# PHASE I
# ENVIRONMENTAL SITE ASSESSMENT

**OF**

**A 136.5794 acre Tract Located Along the East Side of Rudd Road and the North And East Side of Blazek Road in the Southwest Quadrant of the Intersection of Interstate 45 and the US 287 Bypass Ennis, Texas**

**AEEE PROJECT NO. 1396**

**Prepared for:**

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## DISCLAIMER

This report has been prepared according to ASTM's publication titled "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process," ASTM standard E1527-05. The ASTM Phase I Environmental Site Assessment is the **minimum** standard for environmental due diligence. This report was prepared under constraints of time and the recommended ASTM scope, and reflects a limited investigation and evaluation. AEEE's investigation was performed using the degree of care and skill ordinarily exercised, under similar circumstances, by professional consultants practicing in this or similar localities and no other warranty, expressed or implied, are made. **AEEE does not claim responsibility for any incorrect information that may have been supplied by agencies, organizations, or individuals that may be included in the findings or recommendations of this report.** AEEE claims no responsibility for any environmental issues, the detection of which would require examinations beyond the scope of this Phase I Environmental Site Assessment. This Phase I Environmental Assessment was prepared by AEEE specifically for use by the Client. Use of or reliance upon this information by any other party without express written permission granted by AEEE and the Client is not authorized and is completely at the risk of the use.

## TABLE OF CONTENTS

**APPENDICES**

## 1.0 EXECUTIVE SUMMARY

AEEE performed a Phase I Environmental Site Assessment on October 20, 2009, of the property, a 136.5794 acre tract, located along the east side of Rudd Road and the north and east side of Blazek Road in the southwest quadrant of the intersection of Interstate 45 and the US 287 Bypass, Ennis, Ellis County, Texas. Russell R. Thomas, P. E. performed the inspection, the site interviews and prepared the assessment report. The purpose of the assessment was to identify potential environmental concerns in accordance with the requirement of the American Society for Testing and Materials (ASTM) Practice E1527-05. The following is a summary of the findings of the Environmental Site Assessment:

The subject property, a 136.5794 acre tract located along the east side of Rudd Road and the north and east side of Blazek Road in the southwest quadrant of the intersection of Interstate 45 and the US 287 Bypass, Ennis, Ellis County, Texas currently consists of undeveloped property.

- Based on historical aerial photographs and historical city directories, the previous land utilization of the tract appears to have been historically agricultural. The surrounding area appears to have been generally agricultural as well.
- Adjoining properties were observed to be undeveloped.
- The subject property was not listed on the NPL, CERCLIS, CERCLIS-NFRAP, CORRACTS, RCRIS-TSD, RCRA Generators, ERNS, State Equivalent CERCLIS, State Landfill or Solid Waste Disposal Sites, or TCEQ the LUST Inventory, which were reviewed in accordance with ASTM standards. No sites were identified within the ASTM specified search radius of the subject property.
- There were no drums or visible signs of leakage or staining around the property.
- According to the MapPro flood map the site is bisected by an area within the 100-year floodplain.
- AEEE believes that no further environmental investigation is required at this site.

## 2.0 QUALIFYING CONDITIONS

### 2.1 Purpose

The purpose of this Phase I Environmental Site Assessment was to provide appropriate inquiry into the environmental condition at the property, a 136.5794 acre tract, located along the east side of Rudd Road and the north and east side of Blazek Road in the southwest quadrant of the intersection of Interstate 45 and the US 287 Bypass, in the City of Ennis, Ellis County (Appendix B). The purpose of performing a Phase I Environmental Site Assessment, as defined by ASTM E 1527-05 standards, is to define good and customary practice in the United Sates of America for conducting an environmental site assessment of a parcel of commercial real estate with respect to the range of contaminants within the scope of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and petroleum products. As such, this practice is intended to permit a user to satisfy one of the requirements to qualify for the innocent landowner defense to CERCLA liability: that is, the practices that constitute "all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial or customary practice" as defined in 42USC § 92001(35)(B).

### 2.2 Detailed Scope-of-Service

AEEE performed services defined in the ASTM Specification, as agreed upon between AEEE and Raymond W. Olsen. To facilitate the understanding of this report, the Scope-of-Services were divided into numerous tasks, the historical information review, physical setting data, regulatory records review, site and adjoining property reconnaissance, interviews, and data evaluation and final report. The historical information review portion was performed in order to develop a history of the site and adjoining properties to identify past uses suggesting ASTM recognized environmental conditions, which may pose an environmental concern to the subject property. In general accordance with ASTM guidelines, the historical use of the subject property was researched from the present, back to the subject property's first obvious use back to 1940, whichever is earliest. This task involved discretionary review of as many of the ASTM standard historical sources as were necessary and reasonably ascertainable to meet this objective.

Physical setting data are typically consulted when conditions have been identified in which potentially hazardous materials or petroleum related products are likely to migrate to the subject property, from the subject property or within the subject property into the groundwater or soil. At a minimum, a current USGS 7.5 Minute Topographic Map detailing the subject property area was evaluated. As noted by the ASTM standard, other physical setting sources, revealing additional hydrogeologic, hydrologic, and soil conditions, may have been included as necessary to meet assessment objectives.

Federal and state databases compiled by an environmental database company were reviewed to identify registered or documented facilities which may present an environmental concern to the subject property from ASTM standard recognized environmental conditions. Reasonably ascertainable standard regulatory sources were reviewed for the subject property and vicinity within Minimum Search Distances (MSD), as detailed by the ASTM document: EPA National Priorities List/NPL (MSD-one-half mile); Comprehensive Environmental Response, Compensation and Liability Information System/CERCLIS listings (MSD-one-half miles); CERCLIS No Further Remedial Action Planned/CERCLIS NFRAP listings (MSD-property and adjoining properties); Resource Conservation and Recovery Act Corrective Action Reports RCRA CORRACTS (MSD-one Mile); RCRA non-Corrective Action Reports Treatment, Storage and Disposal/RCRA non-CORRACTS TSD facilities (MSD-one-half mile); RCRA Generator facilities (MSD-property and adjoining properties); Emergency Response Notification System/ERNS (MSD-property only); State-equivalent NPL (msd-one mile); State-equivalent CERCLIS (MSD-one-half mile); State Landfill and/or Solid Waste Disposal Sites (MSD-one-half mile); State Leaking Underground Storage Tank/LUST sites (MSD-one-half mile); or State UST listing (MSD-property and adjoining properties). Additionally, record sources may have been reviewed to enhance or supplement the federal and state database information. Reasonably ascertainable and practically reviewable sources may have included city county department of health records, local fire department records, local planning, and building inspection records, local regional pollution control or environmental agency records, and city, county or state water agency files, and local electric utility records.

A site reconnaissance was performed to obtain and record obvious and apparent visual evidence suggesting an ASTM recognized environmental condition to the extent not

obstructed by bodies of water, adjacent buildings, or other external or interior barriers or obstacles. Site features, such as readily accessible adjacent public thoroughfares and on-site roads and paths and accessible common areas expected to be used by occupants or the public, were identified. Inspections of large tracts of land would be performed utilizing grid patterns or systematic approaches, and assessments of developed sites include d a visual inspection of a representative sample of occupied spaces. Current site uses were documented, paying particular attention to uses involving the treatment, storage, disposal or generation of hazardous substances or petroleum products. Apparent evidence of past or present underground or aboveground storage tanks, surface stains, distressed vegetation, electrical transformers, land scars, drums, pits, ponds, lagoons, solid waste, waste water, septic systems, wells or obvious evidence of improper use or disposal of toxic or hazardous materials were documented in this report. The reconnaissance included observations of adjoining properties to identify general land use and apparent potential ASTM recognized environmental conditions. These observations were made from public access right-of-ways.

AEEE personnel made reasonable attempts to interview owners and occupants of the subject property, as well as local government personnel, to obtain information suggesting ASTM recognized environmental conditions which may present concerns to the subject property.

### 2.3 Significant Assumptions

The term "recognized environmental condition" as defined by ASTM E 1527-05 Standards, "the presence or likely 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, ground water, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not recognized environmental conditions."

## 2.4 Limitations and Exceptions

The ASTM Phase I Environmental Site Assessment is the **minimum** standard for environmental due diligence. This report was prepared under constraints of time and the recommended ASTM Scope, and reflects a limited investigation and evaluation. AEEE's investigation was performed using the degree of care and skill ordinarily exercised, under similar circumstances, by professional consultants practicing in this or similar localities and no other warranty, expressed or implied, are made.

**AEEE does not claim responsibility for any incorrect information that may have been supplied by agencies, organizations, or individuals that may be included in the findings of this report.**

AEEE claims no responsibility for any environmental issues, the detection of which would require examinations beyond the scope of this Phase I Environmental Site Assessment. Although this study has attempted to identify recognized environmental conditions associated with the subject property, potential sources of environmental concern may have been undetected as a result of the limitations of this study, the inaccuracy of governmental records, or the presence of undetected or unreported environmental accidents.

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. This assessment is intended to reduce **but not eliminate** uncertainty regarding the environmental condition of the property. **This assessment is not exhaustive and was limited by the time available and costs authorized to be expended by the client in completing this assignment.**

## 2.5 User Reliance

This Phase I Environmental Site Assessment was prepared by AEEE specifically for use by Raymond W. Olsen. Use of or reliance upon this information by any other party without express written permission granted by AEEE and the Client is not authorized and is completely at the risk of the user.

## 3.0 SITE OVERVIEW

### 3.1 Location and Legal Description

The subject property is a 136.5794 acre tract located along the east side of Rudd Road and the north and east side of Blazek Road in the southwest quadrant of the intersection of Interstate 45 and the US 287 Bypass, Ennis, Ellis County, Texas. The subject property consists of undeveloped property. A map indicating the property location is included as Appendix B.

### 3.2 Site and Vicinity General Characteristics

The subject property consists of undeveloped land. The subject property slopes slightly to the southeast, as verified by the site visit and the Ennis, Texas, Quadrangle (dated 1995). The topographic map depicts the nearest active body of water, as Ennis Creek and the associated downstream drainage basin. The immediate vicinity was noted to generally be a mixture of undeveloped and residential properties. The direction of groundwater flow in the immediate area is unknown, but is often reflected by the surface topography. Based on this, the expected shallow groundwater flow direction would be to the southeast.

### 3.3 Current Use of the Property

At the time of the assessment, the subject property was undeveloped. Selected site photographs are provided in Appendix A.

### 3.4 Description of Structures, Roads, and Other Improvements

Currently the subject property is undeveloped.

**Current Uses of Adjoining Property** - The subject property is a 136.5794 acre tract located along the east side of Rudd Road and the north and east side of Blazek Road in the southwest quadrant of the intersection of Interstate 45 and the US 287 Bypass, Ennis, Ellis County, Texas. AEEE performed an area reconnaissance by driving ¼ mile in each direction from the subject property. Surrounding properties are undeveloped. Several rural residences are located on the west side of Rudd Road. Aerial photographs are attached as Appendix D. The subject property currently is undeveloped.

## 4.0 SITE BACKGROUND/OPERATING HISTORY

### 4.1 Title Records

A chain-of-title search is not in the scope of this report.

### 4.2 Aerial Photographs

Historic aerial photography sources were searched for material available within the time frame and budget of the project. Copies of the aerial photographs are located in Appendix D.

### 4.3 Other Historical Records

No additional records were located.

## 5.0 ENVIRONMENTAL SETTING

### 5.1 Surface Water and Groundwater Characteristics

According to the Ennis, Texas Quadrangle (dated 1995), the subject property and adjoining properties slope generally to the southeast. This assessment was verified during the site visit/area reconnaissance. The topographic map depicts the nearest active body of water, as Ennis Creek and the downstream drainage basin that flows to the southeast. The immediate vicinity was noted to generally undeveloped and residential property. The direction of groundwater flow in the immediate area is unknown, but is often reflected by the surface topography. Based on this, the expected shallow groundwater flow direction would be to the southeast.

The direction and hydraulic gradient of subsurface water flow at the site is unknown, but is often related to the surface gradient. Therefore, the expected shallow groundwater flow direction would be in the same direction as the topographical gradient, which is generally to the southeast.

According to the Texas Water Development Board, Report 345, Aquifers of Texas, dated November 1995, one major and one minor aquifer underlies the subject property. A down dip Trinity (major) aquifer underlies the subject property. The Trinity aquifer consists of early Cretaceous age formations of the Trinity Group. Formations comprising the Trinity Group are (from youngest to oldest) the Paluxy, Glen Rose, and Twin Mountain-Travis Peak. Updip, where the Glen Rose thins or is missing, the Paluxy and Twin Mountains coalesce to form the Antlers formation. The Antlers consists of up to 900 feet of sand and gravel, with clay beds in the middle section. Forming the upper unit of the Trinity Group, the Paluxy formation consists of up to 400 feet of predominantly fine- to course-grained sand interbedded with clay and shale. The formation pinches out downdip and does not occur northeast of the Colorado River. Underlying the Paluxy, the Glen Rose formation forms a gulfward-thickening wedge of marine carbonates consisting primarily of limestone. In the north, the downdip portion of the aquifer becomes highly mineralized and is a source of contamination to wells that are drilled into the underlying Twin Mountains. The basal unit of the Trinity Group consists of the Twin Mountains and Travis Peak formations, which are laterally separated by a facies change. To the north, the Twin mountains formation consists mainly of medium- to course-grained sands, silty clays, and conglomerates. The Twin Mountains is the most prolific of the Trinity aquifers in North-Central Texas; however, the quality of the water is generally not as good as that from the Paluxy or

Antlers formations. To the northeast, the Travis Peak formation contains calcareous sands and silts, conglomerates, and limestones. The formation is subdivided into the following members in descending order: Hensell, Pearsall, Cow Creek, Hammett, Sligo, Hosston, and Sycamore.

An outcrop of the Woodbine (minor) aquifer also underlies the subject property. The Woodbine Group is of Cretaceous age and is comprised of water-bearing sandstone beds interbedded with shale and clay.

The aquifer dips eastward into the subsurface where it reaches a maximum depth of 2,500 feet bgs and a maximum thickness of approximately 700 feet. The Woodbine aquifer is divided into three water-bearing zones that differ considerably in productivity and quality. Only the lower two zones of the aquifer are developed to supply water for domestic and municipal uses. Chemical quality deteriorates rapidly in well depths below 1,500 feet. In areas between the outcrop and this depth, quality is considered good overall as long as ground water from the upper Woodbine is sealed off. The upper Woodbine contains water of extremely poor quality in down dip locales and contains excessive iron concentrations along the outcrop.

### 5.2 Soil and Geologic Characteristics

According to the Soil Survey of Ellis County, Texas prepared by the U.S. Department of Agriculture, the subject property is comprised of Houston Black Clay (HoB) soils. This is a deep, gently sloping soil on narrow ridge tops and long smooth foot slopes on uplands in the Blackland Prairie Land Resource Area. Slopes are mostly convex. The mapped areas are irregular in shape and range from 25 to 2,000 acres in size. This area is mixed with soils of the coastal prairies and is interdispersed with silts and clay type soils.

Typically, the soil to a depth of about 50 inches is very dark gray clay. The underlying material is yellowish shaly clay. The soil is moderately alkaline and calcareous throughout.

This soil is moderately well drained. Surface runoff is medium. Permeability is very slow. When the soil is dry, cracks form that are 0.5 inch to 3 inches wide and several feet deep. Water enters rapidly when the soil is dry and cracked and very slowly when it is moist. The available water capacity is high. The rooting zone is deep. However, the clay impedes root penetration. Water erosion is a moderate hazard.

Included with this soil in mapping are small areas of Heiden soils, Altoga soils on uplands, and Tinn soils on the flood plains of small creeks. Also included are small areas of gravelly Houston Black soils and a few eroded spots. Very small areas of saline soils are also included. The included soils make up less than 15 percent of a mapped area.

### 5.3 Radon

A review was made of information supplied by the EPA identifying areas with potentially high radon levels. It was determined that the site was not located in an area generally recognized as having a high potential for the generation of radon gas. Therefore, radon was not considered to be of significant environmental concern for the site.

## 6.0 RESULTS OF ON-SITE INSPECTION

### 6.1 General Discussion of Site Operations

Mr. Russell R. Thomas, P. E. performed a site reconnaissance on October 20, 2009. Weather conditions at the time of the site visit were clear skies and a temperature of approximately 75 degrees. The site is a 136.5794 acre tract located along the east side of Rudd Road and the north and east side of Blazek Road in the southwest quadrant of the intersection of Interstate 45 and the US 287 Bypass, Ennis, Ellis County, Texas. The assessment and reconnaissance consisted of visual observations during a walking tour of the property. The site reconnaissance task included:

- Walking the perimeter of the property
- Walking a grid pattern of all remaining areas

Several site photographs were taken (Appendix A). These photographs provide visual documentation of the site conditions at the time of the site reconnaissance. A site location map is included as Appendix B.

### 6.2 Site Inspection Observations

The subject site is a 136.5794 acre tract located along the east side of Rudd Road and the north and east side of Blazek Road in the southwest quadrant of the intersection of Interstate 45 and the US 287 Bypass, Ennis, Ellis County, Texas. The subject property is bordered by undeveloped property, although there are several rural residences located along the western side of Rudd Road.

The investigation and observations described herein produced no evidence of: tankers; holding ponds; chemical wastewater discharges; lifts; or elevators; remedial activity; leachate or seeps; distressed, discolored, or stained vegetation; oil or gas well exploration, production, or refinery activities; farm waste concerns such as feed lot spoils or manure stockpiles; prolonged use or misapplication of pesticides, herbicides, soil conditioners, or fertilizers; discharges, leachate, migration, or run-off of potential contaminants from off-site sources.

### 6.3 Underground and/or Above Ground Storage Tanks

This site did not appear on the TCEQ database for PSTs.

### 6.4 Potentially Hazardous Materials and Controls

There was no note of stored hazardous substances on site.

### 6.5 On-site Interviews

Property owner(s) were not present on-site and therefore not interviewed.

### 6.6 Sampling Methodology

The property is currently undeveloped so no asbestos survey was performed.

## 7.0 Regulatory/Government Agency Inquiries

### 7.1 Standard Environmental Record Sources

MapPro conducted a regulatory database search for AEEE. This search included, at a minimum, those records and distances from the subject property dictated as appropriate in the ASTM standard. AEEE performed a review of available federal and state databases to ascertain whether the subject property or proximate properties were listed as having environmental concerns, which could have an adverse impact on the subject property. A copy of the regulatory review is presented as Appendix C. The databases reviewed and the dates the information was last updated by MAPPRO are as follows:

National Priorities List (NPL) – January 14, 2004: The NPL database, also known as the Superfund List, is an EPA listing of uncontrolled or abandoned hazardous waste sites. The database is primarily based upon a score, which the site receives from the EPA's

hazardous ranking system. These sites are targeted for possible long-term remedial action under the Superfund Act.

**No NPL sites were reported within a one-mile radius of the subject property.**

Comprehensive Environmental Response Compensation and Liability Act Information System (CERCLIS) – January 14, 2004: The CERCLIS database is a comprehensive listing of known or suspected uncontrolled or abandoned hazardous waste sites. These sites have been investigated, or are currently under investigation by the Federal EPA for the release, or threatened release of hazardous substances. Once a site is placed in CERCLIS, it may be subjected to several levels of review and evaluation and ultimately placed on the National Priorities List (NPL) or it may be designated as "no further remedial action planned" (NFRAP).

**No CERCLIS site was identified within a one-mile radius of the subject property.**

Comprehensive Environmental Response Compensation and Liability Act Information System – No Further Remedial Action Planned (CERCLIS-NFRAP) – January 14, 2004: As of February 1995 CERCLIS site designated "No Further Remedial Action Planned (NFRAP) has been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or contamination was not serious enough to require Federal Superfund action or NPL consideration.

**Neither subject property nor any of the adjoining properties were identified on the CERCLIS-NFRAP database.**

Resource Conservation and Recovery, Act Corrective Action Reports (RCRA CORRACTS) – January 14, 2004: This EPA database identifies hazardous waste handlers with RCRA corrective action activity.

**No RCRA CORRACTS facilities were identified within a one-mile radius of the subject property.**

Resource Conservation and Recovery Act, non-Corrective Action Reports, Treatment, Storage and Disposal Facilities (RCRA non-CORRACTS TSD) – January 14, 2004: This EPA database contains information pertaining to facilities which either treat, store or dispose of hazardous waste.

Resource Conservation and Recovery Act Information System, Large Quantity Generator (RCRIS-LQG) – January 14, 2004: The RCRIS-LQG database contains information pertaining to facilities which either generate more than 1,000 kg (2,200 pounds) of hazardous waste per month or meet other applicable requirements of the Resource Conservation and Recovery Act.

**Neither the subject property nor any of the adjoining properties were identified on the RCRIS-LQG database.**

Resource Conservation and Recovery Act Information System, Small Quantity Generators (RCRIS-SQG) – January 14, 2004: The RCRIS-SQG EPA database contains information pertaining to facilities that either generates between 85 kg (220 pounds) and 1,000 kg (2,200 pounds) of hazardous waste per month or meet other applicable requirements of the Resource Conservation and Recovery Act.

**Neither the subject property nor any of the adjoining properties were identified on the RCRIS-SQG database.**

Emergency Response Notification System (ERNS) – January 1, 2004: This database is the EPA's national computer database system that is used to track the sudden and/or accidental release of hazardous substances, including petroleum, into the environment. The ERNS reporting system contains preliminary information on specific releases, including the spill location, the substance released and the responsible party.

**The subject property was not identified on the ERNS database.**

State-equivalent National Priorities List (State-equivalent NPL): currently, the State of Texas does not maintain a State-equivalent NPL database.