from melting snow or to contact the Public Service Department if assistance is needed to clear the snow.

7. ***MAYOR'S REPORT***
Mayor Fosselman presented Certificates of Recognition to the MindStorm Troopers who recently won the coveted first place Directors Award at the FIRST Lego League State Tournament at Wright State University and will represent Ohio at the FLL World Tournament in Atlanta.

Mayor Fosselman encouraged residents to write letters to the Troops serving in the armed forces. There are collection boxes for the letters at City Hall, Fire Station on Main Street, Community Center and several senior housing facilities.

8. ***REPORT FROM THE CENTRAL OHIO MUNICIPAL ALLIANCE REPRESENTATIVE***
Mr. Treneff stated there is nothing new to report in the new session of the General Assembly other than Eminent Domain. Leadership in both houses are going support a constitutional amendment to restrict home rule on Eminent Domain matters and amendments in a companion bill to the Eminent Domain statutes to make them more restrictive than the recent Ohio Supreme Court decision in the Norwood case. Mr. Treneff stated there is nothing new on the Local Government Fund situation and are waiting for the Governor's

budget which is due in March. Mr. Treneff stated COMA has changed lobbying groups and will now work with Government Advantage Group. Mr. Treneff stated COMA is planning a quarterly meeting and will announce the meeting date when determined.

9. ***CITIZENS COMMENTS***
None.

10. ***LEGISLATION***
a) ***RESOLUTION NO. 07-05, To Appoint City of Westerville Representatives to the Mid-Ohio Regional Planning Commission"*** was presented.
Mr. Lindimore stated Mid Ohio Regional Planning Commission required these appointments be approved by City Council. A copy of this Resolution will be provided to MORPC showing the appointments were authorized by City Council.
Mr. Treneff moved, Mrs. Gonzales seconded for the adoption of Resolution No. 07-05.

Yeas: Mr. Heyeck, Mayor Fosselman, Mrs. Gonzales, Mr. Treneff, Mr. Highfield, Mrs. Cocuzzi, Chairman Wetterauer

Nays: None

The motion carried.

b) ***ORDINANCE NO. 06-36(B), "To Provide for the Supplemental Appropriation of Funds from the Electric Fund to Cover Expenses for the Substation #3 Project"*** was read for the third time.
Andy Boatright, Electric Utility Manager, stated this Ordinance is to appropriate funds for the Substation #3 project. With the substation construction bidding now complete, the costs for both the Substation #3 construction and the Substation #1 modifications should be firm and include a 10% contingency. The bald eagle situation may cause construction delays resulting in additional mobilization/demobilization costs for the project. The Construction Service costs and AEP-related costs are estimated: Construction Services, $300,000; Substation #3 Construction, $5,887,000; Substation #1 Modifications, $370,000; and AEP Facilities Study Modifications, $1,954,000. Total Estimated Cost of Project is $8,511,000.

Mayor Fosselman requested staff keep Council up to date on the bald eagle situation.

Yeas: Mayor Fosselman, Mrs. Gonzales, Mr. Treneff, Mr. Highfield, Mrs. Cocuzzi, Chairman Wetterauer

Nays: None

Abstained: Mr. Heyeck due to a conflict of interest

The motion carried.

c) ***ORDINANCE NO. 06-46, "To Amend Part Eleven of the Codified Ordinances and the Zoning Map of the City of Westerville, Rezoning a 110.00± tract of land from RR, Rural Residential to PND, Planned Neighborhood District and to Approve the Preliminary Development Plan and Development Standards Text for a College Equine Facility (Otterbein College) located on the east side of Spring Road, north of Heritage Middle School"*** was read for the third time.
Rich Kight, Planning Administrator, stated there has been a change to the Ordinance since First Reading that dealt with the environmental issues on the tract and installation of the water and sewer lines. Council received the proposed changes prior to the meeting.

At this time Chairman Wetterauer declared the Public Hearing open. Mrs. Johnston administered the Oath to those who wished to testify.

Speaking in Favor:
Janet Davis, Westerville Area Chamber of Commerce Executive Director, stated Westerville has a very unique opportunity to put the city on the map one more time. With this unique facility it will put the city on the map because there are very few urban equine science programs in the country. There are very few equine science programs with small liberal arts colleges in the country. This facility will bring visitors to the city and increase economic development. The college will have horse lessons which bring people into the community. From a parent perspective, this facility is very convenient for horse lessons and a joy to be able to see the horses on the paddock. The students in the Westerville Schools can partner with Otterbein College and get experience through an equine science program with college students. From an alumni perspective, it makes Otterbein alumni proud of the college and to know it continues to expand in the city is that much more supportive of the college.

Chris Warner, Assistant Superintendent of Westerville City Schools, stated the district is very receptive to the project and the programs available to the middle and high school students. The school district looks forward to the community partnership with Otterbein College that wil mutually beneficial to both schools.

Speaking in Opposition:
None

There being no further testimony, Chairman Wetterauer declared the Public Hearing closed.

Mr. Treneff asked Mr. Bailey to explain the changes made to the Ordinance regarding environmental protection. Mr. Bailey explained the city has a moral obligation to make sure the property is safe for the persons who use the property but also adjoining properties. The city hired a special counsel to deal with the environmental issues who also worked with Otterbein's environmental counsel. What needed to be done was to have this property cleaned to the highest standard that exists by the Ohio EPA regulations. These regulations are spelled out in the Ordinance. Mr. Treneff stated this is a very creative use of a site that presented planning problems and is very happy Otterbein College can bring their program into the city. Mr. Treneff stated he appreciates the cooperation of the college with the community. Mr. Treneff stated he felt this development will enhance property values in the area. Mr. Treneff asked Otterbein College to keep in mind the residents were there first. Mr. Treneff stated he is comfortable with the plan. Mr. Treneff thanked Mr. Bailey and his staff for their work on the environmental issues.

Mayor Fosselman asked staff to review the utilities and sidewalks installation. Mr. Craven stated the Ordinance contains provisions pertaining to water line, sidewalk, drainage and sanitary sewer installation and extensions.

Mrs. Gonzales stated previously her concerns were how the environmental issues were going to be addressed. Mrs. Gonzales stated she is now very much in support of this application and feels very comfortable that Otterbein College will address those environmental concerns. Mrs. Gonzales stated she will be watching it very closely and urged the residents to contact her or City Council with any concerns.

Mrs. Cocuzzi commended Otterbein College for the creative use of this property and for embracing the neighbors prior to bringing this issue forward. Mrs. Cocuzzi stated she hopes the door is always open at Otterbein College for the cooperation and communication to continue and address any concerns that might develop.

Mr. Heyeck moved, Mayor Fosselman seconded for the adoption of Ordinance No. 06-46.

Yeas: Mrs. Gonzales, Mr. Treneff, Mr. Highfield, Mrs. Cocuzzi, Mr. Heyeck, Mayor Fosselman, Chairman Wetterauer

Nays: None

The motion carried.

d) ***ORDINANCE NO. 07-04, "To Provide for the Supplemental Appropriation of Funds for the Purpose of Acquiring Information Technology Computer Equipment, Related Professional Services and Other Related Appurtenances; To Authorize the City Manager to Enter into a Purchase Contract and Agreement without Formal Bidding and Advertising; and to Declare an Emergency"*** was read for the second time.
Todd Jackson, Information Systems Manager, stated detailed analysis of the network in Spring 2006 identified less than 36% of the network hardware would reach end of life and ineligible for maintenance/support as of January 2007 with an additional 30% reaching end of life or non-upgradeable by 2008. This purchase will complete the network backbone upgrade replacing old and end of life equipment located in every city facility. The objectives of the upgrade are to improve network security and redundancy, reduce single points of failure, and enable the city to adopt new technology as needed, while helping control maintenance and support costs. The plan calls for using existing equipment where possible, to leverage previous investment. Contract Award Amount: $419,885.00.

Mayor Fosselman moved, Mrs. Gonzales seconded for the suspension of the rules for the required three readings.

Yeas: Mr. Treneff, Mr. Highfield, Mrs. Cocuzzi, Mr. Heyeck, Mayor Fosselman, Mrs. Gonzales, Chairman Wetterauer

Nays: None

The motion carried.

Mrs. Cocuzzi moved, Mrs. Gonzales seconded for the adoption of Ordinance No. 07-04.

Yeas: Mr. Highfield, Mrs. Cocuzzi, Mr. Heyeck, Mayor Fosselman, Mrs. Gonzales, Mr. Treneff, Chairman Wetterauer

Nays: None

The motion carried

e) ***ORDINANCE NO. 07-05, "To Implement Recommendations of the Hillsdowne Secondary Access Study by Authorizing and Directing the City Manager to Enter into and Perform Real Estate Contracts to Provide for the Purchase of the Properties Known as 650 and 672 Hillsdowne Road, Westerville, and to Declare an Emergency"*** was read for the second time.
Julie Colley, Economic Development Director, stated the intent of the secondary access road is to enhance access and circulation to the South State Street businesses and the Concord Square Office Park as well as deter commercial cut-through traffic in the adjacent residential neighborhood. At this time, the City has the

Mr. Heyeck stated staff needs to collaborate with other communities regarding regional economic development and is pleased to see the communication between communities. Mr. Heyeck stated he would like the city to consider another income tax issue on the ballot and to begin the campaign process earlier. Mr. Heyeck explained the need for him to abstain from voting on AEP issues since he is an employee of AEP. Mr. Heyeck encouraged residents to attend the Westerville Area Chamber of Commerce's Election Academy being held on March 8, 22 and 29, 2007.

Mayor Fosselman announced the city has no plans for the Hillsdowne Secondary Access study. Mayor Fosselman thanked Jane for bringing in valentines addressed to the troops.

Mrs. Cocuzzi congratulated the MindStorm Troopers for their accomplishments. Mrs. Cocuzzi thanked everyone who participated in the Community Bowl-a-thon. Mrs. Cocuzzi thanked the Public Service Department and Parks and Recreation Department for a great job removing snow.

Mrs. Gonzales thanked the Public Service Department for the snow removal. Mrs. Gonzales also thanked Parks and Recreation Department employee Eric Dicke for finding basketball practice locations for local teams. Mrs. Gonzales thanked Mayor Fosselman, Mr. Heyeck and Mr. Treneff for finding a good City Manager search consultant.

Mr. Highfield stated the Public Service Department has used 1,000 tons of salt this year and thanked the Service Department for an outstanding job removing snow. Mr. Highfield congratulated the MindStorm Troopers. Mr. Highfield asked residents to remove their vehicles from city streets so city crews can remove snow from the streets.

Mr. Treneff wished SNP reporter Angie Schmidt good luck with her new position in Youngstown.

Chairman Wetterauer stated the April 3rd regular meeting is being moved to April 10th. Chairman Wetterauer stated Council is in the process of posting the City Manager position and appreciated Mr. Lindimore staying on to help with the transition.

17. ***ADJOURNMENT INTO WORK SESSION.***
Mr. Highfield moved, Mrs. Cocuzzi seconded to adjourn into Work Session.

Yeas: Mr. Treneff, Mr. Highfield, Mrs. Cocuzzi, Mr. Heyeck, Mayor Fosselman, Mrs. Gonzales, Chairman Wetterauer

Nays: None

The motion carried.

The meeting adjourned at 8:48 p.m.

Mary J. Johnston, MMC
Clerk of Council

Damon E. Wetterauer, Jr.
Chair of Council

APPENDIX B.4

Chain-of-Title (2007)

Appendix B.4

Chain-of-Title (2007)

IN PROGRESS

APPENDIX C

Aerial Photographs

The EDR Aerial Photo Decade Package

Kilgore Farms
800 Tussic St.
Westerville, OH 43082

Inquiry Number: 1866786.5

February 28, 2007

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.

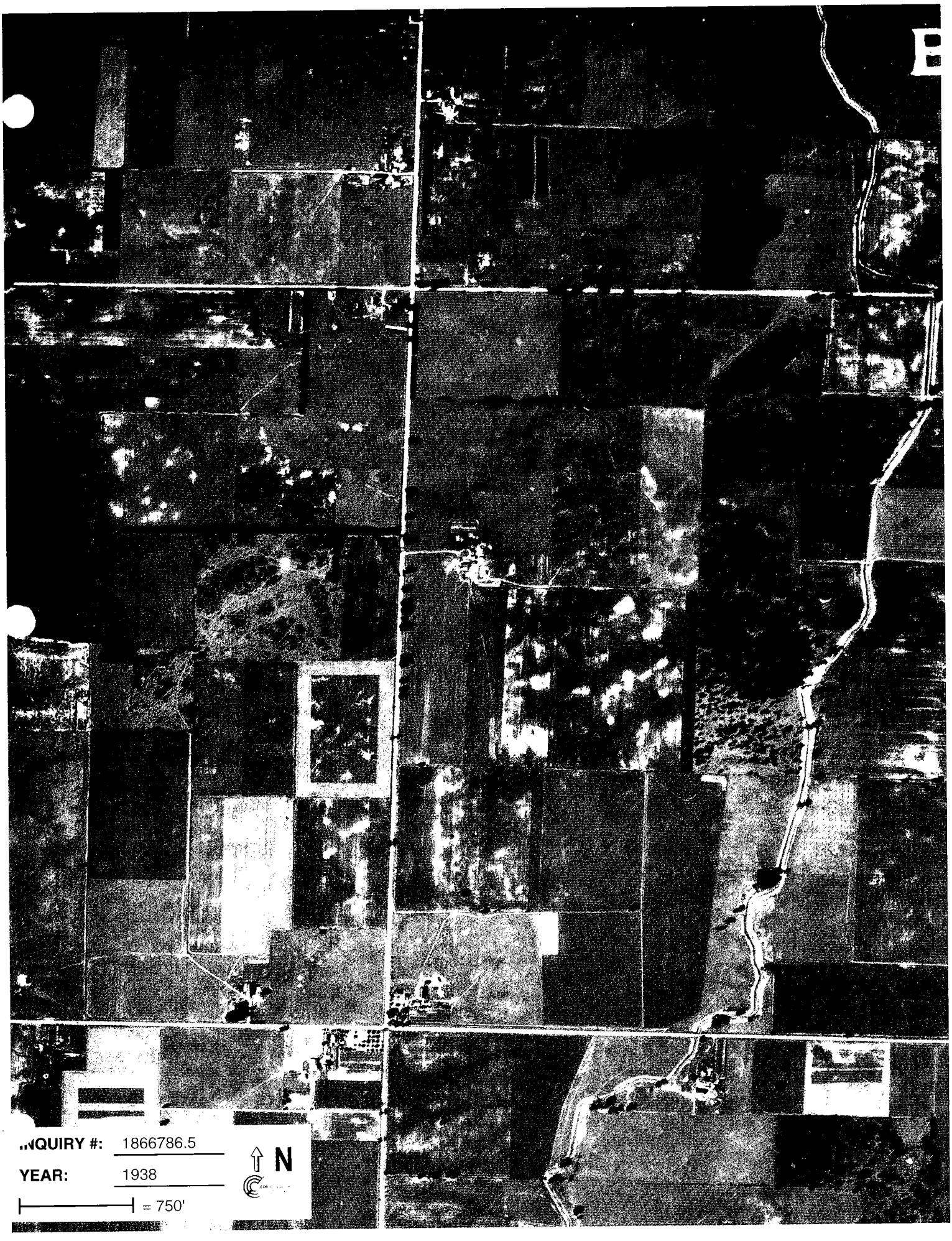
Date EDR Searched Historical Sources:

Aerial Photography February 28, 2007

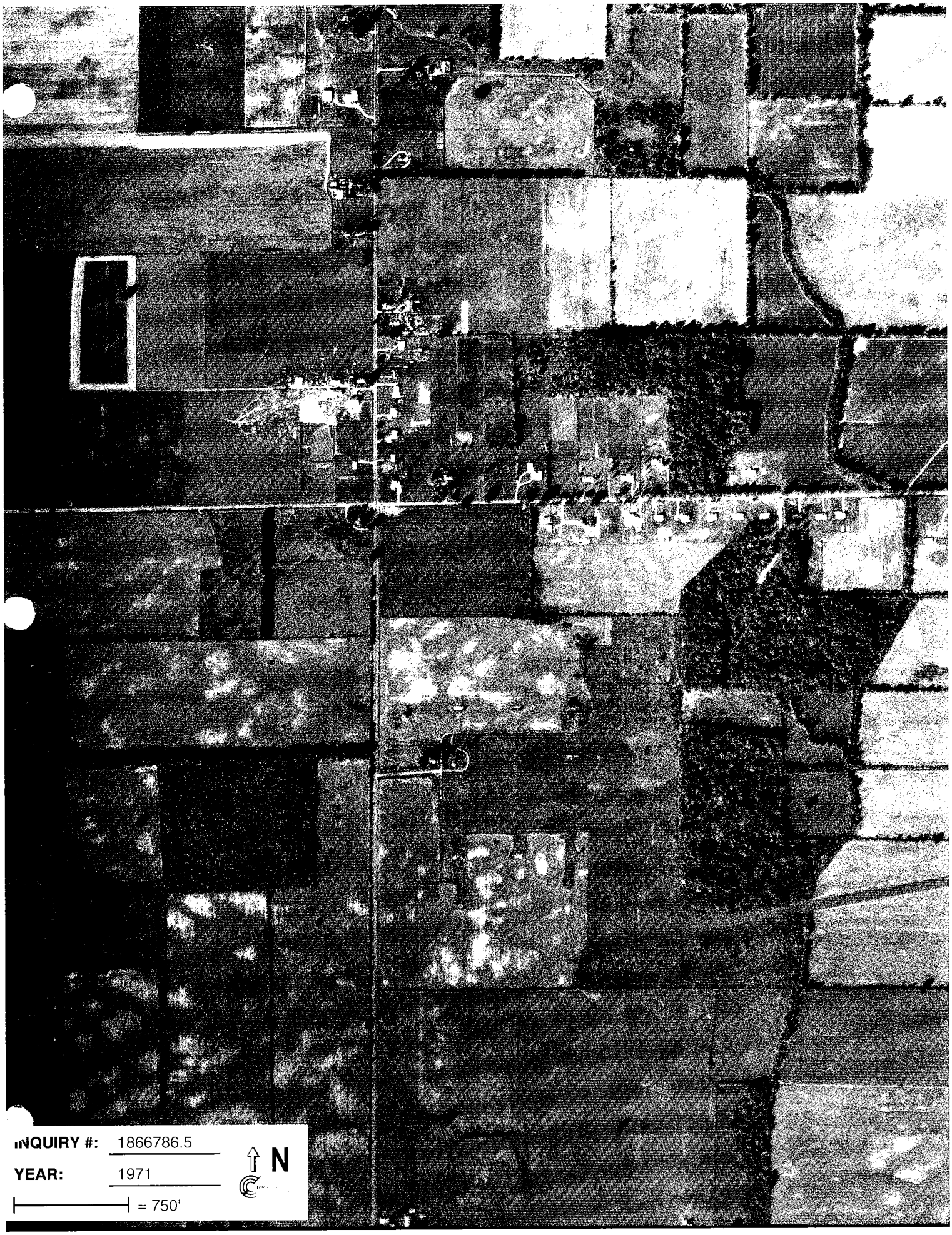
Target Property:

800 Tussic St.
Westerville, OH 43082

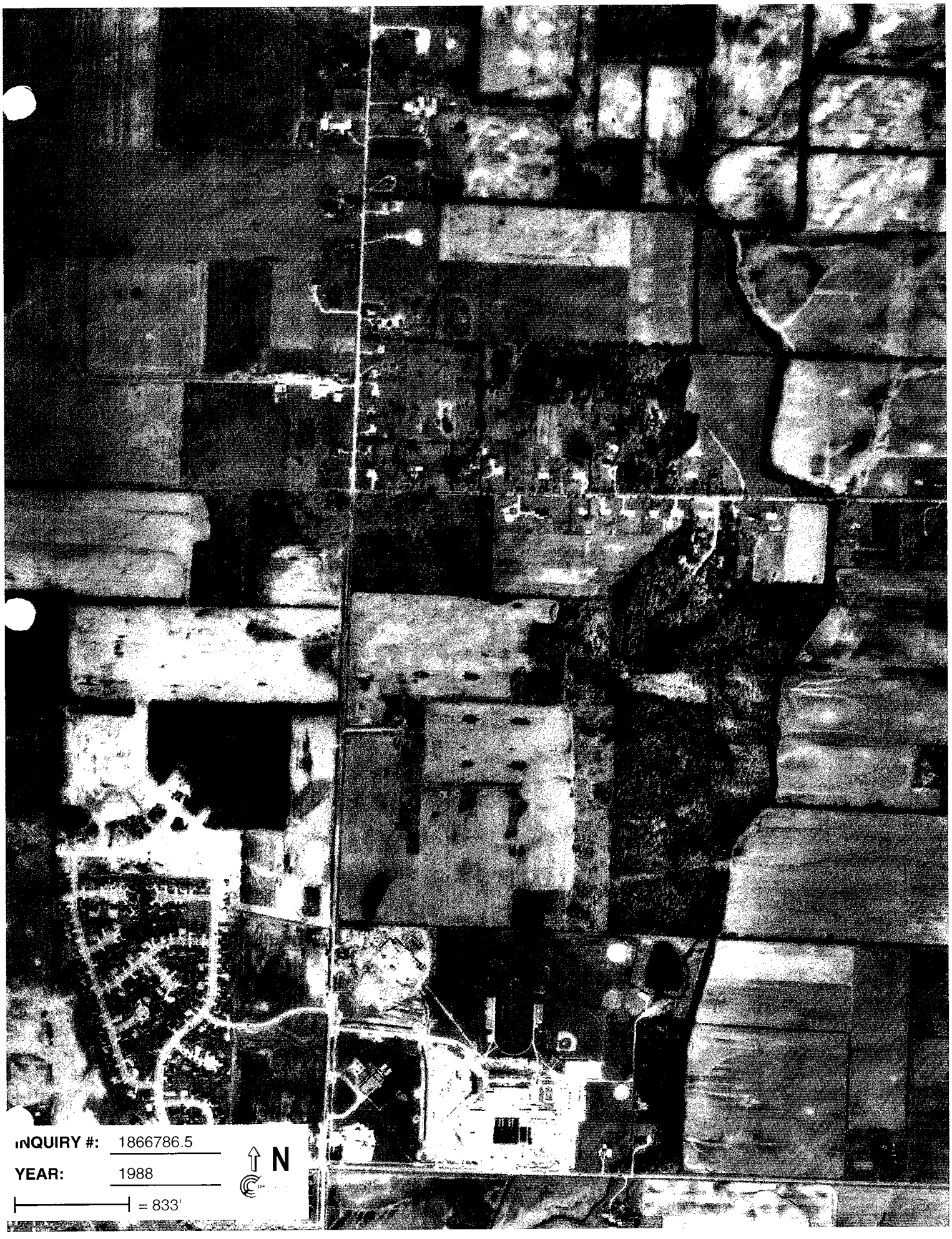
Year	*Scale*	*Details*	*Source*
1938	Aerial Photograph. Scale: 1"=750'	Panel #: 2440082-B8/Flight Date: August 13, 1938	EDR
1957	Aerial Photograph. Scale: 1"=750'	Panel #: 2440082-B8/Flight Date: June 21, 1957	EDR
1971	Aerial Photograph. Scale: 1"=750'	Panel #: 2440082-B8/Flight Date: October 01, 1971	EDR
1980	Aerial Photograph. Scale: 1"=833'	Panel #: 2440082-B8/Flight Date: October 01, 1980	EDR
1988	Aerial Photograph. Scale: 1"=833'	Panel #: 2440082-B8/Flight Date: April 09, 1988	EDR


INQUIRY #: 1866786.5
YEAR: 1938
= 750'
N


INQUIRY #: 1866786.5
YEAR: 1957
= 750'
N


INQUIRY #: 1866786.5
YEAR: 1971
= 750'
N


INQUIRY #: 1866786.5
YEAR: 1980
= 833'
N


INQUIRY #: 1866786.5
YEAR: 1988
= 833'
N

7032.0

OHIO DEPT. OF TRANSPORTATION
OFFICE OF AERIAL ENGINEERING
1602 WEST BROAD STREET
COLUMBUS, OHIO 43223
PH: (614) 275-1359 FAX: (614) 275-1673

TO: SCOTT BLANCHARD FAX: 410-3088
COMPANY: BRUNO + CALDWELL PROJ/PO# 36803960

SITE: WESTERVILLE -

AERIAL PHOTOGRAPHY RESEARCH LOG

DEL. CO.

DATE OF PHOTOGRAPH	FLIGHT	STRIP	NEGATIVE	SCALE FEET/INCH
3/00	10610	82/44	40/16	1000
12/94	9697	82/44	40/16	1000
9/92	8989	2	43	1000
12/89	8377	20	1180	1000
3/86	7920	20	17	1000
11/79	6788	23	16	1000
3/73	5171	7	205	1000
4/64	2772	9	559	1000
6/56	651	2	104	800

ROLL

PLEASE NOTE: ALL PRODUCTS ARE CUSTOM MADE PER YOUR ORDER AND REQUIRE A MINIMUM OF A 7 TO 10 WORKING DAYS PRODUCTION TIME SCHEDULE.
ALL PHOTOGRAPHY MUST BE PRE-PAID

IF YOU WISH TO ORDER, PLEASE CALL (614) 275-1369 OR FAX (614) 275-1673
PAGE 1 OF 1

Sent 2/27/07
RDM

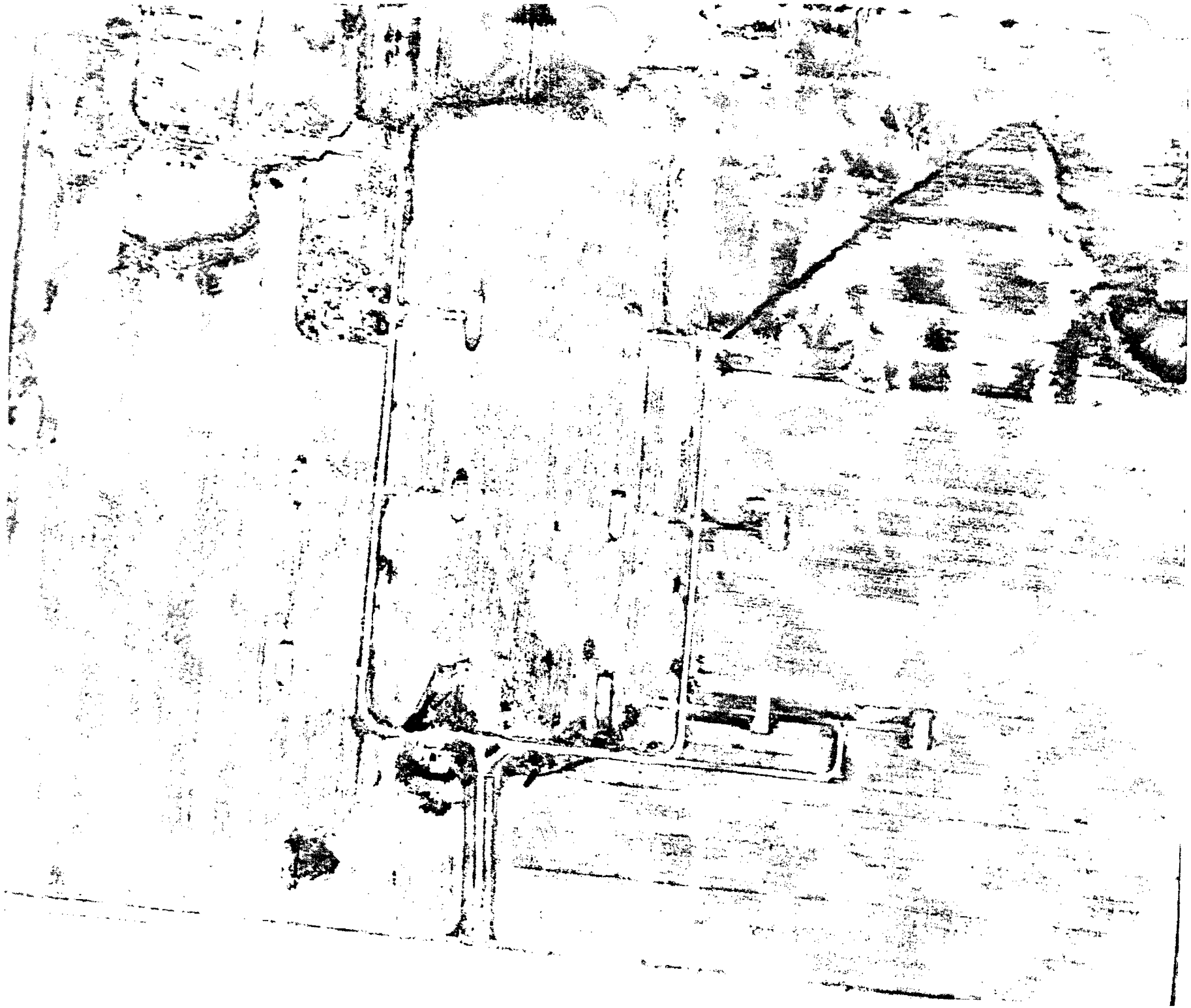
1938

1950

1956

1957

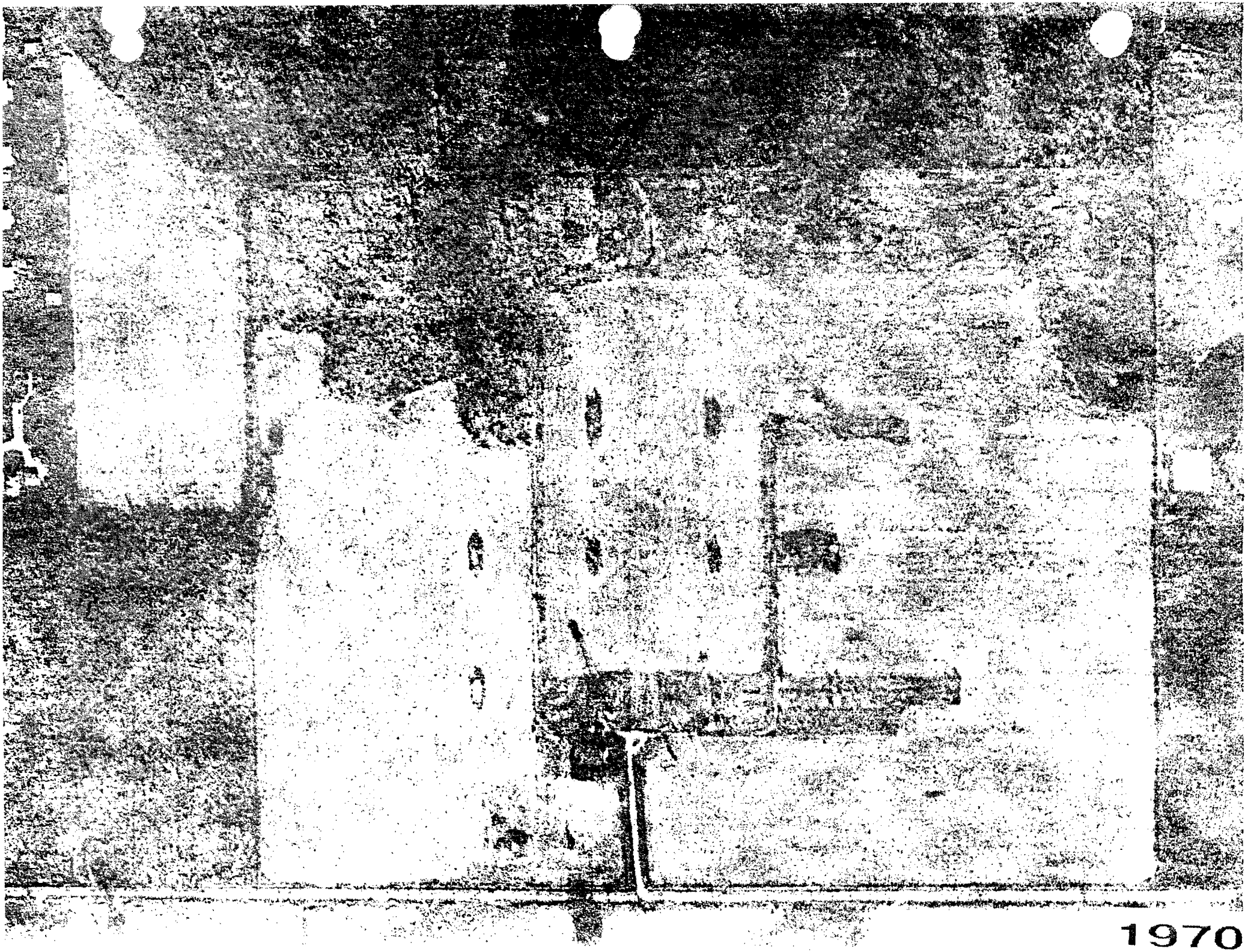
1962



APRIL 1964

JUNE 1964

1967



1970

Delaware County, Ohio
Historic Aerial Photography
2005

1,000 500 0 1,000 Feet

Note:
-Delaware SWCD makes no guaranty or warranty as to the accuracy of the information on this map.

±

Delaware County, Ohio
Historic Aerial Photography
2004

1,000 500 0 1,000 Feet

Note:
-Delaware SWCD makes no guaranty or warranty as to the accuracy of the information on this map.

±

Delaware County, Ohio
Historic Aerial Photography
2002

1,000 500 0 1,000 Feet

Note:
-Delaware SWCD makes no guaranty or warranty as to the accuracy of the information on this map.

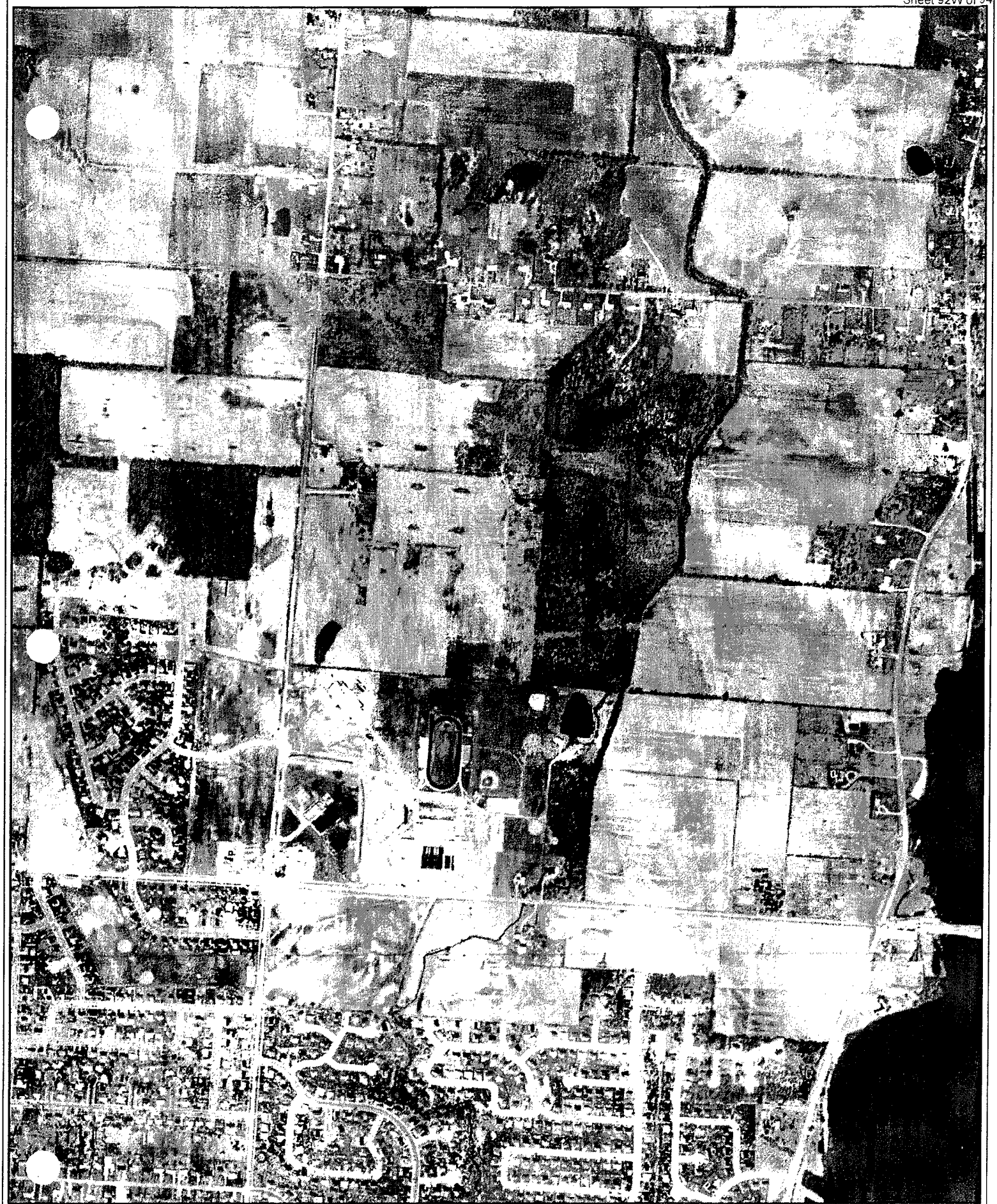
N

Delaware County, Ohio
Historic Aerial Photography
1997

1,000 500 0 1,000 Feet

Note:
-Delaware SWCD makes no guaranty or warranty as to the accuracy of the information on this map.

N

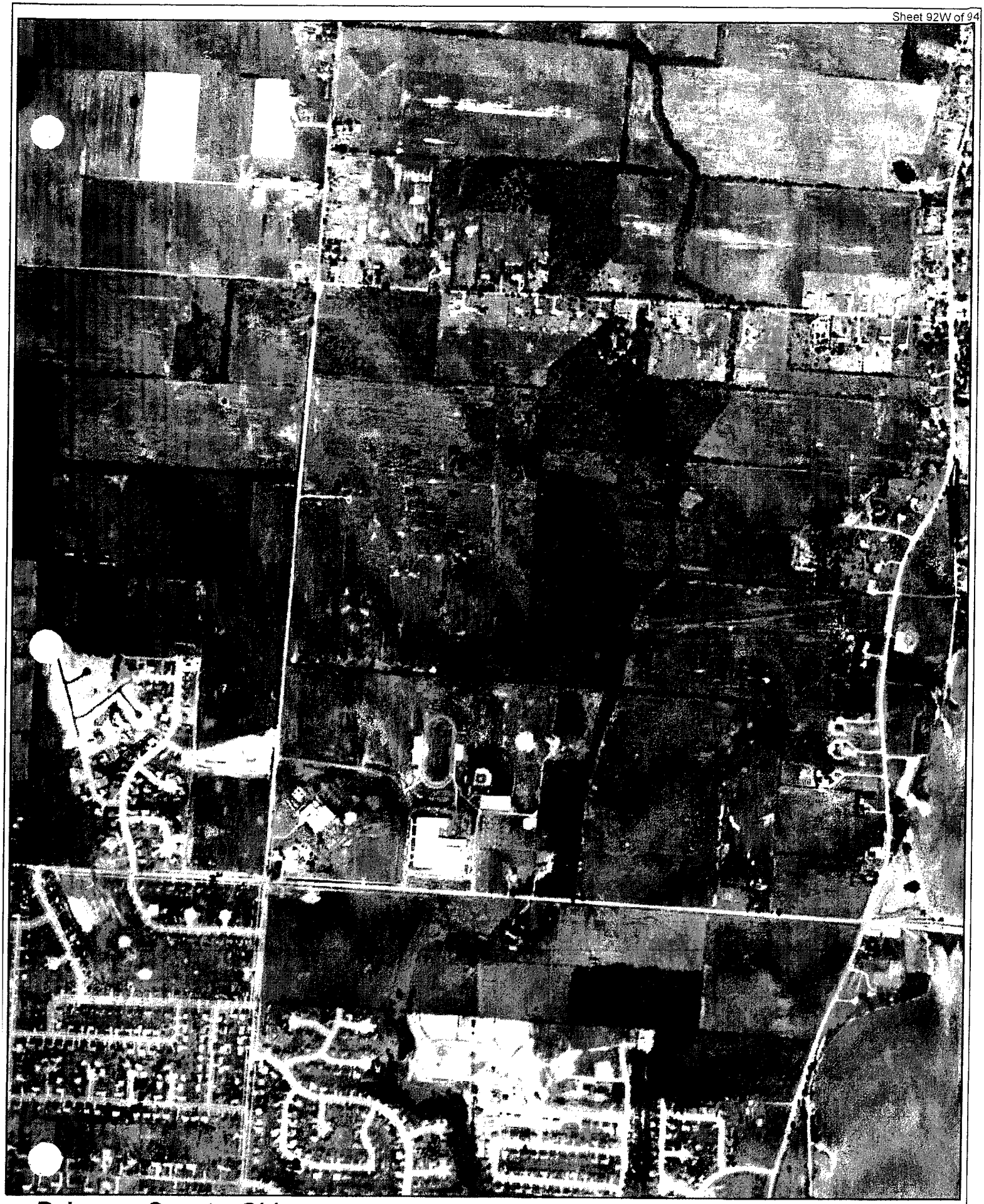


Delaware County, Ohio
Historic Aerial Photography
1988 - Color Infrared Photo

Aerial Photo not to scale
Match lines maybe distorted

Note:
-Delaware SWCD makes no guaranty or warranty as to the accuracy of the information on this map.

N



Delaware County, Ohio
Historic Aerial Photography
1980

Aerial Photo not to scale
Match lines maybe distorted

Note:
-Delaware SWCD makes no guaranty or warranty as to the accuracy of the information on this map.

N

Delaware County, Ohio
Historic Aerial Photography
1964

Aerial Photo not to scale
Match lines maybe distorted

Note:
-Delaware SWCD makes no guaranty or warranty as to the accuracy of the information on this map.

N

Delaware County, Ohio
Historic Aerial Photography
1957-58

Aerial Photo not to scale
Match lines maybe distorted

Note:
-Delaware SWCD makes no guaranty or warranty as to the accuracy of the information on this map.

N

Delaware County, Ohio
Historic Aerial Photography
1951

Aerial Photo not to scale
Match lines maybe distorted

Note:
-Delaware SWCD makes no guaranty or warranty as to the accuracy of the information on this map.

N

Delaware County, Ohio
Historic Aerial Photography
1939-1940

Aerial Photo not to scale
Match lines maybe distorted

Note:
-Delaware SWCD makes no guaranty or warranty as to the accuracy of the information on this map.

N

APPENDIX D

Historical Topographic Maps

EDR Historical Topographic Map Report

Kilgore Farms
800 Tussic St.
Westerville, OH 43082

Inquiry Number: 1866786.4

February 28, 2007

EDR® Environmental Data Resources Inc

The Standard in Environmental Risk Management Information

440 Wheelers Farms Rd
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR Historical Topographic Map Report

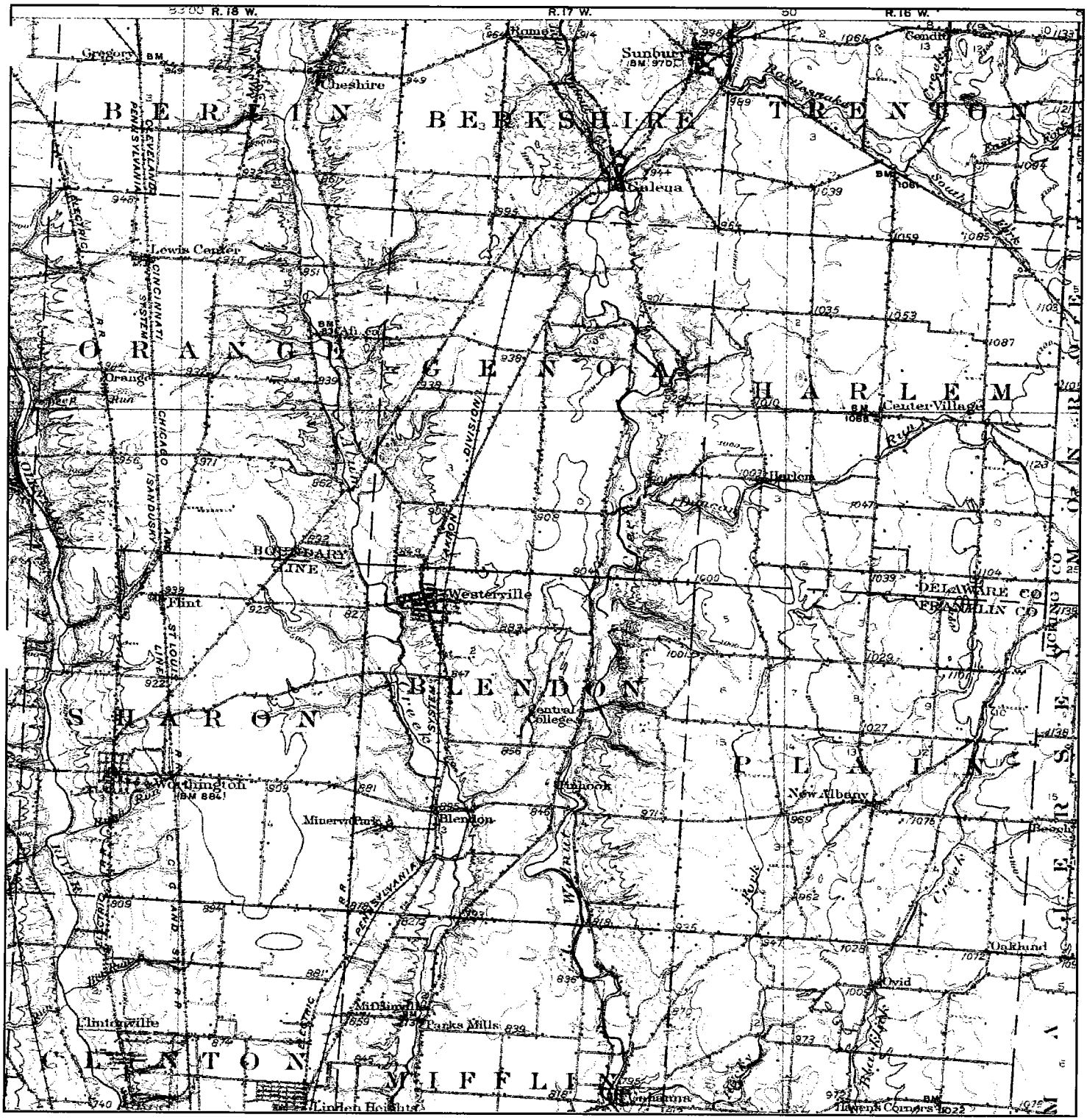
Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Historical Topographic Map

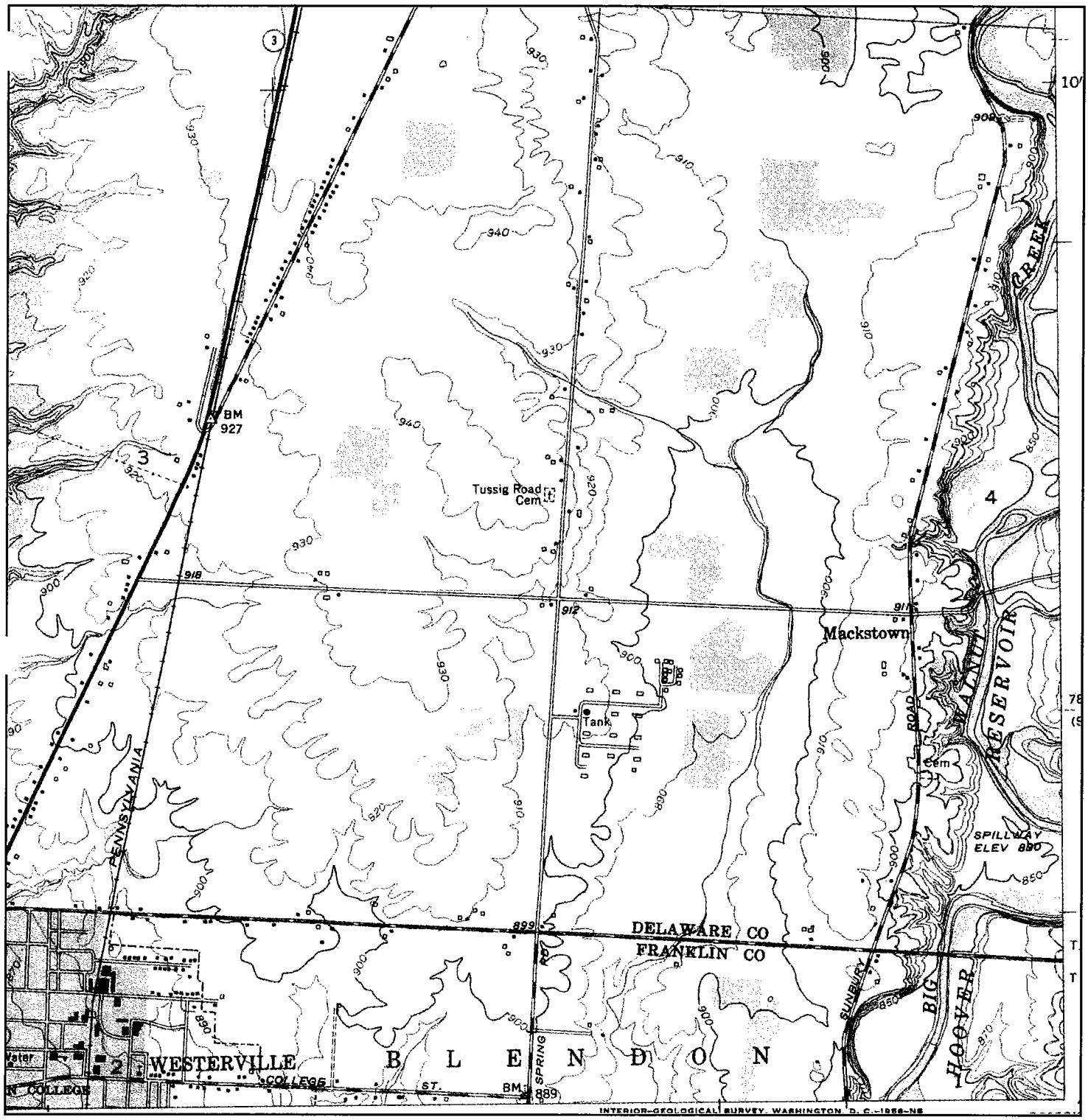
N	TARGET QUAD NAME: WESTERVILLE MAP YEAR: 1904 SERIES: 15 SCALE: 1:62500	SITE NAME: Kilgore Farms ADDRESS: 800 Tussic St. Westerville, OH 43082 LAT/LONG: 40.141 / 82.8992	CLIENT: Brown and Caldwell CONTACT: Scott Blanchard INQUIRY#: 1866786.4 RESEARCH DATE: 02/28/2007

Historical Topographic Map



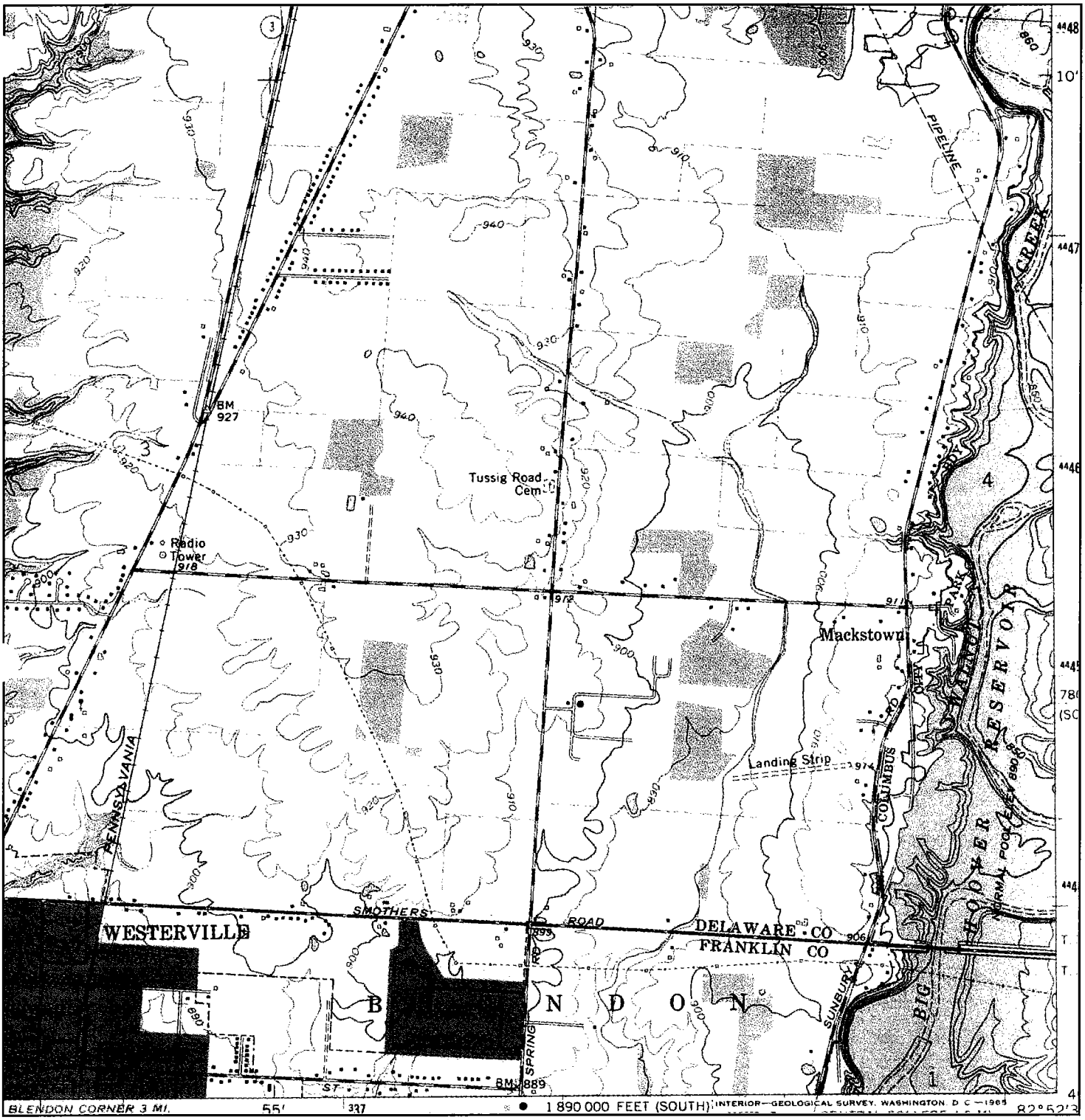
N	TARGET QUAD NAME: COLUMBUS MAP YEAR: 1912 SERIES: 30 SCALE: 1:125000	SITE NAME: Kilgore Farms ADDRESS: 800 Tussic St. Westerville, OH 43082 LAT/LONG: 40.141 / 82.8992	CLIENT: Brown and Caldwell CONTACT: Scott Blanchard INQUIRY#: 1866786.4 RESEARCH DATE: 02/28/2007

Historical Topographic Map



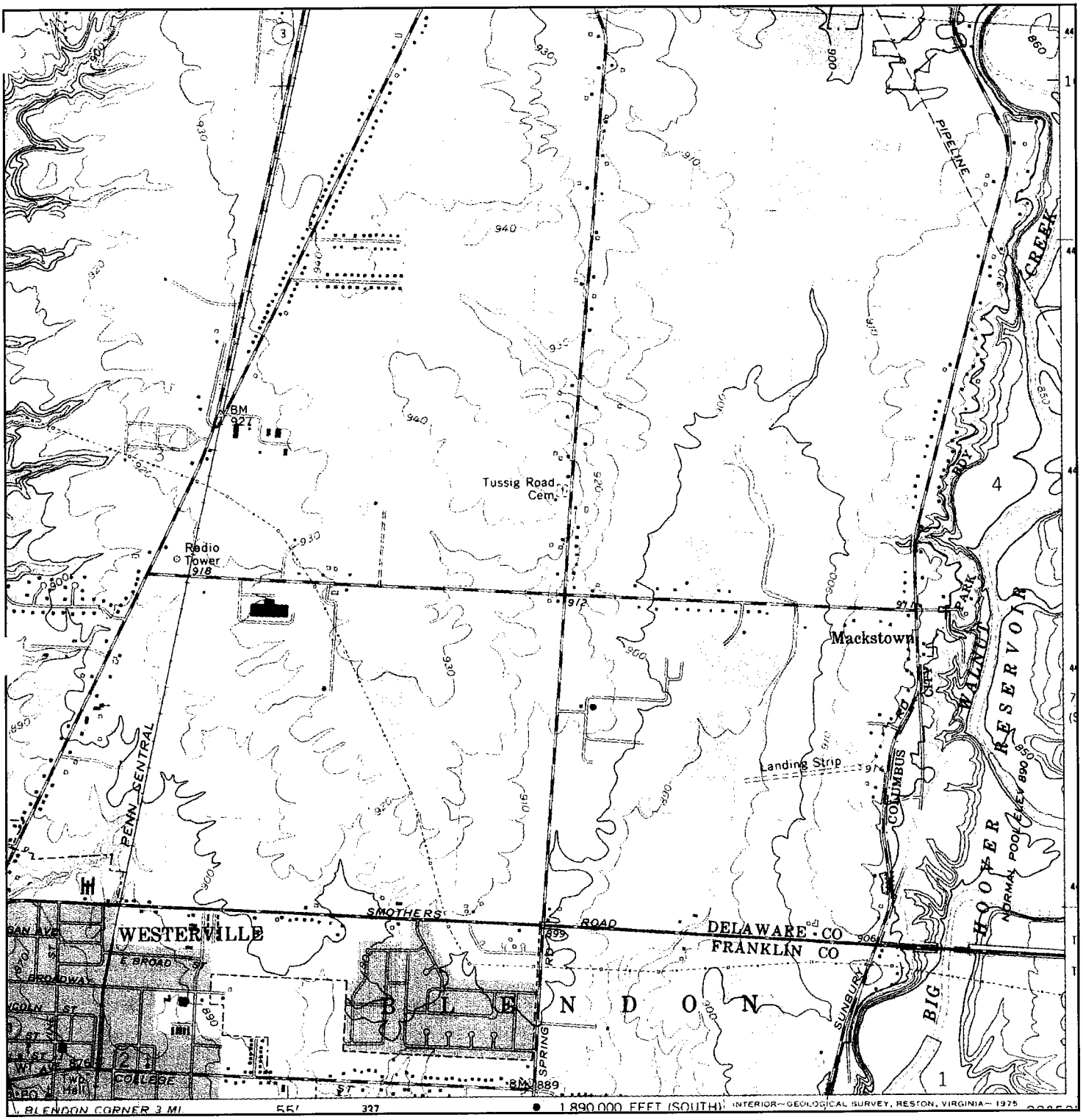
N	TARGET QUAD NAME: GALENA MAP YEAR: 1955 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Kilgore Farms ADDRESS: 800 Tussic St. Westerville, OH 43082 LAT/LONG: 40.141 / 82.8992	CLIENT: Brown and Caldwell CONTACT: Scott Blanchard INQUIRY#: 1866786.4 RESEARCH DATE: 02/28/2007

Historical Topographic Map



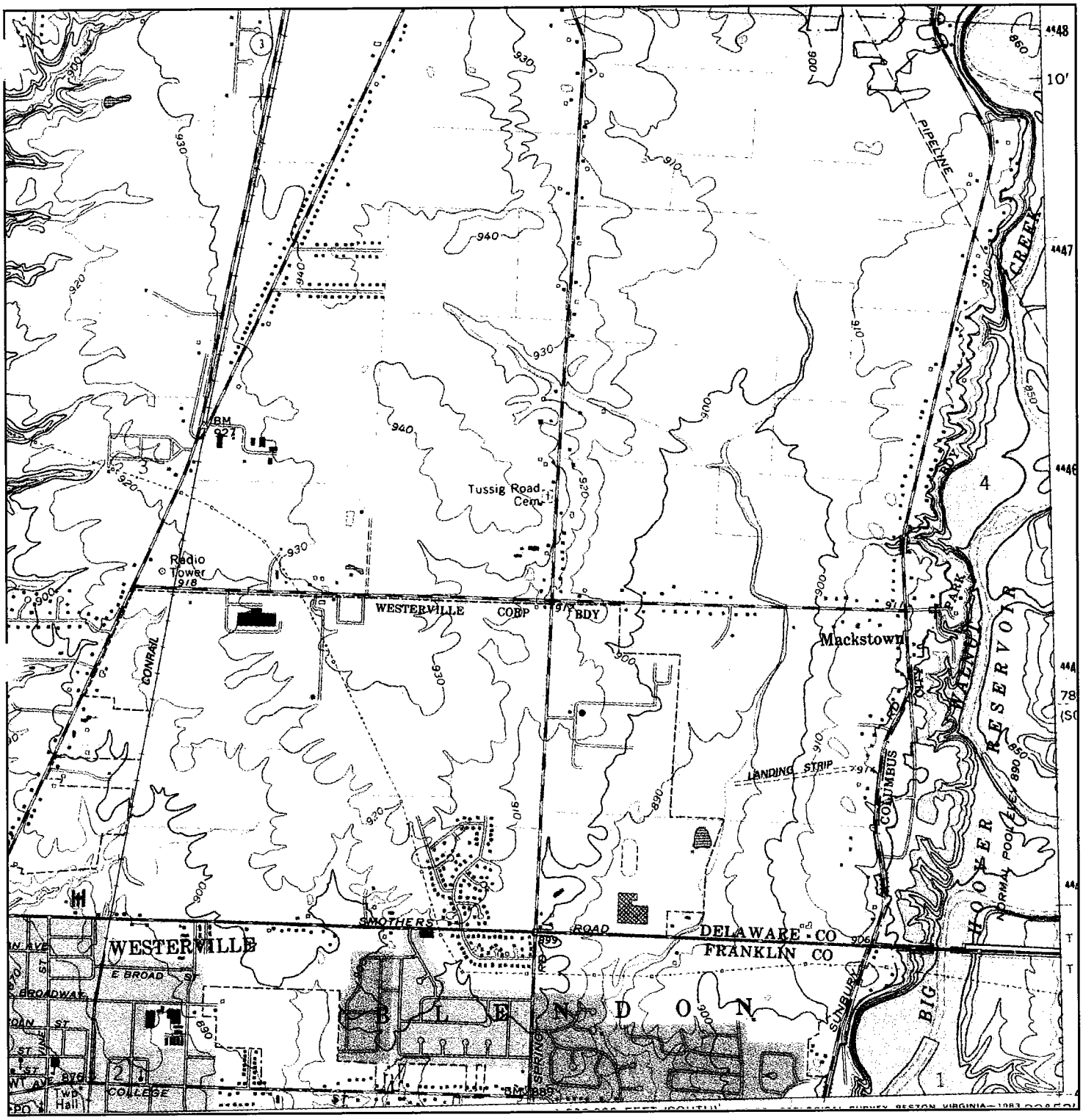
N			
	TARGET QUAD NAME: GALENA MAP YEAR: 1964 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Kilgore Farms ADDRESS: 800 Tussic St. Westerville, OH 43082 LAT/LONG: 40.141 / 82.8992	CLIENT: Brown and Caldwell CONTACT: Scott Blanchard INQUIRY#: 1866786.4 RESEARCH DATE: 02/28/2007

Historical Topographic Map



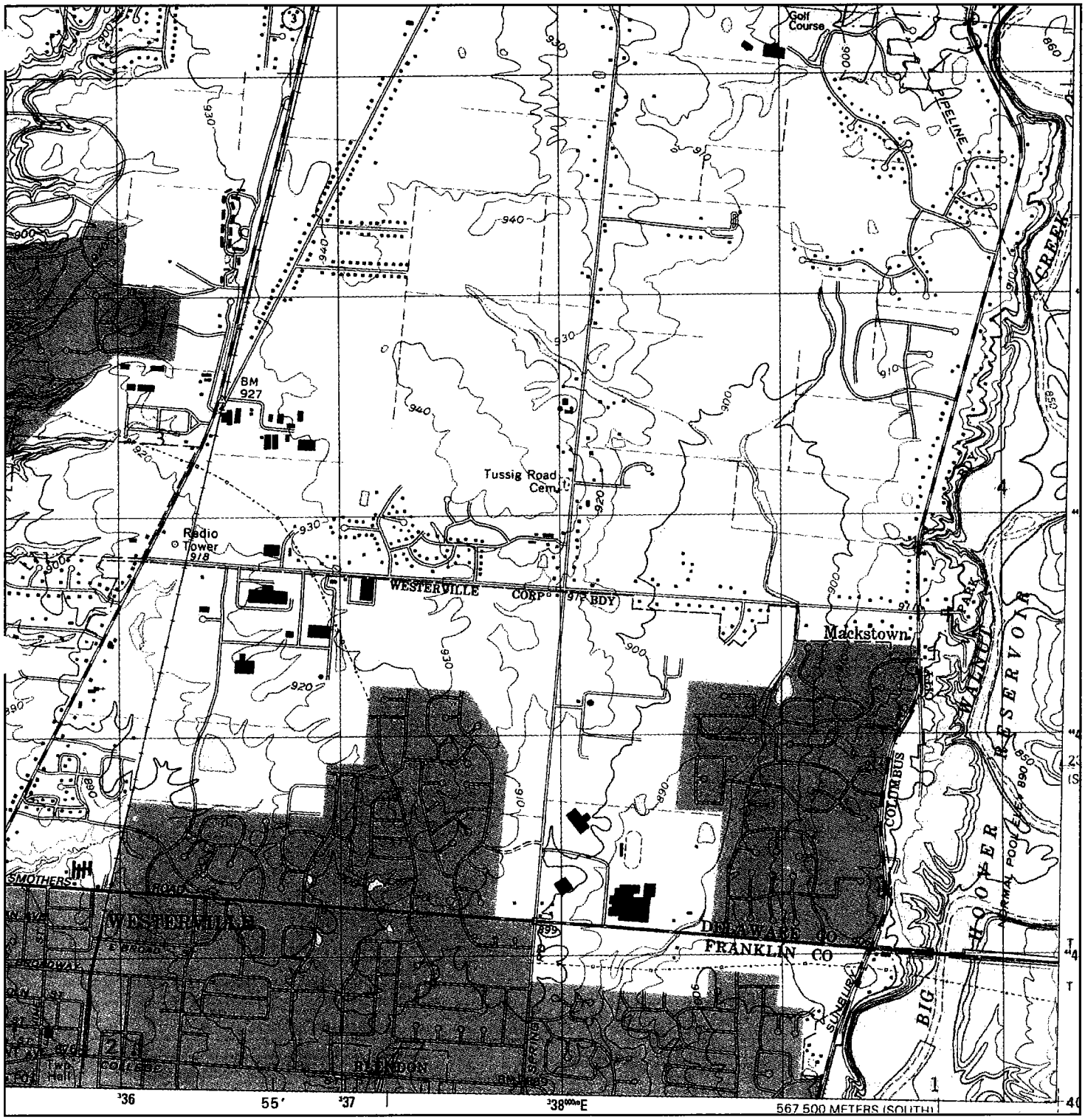
N	TARGET QUAD NAME: GALENA MAP YEAR: 1973 PHOTOREVISED FROM:1964 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Kilgore Farms ADDRESS: 800 Tussic St. Westerville, OH 43082 LAT/LONG: 40.141 / 82.8992	CLIENT: Brown and Caldwell CONTACT: Scott Blanchard INQUIRY#: 1866786.4 RESEARCH DATE: 02/28/2007

Historical Topographic Map



N	TARGET QUAD NAME: GALENA MAP YEAR: 1983 PHOTOREVISED FROM:1964 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Kilgore Farms ADDRESS: 800 Tussic St. Westerville, OH 43082 LAT/LONG: 40.141 / 82.8992	CLIENT: Brown and Caldwell CONTACT: Scott Blanchard INQUIRY#: 1866786.4 RESEARCH DATE: 02/28/2007

Historical Topographic Map



N	TARGET QUAD NAME: GALENA MAP YEAR: 1995 SERIES: 7.5 SCALE: 1:24000	SITE NAME: Kilgore Farms ADDRESS: 800 Tussic St. Westerville, OH 43082 LAT/LONG: 40.141 / 82.8992	CLIENT: Brown and Caldwell CONTACT: Scott Blanchard INQUIRY#: 1866786.4 RESEARCH DATE: 02/28/2007

APPENDIX F

Public Records Requests and Responses

4700 Lakehurst Court
Suite 100
Columbus, OH 43016

Tel: (614) 410-6144
Fax: (614) 410-3088

March 5, 2007

NO RESPONSE
6/8/07

Freedom of Information Officer
U.S. EPA Region 5 (MI-9J)
77 West Jackson Blvd.
Chicago, IL 60604-3590

[redacted]

RE: File Review Request
Former Kilgore Farms Property

Dear Sir/Madam:

I am requesting a file review of United States Environmental Protection Agency Region V in relation to the former Kilgore Farm (Manufacturing) Property. This request is pursuant to a Voluntary Action Program (VAP) Phase I Property Assessment per Ohio Administrative Code 3745-300-06(D)(2)(d).

Names of Facility:	Joe and Eva Morris, Kilgore Farms Property, Kilgore Manufacturing, Millstone Crossing (Westerville, Ohio), Otterbein College
Address:	800 North Spring Street (Formerly 800 Tussic Street)
City/Township/Zip Code:	Westerville, Ohio/Genoa Township/43082
County:	Delaware County
I.D. Number:	N/A
Map:	Attached
Type of Information:	All files, correspondence, memos, site inspection reports, records, and documents as they relate to the potential release of hazardous substances or petroleum on, underlying or emanating from the above referenced property.

Sincerely,

Scott Blanchard, CPG, CP
Senior Geologist

4700 Lakehurst Court
Suite 100
Columbus, OH 43016

Tel: (614) 410-6144
Fax: (614) 410-3088

March 6, 2007

BROWN AND CALDWELL

Michelle Thompson
The Ohio EPA, Central District Office
50 West Town St., Suite 700
Columbus, Ohio 43215

RE: File Review Request – Spill Sites in proximity to the Former Kilgore Farms Property

Dear Ms. Thompson,

I am requesting a file review of all OEPA files, correspondence, memos, site inspection reports, records, and documents concerning spills and or releases of hazardous substances or petroleum in the Ohio EPA Central District Files in relation to the following three sites listed in the Ohio Spills Database:

- **Unknown** (708 Bay Drive, Westerville, Ohio) is listed in the Ohio Spills database. Spill Number 0503-21-1328 was reported on March 22, 2005 by James Ross. The product spilled is listed as "Algae control chemicals; possible."

- **Hovey** (655 Grist Run, Westerville, Ohio; latitude 4008031/ longitude 8254297) is listed in the Ohio Spills Database. Spill number 0410-21-4503 was reported by Wendy Hovey on October 21, 2004. The product spilled was listed as mercury.

- **Westerville North High School** (950 County Line Road, Westerville, Ohio) is listed in both the FINDS database is listed within the FINDS database as an education center in the United States. An unknown origin spill of hydrocarbon sheen is listed for the same address in the Ohio Spill database. Spill number 9902-25-0706 was reported by Jim Tharp on March 25, 1999. The latitude is listed as 401399.0 and the longitude as 828934.0 for the spill.

I have attached a map and associated listings in the EDR Radius report which identified the above listings in the OEPA Spills database.

This request is pursuant to a Voluntary Action Program (VAP) Phase I at 800 North Spring Street in Westerville, Ohio. If possible, I would like to coordinate the review of the above requested files with the review of the files for 800 North Spring Street, Westerville, Ohio which was made on March 5, 2007.

If you have any questions please contact me at (614) 410-6144 or smblanchard@brwncald.com. Thank you for your assistance in this matter.

Sincerely,

Scott M. Blanchard, CPG, CP
Senior Geologist

Cc: Barry Nelson
File
Attachments

OVERVIEW MAP - 1866786.2s

- 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
- County Boundary
- 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: Kilgore Farms ADDRESS: 800 Tussic St. Westerville OH 43082 LAT/LONG: 40.1410 / 82.8992	CLIENT: Brown and Caldwell CONTACT: Scott Blanchard INQUIRY #: 1866786.2s DATE: February 28, 2007 3:18 pm

MAP FINDINGS

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
1 North 1/8-1/4 799 ft. Relative: Higher Actual: 912 ft.	**HERITAGE MIDDLE SCHOOL** **390 N SPRING RD** **WESTERVILLE, OH 43082** FINDS: Other Pertinent Environmental Activity Identified at Site NCES (National Center for Education Statistics) is the primary federal entity for collecting and analyzing data related to education in the United States and other nations and the institute of education sciences.	FINDS	1008280540 110021716259
2 North 1/8-1/4 1028 ft. Relative: Lower Actual: 899 ft.	**HERITAGE CHRISTIAN CHURCH** **7413 MAXTOWN RD** **WESTERVILLE, OH 43082** OH NPDES: Facility Telephone: 614 783 7252 Facility Contact: MIKE SMITH Company Name: HERITAGE CHRISTIAN CHURCH Company Contact: HENRY STONEROOK Company Telephone: 614 888 8041 Company Address: 7413 MAXTOWN RD Comany City,St,Zip: WESTERVILLE, OH 43082 Receiving Waters: Not reported Start Date: 01-Nov-04 End Date: 01-Nov-05 Acreage: 4.2 Facility Renew: 4GC00877*AG Send Date: 30-Sep-04 District: 4	NPDES	S107756680 N/A
3 ENE 1/4-1/2 1907 ft. Relative: Lower Actual: 890 ft.	**UNKNOWN** **706 BAY DR** **WESTERVILLE, OH** SPILLS: Spill No.: 0503-21-1328 Spill Year: 2005 Sequential Number: 0 Date Spill Reported: 03/22/05 Spill Month: 3 Spill Number: 1328 Reporter Name: JAMES ROSS Confidential: No District Code: CD Employee Number: 1752 Lat/Long: Not reported Product Spilled Name: ALGAE CONTROL CHEMICALS; POSSIBLE	OH Spills	S106958335 N/A

Map ID / Direction / Distance / Distance (ft.) / Elevation	Site	Database(s)	EDR ID Number / EPA ID Number
4 SW 1/4-1/2 2033 ft. Relative: Higher Actual: 918 ft.	**HOVEY** **655 GRIST RUN** **WESTERVILLE, OH**	OH Spills	S106748678 N/A

SPILLS:

Spill No.:	0410-21-4503
Spill Year:	2004
Sequential Number:	0
Date Spill Reported:	10/21/04
Spill Month:	10
Spill Number:	4503
Reporter Name:	WENDY HOVEY
Confidential:	No
District Code:	CD
Employee Number:	1786
Lat/Long:	4008031 / 8254297
Product Spilled Name:	MERCURY

A5 South 1/4-1/2 2161 ft. Relative: Lower Actual: 883 ft.	**WESTERVILLE-NORTH HIGH SCHOOL** **950 COUNTY LINE RD** **WESTERVILLE, OH 43082**	FINDS	1008326876 110022150214

Site 1 of 2 in cluster A

FINDS:

Other Pertinent Environmental Activity Identified at Site

GNIS

NCES (National Center for Education Statistics) is the primary federal entity for collecting and analyzing data related to education in the United States and other nations and the institute of education sciences.

A6 South 1/4-1/2 2161 ft. Relative: Lower Actual: 883 ft.	**UNK** **950 COUNTY LINE RD** **WESTERVILLE, OH**	OH Spills	S106306903 N/A

Site 2 of 2 in cluster A

SPILLS:

Spill No.:	9902-25-0706
Spill Year:	1999
Sequential Number:	0
Date Spill Reported:	02/25/99
Spill Month:	2
Spill Number:	0706
Reporter Name:	JIM THARP
Confidential:	No
District Code:	CD
Employee Number:	1786
Lat/Long:	401399.0 / 828934.0
Product Spilled Name:	HYDROCARBON SHEEN

OhioEPA
State of Ohio Environmental Protection Agency

RECD MAR 1 2 2007

STREET ADDRESS:
zarus Government Center
W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

March 8, 2007

Scott M. Blanchard
Brown and Caldwell
4700 Lakehurst Court, Suite 100
Columbus, OH 43016

Re: Public Records Request – Kilgore Farms, Kilgore Manufacturing, Millstone Crossing, Otterbein College, 800 North Spring Street, Westerville, OH.

Dear Mr. Blanchard:

The OhioEPA is in receipt of your public records request for the above-referenced site. Your request has been circulated to those divisions and/or offices within OhioEPA that may have information concerning your request. Attached with this correspondence is the OhioEPA Public Records contact list which list those divisions and/or offices where your public records request has been forwarded. Those contact persons indicated on the list will contact you directly as to the status of your request. Also included on the list is a contact telephone number if you have questions concerning your public records request.

Please be aware that public records may exist in OhioEPA's District Offices and at local air pollution control agencies, if applicable. If you wish to inspect public records at a district office or the Central Office, please contact the appropriate contact person.

Also included with this correspondence is an OhioEPA Fact Sheet which explains the procedures for public records requests.

If you have any questions, please contact me at 614-644-3037.

Sincerely,

Miles J. Davidson/Office Manager
Office of Legal Services

md
attachments

4700 Lakehurst Court
Suite 100
Columbus, OH 43016
Tel: (614) 410-6144
Fax: (614) 410-3088

March 5,2007

Zona Clements
The Ohio EPA, Office of Legal Services
50 West Town St., Suite 700
Columbus, Ohio 43215

BROWN AND CALDWELL

RE: File Review Request
Former Kilgore Farms Property

Dear Ms. Clements,

I am requesting a file review of the Ohio EPA, Central Office Files in relation to the former Kilgore Farm (Manufacturing) Property. This request is pursuant to a Voluntary Action Program (VAP) Phase I.

Names of Facility:	Joe and Eva Morris, Kilgore Farms Property, Kilgore Manufacturing, Millstone Crossing (Westerville, Ohio), Otterbein College
Address:	800 North Spring Street (Formerly 800 Tussic Street)
City/Township/Zip Code:	Westerville, Ohio/Genoa Township/43082
County:	Delaware County
I.D. Number:	N/A
Map:	Attached
Type of Information:	All OEPA files, correspondence, memos, site inspection reports, records, and documents concerning the above property.

If you have any questions please contact me at (614) 410-6144 or smblanchard@brwncald.com. Thank you for your assistance in this matter.

Sincerely,

Scott M. Blanchard, CPG, CP
Senior Geologist

Cc: Barry Nelson
File
Attachments

SURVEY PLAT OF

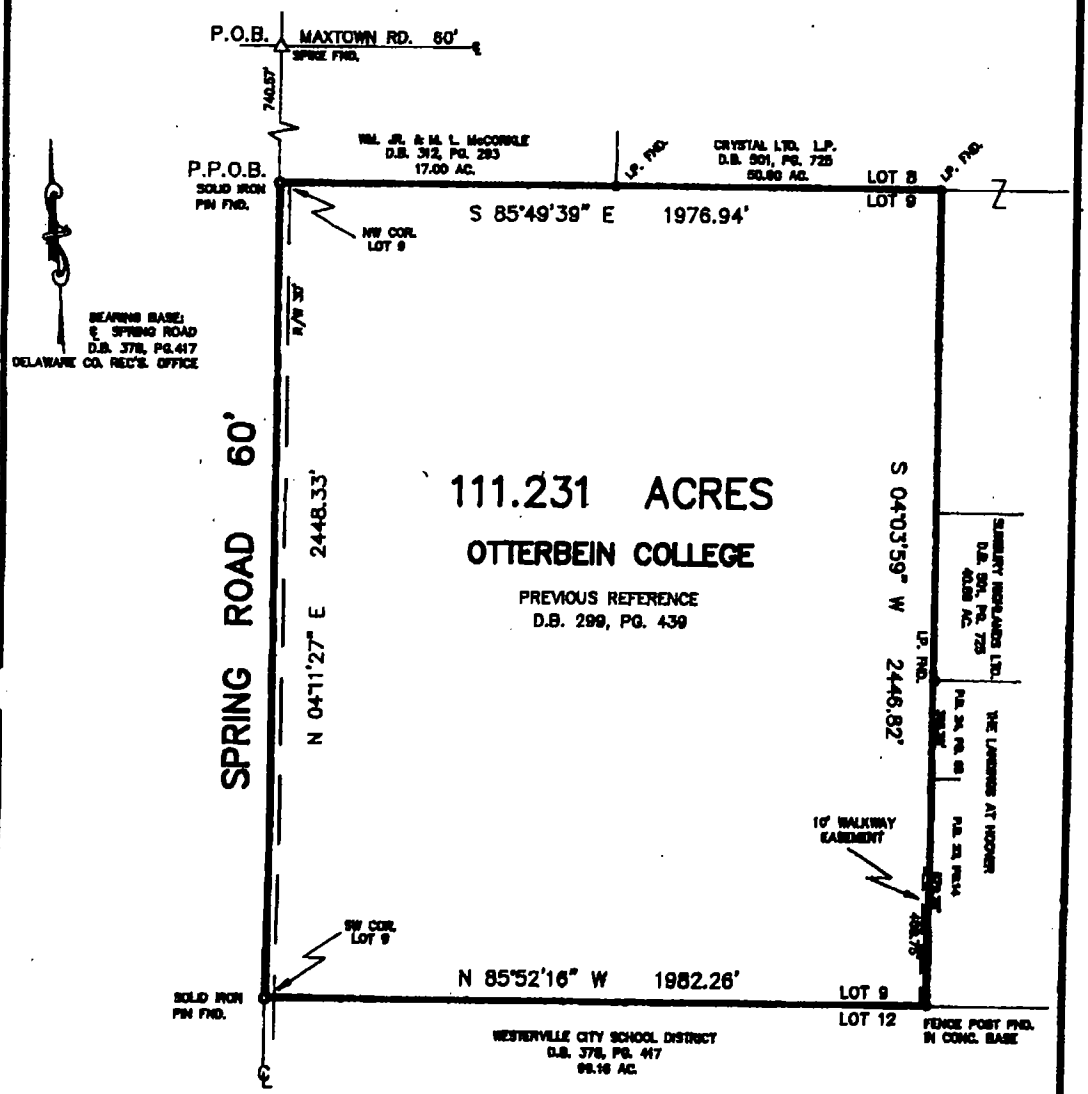
111.231 ACRES

SITUATED IN

CITY OF WESTERVILLE, COUNTY OF DELAWARE, STATE OF OHIO

LOCATED IN

GENOA TOWNSHIP, RANGE 17, TOWNSHIP 3, SECTION 4, LOT 9,
UNITED STATES MILITARY LANDS



REFERENCES:

D.B. 312, PG. 293
D.B. 501, PG. 725
D.B. 378, PG. 417
D.B. 299, PG. 439
P.B. 23, PG. 14
P.B. 24, PG. 69

400' 200 0 200 400 800

SCALE 1" = 400'

OCTOBER 9, 1992

CERTIFICATION: We hereby certify that the foregoing boundary survey was actually made upon the ground, that it and the information, courses and distances shown thereon are accurate. This survey was made in accordance with the "Minimum Standard Detail Requirements for Land Title Surveys" jointly established by ALTA and ACSM in 1988.

STATE OF OHIO
STEVEN A. SOLOMON
#7243
REGISTERED
PROFESSIONAL SURVEYOR

STEVEN A. SOLOMON, P.S. No. 7243

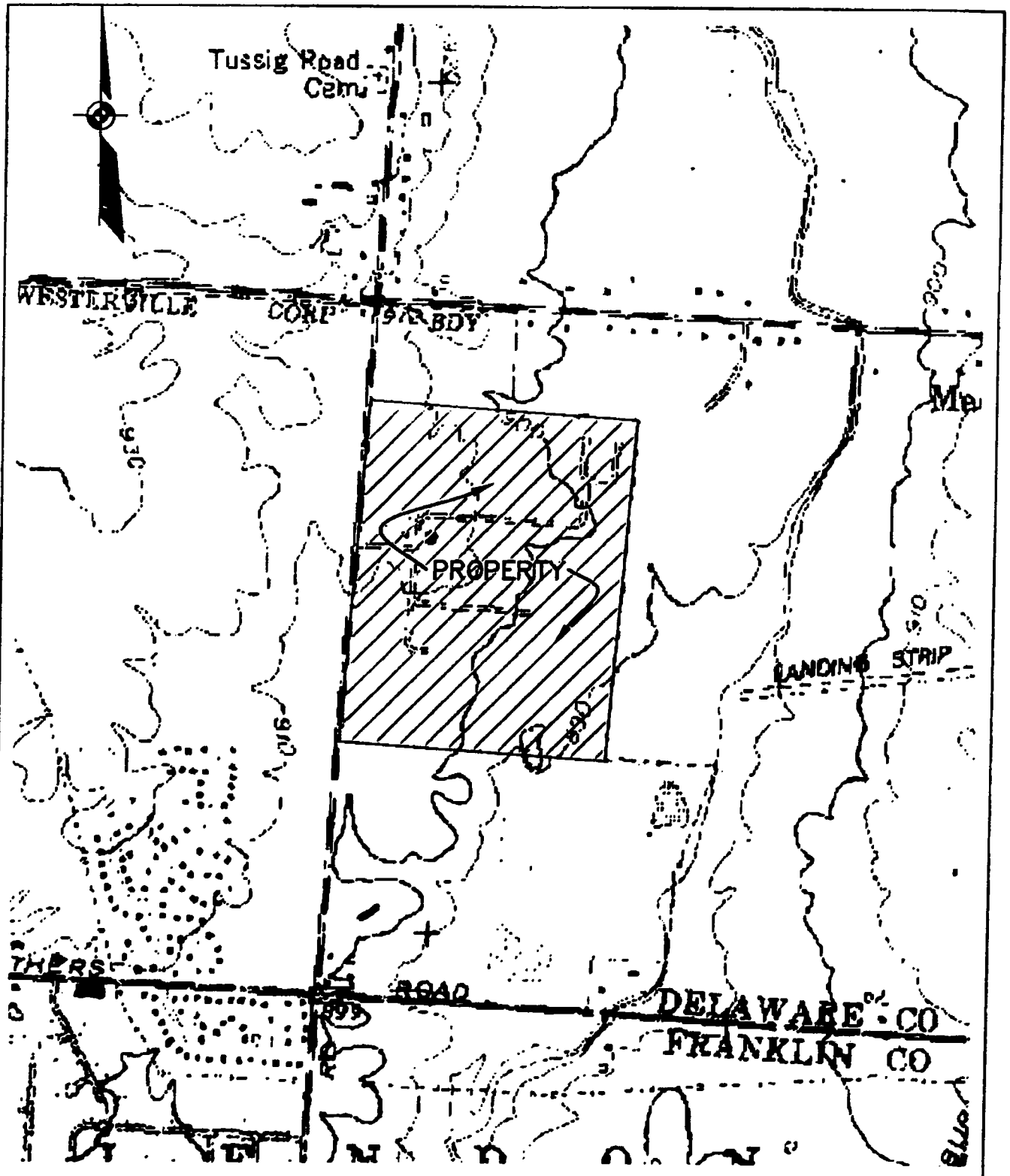
SAS Surveying
69 Ridgecliff Rd.
Worthington, Ohio
614-538-8600
Professional Land Surveying

DWG. NO. 1247

A3 Page 5

CHAIN OF TITLE
PARCEL: #18-002600

December 18, 1941	Joe Morris and Eva M. Morris
December 19, 1941	Kilgore Manufacturing Company
July 2, 1952	Kilgore, Inc.
May 24, 1962	Otterbein College
October 12, 1990	Emmett M. Wickham, et al



Metcalf & Eddy	MILLSTONE CROSSING PROJECT PROPERTY MAP WESTERVILLE, OHIO	Project Number Kilgore File Name

Ohio Public Records Act
Requests Contacts

YOUR REQUEST HAS BEEN FORWARDED TO THE FOLLOWING DIVISIONS AND/OR OFFICES:

__X__Division of Air Pollution Control - Sharon Stills (614) 644-2270
Bryan Zima, Legal Office (614) 644-3037

__X__Division of Hazardous Waste Management - Marilyn Macklin (614) 644-2977
Todd Anderson, Legal Office(614) 644-3037

__X__Division of Solid and Infectious Waste Management - Greg Nichols (614) 728-5327
Jeff Hurdley, Legal Office (614) 644-3037

__X__Division of Surface Water - Jo Hodanbosi (614) 644-2001
Bill Fischbein, Legal Office (614) 644-3037

__X__Division of Emergency and Remedial Response - Gerri Cauley (614) 644-2924
Mark Navarre, Legal Office (614) 644-3037

__X__Division of Drinking and Ground Waters - Tom Allen (614) 644-2752
Bill Fischbein, Legal Office (614) 644-3037

__X__Division of Environmental Financial Assistance - Becky Hegyi (614) 644-2798

__X__Public Interest Center - (614) 644-2160

__X__Director's Office - Supora Johnson (614) 644-2782

__X__Office of Compliance and Pollution Prevention - Michael Kelly (614) 644-2930

District File Reviews

__X__Central District Office, Columbus, Ohio - Michele Thompson (614) 728-3790

____Northeast District Office, Twinsburg, Ohio - Lily Aaron (330)-963-1129

____Southeast District Office, Logan, Ohio - Angela Hardesty (740) 385-8501

____Southwest District Office, Dayton, Ohio - Sally Brown (937) 285-6357

____Northwest District Office, Bowling Green, Ohio - Linda Tilse (419) 352-8461

OhioEPA
State of Ohio Environmental Protection Agency

STREET ADDRESS:
Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

March 7, 2007

Scott M. Blanchard
Brown & Caldwell
4700 Lakehurst Court
Suite 100
Columbus, OH 43016

Dear Mr. Blanchard:

This letter is in response to your March 7, 2007 records request. Ohio EPA, Division of Solid and Infectious Waste Management's Central Office does not have any records or requested information pertaining to the following request/facilities: Kilgore Farm, 800 North Spring Street, Westerville, Ohio.

If you have further questions please contact me at (614) 728-5327.

Sincerely,

Gregory R. Nichols
Records Management Officer

GN/gn

OhioEPA
State of Ohio Environmental Protection Agency

STREET ADDRESS:
Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

March 7, 2007

Re: Public Records Request
Kilgore Manufacturing-Millstone Crossing
800 North Spring Street - 800 Tussic Street
Westerville, Ohio 43081

Scott M. Blanchard
Brown and Caldwell
4700 Lakehurst Court Suite 100
Columbus, Ohio 43016

Dear Mr. Blanchard:

In response to your request concerning the above referenced site, this letter is to inform you that no documentation is available at the Division of Hazardous Waste Management's central office.

If you further questions regarding the above feel free to contact me at the letterhead address, or call directly at (614) 644-2943.

Sincerely,

Marilyn Macklin

Marilyn Macklin
Regulatory and Information Services
Division of Hazardous Waste Management

cc: file

Ohio Department of Commerce
Division of State Fire Marshal
Bureau of Underground Storage Tank Regulations
8895 East Main Street
Reynoldsburg, OH 43068
(614) 752-7938 FAX (614) 752-7942
www.com.state.oh.us

Ted Strickland
Governor

Kimberly A. Zurz
Director

Freedom of Information Act Request

To: **Scott Blanchard**

From: **Nancy Caldwell, Records Management Officer**

Contact #

RE: Reference No. / Address **800 Tussic**

The Bureau of Underground Storage Tanks has received your Freedom of information Act request and provides the following response:

__X__ We have searched our database and found no records for the address you requested.

___ We have searched our database and found that Underground tanks are registered at that address, no releases have been reported.

Blanchard, Scott

From: Bernard Ingles [Bernard.Ingles@westerville.org]
Sent: Wednesday, March 07, 2007 4:14 PM
To: Blanchard, Scott
Subject: File Review Request - Kilgore Property

Dear Mr. Blanchard,
The Westerville Division of Fire has no records on file pertaining to the release of hazardous substances or petroleum on the property located at 800 North Spring Road.

Prior to annexation into the City of Westerville, this property was not under our jurisdiction.

Thank You,
Bernie Ingles

Bernie Ingles
Fire Chief
City of Westerville
Division of Fire
400 West Main Street
614-901-6600

Delaware General Health District

1 and 3 West Winter Street P.O. Box 570 Delaware, Ohio 43015-0570
(740) 368-1700 Fax: (740) 368-1736
Email: Delawarehealth@delawarehealth.org www.delawarehealth.org

Dedicated to Your Health

Frances M. Veverka, MPH
Health Commissioner

March 9, 2007

Brown and Caldwell
4700 Lakehurst Court, Suite 100
Columbus, OH 43016

Attn: Scott M. Blanchard, CPG, Cp

Dear: Scott M.Blanchard:

This letter is in response to your request for a records review for the following location:

800 North Spring Street, Westerville, OH

Our department's records do not indicate any outstanding complaints, violations or health hazards, sewage disposal, water supply, indoor/outdoor air quality, or hazardous material storage and/or disposal. This property been annexed to Westerville. We advise you to contact Franklin County Health Department for further information. We also recommend that you contact BUSTR, Delaware County EMA, and Franklin County EMA, to confirm any hazardous material(s) releases on the property.

Should you have any questions, please contact me at this office.

Sincerely,

Steve Burke, R.S.
Program Manager
Residential Services Unit
Environmental Health Division

OhioEPA
State of Ohio Environmental Protection Agency
Central District Office

STREET ADDRESS:
Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 728-3778 FAX: (614) 728-3898
www.epa.state.oh.us

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

March 14, 2007

Re: Spill Sites in Westerville, Ohio

Scott Blanchard
Brown and Caldwell
4700 Lakehurst Court
Suite 100
Columbus, OH 43016

Dear Mr. Blanchard

Enclosed are the copies of the files indicated for the public records request. Since the total amount of files are less than 250 pages, no charge will be assessed for the copies.

If you have any questions or concerns, please feel free to contact me at (614) 728-3790.

Sincerely,

Michelle Thompson

Michelle Thompson
Office Assistant III
EPA Central District Office

Enclosure

Emergency Response Section - Initial Pollution Incident Report (IPIR)

3/7/2007

Spill Id Number: 0503-21-1328 **District:** CD

Reported By:	JAMES ROSS	**Reported:**	03/22/2005 18:23
Title:		**Discovered:**	03/22/2005 18:00
Telephone:	(614) 818-0922 ext:	**Occurred:**	03/22/2005 1800
Affiliation:	CITIZEN	**Chronic:**	N

County:	DELAWARE	**City/Township:**	WESTERVILLE
Did Spiller Report ?	N	**Complaint ?**	Y
Received By:	ARMSTRONG, GAVIN	**Priority:**	4
Local EPC ?	N	**Did you tell the Spiller to Call the N.R.C ?**	N
Business:	N	**SARA Report:**	N

Suspected Spiller: UNKNOWN
Mailing Address: N/A

Telephone: (000) 000-0000 ext:

Location: 708 BAY DR
Source: UNKNOWN
Cause: UNKNOWN
Reason: CITIZEN COMPLAINT
Waterways Affected: CREEK
Media Affected 1: SURFACE WATER/STORM
Media Affected 2:
Media Affected 3:

Product(s) Spilled

Product	Amount	UOM	RQ	Size	Type	EHS
MATERIAL UNKNOWN	.0	UNK	.0	U	O	N

Remark

CITIZEN COMPLAINT OF STREAM TURNING A BLUE GREEN COLOR. STREAM RUNS INTO HOOVER DAM. NO ODORS NOTED. OSC DALTON NOTIFIED AT 1840HRS..

Emergency Response Section - District Office Investigation Report (DOIR)

Spill Id Number: 0503-21-1328 **OSC:** 1752 - DALTON, MIKE
Spill Status: FINAL

	Date	Time		
Reported:	03/22/2005	18:23	**Reported By:** JAMES ROSS	
Discovered:	03/22/2005	18:00	**Title:**	
Occurred:	03/22/2005	18:00	**Affiliation:** CITIZEN	
			Telephone: (614) 818-0922	**Extension:**

Spill Location Information

County: DELAWARE **Latitude:** - - . N
City/TWP: WESTERVILLE **Longitude:** - - . W
Location: 708 BAY DR
Waterway: SPRING RUN
Length:
Land Area: NONE

Entity Information

Name/Company: UNKNOWN
Address: N/A
City: N/A **State:** OH **Zip Code:**
Telephone: (000) 000-0000 **Ext:**
SPCC Plan Req: **SPCC Plan in Effect:**

Entity Representatives

Products Spilled

Product	Amount	UOM	Type
ALGAE CONTROL CHEMICALS; POSSIBLE	.0	UNK	FC

Source: FIXED FACILITY - BUSINESS - LAGOON/POND
Cause: NO SPILL - NO EXCEEDS/RELEASE
Reason: STANDARD PRACTICE
Media Affected: SURFACE WATER/STORM SEWERS

Other Contacts

Referrals

Supporting Documentation

Document	Document Date	Pages
AERIAL PHOTO	03/23/2005	1
TOPOGRAPHIC MAP	03/23/2005	1

Emergency Response Section - District Office Investigation Report (DOIR)

Spill Id Number: 0503-21-1328
OSC: 1752 - DALTON, MIKE
Status: FINAL
Activity Date: 03/22/2005
Phone Followup: NO

03/22/2005
OSC Dalton was contacted at home by Duty Officer Gavin Armstrong at 18:42. The OSC then called the complainant at home for additional informationl. Mr. Ross stated he first noticed a deep blue-green color in the water and later the color became more green. The water was opaque, but had no odor. Mr. Ross said the color appeared to be from something suspended in the water. The OSC decided to respond immediately and left his home at 19:18; he arrived at 19:42.

The OSC stopped at Mr. Ross' home and spoke with him. He then checked the creek behind his home. The water had a distinct greenish color and in a flashlight beam the OSC could see some type of very small particles in suspension. The turbidity was not due to mud or paint. Next he checked Spring Run upstream of Mr. Ross's home. The water appearred to be turbid and had a light green color. He kept moving north and checking the creek where roads crossed it. Unfortunately, the water quickly became shallow and the turbidity and color were no longer visible.

The OSC noticed numerous lakes and ponds in the area that were part of the development of homes. He checked several of the ponds, but could not see well enough to tell if any had the same conditions as Spring Run. The OSC recontacted Mr. Ross and told him his investigation was inconclusive and that he would come back during daylight. He then left the area at 20:30 and arrived home at 20:54.

03/23/2005
The OSC printed an aerial photograph of the land north of Maxtown Road in the area of Spring Run. The photograph showed major construction activity had occurred in the last few years and there were many manmade ponds and lakes in the vicinity. The OSC suspected someone had started algae control treatments using a light blocking dye. An alternative was that a pond was being pumped out and the algae in the pond was being emulsified by the pump.

The OSC returned to the area at 13:48 and began checking ponds and lakes. Spring Run appeared to be clear and the ponds and lakes he could reach were not discolored (or at least the discoloration was due to mud and not a dye). He then checked the creek near Mr. Ross' again and found the turbidity and color had faded. There now appeared to be no chance of tracing either the source or cause of the incident. The OSC decided to discontinue his investigation but to check the creeks whenever he was in the area in the future.

No further action anticipated.

Emergency Response Section - District Office Investigation Report (DOIR)

Spill Id Number: 0503-21-1328

OSC: 1752 - DALTON, MIKE

Response Date: 03/22/2005

Start Time: 18:42 **End Time:** 20:54 **Total Mileage:** 51.00

Time Code	Regular Time	Overtime	Total
0022	.0	2.2	2.2
		Total Time:	**2.2**

OSC: 1752 - DALTON, MIKE

Response Date: 03/23/2005

Start Time: 13:24 **End Time:** 14:30 **Total Mileage:** 19.00

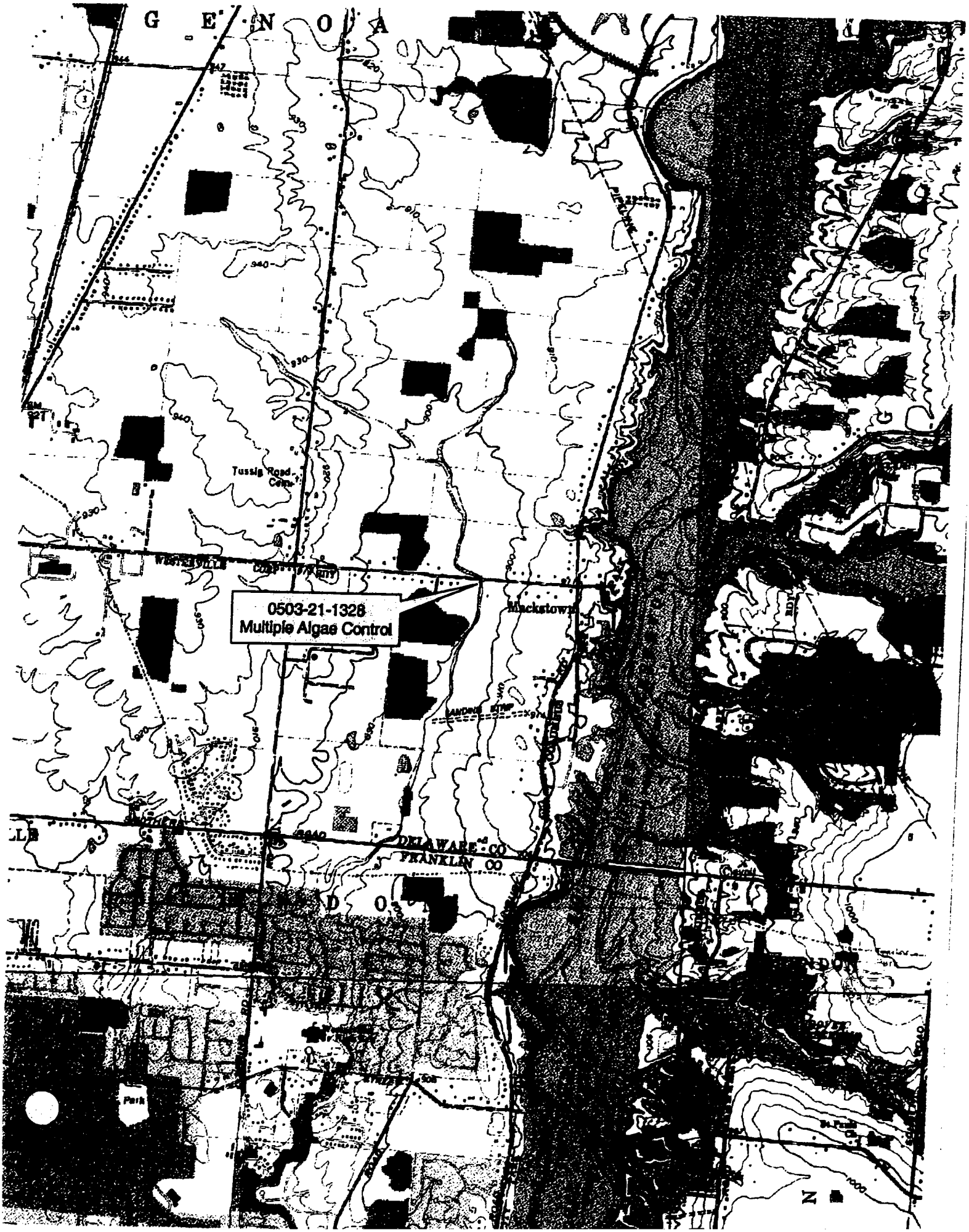
Time Code	Regular Time	Overtime	Total
0022	1.1	.0	1.1
		Total Time:	**1.1**

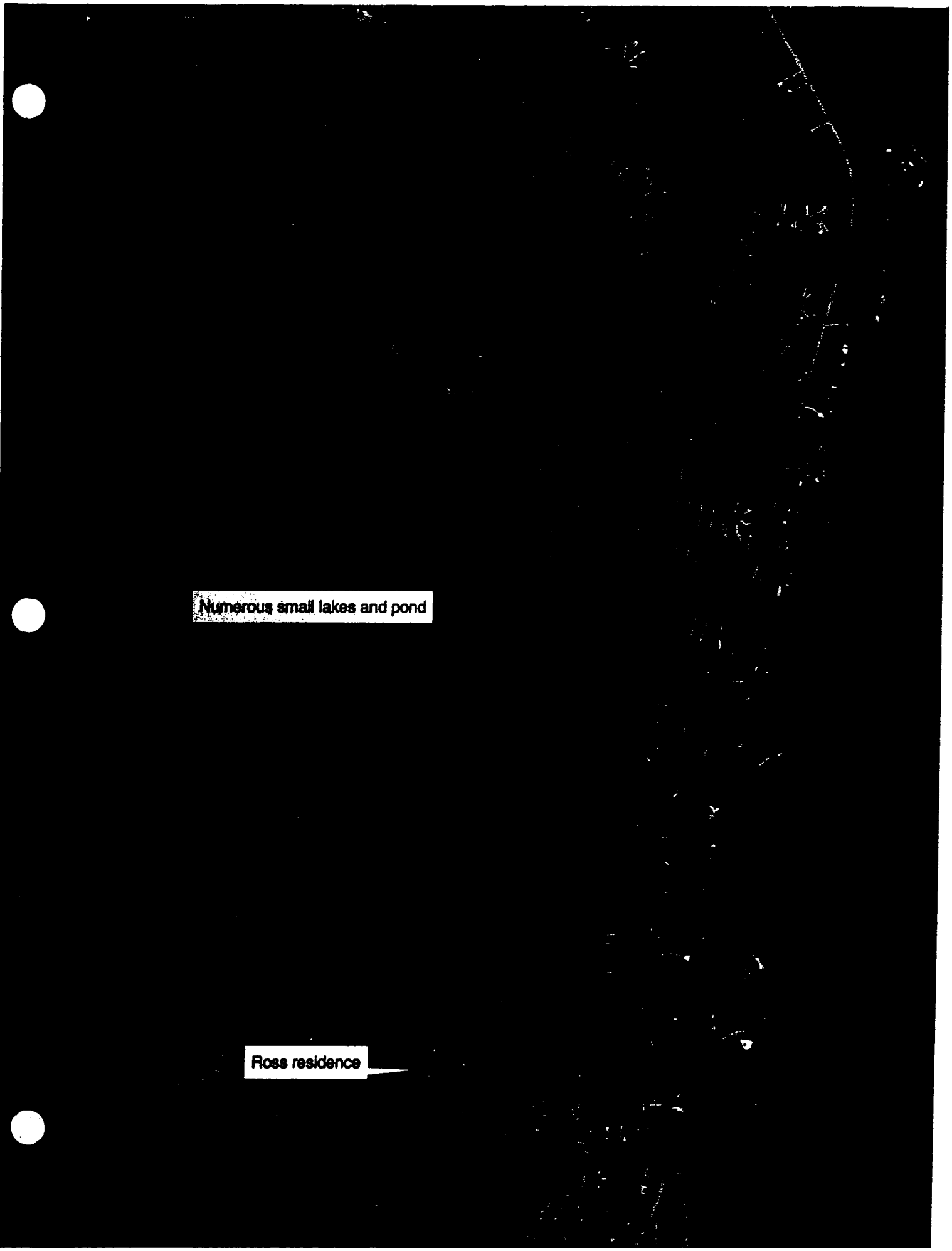
OSC: 1752 - DALTON, MIKE

Response Date: 04/25/2005

Start Time: 13:00 **End Time:** 13:30 **Total Mileage:**

Time Code	Regular Time	Overtime	Total
0100	.5	.0	.5
		Total Time:	**.5**
		Grand Total for this Spill:	**3.8**


G E N O A
0503-21-1328
Multiple Algae Control
Tussig Road
Mackstown
DELAWARE CO
FRANKLIN CO
Park


Numerous small lakes and pond
Ross residence

Emergency Response Section - Initial Pollution Incident Report (IPIR)

3/7/2007

Spill Id Number: 0410-21-4503 **District:** CD

Reported By: WENDY HOVEY **Reported:** 10/21/2004 17:44
Title: CIT **Discovered:** 10/21/2004 17:44
Telephone: (614) 890-8921 **ext:** **Occurred:** 00/00/0000
Affiliation: CITIZEN **Chronic:** N

County: DELAWARE **City/Township:** WESTERVILLE
Did Spiller Report ? Y **Complaint ?** N
Received By: HOLMES, CHRIS **Priority:** 4
Local EPC ? N **Did you tell the Spiller to Call the N.R.C ?** N
Business: N **SARA Report:** N

Suspected Spiller: HOVEY
Mailing Address: 655 GRIST RUN

Telephone: (000) 000-0000 **ext:**

Location: 655 GRIST RUN
Source: FIXED FACILITY - CITIZEN - CONTAINER
Cause: DA / CUT OR BREAK **Reason:** BREAK OR BROKEN
Waterways Affected: N/A **Media Affected 1:** BUILDING INTERIOR
Media Affected 2: **Media Affected 3:**

Product(s) Spilled

Product	Amount	UOM	RQ	Size	Type	EHS
MERCURY	.0	UNK	.0	U	O	N

Other Agencies Notified

Agency	Person	Date	Time
RRS/SIS	DALTON	10/22/2004	07:10

Remark

SMALL CHILD RUPTURED FEVER THERMOMETER AT ABOVE ADDRESS. SILVER BEADS NOTED ON CHAIR. CALLER REMOVED CUSIONS TO THE OUTSIDE. OSC DALTON NOTIFIED.

Emergency Response Section - District Office Investigation Report (DOIR)

Spill Id Number: 0410-21-4503 **OSC:** 1786 - BONNER, CHRIS
Spill Status: FINAL

	Date	Time			
Reported:	10/21/2004	17:44	**Reported By:**	WENDY HOVEY	
Discovered:	10/21/2004	17:44	**Title:**	CIT	
Occurred:	00/00/0000		**Affiliation:**	CITIZEN	
			Telephone:	(614) 890-8921	**Extension:**

Spill Location Information

County: DELAWARE
City/TWP: WESTERVILLE
Location: 655 GRIST RUN
Waterway: N/A
Length:
Land Area:
Latitude: 40-08-03.1 N
Longitude: 82-54-29.7 W

Entity Information

Name/Company: HOVEY
Address: 655 GRIST RUN
City: WESTERVILLE **State:** OH **Zip Code:**
Telephone: (614) 890-8921 **Ext:**
SPCC Plan Req: **SPCC Plan in Effect:**

Entity Representatives

Products Spilled

Product	Amount	UOM	Type
MERCURY	.0	UNK	O

Source: FIXED FACILITY - CITIZEN - CONTAINER
Cause: DA / CUT OR BREAK
Reason: BREAK OR BROKEN
Media Affected: BUILDING INTERIOR

Other Contacts

Referrals

Supporting Documentation

Document	Document Date	Pages
AERIAL PHOTO	10/23/2004	1

Emergency Response Section - District Office Investigation Report (DOIR)

Spill Id Number: 0410-21-4503
OSC: 1786 - BONNER, CHRIS
Status: CONTINUING
Activity Date: 10/22/2004
Phone Followup: NO

10/22/04: 0715 hrs. OSC Bonner received a voice mail message from Lead Worker OSC Dalton regarding a mercury release at the above address. OSC Dalton informed OSC Bonner that he was on vacation and asked this OSC to respond to the incident.

The OSC called Ms. Hovey and was informed that she has removed the contaminated items from the home and there might be some mercury in the carpet. OSC Bonner asked Ms. Hovey if there was a time that she will be available for this OSC to perform indoor air monitoring at her residence. Ms. Hovey informed this OSC that she'll be home at noon. OSC Bonner informed Ms. Hovey that he will meet her at that time.

1130 hours, OSC Bonner left the district office for the spill scene.

1200 hours.OSC Bonner arrived on scene and met with Mr. & Mrs. Hovey.

The OSC began the Lumex survey. The OSC had warmed up the Lumex 915 Lite, prior to arrival. The R% = 23; Background = 0.0 ug/m3; all readings are in ug/m3; the recommended action level for a residential setting has been determined by Health agencies to be 1.0 ug/m3. Breathing Zone readings (BZ); Floor level readings (FL).

Readings: First Floor, entry way from garage BZ = 0.3 ug/m3; BZ in all areas of first floor checked = 0.3 ug/m3. Ottoman, family room FL = 4.9 ug/m3. Seat cushion of lazy boy FL = 19.8 ug/m3. Carpet in front of lazy boy 82.9 ug/m3.

OSC Bonner advised Mr & Mrs. Hovey to remove seat cushion cover and place in the dryer to volatilize the mercury from the cover; remove the carpet because heating to volatilize the mercury will not help; heat ottoman to volatilize mercury from foot stool. Mr. Hovey informed this OSC that he did not want to remove the carpet at this time and asked if he could heat the affected area. OSC Bonner informed Mr. Hovey that he could try, but it was unlikely to work because the mercury is trapped in the fibers of the carpet. OSC Bonner also informed the Hovey's that he would return on Monday, October 25, 2004, to perform follow up indoor air monitoring after they have completed the work of trying to remove the mercury from the carpet; They agreed.

Emergency Response Section - District Office Investigation Report (DOIR)

Spill Id Number: 0410-21-4503
OSC: 1786 - BONNER, CHRIS
Status: FINAL
Activity Date: 10/25/2004
Phone Followup: NO

10/25/04 1130 hours, OSC Bonner left the district office for the spill site.

1206 hours, OSC Bonner arrived on scene.

The OSC began the Lumex survey. The OSC had warmed up the Lumex 915 Lite, prior to arrival. The R% = 23; Background = 0.0 ug/m3; all readings are in ug/m3; the recommended action level for a residential setting has been determined by Health agencies to be 1.0 ug/m3. Breathing Zone readings (BZ); Floor level readings (FL).

Readings: First Floor, entry way from garage BZ = 0.2 ug/m3; BZ in all areas of first floor checked = 0.2 ug/m3. Ottoman, family room FL = 5.9 ug/m3. Seat cushion of lazy boy FL = 0.8 ug/m3. Carpet in front of lazy boy 1.7ug/m3.

OSC Bonner advised Mr. Hovey that the mercury vapor levels had dropped significantly and strongly advised that he remove the carpet from the home. OSC Bonner also advised Mr. Hovey to place the ottoman outside in the sun to help volatilize the mercury from the fabric; He agreed.

1225 hours, OSC Bonner left the scene. Nothing further needs to be done by the Emergence Response Section at this time.

DOIR Status: Final

Emergency Response Section - District Office Investigation Report (DOIR)

Spill Id Number: 0410-21-4503

OSC: 1786 - BONNER, CHRIS

Response Date: 10/22/2004

Start Time: 11:30 **End Time:** 12:30 **Total Mileage:** 25

Time Code	Regular Time	Overtime	Total
0022	1.0	.0	1.0
		Total Time:	1.0

OSC: 1786 - BONNER, CHRIS

Response Date: 10/25/2004

Start Time: 11:30 **End Time:** 13:11 **Total Mileage:** 55

Time Code	Regular Time	Overtime	Total
0022	1.6	.0	1.6
		Total Time:	1.6
		Grand Total for this Spill:	2.6


Mr & Mrs Hovey Residence
Mercury Release
William Kirk's House
Retired LRO from OEPA

Emergency Response Section - Initial Pollution Incident Report (IPIR)

3/7/2007

Spill Id Number: 9902-25-0706 **District:** CD

Reported By:	JIM THARP	**Reported:**	02/25/1999 10:02
Title:	INSPECTOR	**Discovered:**	02/25/1999 09:00
Telephone:	(614) 890-8551 **ext:**	**Occurred:**	00/00/0000
Affiliation:	FIRE DEPT & LOCAL FIRE PREVENTION	**Chronic:**	N

County:	FRANKLIN	**City/Township:**	WESTERVILLE
Did Spiller Report ?	N	**Complaint ?**	N
Received By:	TAYLOR, TODD	**Priority:**	3
Local EPC ?	N	**Did you tell the Spiller to Call the N.R.C ?**	N
Business:	N	**SARA Report:**	N

Suspected Spiller: UNK
Mailing Address: N/A

Telephone: (000) 000-0000 **ext:**

Location: 950 COUNTY LINE RD
Source: UNKNOWN
Cause: UNKNOWN **Reason:** UNKNOWN REASONS
Waterways Affected: UNK CREEK **Media Affected 1:** SURFACE WATER/STORM
Media Affected 2: **Media Affected 3:**

Product(s) Spilled

Product	Amount	UOM	RQ	Size	Type	EHS
HYDROCARBON SHEEN	.0	UNK	.0	U	H	N

Other Agencies Notified

Agency	Person	Date	Time
DSW/WW	MCCARTHY	00/00/0000	

Remark

REPORT OF MYSTERY SHEEN ON CREEK. OSC DALTON AND BONNER NOTIFIED. FD IS TRYING TO LOCATE SPILL SOURCE. NO BOOMS OR PAD IN CREEK YET.

OHIO EPA, EMERGENCY RESPONSE SECTION
DISTRICT OFFICE INVESTIGATION REPORT

SPILL STATUS	F01	OSC	BONNER
	DATE TIME	REPORTED BY	JIM THARP
REPORTED	02/25/1999 10:02	TITLE	INSPECTOR
DISCOVERED	02/25/1999 9:00	AFFILIATION	FD
OCCURRED	/ /	TELEPHONE	614-890-8551

---ENTITY INFORMATION---

NAME/COMPANY	UNIDENTIFIED
ADDRESS	- - 0
TELEPHONE	
SPCC PLAN REQD	N
SPCC PLAN IN EFFECT	N

---CONTACTS---

NAME	TITLE	PHONE #
JIM THARP	WESTERVILLE FIRE INSPECTOR	614-890-8551

---SPILL LOCATION INFORMATION---

COUNTY	FRANKLIN	LATITUDE	401399.0
CITY/TWP	WESTERVILLE	LONGITUDE	828934.0
LOCATION	950 COUNTY LINE RD		
WATERWAY	SPRING RUN VIA STORM SEWER		
LENGTH	2.000		
LAND AREA			
PRE RESPONSE ACTION			

---PRODUCTS SPILLED---

PRODUCT	AMOUNT	UOM	TYPE
YDROCARBON SHEEN	0.0	UNK	H

SOURCE	UNKNOWN		UNKNOWN
CAUSE	UNKNOWN		
REASON	UNKNOWN REASONS		
MEDIA AFFECTED	SURFACE WATER/STORM SEWERS		

---SAMPLE INFORMATION---

---SUPPLIES USED---

---SUPPORTING DOCUMENTS---

DOCUMENT NAME	DOCUMENT DATE	# OF PAGES
OTHER MAPS	02/25/1999	1

---REFERRALS---

---NOTIFICATIONS---

AGENCY NAME	DATE SENT	PERSON
DSW/WW	/ /	MCCARTHY
FD	/ /	ON SCENE

---REMARKS---

02/25/1999

OHIO EPA, EMERGENCY RESPONSE SECTION
DISTRICT OFFICE INVESTIGATION REPORT

TIME ACCOUNTING INFORMATION

SPILL #: 9902-25-00706 PAGE: 3/1

OSC BONNER

DATE 02/25/1999 VISIT NO 1 TOTAL MILEAGE 32

ARRIVAL TIME 1000 DEPARTURE TIME 1230

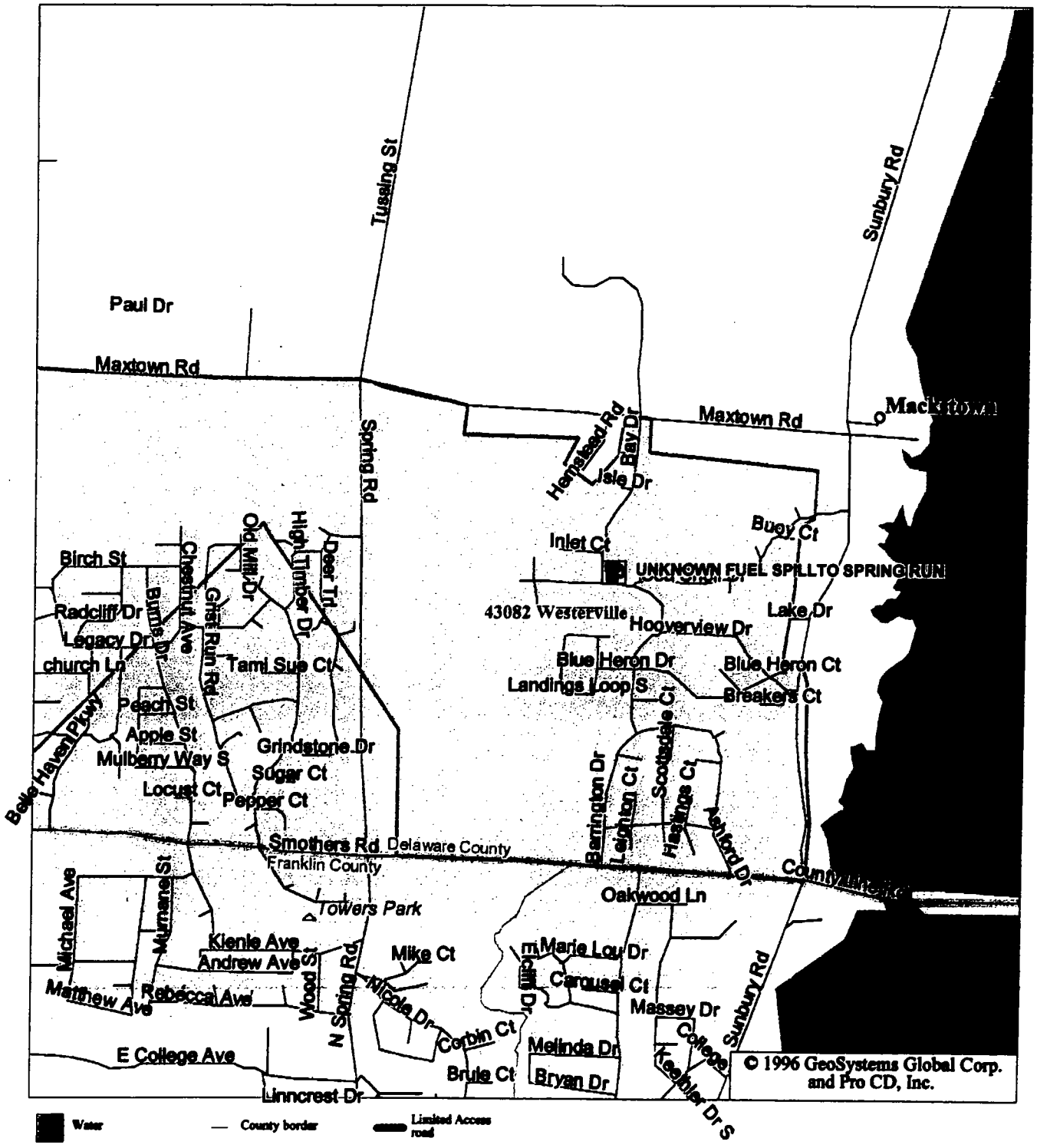
TIME CODE	REGULAR	OVERTIME	TOTAL
0022	0.50	0.00	0.50
0969	2.50	0.00	2.50
		TOTAL TIME	3.00

TOTAL TIME 3.00 TOTAL MILEAGE 32

GRAND TOTAL
TOTAL TIME 3.00 TOTAL MILEAGE 32

S Old High

9902-25-0706



ProCD®

OhioEPA
State of Ohio Environmental Protection Agency

STREET ADDRESS:
\zarus Government Center
J W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

March 19, 2007

Scott M. Blanchard
Brown & Caldwell
Suite 100
4700 Lakehurst Court
Columbus, OH 43016

Dear Scott M. Blanchard:

We received your public records request regarding:

Kilgore Manufacturing – Otterbein College Westerville, OH 43082

We checked our files and found no information on these facilities. If you have any questions, please contact Jennifer Loucks, at (614) 644-2752.

Sincerely,

Thomas M. Allen
Assistant Chief
Division of Drinking and Ground Waters

TMA:jdl

cc: Zona Clements, Legal

OhioEPA
State of Ohio Environmental Protection Agency

STREET ADDRESS:
Lazarus Government Center
50 W. Town St., Suite 700
Columbus, Ohio 43215

TELE: (614) 644-3020 FAX: (614) 644-3184
www.epa.state.oh.us

MAILING ADDRESS:
P.O. Box 1049
Columbus, OH 43216-1049

March 19, 2006

Scott M. Blanchard, CPG, CP
Brown and Caldwell
4700 Lakehurse Court
Suite 100
Columbus, OH 43016

Dear Mr. Blanchard,

This letter is in response to your March, 2007 records request. Ohio EPA, Director's Office does not have any records pertaining to your request regarding:

Joe and Eva Morris, Kilgore Farms Property
Kilgore Manufacturing, Millstone Crossing
(Westerville, Ohio), Otterbein College
800 North Spring Street
Westerville, Ohio/Genoa Township/43082

If you have further questions please contact me at (614) 644-2782.

Sincerely,

Supora Johnson
Executive Secretary

APPENDIX G

Personnel Interviews

April 7. 1998

Meeting with Mr. Leonard "Skip" Day, Jr.
Former Resident. Employee of Kilgore

Location: Kilgore Farm Property. Time: 1300

Todd Aebie met with Mr. Day at the Kilgore Farm Property to discuss his knowledge of the site and to get a eyewitness account of the activities being conducted there.

Mr. Day lived at the Kilgore Farm house from 1945-1949, then graduated from high school and enrolled at The Ohio State University. Mr. Day lived in the Kilgore Farm house with his parents and siblings. Mr. Day's father was one of the head chemists for Kilgore and caretaker of the property. His parents lived at the farm from 1945 till 1961 when Kilgore moved operations to Tennessee. Mr. Day continued to visit his parents at the Farm, and after returning from military service in 1952. worked as a third shift supervisor in the manufacturing area for approximately two years; 1952-1954. Mr. Day training in the Army was in explosive ordnance. After 1954, Mr. day became a police officer for the City of Westerville, Ohio which he served from 1955 until he retired in 1986 after 31 years of distinguished service.

Mr. Day was asked about the layout of the facility and the kind of work. burial, and history of the Kilgore Farm Property. Mr. Day stated that the only areas of burial he was aware of was in the southeast corner of the property (Known Burial Area), and along the banks of the drainage ditch running in the northeast portion of the property. The Burial Area had trenches where flare. trash. and chemicals were disposed. In the area of the ditch. material was buried within 8 to 10 feet of the banks: primarily flares. offspec material. etc. He was aware of these areas because those were the only two areas that were "Off Limits" to he and his brothers and sister. They were allowed to play and wonder in all other areas of the Farm. To the best of his knowledge, no other burial areas are present at the site.

The Kilgore Farm was a working farm throughout World War II and after. The northern property to the second storage bunker was farmed, the eastern portion along Tussic (Spring Road) to the house was farmed, and the southern area to the second bunker was farmed. Cattle were allowed to roam free in the area of the storage bunkers. burial area, the entire property. Herefords and dairy cows were at the farm. No animals were ever injured due to the operations at the Kilgore Facility.

Mr. Day said that his father worked with Dr. H.C. Clowser. a chemist who emigrated from Germany right before World War II. Dr. Clowser was incharge of the experimental facility at the Farm. The manufacturing area had separate two areas, one for experimental work, and one with the main manufacturing buildings. In the

experimental area, closest area to Tussic Road, is where experiments with munitions and flares took place. In the manufacturing area, the powder was pressed, flares assembled, most of the manufacturing took place. The black powder was pressed into pellets for use in a variety of devices. The Kilgore Farm made flares, some hand grenades, primers, flame throwers, and some 250 lb. bombs early in the War before turning to flare and pyrotechnics. To the best of his knowledge no bombs were ever buried on the site, nor were any mines ever produced at this facility.

Upon looking at the aerial photograph dated 1956, Mr. Day confirmed the area of the burn pit. The area was located in the eastern field of the farm. He said that the burn pit was at least 10' deep by 50' in diameter. Materials were regularly burned there. The burning was very complete because they had to make sure the materials were destroyed so they could use the pit again to burn. Every so often, the pit was graded over, and a new pit dug in the same place.

South and east of the burn pit in the 1956 aerial, is an area of potential debris, disturbed material. Mr. Day stated that this was the former experimental building doing research on shaped charges. The building was destroyed during an explosion which killed two workers.

The Kilgore farm house had a big stoked furnace, coal fired, in the basement which heated steam pipes which ran to the storage bunkers. The farm house was supplied with water from the well which fed the water tower. No City water was present at the site.

Materials used at the site included but not limited to: TNT, perchlorate, permanganate, red and white phosphorus, sulfur, black powder, copper, aluminum, and tetryl. Mr. Day will check with his brother regarding the use of other materials.

The storage bunkers, 12, were used to house finished materials, packing crates, cardboard, and some raw materials. No assembly or manufacturing took place in the metal storage bunkers.

The manufacturing area contained a boiler house, UST with fuel oil, powder presses, material storage, rolling tables for the explosives. Some people were burned during the manufacturing process.

Mr. Day saw the aluminum flare canisters and a larger, 4" in diameter shell rusted shell casing. The black caps, were used at the base of the flares as an ignitor. Inside the caps is the black powder pressed into pellets.

Blanchard, Scott

From: Bell, David D [DBell@otterbein.edu]
Sent: Tuesday, May 22, 2007 1:56 PM
To: Blanchard, Scott
Subject: RE: Equine Science Facility -- OEPA Voluntary Action Program Site Use Interview

I have replied to the best of my knowledge. However if something appears unclear please call me. 614 989-7113

David Bell
Director of Physical Plant and Telecommunications
Otterbein College
823-1092

From: Blanchard, Scott [mailto:smblanchard@brwncald.com]
Sent: Monday, May 21, 2007 10:41 AM
To: Bell, David D
Cc: Nelson, Barry
Subject: Equine Science Facility -- OEPA Voluntary Action Program Site Use Interview
Importance: High

David:

As part of the Voluntary Action Program process I need to interview the current land owner to document their current and historical land use and activities that are governed by the Voluntary Action Program Rules. Ohio Administrative Code OAC 3745-300-06(D) states, "Any current owner of a property upon which a voluntary action is being conducted must provide to the volunteer any information known by that owner which may be relevant to determining the existence of source areas on the property or whether treatment, storage, management, or disposal of hazardous substances or petroleum occurred or may have occurred at the property."

Would you please respond to the following questions to the best of your ability. Please don't hesitate to call me if you have any questions or would rather conduct this interview via telephone. All of these questions refer to the 69-acre parcel that is slated to become the Equine Science Facility (hereafter referred to as the "Site.")

1. What activities has Otterbein conducted on the Site since it acquired the former Kilgore Farms parcel? Otterbein has used the site as a temporary holding site for top soil and lay down materials from an off site construction project. The lay down materials were limestone products. Prior to this use the land has been fallow for at least 10 years. Prior to that someone farmed the land and planted it in corn or soy beans. During the time the land was being farmed Otterbein College hired an excavating company and under the guidance of the Army Corps of Engineers Ordinance Office attempted to determine whether there were any explosives buried on the site. Under this guidance several trenches were dug in the suspected or known burial sites. To my knowledge there were no ordinance found.
2. To the best of your knowledge, what historical Site uses occurred on the property prior to Otterbein's acquisition of the property? Kilgore Manufacturing produced flares for the U. S. military during W.W.II. After the war the company made plastic toys and caps for cap guns.
3. Has Otterbein stored, disposed or managed hazardous substances and/or petroleum on the property? Otterbein College has not stored hazardous or petroleum products on this property. Otterbein College has not disposed of hazardous or petroleum products on this property. Otterbein College has not managed hazardous materials or petroleum products on this property.
4. To the best of your knowledge, has any other party stored, disposed or managed hazardous substances and/or petroleum on the property? To the best of my knowledge no other party has stored, disposed of or managed hazardous or petroleum products on this property.
5. To the best of your knowledge, has any adjacent property impacted the Site via a release or spill of hazardous substances and/or petroleum? To the best of my knowledge no property adjacent the property

has impacted the Site via hazardous substances and/or petroleum.

6. What was the source of the sand and gravel and fill dirt stock piles on the Site located just south of the driveway access? When were these stockpiles staged onsite? The source of the soil and sand stock piled on the property was from the excavated top soil and lay down materials from the suites construction project on the Otterbein College campus in August of 2006. The address of the site was 96 W. Home Street, Westerville, Ohio.
7. Are you aware of any other information that might assist with the identification of potential source areas on the Site? There is a map of the trenches in the Service Department Office that was produced when the trenches in item #1 were dug.

Thank you for your time and support.
-Scott

Scott M. Blanchard, C.P.G., C.P.
Senior Geologist
Brown and Caldwell
4700 Lakehurst Court
Suite 100
Columbus, OH 43016
(614) 410-6144
(614) 410-3088 fax
smblanchard@brwncald.com

APPENDIX H

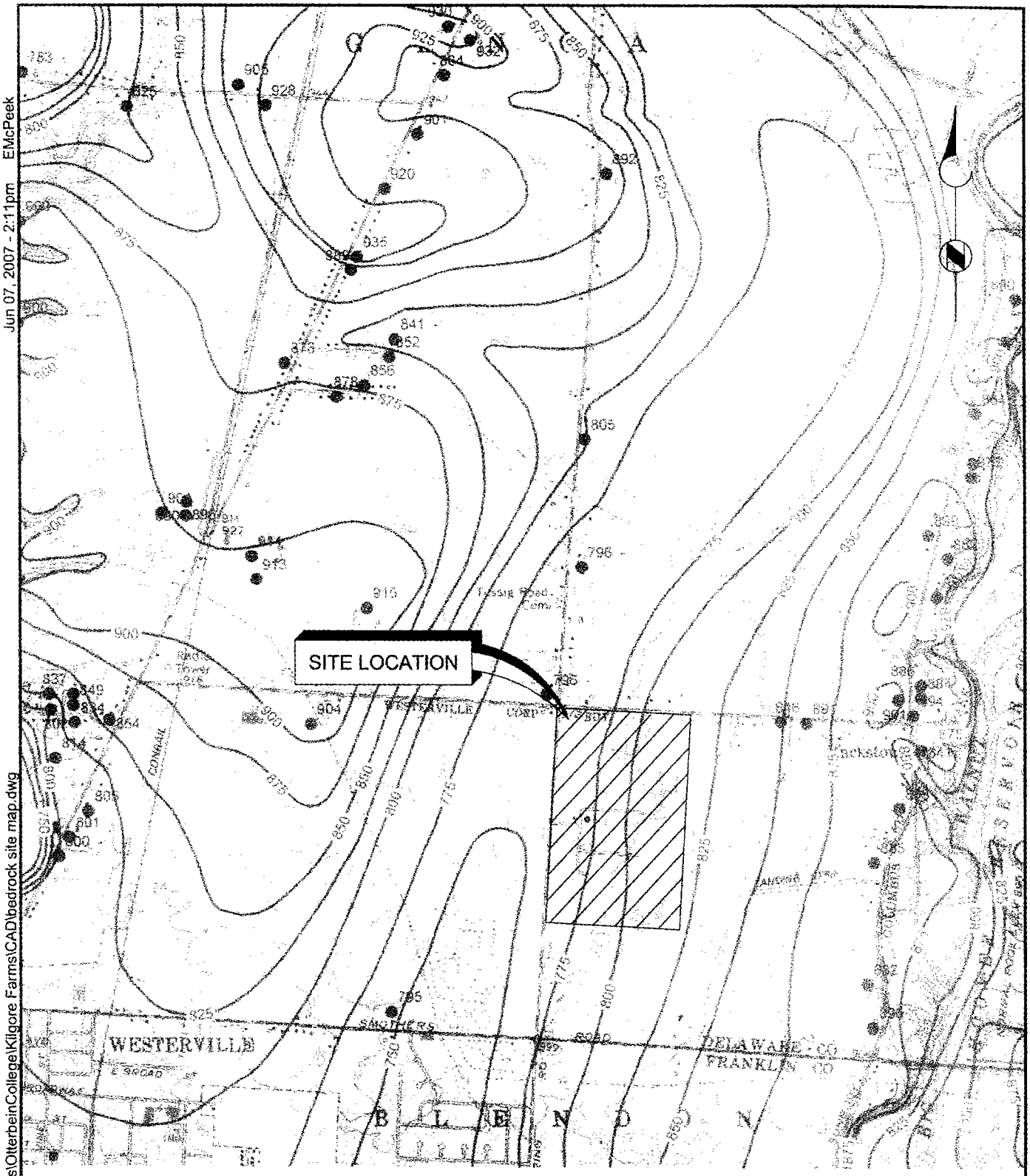
H.1 Bedrock Geology Map

H.2 Soil Survey Map for the Equine Facility

H.3 ODNR Groundwater Well Logs within ½-mile of Site

APPENDIX H.1

Bedrock Geology Map



ADAPTED FROM U.S. GEOLOGICAL SURVEY MAP
GALENA QUADRANGLE
OHIO
7.5 MINUTE SERIES (TOPOGRAPHIC)

Jun 07, 2007 - 2:11pm EMcPeek

P:\Project Working Files\OtterbeinCollege\Kilgore Farms\CAD\bedrock site map.dwg

BROWN AND CALDWELL

OTTERBIEN COLLEGE
BEDROCK TOPOGRAPHY MAP
FIGURE 1

APPENDIX H.2

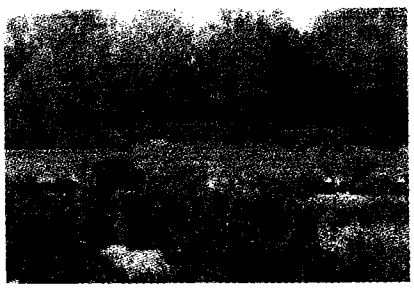
Soil Survey Map for the Equine Facility

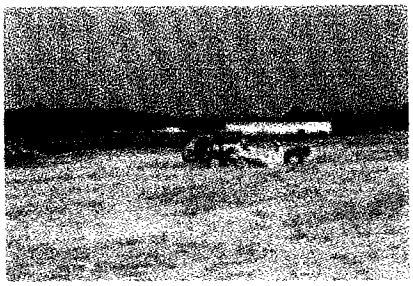
United States Department of Agriculture

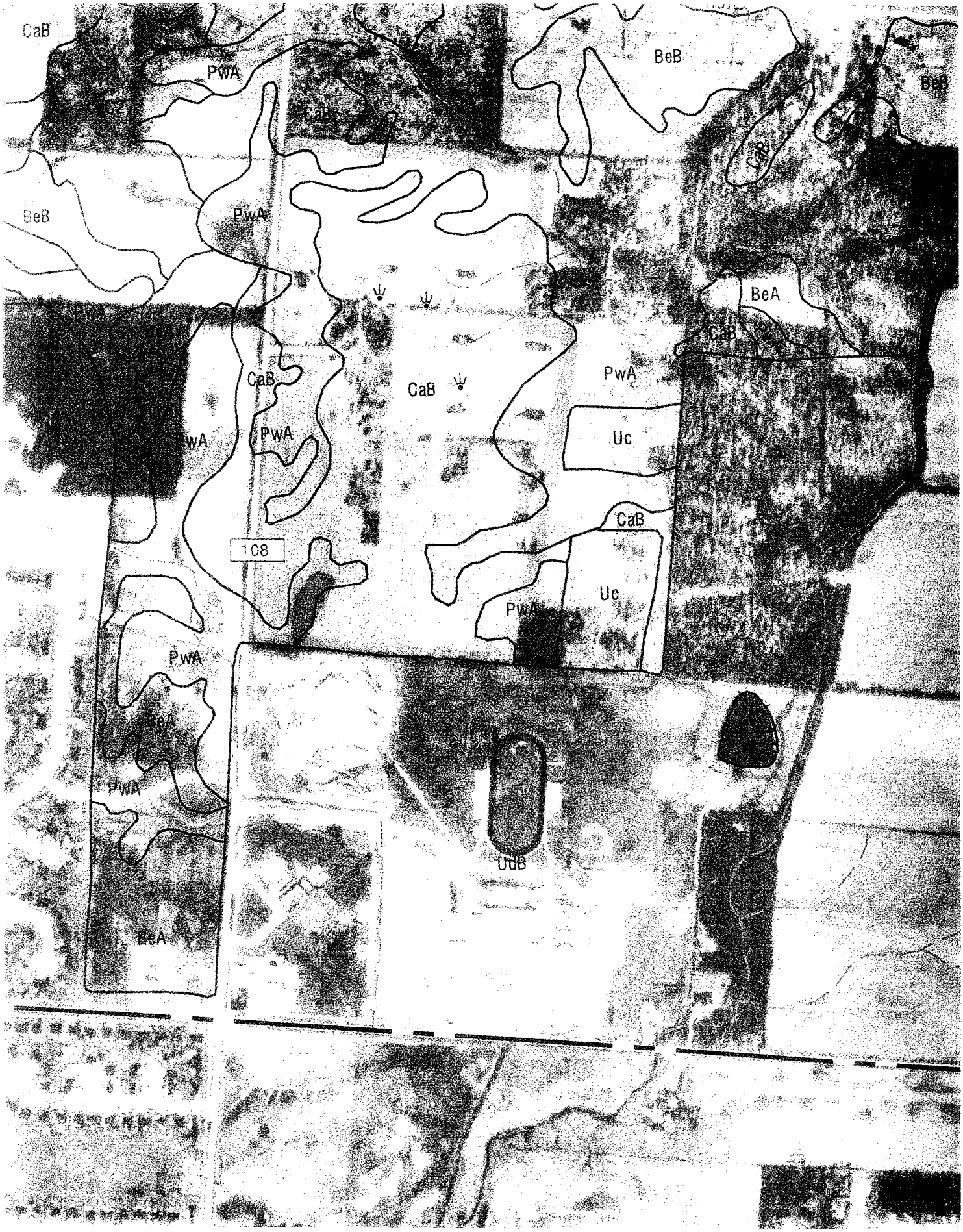
Natural Resources Conservation Service

In cooperation with Ohio Department of Natural Resources, Division of Soil and Water Conservation; Ohio Agricultural Research and Development Center; Ohio State University Extension; Delaware Soil and Water Conservation District; Delaware County Commissioners; and Delaware County Auditor

Soil Survey of Delaware County, Ohio







CaB
PWA
BeB
BeB
PwA
BeA
CaB
CaB
CaB
PwA
Uc
PwA
CaB
108
Uc
PwA
PwA
BeA
PWA
UdB
BeA

SOIL LEGEND

Map symbols consist of a combination of letters or letters and numbers. The first capital letter is the initial one of the map unit name. The lowercase letter that follows separates map units having names that begin with the same letter, except that it does not separate sloping or eroded phases. The second capital letter indicates the class of slope. Symbols without a slope letter are for miscellaneous areas or for soils named for categories above the series level that have variable slope ranges. A final number of 2 indicates that the soil is eroded, and a final number of 3 indicates that the soil is severely eroded.

SYMBOL	NAME
AmD2	Amanda silt loam, 12 to 18 percent slopes, eroded
AmE	Amanda silt loam, 18 to 25 percent slopes
AmF	Amanda silt loam, 25 to 50 percent slopes
BeA	Bennington silt loam, 0 to 2 percent slopes
BeB	Bennington silt loam, 2 to 4 percent slopes
BoA	Blount silt loam, 0 to 2 percent slopes
BoB	Blount silt loam, 2 to 4 percent slopes
CaB	Cardington silt loam, 2 to 6 percent slopes
CaC2	Cardington silt loam, 6 to 12 percent slopes, eroded
CeB	Centerburg silt loam, 2 to 6 percent slopes
CeC2	Centerburg silt loam, 6 to 12 percent slopes, eroded
CnA	Condit silt loam, 0 to 1 percent slopes
EdA	Edwards muck, 0 to 1 percent slopes
GaC2	Gallman loam, loamy substratum, 6 to 12 percent slopes, eroded
GbA	Gallman silt loam, loamy substratum, 0 to 2 percent slopes
GbB	Gallman silt loam, loamy substratum, 2 to 6 percent slopes
GrB	Gallman silt loam, till substratum, 2 to 6 percent slopes
GwB	Glynwood silt loam, 2 to 6 percent slopes
GwC2	Glynwood silt loam, 6 to 12 percent slopes, eroded
GzC3	Glynwood silty clay loam, 6 to 12 percent slopes, severely eroded
HeF	Hennepin silt loam, 25 to 70 percent slopes
HyA	Hyatts silt loam, 0 to 2 percent slopes
HyB	Hyatts silt loam, 2 to 4 percent slopes
JtA	Jimtown silt loam, 0 to 2 percent slopes
LbF	Latham-Brecksville complex, 25 to 70 percent slopes
LoE	Lorain gravelly loam, 12 to 25 percent slopes
LoA	Lobdell silt loam, channery substratum, 0 to 2 percent slopes, occasionally flooded
LsA	Lobdell, channery substratum-Sloan, till substratum complex, 0 to 2 percent slopes, occasionally flooded
LvB	Loudonville silt loam, 2 to 6 percent slopes
LyD2	Lybrand silt loam, 12 to 18 percent slopes, eroded
LyE2	Lybrand silt loam, 18 to 25 percent slopes, eroded
LzD3	Lybrand silty clay loam, 12 to 18 percent slopes, severely eroded
MaB	Martinsville loam, 2 to 6 percent slopes
MdB	Martinsville loam, till substratum, 2 to 6 percent slopes
MeD2	Mentor silt loam, 12 to 18 percent slopes, eroded
MfA	Milgrove silt loam, 0 to 2 percent slopes
MgA	Milgrove silty clay loam, 0 to 2 percent slopes
MhA	Milgrove silty clay loam, 0 to 2 percent slopes, rarely flooded
MoB	Milton silt loam, 2 to 6 percent slopes
MoC2	Milton silt loam, 6 to 12 percent slopes, eroded
MpD2	Milton-Lybrand complex, 12 to 18 percent slopes, eroded
PaA	Pacer silt loam, 0 to 2 percent slopes
PwA	Pewamo silty clay loam, 0 to 1 percent slopes
Pz	Pits, gravel
RdB2	Rarden silt loam, 2 to 6 percent slopes, eroded
RdC2	Rarden silt loam, 6 to 15 percent slopes, eroded
RdF2	Rarden silt loam, 30 to 50 percent slopes, eroded
RoA	Rossburg silt loam, 0 to 2 percent slopes, occasionally flooded
RsA	Rossburg-Sloan complex, 0 to 2 percent slopes, occasionally flooded
ScA	Scioto silt loam, 0 to 2 percent slopes
ScB	Scioto silt loam, 2 to 6 percent slopes
SdC2	Scioto silty clay loam, 6 to 12 percent slopes, eroded
SfA	Scioto silt loam, 0 to 2 percent slopes, rarely flooded
SgA	Shoals silt loam, 0 to 2 percent slopes, occasionally flooded
SlA	Sloan silt loam, 0 to 2 percent slopes, occasionally flooded
SnA	Sloan silt loam, till substratum, 0 to 2 percent slopes, occasionally flooded
SoA	Sloan silty clay loam, till substratum, 0 to 2 percent slopes, occasionally flooded
SsA	Smothers silt loam, 0 to 2 percent slopes
SsB	Smothers silt loam, 2 to 4 percent slopes
StA	Stone silty clay loam, 0 to 2 percent slopes
SuA	Stone clay loam, 0 to 2 percent slopes, rarely flooded
Ur	Udorthents
UrB	Udorthents, clayey-Urban land complex, undulating
Up	Udorthents-Pits complex
W	Water

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

- National, state, or province
- County or parish
- Minor civil division
- Reservation (national forest or park, state forest or park)
- Land grant
- Limit of soil survey (label) and/or denied access area
- Field sheet matchline & neatline
- Previously Published Survey

OTHER BOUNDARY (label)

- Airport, airfield
- Cemetery
- City/county park

STATE COORDINATE TICK 1 590 000 FEET

LAND DIVISION CORNER (section and land grants)

GEOGRAPHIC COORDINATE TICK

TRANSPORTATION

- Divided roads
- Other roads
- Trail

ROAD EMBLEM AND DESIGNATIONS

- Interstate
- Federal
- State
- County, farm or ranch

RAILROAD

POWER TRANSMISSION LINE (normally not shown)

PIPELINE

FENCE

LEVEES

- Without road
- With road
- With railroad
- Single side slope (showing actual feature location)

DAMS

- Medium or Small

LANDFORM FEATURES

- Prominent hill or peak
- Soil Sample Site

MISCELLANEOUS CULTURAL FEATURES

- Farmstead, house
- Church
- School
- Other Religion (Mt Carmel)
- Located object (Ranger station)
- Tank
- Lookout Tower
- Oil and/or Natural Gas Wells
- Windmill
- Lighthouse

HYDROGRAPHIC FEATURES

STREAMS

- Perennial stream, double line
- Perennial stream, single line
- Intermittent stream
- Drainage end

DRAINAGE AND IRRIGATION

- Double-line canal (label)
- Perennial drainage and/or irrigation ditch
- Intermittent drainage and/or irrigation ditch

SMALL LAKES, PONDS AND RESERVOIRS

- Perennial water
- Miscellaneous water
- Flood pool line

MISCELLANEOUS WATER FEATURES

- Spring
- Well, artesian
- Well, irrigation

SPECIAL SYMBOLS FOR SOIL SURVEY AND SSURGO

SOIL DELINEATIONS AND SYMBOLS

LANDFORM FEATURES

- Bedrock escarpment
- Other than bedrock escarpment
- Short steep slope
- Gully
- Depression, closed
- Sinkhole

EXCAVATIONS

- Borrow pits
- Gravel pit
- Mine or quarry
- Landfill

MISCELLANEOUS SURFACE FEATURES

- Blowout
- Clay spot
- Gravelly spot
- Muck spot
- Marsh or swamp
- Rock outcrop (includes sandstone and shale)
- Saline spot
- Sandy spot
- Severely eroded spot
- Slide or slip
- Sinkhole spot
- Spoil area
- Stony spot
- Crystal pedon
- Very stony spot
- Wet spot

APPENDIX H.3

ODNR Groundwater Well Logs within ½-mile of Site

Summary of Located Water Well Logs on File with ODNR
Otterbein College - Kilgore Farms

398006	222	1452.0	7.5		7.5	4	12	NR	0.3	480.0	0.5	2	R
231409	155	2376.0	25.0		25.0	30	6	30	5.0	7200.0	NR	6	R
140818	240	2640.0	38.0		38.0	10	NR	10			NR	18	R
277301	275	495.0	31.0	1.5	32.5	15	5	NR	3.0	4320.0	4.0	17	U
354853	272	495.0	43.0	3	46.0	15	2	NR	7.5	10800.0	3.0	3	U
353602	273	495.0	43.5	2	45.5	10	20	NR	0.5	720.0	1.0	10	U
400934	271	495.0	67.0	1.4	68.4	20	NR	NR			NR	15	U
354859	274	528.0	57.0		57.0	12	3	NR	4.0	5760.0	2.0	13	U
376214	221	897.6	49.0		49.0	12	3	NR	4.0	5760.0	1.5	9	U
126743	218	897.6	91.0		91.0	NR	NR	NR			NR	NR	U
126740	220	897.6	95.0		95.0	NR	NR	NR			NR	NR	U
126741	219	897.6	96.0		96.0	NR	NR	NR			NR	12	U
296202	217	990.0	110.0		110.0	10	34	NR	0.3	423.5	2.0	44	U
214841	216	990.0	124.0		124.0	10	NR	10			NR	39	U
161841	215	1320.0	107.0		107.0	10	NR	10			NR	34	U
161832	276	1531.2	39.0		39.0	20	NR	20			NR	20	U
161808	214	1584.0	115.0		115.0	10	NR	10			NR	47	U
199414	213	1848.0	123.0		123.0	15	NR	15			NR	38	U
185082	269	2534.4	115.0		115.0	NR	10	7			NR	27	U
106001	8	2640.0	125.0	1.5	126.5	10	5	10	2.0	2880.0	NR	29	U

Notes:
NR = Information is not recorded on well log
Specific capacity estimates represent the limited duration of pumping of the well test as recorded on the well log. Specific capacity typically dimenishes with pumping length (Fette

SUMMARY OF LOCATED WATER WELL LOGS ON FILE WITH ODNR DIVISION OF WATER
OTTERBEIN COLLEGE - KILGORE FARMS

Water Well Logs Located Within 1/2-Mile											
Depth Interval	Number of wells screened above rock	Number of wells screened in rock		Average Casing Length (wells screened in Unconsolid.)	Average Casing Length (Wells screened in rock)	Average TD well in sand	Average TD well in rock	Capacity (wells above rock)	Capacity (wells in rock)	Static Water Level (well above rock)	Static Water Level (well in rock)
All wells	17	3	Average	84.1	23.5	84.7	23.5	11.7	20.0	23.8	8.7
< 30	0	2	Min	31	7.5	32.5	7.5	7	10	3	2
< 40	2	1	Max	125	38	126.5	38	20	30	47	18
< 50	3	0									
< 60	1	0									
< 70	1	0									
< 80	0	0									
< 90	0	0									
< 100	3	0									
< 110	2	0									
< 120	2	0									
< 130	3	0									
< 140	0	0									

WELL LOG AND DRILLING REPORT

ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

Nº 106001

47

County ..... Township ..... Section of Township or Lot Number .....

Owner ..... Address .....

Location of property .....

CONSTRUCTION DETAILS

Casing diameter ..... Length of casing .....

Type of screen ..... Length of screen .....

Type of pump .....

Capacity of pump .....

Depth of pump setting .....

PUMPING TEST

Pumping rate ..... G.P.M. Duration of test ..... hrs.

Drawdown ..... ft. Date .....

Developed capacity .....

Static level—depth to water ..... ft.

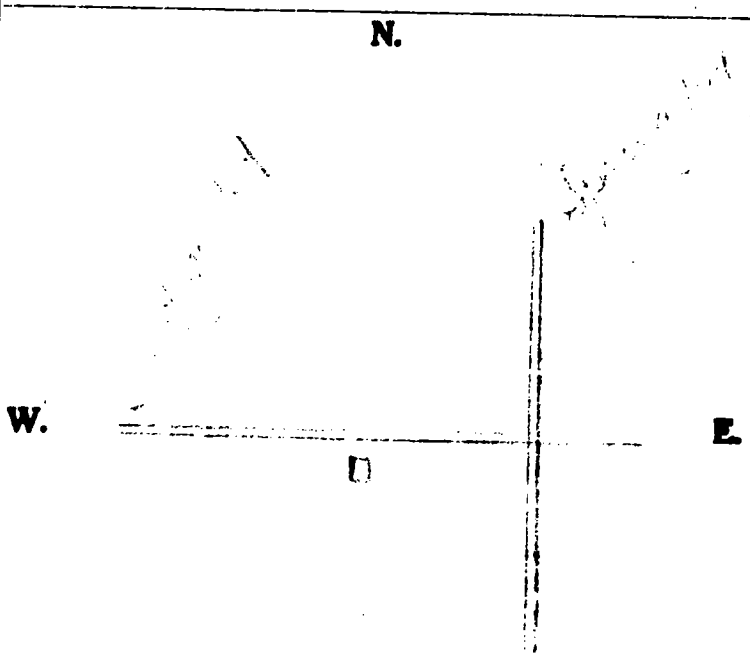
Pump installed by .....

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
[illegible]	0 Feet	[illegible] Ft.
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	111	123
[illegible]	123	125

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



X = 1,884,000
Y = 169,600 - N

See reverse side for instructions

Drilling Firm ..... Date .....

Address ..... Signed .....

R

ORIGINAL

78

W L. LOG AND DRILLING REPORT

PLEASE USE PENCIL OR TYPEWRITER. DO NOT USE INK.

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio

No. 231409

Genoa

County Delaware Township Liberty Section of Township 3

Owner Johnson - Davies Co. Address 8. E Long St

Location of property Oh Sunbury Rd Kmi. N of Co. line

CONSTRUCTION DETAILS

Casing diameter 5 5/8 Length of casing 25'

Type of screen Length of screen

Type of pump

Capacity of pump

Depth of pump setting

Date of completion May 1, 1959

BAILING OR PUMPING TEST

Pumping rate 30 G.P.M. Duration of test hrs.

Drawdown 6 ft. Date

Developed capacity 30 g.p.m

Static level—depth to water 6 ft.

Pump installed by

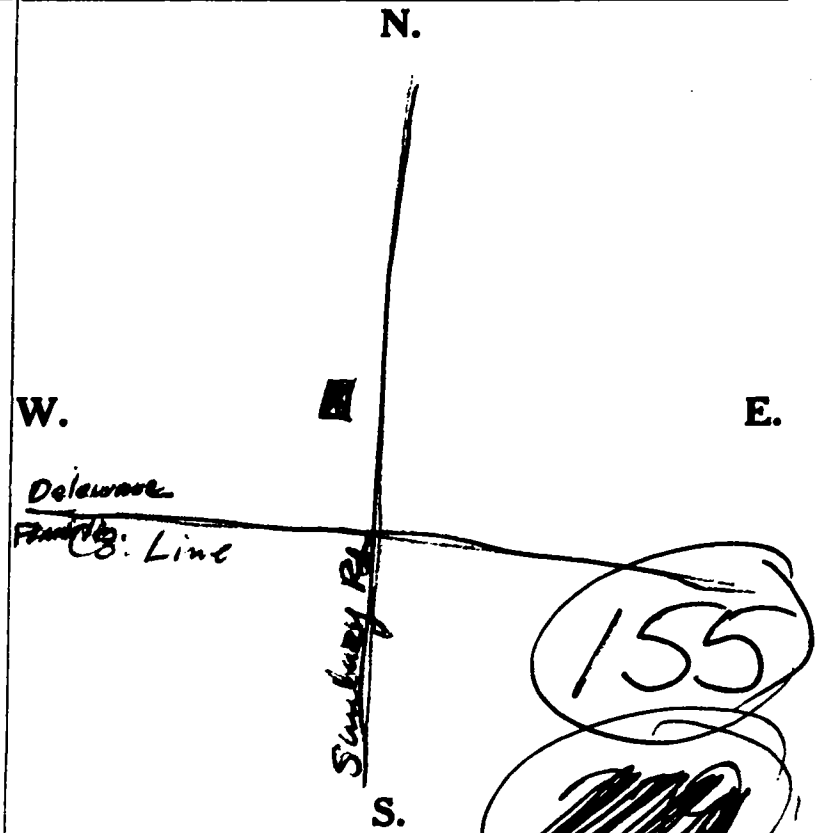
WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	25 Ft.
shale	25'	80'
WATER AT 26' + 80'		

906
25
881

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



155

See reverse side for instructions

Drilling Firm Plummer-McDonald Date May 30, 1959

Address Galena, O Signed R Bruce McDonald

LOCATED

WELL LOG AND DRILLING REPORT

ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1500 Dublin Road
Columbus, Ohio

No. 199414

County Delaware Township Genoa Section of Township 4

Owner Davis Address Galena

Location of property On Jewett St

CONSTRUCTION DETAILS

Casing diameter 4" Length of casing 123'
Type of screen None Length of screen
Type of pump Deep well
Capacity of pump
Depth of pump setting
Date of completion

BAILING OR PUMPING TEST

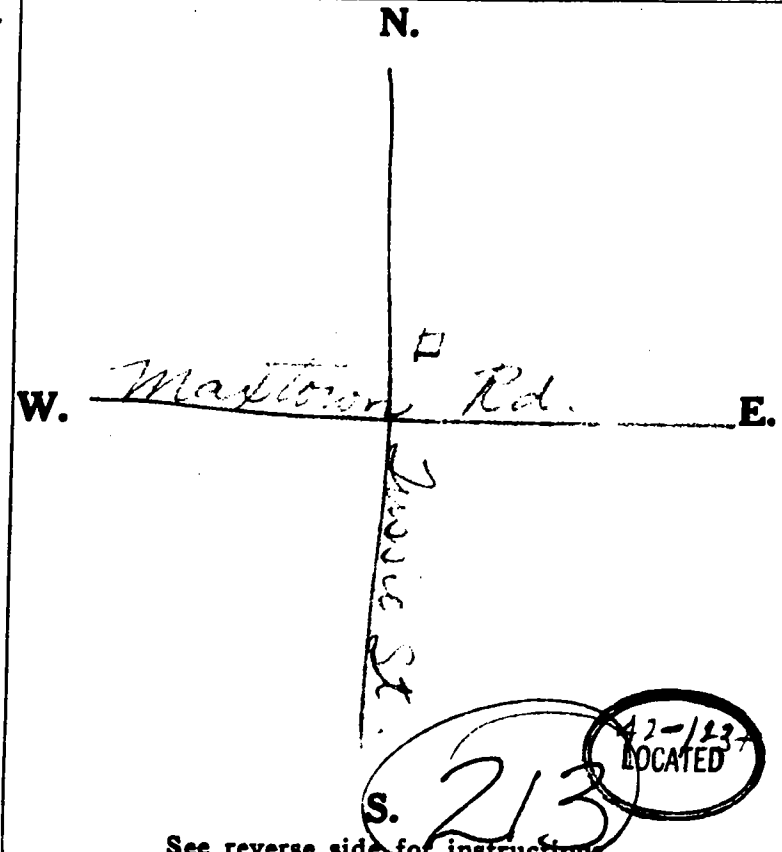
Pumping rate 15 G.P.M. Duration of test hrs.
Drawdown ft. Date July 1
Developed capacity 15 g.p.m.
Static level—depth to water 38 ft.
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	122 Ft.
Gravel	122	123
water at 123'		

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm
Address
Date July 31
Signed

WELL LOG AND DRILLING REPORT

ORIGINAL

LOCATED

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

43 (4)

No 161808

County Delaware Township Genoa Section of Township or Lot Number 4

Owner Green Address Westerville

Location of property On Huntington St.

CONSTRUCTION DETAILS

Casing diameter 4" Length of casing 115'

Type of screen none Length of screen

Type of pump Unknown

Capacity of pump

Depth of pump setting

PUMPING TEST

Pumping rate 10 G.P.M. Duration of test hrs.

Drawdown none ft. Date Sept 7

Developed capacity 10 G.P.M.

Static level—depth to water 47' ft.

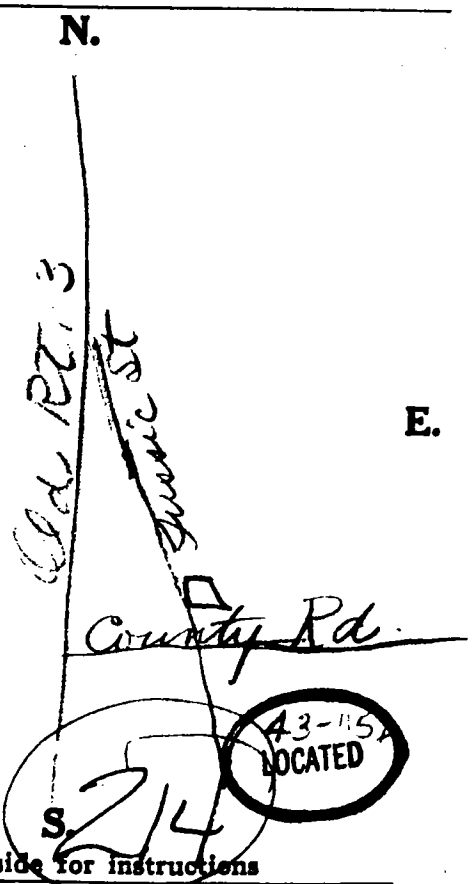
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	~~25~~ Ft.
Quicksand	25	30
Clay	30	113
Sand + gravel	113	115
Water at 115'		

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm

Address Galion O

Date Sept. 30 '55

Signed Chas Thurston

LOCATED

WELL LOG AND DRILLING REPORT

ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

LOCATED

No 161841

County Delaware Township Genoa Section of Township or Lot Number 4

Owner James Reed Address Westerville O

Location of property On Francis St

CONSTRUCTION DETAILS

Casing diameter 4" Length of casing 107'

Type of screen none Length of screen

Type of pump Sunbeam

Capacity of pump

Depth of pump setting

PUMPING TEST

Pumping rate 10 G.P.M. Duration of test hrs.

Drawdown 100 ft. Date Apr. 19

Developed capacity 10 g.p.m.

Static level—depth to water 34 ft.

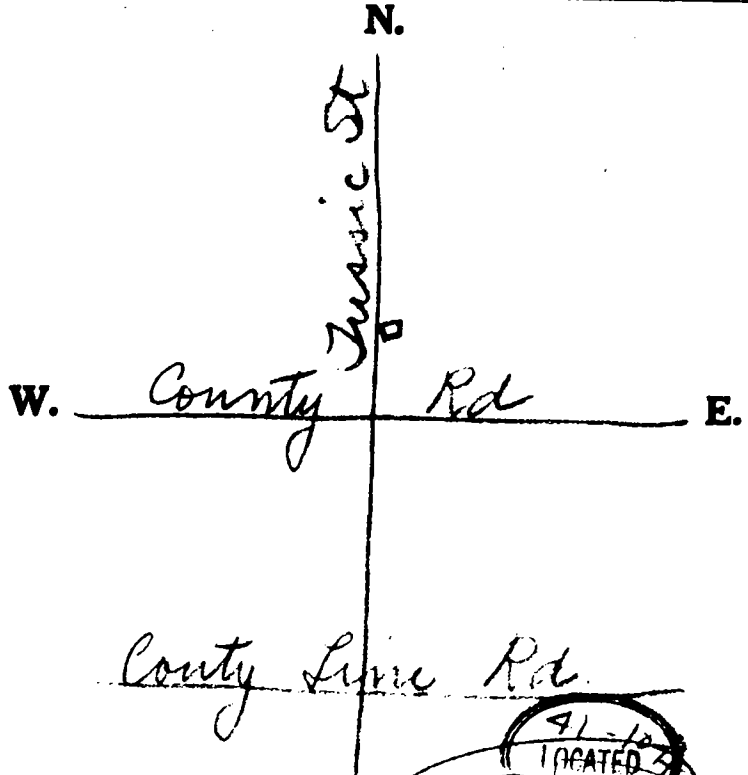
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	105 Ft.
Sand & gravel	105	107
water at 107'		

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



LOCATED

See reverse side for instructions

Drilling Firm

Address Galena O

Date Apr. 30

Signed Chas. Plummer

LOCATED

ORIGINAL
5 7

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1500 Dublin Road
Columbus, Ohio

No. 214841

County Delaware Township Genoa Section of Township 4

Owner Wayne Cleveland Butler Address Manengo, O.

Location of property N-W corner of MacTown Rd & Tussic St.

CONSTRUCTION DETAILS

Casing diameter 4" Length of casing 124'
Type of screen Length of screen
Type of pump
Capacity of pump
Depth of pump setting
Date of completion Dec. 27, 1958

BAILING OR PUMPING TEST

Pumping rate 10 G.P.M. Duration of test hrs.
Drawdown no ft. Date
Developed capacity 10 gpm
Static level—depth to water 39' ft.
Pump installed by

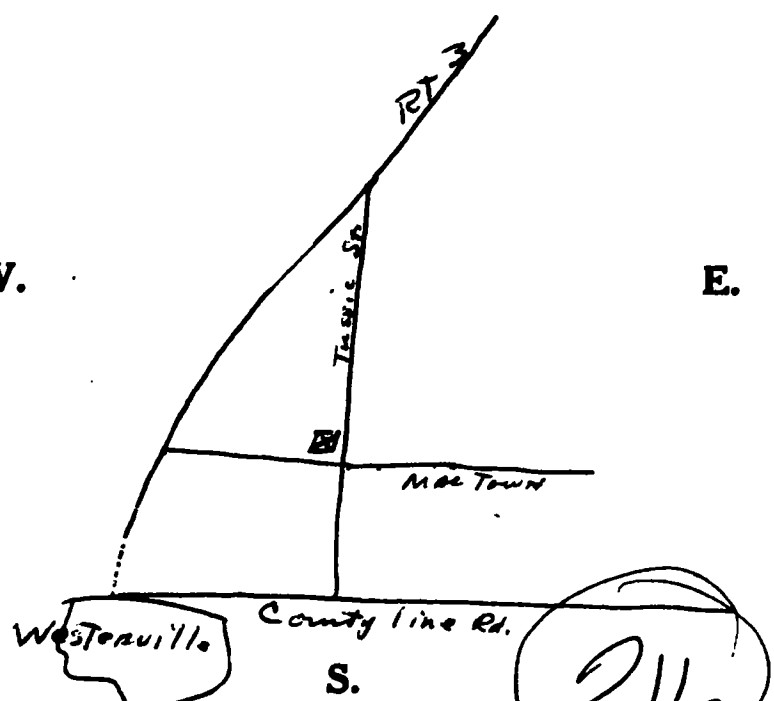
WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	120 Ft.
Fine Sand	120'	122'
Sand + Gravel	122'	124
Water at 124'		

421
124
297

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

216

Drilling Firm Plummer-McDonald Date JAN. 2, 1959

Address Galena, Ohio Signed R. Bruce McDonald

LOCATED

WELL LOG AND DRILLING REPORT

ORIGINAL

PLEASE USE PENCIL OR TYPEWRITER DO NOT USE INK.

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus 12, Ohio

No 296202

County Delaware Township Genoa Section of Township St.

Owner Robert L. Fulwider Address 9112 Jessie St. Westerville Ohio RR

Location of property 9112 Jessie St.

CONSTRUCTION DETAILS

Casing diameter 4 1/4" Length of casing 110'

Type of screen None Length of screen

Type of pump Submersible

Capacity of pump 700 gal. Per hr.

Depth of pump setting 84'

Date of completion Jan. 8 64

BAILING OR PUMPING TEST

Pumping Rate 10 G.P.M. Duration of test 2 hrs.

Drawdown 34 ft. Date

Static level-depth to water 44 ft.

Quality (clear, cloudy, taste, odor)

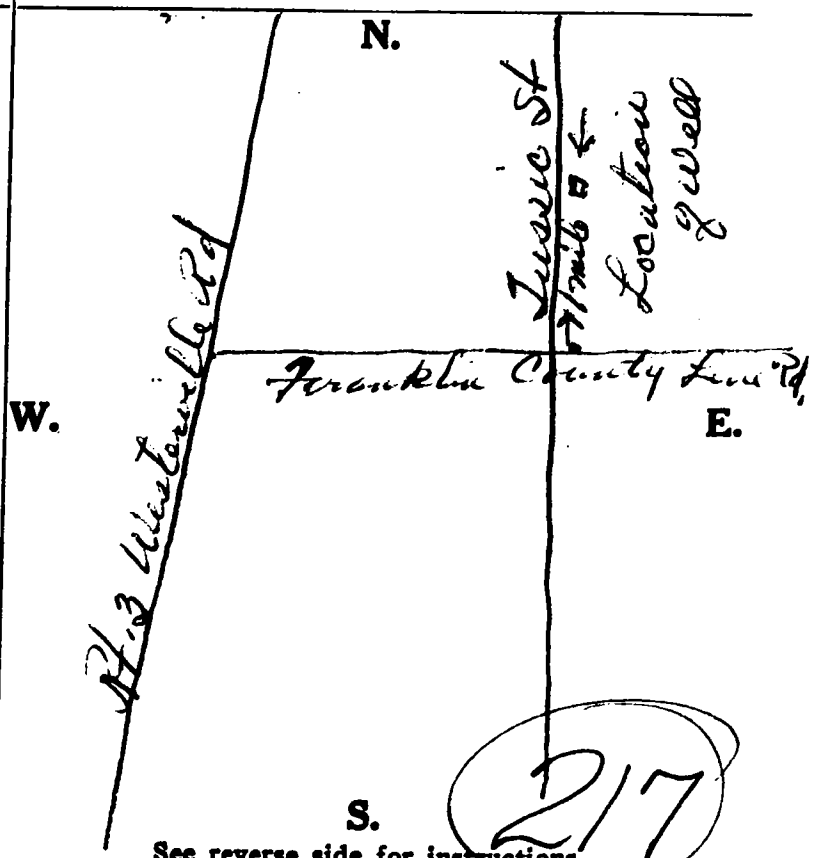
Pump installed by P. Plummer Bros.

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	108 Ft.
sand & Gravel	108	110

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm P. Plummer Bros. Date Harold E. Plummer

Address 5311 Patrick St. Signed Jan 9/64

Franklin Ohio

LOCATED

WELL LOG AND DRILLING REPORT

ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

LOCATED

№ 126743

County: Delaware Township: Genoa Section of Township or Lot Number:

Owner: Raymond E. Lytle Address: 217 Wagner St. City

Location of property: Approx 1 Mile East West of Sunbury Pike from Maxtown Rd. N. Side of Rd.

CONSTRUCTION DETAILS

Casing diameter: 5" Length of casing: 91'

Type of screen: Length of screen:

Type of pump:

Capacity of pump:

Depth of pump setting:

PUMPING TEST

Pumping rate: G.P.M. Duration of test: hrs.

Drawdown: ft. Date:

Developed capacity:

Static level—depth to water: ft.

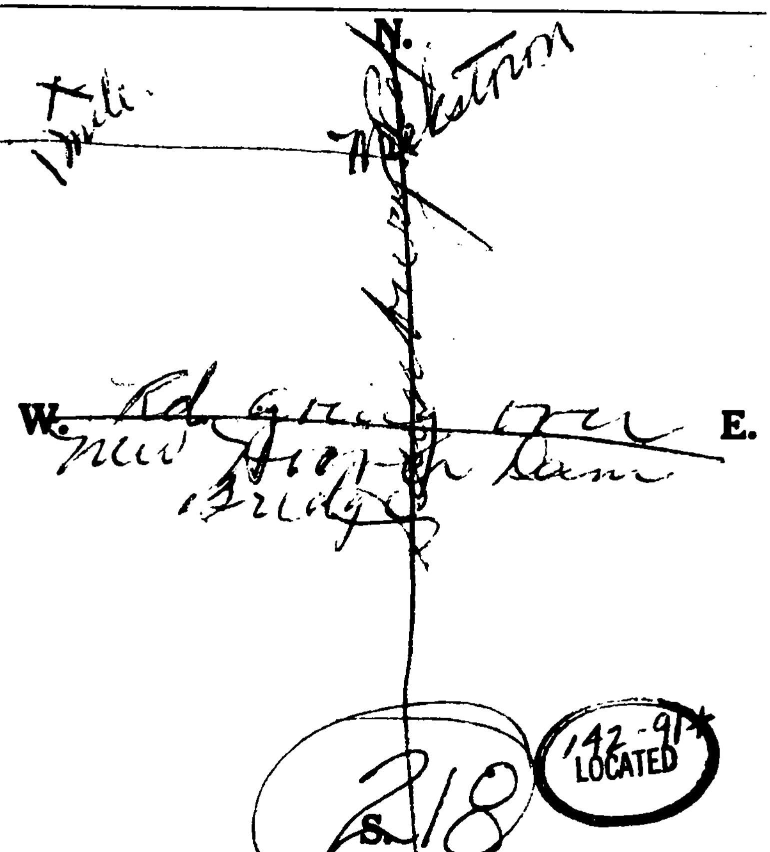
Pump installed by:

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
	0 Feet	Ft.
Blue Clay	0	85
Sand	85	90
Gravel and Water	90	91

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



218

142-91 LOCATED

See reverse side for instructions

Drilling Firm: ARCHIE RYAN WELL DRILLING CO.

Address: 119 Kian Ave

Date: June 13th 1956

Signed: Mrs Archie Ryan

LOCATED

ORIGINAL

WELL LOG AND DRILLING REPORT

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

LOCATED

Nº 126741

County Delaware Township Genoa Section of Township or Lot Number (20)

Owner Ralph Heyl Address 2950 Pontiac St. Ohio

Location of property Appr. 1 Mile West of Sunbury Rd. North side of st. Mackstown / Maxtown

CONSTRUCTION DETAILS	
Casing diameter 5"	Length of casing 96'
Type of screen	Length of screen
Type of pump	
Capacity of pump	
Depth of pump setting	

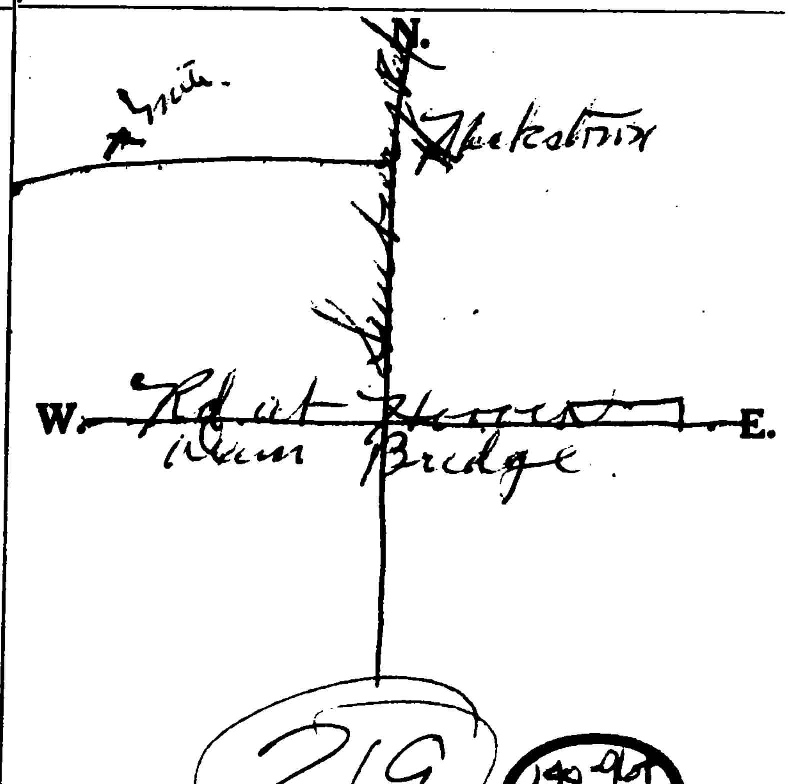
PUMPING TEST	
Pumping rate ...... G.P.M.	Duration of test ...... hrs.
Drawdown ...... ft.	Date
Developed capacity	
Static level—depth to water 12 ft.	
Pump installed by	

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
	0 Feet	...... Ft.
Blue Clay	0	90
Sand Gravel & Water	90	96

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



219

140-96 LOCATED

See reverse side for instructions

Drilling Firm ARCHIE RYAN WELL DRILLING CO. Date May 2?th 1956

Address 114 Kian Ave. Signed Mrs. Archy Ryan

LOCATED

WELL LOG AND DRILLING REPORT

ORIGINAL

LOCATED

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

No. 126740

County Jefferson Township [illegible] Section of Township or Lot Number

Owner Kenneth Sulewart Address 2963 Portia St. [illegible]

Location of property Approx 1 mile West of Junction of [illegible] North Side Street at Broadway

CONSTRUCTION DETAILS

Casing diameter 5" Length of casing 95'

Type of screen Length of screen

Type of pump

Capacity of pump

Depth of pump setting

PUMPING TEST

Pumping rate G.P.M. Duration of test hrs.

Drawdown ft. Date

Developed capacity

Static level—depth to water ft.

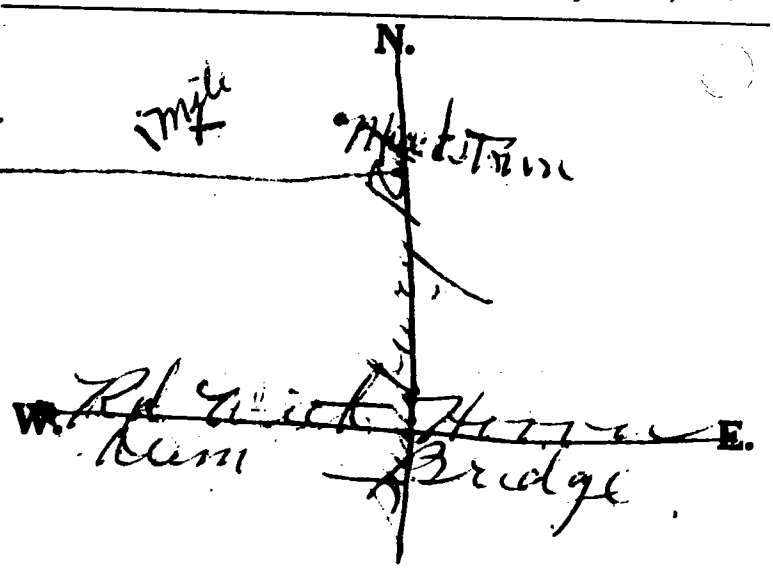
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
	0 Feet	Ft.
Blue Clay	0	90
Sand Gravel and Water	90	95

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



220

LOCATED 1-29-57

See reverse side for instructions

Drilling Firm [illegible] RYAN WELL DRILLING CO.

Address 109 Kim St

Date May 17th 1956

Signed [illegible]

Maxtown

LOCATED

WE'. LOG AND DRILLING RE'ORT

ORIGINAL

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
65 S. Front St., Rm. 815 Phone (614) 469-2646
Columbus, Ohio 43215

No. 376214

County Delaware Township Genoa Section of Township 4

Owner Jan Sorgenfrei Address 76 Electric Ave, Westerville, O

Location of property On Mackstown Rd #32 - ½ mile W. of Sunbury Rd.

CONSTRUCTION DETAILS

Casing diameter 6" OD Length of casing 49'

Type of screen — Length of screen —

Type of pump

Capacity of pump

Depth of pump setting

Date of completion

BAILING OR (PUMPING) TEST
(Specify one by circling)

Test Rate 12 G.P.M. Duration of test 1½ hrs.

Drawdown 3 ft. Date June 12, 1968

Static level-depth to water 9' ft.

Quality (clear, cloudy, taste, odor)

clear - good taste & odor

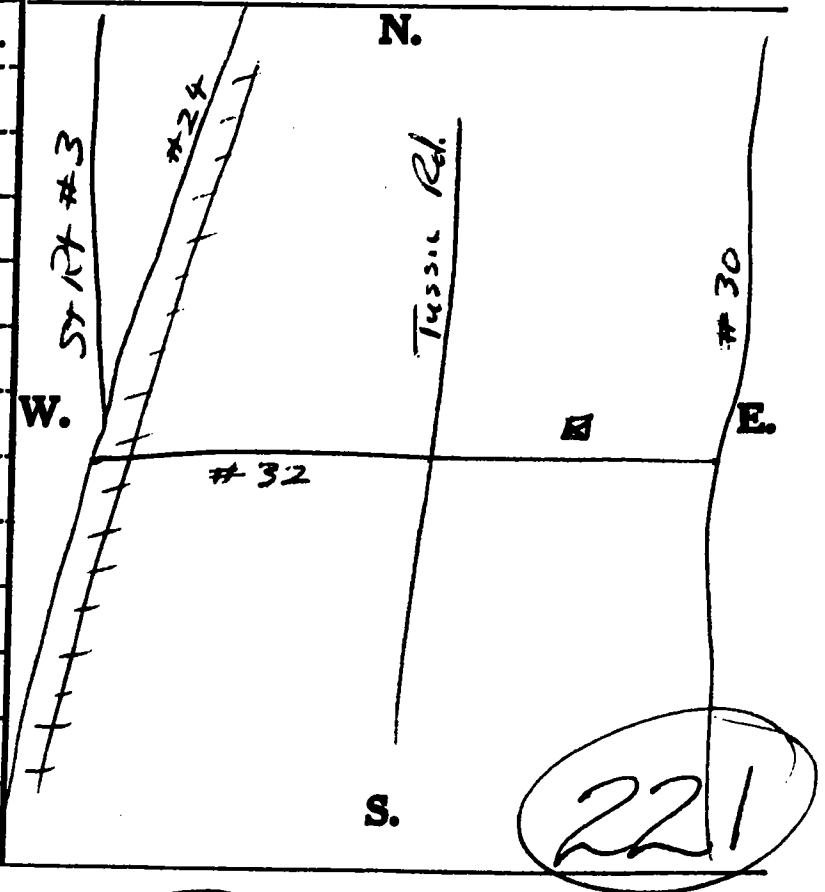
Pump installed by

WELL LOG*

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	21 Ft.
Sand	21'	25'
Clay	25'	46'
Sand	46'	48'
Sand & Gravel	48'	49'
WATER AT 49'		

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



Drilling Firm Plummer & McDonald Date June 25 1968

Address Galena, Ohio Signed R Bruce McDonald

Max Fuson

*If additional space is needed to complete well log, use next consecutive numbered form.

WE' LOG AND DRILLING RE'ORT

ORIGINAL

NO CARBON PAPER NECESSARY— SELF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
65 S. Front St., Rm. 815 Phone (614) 469-2646
Columbus, Ohio 43215

No. 398006

County Delaware Township Genoa Section of Township 4

Owner Lee Lyons Address 910 E. Hillen Rd. Col. O.

Location of property On Mockstown Rd (32) - 1/4 mile W. of Sunbury Rd (30)

CONSTRUCTION DETAILS

Casing diameter 6" OD. Length of casing 7 1/2'

Type of screen — Length of screen —

Type of pump

Capacity of pump

Depth of pump setting

Date of completion 8-15-69

BAILING OR PUMPING TEST
(Specify one by circling)

Test Rate 4 G.P.M. Duration of test 1/2 hrs.

Drawdown 12 ft. Date

Static level-depth to water 2' ft.

Quality (clear, cloudy, taste, odor) Clear Sulfur smell

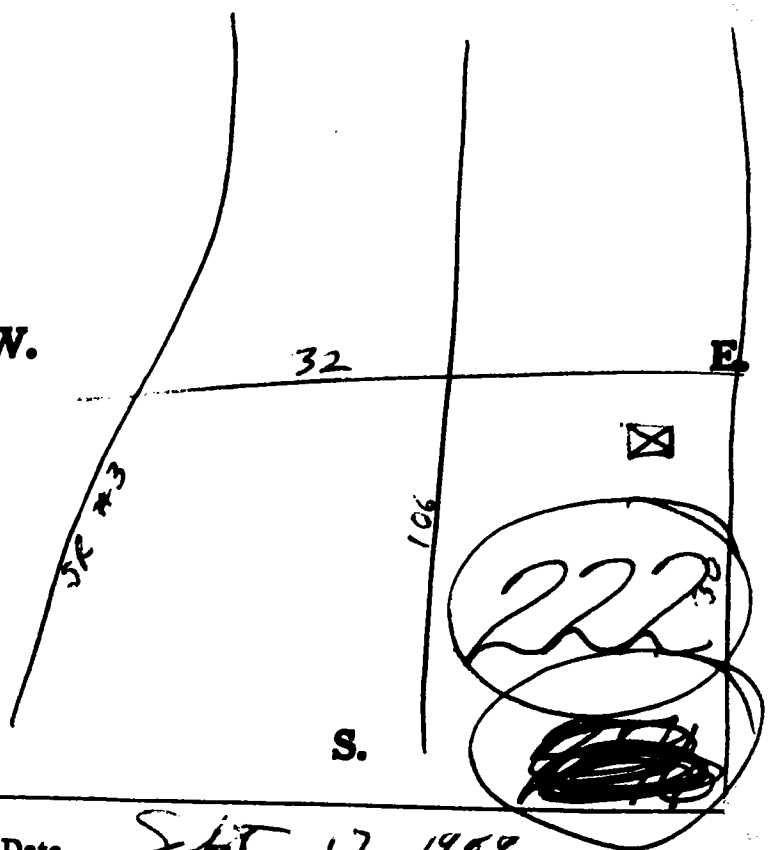
Pump installed by —

WELL LOG*

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	4 Ft.
Shale	4'	22'
Soapstone	22'	28'
Hard Shale	28'	30'
Shale	30'	50'
WATER AT 15 - 28'		

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



Drilling Firm PLUMMER & McDANNA ~~Water Well Drilling~~

Address 199 HARRISON STREET GALENA, OHIO

Date Sept. 17, 1969

Signed P. Bruce McDannald

Max Town

*If additional space is needed to complete well log, use next consecutive numbered form.

X= 1,
Y=

WELL LOG AND DRILLING REPORT

ORIGINAL

LOCATED

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

6-3-40 52

No. 140818

County..... Township..... Section of Township or Lot Number.....

Owner ..... Address .....

Location of property.....

CONSTRUCTION DETAILS

Casing diameter ..... Length of casing.....

Type of screen..... Length of screen.....

Type of pump.....

Capacity of pump.....

Depth of pump setting.....

PUMPING TEST

Pumping rate..... G.P.M. Duration of test..... hrs.

Drawdown..... ft. Date.....

Developed capacity .....

Static level—depth to water..... ft.

Pump installed by.....

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
	0 Feet	.....Ft.

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.

N.

W. E.

S.

See reverse side for instructions

240

63-28 LOCATED

240

Drilling Firm..... Date.....

Address..... Signed.....

LOCATED

WELL LOG AND DRILLING REPORT

ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1500 Dublin Road
Columbus, Ohio

LOCATED

No. 185082

County [illegible] Township [illegible] Section of Township

Owner [illegible] Address [illegible]

Location of property [illegible]

CONSTRUCTION DETAILS

Casing diameter 5" Length of casing [illegible]

Type of screen Perf Length of screen

Type of pump

Capacity of pump

Depth of pump setting

Date of completion

BAILING OR PUMPING TEST

Pumping rate G.P.M. Duration of test hrs.

Drawdown 10 ft. Date

Developed capacity [illegible]

Static level—depth to water [illegible] ft.

Pump installed by

WELL LOG

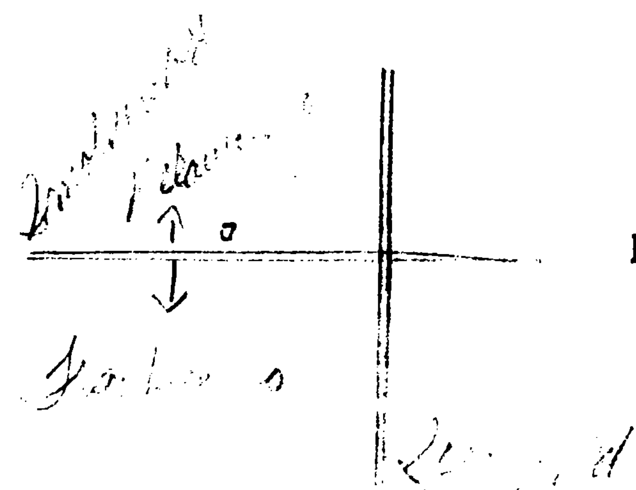
Formations Sandstone, shale, limestone, gravel and clay	From	To
	0 Feet	[illegible] Ft.
[illegible]		
[illegible]	12	37
[illegible]	37	[illegible]
[illegible]	[illegible]	
	[illegible]	[illegible]

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.

N.

W.



E.

S.

LOCATED 143-115

See reverse side for instructions

269

Drilling Firm [illegible] Date 9-7-56

Address [illegible] Signed [illegible]

LOCATED

WE[illegible] LOG AND DRILLING RE[illegible]ORT

ORIGINAL

NO CARBON PAPER NECESSARY— [illegible]LF-TRANSCRIBING

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
65 S. Front St., Rm. 815 Phone (614) 469-2646
Columbus, Ohio 43215

No. 400934 C

County Delaware Township Genoa Section of Township

Owner [illegible] Address [illegible]

Location of property [illegible] 32 Maxtown Rd

CONSTRUCTION DETAILS	
Casing diameter 6 OD	Length of casing 67 ft
Type of screen [illegible]	Length of screen 12 inch
Type of pump	
Capacity of pump	
Depth of pump setting	
Date of completion	

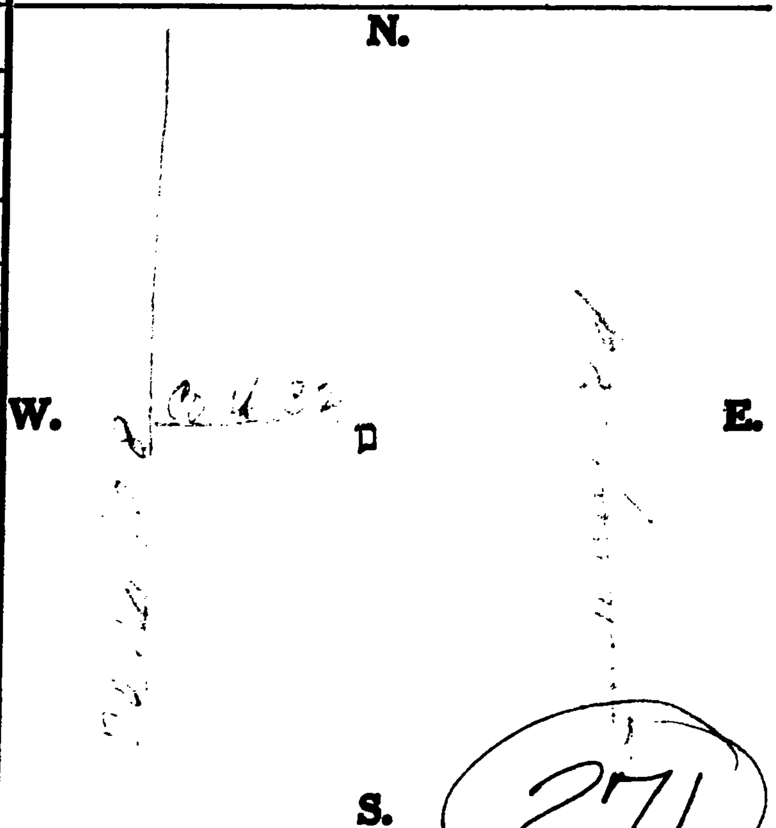
BAILING OR PUMPING TEST (Specify one by circling)
Test Rate .... G.P.M. Duration of test .... hrs.
Drawdown 20 ft. Date
Static level-depth to water 15 ft.
Quality (clear, cloudy, taste, odor) Clear
Pump installed by

WELL LOG*

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	22 Ft.
[illegible]	22	57
fine Sand	57	65
[illegible]	[illegible]	[illegible]
Water at	67 ft	

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



271

Drilling Firm [illegible] Date [illegible]

Address [illegible] Signed [illegible]

*If additional space is needed to complete well log, use next consecutive numbered form.

WELL LOG AND DRILLING REPORT

ORIGINAL

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

PLEASE USE PENCIL OR TYPEWRITER
DO NOT USE INK.

Nº 354853 C

County [illegible] Township [illegible] Section of Township

Owner [illegible] Address [illegible]

Location of property [illegible] (1 mile west [illegible])

CONSTRUCTION DETAILS

Casing diameter [illegible] Length of casing 13'
Type of screen [illegible] Length of screen 3'
Type of pump [illegible]
Capacity of pump 15 gpm
Depth of pump setting 30'
Date of completion [illegible]

BAILING OR PUMPING TEST

Pumping Rate 15 G.P.M. Duration of test 2 hrs.
Drawdown [illegible] ft. Date [illegible]
Static level-depth to water 3 ft.
Quality (clear, cloudy, taste, odor) Clear

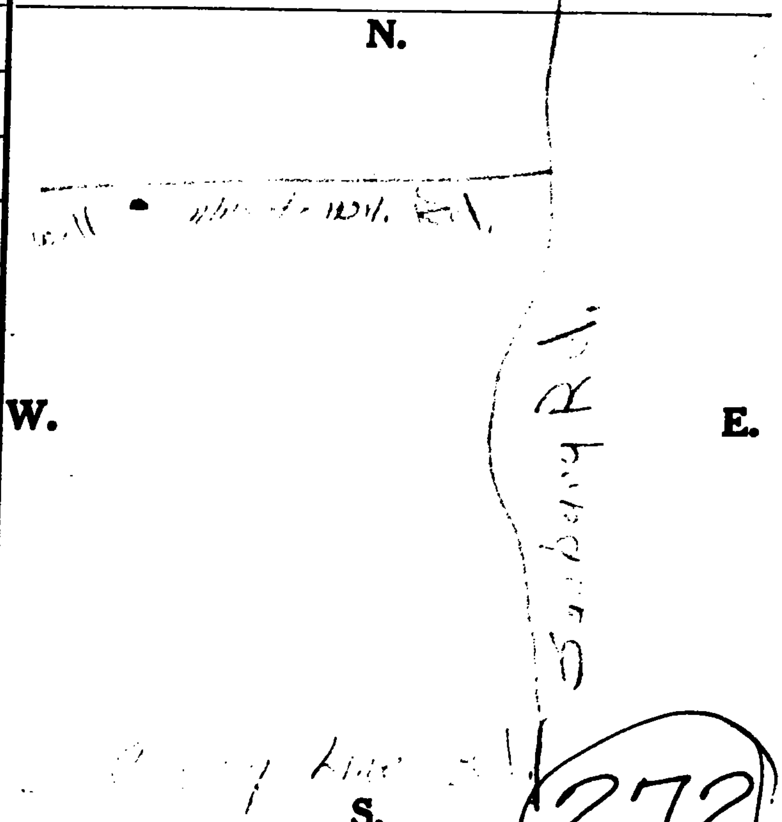
Pump installed by [illegible] Lynn

WELL LOG*

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	10 Ft.
Sand [illegible]	10	13

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

272

Drilling Firm [illegible]
Address [illegible]
Date [illegible]
Signed [illegible]

*If additional space is needed to complete well log, use next consecutive numbered form.

WELL LOG AND DRILLING REPORT

ORIGINAL

PLEASE USE PENCIL OR TYPEWRITER

DO NOT USE INK.

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

No 353602

County Delaware Township Genoa Section of Township

Owner Ray Good Builders Address Westerville Ohio

Location of property Twp 30 - ½ mi west of 30 County Rd

CONSTRUCTION DETAILS

Casing diameter 5" Length of casing 43½'

Type of screen [illegible] Length of screen [illegible]'

Type of pump

Capacity of pump

Depth of pump setting

Date of completion

BAILING OR PUMPING TEST

Pumping Rate 10 G.P.M. Duration of test 1 hrs.

Drawdown 20 ft. Date 11-8-67

Static level-depth to water 10 ft.

Quality (clear, cloudy, taste, odor)

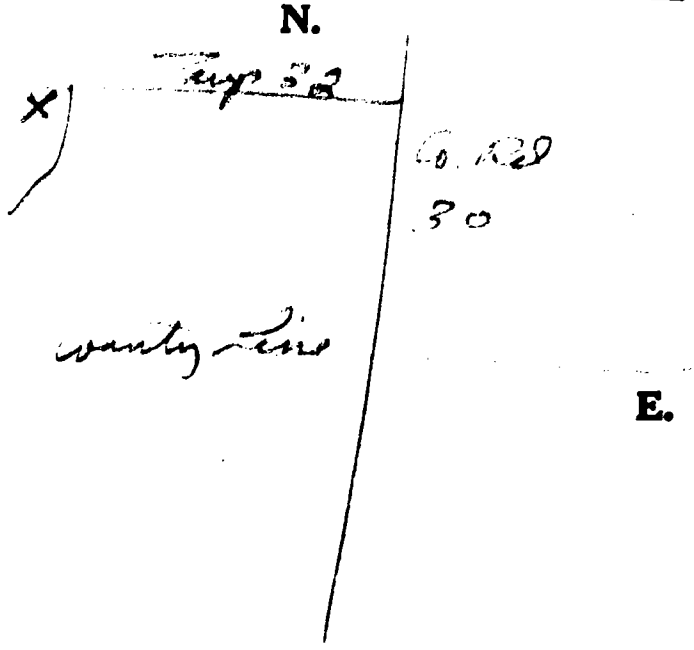
Pump installed by

WELL LOG*

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	35 Ft.
Sand	35	43½

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

273

Drilling Firm [illegible] Date 11-13-67

Address [illegible] Signed [illegible]

*If additional space is needed to complete well log, use next consecutive numbered form.

WELL LOG AND DRILLING REPORT

ORIGINAL

PLEASE USE PENCIL OR TYPEWRITER

DO NOT USE INK.

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus, Ohio 43212

No 354859

County Delaware Township Genoa Section of Township

Owner Tesla Co... Address

Location of property Same

CONSTRUCTION DETAILS

Casing diameter 5" Length of casing 57'

Type of screen ~ Length of screen ~

Type of pump Submersible

Capacity of pump 12 gpm

Depth of pump setting 42'

Date of completion 6/23/67

BAILING OR PUMPING TEST

Pumping Rate 12 G.P.M. Duration of test 2 hrs.

Drawdown 3 ft. Date 6/25/67

Static level-depth to water 13' ft.

Quality (clear, cloudy, taste, odor) Clear

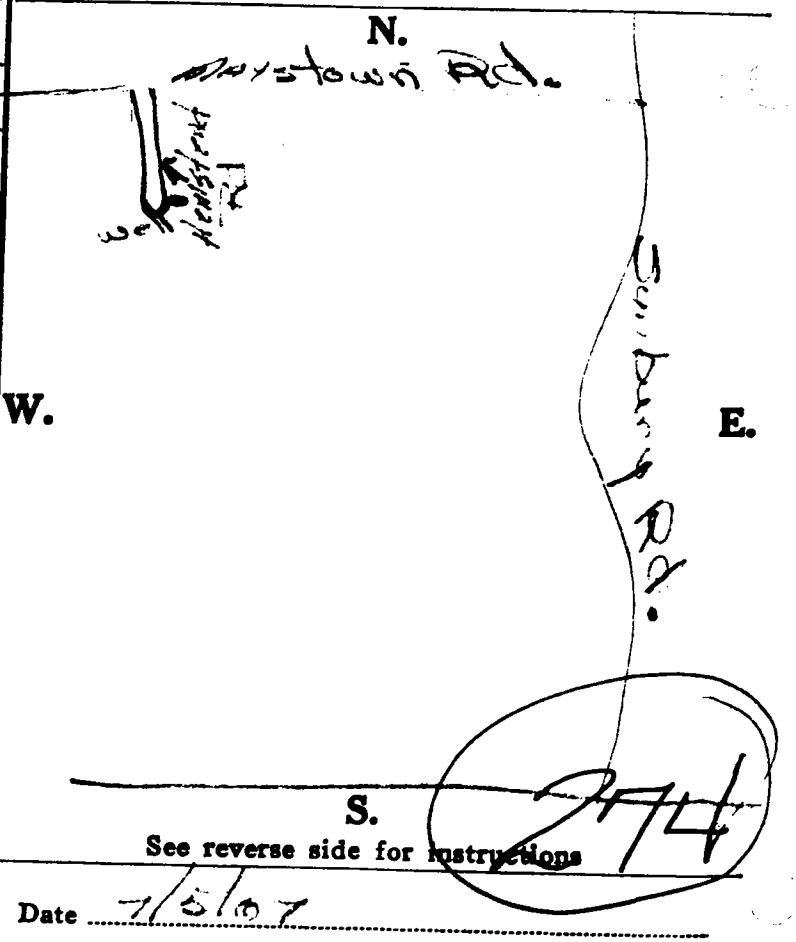
Pump installed by Lehman Drilling

WELL LOG*

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	38 Ft.
Muddy Sand & Gravel	38	55
Coarse Sand	55	57

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm Lehman Drilling Date 7/5/67

Address 5730 Tuttle Rd. Signed

*If additional space is needed to complete well log, use next consecutive numbered form.

WEL LOG AND DRILLING REPORT

ORIGINAL

59

PLEASE USE PENCIL OR TYPEWRITER
DO NOT USE INK.

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
1562 W. First Avenue
Columbus 12, Ohio

No 277301

County Delaware Township Genoa Section of Township 3

Owner Johnson Dairy Co. Address S. Liberty St., Col.

Location of property Twp Rd #32 — ½ mi E of Turnberry St.

CONSTRUCTION DETAILS

Casing diameter 5 5/8 Length of casing 31'

Type of screen Perforated Length of screen 15'

Type of pump

Capacity of pump

Depth of pump setting

Date of completion Jan 19, 1962

BAILING OR PUMPING TEST

Pumping Rate 15 G.P.M. Duration of test 4 hrs.

Drawdown 5 ft. Date

Static level-depth to water 17 ft.

Quality (clear, cloudy, taste, odor)

Clear — good

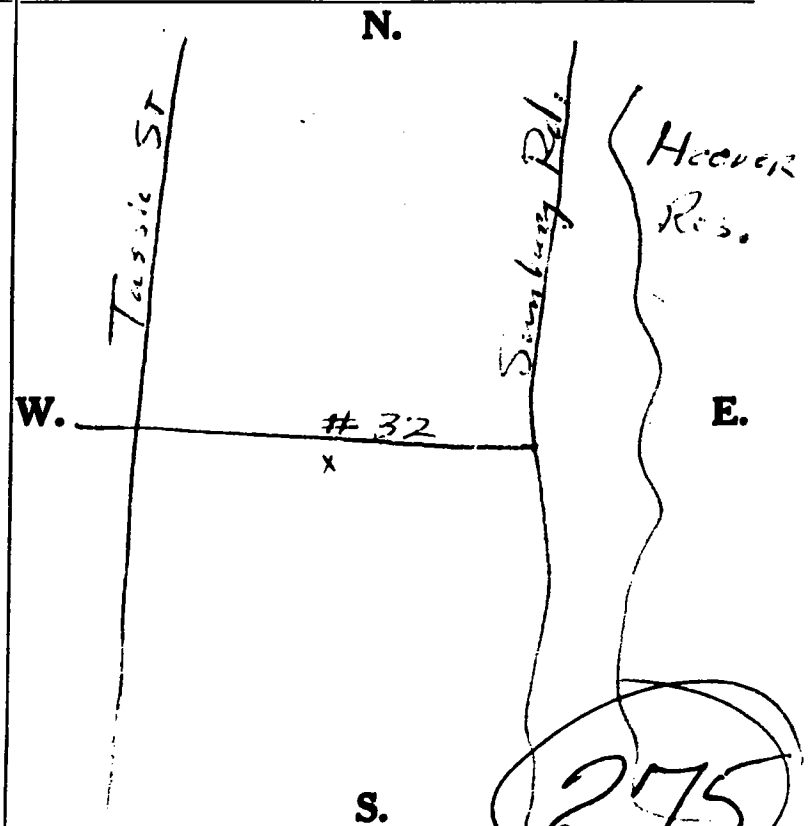
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	14 Ft.
Sand	14'	15'
Clay	15'	29'
Sand & gravel	29'	31'
WATER AT 31'	892 31 861-	

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



See reverse side for instructions

Drilling Firm PLUMMER & McDANNALD
Water Well Drilling

Address 199 HARRISON STREET
GALENA, OHIO

Date Jan 31, 1962

Signed K. L. Plummer McDannald

LOCATED

WELL LOG AND DRILLING REPORT

ORIGINAL

LOCATED

State of Ohio
DEPARTMENT OF NATURAL RESOURCES
Division of Water
Columbus, Ohio

No 161832

County Delaware Township Genoa Section of Township or Lot Number 4

Owner H. A. Day Address Westerville O.

Location of property Dr. County Line Rd.

CONSTRUCTION DETAILS

Casing diameter 5 3/8 Length of casing 39'

Type of screen None Length of screen

Type of pump Myers

Capacity of pump

Depth of pump setting

PUMPING TEST

Pumping rate 20 G.P.M. Duration of test hrs.

Drawdown [illegible] ft. Date Nov. 31

Developed capacity 20 GPM

Static level—depth to water [illegible] ft.

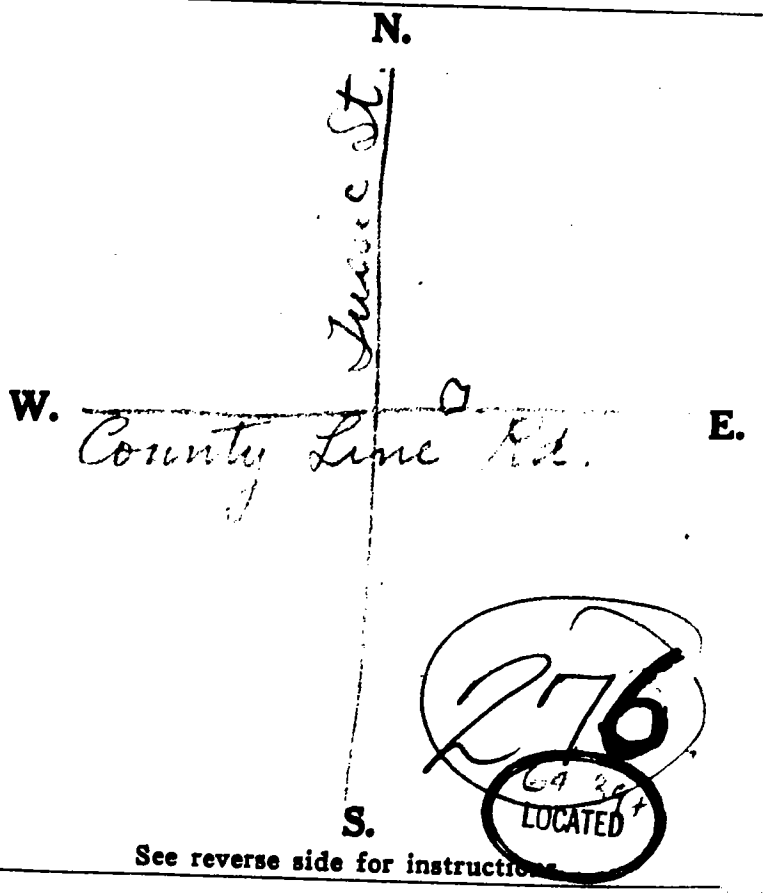
Pump installed by

WELL LOG

Formations Sandstone, shale, limestone, gravel and clay	From	To
Clay	0 Feet	38 Ft.
Gravel	38	39
Water at 39'		

SKETCH SHOWING LOCATION

Locate in reference to numbered State Highways, St. Intersections, County roads, etc.



276

LOCATED

See reverse side for instructions

Drilling Firm

Address Indianola

Date Nov 21 '56

Signed

LOCATED