

## **1.0 SUMMARY**

Equiterra Properties has authorized **DAWOOD ASSOCIATES (DAWOOD)** to perform a Phase I Environmental Site Assessment (ESA) of a property located at the northwest corner of the Route 465 and Interstate 81 interchange. The ESA is in conformance with the scope and limitations outlined in the Standard for Environmental Site Assessments as set forth by ASTM Designation: E 1527-00.

The information collected during this investigation is based on details and/or data obtained during a site visit completed by **DAWOOD** personnel and from a limited number of interviews with individuals familiar with the site and area.

The site currently contains the Rocky Meadows Golf Course, and a mobile home. Surrounding the site to the west is agricultural land, to the south are Interstate 81 and a warehouse, to the west are SR 0465-Allen Road and open space and to the north are a power line and open space.

**DAWOOD** personnel conducted interviews, reviews of federal and state environmental databases and a file review at the Pennsylvania Department of Environmental Protection (PADEP) Southcentral Regional Office.

- An interview with the Engineer from the Borough of Carlisle has revealed that groundwater contamination was found at a site located approximately 1,000 feet north of the study area.
- Federal and State databases have revealed that there is one (1) leaking underground storage tank and one (1) voluntary cleanup program site (Lippert) within the ASTM radius lines.
- In 1997, the Lippert property was granted Act 2 liability protection by the Pennsylvania Department of Environmental Protection due to groundwater contamination found in subsurface investigations. Contaminates originate from an unknown source.
- A portion of the Lippert Property was purchased by Financial Trust Corporation. The testing results from the Lippert Property report were sent to DEP for Act 2 liability

Protection in 1998. Liability protection was granted to the Financial Trust Corporation property. This property is now owned by Dickinson College.

- The PADEP file review has revealed that the groundwater on the site contains coliform bacteria and needs a treatment facility in order to be used for public consumption.

Based on **DAWOOD's** aforementioned observations of this assessment, the following environmental concerns were noted:

- The golf course applies fertilizers to the site. Contamination of the site due to this application is possible.
- Several above ground storage tanks were found on the site. None of the tanks appeared to be leaking, but each tank was not accessible for a close investigation for stains and/or odors.
- There is a significant accumulation of personal belongings in sheds, garages and covered by tarps on the property. These belongings were not investigated for possible contaminants. Possible threats include:
  - Recreational vehicles connected to the septic tank.
  - Abandoned vehicles containing gasoline, oil, anti-freeze, batteries, etc.
  - Cans of paint, oil or other miscellaneous materials.
  - Storage of fertilizers and/or chemicals with regard to the golf course maintenance.
- There is a septic tank that serves the clubhouse and a recreational vehicle and a sand mound that serves the pavilion and the mobile home.
- There may be groundwater contamination from an off-site source based on an interview conducted with the Borough of Carlisle Engineer.

Due to the site's proximity to the Lippert Tract and the Financial Trust Corporation site (now owned by Dickinson College) and the groundwater testing results from the Christian Counseling Center, groundwater testing should be completed for the Property. The testing results should be compiled into a report similar to the report submitted for

the Lippert Tract for Act 2 Liability Protection. If similar contaminants are found, the site should be registered with the Pennsylvania Department of Environmental Protection for Act 2 Liability Protection.

Based on **DAWOOD's** aforementioned observations of this assessment, there are no further recommendations at this time. However, there are several factors as mentioned above that may warrant additional investigation at a later date or if indications of leaks and/or stains are found.

## **2.0 INTRODUCTION**

### **2.1 Purpose**

The goal of this ESA is to determine if the study area is subject to recognized environmental conditions. A recognized environmental condition is defined as the presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.

The ESA included:

- Interviews with persons familiar with the property
- A review of pertinent documents
- A visual inspection of the property
- Inquiries with appropriate regulatory agencies
- A review of federal and state environmental records of the properties and adjacent properties within up to one mile of the site.

Environmental Data Resources (EDR), Inc, conducted an environmental records search of the subject property and surrounding areas. The report of the area is included as Attachment 1.

### **2.2 Limitation and Exceptions of Assessment**

**DAWOOD's** Phase I ESAs conform to and may exceed the ASTM Practice for Environmental Site Assessments (Designation: E 1527-00).

No ESA can completely eliminate uncertainty about the property's potential for environmental problems. No statement of certainty can be made regarding subsurface conditions that may result from onsite or offsite sources of contamination. **DAWOOD** has relied on information provided by others in assessing the site; the information has not been independently verified. This report is a prudent, reasonable evaluation of the property's observed environmental condition.

**DAWOOD** assumes no responsibility for conditions or information not practically reviewable or information that was not accurately disseminated by any party. **DAWOOD** did not sample soil, groundwater, surface water, radon, lead, asbestos, or electromagnetic radiation as part of the ESA.

### 3.0 SITE AND VICINITY CHARACTERISTICS

Current Owner: Loyal Order of the Moose

#### 3.1 Location

The subject study area is located at 399 Allen Road, Carlisle PA 17013. The property is located in South Middleton and Dickinson Township, Cumberland County, Pennsylvania.

#### 3.2 Site Characteristics

Based on observations and information identified during the site visit, the site is currently occupied by the Rocky Meadows Golf Course and a mobile home.

#### 3.3 Past Uses of the Property

Historical information has been gathered for the subject property through interviews, aerial photographs and maps. Aerial photographs were obtained from the Pennsylvania Department of Conservation and Natural Resources Bureau of Topographic and Geologic Survey Aerial Photograph Library. Photographs were obtained from 1947, 1958, 1964 and 1971. A review of the available succession of aerial photographs show the site as being open space and agricultural land followed by the golf course that currently occupies the site.

#### AERIAL PHOTOGRAPHS REVIEWED

Date	Identification Number	Frame
1947	AHD 4D	158
1958	AHD 2V	11
1964	AHD 6EE	12
1971	AHD 4MM	126

United States Geologic Survey (USGS) Maps from 1910, 1919, 1943, 1945, 1952, 1968, 1969, 1973, 1975, 1984, 1987, 1994 and 1999, each containing a circle near the subject study area, have been included as Attachment 2.

### 3.4 Current and Past Uses of Adjoining Properties

A review of the current condition and historical information regarding the adjoining uses suggests that the area surrounding to the site has been agricultural and open space followed by the construction of Interstate 81 and the warehouse to the south. The other adjoining properties are still open space and agricultural land.

### 3.5 Geologic and Topographic Information

#### ***Topography:***

A United States Geologic Survey (USGS) Topographic Map showing the study area has been included in Attachment 2. According to the USGS topographic map, the site contains mild slopes with an elevation of approximately 500-550 feet above mean sea level (AMSL). The site generally slopes gently from south to north.

#### ***Surface Water:***

Based on topography, presumed shallow groundwater flow direction generally proceeds west towards Alexanders Spring Creek. However, site-specific groundwater flow direction was not determined.

#### ***Subsurface Characteristics***

#### ***Soil:***

Soils mapped in the site by the USDA Natural Resource Conservation Service (NRCS) are comprised of the following soil types:

<b>HcB</b>	<b>Hagerstown silt loam, rocky, 3 to 8 percent slopes</b>
<b>HdB</b>	<b>Hagerstown-Rock outcrop complex, 0 to 8 percent slopes</b>
<b>HuA</b>	<b>Huntington silt loam, 0 to 5 percent slopes</b>

A soil map of the area as well as detailed soil descriptions is included in Attachment 3 of this document. In addition, the EDR Report (Attachment 1) has detailed soils information on pages A1-A5.

***Geology:***

The project site is underlain by the Elbrook Formation which is Cambrian in age and consists of calcareous shale, silty limestone and limestone/dolomite lithology. The EDR Report (Attachment 1) has detailed geologic information on pages A1-A5.

A review of the Pennsylvania Department of Environmental Protection website has revealed that sinkholes are not prevalent in the vicinity of the study area (see Attachment 4).



#### 4.0 ENVIRONMENTAL RECORDS REVIEW

##### 4.1 Environmental Data Resources (EDR) Report

An environmental records search was conducted by EDR, Inc. All sites listed with certain federal and state agencies and within an ASTM specified radii of the site were compiled into a list and mapped out to show their locations in reference to the subject property. The following table summarizes the data.

Database	Location	Details
LUST	Brennemans Furniture	Underground storage tank containing petroleum. Cleanup completed in 1995.
VCP	Lippert Site	Voluntary Cleanup Program. This site is listed as contaminated according to the state.

A detailed description of these sites is included in Attachment 1.

##### 4.2 File Review at Pennsylvania Department of Environmental Protection

A file review at Pennsylvania Department of Environmental Protection (PADEP) was requested by **DAWOOD** on September 30, 2005 at the PADEP Southcentral Regional Office. PADEP faxed a copy of a report sheet with regard to Rocky Meadows Golf Course (Attachment 5).

When the facility was operated by the Loyal Order of the Moose, it tested positive for coliform bacteria (summer of 1997). All water that is intended for human consumption (snack bar and rental pavilion) was to be chlorinated to meet PADEP approval. Detention tanks supplying 20 minutes of contact time must also be installed. Mike Garrick was to decide and supply a plan to PADEP for approval before opening the golf course to the public.

**DAWOOD** requested an additional investigation of the Lippert Property on November 16, 2005. The following information was revealed:

##### LIPPERT PROPERTY:

- A Subsurface Environmental Investigation was completed on March 13, 1997 for the Lippert property. The purpose of the investigation was to get Act 2 liability

protection. Contamination was found in monitoring wells and existing wells sampled for the report. Act 2 Liability Protection was granted for the Lippert tract.

- A part of the Lippert property was sold to Financial Trust Corporation. Groundwater sampling information from the Lippert Property revealed contamination in the area. Financial Trust requested Act 2 Liability protection which was granted on March 6, 1998.

## **5.0 INFORMATION FROM SITE RECONNAISSANCE AND INTERVIEWS**

### **5.1 Site Reconnaissance**

**DAWOOD** personnel visually assessed the subject property on October 4, 2005. The purpose of the assessment was to determine current use and conditions and to identify the presence of and/or potential for environmental impact from current and/or past use.

**DAWOOD** personnel walked the perimeter of the subject property and throughout the site. Photographs from the October 4, 2005 site reconnaissance are included as Attachment 6. The weather was cloudy and cool during the field reconnaissance portion of this assessment.

- A total of 5 above ground storage tanks were noted on the site:
  - 1 at the trailer containing kerosene.
  - 2 empty tanks located near the clubhouse
  - 1 empty tank for water (smelled like diesel fuel)
  - 1 tank installed in the early 1990's for fuel oil located inside the brick structure.
- A small dumping area was found on the western edge of the property. Included in the dumping area were 5 golf carts (possibly containing batteries), one push lawnmower, and two household appliances.
- Cleanout pipes for the sand-mound system were noted behind the pavilion.
- A portable toilet is located on the course. The manager stated that it is cleaned regularly.
- Two transformers are located on the site along SR 0465-Allen Road.
- Stormwater drainage pipes from I-81 were found along the highway.
- Possible sinkholes and a spring were noted on the site.
- Several tires were found behind the mobile home.
- Several abandoned vehicles were noted on the property.
- At least 3 barrels used to burn trash were found on the property.
- There are likely several buckets and possible barrels found throughout the personal property that has accumulated on site.

The scope of this project did not include investigation of subsurface conditions onsite. Any information concerning subsurface soil, groundwater and surface water is based on publicly available maps or related sources referenced in this report.

## 5.2 Interviews

Interviews were conducted with local officials concerning the subject property. Persons contacted are identified and documented in Attachment 7.

**DAWOOD** personnel interviewed Ms. Barb Wilson, Manager of South Middleton Township on October 3, 2005. Barb has been working for South Middleton Township for approximately 15 years. She is unaware of any environmental issues associated with the property. She noted that the area is very rocky.

**DAWOOD** personnel interviewed Mr. Jonathan Reisinger, Zoning Officer for Dickinson Township on October 3, 2005. Mr. Reisinger has been with Dickinson Township for approximately 5 years and is unaware of any environmental problems associated with the property.

**DAWOOD** personnel interviewed Ms. Barb Boise, Assistant to the Administrator of the Loyal Order of the Moose on October 3, 2005. Ms. Boise has been working for the Loyal Order of the Moose for approximately 28 years. She noted that one accident involving a truck occurred on Interstate 81 that impacted the area. Ms. Boise stated that the spill was not toxic and the site was cleaned. She could not remember the contents of the spill.

**DAWOOD** personnel interview Mr. Mike Keiser, the Engineer for the Borough of Carlisle, on October 5, 2005. He has been working with the Borough of Carlisle for almost 20 years. Mr. Keiser stated that groundwater contamination is likely a problem on the site. The Christian Counseling Center (located approximately 1,000 feet north of the site) had to have a treatment system installed for their well. Mr. Keiser stated that the contamination seems to be moving westward. He was unaware of any other environmental concerns associated with the area.

Mr. Mike Garrick, the Manager of the Rocky Meadows Golf Course joined **DAWOOD** personnel for the site visit on October 4, 2005. Mr. Garrick has managed the golf course since 1997. He stated the following:

- There has never been a spill of fertilizers or chemicals on the property. The chemicals are all purchased at local hardware stores, and are not considered commercial grade.
- There is a sand-mound system that serves the pavilion and the mobile home. In addition, there is an older septic tank that serves the clubhouse and an occupied recreational vehicle.
- There was a traffic accident on I-81 that impacted the property. Apparently the truck was hauling cattle feed and the contents spilled on the property. Nothing toxic was spilled at that time.
- Another accident occurred in 1998. The accident involved a passenger vehicle and a U-Haul trailer. Nothing toxic was found during that accident.
- All of the watering systems on the course consist of black plastic pipe or white PVC pipe.
- Mr. Garrick also described the contents of each of the above ground storage tanks found on the property.

**DAWOOD** attempted to interview the fire chief of the Carlisle Fire Company and the South Middleton Township Fire Department on October 3, 2005. As of the date of this report, they were not available for comment.

### **5.3 Physical Setting Analysis**

The property consists of an active golf course which applies fertilizer regularly. In addition to the golf course, the property contains a pavilion, a clubhouse, an occupied mobile home and a large accumulation of personal belongings. Among the personal belongings are recreational vehicles, several sheds/storage areas, and hidden items.

Hazardous substances on the study area may include fertilizers and chemicals that have been applied or are stored to be applied to the golf course. Storage of fertilizers and

chemicals was not reported by the Manager during the site reconnaissance portion of this report.

Two PPL Utilities transformers are located on the site. PPL Utilities has stated that 98% of their transformers are PCB free. A transformer history and/or a sampling of the fluids in the transformer may be completed for a fee.

## 6.0 CONCLUSIONS AND RECOMMENDATIONS

The site currently contains the Rocky Meadows Golf Course, and a mobile home. Surrounding the site to the west is agricultural land, to the south are Interstate 81 and a warehouse, to the west are SR 0465-Allen Road and open space and to the north are a power line and open space.

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## 7.0 SIGNATURES

**DAWOOD Associates** has conducted a Phase I Environmental Site Assessment in accordance with ASTM Designation E 1527-00 for the property located at:

The northwest corner of the Interstate 81 Plainfield Interchange (SR 0465) in Dickinson Township and South Middleton Township, Cumberland County, Pennsylvania.

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Steve Hoffman  
Planner/Environmental Specialist

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Date