INTRODUCTION

The following presents AMEC Earth & Environmental, Inc.'s (AMEC's) preliminary assessment of potential hazardous materials to be located at the Lambertucci-Roma Ranch (the Ranch), Esmeralda County, Nevada. This work was performed for the Nevada Division of Environmental Protection (NDEP) Brownfields Program under contract #06-015. The purpose of the assessment was to assist Esmeralda County (the County) with addressing apparent imminent health and safety issues at the site as well as providing information regarding site conditions that would assist them in deciding whether to acquire the property. This technical memorandum contains a property description, scope of work performed, historical data reviewed, site visit information, conclusions and recommendations.

PROPERTY DESCRIPTION

The Ranch (APN 105-531-04/05, Attachment A) consists of approximately 605 acres of land. It straddles U.S. Highway 95 and is bordered on the west by Nye County. The general landscape consists of desert scrub land that slopes to the west. Several drainages bifurcate the site. Multiple development activities have occurred on the property over the apparent past 100+ years. Evidence of these activities is described in greater detail below.

SCOPE OF WORK

AMEC performed the scope of work as described in our Proposal No. PN05-8-7, dated August 22, 2005. This scope of work included obtaining and reviewing readily available historical documents (air photographs and topographic maps) as well as conducting a site visit, and meeting with County Department of Solid Waste personnel (Mr. Ed Rannells). During the day of the site visit AMEC also reviewed photographs located at the Central Nevada Historical Museum in Tonopah and discussed the site's history with a 37-year resident of Tonopah. Data obtained from the historical document review and site visit are the basis of this memorandum.
HISTORICAL DOCUMENT REVIEW

AMEC reviewed historical aerial photographs of the site housed at the University of Nevada, Reno. The following photographs were reviewed.

- March 4, 1954 at scale 1"=5080'
- January 27, 1978 at scale 1:25,000
- September 16, 1980 at scale 1"=5280'
- May 30, 1994 at scale 1"=5260

The January 27, 1978 photograph was photocopied and enlarged to show site features, Attachment B.

AMEC also ordered and received historic topographic maps of the site from Environmental Data Resources Inc. (EDR), Attachment B. The maps received include; 1960 7.5 minute, 1961 15 minute, 1982 and 1987 7.5 minute maps. Note that the site is covered by two topographic maps and only the 1987 and 1961 maps show the vast majority of the site.

An approximation of the Ranch property boundary, based on the County parcel map is shown on the 1987 map. From review of both the air photographs and the maps it is apparent that the site has been significantly impacted by mining activity. The topographic map indicates that prospects as well as mine shafts and tailings (stippled areas on the 1987 topographic map) are present onsite. There are also mapped ruins, former ponds, air strip, trailer park, water tank, and numerous dikes. Sewage disposal ponds are shown on the 1987 map and are located approximately 500 – 1000 feet southwest of the site. The photographs also show variations in vegetation across the site.

The aerial photographs show dark areas that appear to contain lusher vegetation than the surrounding desert. The 1978 photograph also shows the area along U.S. Hwy. 95 that had been commercially developed.

Photographs reviewed at the museum indicated that intense mining and milling activities occurred in the vicinity of the site during the early 1900’s. Also museum staff indicated that the past occupants (the Lambertoicci family) had green houses onsite and produced a wide variety of vegetables for local consumption.

AMEC queried the Nevada Department of Water Resources database of well logs for the site and surrounding sections. No well logs were found. Information obtained during our past experience working in the Tonopah area has indicated that groundwater is very deep (in excess of 1,000’). For this reason the area has historically been supplied with water from a source some miles to the northeast of Tonopah and the site.

SITE VISIT

A site visit was performed by Brett Whitford, CEM, on September 1, 2005. During the initial portion of the site visit he was accompanied by Mr. Ed Rannells, Manager, County Department of Solid Waste. Mr. Rannells explained that the County intended to enter onto the property and remove up to six mobile homes from the north side of U.S. 95 and possibly one mobile home
located on the south side of the highway. The reason to remove these structures is the decrepit state which allows the wind to blow large pieces of material from them. This debris has ended up on Hwy 95 and other locations offsite, making them a hazard to traffic and people. Photographs 1 through 3, 6, 9 and 10 show the condition of the various trailers at the site.

Evidence of storage and/or discharge of hazardous or regulated materials in the immediate vicinity of the trailers to be removed include the following:

- A small area of oil stained soil located to the east of the westernmost trailer, Photograph 11.

- Potential asbestos containing building materials within the trailers and associated scattered debris. Photograph 10 shows 9- x 9-inch floor tiles, in poor condition, located in the westernmost trailer. Typically this type of floor tile contains regulated concentrations of asbestos. Other materials observed that may contain asbestos include (but not limited to) sheet vinyl (linoleum, flooring and counter tops), roofing, mastics, ceiling materials and non-fiberglass insulation.

- Several old refrigerators and freezers were associated with the trailers. These appliances may contain regulated quantities of fluorocarbons.

Mr. Rannells expressed concern for the location of a septic system associated with the former trailer park. Direct evidence of a drainfield was not observed during our site visit. However, during AMEC's further assessment of the site a sewer man-way was located in a drainage to the northwest and down-gradient of the trailer park, Photograph 17. Since waste water from Tonopah is discharged to sewage ponds west of town this observed line may have served the trailer park. An assessment of easement and hookup history for this system may address Mr. Rannell's concern regarding this matter.

Following the visual assessment of the trailer area, readily accessible areas of the site were visited. Areas and issues of environmental concern noted during this portion of the site visit include:

- Above and underground storage tanks are located onsite. Three large aboveground tanks are located on the northeastern portion of the site, along US Hwy 95, Photographs 4 and 12. There is distribution equipment scattered about the tank area. A date in the concrete cradle of November 13, 1948 gives an indication of the time of placement. Evidence of underground storage tank/s is present in front of an abandoned store/gas station, Photograph 8. Several the above ground tanks are strewn about the property, Photographs 18 and 19.

- Abandoned vehicles and associated batteries, fuel tanks and engine blocks with associated fluids were observed in the borrow pits located to the north of US Hwy 95 and scattered about the southern portion of the site (see Photographs 7, 15, 16, 19 and 20.

- Predominantly empty 55-gallon drums are both stockpiled and scattered on the Ranch. None of the drums inspected contained legible labeling to indicate the former or present contents of the drums, Photographs 15, 16, 19, 20, 23 and 24.
Mine tailings are present within the wash located immediately south of US Hwy 95, north of the wash as well as to the south. Photographs 21, 22 and 25 (generally light colored material). Note the berms constructed to retain the tailings. The thickness and chemical characteristics of this material are not known. AMEC inquired with Tom Gray and Kevin Sullivan, NDEP Bureau of Mining Regulations to see if they recall assessment work performed on the tailings in the washes below Tonopah thru Bureau of Mining Regulation. To their knowledge no assessment or characterization work has been performed on this material. Given the age of the material there is the potential for the tailings to contain significant concentrations of heavy metals. According to the Mineral Resources of Northern Nye County, Nevada; Nevada Bureau of Mines and Geology, Bulletin 99B, 1984, the ores from the Tonopah mining district contained such metals as gold, silver, lead, copper, zinc, selenium, and barium to name a few.

Photographs 33 through 36 show tailings in Slime Wash. Based on our preliminary plotting of the property boundary on the 1987 USGS topographic map the site may not extend into this feature.

Open mine shafts and addits along with associated waste rock dumps are present on or immediately adjacent to the site, Photographs 29 through 33 and 37 through 38.

Ore processing was most likely conducted on site. Therefore, one may expect that residual process chemicals may be present. Photograph 27 shows some of the equipment that may have been used for ore processing.

Apparent potential asbestos debris is located west of the barn structure shown on Photograph 26, see Photograph 28. This material appeared to be a felt material that survived the apparent burning of the parent structure.

CONCLUSIONS

The trailers associated with the former trailer park are in a severe decrepit state. Debris from and intact materials may contain asbestos. Evidence of discharges of petroleum as one may expect from an automobile oil change were observed west of the easternmost trailer, north of US 95. Regulated refrigerants may be present in the appliances that litter the trailer park area.

Overall the property appears to have had a long history of development and multiple land use. Uses include commercial development with retail fuel sales, mining, ore processing and waste disposal, as well as agriculture. Non-developmental issues include indiscriminant dumping and disposal of refuse and junk vehicles at the site. All of these activities may have contributed to releases of regulated and/or hazardous materials at the site.

RECOMMENDATIONS

1. An asbestos survey should be performed on the trailers prior to further demolition and removal from the site. Regulated asbestos containing materials (if found) should be managed per applicable state and federal regulations prior to demolition of the trailers.
2. Regulated refrigerants should be recovered from the abandoned appliances prior to disposal.

3. If Esmeralda County wishes to continue with its plans to obtain control of the property additional environmental assessment activity is warranted. Such assessment work should not only include further addressment of those issues presented herein, but also include a more thorough review of the site’s history, activities and related potential releases of hazardous materials. Following further research into the site, sampling and analysis of soil and waste materials is warranted.

This technical memorandum was prepared by:

[Signature]

Brett Whitford, C.E.M. 1515
Nevada Asbestos Consultant IJ0759

I hereby certify that I am responsible for the services described in this document and for the preparation of this document. The services described in this document have been provided in a manner consistent with the current standards of the profession and to the best of my knowledge comply with all applicable federal, state and local statutes, regulations and ordinances.

Reviewed by,

[Signature]

Don L. Swigonski
Project Manager

BW/DLS/mm

Attachments

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ATTACHMENT A

PARCEL MAP
ATTACHMENT B

HISTORIC TOPOGRAPHIC MAPS
EDR Historical Topographic Map Report

Lamabertucci-Roma Ranch
Lamabertucci-Roma Ranch
GOLDFIELD, NV 89013

1500298.1

The Standard in Environmental Risk Management Information

September 02, 2005

440 Wheelers Farms Road
Milford, Connecticut 06460

Nationwide Customer Service
Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com
Quadrangle Relation Chart

Inquiry # 1500298.1

Target: Mount Butte, NV.

Adjoining: Tonopah, NV.
Environmental Data Resources, Inc.
Historical Topographic Map Report

Environmental Data Resources, Inc.'s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property, and its surrounding area, resulting from past activities. ASTM E 1527-00, Section 7.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. The ASTM standard requires a review of reasonably ascertainable standard historical sources. Reasonably ascertainable is defined as information that is publicly available, obtainable from a source with reasonable time and cost constraints, and practically reviewable.

To meet the prior use requirements of ASTM E 1527-00, Section 7.3.4, the following standard historical sources may be used: aerial photographs, city directories, fire insurance maps, topographic maps, property tax files, land title records (although these cannot be the sole historical source consulted), building department records, or zoning/and use records. ASTM E 1527-00 requires "All obvious uses of the property shall be identified from the present, back to the property's obvious first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historical sources as are necessary, and that are reasonably ascertainable and likely to be useful." (ASTM E 1527-00, Section 7.3.2 page 12.)

EDR's Historical Topographic Map Report includes a search of available public and private color historical topographic map collections.

Topographic Maps
A topographic map (topo) is a color coded line-and-symbol representation of natural and selected artificial features plotted to a scale. Topos show the shape, elevation, and development of the terrain in precise detail by using contour lines and color coded symbols. Many features are shown by lines that may be straight, curved, solid, dashed, dotted, or in any combination. The colors of the lines usually indicate similar classes of information. For example, topographic contours (brown); lakes, streams, irrigation ditches, etc. (blue); land grids and important roads (red); secondary roads and trails, railroads, boundaries, etc. (black); and features that have been updated using aerial photography, but not field verified, such as disturbed land areas (e.g., gravel pits) and newly developed water bodies (purple).

For more than a century, the USGS has been creating and revising topographic maps for the entire country at a variety of scales. There are about 60,000 U.S. Geological Survey (USGS) produced topo maps covering the United States. Each map covers a specific quadrangle (quad) defined as a four-sided area bounded by latitude and longitude. Historical topographic maps are a valuable historical resource for documenting the prior use of a property and its surrounding area, and due to their frequent availability can be particularly helpful when other standard historical sources (such as city directories, fire insurance maps, or aerial photographs) are not reasonably ascertainable.
ATTACHMENT C

SITE PHOTOGRAPH