



AMREP SOUTHWEST INC

BUILDING A BETTER FUTURE FOR NEW MEXICO

PHASE I ENVIRONMENTAL SITE ASSESSMENT

ENCHANTED HILLS UNIT 11B
U.S. HIGHWAY 550
RIO RANCHO, SANDOVAL COUNTY,
NEW MEXICO 87144

January 2016

NALE-16-004 (100)-16-340



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EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment was performed in accordance with our proposal (P-ALE-16-084 dated January 6, 2016) and in general accordance with the consensus documents known as American Society for Testing and Materials E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. Mr. Kenneth Hunter performed the site reconnaissance on January 9, 2016.

Enchanted Hills Unit 11B (subject property) is located on the south side of U.S. Highway 550 and four blocks west of Chayote Road in northeast Rio Rancho, Sandoval County, New Mexico.

A summary of findings is provided below. However, details are not included or fully developed in this Executive Summary, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

- The subject property contains approximately 27 acres of land that has been graded (house pads and roadways) for residential subdivision use.
- Historical sources indicate that the subject property has been undeveloped from at least 1935 to 2007 when it was cleared and graded. Residences were located south and east of the subject property by 2005. Adjoining parcels to the north and west have historically been undeveloped.
- The regulatory review identified one Emergency Response Notification System site within the specified search radii of the subject property. Based upon facility characteristics, environmental settings, and/or distance from the site, the identified regulatory site does not appear to constitute a recognized environmental condition in connection with the site at this time.

Based on the scope of services and limitations of this assessment, Zia did not identify any recognized environmental conditions in connection with the subject property at this time.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

ENCHANTED HILLS UNIT 11B

U.S. HIGHWAY 550

RIO RANCHO, SANDOVAL COUNTY, NEW MEXICO 87144

1 INTRODUCTION

The Enchanted Hills Unit 11B (subject property) residential subdivision consists of approximately 27 acres of land located on the south side of U.S. Highway 550 and four blocks west of Chayote Road in northeast Rio Rancho, Sandoval County, New Mexico. The subject property has been graded (house pads and roadways) for residential subdivision use.

1.1 PURPOSE

The purpose of a Phase I Environmental Site Assessment (ESA) is to accumulate data for use by parties who wish to evaluate the level of environmental risk associated with commercial real estate and takes into account commonly known and reasonably ascertainable information. While completion of a Phase I ESA is intended to constitute one of the requirements of all appropriate inquiry for purposes of Comprehensive Environmental Response Compensation and Liability Act (CERCLA) liability protections, it is not intended that its use be limited to that purpose. This ESA is intended primarily as an approach to conducting an inquiry designed to identify recognized environmental conditions¹ (REC), controlled recognized environmental conditions² (CREC), and historical recognized environmental conditions³ (HREC) in connection with a property, as reflected by the scope, and represents a commercially prudent and reasonable inquiry.

¹ RECs, per ASTM E1527-13, are defined as "the presence or likely presence of any hazardous substance or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. *De minimus* conditions are not recognized environmental conditions."

² CRECs, per ASTM E1527-13, are defined as "a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

³ HRECs, per ASTM E1527-13 are defined as "a past release of any hazardous substance or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority, without subjecting the property to any required controls."

1.2 DETAILED SCOPE OF SERVICES

This Phase I ESA of the above-referenced site was performed in accordance with our proposal (P-ALE-16-084 dated January 6, 2016) and in general accordance with the consensus document known as ASTM International, formerly known as the American Society for Testing and Materials (ASTM) E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. This ESA consisted of the following components, which include:

- *A thorough, noninvasive, on-site reconnaissance of the property, including a review of adjacent properties;*
- *Interviews with current owners/operators/occupants, local government officials, and neighboring property owners/occupants to obtain information which may indicate RECs in connection with the property;*
- *A review of various physical setting, historical, and regulatory records to help identify RECs in connection with the subject property and nearby properties; and*
- *Preparation of a final report, which details the assessment findings, conclusions, and opinions of the environmental professional, and includes supporting documentation.*

A more detailed scope of services is included in the above-referenced proposal. Limitations and ASTM deviations are evident from reviewing the applicable scope of services and the report text.

1.3 SIGNIFICANT ASSUMPTIONS

This Phase I ESA was performed in accordance with generally accepted practices of this profession undertaken in similar studies at the same time and in the same geographical area. We have endeavored to meet this standard of care but may be limited by conditions encountered during performance, a client-driven scope of services, or the inability to review information not received by the report date. Phase I ESAs, such as the one performed at this site, are of limited scope, are noninvasive, and cannot eliminate the potential that hazardous, toxic, or petroleum substances are present or have been released at the site beyond what is identified by the limited scope of this ESA. In conducting the limited scope of services described herein, certain sources of information and public records were not reviewed.

It should be recognized that environmental concerns might be documented in public records that were not reviewed. No environmental site assessment can wholly eliminate uncertainty regarding the potential for RECs in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for RECs. No warranties, express or implied, are intended or made. The limitations herein must be considered when the user of this report formulates opinions as to risks associated with the site or otherwise uses the report for any other purpose. These risks may be further evaluated – but not eliminated – through additional research or assessment. We will, upon request, advise you of additional research or assessment options that may be available and associated costs.

1.4 LIMITATIONS AND EXCEPTIONS AND SPECIAL TERMS AND CONDITIONS

Based upon the agreed-on scope of services, this ESA did not include subsurface or other invasive assessment, business environmental risk evaluations, or other services unless identified and discussed herein. Reasonable attempts were made to obtain information within the scope and time constraints set forth by the client; however, in some instances, information requested is not or was not received by the issuance date of the report.

Consideration of such information is beyond the scope of this assessment. Information obtained for this ESA was received from several sources that we believe to be reliable; nonetheless, the authenticity or reliability of these sources cannot and is not warranted hereunder. Purchase price data, specialized knowledge, or experience of the client, activities and land use limitations, and environmental lien information were not provided by the client for evaluation unless otherwise specified herein. This ESA was further limited by the following:

- *Credentials of the company (Statement of Qualifications) have not been included in this report but are available upon request.*
- *During the site reconnaissance, small portions of the subject property could not be observed due to patches of snow.*

This report represents our service to you as of the report date and constitutes our final document; its text may not be altered after final issuance. Findings in this report are based upon the site's current utilization, information derived from the most recent reconnaissance and from other activities described herein; such information is subject to change. Certain indicators of the presence of hazardous substances or petroleum products may have been latent, inaccessible, unobservable, or not present during the most recent reconnaissance and may subsequently become observable (such as after site renovation or development). Furthermore, these services are not to be construed as legal interpretation or advice.

1.5 USER RELIANCE

This ESA report has been prepared for the exclusive use and reliance of Amrep Southwest, Inc., and the City of Rio Rancho. Use or reliance by any other party is prohibited without the written authorization of Amrep Southwest, Inc., and Zia Engineering & Environmental Consultants, LLC (Zia).

Reliance on the ESA by the client and all authorized parties will be subject to the terms, conditions, and limitations stated in the proposal, ESA report, and Zia's Terms and Conditions. The limitation of liability defined in the Terms and Conditions is the aggregate limit of Zia's liability to the client and all relying parties.

2 SITE DESCRIPTION

TABLE 1: SITE LOCATION AND LEGAL DESCRIPTION

Site Name	Enchanted Hills Unit 11B
Site Location / Address	U.S. Highway 550, Rio Rancho, Sandoval County, New Mexico 87144
Legal Description	Block 1 lots 34 through 79, Block 2 lots 1 through 12, Block 3 lots 1 through 14, Block 4 lots 5 through 14, Block 5 lots 9 through 21, Block 6, lots 1 through 3, Block 7 lots 1 through 16, and Parcel B plus road easements
Site / Vicinity General Characteristics	Residential and undeveloped
Current Use of Site	Undeveloped, graded for single-family residential development
Structures, Roads, Other Improvements	House pads and roadways have been graded
General Current Use of Adjoining Properties	Residential and undeveloped

According to the Rio Rancho Zone Atlas, the subject property is located within the west-central portion of Section 15, Township 13 North, Range 3 East, New Mexico Principal Meridian (Zone Atlas page 158).

Most of the site has been graded. A storm water ponding area (Parcel B) is located in the northwest portion of the subject property. The subject site characteristics are addressed in greater detail in Section 5.0. The site location is depicted on Figure 1 of Appendix A, which was reproduced from a portion of the U.S. Geological Service (USGS) 7.5-minute series 2013 Bernalillo, New Mexico, topographic map. A site diagram, including adjoining properties, is included as Figure 2 of Appendix A, which was reproduced from a portion of a 2014 Google Earth™ aerial photograph. Selected acronyms and terms used in this report are described in Appendix G.

3 USER PROVIDED INFORMATION

The user is defined as the party seeking to use ASTM Practice E 1527-13 to complete this Phase I ESA of the subject site. The user for this ESA is identified as Amrep Southwest, Inc., which intends to designate the subject property as a Public Improvement District (PID).

A User Questionnaire (Appendix E) was completed by Ms. Carey Plant, Director of Land Development for Amrep Southwest, Inc., to assist in gathering information that may be material to identifying RECs in connection with the subject site. In order to qualify for one of the CERCLA liability protections offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001, the user is requested to provide to Zia the following information (if available).

3.1 TITLE RECORDS

Ms. Plant stated that Amrep Southwest, Inc. (formerly Rio Rancho Estates) acquired the subject property in 1961 as a portion of the purchase of three ranches for the development of the City of Rio Rancho. She said that the subject property has historically been used for grazing but that it has been undeveloped since their acquisition.

3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

Ms. Plant indicated that she is not aware of environmental clean-up liens or activity and use restrictions at the subject property.

3.3 SPECIALIZED KNOWLEDGE, COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

Ms. Plant stated that she is not aware of environmental concerns at the subject property.

3.4 VALUATION REDUCTION FOR ENVIRONMENTAL ISSUES

Ms. Plant stated that the fair market value of the property is not applicable to the subject property since the site is being considered for application as a (PID). The subject property is not being considered for sale or lease at this time.

3.5 REASON FOR PERFORMING ESA

According to Ms. Plant, the Phase I ESA is being performed for the due diligence process during the PID application.

4 RECORDS REVIEW

In some of the following subsections, the words up-gradient, cross-gradient, and down-gradient refer to the topographic gradient in relation to the site. The groundwater flow direction and the depth to shallow groundwater, if present, would likely vary depending upon seasonal variations in rainfall and the depth to the soil/bedrock interface. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be accurately ascertained but only inferred, as has been done in this case.

4.1 STANDARD ENVIRONMENTAL RECORD SOURCES

The United States Environmental Protection Agency (EPA) and the New Mexico Environment Department (NMED) regulatory database information was provided by GeoSearch, a contract information services company, for indications of environmental concern on and in the vicinity

of the site. Information in this section is subject to the accuracy of the data provided by the information service company and the date at which the information is updated, and the scope herein did not include identifying the location of facilities listed as "unmappable."

The types and number of facilities identified in the standard federal and state databases within the indicated search areas are listed in Table 2. Database definitions, descriptions, and the database search reports and any additional regulatory record information provided by GeoSearch, and/or NMED are included in Appendix D.

TABLE 2: FEDERAL AND STATE DATABASES

DATABASE	DESCRIPTION	RADIUS (MILES)	FACILITIES
FEDERAL			
NPL	The National Priorities List (NPL) is the EPA's database of uncontrolled or abandoned hazardous waste facilities that have been listed for priority remedial actions under the Superfund Program.	1.0	0
CERCLIS/ NFRAP	The CERCLIS database is a compilation of facilities, which the EPA has investigated, or is currently investigating for a release or threatened release of hazardous substances pursuant to CERCLA. No Further Remedial Action Planned (NFRAP) refers to facilities that have been removed and archived from its inventory of CERCLA sites.	0.5	0
RCRA CORRACTS/ TSD	The EPA maintains a database of Resource Conservation and Recovery Act (RCRA) facilities associated with treatment, storage, and disposal (TSD) of hazardous materials that are undergoing "corrective action". A "corrective action" order is issued when there has been a release of hazardous waste or constituents into the environment from an RCRA facility.	1.0	0
RCRA Non- CORRACTS/ TSD	The RCRA Non-CORRACTS/TSD Database is a compilation by the EPA of facilities that report storage, transportation, treatment, or disposal of hazardous waste. Unlike the RCRA CORRACTS/TSD database, the RCRA Non-CORRACTS/TSD database does not include RCRA facilities where corrective action is required.	0.5	0
RCRA Generators	RCRA Generators database maintained by the EPA, lists facilities that generate hazardous waste as part of their normal business practices. Generators are listed as large, small, or conditionally exempt. Large quantity generators (LQG) produce at least 1000 kg/month of non-acutely hazardous waste or 1 kg/month of acutely hazardous waste. Small quantity generators (SQG) produce 100-1000 kg/month of non-acutely hazardous waste. Conditionally exempt small quantity generators (CESQG) are those that generate less than 100 kg/month of non-acutely hazardous waste. This list includes facilities that are no longer generating RCRA wastes.	0.1	0
US Eng Controls	EPA maintains a listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.	Site	0

DATABASE	DESCRIPTION	RADIUS (MILES)	FACILITIES
US Inst Controls	EPA maintains a listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.	Site	0
ERNS	The Emergency Response Notification System (ERNS) is a listing compiled by the EPA on reported releases of petroleum and hazardous substances to the air, soil, and/or water.	Site	1
Brownfields	Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off undeveloped, open land and both improves and protects the environment.	0.5	0
STATE			
SPL	NMED maintains a database of state-equivalent national priority list (SPL) facilities in the state of New Mexico.	1.0	0
CEPCS	NMED maintains a database of Compliance and Enforcement Program Cleanup Sites (CEPCS), state-equivalent CERCLIS facilities in the state of New Mexico.	0.5	0
SWF	NMED maintains a database of Solid Waste Facilities (SWF) located within the state of New Mexico. The database information may include the facility name, class, operation type, area, estimated operational life, and owner. It includes recycling facilities.	0.5	0
LUST	NMED provides a computer-generated database of the leaking petroleum storage tanks in the state of New Mexico. The EPA maintains a listing of leaking underground storage tank locations on Indian land.	0.5	0
UST / AST	NMED has compiled a database of registered petroleum storage tanks in the state of New Mexico, which may include the owner and location of the USTs and includes registered aboveground storage tanks (ASTs).	0.25	0
Inst Control	NMED maintains a list of sites included in the Voluntary Cleanup listing that have Institutional Controls in place.	Site	0
VCP	NMED maintains a list of sites involved in the Voluntary Cleanup Program (VCP).	0.5	0

The regulatory review identified one ERNS site within the specified search radii of the subject property.

4.1.1 Listed Facilities

The following table summarizes the site-specific information provided by the database and/or gathered by Zia for facilities identified on federal and state databases within the indicated search areas. Additional discussion for selected facilities may follow the summary table.

TABLE 3: SUMMARY OF LISTED FACILITIES

FACILITY NAME AND LOCATION	ESTIMATED DISTANCE	DIRECTION	TOPOGRAPHIC POSITION	DATABASE LISTING
Residence, 5877 Union Drive NE	0.02 mile	East	Down-gradient	ERNS

Residence (ERNS)

According to the regulatory review, a fire was reported on May 14, 2011 at a residence located approximately 0.02 mile east and topographically down-gradient relative to the subject property. The database did not list any potentially hazardous materials associated with the fire.

- Based on the current regulatory status, depth to groundwater, and the topographic gradient, the ERNS site is not considered to present a REC relative to the subject property at this time.

4.1.2 Unmapped Facilities

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the site. The GeoSearch report listed no facilities in the unmapped/orphan summary section (Appendix D). The unmapped facilities were not observed in the vicinity of the subject property during the area reconnaissance.

4.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

4.2.1 Fire Department and Public Service Company of New Mexico Databases

Zia requested that local fire department and transformer records be reviewed (please reference sections 6.2 and 6.3).

4.3 PHYSICAL SETTING SOURCES

TABLE 4: PHYSICAL SETTINGS

PHYSICAL SETTING INFORMATION FOR SITE AND SURROUNDING AREA		SOURCE
TOPOGRAPHY		
Site Elevation	Approximately 5550 feet (ft.) above mean sea level (amsl) (southeast corner), and 5590 ft. amsl (northwest corner)	<i>Bernalillo, NM 7.5-minute USGS topographic map, dated 2013</i>
Surface Runoff / Topographic Gradient	Easterly	
Closest Surface Water	Jemez River (3.5 miles northeast), Rio Grande (3.9 miles southeast)	
FEMA MAP		
Zone / Description	Unshaded Zone X, which is defined as outside the 0.2% chance of flood. Zone A within the storm water ponding area in the northwest portion of the site.	<i>FEMA Flood Insurance Rate Map, Community Panel 35043C1925D, dated 03/18/2008</i>
SOIL CHARACTERISTICS		
Soil Type / Soil Description	(183) Sheppard loamy fine sand with 8 to 15 percent slopes. The Sheppard loamy fine sand forms in eolian sands. Permeability is rapid (6.0 to 20.0 inches per hours) and the available water capacity is low. Runoff is medium and the hazard of water erosion is moderate. The hazard of soil blowing is severe. Soil pH ranges from 7.4 to 9.0. The risk of corrosion to uncoated steel is high and the risk of corrosion to concrete is moderate.	<i>Web Soil Survey accessed 1/21/16</i>

PHYSICAL SETTING INFORMATION FOR SITE AND SURROUNDING AREA		SOURCE
GEOLOGY/HYDROGEOLOGY		
Formation(s) / Description:	The site is located on the west mesa portion of the Albuquerque-Belen basin. The west mesa was formed by an upfaulted block that rose between the Rio Grande to the east and the Rio Puerco to the west. Regional basalt flows are present. Quaternary alluvium (Q) is present in this area, overlying the Santa Fe Group.	Vincent C. Kelly, <u>Geology of Albuquerque Basin, New Mexico</u> ; 1977
Estimated Depth to Groundwater*	350 feet below ground surface	New Mexico Office of the State Engineer Website (http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.htm), accessed 1/21/16
Primary Aquifer	Santa Fe Group	
Hydrogeologic Gradient*	Easterly toward Rio Grande	
Site Water Source	City of Rio Rancho	Site visit 1/09/2016
RADON		
Zone / Description	EPA: Zone 2: Sandoval County has a predicted average indoor radon screening level between 2.0 pCi/L and 4.0 pCi/L. NMED: Sandoval County has a high preliminary radon-availability rating.	EPA Map of Radon Zones; accessed 1/21/2016 NMED <u>New Mexico Radon Survey 1987-1989</u>

*The groundwater flow direction and the depth to shallow groundwater, if present, would likely vary depending upon seasonal variations in rainfall, local variations associated with surface water channels, municipal well fields, and the depth to the soil/bedrock interface. Ground water flow direction is generally inferred to follow surface topography.

A total of 70 radon measurements were collected within Sandoval County during the NMED 1987-1989 radon survey. Of those, 55 radon measurements (78.6%) were less than 4.0 pCi/L and seven radon measurements (10%) were between 4.0 pCi/L and 10.0 pCi/L. Six radon measurements (8.6%) were between 10.0 pCi/L and 20.0 pCi/L and two radon measurements (2.9%) were greater than 20 pCi/L.

The 87144 zip code area was not a designated zip code area during the years of the NMED radon survey. However, 26 radon measurements were collected within Rio Rancho. Twenty-five of those radon measurements (96.2%) were below 4.0 pCi/L and one radon measurement (3.8%) was between 10.0 pCi/L and 20.0 pCi/L.

- Based on a review of EPA and NMED data, radon levels appear to be low in Rio Rancho but elevated in other parts of the Sandoval County.

4.4 HISTORICAL USE INFORMATION

Review of historical use information helps identify obvious uses of the site back to at least 1940 or prior to site development, whichever is earlier, by reviewing one or more "standard historical sources." Documentation of historical sources, as available, is included in Appendix C.

4.4.1 Historical Topographic Maps

Zia reviewed readily available USGS historical topographic maps to identify RECs in connection with the site. Selected historical topographic maps are summarized in Table 5.

- USGS Topographic Map: Bernalillo, New Mexico; 1954, 1972, 1990, 2006, 2011, 2013.

TABLE 5: HISTORICAL TOPOGRAPHIC MAPS

DIRECTION	DESCRIPTION
Site	Vacant land (1954, 1972, 1990, 2006); Orthographic image layer depicts the site as graded (2011, 2013).
North	U.S. Highway 550 and vacant land of Santa Ana Pueblo (1954, 1972, 1990, 2006, 2011, 2013).
West	Vacant land (1954, 1972, 1990, 2006, 2011, 2013).
South	Vacant land (1954, 1972, 1990); Shaded to depict urban development (2006); Orthographic image layer depicts the area as residential (2011, 2013).
East	Vacant land (1954, 1972, 1990); Shaded to depict urban development (2006); Orthographic image layer depicts the area as residential (2011, 2013).

Based on the review of topographic maps, the subject property appears to have been undeveloped land from at least 1954. Adjacent parcels to the north and west have also been undeveloped. Adjacent parcels to the east and west appeared to be residential by 2006.

- Based on a review of historical topographic maps, no RECs were noted in connection with the site.

4.4.2 Historical Aerial Photographs

Selected historical aerial photographs were reviewed at approximately 10-year to 15-year intervals, if readily available, to identify RECs in connection with the site. Aerial photograph quality and scale may limit evaluation of some older aerial photographs. Selected photographs are summarized in Table 6.

- University of New Mexico (UNM) Earth Data Analysis Center Aerial Photograph Collection: 1935, 1954, 1975, 1982, and 1987.
- Albuquerque Geographic Information System (AGIS): 2008, 2010, and 2012.
- Google Earth™: 1996, 2002, 2003, 2004, 2005, 2006, 2007, 2009, and 2014.

TABLE 6: HISTORICAL AERIAL PHOTOGRAPHS

DIRECTION	DESCRIPTION
Site	Vacant land (1935, 1954, 1975, 1982, 1987, 1996, 2002, 2003, 2004); Graded (2005, 2006, 2007, 2008, 2009, 2010, 2012, 2014).
North	U.S. Highway 550 and vacant land (1935, 1954, 1975, 1982, 1987, 1996, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2012, 2014).
West	Vacant land (1935, 1954, 1975, 1982, 1987, 1996, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2012, 2014).

DIRECTION	DESCRIPTION
South	Vacant land (1935, 1954, 1975, 1982, 1987, 1996, 2002, 2003); Graded (2004); Residences (2005, 2006, 2007, 2008, 2009, 2010, 2012, 2014).
East	Vacant land (1935, 1954, 1975, 1982, 1987, 1996, 2002); Graded (2003, 2004); Residences (2005, 2006, 2007, 2008, 2009, 2010, 2012, 2014).

Historical aerial photographs indicate that the subject property has been undeveloped land from at least 1935 to 2005 when it was graded for residential development. Adjacent properties to the north and west have also been historically undeveloped. The residential subdivision to the south and east was graded in approximately 2003 and was fully developed by 2005.

- Based on a review of the historical aerial photographs, no RECs were noted in connection with the subject site.

4.4.3 Historical City Directories

Historical street directories are not available for the City of Rio Rancho. Rio Rancho was not founded until 1961 and was not incorporated until 1981.

4.4.4 Historical Fire Insurance Maps

In the late nineteenth century, the Sanborn Company (Sanborn) began preparing maps of central business districts for use by fire insurance companies. These maps were updated and expanded geographically periodically through the twentieth century. The Sanborn maps often indicate construction materials of specific building structures and the location of storage tanks.

Zia reviewed Sanborn maps at the Map and Geographic Information Center at UNM. Historical fire insurance maps produced by Sanborn are not available for Rio Rancho.

4.4.5 Title and Other Property Records

A 50-year title history for the site was not provided for review.

4.4.6 Prior Report Review

Previous environmental reports were not provided for review.

5 SITE RECONNAISSANCE

5.1 METHODOLOGY AND LIMITING CONDITIONS

Information contained in this section is based on a visual reconnaissance conducted while walking through the site and the accessible interior areas of structures, if any, located on the site. A summary of information obtained from interviews and other references presented in the following subsections are also provided.

5.2 GENERAL SITE SETTING

TABLE 7: GENERAL SITE INFORMATION

GENERAL SITE INFORMATION	DESCRIPTION
SITE RECONNAISSANCE	
Field Personnel	Kenneth Hunter
Reconnaissance Date	January 9, 2016
Weather	Approximately 37°F, slightly cloudy, 20+ mph wind
Site Contact/Title	Ms. Carey Plant, Director of Land Development with Amrep Southwest, Inc.
SITE DESCRIPTION	
Site Name	Enchanted Hills Unit 11B
Site Location/Address	U.S. Highway 550, Rio Rancho, Sandoval County, New Mexico 87144
Adjoining Streets	Sandoval Drive NE and Quay Drive (east), and Valencia Drive and Union Drive, NE dead end onto property (east)
LAND AREA DESCRIPTION	
Land Area	Approximately 27 acres
Other Site Improvements	Graded roads and graded house pads, silt fencing
Zoning	Residential development (R4)
IN-USE SITE UTILITIES	
Electricity	Public Service Company of New Mexico (PNM)
Drinking Water	City of Rio Rancho
Wastewater	City of Rio Rancho
Natural Gas	New Mexico Gas Company
Solid Waste	Waste Management

The subject property is an irregular-shaped property that contains approximately 27 acres. The site is accessed by turning west off Chayote Road and going northwest along Valencia Drive.

The subject property has been graded (house pads and streets). Streets graded within the subject property include Sandoval Drive, Union Drive, Valencia Drive, Colfax Court, Colfax Place, Eddy Drive, and Eddy Place. Valencia Drive and Sandoval Drive are extensions of the paved roads to the east within the residential subdivision. Hay has been disced into the surface to reduce wind erosion. Silt fencing has been placed around the north, west, and south sides of the site and at multiple locations within the site to control erosion. Cement block walls are located along the east side of the site, separating the subject property from the adjacent residences.

The 2000 Rio Rancho Zone Atlas page indicates an unnamed arroyo passes from northwest to southeast through the subject property. A storm water ponding area is currently located in the northwest portion of the site and is located where the historical arroyo would have entered the

west side of the site. The storm water ponding area is unlined and approximately 15 feet deep. Silt fencing has been placed along the north and east sides of the ponding area. The remainder of the historical arroyo was not evident at the surface of the subject property during the site visit. Uniform property classification numbers were not obtained for the lots. Addresses have not yet been assigned to the lots.

5.3 SUMMARY OF OBSERVATIONS

Table 8 summarizes interior and exterior site observations and interviews. Affirmative responses (designated by an "X") are discussed in more detail in the subsections following the table.

TABLE 8: SITE CHARACTERISTICS

CATEGORY	ITEM OR FEATURE	ITEM OR FEATURE OBSERVED
Site Operations, Processes and Equipment	Emergency generators	
	Elevators	
	Air compressors	
	Hydraulic lifts	
Aboveground Chemical or Waste Storage	Evidence of aboveground storage tanks	
	Drums, barrels, and/or containers > 5 gallons	
	Chemicals ≤ 5 gallons, cleaning, and/or similar supplies	
	Safety Data Sheets	
Underground Chemical or Waste Storage, Drainage, or Collection Systems	Evidence of USTs or ancillary UST equipment	
	Sumps, cisterns, catch basins, and/or dry wells	
	Grease traps	
	Septic tanks and/or leach fields	
	Oil/water separators and sand traps	
	Pipeline markers	
Electrical Transformers and / or PCBs	Interior floor drains	
	Pad- or pole-mounted transformers	X
Evidence of Releases or Potential Releases	Stressed vegetation	
	Stained soil	
	Stained pavement or similar surface	
	Trash, debris, and/or other waste materials	X
	Dumping or disposal areas	
	Construction/demolition debris and/or dumped fill dirt	
	Surface water discoloration, odor, sheen, and/or free floating product	
	Strong, pungent, or noxious odors	
	Exterior pipe discharges and/or other effluent discharges	
	Laboratory hoods and/or incinerators	
	Waste treatment systems and/or water treatment systems	
	Compressor blowdown	
Other Notable Site Features	Surface water bodies	
	Quarries or pits	
	Wells	

Those entries above in bold and designated by an "X" indicate that the Item or Feature was observed during the site visit. These are discussed in more detail below. If no "X" designation appears above, then the Item or Feature was not observed on the date of the site visit.

5.3.1 Electrical Transformers/PCBs

Pad- or Pole-Mounted Transformers

Two PNM pole-mount transformers are located along the north side of the site (Station No. 1884 is the southeast transformer). Transformers contain mineral oil which may contain minor amounts of PCB and could be considered "PCB contaminated" (PCB content of 50-499 ppm).

Mr. Stephen Saletta at PNM was contacted by email for information about the transformers on January 19, 2016. Mr. Saletta responded that Station No. 1884 was manufactured by Howard Industries and was installed in 2008. He said that the northwest transformer was manufactured by Cooper Transformers and was installed in 2012. Both transformers are non-PCB.

PNM maintains responsibility for the transformers, and if the transformers were "PCB" contaminated, the utility company is not required to replace the transformer fluids until a release is identified. However, no evidence of current or past releases was observed in the vicinity of the electrical equipment during the site reconnaissance.

- Based on the above information, the PNM pole-mount transformers located at the subject property are not considered a REC at this time.

5.3.2 Evidence of Releases or Potential Releases

Trash, Debris, and/or other Waste Materials

Several small areas of surface debris were observed during the site visit. Based on visual observations (surface materials only), a radiator was observed along the west side of the site, north of the storm water ponding area. Some wood, cardboard, and bales of hay were observed within the northwest storm water ponding area. A wood pallet is located in the southwest corner of the subject property. Some concrete debris and minor quantities of other debris were observed along the east block walls.

- Based on the above information, the surface debris is not considered a REC at this time.

5.4 ADJOINING/SURROUNDING PROPERTY RECONNAISSANCE

Visual observations of adjoining/surrounding properties (from site boundaries and readily accessible public areas) are summarized in Table 9.

TABLE 9: ADJOINING/SURROUNDING PROPERTIES

DIRECTION	DESCRIPTION
North	U.S. Highway 550 and an undeveloped portion of Santa Ana Pueblo
East	Single-family residences
South	Storm water pond and single-family residences
West	Undeveloped land

The adjacent and surrounding properties include undeveloped desert land and residential properties.

- Based on the above information, neighboring properties are not considered a REC at this time.

6 INTERVIEWS

The following individuals were interviewed regarding the history, and/or presence or absence of the items or features listed in Section 5.3. Unless otherwise noted herein, the interviewee was not aware of any environmental concerns associated with the site or surrounding areas. A record of communication and the User Questionnaire are included in Appendix E.

6.1 OWNER/SITE MANAGER/OCCUPANTS

Carey Plant, Director of Land Development, Amrep Southwest, Inc.

Ms. Plant provided information about the subject property. She stated that the City of Rio Rancho was formed from three ranches that were purchased in 1961. The city was incorporated in 1981. Ms. Plant said that the subject property used to be used for grazing but that it has been undeveloped since their acquisition. Ms. Plant completed the ASTM User Questionnaire indicating that she was not aware of any potential environmental concerns with the site.

6.2 LOCAL GOVERNMENT OFFICIALS

Fire Marshal Jonathan Garcia, Rio Rancho Fire Department

Fire Marshal Garcia with the Rio Rancho Fire Department was contacted by telephone on January 15, 2016, for information regarding possible records of hazardous materials (HazMat) responses at the subject property. At this issuance of this report, a response has not been received.

6.3 OTHER

Stephen Saletta, PNM Environmental Services

Mr. Stephen Saletta was contacted on January 19, 2016, for information regarding the PNM pole-mount transformers on the north side of the property. Mr. Saletta stated that the transformer Station No. 51532S is the southeast transformer. It was manufactured by Howard Industries and was installed in 2008. Transformer Station No. 53869S is the northwest transformer. It was manufactured by Cooper Transformers and was installed in 2012. Both transformers are non-PCB.

7 FINDINGS, OPINIONS AND CONCLUSIONS

7.1 FINDINGS AND OPINIONS

This Phase I ESA was performed in accordance with our proposal (P-ALE-16-084 dated January 6, 2016) and in general accordance with the consensus documents known as ASTM E 1527-13 *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. Mr. Kenneth Hunter performed the site reconnaissance on January 9, 2016.

The Enchanted Hills Unit 11B (subject property) is located on the south side of U.S. Highway 550 and four blocks west of Chayote Road in northeast Rio Rancho, Sandoval County, New Mexico.

A summary of findings is provided below. However, details are not included or fully developed in this section, and the report must be read in its entirety for a comprehensive understanding of the items contained herein.

- The subject property contains approximately 27 acres of land that has been graded (house pads and roadways) for residential subdivision use.
- Historical sources indicate that the subject property has been undeveloped from at least 1935 to 2007 when it was cleared and graded. Residences were located south and east of the subject property by 2005. Adjoining parcels to the north and west have historically been undeveloped.
- The regulatory review identified one ERNS site within the specified search radii of the subject property. Based upon facility characteristics, environmental settings, and/or distance from the site, the identified regulatory site does not appear to constitute a REC in connection with the site at this time.

7.2 DATA GAPS

No significant data gaps were identified in the information obtained and reviewed during the inquiry activities for this Phase I ESA that we believe may affect Zia's ability to identify RECs at the subject property.

7.3 ADDITIONAL INVESTIGATION

Based on the scope of services and limitations of this assessment, Zia did not identify RECs in connection with the subject property, which in our opinion, would require additional investigation at this time.

7.4 CONCLUSIONS

We have performed a Phase I ESA in conformance with the scope and limitations of ASTM E 1527-13 of the Enchanted Hills Unit 11B located at U.S. Highway 550, Rio Rancho, Sandoval County, New Mexico. Any exceptions to, or deletions from, this practice are described in Sections 1.4 and 7.2 of this report. Based on the scope of services and limitations of this assessment, Zia did not identify RECs in connection with the subject property at this time.

8 ADDITIONAL SERVICES AND DEVIATIONS

Per the agreed-on scope of services specified in the proposal, additional services (e.g., asbestos testing, wetlands evaluation, lead-based paint testing, lead in drinking water testing, radon testing, etc.) were not conducted under this scope of work.

9 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject site. We have developed and performed all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



Kenneth E. Hunter
Associate Scientist



Victoria T. Brown
Project Scientist

10 REFERENCES

AGIS Web site Aerial Photographs of Albuquerque, New Mexico dated: 2008, 2010, and 2012.

GeoSearch ERec Search Report Enchanted Hills Unit 11B, U.S. Highway 550, Rio Rancho, New Mexico 87144; Job Number 133300, dated January 11, 2016.

EPA Map of Radon Zones Web site; <http://www.epa.gov/radon/zonemap.htm>.

Federal Emergency Management Agency Flood Insurance Rate Map Panel Number 35043C1925D, dated 03/18/2008.

Google Earth™ Aerial Photograph of Albuquerque, New Mexico, dated 1996, 2002, 2003, 2004, 2005, 2006, 2007, 2009, and 2014.

Vincent C. Kelly, Geology of Albuquerque Basin, New Mexico; 1977.

Ralph Manchego, Virginia McLemore, and John Hawley; NMED; New Mexico Radon Survey 1987 – 1989.

New Mexico Office of the State Engineer Web site (<http://nmwrrs.ose.state.nm.us/nmwrrs/waterColumn.html>), accessed 1/21/16.

UNM Earth Data Analysis Center Aerial Photographs of Albuquerque, New Mexico, dated: 1935, 1954, 1963, 1975, 1982, and 1987.

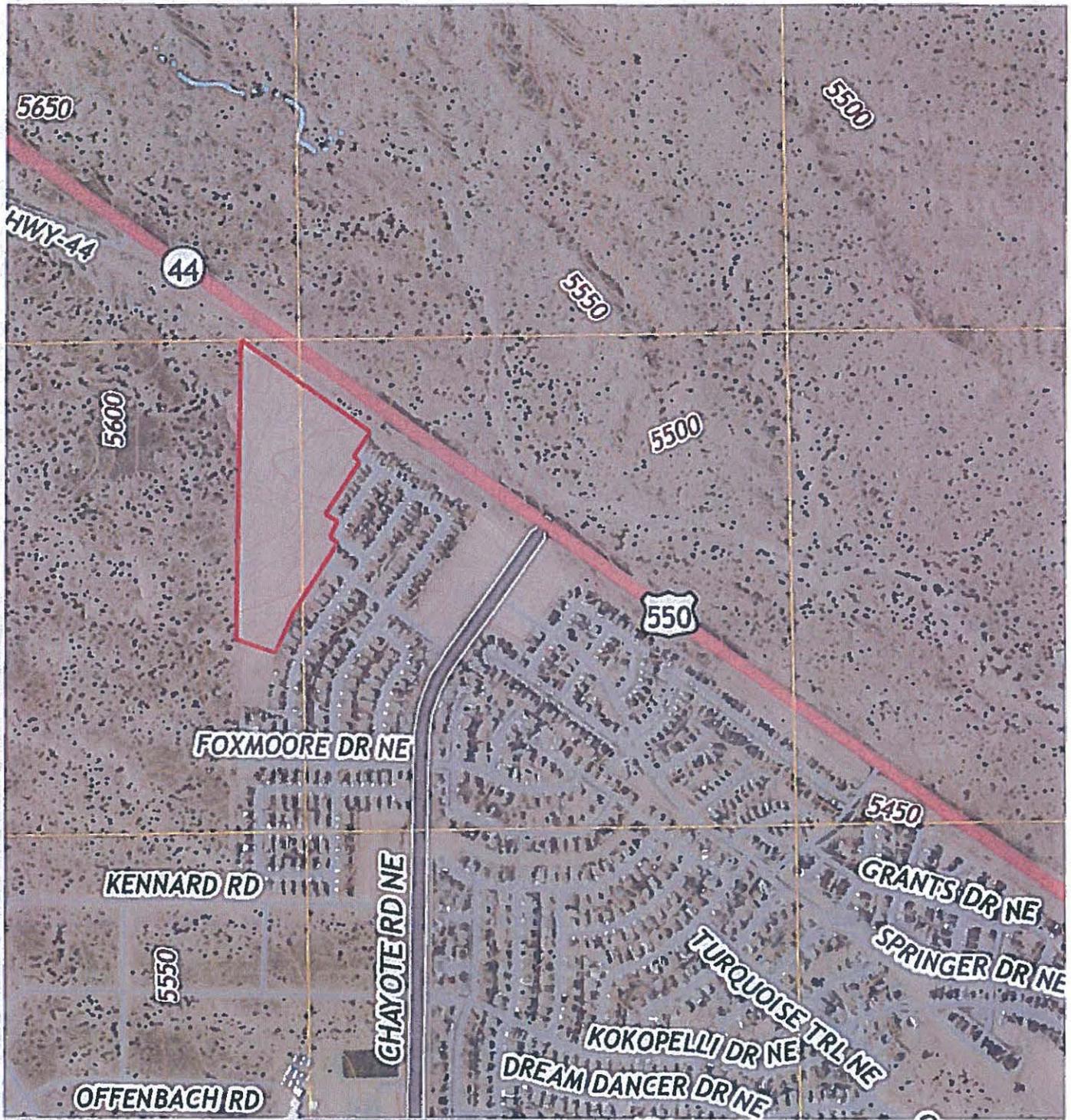
USGS 7.5 Series Topographic Maps "Bernalillo, New Mexico" dated 1954, 1972, 1990, 2006, 2011, and 2013.

United States Department of Agriculture Natural Resource Conservation Service, Web Soil Survey, Bernalillo County, New Mexico, Version 10, accessed 1/21/16.

APPENDIX A

Figure 1: Topographic Map

Figure 2: Site Diagram and Vicinity Map



Source: USGS 7.5' Series Topographic Map: Bernalillo, NM dated 2013.

	LEGEND
	Project Boundary

 zia engineering & environmental <small>consultants, llc</small>	TOPOGRAPHIC MAP	Zia Project No.: NALE-16-004 (100)
	Phase I Environmental Site Assessment Enchanted Hills Unit 11B U.S. Highway 550 Rio Rancho, Sandoval County, New Mexico	Date: January 16, 2016
		Appendix A-1



Source: Google Earth™ Rio Rancho, New Mexico dated 3/08/2014, accessed 1/15/2016

LEGEND



- Project Boundary
- Fencing / Block Wall
- Pole-mounted Transformer
- Surface Debris
- Stormwater Ponding Area
- Stormwater Flow Direction



SITE VICINITY MAP

Phase I Environmental Site Assessment
 Enchanted Hills Unit 11B
 U.S. Highway 550
 Rio Rancho, Sandoval County, New Mexico

Zia Project No.: NALE-16-004 (100)

Date: January 16, 2016

Appendix A-2

APPENDIX B

Site Photographic Log

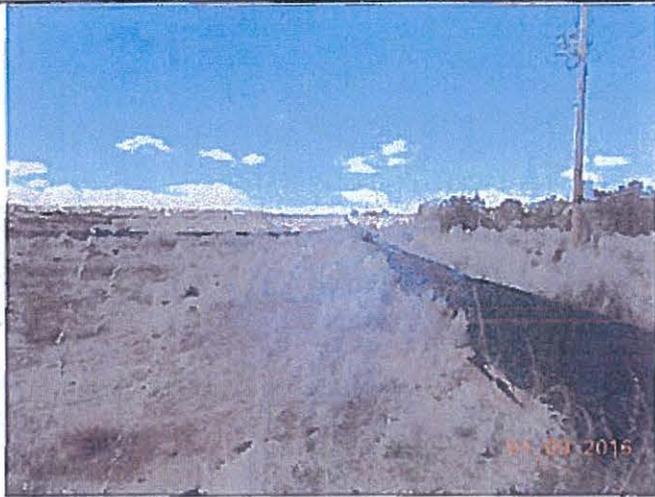


Photo 1: View west along the north side of the site from the northeast corner.

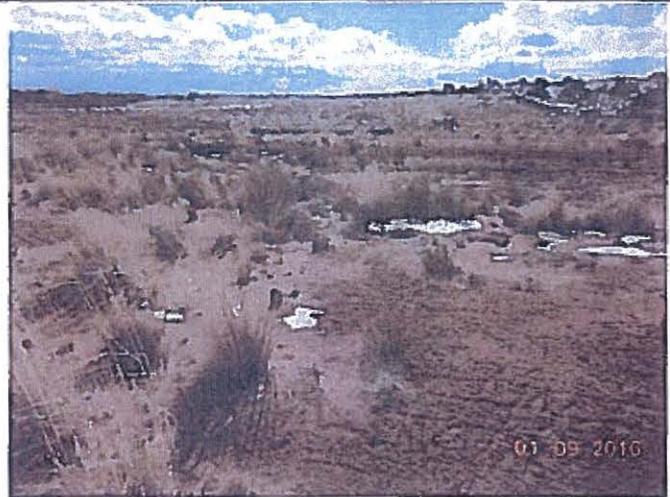


Photo 4: View south through the central portion of the subject property.



Photo 2: View from the northeast corner looking southwest across the site.



Photo 5: View from the northwest corner looking south along the west side of the subject property.

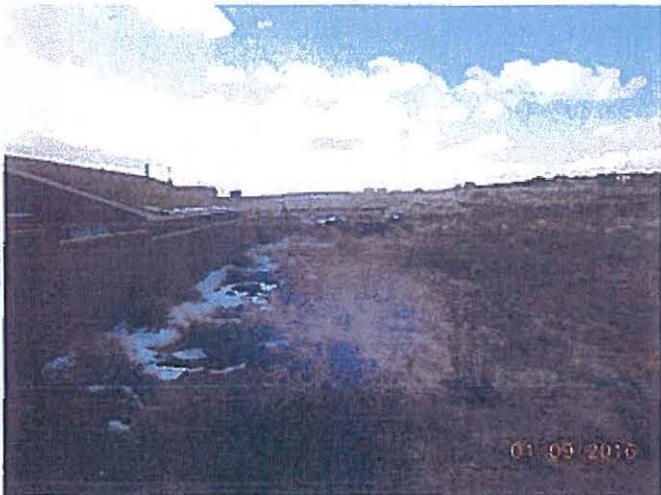


Photo 3: View from the northeast corner looking south along the east side of the subject property.



Photo 6: View southeast across the site from the northwest corner.



PHOTOGRAPHIC LOG

Phase I Environmental Site Assessment
 Enchanted Hills Unit 11B
 U.S. Highway 550
 Rio Rancho, Sandoval County, New Mexico

Zia Project No.: NALE-16-004 (100)

Date: January 16, 2016

Appendix B-1



Photo 7: View north along the west side of the site from the southwest corner



Photo 10: View north along the east side of the site from the southeast corner

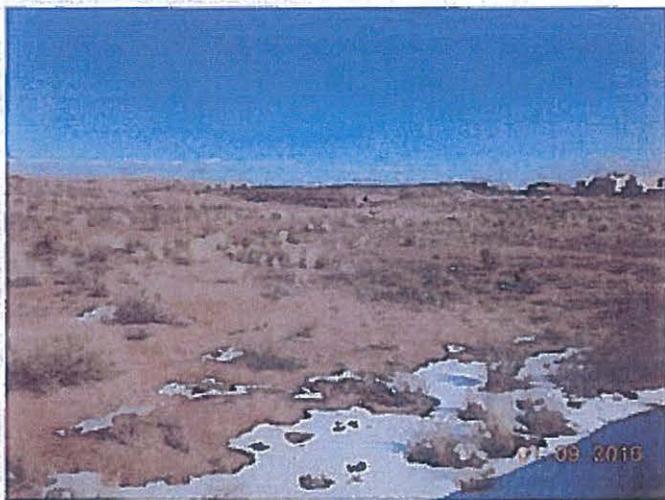


Photo 8: View northeast across the site from the southwest corner



Photo 11: View south into the storm water retention pond in the northwest portion of the subject property

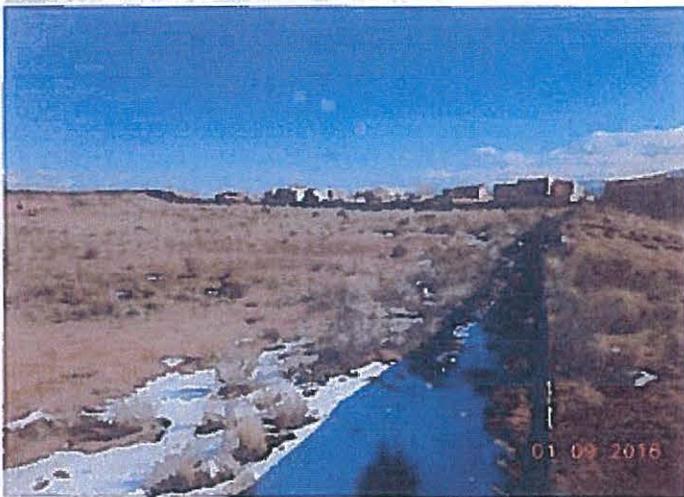


Photo 9: View east along the south side of the site from the southwest corner



Photo 12: Minor surface debris in the northwest storm water retention basin



PHOTOGRAPHIC LOG

Phase I Environmental Site Assessment
 Enchanted Hills Unit 11B
 U.S. Highway 550
 Rio Rancho, Sandoval County, New Mexico

Zia Project No.: NALE-16-004 (100)

Date: January 16, 2016

Appendix B-2

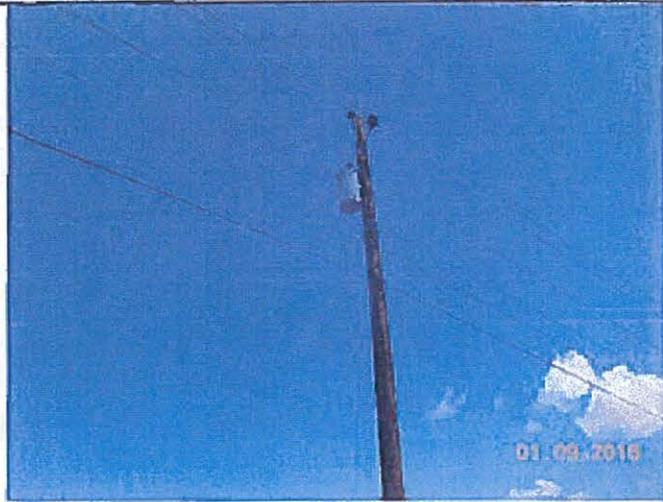


Photo 13: PNM pole-mount transformer located near the north-central portion of the site

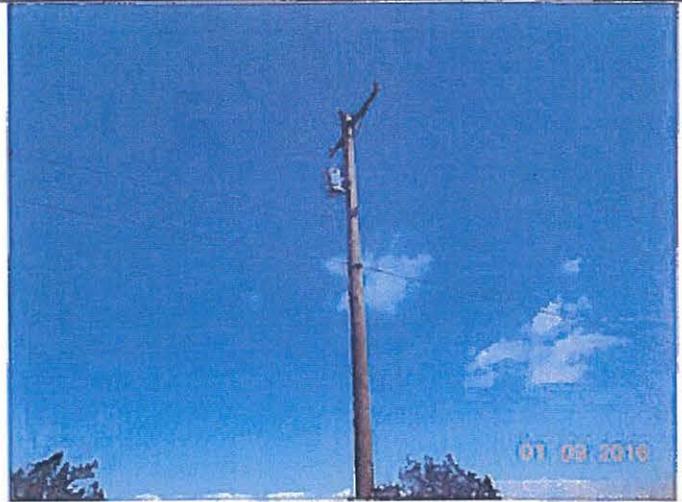


Photo 16: PNM pole-mount transformer (Station No. 1884) located near the northeast corner of the site



Photo 14: View offsite to the east (residential subdivision) from the northeast corner of the subject property

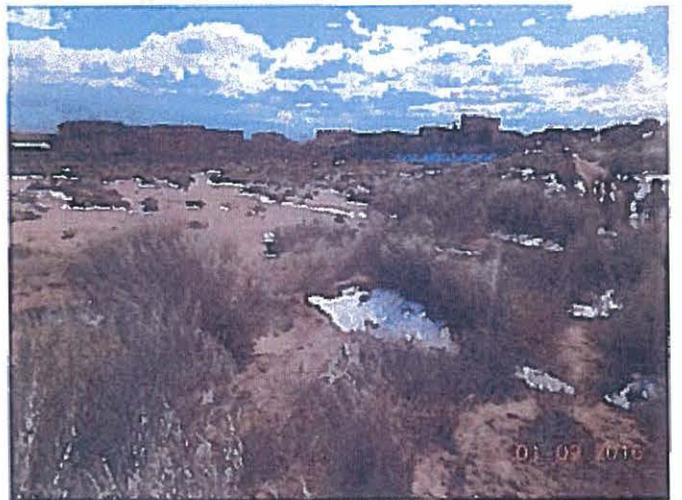


Photo 17: View offsite to the south retention basin from the southwest corner of the subject property

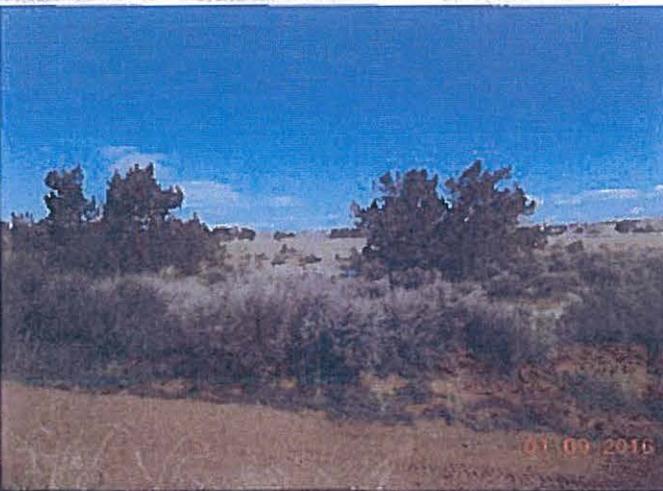


Photo 15: View offsite to the north (across Hwy. 550 toward Santa Ana Pueblo) from the NE corner of the subject property.



Photo 18: View offsite west (undeveloped) from the northwest corner of the site.



PHOTOGRAPHIC LOG

Phase I Environmental Site Assessment
 Enchanted Hills Unit 11B
 U.S. Highway 550
 Rio Rancho, Sandoval County, New Mexico

Zia Project No.: NALE-16-004 (100)

Date: January 16, 2016

Appendix B-3

APPENDIX C

Historic Aerial Photographs



Source: EDAC Aerial Imagery: Rio Rancho, NM dated 1935

	LEGEND
	 Project Boundary

	HISTORICAL AERIAL PHOTOGRAPH 1935	Zia Project No.: NALE-16-004 (100)
	Phase I Environmental Site Assessment Enchanted Hills Unit 11B U.S. Highway 550 Rio Rancho, Sandoval County, New Mexico	Date: January 16, 2016
		Appendix C-1



Source: EDAC Aerial Imagery: Albuquerque, NM dated 2/02/1954

	LEGEND
	Project Boundary

 zia engineering & environmental <small>consultants, llc</small>	HISTORICAL AERIAL PHOTOGRAPH 1954	Zia Project No.: NALE-16-004 (100)
	Phase I Environmental Site Assessment Enchanted Hills Unit 11B U.S. Highway 550	Date: January 16, 2016
	Rio Rancho, Sandoval County, New Mexico	Appendix C-2



Source: EDAC Aerial Imagery: Albuquerque, NM dated 06/21/1975

	LEGEND
	Project Boundary

	HISTORICAL AERIAL PHOTOGRAPH 1975	Zia Project No.: NALE-16-004 (100)
	Phase I Environmental Site Assessment Enchanted Hills Unit 11B U.S. Highway 550 Rio Rancho, Sandoval County, New Mexico	Date: January 16, 2016
		Appendix C-3



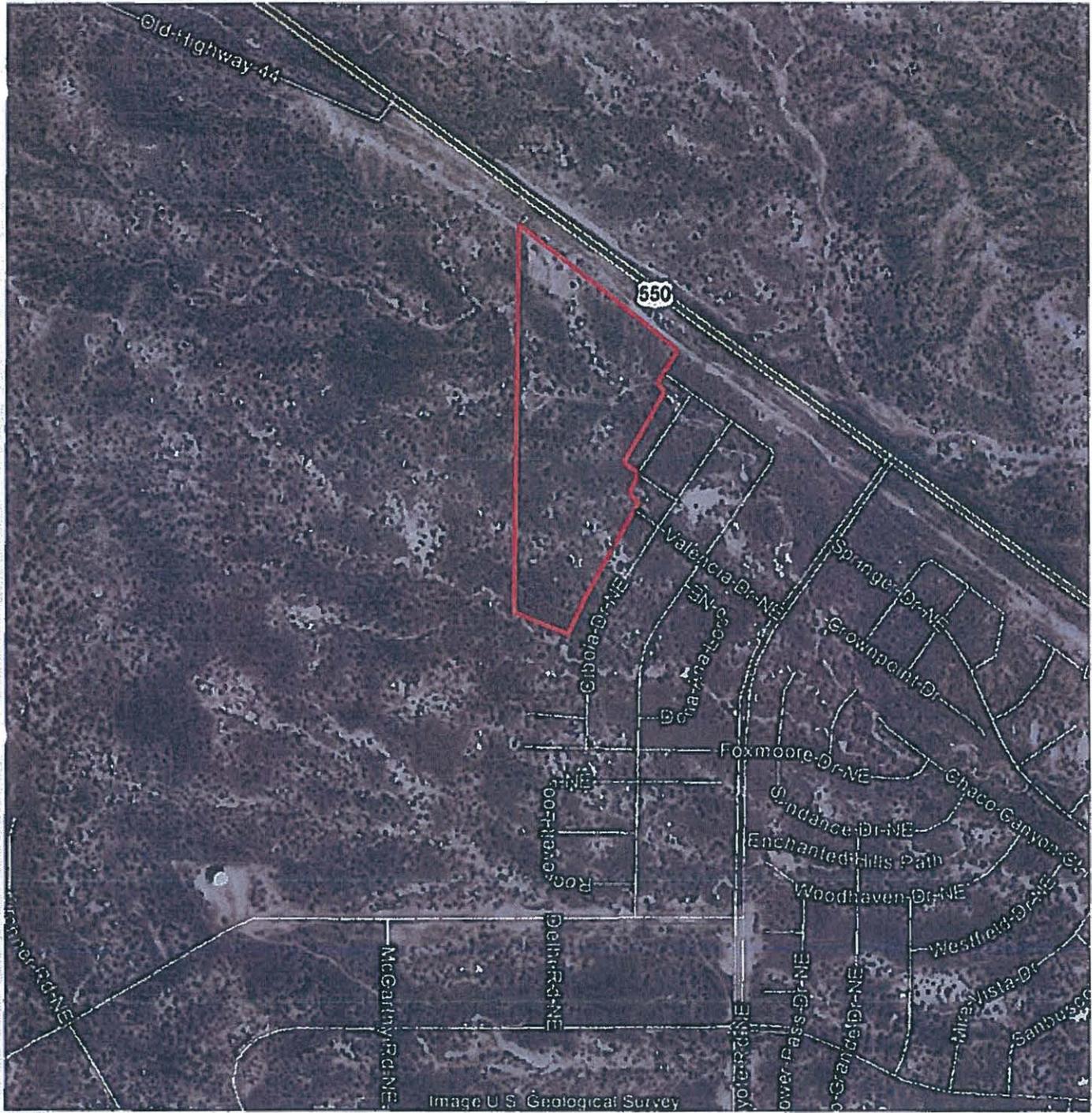
Source: UNM EDAC Aerial Imagery: Albuquerque, NM dated 06/02/1982

	LEGEND
	 Project Boundary



HISTORICAL AERIAL PHOTOGRAPH 1982
 Phase I Environmental Site Assessment
 Enchanted Hills Unit 11B
 U.S. Highway 550
 Rio Rancho, Sandoval County, New Mexico

Zia Project No.: NALE-16-004 (100)
 Date: January 16, 2016
 Appendix C-4



Source: Google Earth™ Aerial Imagery: Albuquerque, NM dated 10/06/1996



LEGEND	
	Project Boundary



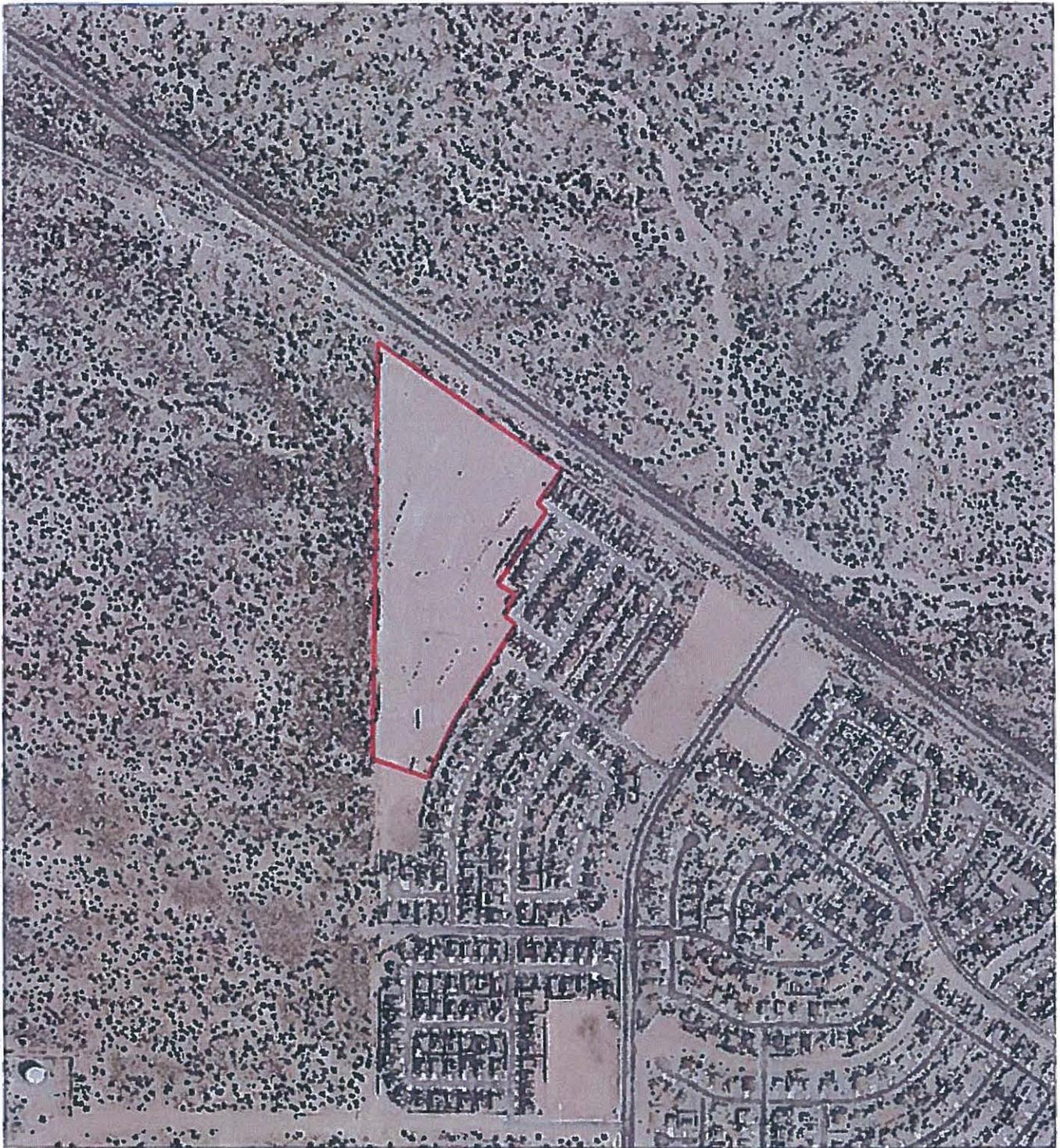
HISTORICAL AERIAL PHOTOGRAPH 1996

Phase I Environmental Site Assessment
 Enchanted Hills Unit 11B
 U.S. Highway 550
 Rio Rancho, Sandoval County, New Mexico

Zia Project No.: NALE-16-004 (100)

Date: January 16, 2016

Appendix C-5



Source: AGIS Aerial Imagery: Albuquerque, NM dated 2008



LEGEND

 Project Boundary



HISTORICAL AERIAL PHOTOGRAPH 2008

Phase I Environmental Site Assessment
 Enchanted Hills Unit 11B
 U.S. Highway 550
 Rio Rancho, Sandoval County, New Mexico

Zia Project No.: NALE-16-004 (100)

Date: January 16, 2016

Appendix C-6



Source: Google Earth™ Aerial Imagery: Albuquerque, NM dated 2014

	LEGEND
	Project Boundary



HISTORICAL AERIAL PHOTOGRAPH 2014
 Phase I Environmental Site Assessment
 Enchanted Hills Unit 11B
 U.S. Highway 550
 Rio Rancho, Sandoval County, New Mexico

Zia Project No.: NALE-16-004 (100)
 Date: January 16, 2016
 Appendix C-7