

**PHASE I ENVIRONMENTAL ASSESSMENT**

**OF**

**TRACTS A, 4, AND 5  
LOCATED ON THE NORTH SIDE  
OF GIBSON BOULEVARD, SE  
EAST OF INTERSTATE 25  
ALBUQUERQUE, NEW MEXICO**

**SUBMITTED TO:**

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**FEBRUARY 27, 2006**



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## LIST OF ACRONYMS

ACM	Asbestos Containing Materials
ACBM	Asbestos Containing Building Materials
AEHD	Albuquerque Environmental Health Department
AST	Aboveground Storage Tank
ASTM	American Society for Testing & Materials
BGS	Below Ground Surface
CERCLA	Comprehensive Environmental Response, Compensation, & Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation, & Liability Information System
CONSENT	Superfund (CERCLA) Consent Decrees
CORRACTS	Corrective Actions
EDR	Environmental Data Resources, Inc.
EPA	Environmental Protection Agency
ERNS	Emergency Response Notification System
FEMA	Federal Emergency Management Agency
FINDS	Facility Index System
GIS	Geographic Information System
GWQB	Ground Water Quality Bureau
HMIRS	Hazardous Materials Information Reporting System
LEA	LEA Environmental, LLC
LQG	Large Quantity Generator
LUST	Leaking Underground Storage Tank
NMED	New Mexico Environment Department
NPL	National Priority List
PADS	PCB Activity Database System
PCB	Polychlorinated Biphenyl
PSTB	Petroleum Storage Tank Bureau
RAATS	RCRA Administrative Tracking System
RCRA	Resource Conservation and Recovery Act
RCRIS	Resource Conservation and Recovery Information System
REC	Recognized Environmental Condition
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SHWS	State Hazardous Waste Site
SQG	Small Quantity Generator

Phase I Environmental Site Assessment  
of Tracts A, 4, & 5, on Gibson Boulevard, SE  
Albuquerque, New Mexico  
LEA Project No. 0211-11.0

TRIS	Toxic Chemic Release Inventory System
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage, or Disposal (Facility)
US	United States
USGS	United States Geologic Survey
UST	Underground Storage Tank





## EXECUTIVE SUMMARY

LEA Environmental, LLC (LEA) has performed a Phase I Environmental Site Assessment of Tracts A, 4, and 5 on the north side of Gibson Boulevard, SE, east of Interstate 25 (I-25), to evaluate the environmental condition of the subject property and surrounding area and to determine whether evidence exists of recognized environmental conditions as that term is used in ASTM (American Society for Testing and Materials) E1527-05. The assessment was conducted in conformance with the scope and limitations of ASTM Standard E1527-05 and the U.S. Environmental Protection Agency (US EPA) standards for all appropriate inquiry as found in 40 CFR 312 to include a review of published literature; aerial photographs; and data available from federal, state, and city agencies; interviews with persons familiar with the past and present use of the site; and a site reconnaissance.

The subject property (hereafter referred to as the Site) consists of approximately 3.768 acres of undeveloped land located on the north side of Gibson Boulevard approximately 1,200 feet east of I-25 in the southeast quadrant of Albuquerque, New Mexico. Depth to groundwater at the site is estimated to be 150 to 190 feet below ground surface (bgs) with a groundwater gradient to the east. According to the 2003 Flood Insurance Rate Map, the Site is not situated within a 100-year flood zone. At the time of the site visit, the site was undeveloped. Scattered dumping of construction debris and domestic solid waste was observed on the Site. The erosion channels on the Site had no observed exposed solid waste. According to reviewed historical information, including aerial photographs and topographic maps, the Site has not been developed and does not appear to have been used a quarry or landfill. A site reconnaissance, interviews with persons familiar with the Site, and a regulatory database review found no indication of the past use of hazardous materials on the Site. The Site reconnaissance did not find observable evidence of activities that would cause a significant negative environmental impact to the Site.

LEA's review of available environmental and regulatory databases did not indicate that the Site or immediately adjacent properties are the subject of regulatory action. No indication of hazardous waste disposal (e.g. stained or discolored soils or distressed vegetation) was noted on the Site during the site reconnaissance. As described above, solid waste debris was observed. Review of the databases for the City of Albuquerque indicated that there were two landfills (Yale and Schwartzman's) south of the Site. Data on the Yale landfill indicated that the landfill would not be expected to impact the Site. Data on the Schwartzman's landfill indicated that the Site was not part of the landfill. However, based on the City of Albuquerque guidelines for solid waste landfills with a potential to produce landfill gas, the Site lies within the 1,000-foot buffer of land that might be impacted by landfill gas.

With the exception of the potential impact from landfill gas migrating from the Schwartzman's landfill, this assessment has revealed no recognized environmental conditions, in connection with the Site, as defined in ASTM Standard Practice E 1527-05. Based on observations from the site visit, information from personal interviews, available agency information, and documents related to the Site, LEA recommends that

- a landfill gas study be conducted on the Site in accordance with City of Albuquerque landfill gas guidelines prior to any construction on the Site.
- appropriate landfill gas barriers be designed and installed in accordance with the City of Albuquerque landfill gas guidelines as part of the Site development.

LEA recommends no other actions at this time.



## **1.0 INTRODUCTION**

### **1.1 Objective**

LEA Environmental, LLC (LEA) was retained by the University of New Mexico (UNM) Real Estate Department to perform a Phase I Site Assessment (ESA) of the subject property (hereafter referred to as the Site) located on the north side of Gibson Boulevard 1,200 feet east of Interstate 25 (I-25) in the southeast quadrant of Albuquerque, in Bernalillo County, New Mexico. The Site is undeveloped land described as Tract A of 40/25 Associates and Tracts 4 and 5 of Gibson Tracts. There is no street address. The purpose of the assessment was to evaluate the potential for environmental impact from past and present land use. The assessment was conducted on the Site and in the vicinity with in conformance with the scope and limitations of ASTM (American Society for Testing and Materials) Standard E1527-05 and the U.S. Environmental Protection Agency (US EPA) standards for all appropriate inquiry as found in 40 CFR 312 to include a review of publicly available data for evidence of the existence of recognized environmental conditions (RECs). RECs include, but are not limited to, hazardous materials or regulated substances on the surface, in the subsurface profile, or in the groundwater beneath the vicinity.

### **1.2 Scope of Work**

To accomplish the objectives described above, our scope included the following tasks within the guidelines of the ASTM Standard designated as ASTM E 1527-05 and the US EPA standards for all appropriate inquiry as found in 40 CFR 312:

- An assessment of present surface and subsurface conditions;
- A historical review of past land use;
- A site reconnaissance to observe existing conditions in the field;
- A review of documents pertaining to the environmental condition of the Site and Site vicinity;
- A review of documents pertaining to remediation activities at the Site and in the Site vicinity.

The scope of work for the Phase I ESA did not include chemical analysis of groundwater or soils at the Site, an asbestos inspection, or on-site radiometric surveys for radon gas.

### **1.3 Limitations**

This Phase I Environmental Assessment report has been prepared for the exclusive use of the UNM Real Estate Office to support potential transactions involving the property. This report may be used within a reasonable time from its issuance. Land use, site conditions (both off- and on-site) or other factors may change over time and additional work may be required. Any other use of the report may be inappropriate. Reliance upon this report by any third party shall be (1) at such third party's sole risk; and (2) strictly limited to the terms and conditions of the contract between LEA and Client and the limitations set forth above and in other sections of this report.

All work has been performed in accordance with accepted environmental assessment practices to include the standards set by the ASTM for the conduct of Phase I Environmental Assessments, ASTM E-1527-05 and the US EPA standards for all appropriate inquiry as found in 40 CFR 312. No warranty is expressed or implied.

The assessment results are based on observations of the investigator at the time of the site visit, on reviews of publicly available information, and on information provided by persons familiar with the property. Unless contradicted by conflicting data obtained independently during the conduct of the work, all information obtained has been accepted at face value. Information obtained during interviews and from files and databases is sometimes inaccurate and/or incomplete. The information and conclusions in this report are subject to the accuracy, completeness, and availability of such data. Except as set forth in this report, LEA made no independent investigations as to the accuracy and completeness of the information derived from the listed sources.

All findings, observations, conclusions, and recommendations stated in this report are based on facts; circumstances; applicable federal, state and local laws, rules, and regulations; and generally accepted national standards for such services in existence at the time that the report was prepared. Topics not explicitly discussed within this report should not be assumed to have been investigated or tested. This report does not guarantee current compliance with federal, state, or local laws, rules, or regulations.

No environmental samples were taken during this assessment.

The property size was derived from the legal description of the property. The legal description and a site plat were provided by UNM. Neither a title abstract nor a Chain-of-Title was available for this property. A Title Commitment was provided by UNM. Current ownership information is based on the December 12, 2005, appraisal conducted for Mr. Kim Murphy (UNM Real Estate Office) and from an interview with Mr. Murphy. Contact information for the owners listed in the appraisal was not available to confirm ownership history. The Title Commitment confirmed only the current owners.

The findings, observations, conclusions, and recommendations presented herein, unless otherwise stated, are based solely on the information obtained and presented herein. Implementation of the recommendations contained in this report does not ensure that all environmental risks will be eliminated or that all legal obligations will be met.

#### **1.4 Limiting Conditions**

LEA's on-site inspection consisted of a walking inspection of areas that were accessible by foot, and a drive-by inspection of surrounding and adjacent properties, including any properties identified in the environmental database search. No conditions that would limit LEA personnel's ability to complete the scope of work were encountered during the performance of this Phase I Environmental Site Assessment.

#### **1.5 Definitions**

Our investigation consisted of an integration of data from four areas of influence, as defined below:

- "Site" refers to land within the specified boundaries of the properties described in Section 2.0 of this report.
- "adjacent sites" refers to properties immediately bordering the Site.

- "site area" refers to properties within an one-quarter mile radius of the Site.
- "site vicinity" indicates properties within an one-mile radius of the Site.

The term "recognized environmental conditions" (RECs) is defined by ASTM Standard E1527-05 to mean the presence or likely presence of any hazardous substances or petroleum products on a site 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 site or into the ground or groundwater beneath the site, or surface water on the site. 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 government agencies.

## 2.0 SITE RECONNAISSANCE

### 2.1 Site Assessment Techniques

Existing data on the hydrogeologic setting, past land ownership and environmental incidences within Bernalillo, New Mexico were used to evaluate the environmental condition of the Site. The following information was reviewed:

- A series of aerial photographs showing the site area. This review included the available aerial photographs from the years 1935, 1947, 1951, 1959, 1967, 1973, 1982, 1991, 1996, 2002, and 2004.
- Interviews with persons familiar with the Site.
- Review of historic city directories, Sanborn Fire Insurance maps, and Topographic maps.
- Published literature on the geology and hydrogeology of the sites.
- A site reconnaissance by LEA personal.

In addition, LEA obtained an Environmental Data Resources, Inc (EDR) site assessment report for the location, which included a search of pertinent environmental databases for the site vicinity. The following information was included in EDR's search and is presented in Appendix A.

NPL	National Priority List
Delisted NPL	NPL Deletions
RCRIS-TSD	Resource Conservation and Recovery Information System - Transportation, Storage, Disposal
SHWS	State Hazardous Waste Sites
CERCLIS	Comprehensive Environmental Response, Compensation, and Liability Information System
CERCLIS-NFRAP	CERCLIS - No Further Action Planned
CORRACTS	Corrective Action Report
SWF/LF	Solid Waste Facilities / Landfills
RAATS	RCRA Administrative Action Tracking System
RCRIS-SQG	RCRIS - Small Quantity Generator
RCRIS-LQG	RCRIS - Large Quantity Generator
HMIRS	Hazardous Materials Information Reporting System
PADS	PCB Activity Database System

ERNS	Emergency Response Notification System
FINDS	Facility Index System
TRIS	Toxic Chemical Release Inventory System
NPL Lien	Federal Superfund Liens
TSCA	Toxic Substances Control Act
MLTS	Material Licensing Tracking System
ROD	Records of Decision
CONSENT	Superfund (CERCLA) Consent Decrees

A site reconnaissance was conducted to assess the Site and surrounding area for possible adverse environmental conditions. In particular, observations were made for evidence of potential environmental concerns such as:

- improper waste disposal
- hazardous waste containers
- chemical spills
- disturbed/discolored soils
- distressed vegetation
- on-site effluent disposal systems
- underground storage tanks
- wells and dry wells
- standing water/improper drainage
- electrical transformers
- unusual odors and/or other unusual conditions

## 2.2 Site Location and Description

The Site is regionally located in the southeast quadrant of Albuquerque in Bernalillo County, New Mexico. The Site consists of three tracts of land approximately 3.768 acre in size located on the north side of Gibson Boulevard approximately 1,200 feet east of the Gibson/I-25 interchange. At the time of the site visit the property was undeveloped. The Site is bounded on the north by vacant land, on the west by an Albuquerque Metropolitan Area Flood Control Authority (AMAFCA) flood control channel and I-25, on the south by Gibson Boulevard, and on the east by the Quality Suites hotel.

A city map and a U.S.G.S. topographic map showing the site vicinity are presented in Appendix B. Copies of photographs taken during the recent site reconnaissance and aerial photographs of the Site from 1935 through 2002 are also included in Appendix B. The survey plat, a zoning plat map, the legal description from the appraisal conducted for UNM, and the ownership information from the appraisal are provided as Appendix C. Land ownership information was provided in the appraisal and confirmed by Mr. Kim Murphy of the UNM Real Estate Office.

## 2.3 Surrounding Land Use

The adjacent property to the east is the Quality Suites hotel. University Boulevard lies on the east side of the hotel. Residential, commercial, and UNM properties line University Boulevard north of Gibson. To the north is Tract B of the Ever Ready Subdivision. The tract is undeveloped. An AMAFCA flood control channel developed to control the water in the Genevas Arroyo lies north of Tract B and joins the AMAFCA South Diversion Channel near the northwest corner of the Site. The land north of the Genevas Arroyo Channel is undeveloped. A small amount of undeveloped land and

the South Diversion Channel form the western property boundary. A small historic cemetery lies between the South Diversion Channel and I-25. The area west of I-25 and north of Gibson is a mix of residential and commercial properties.

Lands on the south side of Gibson are mixed use. From University Boulevard west to Mulberry Street is residential with the exception of several small business at the intersection of Mulberry and Gibson and a church at the intersection of University and Gibson. Between Mulberry and the South Diversion Channel, is a strip of commercial land currently occupied by Eclipse Aviation and a second commercial enterprise. South of these two properties is undeveloped land that is part of the old Schwartzman's landfill. On the west side of the South Diversion Channel between the channel and I-25 is an undeveloped parcel of land that is also part of the old Schwartzman's landfill. West of I-25 from Gibson south to the point where the South Diversion Channel crosses under I-25 is the Broadway Industrial Park. A portion of this land was also part of the old Schwartzman's landfill. Maps showing the location of the landfill from City of Albuquerque documents are provided in Appendix D.

## 2.4 Site History

The history of the Site was evaluated utilizing aerial photographs, topographic maps, fire insurance rate maps, an interview with Mr. Murphy, UNM Real Estate, and a site reconnaissance. Items of note are summarized below.

### 2.4.1 Interviews

LEA attempted to contact individuals familiar with the project area in order to gain "first hand" knowledge concerning historical land uses that may have environmentally impacted the Site.

Mr. Kim Murphy, Director of the Real Estate Office for the University of New Mexico, was interviewed by telephone on January 18 and 27, 2006, concerning environmental issues within the site area and land ownership. Mr. Murphy stated that the land is currently owned by RHS Properties, Inc., and Rio Grande-Alameda, Ltd. Ownership information for the owners immediately prior to RHS Properties and Rio Grande-Alameda, Ltd., was found in the appraisal. WW Albuquerque Corp sold the property to 5000 Jefferson Partners in 2000. The Partners conveyed the land to RHS in 2001. Ownership information prior to 2000 was not available. However, Mr. Murphy understood that historically the land had been part of a larger family-owned parcel that had been split into portions that were given to descendants of the original owner. The portions were purchased and consolidated into the current configuration by a local broker. Mr. Murphy did not have the broker's name or the names of the family or its descendants.

Mr. Murphy stated that he was not aware of any environmental liens on the property or any history of past improper use of chemicals or hazardous materials on the property. However, LEA found evidence that landfill gas and ground water contamination from existing closed landfills in the area could potentially impact the Site. Further research, found that existing ground water contamination from the two landfills would not impact the Site. There was insufficient documented information to eliminate the potential for landfill gas impact on the Site. LEA reported this information to Mr. Murphy on January 27, 2006, and through messages left on January 30 and February 2, 2006. The information on the landfills is discussed in this report.

Marcia Pincus and Ralph Gruebel of the City of Albuquerque Environmental Health Department (AEHD) were interviewed on January 25 and 27, 2006. Information was provided on the landfills and groundwater contamination at the Yale Landfill. Landfill and groundwater information is provided in Appendix D.



#### **2.4.2 Aerial Photographs**

A review of historical aerial photography may indicate past activities at a site that may not be documented by other means, or observed during a site visit. The effectiveness of this technique depends on the scale and quality of the photographs and the available coverage. Readily available aerial photographs were obtained from the Earth Data Analysis Center at the University of New Mexico. The photographs reviewed were generally clear and of fair to good quality. Eleven (11) historical aerial photographs from 1935 (the earliest readily available) to 2004 (the latest available photograph) were reviewed to evaluate past land use at the Site and in the surrounding area. The 11 are included in Appendix B. The photos reviewed are summarized in the following paragraphs.

In all reviewed aerial photographs, the general area, including the Site, progressed from undeveloped open land to a mix of residential, commercial, industrial, and undeveloped use. The first available photograph in the series (1935) shows that the site vicinity is essentially undeveloped. There is residential and agricultural development over a mile to the west paralleling the railroad tracks. There is residential and UNM development over a mile to the northeast and, with the exception of what appears to be a residence approximately 0.35 miles southeast of the Site there is no development within a mile to the east and south. Dirt ranch roads exist in the approximate location of Gibson Boulevard with a connection to the residence.

The photograph taken in 1947 shows Gibson Boulevard in place and paved. There is quarrying in the area that is considered part of the old Schwartzman's landfill. The residence and out buildings are clearly visible south of Gibson Boulevard. There is residential development to the west and there appears to be some land disturbance west of the site in the bend of Genevas Arroyo.

By 1951, the quarrying activities are still in place and there quarrying occurring at the location of the old Yale landfill. There is increased residential development along Yale toward the airport and airport development is visible to the southeast of the Site. The single residence is in place and residential development has started to the west of that residence on the south side of Gibson across from the Site. A commercial facility has been constructed just north of the airport on the west side of Yale. Development west of the Site appears to be residential and there is continued agricultural land use to the southwest.

The 1959 aerial photograph shows the residential development on the south side of Gibson across from the Site has filled in and additional development is occurring on the east. There is still quarrying activity occurring south of the subdivision and in the old Yale landfill area. Quarrying immediately west of the subdivision appears to have ceased and there is evidence that that quarry area is being filled. Commercial development is increasing in what is now the Broadway industrial park west of the quarry area being filled and on properties lining Gibson to the west of the Site. There is increased residential infill northwest of the site and additional development has started on the west side of Yale. An outdoor movie theater is in place on the east side of Yale and Roosevelt Park and Milne Stadium are in place north of the Site. Mulberry Street from Gibson north is in place and unpaved. Mulberry is near the western Site boundary.

The 1967 aerial photograph shows I-25 in place and possibly still under construction. The Gibson exit is in place. University Boulevard is in place and the AMAFCA channelization of the Genevas Arroyo is in place north of the Site. The north extension of Mulberry Street is gone. The commercial industrial area, now west of the freeway, has expanded to the freeway right of way and the old quarry has been filled in to accommodate the development. The southern portion of the quarry is also being filled and no longer shows the mining pattern. On the east side of the freeway, there are two accesses into the quarry area. However, the purpose of the accesses is not clear. The Yale landfill

quarry area west of the airport runway is also being filled in. The UNM south golf course is in place. North of the Site, the UNM sports complexes are in place on both sides of University on the south side of Stadium Boulevard. A small commercial complex has been built at the intersection of Gibson and Mulberry on the south side of Gibson. There is additional residential development on the east side of Yale north of the theater and on the west side of Yale south of the sports complex. Commercial development is in place near the southwest corner of Yale and Gibson. The Site remains undeveloped.

In the 1973 aerial photograph, the AMAFCA South Diversion Channel is in place and the Genevas Arroyo channel has been tied into it. The historic cemetery that lies between the channel and the freeway is clearly visible. The Site remains undeveloped although some disturbance has resulted from the channel construction. The quarry area adjacent to the channel and to the freeway on the west has been filled to grade. South of the channel on the east side of the freeway, the quarried area has been filled. West of the freeway, it is also apparent that the quarried area has been filled. There is increased commercial/industrial development on the east side of Broadway. Residential development seems stable south of Gibson and west of the freeway north of Gibson. A city park has been developed on the south side of the subdivision south of the Site. North of the Site on the east side of University, additional residential development is in place. The Yale landfill off the west end of the runways has been filled and brought to grade.

In the 1982 aerial photograph, there is increased commercial/industrial development along the east and west sides of Yale Boulevard south of Gibson and increased commercial development on the west side of Yale north of Gibson. There has been additional residential infill northeast of the Site and an expansion of the UNM sports complex. The Site remains undeveloped. There appears to be activity in the strip of land between the South Diversion Channel and the freeway on the south side of Gibson. This area is part of the old Schwartzman's landfill.

In the 1991 aerial photograph, there is still activity in the strip of land between the diversion channel and the freeway on the south side of Gibson. There is industrial/commercial activity along the southern extension of University Boulevard. Some of that activity is on or immediately adjacent to the old Yale landfill. A hotel has been constructed on the west side of University northeast of the Site. The Site is undeveloped. Development on the west side of the freeway appears similar to the development noted in the last two aerial photos as does the development of the area between Yale and University.

By 1996, the land between the diversion channel and the freeway south of Gibson shows no sign of activity and appears to be filled to grade. Additional hotel facilities are in place on the northwest corner of University and Gibson. Industrial development west of the freeway appears stable. East of the freeway, Sunport Boulevard is under construction and cuts through the Yale landfill. The surface of the old Schwartzman's landfill appears to have been graded. The Site remains undeveloped and the residential and UNM development north and east of the Site appear stable. Off-airport industrial/commercial development north of the airport and east of Yale has expanded.

By 2002, the Quality Suites adjacent to the Site on the east are in place. The Site remains undeveloped. Two facilities have been constructed east of the diversion channel, west of Mulberry Street, and north of the area identified as part of the Schwartzman's landfill. On the west side of the freeway, there is expanded development in the Broadway Industrial Park. The southernmost development is on the northern boundary of the western portion of the Schwartzman's landfill. The rental car facility for the airport has been constructed south of Sunport Boulevard and is on the old Yale landfill.

The 2004 aerial photograph shows conditions similar to the 2002 aerial photo and essentially reflects the conditions observed the day of the Site visit.

### **2.4.3 Topographic Map Review**

The 1934, 1954, 1960, the 1960 photo revised in 1967, 1972, and the 1990 Albuquerque East and West U.S. Geological Survey 7.5 minute topographical quadrangle maps were reviewed for the Site and surrounding area. Neither the Site nor the adjacent properties were developed in the 1934 rendering of the topographical map. Development in the site vicinity reflects the development noted in the 1935 aerial photograph. The map renderings from 1954 forward reflect the same development seen in the aerial photographs.

These maps do not depict the historic presence of associated bulk oil storage or manufacturing. The quarrying activities are indicated on all maps after 1934.

### **2.4.4 Fire Insurance Rate Maps**

Sanborn Fire Insurance maps were compiled from the late 1800s to the late 1950s for medium sized cities across the United States. These maps provided baseline information about construction materials used in developed areas within city limits. Sanborn maps can provide information about historic land use and possible environmental concerns.

A review of the Sanborn maps available in Zimmerman Library on the UNM campus revealed no historic Sanborn maps for the site area.

### **2.4.5 City Directories**

The Albuquerque City Directories were reviewed to confirm the information provided by the maps and aerial photographs. Because the land is vacant, there are no listings for the Site. The listings for the businesses and residences developing around the Site appear in the city directories within two years of the dates of the aerial photographs. With the exception of gasoline stations or businesses with underground storage tanks, the listed businesses do not appear to conduct activities that could potentially impact the Site. The potential impact from underground storage tanks is discussed in Section 3.2.5 below.

The directories are available at Zimmerman Library on UNM campus in the Southwest Collections section. They are also available in the Special Collections Branch of the Albuquerque Public Library at 423 Central NE in Albuquerque, New Mexico.

### **2.4.6 Past/Current Site Usage**

Based on available information, the Site has remained undeveloped. Some illegal dumping of domestic waste such as glass, ceramic ware, and cans, and some construction and landscaping debris has occurred. However, there was no observed indication that the Site had been used as a landfill. With the exception of incidental dumping, there is no observable or available evidence of any other use of the Site.

## **2.5 Hydrogeologic Setting**

Topography, drainage patterns, soil types, depth to groundwater, groundwater direction and gradient, and other factors all affect the transport of hazardous materials on the surface and in the subsurface.

An understanding of the geologic, surface water and hydrogeologic setting can help in evaluating the susceptibility of the Site to contamination. Typically, contaminants migrate vertically through porous soils to the water table (unconfined aquifer conditions), then travel with the flow of groundwater. Locally, subsurface transport can be diverted by man-made conduits such as sewers, water lines, or wells. Poorly constructed groundwater wells can serve as conduits for vertical transport of contaminants.

Available data pertaining to the geologic, surface water and hydrogeologic setting are provided in the following sections.

### **2.5.1 Geologic Setting**

The City of Albuquerque lies within the Albuquerque Basin, which is located in the middle part of the Rio Grande Rift Valley (Kelley, 1977). In the Albuquerque area, Quaternary mud, sand and gravel deposits approximately 80 to 120 feet thick, are located at the surface throughout most of the Rio Grande flood plain area that bisects the City. Lying below these Quaternary deposits is the Tertiary Santa Fe Group (which is primarily a mudstone, sandstone, and conglomerate) of the Ancha Formation and upper part of the Tesuque Formation (Kelley, 1977).

A review of LEA project files for the site vicinity shows the Santa Fe group to be locally composed of interbedded river deposits (silty to clayey sands with some gravel). Beneath the river deposits are older Santa Fe Group deposits consisting of interbedded clays, sands, gravels, and cobbles.

In the vicinity of the project site, the Albuquerque Basin is faulted along north-south trending faults that are the major factor in controlling the distribution of basin-fill sediments that form the Santa Fe Group, the primary aquifer in the region. The upper Santa Fe Group consists of inter-tonguing piedmont-slope (fan) and fluvial basin floor (ancestral Rio Grande) deposits. Underlying the upper Santa Fe unit is the middle Santa Fe unit consisting of about 4,500 feet of eolian deposits that inter-tongue westward and northward with coarser grained deposits derived from the Colorado Plateau and southern Rocky Mountain provinces. In this area, the upper and middle Santa Fe units are the primary hydrogeologic units.

### **2.5.2 Surface Water, Topography & Drainage**

The local topography slopes to the relatively steeply to the west. The elevation of the Site is approximately 5,040 feet above mean sea level (msl) at the west end, 5,050 feet above msl across the center, 5,070 feet above msl at the northeast corner, and 5,060 feet above msl at the southeast corner. The general topographic gradient on the Site is to the west and southwest. Erosion channels on the Site drain essentially west toward the flood control channel but not into the channel. Drainage from the east is prevented from flowing onto the Site by retaining walls constructed for those properties. There are no curb cuts that might allow flow from Gibson onto the Site. There are no storm drains on Gibson near the Site. The Rio Grande River, located approximately 1.3 miles west of the Site, is the nearest perennial stream. There are no perennial or ephemeral streams, ponds, or lakes on the Site.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Map Number 35001C0342E published November 19, 2003 shows that the Site is located outside the 100-year and 500-year flood zone of the Rio Grande and any tributaries and there is no indication of localized street flooding that might affect the property. The FEMA map is provided in Appendix

### **2.5.3 Groundwater**

The Santa Fe Group is the aquifer from which the City of Albuquerque derives its drinking water supply. According to information obtained from the City of Albuquerque, the depth to groundwater in the immediate area of the Site has been reported to between 150 and 190 feet below ground surface (bgs). Based on the locations of public supply water wells and on information from the groundwater monitoring wells at the Yale landfill, groundwater gradient flows in an easterly direction. Shallow groundwater beneath the Yale landfill has low concentrations of organic contaminants. However, Miles No. 1, a City of Albuquerque public water supply well located near the north boundary of the Yale landfill has shown no indication of contamination. Contamination from the Yale Landfill and, if there is contamination beneath the Schwartzman's Landfill, would not be expected to impact the Site.

Perched aquifers are known to exist in the site vicinity. It is not known whether any exist beneath the Site. Water quality in the shallow alluvium is more mineralized and contains more iron than that of the Santa Fe Group (Bjorklund and Maxwell, 1961). However, the alluvial groundwater is generally of a chemical quality suitable for domestic and industrial use.

## **2.6 Site Environmental Status**

A Site reconnaissance was performed by Ms. Lucy E. Archambault of LEA on January 13, 2006.

### **2.6.1 On-Site Observations**

The Site consists of two rectangular and one triangular parcels of land that total approximately 3.768 acres. The Site is currently undeveloped. As described above, it slopes relatively steeply to the west and has several erosion channels that cut across the property essentially from east to west. There are several small dirt tracks across the Site that appear to have had some vehicle use. There are scattered dump areas across the property. The dumped material is predominantly glass, ceramic ware, and flattened, rusted cans. There has also been some construction debris (asphalt chunks, chunks of concrete, and some lumber) and some landscaping debris dumped on the Site. A 55-gallon plastic drum was observed near the southeast corner of the Site. The drum contained dirt and landscaping debris. There was no observable evidence of on site utilities except the sewer manhole located near the western Site boundary. There are no electrical transformers on or near the Site. There was no observable evidence of the use of hazardous materials on the Site, no chemical containers were observed, and no evidence of releases were observed on the Site.

The observations listed below were made during the site visit.

- There were no observed hazardous substances .
- There were no observed hazardous wastes.
- There were no observed underground or aboveground storage tanks.
- With the exception of the 55-gallon drum that had been used to hold landscaping debris, there were no observed containers or drums on the Site.
- There were no electrical transformers observed on the Site.
- Improper disposal of solid waste was observed on the Site. The waste consisted predominantly of glass, ceramic ware, cans, and construction and landscaping debris. .
- There was no observed evidence of improper hazardous or potentially hazardous waste disposal.
- There were no drains on the Site.



- There was no observed evidence of pits, ponds, lagoons, or on-site effluent disposal systems.
- There was no observed evidence of chemical spills.
- Discolored or stained soils were not observed.
- No water wells or dry wells were observed on the Site.
- Unusual odors were not encountered.

### 2.6.2 Private/Public Water Supply

No public or private water supply wells were identified on this Site during the course of this assessment. According to information provided by the New Mexico State Engineer Office, there are no municipal wells located on the property. The closest public water supply well is Miles No. 1 located approximately 0.50 mile southeast of the Site.

### 2.6.3 Asbestos/Lead-Based Paint Potential

No specific investigation as to the presence of asbestos was performed during this study. US EPA regulations issued in 1973, 1975 and 1978 have banned the use of asbestos-containing-building materials (ACBMs) in new building construction. ACBMs are those building material containing greater than one-percent asbestos. Because there are no buildings on the Site, it is unlikely that asbestos is present on the Site.

The use of lead-based paint was also banned in 1978. However, because there are no buildings on the Site, it is unlikely that lead-based paint is present on the Site.

## 3.0 REGULATORY AGENCY REVIEW

### 3.1 General Data Base Information

Minimum records/field search distances for facilities of potential environmental concern in the vicinity of the Site utilized for this Phase I Environmental Site Assessment meet or exceed the standards outlined in the ASTM *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* document E1527-00. The minimum records/field search distances used for this Phase I Environmental Site Assessment compared to the ASTM standards are listed in the Table 1 below.

TABLE 1: *Records Search Distances*

RECORD	ASTM MINIMUM SEARCH DISTANCE (miles)	LEA SEARCH DISTANCE (miles)
Federal NPL Site List	1.0	1.00
Federal CERCLIS List	0.5	1.00
Federal RCRA Corrective Action List	1.0	1.00
Federal RCRA TSD Facilities List	0.5	1.00
Federal RCRA Generators List	Property/adjoining prop.	1.00
Federal ERNS List	Property only	1.00
State Leaking UST List	0.5	1.00

RECORD	ASTM MINIMUM SEARCH DISTANCE (miles)	LEA SEARCH DISTANCE (miles)
State Registered UST List	Property/adjoining prop.	1.00
State Hazardous Waste Investigation and/or Remediation	1.0	1.00
State Solid Waste Disposal Site List	0.5	1.00

Acronyms used in Table 1 are defined as follows:

CERCLIS - Comprehensive Environmental Response, Compensation, and Liability Information System

ERNS - B Emergency Response Notification System

NPL - B National Priorities List

RCRA - B Resource Conservation and Recovery Act

TSD - B Treatment, Storage, and/or Disposal

UST - B Underground Storage Tank

As previously indicated, regulatory lists were reviewed, and when appropriate, regulatory agencies were contacted as part of this assessment and are documented in the following sections. Available data for the ASTM radius are provided in the EDR Radius Map Report, dated January 11, 2006, found in Appendix A. Locations of these various facilities are also presented in map form. Additional information provided in the EDR report includes Brownfields information and information on Indian reservations. There are no Indian lands within one mile of the Site and there are no Brownfields or proposed Brownfields sites within one mile of the Site

### 3.2 Environmental Data Bases Review

#### 3.2.1 CERCLIS/NPL

The US EPA maintains a listing of sites that (1) meet or exceed a predetermined hazard ranking system score, (2) are chosen as top priority sites by the state, or (3) meet specific criteria established by the U.S. Department of Health and Human Services jointly with the US EPA. These sites are identified for priority remedial action under the Federal Superfund program.

- The Site was not on this list.
- There is one NPL site listed within one mile of the Site. The listed site is called the South Valley Site and involves two plumes, one from near the GE Aircraft Engines Plant and the second one from near the Van Waters and Rogers/Univar facility. According to the US EPA records and the New Mexico Environment Department (NMED), the plume contaminant for both plumes is predominantly trichloroethylene (TCE). The GE plume extended east from the plant on the west side of Broadway at Woodward to the freeway and the Van Waters and Rogers plume extended beneath the freeway from the facility location on Woodward west of the freeway. The plumes are undergoing remediation by pump and treat with reinjection of the clean water back into the aquifer. According to Bart Faris of the NMED Ground Water Protection Bureau, the second year US EPA review of the remediation found that both plumes were shrinking and the contamination concentrations were dropping. The plume is not impacting the Site and would not be expected to impact the Site in the future.
- There are no facilities identified in the EDR database search, within one-half mile of the Site listed with a CERCLIS/NFRAP designation. The GE Aircraft Engines plant is listed as a CRECLIS/NFRAP facility and lies just over a mile from the Site. GE is actively involved in the plume remediation described above even though it is listed in the EDR database as a no further action facility.

### **3.2.2 RCRA CORRACTS FACILITIES**

The RCRA CORRACTS Facilities are facilities that treat, store and/or dispose of hazardous waste and have been subject to a corrective action by the US EPA in the past.

- The Site was not on the list.
- There is one RCRA CORRACTS site, the GE Aircraft Engines Plant, listed in the EDR report. That site is slightly over a mile from the Site. Based on distance and ground water gradient, activities at the GE Aircraft Engines Plant would not be expected to impact the Site. There are no CORRACTS sites within one mile of the Site.

### **3.2.3 Resource Conservation and Recovery Act (RCRA) Treatment, disposal, Storage (TSD) Facilities**

The US EPA maintains a database of all RCRA-regulated TSD facilities in the United States. RCRA-regulated facilities are those that treat, store, dispose, or transport hazardous wastes. The ASTM minimum search distance for these facilities is 0.5 mile of the Site.

- The site is not listed as a RCRA-regulated facility.
- There are no RCRA TSD sites within one mile of the Site

### **3.2.4 Emergency Response Notification System (ERNS)/RCRA Generators**

The ERNS database contains information from spill reports made to the US EPA, the U.S. Coast Guard, the National Response Center, and the Department of Transportation. The search distance for RCRA generator sites is the Site and adjacent properties. The search distance for ERNS sites is the Site.

- The Site was not listed in the EDR report as an ERNS site.
- There is one ERNS site within a 0.25 to 0.50-mile radius of the Site, the Yellow Freight Terminal west of the freeway on the east side of Broadway. Less than six ounces of azinphos methyl vented from a 5-gallon pail and evaporated. The release would not be expected to impact the Site. An additional release report under the Hazardous Materials Incident Report System (HMIRS) identified a hydrochloric acid release during shipment to the Karstens facility at 2600 Karstens Court, SE, west of the freeway. The spill was contained within the truck and cleaned up. The release would not be expected to impact the Site.
- The Site was not listed in the EDR report as a RCRA generator.
- One RCRA generator site is listed within a 0.125 to 0.25-mile radius; one within a 0.25 to 0.50-mile radius; and six within a 0.5 to 1.0-mile radius. All are listed as small quantity generators. According to the EDR data base report, none of these sites have had violations and no impact on the Site would be anticipated.

### **3.2.5 USTs/LUSTs**

The NMED USTB maintains a list of Sites where releases of petroleum products has occurred from underground storage tanks. The ASTM search distance for LUST Sites is one-half mile and for UST sites is one-quarter mile.

- The Site was not listed as an UST or LUST site.
- There are 12 UST sites identified within one mile of the Site. Five are within the ASTM search distance of 0.50 mile. There is one within one-eighth mile, two within one-quarter mile and two within one-half mile. Of these five sites, four have had the tanks removed. The active tank site is at the corner of University and Gibson. At the time of this report, there were no known releases from that facility. With a ground water gradient to the east, releases from that site would not be expected to impact the Site.
- There are 11 LUST sites within one mile of the Site. Only one, the Pump and Save at I-25 and Gibson has a potential to impact the Site. According to the NMED records, those tanks have been removed and the affected soils removed. Ground water was not impacted. No further action is required. The contamination remained on the Pump and Save site and the Site was not impacted.

### 3.2.6 Landfills/Solid Waste Disposal Facilities

No permitted or listed state landfills or specified state solid waste disposal facilities are reported within the one-half mile search distance from the Site. The Site was not listed in the EDR report as a solid waste disposal facility. However, there are two landfills south of the Site. The first is the Yale landfill. That facility has been closed and is being monitored for ground water contamination with organic chemicals and for landfill gas. The north end of the landfill lies approximately 0.50 mile southeast of the Site. Based on ground water monitoring, the ground water gradient is to the east. Ground water beneath the Site would not be expected to be impacted by the Yale Landfill. The Site lies outside the 1,000-foot buffer zone for properties that might be impacted by landfill gas from the Yale landfill. The second landfill is the Schwartzman's Landfill. The northernmost extent of the landfill (between the freeway and the AMAFCA channel) lies approximately 600 feet southwest of the Site. No ground water monitoring specific to this landfill has been done. One of the Yale landfill wells lies between the two landfills. The data indicates that there is ground water contamination and, given a gradient to the east, that contamination may come from the Schwartzman's landfill. However, with an eastern gradient, ground water beneath the Site would not be expected to be impacted by the Schwartzman's landfill. The Site does lie within the 1,000-foot buffer for potential landfill gas impact. Only one industrial site, located west of the freeway and on the north boundary of the landfill, appears to have conducted a landfill gas study and submitted that study to the City of Albuquerque. Landfill gas was found at 5% of the lower explosive limit. From this study, it appears that landfill gas is being generated. It is possible that the Site could be impacted by the presence of landfill gas.

## 4.0 CONCLUSION AND RECOMMENDATIONS

LEA Environmental, LLC (LEA) has performed a Phase I Environmental Site Assessment of Tracts A, 4, and 5 on the north side of Gibson Boulevard, SE, east of Interstate 25 (I-25). The assessment was conducted in conformance with the scope and limitations of ASTM Standard E1527-05 and the US EPA standards for all appropriate inquiry as found in 40 CFR 312.

The Site consists of approximately 3.768 acres of undeveloped land located on the north side of Gibson Boulevard approximately 1,200 feet east of I-25 in the southeast quadrant of Albuquerque, New Mexico. Depth to groundwater at the site is estimated to be 150 to 190 feet below ground surface (bgs) with a groundwater gradient to the east. According to the 2003 Flood Insurance Rate Map, the Site is not situated within a 100-year flood zone. At the time of the site visit, the site was undeveloped. Scattered dumping of construction debris and domestic solid waste was noted over the Site. The erosion channels on the Site had no observed exposed solid waste. According to

reviewed historical information, including aerial photographs and topographic maps, the Site has not been developed and does not appear to have been used a quarry or landfill. A site reconnaissance, interviews with persons familiar with the Site, and a regulatory database review found no indication of the past use of hazardous materials on the Site. The Site reconnaissance did not find observable evidence of activities that would cause a significant negative environmental impact to the Site.

LEA's review of available environmental and regulatory databases did not indicate that the Site or immediately adjacent properties are the subject of regulatory action. No indication of hazardous waste disposal (e.g. stained or discolored soils or distressed vegetation) was noted on the Site during the site reconnaissance. As described above, solid waste debris was observed. Review of the databases for the City of Albuquerque indicated that there were two landfills (Yale and Schwartzman's) south of the Site. Data on the Yale landfill indicated that the landfill would not be expected to impact the Site. Data on the Schwartzman's landfill indicated that the Site was not part of the landfill. However, based on the City of Albuquerque guidelines for solid waste landfills with a potential to produce landfill gas, the Site lies within the 1,000-foot buffer of land that might be impacted by landfill gas.

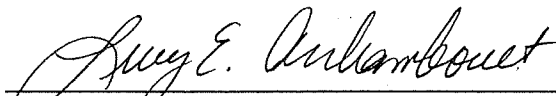
With the exception of the potential impact from landfill gas migrating from the Schwartzman's landfill, this assessment has revealed no recognized environmental conditions, in connection with the Site, as defined in ASTM Standard Practice E 1527-05. Based on observations from the site visit, information from personal interviews, available agency information, and documents related to the Site, LEA recommends that

- a landfill gas study be conducted on the Site in accordance with City of Albuquerque landfill gas guidelines prior to any construction on the Site.
- appropriate landfill gas barriers be designed and installed in accordance with the City of Albuquerque landfill gas guidelines as part of the Site development.

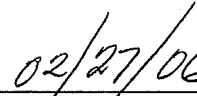
LEA recommends no other actions at this time.

## 5.0 SIGNATURE

The information contained in this Phase I Environmental Site Assessment was compiled by LEA Manager, Lucy E. Archambault. It is current to the best of my knowledge, and is intended to represent substantial conformance with the standards, methods, and procedures described in the **ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process** (Standard Designation E 1527-05), published 2005. It has been prepared on behalf of the UNM Real Estate Office for a potential transaction involving the Site.



Lucy E. Archambault, RHSP  
Manager  
LEA Environmental

  
Date



Phase I Environmental Site Assessment  
of Tracts A, 4, & 5, on Gibson Boulevard, SE  
Albuquerque, New Mexico  
LEA Project No. 0211-11.0

## 6.0 CONTACTS AND REFERENCES

### 6.1 Contacts

Bart Faris, New Mexico Environment Department, Ground Water Protection Bureau, Albuquerque, New Mexico, 222-9521.

Ralph Gruebel, Albuquerque Environmental Health Department, Ground Water Division, Albuquerque, New Mexico, (505) 768-2658.

Kim Murphy, Director of Real Estate for the University of New Mexico (505) 277-4620

Marcia Pincus, Albuquerque Environmental Health Department, Solid Waste Division, Albuquerque, New Mexico, (505) 768-2618

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U.S. Geological Survey Topographic Map, Albuquerque West, New Mexico 7-1/2 minute quadrangle, maps Dated 1934, 1954, 1960 (photo revised 1967, 1972) and 1990.