

Appendix H –
Phase I Environmental Site Assessment Discovery Ridge Lots 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15,
16, 17, and 18 Terracon (Terracon, 2011a)

Phase I Environmental Site Assessment

Discovery Ridge

Lots 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 & 18

Columbia, Boone County, Missouri

March 23, 2011

Terracon Project No. 09117701



Prepared for:

Trabue Hansen & Hinshaw, Inc.

Columbia, Missouri

Prepared by:

Terracon Consultants, Inc.

Columbia, Missouri

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Terracon

Geotechnical ■ Environmental ■ Construction Materials ■ Facilities

March 23, 2011



Trabue Hansen & Hinshaw, Inc.
1901 Pennsylvania
Columbia, Missouri 65202

Attn: Mr. John Huss
P: 573-814-1568
F: 573-814-1128

Re: Phase I Environmental Site Assessment
Discovery Ridge Lots 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 and 18
Columbia, Boone County, Missouri 65211
Project No. 09117701

Dear Mr. Huss:

Terracon Consultants, Inc. (Terracon) is pleased to submit the enclosed Phase I Environmental Site Assessment report for the above-referenced site. This assessment was performed in accordance with our proposal dated December 15, 2010.

We appreciate the opportunity to be of service to you on this project. In addition to Phase I services, our professionals provide geotechnical, environmental, construction materials, and facilities services on a wide variety of projects locally, regionally and nationally. For more detailed information on all of Terracon's services please visit our website at <http://www.terracon.com>. If there are any questions regarding this report or if we may be of further assistance, please do not hesitate to contact us.

Sincerely,
Terracon Consultants, Inc.

A handwritten signature in blue ink, appearing to read "Mark E. Dierker".

Mark E. Dierker
Field Geologist

A handwritten signature in blue ink, appearing to read "Tracie A. Ragland".

Tracie A. Ragland
Environmental Project Manager

A handwritten signature in blue ink, appearing to read "Timothy L. Bennett".

Timothy L. Bennett, R.G.
Environmental Department Manager

A handwritten signature in blue ink, appearing to read "Adam J. White".

Adam J. White
Environmental Scientist

Attachments

Terracon Consultants Inc, 3601 Mojave Ct. Suite A Columbia, MO 65202
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Common Acronyms¹

ACM.....	Asbestos containing material
AST.....	Aboveground storage tank
ASTM.....	American Society for Testing and Materials
AUL.....	Activity and use limitation
BGS	Below ground surface
BTEX	Benzene, toluene, ethylbenzene, and xylenes
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DOT	United States Department of Transportation
EPA	United States Environmental Protection Agency
HREC	Historical recognized environmental condition
LUST	Leaking underground storage tank
MCL.....	Maximum contaminant level
MSDS	Material safety data sheet
NGVD	National Geodetic Vertical Datum
NOV.....	Notice of violation
NPL.....	National Priority List
NRCS	USDA Natural Resources Conservation Service
OSHA	Occupational Safety and Health Administration
PCB	Poly-chlorinated biphenyl
RCRA	Resource Conservation and Recovery Act
REC	Recognized environmental condition
SPCC.....	Spill Prevention, Control and Countermeasure
SWPPP.....	Stormwater pollution prevention plan
TEPH.....	Total extractable petroleum hydrocarbons
TPH	Total petroleum hydrocarbons
TVPH.....	Total volatile petroleum hydrocarbons
TRI.....	Toxic release inventory
TSCA.....	Toxic Substances Control Act
USGS	United States Geological Survey
UST	Underground storage tank
VCP	Voluntary cleanup program
VOC.....	Volatile organic compound

Units of measure

sq ft or ft ²	square feet
mg/kg.....	milligrams per kilogram
mg/l.....	milligrams per liter
ug/l.....	micrograms per liter
ppb.....	parts per billion
ppm.....	parts per million

¹ An additional list of acronyms and definitions is included in Appendix B.

PHASE I ENVIRONMENTAL SITE ASSESSMENT
DISCOVERY RIDGE LOTS 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 & 18
COLUMBIA, BOONE COUNTY, MO

Project No. 09117701
March 23, 2011

EXECUTIVE SUMMARY

This Phase I ESA was performed in accordance with our proposal dated December 15, 2010, and was conducted consistent with the procedures included in ASTM E 1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The ESA was conducted under the supervision or responsible charge of Timothy L. Bennett, R.G., environmental professional. Adam J White performed the site reconnaissance on January 21, 2011 and February 23, 2011.

A cursory summary of findings is provided below. It should be recognized that details were 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 site is located along Discovery Ridge Parkway and Discovery Drive within the University of Missouri, Discovery Ridge Research Park, Columbia, Boone County, Missouri. The site is an approximate 120-acre tract of land, improved with three machine shed structures located on the northern portion, occupied by the University of Missouri-Genetics Farm, and a Quonset hut located on the western portion occupied by the United States Department of Agricultural (USDA). The on-site structures are utilized for the storage of multiple pieces of research equipment. The remainder of the site consists of vacant undeveloped land utilized for row crop production, and livestock pasture with portions developed as graded lots associated with the current-day Discovery Ridge Research Park.
- On-site features observed during the site reconnaissance included interior floor drains within the large machine shed, four tractors, eight pad mounted transformers, three inactive pole-mounted transformer, a septic system, an approximately 500-gallon propane AST, fill dirt, an air compressor and an intermittent stream. On-site RECs were not identified based on visual findings during the site reconnaissance.
- Based on review of the historical information, the site has predominately been vacant farmland consisting of both row crop production and livestock pasture from at least 1934 to 2006. The western portion of the site has been utilized as a research park development from approximately 2006 to present-day. Additionally, the eastern portion of the site has always been utilized as farmland and livestock pasture land. The northern portion of the site is currently utilized as a University of Missouri plant genetic research farm. A residential structure was located at the Genetics Farm, on the northern portion of the site from approximately 1945 to 2001 at which time the residential structure was demolished. Multiple small machine shed structures have been located at the Genetics Farm, on the northern portion of the site from at least

1956 to the mid 2000s with two small machine structures still present on-site. The large machine shed structure located at the Genetics Farm was placed on-site in approximately 2007. A Quonset hut structure utilized by the USDA has been located on the western portion of the site from approximately 1965 to present-day. A residential structure was located on the western portion of the site, east of the current-day on-site Quonset hut from approximately 1945 to approximately the 1980s. A small log cabin type structure was located on the central portion of the site from approximately 1945 to 1980. Terracon did not identify RECs for the site based on the historical use of the site or adjoining properties.

- The current-day adjoining properties of the subject site consist of the following:
 - Sugar Grove Road, R1 Lake, and livestock pasture land, followed by row crop farmland and livestock pasture land to the north;
 - Highway 63, followed by grass and tree covered land with Phillips Lake to the south;
 - A trailer park, followed by an elderly care facility to the northwest and Highway 63 to the west; and
 - A residential structure, a barn, wooded land and livestock pasture land, followed by pasture land associated with the University of Missouri Beef Farm to the east.

Collective Adjoining – Properties encompassed by the site

- ABC Laboratories encompassed by Lot 5, Lot 17, Lot 18, Lot 2, and Lot 6;
- Radil with pad-mounted transformer encompassed by Lot 2, Lot 8, and Lot 15;
- Stormwater drainage easement encompassed by Lot 2, Lot 7, and Lot 8;
- A City of Columbia, sanitary sewer pump station, with diesel generator encompassed on the southwestern portion of Lot 9.

A City of Columbia sanitary sewer pump station with a diesel generator was observed located on a collective adjoining property on the southwestern portion of Lot 9. The City of Columbia sanitary sewer pump station currently does not represent a REC to the site due to duration of time located on and encompassed by Lot 9.

Indications of RECs were not observed with the current-day adjoining and collective adjoining properties.

- The regulatory review identified one Missouri Department of Natural Resources facility within the specified search distance; however, the facility is not a REC due to regulatory status, and duration of time located within the vicinity of the site. Additionally an Orphan facility was identified located on the north adjoining property.

The local agency inquiries for environmental records did not reveal RECs in connection with the site from the agencies that have responded by the issuance of this report.

- The following previous environmental report associated with portions of the current-day Discovery Ridge Research Park and its associated collective adjoining properties, was provided by the University of Missouri for review: **Phase I Environmental Site Assessment Discovery Ridge, prepared by Terracon, prepared for University of Missouri, Terracon project number 09067718, dated May 31, 2006.** The 2006 Terracon ESA report did not identify RECs associated with the subject site; however did recommend the cleanout of the oil/water separator in the garage of the USDA Field Research Building (FRB), and if encountered during proposed site activities the proper abandonment of the water well and the closure of the septic tank located within the vicinity of the current-day ABC Laboratories' facility. The oil/water separator, water well and septic tank discussed within Terracon's 2006 ESA report were identified as located on the site's collective adjoining properties.
- The following previous geotechnical engineering report associated with Discovery Ridge was provided by the University of Missouri for review: **Geotechnical Engineering Report Discovery Ridge Lots 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18, prepared by Terracon, prepared for University of Missouri, Terracon project number 09105094, dated February 17, 2011.** The 2011 Terracon geotechnical engineering report stated that nine soil borings were advanced at the site. According to the geotechnical report, fill soils were encountered in borings B-3 and B-4 on Lot 2 and Lot 8, respectively. It was noted that the material was placed as part of a mass grading in 2008 and that Terracon was onsite to observe and test the density and moisture during the placement of the engineered fill material. Additionally the report indicated that historically a pond may have been present in the vicinity of Lot 16 and on the northeastern portion of Lot 2. Typically on-site depth to groundwater was encountered between 12 feet and 18.5 feet below existing grade.
- Pursuant to the client's request, an agency file review was conducted to identify the potential occurrence of cultural resources on the site. The Section 106 Review form, signed by Mark Miles, Deputy State Historic Preservation Officer, dated March 7, 2011 states that "an adequate cultural resource survey of the project area has been previously conducted. It has been determined that for the proposed undertaking there will be no historic properties affected."

Recommendations

Based on the scope of services, limitations, and findings of this assessment, Terracon did not identify RECs which, in our opinion, warrant additional investigation at this time.

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COLUMBIA, BOONE COUNTY, MO

Project No. 09117701
March 23, 2011

1.0 INTRODUCTION

1.1 Site Description

Site Description

Site Name	Discovery Ridge Lots 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 & 18
Site Location/Address	Four groups of lots: Group A (Lots 5, 16, 17, and 18), Group B (Lots 2, 6, and 7), Group C (Lot 8); and Group D (Lots 9, 10, 11, 12, 13, 14, and 15) located along Discovery Ridge Parkway and Discovery Drive within the Discovery Ridge Research Park in Columbia, Boone County, Missouri.
Land Area	Approximately 120 acres
Site Improvements	A Quonset hut structure located on Lot 5 and three metal machine shop shed structures located on Lot 17 with the remainder of the site consisting of vacant graded grass covered land, and farmland.

The site location is depicted on Exhibit 1 of Appendix A, which was reproduced from a portion of the USGS 7.5-minute series topographic map. A diagram of the site and adjoining properties is included as Exhibit 2 of Appendix A. Acronyms and terms used in this report are described in Appendix B.

1.2 Scope of Services

This Phase I ESA was performed in accordance with our proposal dated December 15, 2010, and was conducted consistent with the procedures included in ASTM E 1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The purpose of this ESA was to assist the client in developing information to identify RECs in connection with the site as reflected by the scope of this report. This purpose was undertaken through user-provided information, a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, and a visual noninvasive reconnaissance of the site and adjoining properties. Limitations, ASTM deviations, and significant gaps (if identified) are evident from reviewing the applicable scope of services and the report text.

1.3 Standard of Care

This 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 work, or inability to review information not received by the report date. When appropriate, these limitations are discussed in the text of

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the report, and an evaluation of their significance with respect to our findings has been conducted.

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 may be documented in public records that were not reviewed. No ESA 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 Additional Scope Limitations, ASTM Deviations and Significant Data Gaps

Based upon the agreed-on scope of services, this ESA did not include subsurface or other invasive assessments, business environmental risk evaluations, or other services not particularly 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. 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.*
- *Pertinent documents are referred to in the text of this report, and a separate reference section has not been included.*
- *At the time of the February 23, 2011 site reconnaissance, the two small machine shed type storage structures located on Lot 17 were locked and inaccessible.*
- *At the time of the January 21, 2011 site reconnaissance, the site was covered with snow making the exterior surface of the site unobservable.*

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An evaluation of the significance of these limitations and missing information with respect to our findings has been conducted, and where appropriate, significant data gaps are identified and discussed in the text of the report. However, it should be recognized that an evaluation of significant data gaps is based on the information available at the time of report issuance, and an evaluation of information received after the report issuance date may result in an alteration of our conclusions, recommendations, or opinions. We have no obligation to provide information obtained or discovered by us after the issuance date of the report, or to perform any additional services, regardless of whether the information would affect any conclusions, recommendations, or opinions in the report. This disclaimer specifically applies to any information that has not been provided by the client.

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). Further, these services are not to be construed as legal interpretation or advice.

1.5 Reliance

This ESA report is prepared for the exclusive use and reliance of Trabue Hansen & Hinshaw, Inc. and the University of Missouri. Use or reliance by any other party is prohibited without the written authorization of Trabue Hansen & Hinshaw, Inc. and Terracon Consultants, Inc. (Terracon).

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 Terracon's Agreement for Services. The limitation of liability defined in the Agreement for Services is the aggregate limit of Terracon's liability to the client and all relying parties.

Continued viability of this report is subject to ASTM E 1527-05 Sections 4.6 and 4.8. If the ESA will be used by a different user (third party) than the user for whom the ESA was originally prepared, the third party must also satisfy the user's responsibilities in Section 6 of ASTM E 1527-05.

1.6 Client Provided Information

Prior to the site visit, Mr. Greg Williams, CECD Director of Research Parks for the University of Missouri System, client's representative, provided the following information.

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1.6.1 Specialized Knowledge or Experience

Mr. Williams was not aware of specialized knowledge or experience that is material to RECs in connection with the site.

1.6.2 Actual Knowledge of Environmental Liens or AULs

Mr. Williams did not have actual knowledge of environmental liens or AULs encumbering the site or in connection with the site.

1.6.3 Reason for Significantly Lower Purchase Price

Mr. Williams was not aware of a significantly lower purchase price because of the presence of hazardous substances or petroleum products.

1.6.4 Commonly Known or Reasonably Ascertainable Information

Mr. Williams was not aware of commonly known or reasonably ascertainable information within the local community about the site that is material to RECs in connection with the site.

1.6.5 Obvious Indicators of Contamination at the Site

Mr. Williams was not aware of obvious indicators that point to the presence or likely presence of contamination at the site.

2.0 PHYSICAL SETTING

Physical Setting

PHYSICAL SETTING INFORMATION FOR SITE AND SURROUNDING AREA		SOURCE
Topography (Refer to Appendix A for an excerpt of the Topographic Map)		
Site Elevation	Approximately 820 feet (NGVD)	USGS Topographic Map, Columbia, Missouri Quadrangle, 1981.
Surface Runoff/ Topographic Gradient	Sloping toward the east	
Closest Surface Water	The topographic map shows a pond located on Lot 16 and another pond located on Lot 2; however, during the site reconnaissance it was observed that the ponds depicted on the topographic map had been removed. The closest surface water is a lake east of Lots 18 and 2.	
Soil Characteristics		
Soil Type	A) Armstrong loam, 5 to 9 percent slopes, eroded B) Vanmeter clay loam, 5 to 14 percent slopes C) Mexico silt loam, 1 to 3 percent slopes, eroded D) Leonard silt loam, 2 to 6 percent slopes, eroded	Soil Survey of Boone County, Missouri – USDA-NRCS, Soil Conservation Service issued 2003.
Description	A) Loam, clay loam, and clay encountered on back slopes of hills on uplands. Somewhat poorly drained. B) Clay loam and silty clay encountered on back	

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PHYSICAL SETTING INFORMATION FOR SITE AND SURROUNDING AREA		SOURCE
	slopes of hills on uplands. Moderately well drained. C) Silt loam, silty clay loam, and silty clay encountered on summits of ridges on uplands. Poorly drained. D) Silt loam, silty clay, and silty clay loam encountered on shoulders of ridges on uplands. Moderately well drained.	
Geology/Hydrogeology		
<i>Formation</i>	A) The Pennsylvanian - Cherokee Group B) Burlington Limestone	Geologic Map of Missouri, Missouri Department of Natural Resources, Missouri Geological Survey Program, 2003.
<i>Description</i>	A) Successions of sandstone, siltstone, shale, limestone, underclay, and coal beds B) White to gray, medium to coarsely crystalline, medium to coarsely crinoidal, medium to thick bedded, often cross-stratified, chert-free to sparsely cherty limestone.	
<i>Estimated Depth to First Occurrence of Groundwater</i>	Approximately 12' - 18.5' below ground surface.	On-site Terracon geotechnical borings.
<i>Primary Aquifer</i>	Burlington Limestone	Groundwater Resources of Missouri, Missouri Department of Natural Resources, Division of Geology and Land Survey, 1997.
<i>*Hydrogeologic Gradient:</i>	Not known - may be inferred to be parallel to topographic gradient (primarily to the east.)	

* The groundwater flow direction and the depth to shallow, unconfined groundwater, if present, would likely vary depending upon seasonal variations in rainfall and other hydrogeological features. Without the benefit of on-site groundwater monitoring wells surveyed to a datum, groundwater depth and flow direction beneath the site cannot be directly ascertained.

3.0 HISTORICAL USE INFORMATION

Terracon reviewed the following historical sources for indications of RECs. A summary of the historical review is included at the end of this section. Copies of selected historical documents are included in Appendix C.

3.1 Historical Topographic Maps

Readily available historical USGS topographic maps were reviewed to identify RECs in connection with the site. Reviewed historical topographic maps are summarized below.

- Columbia, Missouri, published 1940 from **1934-35** surveys (1:24,000)
- Columbia, Missouri, published 1948 from **1945** aerial photographs (1:24,500)

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- Columbia, Missouri, published 1967 from **1965** aerial photographs (1:24,000)
- Columbia, Missouri, published 1967, photorevised 1974 from **1974** aerial photographs (1:24,000)
- Columbia, Missouri, published 1967, photorevised 1981 from **1980** aerial photographs (1:24,000)

Historical Topographic Maps

Direction	Description
Site Group A	Illustrated as vacant land (1934-35). Illustrated as vacant land with a pond and a structure on the north central portion (1945). Illustrated as vacant land with two ponds and two structures on the southeastern portion and one structure on the north central portion (1965, 1974 and 1980).
Site Group B	Illustrated as vacant land (1934-35). Illustrated as vacant land with a pond (1945). Illustrated as vacant land with a portion of a lake (1965, 1974, and 1980).
Site Group C	Illustrated as vacant land (1934-35). Illustrated as vacant land with one structure on the south central portion (1945, 1965, 1974, and 1980).
Site Group D	Illustrated as vacant land with an unnamed tributary to Gans Creek (1934-35, 1945, 1965, 1974 and 1980).
North	Illustrated as a road similar to current-day Sugar Grove Road followed by predominantly vacant land with unimproved roads and two structures (1934-35 and 1945). Illustrated as a road similar to current-day Sugar Grove Road followed by predominantly vacant land with a group of structures labeled Lenoir Home to the northwest, unimproved roads and a labeled fish hatchery to the north, and an improved road to the northeast (1965, 1974 and 1980).
East	Illustrated as vacant land with an unnamed tributary of Gans Creek followed by Gans Creek (1934-35). Illustrated as vacant land with a pond and a pair of structures followed by Gans Creek (1945). Illustrated as vacant land with two ponds, several structures, and an unimproved road followed by Gans Creek (1965, 1974, and 1980).
South	Illustrated as two structures, followed by Gans Creek and a road labeled Highway 63 followed by predominantly vacant land (1934-35). Illustrated as one structure, followed by Gans Creek and a road labeled Highway 63 followed by predominantly vacant land with four structures (1945). Illustrated as one structure and two ponds, followed by Gans Creek and a labeled Highway 63 followed by predominantly vacant land with five structures and two ponds (1965). Illustrated as one structure and a pond, followed by Gans Creek and a road labeled Highway 63 followed by predominantly vacant land with five structures and two ponds (1974 and 1980).

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Direction	Description
West	<p>Illustrated as predominantly vacant land with one structure followed by a road labeled Highway 63, followed by predominantly vacant land with a pond, a structure and an unnamed tributary to Clear Creek (1934-35 and 1945).</p> <p>Illustrated as a labeled Trailer Park followed by a road labeled Highway 63, followed by predominantly vacant land with several ponds, a large lake, several structures and an unnamed tributary to Clear Creek (1965).</p> <p>Illustrated as a labeled Trailer Park and a road labeled Highway 63, followed by predominantly vacant land with several ponds, a large lake, several structures, improved roads and an unnamed tributary to Clear Creek (1974 and 1980).</p>
Collective adjoining property	<p>Illustrated as predominantly vacant land with a structure and an unnamed tributary of Gans Creek (1934-35).</p> <p>Illustrated as predominantly vacant land with a structure and an unnamed tributary of Gans Creek and a structure marked Home for the Aged (1945).</p> <p>Predominantly vacant land with a lake, three structures and an unnamed tributary of Gans Creek (1965).</p> <p>Illustrated as predominantly vacant land with a lake, five structures, an improved road, and an unnamed tributary of Gans Creek (1974).</p> <p>Illustrated as predominantly vacant land with a lake, two ponds, five structures, an improved road, and an unnamed tributary of Gans Creek (1980).</p>

3.2 Historical Aerial Photographs

Selected historical aerial photographs from the Boone County United States Department of Agriculture (USDA)-NRCS office and the University of Missouri CARES html-gis website were reviewed at approximately 10 to 15 year intervals, if readily available, to obtain information concerning the history of development on and near the site. Evaluation of these aerials may be limited by a photo's quality and scale. Selected photographs are summarized below.

- NRCS, 1939, scale unknown
- NRCS, 1956, scale unknown
- NRCS, 1968, scale unknown
- CARES, 1994, 1:6,776
- CARES, 2003, 1:6,776
- CARES, 2007, 1:6,776

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**Historical Aerial Photographs**

Direction	Description
Site Group A	<p>Appears to be vacant pasture land with a pond (1939).</p> <p>Appears to be vacant pasture land with a pond, unimproved roads, three structures on the northern portion and a structure on the south western portion (1956)</p> <p>Appears to be vacant pasture land with a pond, unimproved roads, three structures on the northern portion and two structures on the south western portion (1968).</p> <p>Appears to be vacant farmland, unimproved roads, three structures on the northern portion and a structure on the south western portion (1994, 2003, and 2007).</p>
Site Group B	<p>Apparent vacant pasture land (1939).</p> <p>Apparent vacant pasture land and a pond (1956).</p> <p>Apparent vacant pasture land and part of a lake (1968, 1994, 2003 and 2007).</p>
Site Group C	<p>Apparent vacant pasture land (1939).</p> <p>Appears to be farmland (1956);</p> <p>Apparent vacant land with one structure on the south central portion (1968).</p> <p>Apparent vacant pasture land (1994, 2003 and 2007).</p>
Site Group D	<p>Apparent vacant pasture land and a stream (1939).</p> <p>Apparent vacant pasture land (1956 and 1968, 1994, 2003 and 2007).</p>
North	<p>Appears to be a road similar to current-day Sugar Grove Road, followed by apparent vacant pasture land (1939 and 1956).</p> <p>Appears to be a road similar to current-day Sugar Grove Road, followed by apparent vacant pasture land and structures similar to current day Lenoir Home and an apparent fish hatchery (1968, 1994, 2003 and 2007).</p>
East	<p>Appears to be a pond and apparent vacant pasture land (1939).</p> <p>Appears to be structures, a road, and predominantly vacant pasture with some vacant wooded land (1956, 1968, 1994, 2003 and 2007).</p>
South	<p>Appears to be a road similar to current-day Highway 63 and a creek similar to current day Gans Creek, followed by vacant pasture and wooded land (1939).</p> <p>Appears to be a road similar to current-day Highway 63 and a creek similar to current day Gans Creek, followed by predominantly vacant pasture and wooded land with several apparent structures and associated drives (1956, 1968, 1994, 2003 and 2007).</p>
West	<p>Appears to be a road similar to current-day Highway 63, followed by predominantly vacant pastures (1939).</p> <p>Appears to be road similar to current-day Highway 63, followed by predominantly vacant pasture with a couple groups of structures and associated drives (1956).</p> <p>Appears to be a trailer park followed by an apparent road similar to current-day Highway 63, followed by an apparent trailer park to the northwest and predominantly vacant pasture with a large lake, and a couple groups of structures, with associated drives, to the west and southwest (1968, 1994, 2003 and 2007).</p>

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Direction	Description
Collective adjoining property	Appears to be a vacant pasture land (1939, and 1956). Appears to be predominantly vacant pasture with a road, a structure and a lake (1968). Appears to be predominantly vacant pasture with a road, several structures, a small pond and a lake (1994, and 2003). Appears to be predominantly vacant pasture with a road, several structures, a large structure similar to current day ABC Laboratories, and a lake (2007).

3.3 Historical City Directories

City Directories from the Daniel Boone Public Library were reviewed regarding the site. Due to the rural location of the site, city directories were not available for the site or adjoining properties.

3.4 Historical Fire Insurance Maps

Historical fire insurance maps produced by the Sanborn Map Company were requested from Environmental Data Resources, Inc. (EDR) to evaluate past uses and relevant characteristics of the site and surrounding properties.

Based upon inquiries to the above-listed Sanborn provider, Sanborn Maps were not available for the site. EDR confirmation of "no coverage" for the subject site is included in Appendix C.

3.5 Property Tax File Information

Based on a review of information obtained from the Boone County Assessor's website, the current site owner is the Curators of the University of Missouri. The parcel identification numbers of the site are 17-704-00-00-003.00 01 and 17-803-00-00-001.00 01.

3.6 Title Search

At the direction of the client, a title search was not included as part of the scope of services. Unless notified otherwise, we assume that the client is evaluating this information outside the context of this report.

3.7 Environmental Liens

Environmental lien records recorded against the site were not provided by the client. At the direction of the client, performance of a review of these records was not included as part of the scope of services and unless notified otherwise, we assume that the client is evaluating this information outside the context of this report.

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3.8 Building Department Records

The City of Columbia Building and Site Development Division was contacted by e-mail on January 28, 2011 regarding environmental records for the site. Mr. Jim Paneck, Chief Building Inspector, replied that the Building & Site Development Division does not have information regarding the site due to its historic rural location and association with a University of Missouri research farm.

3.9 Zoning/Land Use Records

According to the City of Columbia Zoning District Map, prepared by the Department of Public Works Columbia, Missouri dated July 20, 2004, the site is currently zoned as A-1 Agricultural.

3.10 Historical Interviews

The following individuals were interviewed regarding historical use of the site.

Interviewee

Interviewer	Interviewee/Phone #	Title	Date/Time
Adam White	Chris Browne 573-864-2351 brownec@missouri.edu	Farm Manager Genetics Farm	2-23-2011/10:00
Adam White	Kurtis Holiman and Bob 573-881-6002 HolimanK@missouri.edu	USDA site employees	2-23-2011/10:40

Mr. Chris Browne, Farm Manager of the University of Missouri Genetics Farm was interviewed on February 23, 2011 regarding the site. Mr. Browne has been associated with the site for approximately 32 years. According to Mr. Browne, Lots 16, 17, and 18 of the site have been utilized as a genetic crop research facility for as long as he could remember. Mr. Browne indicated that research at the farm consisted of basic plant genetics, production, and resistance research. According to Mr. Browne, crop research is performed on small test plots and is mostly done by hand with hand planting and pollination utilized. Additionally, Mr. Browne indicated that tractors and tillage equipment are utilized in the cultivation of the test plots. Mr. Browne indicated that minor amounts of herbicides and fertilizers are utilized at the site.

According to Mr. Browne, the current day on-site large machine shed was moved to the site in approximately 2008 from its former location. Mr. Browne indicated that the two small metal machine shed structures located at the Genetics Farm were constructed at the site in

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the 1950s as part of a demonstration for revitalization efforts following World War II. According to Mr. Browne, the demonstration involved the construction of multiple farm structures with the terracing of associated farmland and was completed in approximately 1 week. Mr. Browne indicated that a residence was located at the Genetics Farm for as long as he could remember and was demolished in approximately 2001. Additionally, Mr. Browne indicated that multiple small machine sheds associated with the revitalization demonstration were demolished in the late 2000s prior to placing the current-day large machine shed at the site.

According to Mr. Browne, the site and its adjoining properties have been utilized as farmland for as long as he could remember. According to Mr. Browne, the southern portion of the site was the historic location of the University of Missouri Dairy Farm, which was moved to a different location prior to his employment at the site. Most recently Mr. Brown indicated that the southern portion of the site was utilized as hay fields prior to their development as Discovery Ridge Research Park. To Mr. Browne's knowledge the eastern portion of the site has always been utilized as a portion of the University of Missouri's Beef Farm. Mr. Browne indicated that he was unaware of who the previous owner of the site was prior to its purchase by the University of Missouri while compiling current-day South Farms.

According to Mr. Brown, the site is currently owned by the University of Missouri. Mr. Browne indicated that all of the equipment utilized at the site is fueled and serviced north of the site at the South Farms Field Operation facility. According to Mr. Browne, minor greasing activities are performed on-site. Mr. Browne indicated that the Genetics Farm facility is inspected twice a year by the University of Missouri Environmental Health Department and no concerns have been noted. Mr. Browne was not aware of any pending, threatened or past environmental litigation, proceedings or notices of possible violations of environmental laws or liability in connection with the site. Additionally, Mr. Browne was not aware of the past or present storage, use, generation, or release of potential hazardous materials or petroleum products at the site.

Mr. Kurtis Holiman and Bob, employees with the USDA, were interviewed on February 23, 2011 regarding the site. Kurtis Holiman has been associated with the site for approximately 30 years and Bob has been associated with the site since approximately 1968. According to Bob, the Quonset hut located on Lot 5 of the site was historically utilized as a soil testing laboratory and a shop associated with the fabrication of research equipment for erosion control research, specifically: rain stimulator, flumes, and foot bridges. Drill presses, milling machines, lathes, and band saws were typical equipment utilized within the Quonset hut during the fabrication of research equipment. Bob indicated historically a Gamma Probe utilized for measuring soil moisture was stored within the on-site Quonset hut. The Gamma Probe was stored within a lead brick lined compartment. Typical on-site laboratory soil tests were associated with total suspended solids from watershed outfall samples.

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Bob indicated that the Quonset hut located on Lot 5 has been present at the site since at least 1967. According to Bob, major research activities were terminated at the Quonset building in the 1980s when operations were moved to a location on the Business Loop within the city limits of Columbia, Missouri. Bob indicated that from the 1980s to approximately 2002 minor research activities occurred at the site with approximately 2 employees working out of the structure. According to Bob, the on-site Quonset hut was mainly utilized as a storage facility from the 1980s to present-day. Mr. Holiman and Bob indicated that in approximately 2002 the on-site sanitary lagoon historically located on the northern portion of Lot 5 and utilized for sanitary waste disposal associated the on-site Quonset hut was closed in according with MDNR regulations. According to Bob, the sanitary lagoon was located on the central portion of Lot 5 from at least 1967 to 2002.

According to Mr. Holiman and Bob, the eastern portion of the site has always been utilized as farm land. The farmland located on the eastern portion of the site was the historic location of the University of Missouri Dairy Farm research facility. Bob indicated that to his knowledge a home was historically located just east of the current-day on-site Quonset hut structure. The home located east of the Quonset hut was demolished in the 1980s. Additionally, a cabin type structure was historically located somewhere on the south central portion of the eastern portion of the site. Mr. Holiman and Bob were not aware of any pending, threatened or past environmental litigation, proceedings or notices of possible violations of environmental laws or liability in connection with the site. Additionally, Mr. Holiman and Bob were not aware of the past or present storage, use, generation, or release of potential hazardous materials or petroleum products at the site.

3.11 Prior Report Review

The following previous environmental report associated with portions of the current-day Discovery Ridge Research Park and its associated collective adjoining properties, was provided by the University of Missouri for review:

Phase I Environmental Site Assessment, Discovery Ridge, prepared by Terracon, prepared for University of Missouri, Terracon project number 09067718, dated May 31, 2006.

The 2006 Terracon ESA report indicated that the site was a 114 acre tract of land consisting of predominantly farmland with a lake, lagoon, and nine buildings located on the northwestern portion of the site. The 2006 Terracon ESA report did not identify RECs associated with the subject site; however did recommend the cleanout of the oil/water separator in the garage of the USDA Field Research Building (FRB), and if encountered during proposed site activities the proper abandonment of the water well and the closure of

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the septic tank located within the vicinity of the current-day ABC Laboratories' facility. The oil/water separator, water well and septic tank discussed within Terracon's 2006 ESA report were identified as located on the site's collective adjoining properties.

A review of readily available historical information revealed that the development of the current-day buildings on the site appeared to have begun between 1939 and 1948. The lake on the site appeared to have been constructed between approximately 1948 and 1959 and the lagoon constructed between 1974 and 1981.

The regulatory review identified no USEPA facilities and one MDNR facility within the vicinity of the site. Also identified in the regulatory database report was an orphan facility identified as the University of Missouri-South Farm. The University of Missouri-South Farms facility was identified as a State Hazardous Waste Site (SHWS). This facility was observed at the time of the site visit to be located approximately 1 mile east of the site. The regulatory review and agency inquiries did not reveal RECs associated with the site.

Terracon interviewed Mr. John Poehlmann regarding the site. Mr. Poehlmann is the Assistant Director of the Missouri Agricultural Experiment Station and superintendent of the University of Missouri-South Farms of which the site is located within. Mr. Poehlmann stated that the site currently and historically has been used for agricultural research and teaching which included maize genetics crop research, swine nutrition, beef cattle management and grazing, agricultural equipment development and cropping for grain silage and uptake of nutrients from lagoon application. To Mr. Poehlmann's knowledge, the nine buildings located on the site were constructed between the 1970's and approximately 2002.

According to Mr. Poehlmann, there are pits for the collection of animal waste beneath a building which formerly housed sheep and swine. The wastes were surface and injection applied as plant nutrients. The on-site lagoon operated under the MDNR permit MO-G010024. Mr. Poehlmann stated that a well is located on the site. The exact location of the well was not known. However, the well was installed in the approximate 1950's and reported to be abandoned. Mr. Poehlmann has no knowledge of any aboveground or underground storage tanks for chemicals or petroleum, past use, treatment, disposal or generation of hazardous materials or petroleum products associated with the subject site.

Geotechnical Engineering Report, Discovery Ridge Lots 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 and 18, prepared by Terracon, prepared for University of Missouri and Trabue, Hansen & Hinshaw, Inc, Terracon project number 09105094, dated February 17, 2011.

The 2011 Terracon Geotechnical report indicated that nine soil borings were advanced to depths ranging between approximately 13 to 20 feet below ground surface (bgs) at the site.

According to the geotechnical report, fill soils were encountered in boring B-3 at a depth of 3 feet (bgs) and in boring B-4 at a depth of 12 feet (bgs). Boring B-3 was located on the central portion of Lot 2, and Boring B-4 was located on the central portion of Lot 8. It was noted that the material was placed as part of a mass grading in 2008 and that Terracon was onsite to observe and test the density and moisture during the placement of the engineered fill material. Additionally the report indicated that historically ponds may have been present in the vicinity of Lot 16 and on the northeastern portion of Lot 2. Typically on-site depth to groundwater was encountered between 12' and 18.5' below existing grade.

3.12 Historical Use Information Summary

Based on review of the historical information, the site has predominately been vacant farmland consisting of both row crop production and livestock pasture from at least 1934 to 2006. The western portion of the site has been utilized as a research park development from approximately 2006 to present-day. Additionally, the eastern portion of the site has always been utilized as farmland and livestock pasture land. The northern portion of the site is currently utilized as a University of Missouri plant genetic research farm. A residential structure was located at the Genetics Farm, on the northern portion of the site from approximately 1945 to 2001 at which time the residential structure was demolished. Multiple small machine shed structures have been located at the Genetics Farm, on the northern portion of the site from at least 1956 to the mid 2000s with two small machine structures still present on-site. The large machine shed structure located at the Genetics Farm was placed on-site in approximately 2007. A Quonset hut structure utilized by the USDA has been located on the western portion of the site from approximately 1965 to present-day. A residential structure was located on the western portion of the site, east of the current-day on-site Quonset hut from approximately 1945 to approximately the 1980s. A small log cabin type structure was located on the central portion of the site from approximately 1945 to 1980. Terracon did not identify RECs for the site based on the historical use of the site or adjoining properties.

4.0 RECORDS REVIEW

Regulatory database information was provided by EDR, a contract information services company. The purpose of the records review was to identify RECs in connection with the site. Evaluating identified regulatory facilities for potential vapor intrusion conditions was outside the scope of this assessment. Information in this section is subject to the accuracy of the data provided by the information services company and the date at which the information is updated, and the scope herein did not include confirmation of facilities listed as "unmappable" by regulatory databases.

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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. As stated previously, 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 directly ascertained.

4.1 Federal and State/Tribal Databases

Listed below are the facility listings identified on federal and state/tribal databases within the ASTM-required search distances from the approximate site boundaries. Database definition, descriptions, and the database search report are included in Appendix D.

Federal and State Databases

<u>Database</u>	<u>Description</u>	<u>Radius (miles)</u>	<u>Listings</u>
Federal			
NPL	The 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
NPL (Delisted)	The NPL (Delisted) refers to facilities that have been removed from the NPL.	0.5	0
CERCLIS	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 the CERCLA of 1980.	0.5	0
CERCLIS / NFRAP	CERCLIS/NFRAP refers to facilities that have been removed and archived from EPA's inventory of CERCLA sites.	0.5	0
RCRA CORRACTS/ TSD	The EPA maintains a database of RCRA facilities associated with treatment, storage, and disposal (TSD) of hazardous waste 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 a RCRA facility.	1.0	0
RCRA Non- CORRACTS/ TSD	The RCRA Non-CORRACTS/TSD Database is a compilation by the EPA of facilities which 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	The RCRA Generators database, maintained by the EPA, lists facilities that generate hazardous waste as part of their normal business practices. Generators are listed as either large (LQG), small (SQG), or conditionally exempt (CESQG). LQG produce at least 1000 kg/month of non-acutely hazardous waste or 1 kg/month of acutely hazardous waste. SQG produce 100-1000 kg/month of non-acutely hazardous waste. CESQG are those that	Site and adjoining properties	1

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<u>Database</u>	<u>Description</u>	<u>Radius (miles)</u>	<u>Listings</u>
	generate less than 100 kg/month of non-acutely hazardous waste.		
IC / EC	A listing of sites with institutional and/or engineering controls in place. IC 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. EC 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
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	0
State			
SHWS	The Missouri Department of Natural Resources (MDNR) maintains a database of state equivalent CERCLIS facilities (State Hazardous Waste Sites) in the State of Missouri.	0.5	0
SWF/LF	State and/or Tribal database of solid waste facilities located within Missouri. The database information may include the facility name, class, operation type, area, estimated operational life, and owner.	0.5	0
LUST	State and/or Tribal database of leaking underground storage tanks in the State of Missouri.	0.5	0
UST	State and/or Tribal database of registered storage tanks in the State of Missouri which may include the owner and location of the tanks.	Site and adjoining properties	0
AUL	Activity and use limitations include both engineering controls and institutional controls.	Site	0
VCP	State and/or Tribal facilities included as Voluntary Cleanup Program sites.	0.5	0
Brownfields	State and/or Tribal listing of Brownfield properties addressed by Cooperative Agreement Recipients or Targeted Brownfields Assessments.	0.5	0

In addition to the above ASTM-required listings, Terracon reviewed other federal, state, local and proprietary databases provided by the database firm. A list of the additional reviewed databases is included in the regulatory database report included in Appendix D.

The following table summarizes the site-specific information provided by the database and/or gathered by this office for identified facilities. Facilities are listed in order of proximity to the site. Additional discussion for selected facilities may follow the summary table.

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Listed Facilities

Facility Name and Location	Estimated Distance/Direction/Gradient	Database Listings
Analytical Bio Chemistry Laboratories In 4780 Lenoir St	Observed on a collective adjacent property/ Lot 1 of Discovery Ridge Research Park / cross-gradient of the site	RCRA-LQG

Analytical Bio Chemistry Laboratories

Analytical Bio Chemistry Laboratories is located on a collective adjacent property between Group A (Lots 5, 16, 17, and 18) and Group B (Lots 2, 6, and 7) and was identified within the database report as a Resource Conservation and Recovery Act (RCRA) Large Quantity Generator (LQG) permitted facility. The following materials were identified within the database report as associated with the facility: D001 (ignitable hazardous waste), D002 (waste with pH of less than 2 or greater than 12.5), D003 (material considered to be reactive hazardous waste), D004 (Arsenic), D008 (Lead), C009 (mercury), D022 (Chloroform), F002 (spent halogenated solvents), F003 and F005 (spent non-halogenated solvents), P001 (2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-Oxo-1-phenylbutyl)-, & Salts when present at concentrations greater than 3%), P003 (Acrolein), P037 (Dieldrin), P051 (2,7:3,6-Dimethanonaphth[2,3-B]Oxirene, 3,4,5,6,9,9-Hexachloro-1A,2,2A,3,6,6A,7,7A-Octahydro), P105 (Sodium Azide), U019 (Benzene I,T), U037 (Benzene, Chloro), U044 (Chloroform), U053 (2-Butenal), U056 (Benzene, Hexahydro), U112 (Acetic Acid Ethyl Ester), U123 (Formic Acid), U124 (Furan), U133 (Hydrazine), U138 (Methane, Iodo), U144 (Acetic Acid, Lead (2+) Salt), U154 (Methanol), U159 (2-Butanone), U165 (Naphthalene), U169 (Benzene, Nitro), U188 (Phenol), U196 (Pyridine), U211 (Carbon Tetrachloride), and U219 (Thiourea). Multiple violations, with an enforcement action of "written informal," associated with the RCRA-LQG status of the facility were reported from an on-site inspection conducted in November of 2008. The Analytical Bio Chemistry Laboratories was first identified located on the collective adjoining property in 2007. Based on regulatory status and facility age the Analytical Bio Chemistry Laboratories listing facility does not constitute a REC to the site at this time.

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the site. The report listed 40 facilities in the unmapped section. Determining the location of unmapped facilities is beyond the scope of this assessment; however, one of these facilities was identified as located north of the site and is discussed below. The remaining facilities are listed in the database report in Appendix D.

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University of Missouri Columbia

An orphan facility was identified located north of the site. The identified orphan facility is listed as the University of Missouri Columbia. The facility was identified as a RCRA Non-Generator (NonGen) permitted facility. Based on the regulatory RCRA-Non-Generator status, the orphan facility listing does not constitute a REC to the site.

4.2 Local Agency Inquiries

4.2.1 Health Department/Environmental Division

The Columbia Department of Public Health and Human Services was contacted by e-mail on January 28, 2011 regarding environmental records or information indicating environmental concerns for the site. At the issuance of this report, a response had not been received from the health department.

4.2.2 Fire Department

The Columbia Fire Department was contacted by e-mail on January 28, 2011 regarding environmental records or information indicating environmental concerns for the site. Battalion Chief Steve Sapp responded that the City of Columbia Fire Marshal's Division has found no current records for any fires, illegal dumping, hazardous and/or suspicious materials, petroleum products and/or issues for the site.

4.2.3 Planning Department

The City of Columbia, Missouri Planning Division was contacted by e-mail on January 28, 2011 regarding environmental records for the site. Matthew Lepke, AICP Planner responded that the Discovery Ridge site is owned by the MU Curators and that MU properties do not necessarily have to follow city codes. According to Mr. Lepke, the property has not been subdivided under city code and has not been rezoned since it was annexed in 1998, leaving the property zoned A-1 (Agricultural).

4.2.4 Building Permit/Inspection Department

The City of Columbia Chief Building Inspector, Mr. Jim Paneck was contacted by e-mail on January 28, 2011 regarding environmental records for the site. Information provided by Mr. Paneck is discussed in section 3.8.

4.3 Records Review Summary

The regulatory review identified one Missouri Department of Natural Resources facility within the specified search distance; however, the facility is not a REC due to regulatory status, and duration of time located within the vicinity of the site. Additionally an Orphan facility was

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identified located on the north adjoining property. The local agency inquiries for environmental records did not reveal RECs in connection with the site from the agencies that have responded by the issuance of this report.

5.0 SITE RECONNAISSANCE**5.1 General Site Information**

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. Exhibit 2 in Appendix A is a diagram of the site. Photo documentation of the site at the time of the visual reconnaissance is provided in Appendix E. Credentials of the individuals planning and conducting the site visit are included in Appendix F.

General Site Information

Site Reconnaissance				
Field Personnel	Adam J. White			
Reconnaissance Date	January 21, 2011 and February 23, 2011			
Weather Conditions	January 21, 2011: Cold overcast with snow on the ground. February 23, 2011: Cold and overcast			
Site Contact/Title	January 21, 2011: None February 23, 2011: Chris Browne, Bob, and Kurtis Holiman			
Site Description				
Site Name	Discovery Ridge Lots 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 & 18			
Site Location/Address	4700 Discovery Drive, Columbia, Boone County, Missouri			
Land Area	Approximately 120 acres			
Site Improvements	A Quonset hut structure located on Lot 5 and three metal machine shop shed structures located on Lot 17 with the reminder of the site consisting of vacant graded grass covered land, and farmland.			
Zoning	A-1 Agriculture			
Site Topographic Relief	Gently sloping south			
Building Description				
Building Identification	Building Use	Approx. Construction Date	Number of Stories	Approx. Size (ft²)
Large Machine Shed	Genetics Farm equipment storage	2007	1	5,200
Small Machine Shed	Empty	1956	1	800

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Small Machine Shed	Empty	1956	1	800
Quonset Hut	USDA equipment storage	1965	1.5	4,500
Site Utilities				
<i>Electricity</i>	City of Columbia			
<i>Drinking Water</i>	City of Columbia			
<i>Wastewater</i>	Large Machine Shed located on Lot 17 – On-site septic Remainder of the site provided with wastewater services from the City of Columbia			
<i>Natural Gas</i>	MFA (Propane provider)			

5.2 General Description of Site, Occupants, and Operations

The site is located along Discovery Ridge Parkway and Discovery Drive within the University of Missouri, Discovery Ridge Research Park, Columbia, Boone County, Missouri. The site is an approximate 120-acre tract of land, improved with three machine shed structures located on the northern portion, occupied by the University of Missouri-Genetics Farm, and a Quonset hut located on the western portion occupied by the United States Department of Agricultural (USDA). The on-site structures are utilized for the storage of multiple pieces of research equipment. The remainder of the site consists of vacant undeveloped land utilized for row crop production, and livestock pasture with portions developed as graded lots associated with the current-day Discovery Ridge Research Park.

5.3 Site Observations

The following table summarizes site observations and interviews. Affirmative responses (designated by an "X") are discussed in more detail following the table.

Site Characteristics

Category	Item or Feature	Observed
Site Operations, Processes, and Equipment	Emergency generators	
	Elevators	
	Air compressors	X
	Hydraulic lifts	
	Dry cleaning	
	Photo processing	
	Laboratory hoods and/or incinerators	
	Waste treatment systems and/or water treatment systems	
	Heating and/or cooling systems	

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Category	Item or Feature	Observed
	Other processes or equipment	X
Aboveground Chemical or Waste Storage	Aboveground storage tanks	X
	Drums, barrels and/or containers ≥ 5 gallons	
	MSDS	
Underground Chemical or Waste Storage, Drainage or Collection Systems	Underground storage tanks or ancillary UST equipment	
	Sumps, cisterns, catch basins and/or dry wells	
	Grease traps	
	Septic tanks and/or leach fields	X
	Oil/water separators	
	Pipeline markers	
	Interior floor drains	X
Electrical Transformers/ PCBs	Pad or pole mounted transformers and/or capacitors	X
	Other equipment	
Releases or Potential Releases	Stressed vegetation	
	Stained soil	
	Stained pavement or similar surface	
	Leachate and/or waste seeps	
	Trash, debris and/or other waste materials	
	Dumping or disposal areas	
	Construction/demolition debris and/or dumped fill dirt	X
	Surface water discoloration, odor, sheen, and/or free floating product	
	Strong, pungent or noxious odors	
	Exterior pipe discharges and/or other effluent discharges	
Other Notable Site Features	Surface water bodies	X
	Quarries or pits	
	Wells	

Site Operations, Processes, and EquipmentAir compressors

A large air compressor was observed in the southwestern portion of the large machine shed located on Lot 17, associated with the University of Missouri Genetics Research Farm. The large air compressor was observed located on concrete flooring material. No evidence of surficial staining or releases was observed on the concrete flooring material or in the vicinity of the large air compressor at the time of the visual reconnaissance.

Other processes or equipment

Four mid size tractors were observed located within the on-site large machine shed located on the northern portion of the site. The on-site tractors were observed stored on concrete flooring material. Staining was not observed on the concrete floor located below the on-site tractors. According to Mr. Chris Browne, the on-site tractors are serviced at the Field

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Operation facility located north of the site at the University of Missouri South Farms. Additionally, Mr. Browne indicated that the on-site tractors are fueled at the South Farms facility located north of the site.

Aboveground Chemical or Waste Storage

Aboveground storage tanks

A 500-gallon propane AST was observed located southeast of the large machine shed located at the University of Missouri Genetics Farm on Lot 17. According to Mr. Browne, on-site propane services are provided by MFA. Staining or stressed vegetation was not observed located in the vicinity of the on-site propane AST.

Underground Chemical or Waste Storage, Drainage or Collection Systems

Septic tanks and/or leach fields

According to Mr. Chris Browne, the large machine shed located on the northern portion of the site and associated with the University of Missouri Genetics Research Farm is serviced by a septic system located southeast of the structure. Mr. Brown indicated that the on-site septic system has been present at the site for as long as he could remember and that historically the septic system was utilized to service the historic on-site residence. Seeps or excessively wet areas were not observed within the general location of the on-site septic system. According to Mr. Browne, the on-site septic system was inspected at the time when the on-site large machine shed was placed at the site and hooked into the existing system. Additionally, Mr. Brown indicated that the septic system has not required additional maintenance for as long as he could remember due to its minimum amount of use.

Interior floor drains

Three interior floor drains were observed within the conference room, restroom, and shower room located within the on-site large machine shed. According to Mr. Chris Browne, the floor drains discharge to the on-site septic system. Minor staining was not observed in the vicinity of on-site floor drains during the site reconnaissance. Other releases to the floor drains were not observed during the site reconnaissance. Potentially hazardous materials did not appear to be stored in the vicinity of the floor drains.

Electrical Transformers/ PCBs

Pad or pole mounted transformers and/or capacitors

During Terracon's site visit, eight pad-mounted transformers and three inactive pole-mounted transformers, owned and serviced by the City of Columbia, were observed at the site; however, no information with regard to PCB content of the transformer fluids was observed. Single pad-mounted transformers were observed on the southwestern portions of Lot 2 and Lot 9. Single pad-mounted transformers were observed on the northwestern

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portions of Lot 12 and Lot 16. Three pad-mounted transformers were observed located on the southwestern portion of Lot 15. A pad-mounted transformer was located on the southeastern portion of Lot 17. Three inactive pole-mounted transformers were observed on the northern portion of Lot 17. According to Mr. Bowne, the inactive pole-mounted transformers have been inactive since the demolishing of the residence historically located at the Genetics Farm. Transformers contain mineral oil which may contain minor amounts of PCB and could be considered "PCB contaminated" (PCB content of 50-500 ppm).

The City of Columbia 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 prior release was observed in the vicinity of the electrical equipment during the site reconnaissance.

Releases or Potential Releases

Construction/demolition debris and/or dumped fill dirt

Approximately 1-acre of fill dirt was observed located on the northern portion of Lot 9 at the time of the site reconnaissance. Mr. Brent Mahoney with the University of Missouri, South Farms, Field Operations indicated that the fill material located on Lot 9 has been placed on-site over the past two years and originated from the future location of the Missouri Conservation facility located south of Gans Road approximately 1.5 miles south of the site. Staining was not observed located within the on-site fill material and odors were not emanating from the material at the time of the site reconnaissance.

According to the Terracon **Geotechnical Engineering Report, Discovery Ridge Lots 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17 and 18, prepared for University of Missouri and Trabue, Hansen & Hinshaw, Inc, Terracon project number 09105094, dated February 17, 2011**, fill soils were encountered in boring B-3 at a depth of 3 feet (bgs) and in boring B-4 at a depth of 12 feet (bgs). Boring B-3 was located on the central portion of Lot 2, and Boring B-4 was located on the central portion of Lot 8. It was noted that the material was placed as part of a mass grading in 2008 and that Terracon was onsite to observe and test the density and moisture during the placement of the engineered fill material. Additionally the report indicated that historically ponds may have been present in the vicinity of Lot 16 and on the northeastern portion of Lot 2.

Other Notable Site Features

Surface water bodies

An intermittent stream was observed on Lots 9, 10, and 11 of the site, traversing the site in a north to south orientation. No evidence of chemical sheens was observed on the surface of the pools of water and no noxious odors were observed emanating from within the intermittent stream at the time of the site reconnaissance.

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5.4 Interviews Conducted During Visual Reconnaissance

Mr. Chris Browne, Genetics Farm-Farm Manager, Mr. Kurtis Holiman, USDA, and Bob, USDA, were interviewed for information pertaining to the site. Details of the interviews are explained throughout Section 5.3 – Site Observations and in Section 3.10 – Historical Interviews.

5.5 Site Reconnaissance Summary

On-site features observed during the site reconnaissance included interior floor drains within the large machine shed, four tractors, eight pad mounted transformers, three inactive pole-mounted transformer, a septic system, an approximately 500-gallon propane AST, fill dirt, an air compressor and an intermittent stream. On-site RECs were not identified based on visual findings during the site reconnaissance.

6.0 ADJOINING PROPERTY RECONNAISSANCE

Visual observations of adjoining properties (from site boundaries) are summarized below.

Adjoining Properties

Direction	Description
North	Sugar Grove Road, R1 Lake, and livestock pasture land, followed by row crop farmland and livestock pasture land.
East	A residential structure, a barn, wooded land and livestock pasture land, followed by pasture land associated with the University of Missouri Beef Farm.
South	Highway 63, followed by grass and tree covered land with Phillips Lake.
West	A trailer park, followed by an elderly care facility to the northwest and Highway 63.
*Collective Adjoining Properties	ABC Laboratories encompassed by Lot 5, Lot 17, Lot 18, Lot 2, and Lot 6. Radil with pad-mounted transformer encompassed by Lot 2, Lot 8, and Lot 15. Stormwater drainage easement encompassed by Lot 2, Lot 7, and Lot 8. A City of Columbia, sanitary sewer pump station, with diesel generator encompassed on the southwestern portion of Lot 9.

*Collective Adjoining Properties – Adjoining properties encompassed by the site.

The ABC Laboratories facility is listed in the regulatory database report and further discussed in Section 4.1 of this report.

A City of Columbia sanitary sewer pump station was observed located on a collective adjoining property on the southwestern portion of Lot 9. The diesel generator with internal diesel fuel tank was observed located on the northern portion of the sanitary sewer pump

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station on an area of gravel. Areas of staining were not observed located in the vicinity of the generator at the time of the site reconnaissance. The City of Columbia sanitary sewer pump station was constructed in approximately 2008. The City of Columbia sanitary sewer pump station currently does not represent a REC to the site due to duration of time located on and encompassed by Lot 9.

Indications of RECs were not observed with the current-day adjoining and collective adjoining properties.

7.0 ADDITIONAL SERVICES

Per the agreed scope of services specified in the proposal, the following additional service was conducted: Limited Historic Properties/Archaeological Resources Review.

7.1 Limited Historic Properties/Archaeological Resources Review

Pursuant to the client's request, an agency file review was conducted to identify the potential occurrence of cultural resources on the site. Cultural resources comprise of both historic properties and archaeological artifacts. The review included a Cultural Resource Assessment, Section 106 review of the site conducted by the Missouri Department of Natural Resources (MDNR), State Historic Preservation Office (SHPO). The Section 106 Review form, signed by Mark Miles, Deputy State Historic Preservation Officer, dated March 7, 2011, states that "An adequate cultural resource survey of the project area has been previously conducted. It has been determined that for the proposed undertaking there will be "no historic properties affected."

8.0 FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

8.1 Findings and Conclusions

This Phase I ESA was performed in accordance with our proposal dated December 15, 2010, and was conducted consistent with the procedures included in ASTM E 1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The ESA was conducted under the supervision or responsible charge of Timothy L. Bennett, R.G., environmental professional. Adam J White performed the site reconnaissance on January 21, 2011 and February 23, 2011.

A cursory summary of findings is provided below. It should be recognized that details were 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.

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- The site is located along Discovery Ridge Parkway and Discovery Drive within the University of Missouri, Discovery Ridge Research Park, Columbia, Boone County, Missouri. The site is an approximate 120-acre tract of land, improved with three machine shed structures located on the northern portion, occupied by the University of Missouri-Genetics Farm, and a Quonset hut located on the western portion occupied by the United States Department of Agricultural (USDA). The on-site structures are utilized for the storage of multiple pieces of research equipment. The remainder of the site consists of vacant undeveloped land utilized for row crop production, and livestock pasture with portions developed as graded lots associated with the current-day Discovery Ridge Research Park.
- On-site features observed during the site reconnaissance included interior floor drains within the large machine shed, four tractors, eight pad mounted transformers, three inactive pole-mounted transformer, a septic system, an approximately 500-gallon propane AST, fill dirt, an air compressor and an intermittent stream. On-site RECs were not identified based on visual findings during the site reconnaissance.
- Based on review of the historical information, the site has predominately been vacant farmland consisting of both row crop production and livestock pasture from at least 1934 to 2006. The western portion of the site has been utilized as a research park development from approximately 2006 to present-day. Additionally, the eastern portion of the site has always been utilized as farmland and livestock pasture land. The northern portion of the site is currently utilized as a University of Missouri plant genetic research farm. A residential structure was located at the Genetics Farm, on the northern portion of the site from approximately 1945 to 2001 at which time the residential structure was demolished. Multiple small machine shed structures have been located at the Genetics Farm, on the northern portion of the site from at least 1956 to the mid 2000s with two small machine structures still present on-site. The large machine shed structure located at the Genetics Farm was placed on-site in approximately 2007. A Quonset hut structure utilized by the USDA has been located on the western portion of the site from approximately 1965 to present-day. A residential structure was located on the western portion of the site, east of the current-day on-site Quonset hut from approximately 1945 to approximately the 1980s. A small log cabin type structure was located on the central portion of the site from approximately 1945 to 1980. Terracon did not identify RECs for the site based on the historical use of the site or adjoining properties.

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- The current-day adjoining properties of the subject site consist of the following:
 - Sugar Grove Road, R1 Lake, and livestock pasture land, followed by row crop farmland and livestock pasture land to the north;
 - Highway 63, followed by grass and tree covered land with Phillips Lake to the south;
 - A trailer park, followed by an elderly care facility to the northwest and Highway 63 to the west; and
 - A residential structure, a barn, wooded land and livestock pasture land, followed by pasture land associated with the University of Missouri Beef Farm to the east.

Collective Adjoining – Properties encompassed by the site

- ABC Laboratories encompassed by Lot 5, Lot 17, Lot 18, Lot 2, and Lot 6;
- Radil with pad-mounted transformer encompassed by Lot 2, Lot 8, and Lot 15;
- Stormwater drainage easement encompassed by Lot 2, Lot 7, and Lot 8;
- A City of Columbia, sanitary sewer pump station, with diesel generator encompassed on the southwestern portion of Lot 9.

A City of Columbia sanitary sewer pump station with a diesel generator was observed located on a collective adjoining property on the southwestern portion of Lot 9. The City of Columbia sanitary sewer pump station currently does not represent a REC to the site due to duration of time located on and encompassed by Lot 9.

Indications of RECs were not observed with the current-day adjoining and collective adjoining properties.

- The regulatory review identified one Missouri Department of Natural Resources facility within the specified search distance; however, the facility is not a REC due to regulatory status, and duration of time located within the vicinity of the site. Additionally an Orphan facility was identified located on the north adjoining property. The local agency inquiries for environmental records did not reveal RECs in connection with the site from the agencies that have responded by the issuance of this report.
- The following previous environmental report associated with portions of the current-day Discovery Ridge Research Park and its associated collective adjoining properties, was provided by the University of Missouri for review: **Phase I Environmental Site Assessment Discovery Ridge, prepared by Terracon,**

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prepared for University of Missouri, Terracon project number 09067718, dated May 31, 2006. The 2006 Terracon ESA report did not identify RECs associated with the subject site; however did recommend the cleanout of the oil/water separator in the garage of the USDA Field Research Building (FRB), and if encountered during proposed site activities the proper abandonment of the water well and the closure of the septic tank located within the vicinity of the current-day ABC Laboratories' facility. The oil/water separator, water well and septic tank discussed within Terracon's 2006 ESA report were identified as located on the site's collective adjoining properties.

- The following previous geotechnical engineering report associated with Discovery Ridge was provided by the University of Missouri for review: **Geotechnical Engineering Report Discovery Ridge Lots 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18, prepared by Terracon, prepared for University of Missouri, Terracon project number 09105094, dated February 17, 2011.** The 2011 Terracon geotechnical engineering report stated that nine soil borings were advanced at the site. According to the geotechnical report, fill soils were encountered in borings B-3 and B-4 on Lot 2 and Lot 8, respectively. It was noted that the material was placed as part of a mass grading in 2008 and that Terracon was onsite to observe and test the density and moisture during the placement of the engineered fill material. Additionally the report indicated that historically a pond may have been present in the vicinity of Lot 16 and on the northeastern portion of Lot 2. Typically on-site depth to groundwater was encountered between 12 feet and 18.5 feet below existing grade.
- Pursuant to the client's request, an agency file review was conducted to identify the potential occurrence of cultural resources on the site. The Section 106 Review form, signed by Mark Miles, Deputy State Historic Preservation Officer, dated March 7, 2011 states that "an adequate cultural resource survey of the project area has been previously conducted. It has been determined that for the proposed undertaking there will be no historic properties affected."

Recommendations

Based on the scope of services, limitations, and findings of this assessment, Terracon did not identify RECs which, in our opinion, warrant additional investigation at this time.

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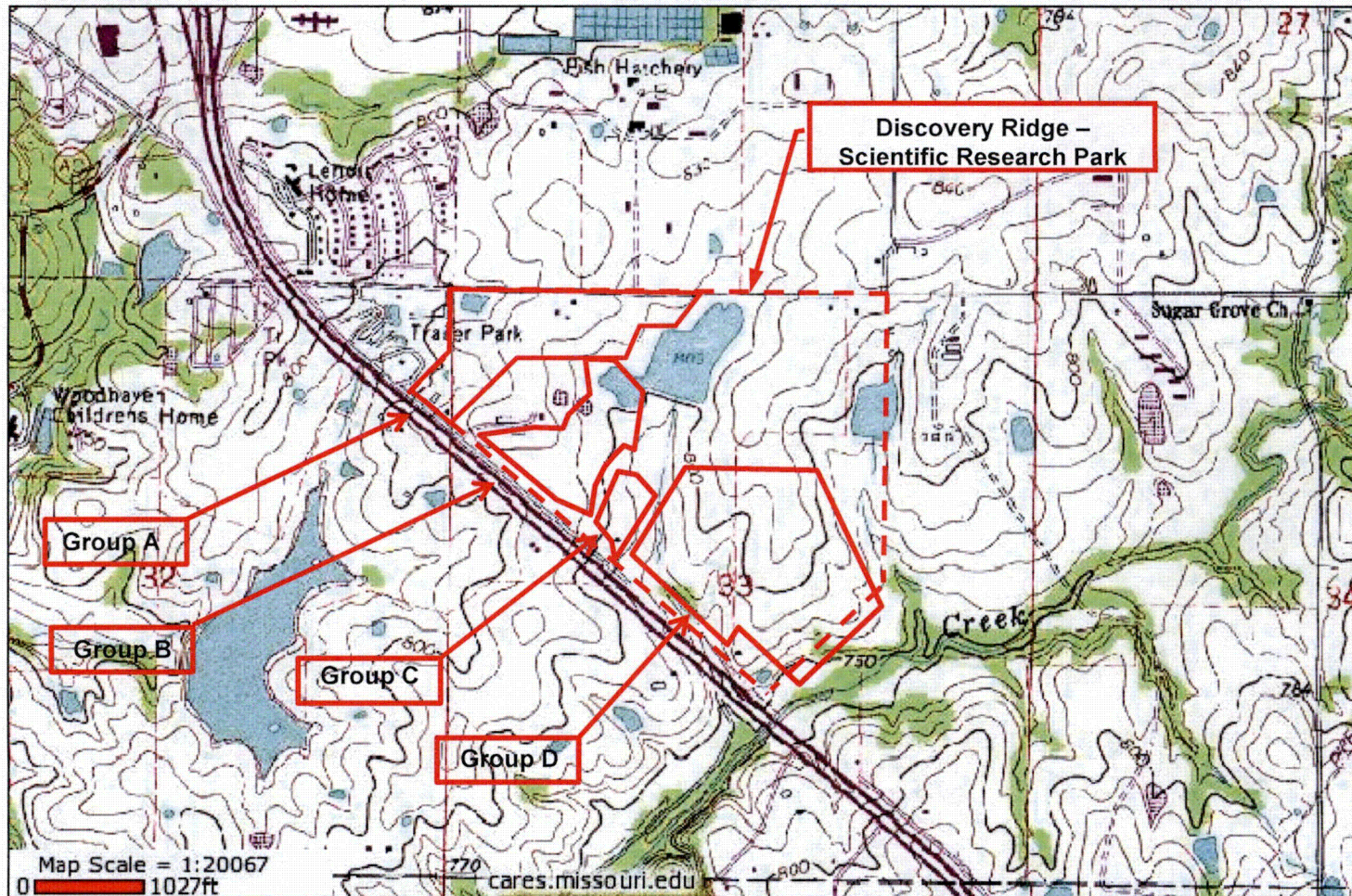


9.0 DECLARATION

I, Timothy L. Bennett, R.G., declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312; and I have the specific qualifications based on education, training, and experience to assess a site of the nature, history, and setting of the subject site. I have developed and performed the All Appropriate Inquiries in conformance with the standards and practice set forth in 40 CFR Part 312.

APPENDIX A

Exhibit 1 - Topographic Map, Exhibit 2 – Site Diagram



U.S.G.S. 7.5 MINUTE SERIES TOPOGRAPHIC MAP

STATE of MISSOURI QUADRANGLE

Columbia, Missouri, 1981



Project Manager:	AJW	Project No.	09117701
Drawn by:	AJW	Scale:	GRAPHIC
Checked by:	TAR	File Name:	Exhibit 1
Approved by:	TLB	Date:	2/7/2011

Terracon
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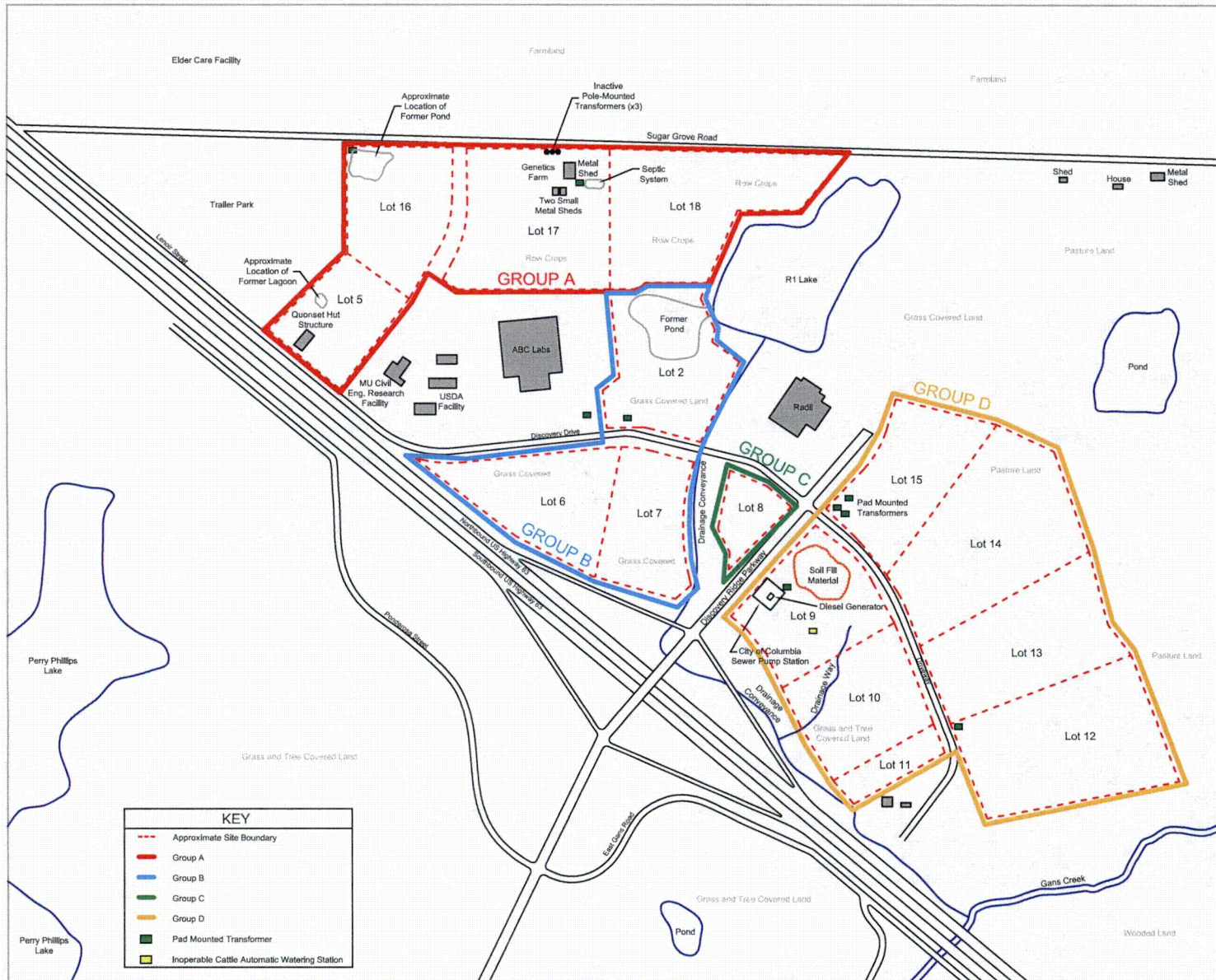
3601 Mojave Court, Suite A Columbia, Missouri 65202
P [573] 214 2677 F [573] 214 2714

USGS MAP

DISCOVERY RIDGE
LOTS 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18
DISCOVERY DRIVE AND DISCOVERY PARKWAY
COLUMBIA, BOONE COUNTY, MISSOURI

Exhibit

1



KEY	
---	Approximate Site Boundary
---	Group A
---	Group B
---	Group C
---	Group D
	Pad Mounted Transformer
	Inoperable Cattle Automatic Watering Station

0 250 500 1,000 ft.

DIAGRAM IS FOR GENERAL LOCATION ONLY,
AND IS NOT INTENDED FOR CONSTRUCTION
PURPOSES

Project Mng:	AJW	Project No.	09117701
Drawn By:	JMK	Scale:	GRAPHIC
Checked By:	TAR	File No.	09117701EXHIBIT2
Approved By:	TLB	Date:	2/24/2011

Terracon
Consulting Engineers and Scientists

3601 MOJAVE COURT, STE. A COLUMBIA, MO 65202
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SITE DIAGRAM

DISCOVERY RIDGE
LOTS 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18
DISCOVERY DRIVE AND DISCOVERY PARKWAY
COLUMBIA, BOONE COUNTY, MISSOURI

EXHIBIT

2

APPENDIX B

Description of Terms and Acronyms

Description of Selected General Terms and Acronyms

Term/Acronym	Description
ACM	<p>Asbestos Containing Material. Asbestos is a naturally occurring mineral, three varieties of which (chrysotile, amosite, crocidolite) have been commonly used as fireproofing or as binding agents in construction materials. Inhalation of asbestos fibers has been documented to cause asbestosis (scarring of the lung), lung cancer, and mesothelioma (a cancer of the chest wall lining).</p> <p>Most Federal and State agencies define ACM as a material containing more than one (1) percent asbestos, although some states, such as California, define ACM as material containing 0.1% or more asbestos. In order to determine the ACM status of suspect building materials, a minimum number of samples must be collected and analyzed, depending on the type and quantity of the suspect material. A suspect material can only be confirmed as non-ACM when analytical results of all required samples are below applicable regulatory limits. Asbestos concentrations are generally determined using polarized light microscopy or transmission electron microscopy. An asbestos containing material may be classified as either friable or non-friable. Friable materials are those that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. Non-friable ACM are materials in which the asbestos fibers are more firmly bound in a matrix of tar, plastic or other such material, and which have a lower potential for asbestos fiber release.</p> <p>Federal and State regulations require that an asbestos survey be performed prior to renovation, dismantling, demolition or other activities that may disturb suspect or confirmed ACM unless such materials are removed as ACM prior to planned disturbances. ACM removal may also be required if confirmed ACM becomes damaged, or if renovation or demolition activities could result in damage to confirmed or suspect ACM. Depending upon the quantity, notification to Federal or State regulatory agencies may be required prior to ACM removal (abatement) operations. Abatement of friable or potentially friable ACM must be performed by a licensed abatement contractor in accordance with applicable federal, state, or local regulations. OSHA worker protection regulations will also apply.</p>
AHERA	Asbestos Hazard Emergency Response Act
AST	Above Ground Storage Tanks. ASTs are generally described as storage tanks less than 10% of which are below ground (i.e., buried). Tanks located in a basement, but not buried, are also considered ASTs. Whether, and the extent to which, an AST is regulated, is determined on a case-by-case basis and depends upon tank size, its contents and the jurisdiction of its location.
AULs	Activity and Use Limitations
BGS	Below Ground Surface
BTEX	Benzene, Toluene, Ethyl benzene, and Xylenes. BTEX are VOC components found in gasoline and commonly used as analytical indicators of a petroleum hydrocarbon release.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (a.k.a. Superfund). CERCLA is the federal act that regulates abandoned or uncontrolled hazardous waste sites. Under this Act, joint and several liability may be imposed on potentially responsible parties for cleanup-related costs.
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System. An EPA compilation of sites having suspected or actual releases of hazardous substances to the environment. CERCLIS also contains information on site inspections, preliminary assessments and remediation of hazardous waste sites. These sites are typically reported to EPA by states and municipalities or by third parties pursuant to CERCLA Section 103.
CFR	Code of Federal Regulations
CESQG	Conditionally exempt small quantity generators.
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency

Description of Terms and Acronyms (cont.)

Term/Acronym	Description
ERNS	Emergency Response Notification System. An EPA-maintained federal database which stores information on notifications of oil discharges and hazardous substance releases in quantities greater than the applicable reportable quantity under CERCLA. ERNS is a cooperative data-sharing effort between EPA, DOT, and the National Response Center.
ESA	Environmental Site Assessment
FRP	Fiberglass Reinforced Plastic
Hazardous Substance	As defined under CERCLA, this is (A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title; (C) any hazardous waste having characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (with some exclusions); (D) any toxic pollutant listed under section 1317(a) of Title 33; (E) any hazardous air pollutant listed under section 112 of the Clean Air Act; and (F) any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action under section 2606 of Title 15. This term does not include petroleum, including crude oil or any fraction thereof which is not otherwise listed as a hazardous substance under subparagraphs (A) through (F) above, and the term does not include natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).
Hazardous Waste	This is defined as having characteristics identified or listed under section 3001 of the Solid Waste Disposal Act (with some exceptions). RCRA, as amended by the Solid Waste Disposal Act of 1980, defines this term as a "solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (A) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed."
IC / EC	Industrial Controls / Engineering Controls
ILP	Innocent Landowner Program
IOP	Innocent Owner/Operator Program
LQG	Large quantity generators.
LUST	Leaking Underground Storage Tank. This is a federal term set forth under RCRA for leaking USTs. Some states also utilize this term.
MCL	Maximum Contaminant Level. This Safe Drinking Water concept (and also used by many states as a groundwater cleanup criteria) refers to the limit on drinking water contamination that determines whether a supplier can deliver water from a specific source without treatment.
MSDS	Material Safety Data Sheets. Written/printed forms prepared by chemical manufacturers, importers and employers which identify the physical and chemical traits of hazardous chemicals under OSHA's Hazard Communication Standard.
NESHAP	National Emissions Standard for Hazardous Air Pollutants (Federal Clean Air Act). This part of the Clean Air Act regulates emissions of hazardous air pollutants.
NFRAP	Facilities where there is "No Further Remedial Action Planned," as more particularly described under the Records Review section of this report.
NGVD	National Geodetic Vertical Datum
NOV	Notice of Violation. A notice of violation or similar citation issued to an entity, company or individual by a state or federal regulatory body indicating a violation of applicable rule or regulations has been identified.
NPDES	National Pollutant Discharge Elimination System (Clean Water Act). The federal permit system for discharges of polluted water.
NPL	National Priorities List, as more particularly described under the Records Review section of this report.
OSHA	Occupational Safety and Health Administration or Occupational Safety and Health Act
PACM	Presumed Asbestos-Containing Material. A material that is suspected of containing or presumed to contain asbestos but which has not been analyzed to confirm the presence or absence of asbestos.
PCB	Polychlorinated Biphenyl. A halogenated organic compound commonly in the form of a viscous liquid or resin, a flowing yellow oil, or a waxy solid. This compound was historically used as dielectric fluid in electrical equipment (such as electrical transformers and capacitors, electrical ballasts, hydraulic and heat transfer fluids), and for numerous heat and fire sensitive applications. PCB was preferred due to its durability, stability (even at high temperatures), good chemical resistance, low volatility, flammability, and conductivity. PCBs, however, do not break down in the environment and are classified by the EPA as a suspected carcinogen. 1978 regulations, under the Toxic Substances Control Act, prohibit manufacturing of PCB-containing equipment; however, some of this equipment may still be in use today.

Description of Terms and Acronyms (cont.)

Term/Acronym	Description
pCi/l	picoCuries per Liter of Air. Unit of measurement for Radon and similar radioactive materials.
PLM	Polarized Light Microscopy (see ACM section of the report, if included in the scope of services)
PST	Petroleum Storage Tank. An AST or UST that contains a petroleum product.
Radon	A radioactive gas resulting from radioactive decay of naturally-occurring radioactive materials in rocks and soils containing uranium, granite, shale, phosphate, and pitchblende. Radon concentrations are measured in picoCuries per Liter of Air. Exposure to elevated levels of radon creates a risk of lung cancer; this risk generally increases as the level of radon and the duration of exposure increases. Outdoors, radon is diluted to such low concentrations that it usually does not present a health concern. However, radon can accumulate in building basements or similar enclosed spaces to levels that can pose a risk to human health. Indoor radon concentrations depend primarily upon the building's construction, design and the concentration of radon in the underlying soil and groundwater. The EPA recommended annual average indoor "action level" concentration for residential structures is 4.0 pCi/l.
RCRA	Resource Conservation and Recovery Act. Federal act regulating solid and hazardous wastes from point of generation to time of disposal ("cradle to grave"). 42 U.S.C. 6901 et seq.
RCRA Generators	The RCRA generators list is part of the RCRIS database maintained by EPA and lists facilities that generate hazardous waste as part of their normal business operations, as more particularly defined under Section 5.0 of this report.
RCRA CORRACTS/TSDs	The USEPA maintains a database of RCRA facilities associated with treatment, storage, and disposal (TSD) of hazardous materials, which are undergoing "corrective action". A "corrective action" order is issued when there is a release of hazardous waste or constituents into the environment from a RCRA facility.
RCRA Non-CORRACTS/TSDs	The RCRA Non-CORRACTS/TSD Database is a compilation by the USEPA of facilities, which 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.
RCRA Violators List	RAATS. RCRA Administrative Actions Taken. RAATS information is now contained in the RCRIS database and includes records of administrative enforcement actions against facilities for noncompliance.
RCRIS	Resource Conservation and Recovery Information System, as defined in the Records Review section of this report.
REC	Recognized Environmental Conditions are defined by ASTM E 1527-05 as "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property." The term includes hazardous substances or petroleum products even under conditions of compliance with laws. The term is not intended to include <i>de minimis</i> conditions that generally do not present a material risk of harm to the public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.
SCL	State "CERCLIS" List (see SPL /State Priority List, below).
SPCC	Spill Prevention, Control and Countermeasures. SPCC plans are required under federal law (Clean Water Act and Oil Pollution Act) for any facility storing petroleum in tanks and/or containers of 55-gallons or more that when taken in aggregate exceed 1,320 gallons. SPCC plans are also required for facilities with underground petroleum storage tanks with capacities of over 42,000 gallons. Many states have similar spill prevention programs, which may have additional requirements.
SPL	State Priority List. State list of confirmed sites having contamination in which the state is actively involved in clean up activities or is actively pursuing potentially responsible parties for clean up. Sometimes referred to as a State "CERCLIS" List.
SQG	Small quantity generators.
SWF	Solid Waste Facility. Landfills listed by a state database.
TPH	Total Petroleum Hydrocarbons
TRI	Toxic Release Inventory. Routine EPA report on releases of toxic chemicals to the environment based upon information submitted by entities subject to reporting under the Emergency Planning and Community Right to Know Act.
TSCA	Toxic Substances Control Act. A federal law regulating manufacture, import, processing and distribution of chemical substances not specifically regulated by other federal laws (such as asbestos, PCBs, lead-based paint and radon). 15 U.S.C 2601 et seq.
USACE	United States Army Corps of Engineers

Description of Terms and Acronyms (cont.)

Term/Acronym	Description
USC	United States Code
USGS	United States Geological Survey
USNRCS	United States Department of Agriculture-Natural Resource Conservation Service
UST	Underground Storage Tank. Most federal and state regulations, as well as ASTM E 1527-05, define this as any tank, incl., underground piping connected to the tank, that is or has been used to contain hazardous substances or petroleum products and the volume of which is 10% or more beneath the surface of the ground (i.e., buried).
VCP	Voluntary Cleanup Program
VOC	Volatile Organic Compound
Wetlands	<p>Areas that are typically saturated with surface or groundwater that creates an environment supportive of wetland vegetation (i.e., swamps, marshes, bogs). The <u>Corps of Engineers Wetlands Delineation Manual</u> (Technical Report Y-87-1) defines wetlands as areas inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. For an area to be considered a jurisdictional wetland, it must meet the following criteria: more than 50 percent of the dominant plant species must be categorized as Obligate, Facultative Wetland, or Facultative on lists of plant species that occur in wetlands; the soil must be hydric; and, wetland hydrology must be present.</p> <p>The federal Clean Water Act which regulates "waters of the US," also regulates wetlands, a program jointly administered by the USACE and the EPA. Waters of the U.S. are defined as: (1) waters used in interstate or foreign commerce, including all waters subject to the ebb and flow of tides; (2) all interstate waters including interstate wetlands; (3) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, etc., which the use, degradation, or destruction could affect interstate/ foreign commerce; (4) all impoundments of waters otherwise defined as waters of the U. S., (5) tributaries of waters identified in 1 through 4 above; (6) the territorial seas; and (7) wetlands adjacent to waters identified in 1 through 6 above. Only the USACE has the authority to make a final wetlands jurisdictional determination.</p>

Description of Terms and Acronyms (cont.)

Missouri Term/Acronym	Description
SHWS	The Missouri Department of Natural Resources (MDNR) maintains a database of state equivalent CERCLIS facilities (State Hazardous Waste Sites) in the State of Missouri.
SWF/LF	State and/or Tribal database of solid waste facilities located within Missouri. The database information may include the facility name, class, operation type, area, estimated operational life, and owner.
LUST	State and/or Tribal database of leaking underground storage tanks in the state of Missouri.
UST	State and/or Tribal database of registered storage tanks in the State of Missouri which may include the owner and location of the tanks.
AUL	Activity and use limitations include both engineering controls and institutional controls.
VCP	State and/or Tribal facilities included as Voluntary Cleanup Program sites.
Brownfields	State and/or Tribal listing of Brownfield properties addressed by Cooperative Agreement Recipients or Targeted Brownfields Assessments.

APPENDIX C

Historical Documentation

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Relief and Brownfields Revitalization Act of 2001, the User must respond to the following questions. Failure to provide this information to the Environmental Professional may result in significant data gaps, which may limit our ability to identify recognized environmental conditions resulting in a determination that "all appropriate inquiry" is not complete. This form represents a type of interview and as such, the User has an obligation to answer all questions in good faith, to the extent of their actual knowledge.

Site Name: DISCOVERY RIDGE RESEARCH PARK Site Address U.S. HIGHWAY 63 @ DISCOVERY DRIVE

1) Are you aware of any environmental cleanup liens against the site that are filed or recorded under federal, tribal, state or local law (40 CFR 312.25)? ☒ No ☐ Yes If yes, please explain.

2) Are you aware of any activity and use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law (40 CFR 312.26)? ☒ No ☐ Yes If yes, please explain.
THERE ARE COVENANTS & RESTRICTIONS RELATIVE TO LAND USE, BUT THEY HAVE NOT BEEN RECORDED IN A STATE OR LOCAL REGISTRY

3) As the user of this ESA, do you have any specialized knowledge or experience related to the site or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the site or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business (40 CFR 312.28)? ☒ No ☐ Yes If yes, please explain.

4) Does the purchase price being paid for this site reasonably reflect the fair market value of the site (40 CFR 312.29)? ☐ No ☒ Yes

If no, have you considered whether the lower purchase price is because contamination is known or believed to be present at the site (40 CFR 312.29)? ☐ No ☐ Yes If yes, please explain.

5) Are you aware of commonly known or reasonably ascertainable information about the site that would help the environmental professional to identify conditions indicative of releases or threatened releases (40 CFR 312.30)? ☒ No ☐ Yes If yes, please explain.

6.) As the user of this ESA, based on your knowledge and experience related to the site, are there any obvious indicators that point to the presence or likely presence of contamination at the site (40 CFR 312.31)? ☒ No ☐ Yes If yes, please explain.

Please return this form with the signed and completed Agreement for Services.

Request for Information and Documentation

In addition to the specific questions outlined above, the User is requested to provide the following information and documentation, as available. ASTM requires that this information, if available, be provided to the Environmental Professional prior to the site visit.

Item Supplied "X"	Not Applicable, Not Available or Not Known "X"	Item Requested (See Proposal)	Contacts/Comments Or Indicate Attachment
X		Point of Contact for Access	Name/Phone: GREG WILLIAMS, 882-6756
X		Current Site Owner UNIVERSITY OF MISSOURI BOARD OF CURATORS	Name/Phone: GREG WILLIAMS 882-6756
X		Current Facility Operator UNIVERSITY OF MISSOURI SYSTEM	Name/Phone: GREG WILLIAMS 882-6756
	X	Contacts for Prior Owners	Name/Phone:
	X	Contacts for Prior Occupants	Name/Phone:
	X	Access Restrictions	
	X	Notification of Special Requirements Regarding Confidentiality	
X		Legal Description and Diagram/ Survey of Site	LAURA MURRAY, 882-6756
	X	Chain of Title with Grantor/Grantee Summary back to 1940 or first developed use	
X		Reasons for conducting ESA	CERTIFIED SITE APPLICATION, STATE OF MISSOURI

Helpful Documents Checklist

Pursuant to ASTM E 1527-05 § 10.8, do you know whether any of the following documents exist related to the subject property and, if so, whether copies can and will be provided to the Environmental Professional? Check all that apply.

☒ Environmental site assessment reports

☐ Environmental compliance audit reports

☒ Geotechnical studies

☒ Reports regarding hydrogeologic conditions on the property or surrounding area

☐ Registrations for above or underground storage tanks

☐ Notices or other correspondence from any governmental agency relating to past or current violations of environmental laws with respect to the property or relating to environmental liens encumbering the property

☐ Registrations for underground injection systems

☒ Environmental permits/plans, solid waste permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits, SPCC plans

Please return this form with the signed and completed Agreement for Services.

GREG WILLIAMS
Name (Authorized Client Representative)

DIRECTOR, UNIVERSITY SYSTEM RESEARCH PARKS
Title

Signature

2/4/11
Date

Please return this form with the signed and completed Agreement for Services.

PHASE I ENVIRONMENTAL SITE ASSESSMENT

**DISCOVERY RIDGE
EAST OF LENOIR STREET AND SOUTH OF SUGAR GROVE LANE
COLUMBIA, BOONE COUNTY, MISSOURI**

**Project No. 09067718
May 31, 2006**

Prepared for:

**UNIVERSITY OF MISSOURI
Columbia, Missouri**

Prepared by:

Terracon
Columbia, Missouri

Terracon

May 31, 2006

Terracon
Consulting Engineers & Scientists

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University of Missouri
Facilities Planning & Development
Room 6 Clark Hall
Columbia, Missouri 65211

Attention: Mr. David Sheahen, P.E., Director
Phone: 573-882-2321
Fax: 573-884-4347

Re: Phase I Environmental Site Assessment
Discovery Ridge
East of Lenoir Street and South of Sugar Grove Lane
Columbia, Missouri
Project No. 09067718

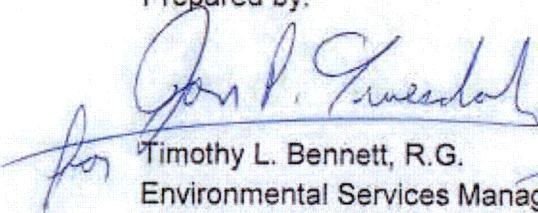
Dear Mr. Sheahen:

We are pleased to submit the enclosed Phase I Environmental Site Assessment (ESA) report for the above-referenced site. This assessment was performed in general accordance with our proposal dated April 6, 2006.

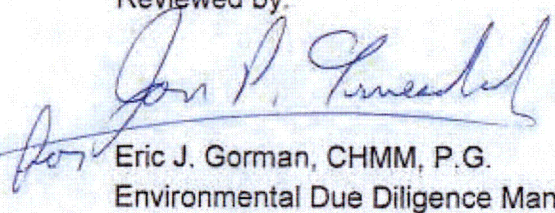
We appreciate the opportunity to perform these services for you. Please contact us if you have questions regarding this information or if we can provide any other services.

Sincerely,
Terracon

Prepared by:


for Timothy L. Bennett, R.G.
Environmental Services Manager

Reviewed by:


for Eric J. Gorman, CHMM, P.G.
Environmental Due Diligence Manager

Attachments

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**PHASE I ENVIRONMENTAL SITE ASSESSMENT
DISCOVERY RIDGE
EAST OF LENOIR STREET AND SOUTH OF SUGAR GROVE LANE
COLUMBIA, BOONE COUNTY, MISSOURI**

**Project No. 09067718
May 31, 2006**

EXECUTIVE SUMMARY

This Phase I Environmental Site Assessment (ESA) of the above-referenced site was performed in accordance with our proposal dated April 6, 2006, and in general accordance with the consensus document known as ASTM E 1527-00, a guide for conducting ESAs. Tim Bennett performed the site reconnaissance on April 18, 2006.

The site is a 114-acre portion of the University of Missouri-South Farm which is proposed to be developed with a research park. The site is located at the approximate southwestern corner of the South Farm east of Lenoir Street and south of Sugar Grove Lane. Nine buildings associated with agricultural and engineering research and related equipment storage exist on the site. The site is generally located on the southeastern portion of Columbia, Boone County, Missouri.

A cursory summary of findings is provided below. It should be recognized that details were 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 site is located on an irregular-shaped plot of approximately 114 acres of land. The site consists predominantly of farmland with nine buildings associated with agricultural research located on the northwestern portion of the site and a lake. The site is owned by the University of Missouri. According to Mr. John Poehlmann, Assistant Director of University of Missouri Agricultural Station and superintendent of the site, the site currently and historically has been used for agricultural research and teaching which included maize genetics crop research, swine nutrition, beef cattle management and grazing, agricultural equipment development, and cropping for grain, silage and uptake of nutrients from lagoon application.
- Observations made during Terracon's reconnaissance of the subject site included, but was not limited to 55-gallon drums, 5-gallon containers; an oil/water separator and sump associated with an indoor floor drain; aboveground storage tanks (ASTs) for water; a temporary underground storage tank (UST) for collection of wastewater; electrical transformers; a lake and a lagoon. Observations did not indicate

recognized environmental conditions (RECs) associated with these features at the time of the site reconnaissance.

- Based on a review of historical information including, historical topographic maps, aerial photographs, and interviews, the subject site appears to have been developed by at least 1935 with apparent farmstead buildings. The development of the current-day buildings on the site appears to have begun between 1939 and 1948. The lake on the site appears to have been constructed between approximately 1948 and 1959 and the current-day lagoon constructed between 1974 and 1981. A review of registered water well information provided by the Missouri Department of Natural Resources (MDNR)-Geological Survey and Resource Assessment Division (GSRAD) did not identify a water well which is reportedly on the site at an unknown location. Development of the surrounding areas appears to have begun by at least 1935 with the development of current-day Highway 63 to the west and south and homes and buildings associated with surrounding farmland to the north, south, and west of the subject site. The development of the current-day Ed's Mobile Home Park and Sunset Mobile Home Park northwest of the site began between approximately 1948 and 1959.
- The current-day adjoining properties of the subject site consist of the following:
 - Ed's Mobile Home Park and Sunset Mobile Home Park, farmland with University of Missouri storage buildings, and Sugar Grove Lane, to the north,
 - Farmland and buildings associated with the University Beef Farm to the east,
 - Lenoir Street, a residential house, Highway 63, Ponderosa Drive and farmland to the south, and
 - Lenoir Street, Highway 63, Ponderosa Drive and the Phillips Farm to the west.

The adjoining properties do not appear to represent a REC to the subject site at this time.

- The regulatory database review identified no Environmental Protection Agency (EPA) facilities, and one (1) MDNR Underground Storage Tank (UST) facility within the specified search radii. Based on the regulatory status and topographic distance relative to the subject site, this facility does not appear to represent a REC to the subject site.

Recommendations

Based on the Scope of Services for this assessment, Terracon did not identify conditions which, in our opinion, require additional investigation at this time. However;

- Terracon recommends a current cleanout of the oil/water separator in the garage of the USDA Field Research Building (FRB).

EXECUTIVE SUMMARY (cont.)

Terracon

- Water wells may provide a direct migration pathway for contaminants to reach aquifers underlying a site, and therefore become a source of environmental concern. If the well on the site is encountered during the proposed site activities, Terracon recommends that the water well be properly abandoned according to MDNR regulations. Proper abandonment of water wells should be performed by a water well driller licensed with the State of Missouri, and requires notification to MDNR prior to abandonment.
- If the septic tank is to be encountered during future site development activities, it should be closed in accordance with Boone County regulations, if applicable.

**PHASE I ENVIRONMENTAL SITE ASSESSMENT
DISCOVERY RIDGE
EAST OF LENOIR STREET AND SOUTH OF SUGAR GROVE LANE
COLUMBIA, BOONE COUNTY, MISSOURI**

**Project No. 09067718
May 31, 2006**

1.0 INTRODUCTION

1.1 Site Description

Site Description

Site Name	Discovery Ridge
Site Location/Address	East of Lenoir Street and south of Sugar Grove Lane, Columbia, Boone County, Missouri
Land Area	Approximately 114 acres
Additional Site Improvements	The subject site consists of predominantly farmland with a lake, lagoon, and nine buildings located on the northwestern portion of the site.

The site location is depicted on Figure 1 of Appendix A, which was reproduced from a portion of the Columbia, Missouri Quadrangle, United States Geological Survey (USGS) 7.5 minute series topographic map. A Site Diagram of the site and adjoining properties is included as Figure 2 of Appendix A. Acronyms and terms used in this report are described in Appendix E.

1.2 Scope of Work

This Environmental Site Assessment (ESA) was performed in accordance with our proposal dated April 6, 2006 and in general accordance with the consensus document known as ASTM E 1527-00, a guide for conducting ESAs. The purpose of this ESA was to assist the client in developing information to identify recognized environmental conditions (RECs) in connection with the site as reflected by the scope of this report. This purpose was undertaken through a regulatory database review, historical and physical records review, interviews, including local government inquiries, as applicable, and a visual noninvasive reconnaissance of the site and adjoining properties. Limitations and ASTM deviations are evident from reviewing the applicable scope of services and the report text.

1.3 Standard of Care

This 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 work, or 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 may be documented in public records that were not reviewed. No ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of this practice is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions. 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. Terracon will, upon request, advise you of additional research or assessment options that may be available and associated costs.

1.4 Additional Scope Limitations and ASTM Exceptions

Based upon the agreed-on scope of services, this ESA did not include subsurface or other invasive assessments, business environmental risk evaluations, or other services not particularly 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. This ESA was further limited by the following:

- Credentials of the environmental assessors (resumes) and of the company (Statement of Qualifications) have not been included in this report but are available upon request.

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). Further, these services are not to be construed as legal interpretation or advice.

1.5 Reliance

This ESA report is prepared for the exclusive use and reliance of the University of Missouri. Use or reliance by any other party is prohibited without the written authorization of the University of Missouri and Terracon.

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 Terracon's Agreement for Services. The limitation of liability defined in the Agreement for Services is the aggregate limit of Terracon's liability to the client and all relying parties.

2.0 PHYSICAL SETTING

Physical Setting

PHYSICAL SETTING INFORMATION FOR SITE AND SURROUNDING AREA		SOURCE
Topography (Refer to Appendix A for an excerpt of the Topographic Map)		
Site Elevation	Approximately 820 feet on the northwestern portion of the site to approximately 800 feet on the southwestern portion of the site.	USGS Topographic Map, Columbia, Missouri Quadrangle, 1981.
Surface Runoff/ Topographic Gradient	Generally east to southeast.	
Closest Surface Water	A lake, two ponds, and an intermittent stream on the site.	
FEMA Map		
Zone	C	FEMA Agency Flood Insurance Rate maps, Community-Panels 290034 0136B and 290034 0137B, June 15, 1983.
Description:	Based on a review of the FEMA map and site observations, the site is located in areas of minimal flooding.	
Soil Characteristics		
Soil Type:	A) Armstrong loam, 5 to 9 percent slopes, eroded B) Mexico silt loam, 1 to 3 percent slopes C) Mexico silt loam, 1 to 3 percent slopes, eroded D) Leonard silt loam, 1 to 3 percent slopes, eroded	Boone County, Missouri USDA, Natural Resource Conservation Service Soil Survey issued November

<p><i>Description:</i></p>	<p>A) Loam, clay loam, and clay encountered on backslopes of hills on uplands. B) Silt loam, silty clay loam, and silty clay encountered on summits of ridges on uplands. C) Silt loam, silty clay loam, and silty clay encountered on summits of ridges on uplands. D) Silt loam, silty clay, and silty clay loam encountered on shoulders of ridges on uplands.</p>	<p>2001.</p>
<p><i>Permeability:</i></p>	<p>(A): Depth (inches) micrometers per second(um/sec) 0 – 5 4.00 – 14.00 5 – 11 1.40 – 4.00 11 – 31 0.42 – 1.40 31 – 70 1.40 – 4.00 (B): Depth (inches) micrometers per second(um/sec) 0 – 7 4.00 – 14.00 7 – 10 4.00 – 14.00 10 – 13 1.40 – 4.00 13 – 27 0.01 – 0.42 27 – 60 0.42 – 1.40 (C): Depth (inches) micrometers per second(um/sec) 0 – 7 4.00 – 14.00 7 – 22 0.01 – 0.42 22 – 41 0.42 – 1.40 41 – 60 1.40 – 4.00 (D): Depth (inches) micrometers per second(um/sec) 0 – 8 4.00 – 14.00 8 – 26 0.42 – 1.40 26 – 60 0.42 – 1.40</p>	
<p><i>Available Water Capacity:</i></p>	<p>(A) Depth (inches) Inches per inch (In/in) 0 – 5 0.20 – 0.22 5 – 11 0.14 – 0.16 11 – 31 0.11 – 0.16 31 – 60 0.14 – 0.16 (B) Depth (inches) Inches per inch (In/in) 0 – 7 0.19 – 0.22 7 – 10 0.17 – 0.20 10 – 13 0.17 – 0.20 13 – 27 0.08 – 0.12 27 – 60 0.14 – 0.18 (C) Depth (inches) Inches per inch (In/in) 0 – 7 0.19 – 0.24 7 – 22 0.08 – 0.12 22 – 41 0.12 – 0.17 41 – 60 0.12 – 0.18 (D) Depth (inches) Inches per inch (In/in) 0 – 8 0.19 – 0.22 8 – 26 0.11 – 0.16 26 – 60 0.14 – 0.17</p>	

Geology/Hydrogeology		
<i>Formation:</i>	A) Pennsylvanian – Cherokee Group, Cabaniss Subgroup B) Mississippian – Burlington Limestone	Geologic Map of Missouri, 2003 and The Stratigraphic Succession in Missouri, 1995.
<i>Description:</i>	A) Successions of sandstone, siltstone, shale, limestone, underclay, and coal beds. B) White to gray, medium to coarsely crystalline, medium to coarsely crinoidal, medium to thick bedded, often cross stratified, chert-free to sparsely cherty limestone.	
<i>Estimated Depth to First Occurrence of Ground water:</i>	Approximately 20 feet below ground surface.	Off-site Terracon geotechnical borings in the site region.
<i>Primary Aquifer</i>	Burlington Limestone	USGS Well # 385718092234201 Boone County, Columbia, MO continuous recording well located in Burlington Limestone
<i>*Hydrogeologic Gradient:</i>	Not known - may be inferred to be parallel to topographic gradient which is generally east-southeast. (see discussion below)	
Site Water Source	Boone County Public Water Supply District #9	

*The groundwater flow direction and the depth to shallow, unconfined 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 ascertained.

3.0 HISTORICAL USE INFORMATION

3.1 Historical Topographic Maps

Terracon reviewed the historic Columbia, Missouri Quadrangles published by the USGS, which includes the subject site. The color-coding used on the maps indicates areas that are historically-developed, recently-developed, or undeveloped at the time of the publication of the map.

Historical Topographic Maps

USGS Map/Date	Direction	Description
USGS Topographic Maps, Columbia, Missouri Quadrangles, 1935, 1948, 1967, 1974 and 1981	Site	<ul style="list-style-type: none"> • Appears to consist of predominantly vacant land with a small building on the southwestern portion and an intermittent stream on the eastern portion (1935); • Appears to consist of predominantly vacant land with a small structure on the southwestern portion, a building labeled as "Home for the Ag" on the northwestern portion, and two (2) ponds (1948); • Appears to consist of predominantly vacant land with five (5) structures, a lake, and an intermittent stream. Three structures on the northwestern portion appear to be located similar to buildings observed during the site visit (1967); • Appears similar to the 1967 map with the addition of two (2) structures to the northwest that are located similar to buildings observed during the site visit (1974); • Appears similar to the 1974 map with the addition of two (2) ponds east of the buildings on the northwest portion of the site. Similar to the location of a lagoon observed during the site visit (1981).
	North	<ul style="list-style-type: none"> • Appears to consist of predominantly vacant land with a small structure to the northwest, followed by current-day Sugar Grove Lane (1935); • Appears similar to the 1935 map with an additional small structure (1948); • Appears to consist of a trailer park, two (2) ponds, and associated roads to the northwest, and a small structure to the north, followed by current-day Sugar Grove Lane (1967 and 1974); • Appears similar to the 1974 map with the addition of two buildings to the north-central portion similar to that observed during the site visit (1981).
	South	<ul style="list-style-type: none"> • Appears to consist of Highway 63, predominantly vacant land with two (2) small structures, an intermittent stream, and Gans Creek (1935); • Appears to consist of Highway 63, predominantly vacant land with three (3) small structures, a road, and Gans Creek (1948); • Appears to consist of Highway 63, predominantly vacant land with three (3) small structures, a road, two (2) ponds, and Gans Creek (1967); • Appears to consist of Highway 63, predominantly vacant land with three (3) small structures, two (2) roads, three (3) ponds, and Gans Creek (1974 and 1981).
	East	<ul style="list-style-type: none"> • Appears to consist of vacant land (1935); • Appears to consist of predominantly vacant land with a pond and two (2) small structures (1948); • Appears to consist of predominantly vacant land with a lake, two (2) small structures, a road, and an intermittent stream (1967); • Appears to consist of predominantly vacant land with a lake, nine (9) structures, and a road similar to the University beef farm observed during the site visit (1974 and 1981).

	West	<ul style="list-style-type: none">• Appears to consist of Highway 63, followed by predominantly vacant land with a small structure, a pond, and two (2) intermittent streams (1935);• Appears to consist of Highway 63, followed by predominantly vacant land with four (4) small structures, two (2) ponds, and an intermittent stream (1948);• Appears to consist of Highway 63, followed by predominantly vacant land with seven (7) small structures, seven (7) ponds, a lake, and an intermittent stream (1967);• Appears to consist of Lenoir Street, Highway 63 and Ponderosa Drive, followed by predominantly vacant land with six (6) small structures, seven (7) ponds, a lake, and an intermittent stream similar to the farmstead observed during the site visit (1974 and 1981).
--	------	--

Based upon review of the historical topographic maps identified above, the subject site appears to have been developed with an apparent farmstead building that was identified on the southwestern portion of the site by at least 1935. The current-day buildings on the northwestern portion and the lake on the site appear to have been constructed between 1948 and 1974. The adjoining properties except the east-adjoining property appear to have been developed with apparent farmstead buildings and Highway 63 to the west by at least 1935. Apparent farmstead buildings to the east were developed between 1935 and 1948. Visual surface indications do not appear to reveal RECs on the subject site or adjoining properties.

3.2 Historical Aerial Photographs

Selected historical aerial photographs from the Missouri Department of Transportation (MoDOT) and United States Department of Agriculture (USDA) were reviewed at approximately 10 to 15 year intervals, if readily available, to obtain information concerning the history of development on and near the site. Evaluation of these aerials may be limited by a photo's quality and scale. Selected photographs are summarized below:

The following aerials were reviewed for this assessment and are summarized below:

- USDA 1939;
- MoDOT 1959;
- MoDOT 1970;
- USDA 1995;
- USDA 2005.

Historical Aerial Photographs

Direction	Description
Site	<ul style="list-style-type: none"> • Appears to consist of predominantly vacant land with a small building on the northwest corner and a small building on the southwest corner of the site (1939); • Appears to consist predominantly of farmland with three (3) buildings on the northwestern portion, three (3) buildings on the southwestern portion, and a pond on the northeast portion of the site (1959); • Appears to consist predominantly of farmland with five (5) buildings on the northwestern portion, a building on the southwestern portion, and a lake on the northeastern portion of the site (1970); • Appears to consist predominantly of farmland with approximately eight (8) buildings on the northwestern portion, a lagoon, and a lake on the northeastern portion of the site, similar to that observed during the site visit except without the current-day field research building (1995); • Appears to consist predominantly of farmland with approximately nine (9) buildings on the northwestern portion, a lagoon, and a lake on the northeastern portion of the site, similar to that observed during the site visit (2005);
North	<ul style="list-style-type: none"> • Appears to consist of farmland, followed by current-day Sugar Grove Lane (1939); • Appears to consist predominantly of farmland with approximately seven (7) farmstead buildings followed by a trailer park and current-day Sugar Grove Lane (1959); • Appears to consist of a trailer park to the northwest and farmland with approximately four (4) farmstead buildings, followed by current-day Sugar Grove Lane (1970); • Similar to the 1970 photograph (1995 and 2005).
West	<ul style="list-style-type: none"> • Appears to consist of Highway 63, followed by farmland with approximately two (2) buildings (1939); • Appears to consist of Highway 63, followed by predominant farmland with approximately seven (7) farmstead buildings and approximately three (3) ponds (1959); • Appears to consist of current-day Lenoir Street, Highway 63, and current-day Ponderosa Drive, followed by predominant farmland with approximately six (6) farmstead buildings (current-day Phillips Farm), a pond, and a lake (1970); • Appears similar to the 1970 photograph (1995 and 2005)
East	<ul style="list-style-type: none"> • Appears to consist of farmland (1939); • Appears to consist predominantly of farmland with approximately three (3) farmstead buildings (1959); • Similar to the 1959 photograph with the addition of three farm outbuildings similar to that associated with the beef farm observed during the site visit (1970); • Similar to the 1970 photograph (1995 and 2005).

South	<ul style="list-style-type: none">• Not pictured in photograph(1939);• Appears to consist predominantly of farmland, Highway 63, approximately three (3) farmstead buildings, and a creek (1959);• Appears to consist predominantly of farmland; current-day Lenoir Street, Highway 63, and current-day Ponderosa Drive; approximately four (4) farmstead buildings, and a creek (1970);• Similar to the 1970 photograph (1995, and 2005).
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Based upon review of the historical aerial photographs identified above, the subject site appears to have been developed with small apparent farmstead buildings on the northwestern and southwestern portions by at least 1939. The current-day buildings on the northwestern portion of the site appear to have been developed between approximately 1939 and 2005. The adjoining properties appear to have begun development by at least 1939 with current-day Sugar Grove Lane to the north and Highway 63 and apparent farmstead buildings to the west. The trailer park to the northwest appears to have begun development between 1939 and 1959. Visual surface indications do not appear to reveal obvious RECs on the subject site or adjoining properties.

3.3 Historical Fire Insurance Maps

Historical fire insurance maps produced by the Sanborn Map Company were requested from Environmental Data Resources, Inc. (EDR) to evaluate past uses and relevant characteristics of the site and adjoining properties.

Based upon inquiries to the above-listed Sanborn provider, Sanborn Maps were not available for the site area in their collection. EDR confirmation of "no coverage" for the subject site is included in Appendix B.

3.4 Ownership Information

At the direction of the client, a title search was not included as part of the scope of services.

3.5 Historical Interviews

Terracon interviewed Mr. John Poehlmann regarding the subject site. Mr. Poehlmann is the Assistant Director of the Missouri Agricultural Experiment Station and superintendent of the University of Missouri (University) South Farm of which the subject site is located within. Mr. Poehlmann has been associated with the site between 1983 through 1986 and since January of 2000. To Mr. Poehlmann's knowledge, the site was previously owned by unspecified multiple landowners previous to ownership by the University. Mr. Poehlmann stated that the site currently and historically has been used for agricultural research and teaching which included maize genetics crop research, swine nutrition, beef cattle

management and grazing, agricultural equipment development, and cropping for grain, silage and uptake of nutrients from lagoon application. To Mr. Poehlmann's knowledge, past tenants of the site have included USDA-ARS and Animal Sciences faculty. Mr. Poehlmann stated that the current and historic uses of the surrounding property has been for agricultural research in beef, corn genetics, entomology, atmospheric science, and a Missouri Department of Conservation fishing lake.

Mr. Poehlmann stated that there are nine structures on the site that are associated with research and development for civil engineering and agriculture. To Mr. Poehlmann's knowledge, the buildings were constructed between the 1970's and approximately 2002. According to Mr. Poehlmann, waste water from all buildings except the civil engineering research building discharge to the on-site lagoon until recently. The civil engineering building waste water is handled by septic system located to the west of the building. Currently the waste water from the USDA Field Research Building (FRB) is being collected in a 1500-gallon temporary underground storage tank (UST) until the upcoming City of Columbia sewer system is installed. Mr. Poehlmann stated that an oil/water separator is located beneath a floor drain in the FRB and is cleaned out on an as needed basis.

According to Mr. Poehlmann, there are pits for the collection of animal waste beneath buildings which formerly housed sheep and swine. The wastes were surface and injection applied as plant nutrients. The lagoon operates under MDNR permit MO-G010024. Mr. Poehlmann stated that a well is located on the site. The exact location was not known. However, the well was installed in the approximate 1950's and reported to be abandoned and have a steel cap welded to the top of the casing. The well was reportedly used to provide potable water for livestock. According to Mr. Poehlmann waste oil from the site is collected by the University Field Operations staff or Safety Kleen. Mr. Poehlmann stated that solvents, paints, oils, fuels, and lubricants typically used for agriculture and research are present on the site. According to Mr. Poehlmann, the site is inspected at least twice annually or more to identify unlabelled containers and unknown substances. Mr. Poehlmann was aware of hydraulic equipment at the site which included portable testing equipment at the civil engineering building and forklifts used by the USDA. Mr. Poehlmann has no knowledge of any aboveground or underground storage tanks for chemicals or petroleum, past use, treatment, disposal or generation of hazardous materials or petroleum products, polychlorinated biphenyl (PCB) equipment, solid waste disposal, or any pending, threatened, or past litigation, administrative proceedings, violations of environmental laws, or possible litigation relating to hazardous substances or petroleum products associated with the subject site.

3.6 Prior Report Review

Previous ESA or geotechnical reports of environmental significance, for the subject site, were not provided by the client to Terracon for review.

4.0 RECORDS REVIEW

The United States EPA and State of Missouri database information was provided by EDR, 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 services company and the date at which the information is updated, and the scope herein did not include confirmation of facilities listed as "unmappable" by regulatory databases.

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. As stated previously, 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 ascertained.

4.1 Federal and State Databases

Listed below are the names and number of facilities identified on federal and state databases within the indicated search areas. Database definition, descriptions, and the database search report are included in Appendix C.

Federal and State Databases

<u>Database</u>	<u>Description</u>	<u>Radius (Miles)</u>	<u>Facilities</u>
<u>Federal</u>			
NPL	The National Priorities List (NPL) is the USEPA'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 USEPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to the Comprehensive Environmental Response, Compensation and	0.5	0

<u>Database</u>	<u>Description</u>	<u>Radius (Miles)</u>	<u>Facilities</u>
	Liability Act (CERCLA) of 1980. NFRAP (No Further Remedial Action Planned) refers to facilities that have been removed and archived from its inventory of CERCLA sites.		
RCRA CORRACTS/ TSD	The USEPA maintains a database of 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 a RCRA facility.	1.0	0
RCRA Non-CORRACTS/ TSD	The RCRA Non-CORRACTS/TSD Database is a compilation by the USEPA 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	The Resource Conservation and Recovery Act (RCRA) Generators database, maintained by the USEPA, 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.	0.25	0
ERNS	The Emergency Response Notification System (ERNS) is a listing compiled by the USEPA on reported releases of petroleum and hazardous substances to the air, soil and/or water.	Site	0
<u>State</u>			
SPL	The Missouri Department of Natural Resources (MDNR) maintains a database of state equivalent national priority list (SPL) facilities in the State of Missouri.	1.0	0
SCL	The MDNR maintains a database of state equivalent CERCLIS (SCL) facilities in the State of Missouri.	0.5	0
SWF	The MDNR maintains a database of Solid Waste Facilities located within State of Missouri. The database information may include the facility name, class, operation type, area, estimated operational life, and owner.	0.5	0
LUST	The MDNR provides a computer generated database of the Leaking Underground Storage Tanks (LUSTs) in the State of Missouri.	0.5	0
UST	The MDNR has compiled a database of registered Underground Storage Tanks in the State of Missouri, which may include the owner	0.25	1

<u>Database</u>	<u>Description</u>	<u>Radius (Miles)</u>	<u>Facilities</u>
	and location of the USTs. This database may also include registered Aboveground Storage Tanks (USTs).		
LAST	The MDNR has compiled a database of registered Leaking Aboveground Storage Tanks (LASTs) in the State of Missouri, which may include the owner and location of the LASTs.	0.5	0
AST	The MDNR has compiled a database of registered Aboveground Storage Tanks (ASTs) in the State of Missouri, which may include the owner and location of the ASTs.	0.25	0
VCP	The MDNR has compiled a database of Sites which are or have participated in the state's voluntary cleanup program.	0.5	0
Drycleaners	The MDNR has compiled a database of drycleaner facilities that are potentially eligible for reimbursement of department approved cleanup costs under the Drycleaning Environmental Response Trust Fund.	0.25	0

The following table summarizes the site-specific information provided by the database and/or gathered by this office for identified facilities. Facilities are listed in order of proximity to the subject site. Additional discussion for selected facilities may follow the summary table.

Listed Facilities

Facility Name and Address	Distance/Direction/Gradient	Listing
Blue Acres-Little General 4001 Ponderosa Drive Columbia, Missouri 65201	Approximately 2000 feet west-northwest and apparently topographically up-gradient of the subject site	UST

Blue Acres – Little General

Blue Acres – Little General is identified as an UST facility. The facility is located approximately 2000 feet west-northwest and topographically, up-gradient of the subject site. Three (3) 8000-gallon gasoline USTs were reported as being currently used at the facility. The USTs are reported to meet the 1998 upgrade requirements for spill, overfill, and corrosion protection. Based on current regulatory status and location relative to the subject site, this facility does not appear to represent a REC at this time.

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the site. The report listed forty-eight (48) facilities in the unmapped section. Determining the location of unmapped facilities is beyond

the scope of this assessment. However, the unmapped section identified the University of Missouri – South Farm as a State Hazardous Waste Site (SHWS) facility. This facility was observed at the time of the site visit to be located approximately 1 mile to the east of the site and does not appear to represent a REC to the site based upon and topographic location and distance relative to the subject site. None of the remaining unmapped facilities were identified during the site reconnaissance as the site or in the vicinity of the site. These facilities are listed in the report in Appendix C.

4.2 Fire Department

Terracon contacted the Boone County Fire District regarding the subject site. According to Doug Westoff, there are not records of hazardous materials storage or incidents regarding the site.

5.0 SITE RECONNAISSANCE

5.1 General Site Information

Information contained in this section is based on a visual reconnaissance performed as set forth below, interviews, and other references presented in the following subsections. Figure 2 in Appendix A is a Site Diagram of the site. Photo documentation of the site at the time of the visual reconnaissance is provided in Appendix D.

General Site Information

Site Reconnaissance	
<i>Field Personnel</i>	Tim Bennett
<i>Reconnaissance Date</i>	April 18, 2006
<i>Weather</i>	Clear, warm
<i>Site Contact/Title</i>	John Poehlmann/Assistant Director Missouri Agricultural Station
Site Description	
<i>Site Name</i>	Discovery Ridge
<i>Site Location/Address</i>	East of Lenoir Street and south of Sugar Grove Lane, Columbia, Boone County, Missouri
<i>Adjoining Streets</i>	Lenoir Street to the west and Sugar Grove Lane to the north.
<i>Land Area</i>	Approximately 114 acres
<i>Land Area Description</i>	Predominantly farmland with nine buildings for research and equipment repair/storage
<i>Other Site Improvements</i>	A lake, lagoon, and nine buildings located on the northwestern corner

	of the site.
<i>Site Topographic Relief</i>	Generally to the east-southeast.
Site Utilities	
<i>Electricity</i>	Boone Electric Cooperative
<i>Drinking Water</i>	Boone County Public Water District No. 9
<i>Wastewater</i>	Septic system for the civil engineering research building and a lagoon. A temporary UST is used currently used for the collection of waste until the new sanitary sewer system is installed.
<i>Natural Gas</i>	Ameren UE

5.2 Summary of Observations

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

Site Characteristics

Category	Item or Feature	
Site Operations, Processes, and Equipment	emergency generators	
	elevators	
	air compressors	X
	hydraulic equipment	X
Aboveground Chemical or Waste Storage	evidence of aboveground storage tanks	X
	drums, barrels and/or containers ≥ 5 gallons	X
	cleaning and/or similar supplies	X
	MSDS sheets	
Underground Chemical or Waste Storage, Drainage or Collection Systems	evidence of underground storage tanks or ancillary UST equipment	X
	sumps, cisterns, catch basins and/or dry wells	X
	grease traps	
	septic tanks and/or leach fields	X
	oil/water separators	X
	pipeline markers	
	interior floor drains	X
Electrical Transformers/ PCBs	pad or pole mounted transformers and/or capacitors	X
	Other equipment	
Evidence of Releases or Potential Releases	stressed vegetation	
	stained soil	
	stained pavement or similar surface	X
	leachate and/or waste seeps	
	trash, debris and/or other waste materials	
	dumping or disposal areas	
	construction/demolition debris and/or dumped fill dirt	X

Category	Item or Feature	
	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	X
	quarries or pits	
	wells	X

5.2.1 Observations

Site Operations Processes and Equipment

Air Compressors

Air compressors were observed in building 88 and the FRB. Compressor blowdown and staining was not observed at the time of the site visit. The compressors do not appear to represent a REC to the subject site at this time.

Hydraulic Equipment

Forklifts for moving agricultural related materials and hydraulic lab testing equipment were observed on the site during the site visit. Equipment appeared in good condition and obvious indications of releases were not observed. The observed hydraulic equipment does not appear to represent a REC to the site at this time.

Aboveground Chemical or Waste Storage

Aboveground Storage Tanks

Two ASTs were observed behind buildings 226 and 88 during the site visit. A 1,000-gallon plastic AST half full of water was located behind building 88 and secured to a trailer. A 1,600-gallon empty steel AST, reported by on-site staff to be used for water storage during research activities, was located behind building 226. Two (2) propane ASTs were observed to the west of building 90. The water storage ASTs and propane ASTs do not appear to represent a REC to the site at this time.

Drums, Barrels and/or Containers \geq 5-Gallons

Terracon observed 5-gallon gasoline containers during the site visit. Most of the containers with fuel contents that were not in use with active site operations, at the time of the site visit, and appeared to be appropriately stored as to limit accidental releases in a labeled steel cabinet in building 226. Empty 5-gallon (approximate) gasoline containers and empty containers labeled coolant and solvent were observed to be stored in building 89. Evidence of releases from the empty containers was not observed at the time of the site visit.

55-gallon drums and 5-gallon buckets were observed at the civil engineering research building and building 88. The drums and buckets were labeled as containing waste oil, hydraulic fluid, and cutting oil. Minor floor staining was observed in the vicinity of waste oil drums in the civil engineering research building and is addressed below.

According to Mr. Poehlmann, waste oils from the site are removed by Safety Kleen or University Field Operations staff on an as needed basis. The observed drums and containers do not appear to represent a REC at this time.

Cleaning and/or Similar Supplies

Cleaning supplies for equipment and vehicles was observed at the site. These products appeared to be stored appropriately and do not appear to represent a REC to the site.

Underground Chemical or Waste Storage, Drainage or Collection Systems

Evidence of Underground Storage Tanks

A 1,500-gallon temporary fiberglass UST located south of the FRB. The UST is used for storage of wastewater from the FRB until the City of Columbia installs the new sanitary sewer to the site in the September of 2006. The UST does not appear to represent a REC to the site at this time.

Sumps, Cisterns, Catch Basins and/or Dry wells

According to a staff member at the FRB, a sump is associated with the floor drain in the garage area. The sump was formerly used to pump water to the MDNR permitted lagoon that is going to be closed and presumably is now used to pump to the temporary waste water UST. The sump does not appear to represent a REC to the site at this time.

Pits for the collection of animal wastes are located at buildings 90 and 91 and were used when animals were historically housed on the site. Mr. Poehlmann stated that the animal wastes were periodically flushed from the buildings. The waste collection pits do not appear to represent a REC to the site.

Septic Tanks and/or Leach Fields

A septic system is used for waste water from the civil engineering research building on the site. Mr. Poehlmann stated that the tank was located west of the building. The leach field was observed to be to the north of the building during the site visit. The septic system does not appear to represent a REC at the site. However, if the septic tank is to be encountered during future site development activities, it should be closed in accordance with Boone County regulations, if applicable.

Oil/Water Separators

An oil/water separator is located in the garage of the FRB. The water from the separator formerly discharged to the lagoon and now discharges to the temporary UST. According to Mr. Poehlmann the oil/water separator was installed in 2002 and is cleaned out on an as needed basis. He was unaware if Safety Kleen or University Field Operations performed the separator cleanout in conjunction with the removal of other on-site waste products. A sheen was observed on the surface of the contents within the separator during the site visit and it appeared that the separator was in need of cleanout. The oil/water separator does not appear to represent a REC to the site at this time. However, Terracon recommends that a current cleanout be conducted to limit the potential of a release of petroleum products on the site.

Interior Floor Drains

Interior floor drains were observed in the bathroom of the FRB and a floor drain in the garage of the FRB associated with the oil/water separator and a sump referenced above. There was no obvious indications of staining around the floor drains at the time of the site visit. The floor drains do not appear to represent a REC to the site at this time.

Electrical Transformers/PCBs

Pad or Pole-Mounted Transformers and/or Capacitors

Fourteen (14) pole-mounted transformers and one pad-mounted transformer were observed on the subject site. The transformers are owned and serviced by Boone Electric Cooperative. Transformers contain mineral oil, which may contain minor amounts of PCB and could be considered "PCB contaminated" (PCB content 50 to 500 ppm).

Boone Electric Cooperative 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 prior releases was observed in the vicinity of the electrical equipment during the site visit.

Evidence of Releases or Potential Releases

Stained Pavement or Similar Surface

Minor staining of concrete flooring was observed in the civil engineering building around the waste oil drums and 5-gallon buckets. The concrete surface in this area was not cracked at the time of the site visit. The minor staining does not appear to represent a REC to the site at this time based upon small area of staining and apparent good condition of the concrete floor surface.

Construction/Demolition Debris and/or Dumped Fill Dirt

Mr. Poehlmann stated that a historic lagoon on the site was filled in the past prior to regulatory requirements for formal closure sequencing. The lagoon was reportedly used to hold hog waste associated with an off-site study on swine waste and leachfields conducted in the past. Mr. Poehlmann was not aware of the exact location of the former lagoon on the site or the type of material used for backfill but he assumed that the lagoon was backfilled with its earthen berm.

Other Notable Site Features

Surface Water Bodies

A lake was observed on the northeastern portion and a lagoon was observed on the north-central portion of the site during the site visit. Sheens or evidence of a release were not observed on the water surface of the lagoon and lake during the site visit. According to Mr. Poehlmann, the lagoon is in the process of closure and has a MDNR operating permit and the Missouri Department of Conservation manages the lake.

Wells

According to Mr. Poehlmann, a water well is located on the site. A water well search of MDNR Geological Survey and Resource Assessment Division database information for the area of the site did not specifically identify the well and the location of the well on the site was not determined at the time of issuance of this report. The water well does not appear to represent a REC to the site at this time. However, Terracon recommends that the water well be properly abandoned according to MDNR regulations, if the well is encountered during future site development activities.

5.2.2 Interviews Conducted Associated with Site Reconnaissance

The following individuals were interviewed regarding the presence or absence of the features listed in the table above. Unless otherwise noted herein, the interviewee was not aware of the listed features (identified in the Site Characteristics Table) at the site.

Interviewees

Interviewee	Title
John Poehlmann	Assistant Director of the Missouri Agricultural Station

Information obtained from the above-listed interviewee is discussed in Sections 3.5 and 5.2.1 above.

6.0 ADJOINING PROPERTY RECONNAISSANCE

Visual observations of adjoining properties (from site boundaries) are summarized below.

Adjoining Properties

DIRECTION	DESCRIPTION
North	The north-adjoining property appears to consist of Ed's Mobile Home Park and Sunset Mobile Home Park to the northwest and farmland with University of Missouri storage buildings, farmland, and Sugar Grove Lane to the north and northeast.
South	The south-adjoining property appears to consist of Lenoir Street, a residential house, Highway 63, Ponderosa Drive and farmland.
East	The east-adjoining property appears to consist of farmland and buildings associated with the University Beef Farm.
West	The west-adjoining property appears to consist of Lenoir Street, Highway 63, Ponderosa Drive and the Phillips Farm.

Obvious indications of RECs were not observed on the adjoining properties during the site reconnaissance.

7.0 ADDITIONAL SERVICES

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

8.0 FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

8.1 Findings and Conclusions

This Phase I Environmental Site Assessment (ESA) of the above-referenced site was performed in accordance with our proposal dated April 6, 2006, and in general accordance with the consensus document known as ASTM E 1527-00, a guide for conducting ESAs. Tim Bennett performed the site reconnaissance on April 18, 2006.

The site is a 114-acre portion of the University of Missouri-South Farm which is proposed to be developed with a research park. The site is located at the approximate southwestern corner of the South Farm east of Lenoir Street and south of Sugar Grove Lane. Nine buildings associated with agricultural and engineering research and related equipment storage exist on the site. The site is generally located on the southeastern portion of Columbia, Boone County, Missouri.

A cursory summary of findings is provided below. It should be recognized that details were 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 site is located on an irregular-shaped plot of approximately 114 acres of land. The site consists predominantly of farmland with nine buildings associated with agricultural research located on the northwestern portion of the site and a lake. The site is owned by the University of Missouri. According to Mr. John Poehlmann, Assistant Director of University of Missouri Agricultural Station and superintendent of the site, the site currently and historically has been used for agricultural research and teaching which included maize genetics crop research, swine nutrition, beef cattle management and grazing, agricultural equipment development, and cropping for grain, silage and uptake of nutrients from lagoon application.
- Observations made during Terracon's reconnaissance of the subject site included, but was not limited to 55-gallon drums, 5-gallon containers; an oil/water separator and sump associated with an indoor floor drain; aboveground storage tanks (ASTs) for water; a temporary underground storage tank (UST) for collection of wastewater; electrical transformers; a lake and a lagoon. Observations did not indicate recognized environmental conditions (RECs) associated with these features at the time of the site reconnaissance.
- Based on a review of historical information including, historical topographic maps, aerial photographs, and interviews, the subject site appears to have been developed by at least 1935 with apparent farmstead buildings. The development of the current-day buildings on the site appears to have begun between 1939 and 1948. The lake on the site appears to have been constructed between approximately 1948 and 1959 and the current-day lagoon constructed between 1974 and 1981. A review of registered water well information provided by the Missouri Department of Natural Resources (MDNR)-Geological Survey and Resource Assessment Division (GSRAD) did not identify a water well which is reportedly on the site at an unknown location. Development of the surrounding areas appears to have begun by at least 1935 with the development of current-day Highway 63 to the west and south and homes and buildings associated with surrounding farmland to the north, south, and

west of the subject site. The development of the current-day Ed's Mobile Home Park and Sunset Mobile Home Park northwest of the site began between approximately 1948 and 1959.

- The current-day adjoining properties of the subject site consist of the following:
 - Ed's Mobile Home Park and Sunset Mobile Home Park, farmland with University of Missouri storage buildings, and Sugar Grove Lane, to the north,
 - Farmland and buildings associated with the University Beef Farm to the east,
 - Lenoir Street, a residential house, Highway 63, Ponderosa Drive and farmland to the south, and
 - Lenoir Street, Highway 63, Ponderosa Drive and the Phillips Farm to the west.

The adjoining properties do not appear to represent a REC to the subject site at this time.

- The regulatory database review identified no Environmental Protection Agency (EPA) facilities, and one (1) MDNR Underground Storage Tank (UST) facility within the specified search radii. Based on the regulatory status and topographic distance relative to the subject site, this facility does not appear to represent a REC to the subject site.

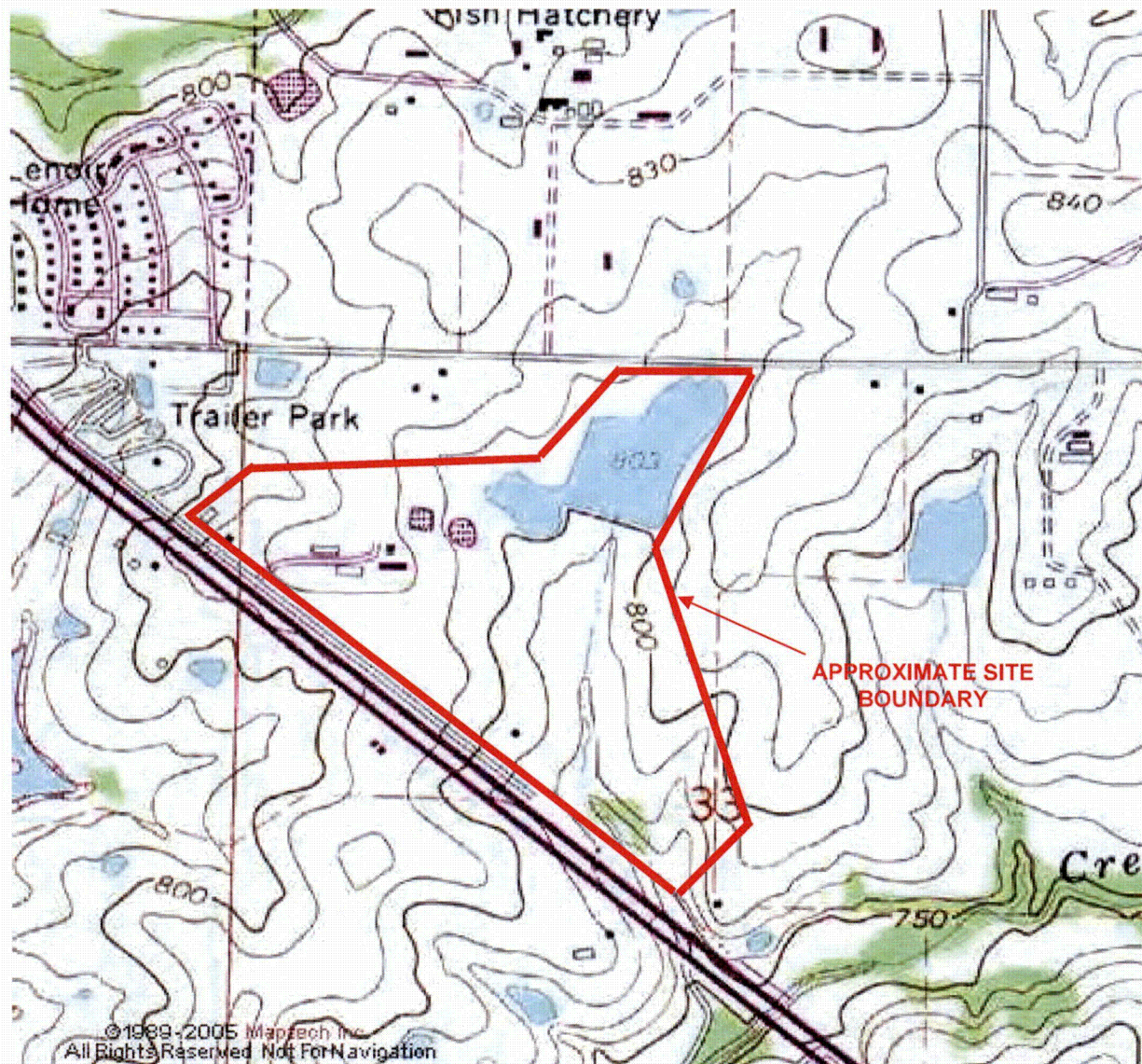
8.2 Recommendations

Based on the Scope of Services for this assessment, Terracon did not identify conditions which, in our opinion, require additional investigation at this time. However;

- Terracon recommends a current cleanout of the oil/water separator in the garage of the USDA Field Research Building (FRB).
- Water wells may provide a direct migration pathway for contaminants to reach aquifers underlying a site, and therefore become a source of environmental concern. If the well on the site is encountered during the proposed site activities, Terracon recommends that the water well be properly abandoned according to MDNR regulations. Proper abandonment of water wells should be performed by a water well driller licensed with the State of Missouri, and requires notification to MDNR prior to abandonment.
- If the septic tank is to be encountered during future site development activities, it should be closed in accordance with Boone County regulations, if applicable.

APPENDIX A

Figure 1 - Topographic Map, Figure 2 – Site Diagram



U.S.G.S. 7.5 MINUTE SERIES TOPOGRAPHIC MAP

STATE of MISSOURI QUADRANGLE

Columbia

1981

DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS
NOT INTENDED FOR CONSTRUCTION PURPOSES.

*VERTICAL SCALE IS IN FEET

1750 feet

FIGURE 1- TOPOGRAPHIC MAP
DISCOVERY RIDGE
EAST OF LENOIR STREET AND SOUTH OF SUGAR GROVE LANE
COLUMBIA, MISSOURI

Project Manager: TLB

Reviewed by: EJG

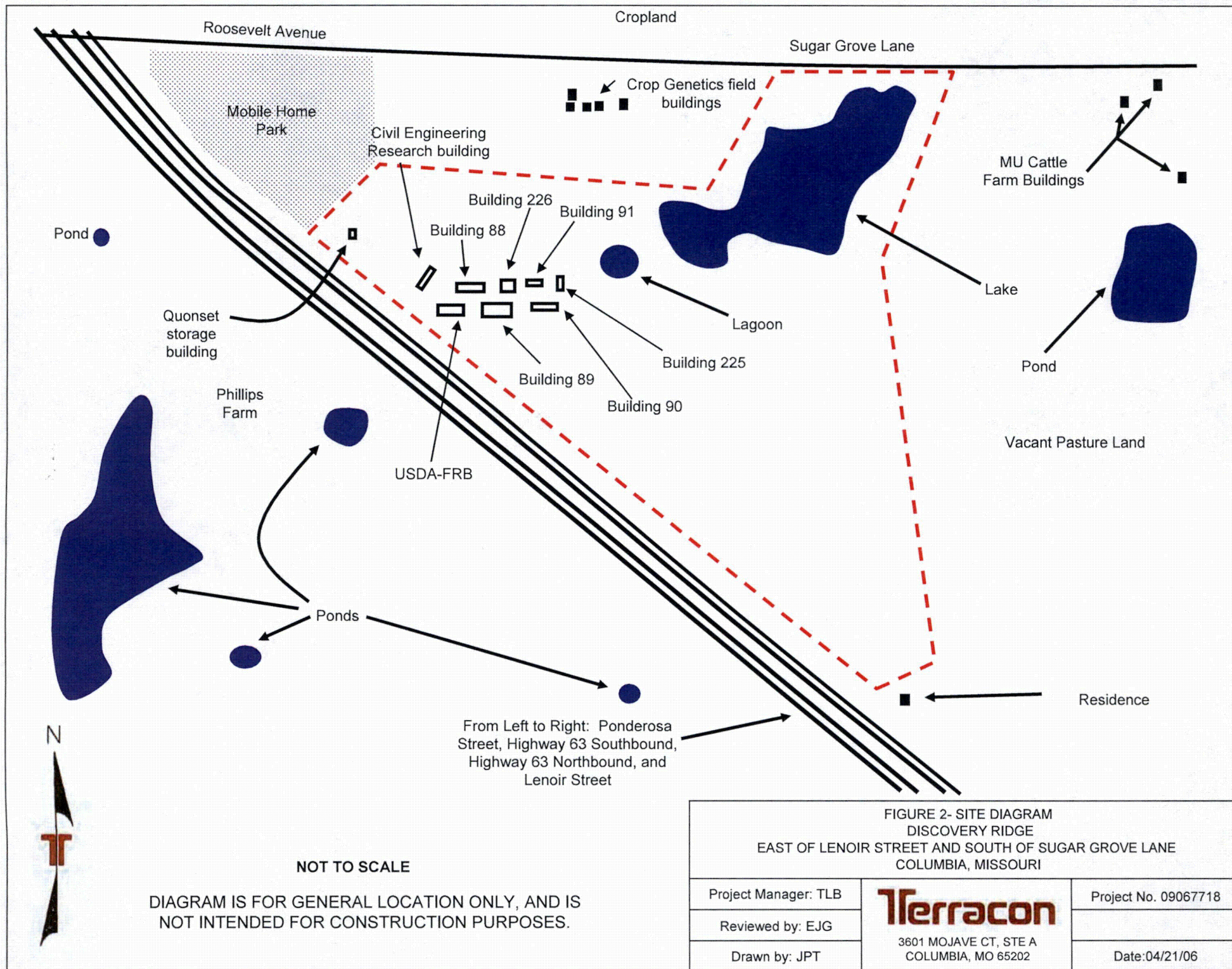
Drawn by: TLB

Terracon

3601 MOJAVE CT, STE A
COLUMBIA, MO 65202

Project No. 09067718

Date: 4/20/06



APPENDIX B

Historical Documentation



EDR® Environmental
Data Resources Inc

"Linking Technology with Tradition"®

Sanborn® Map Report

Ship To: Tim Bennett
Terracon
3601 Mojave Court
Columbia, MO 65202

Order Date: 4/11/2006 **Completion Date:** 4/11/2006

Inquiry #: 1652726.2

P.O. #: NA

Site Name: Discovery Ridge

Address: New Haven Road/Lenoir Street

City/State: Columbia, MO 65201

Cross Streets:

Customer Project: 09067718
1381249GIL 573-214-2677

This document reports that the largest and most complete collection of Sanborn fire insurance maps has been reviewed based on client supplied information, and fire insurance maps depicting the target property at the specified address were not identified.

NO COVERAGE

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report AS IS. Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

APPENDIX C

Environmental Database Information



EDR® Environmental
Data Resources Inc

The EDR Radius Map™ Report

**Discovery Ridge
New Haven Road/Lenoir Street
Columbia, MO 65201**

Inquiry Number: 1652726.1s

April 11, 2006

The Standard in Environmental Risk Management Information

440 Wheelers Farms Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

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Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	6
Orphan Summary	11
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

GeoCheck - Not Requested

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

NEW HAVEN ROAD/LENOIR STREET
COLUMBIA, MO 65201

COORDINATES

Latitude (North):	38.901800 - 38° 54' 6.5"
Longitude (West):	92.280600 - 92° 16' 50.2"
Universal Transverse Mercator:	Zone 15
UTM X (Meters):	562382.1
UTM Y (Meters):	4305917.5
Elevation:	798 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	38092-H3 COLUMBIA, MO
Most Recent Revision:	1982

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

FEDERAL RECORDS

NPL.....	National Priority List
Proposed NPL.....	Proposed National Priority List Sites
Delisted NPL.....	National Priority List Deletions
NPL RECOVERY.....	Federal Superfund Liens
CERCLIS.....	Comprehensive Environmental Response, Compensation, and Liability Information System
CERC-NFRAP.....	CERCLIS No Further Remedial Action Planned
CORRACTS.....	Corrective Action Report
RCRA-TSDF.....	Resource Conservation and Recovery Act Information
RCRA-LQG.....	Resource Conservation and Recovery Act Information

EXECUTIVE SUMMARY

RCRA-SQG	Resource Conservation and Recovery Act Information
ERNS	Emergency Response Notification System
HMIRS	Hazardous Materials Information Reporting System
US ENG CONTROLS	Engineering Controls Sites List
US INST CONTROL	Sites with Institutional Controls
DOD	Department of Defense Sites
FUDS	Formerly Used Defense Sites
US BROWNFIELDS	A Listing of Brownfields Sites
CONSENT	Superfund (CERCLA) Consent Decrees
ROD	Records Of Decision
UMTRA	Uranium Mill Tailings Sites
ODI	Open Dump Inventory
TRIS	Toxic Chemical Release Inventory System
TSCA	Toxic Substances Control Act
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
SSTS	Section 7 Tracking Systems
PADS	PCB Activity Database System
MLTS	Material Licensing Tracking System
MINES	Mines Master Index File
FINDS	Facility Index System/Facility Registry System
RAATS	RCRA Administrative Action Tracking System

STATE AND LOCAL RECORDS

SHWS	Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites
DEL SHWS	Registry Sites Withdrawn or Deleted
SWF/LF	Solid Waste Facility List
LUST	Leaking Underground Storage Tanks
LAST	Leaking Aboveground Storage Tanks
AST	Aboveground Petroleum Storage Tanks
SPILLS	Environmental Response Tracking Database
AUL	Sites with Controls
VCP	Sites Participating in the Voluntary Cleanup Program
DRYCLEANERS	Drycleaners in Missouri Listing
BROWNFIELDS	Brownfields Site List
CDL	Environmental Emergency Response System
MO RRC	Certified Hazardous Waste Resource Recovery Facilities

TRIBAL RECORDS

INDIAN RESERV	Indian Reservations
---------------	---------------------

EDR PROPRIETARY RECORDS

Manufactured Gas Plants	EDR Proprietary Manufactured Gas Plants
-------------------------	---

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property. Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STATE AND LOCAL RECORDS

UST: Underground Storage Tank Information.

A review of the UST list, as provided by EDR, and dated 12/16/2005 has revealed that there is 1 UST site within approximately 0.75 miles of the target property.

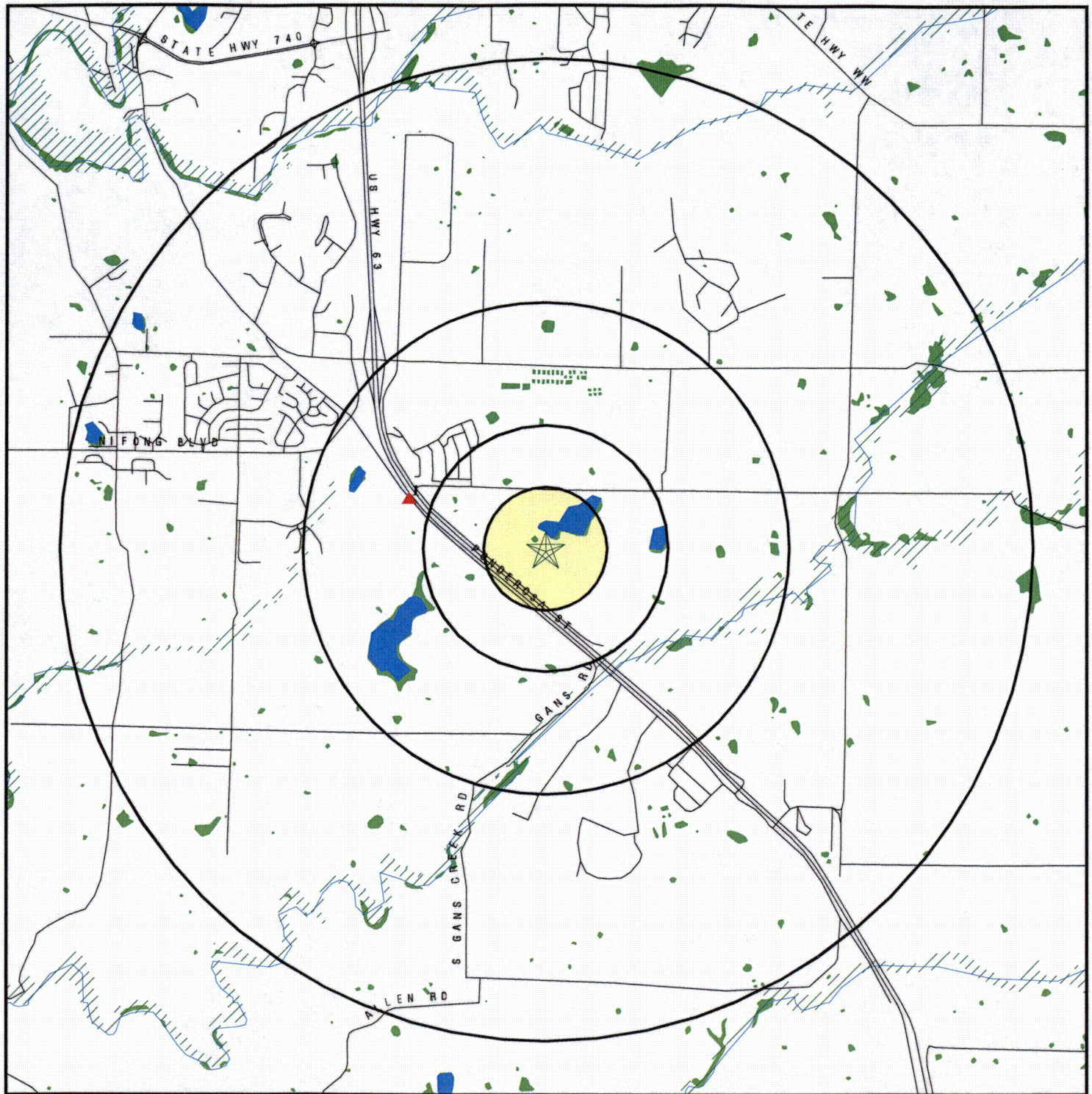
<u>Equal/Higher Elevation</u>	<u>Address</u>	<u>Dist / Dir</u>	<u>Map ID</u>	<u>Page</u>
BLUE ACRES - LITTLE GENERAL	4001 PONDEROSA DR	1/2 - 1 WNW 1		6

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

<u>Site Name</u>	<u>Database(s)</u>
CENTRAL MISSOURI SHELTERED ENTERPRISES	FTTS
DAVIS CLEANERS	DRYCLEANERS
HIGHWAY 63 / HIGHWAY K	SPILLS, CDL
BEHIND FAIRVIEW ELEMENTARY SCHOOL	SPILLS, CDL
2518 E BUSINESS 70	SPILLS, CDL
3820 ST. CHARLES ROAD	SPILLS, CDL
1081 DOZIER	SPILLS, CDL
1900 SOUTHWEST I-70 DRIVE, APARTMENT 230	SPILLS, CDL
KING LANE	SPILLS, CDL
MARY LANE	SPILLS, CDL
2203 MCKEE	SPILLS, CDL
MILE 126, I-70	SPILLS, CDL
MOREAU STREET	SPILLS, CDL
4001 SOUTH PONDEROSA	SPILLS, CDL
4001 SOUTH PONDEROSA AT LOT # 113	SPILLS, CDL
3406 RANGE LINE	SPILLS, CDL
2904 N. RANGELINE	SPILLS, CDL
1111 E. SOUTH ELIZABETH	SPILLS, CDL
VANDIVER DRIVE	SPILLS, CDL
VEHICLE STOP AT 3109 PARKER STREET	SPILLS, CDL
10400 RT VV	SPILLS, CDL
7500 HIGHWAY W	SPILLS, CDL
WALLO ROAD	SPILLS, CDL
UNIVERSITY OF MISSOURI - SOUTH FARM	SHWS
WILLIAMS PIPE LINE CO - COLUMBIA	RCRA-SQG, FINDS,
	CERC-NFRAP
WATKINS MOTOR LINES, I-70 SPILL	SPILLS, LAST
CITY OF COLUMBIA SANITARY LANDFILL	SWF/LF
EMERY PEURCULATOR	LUST, UST
MURRAY & SONS GROCERY	LUST, UST
MCGEE GROCERY	LUST, UST
CUMMINS MISSOURI, INC	UST
RILEY & MCCUBBIN	UST
LEATHERWOOD HILLS LITTLE GENERAL STORE	UST
BREAKTIME #3112	AST
LITTLE GENERAL STORE	AST
CONOCO INC	LAST
UNIVERSITY OF MO - SINCLAIR FARM & ANIMAL SCIENCE	VCP
FLEUR DE LITE	RCRA-SQG
WILLERT PRODUCTS INC	RCRA-SQG
SIMON STEEL INC	RCRA-SQG, FINDS
STUCKEYS DQ #117	RCRA-SQG
BREAK TIME #3003	RCRA-SQG
RYDER TRUCK RENTAL	RCRA-SQG
STONE RIDGE SUBDIVISION NEW STREET ON RIGHT SIDE OF SMITH BL	ERNS
BLUFF RIDGE PLAT 1-E	FINDS
DEER RIDGE, PLAT 3	FINDS
SMITHTON RIDGE PLAT 3	FINDS
WILLERT HOME PRODUCTS INC	SSTS

OVERVIEW MAP - 1652726.1s

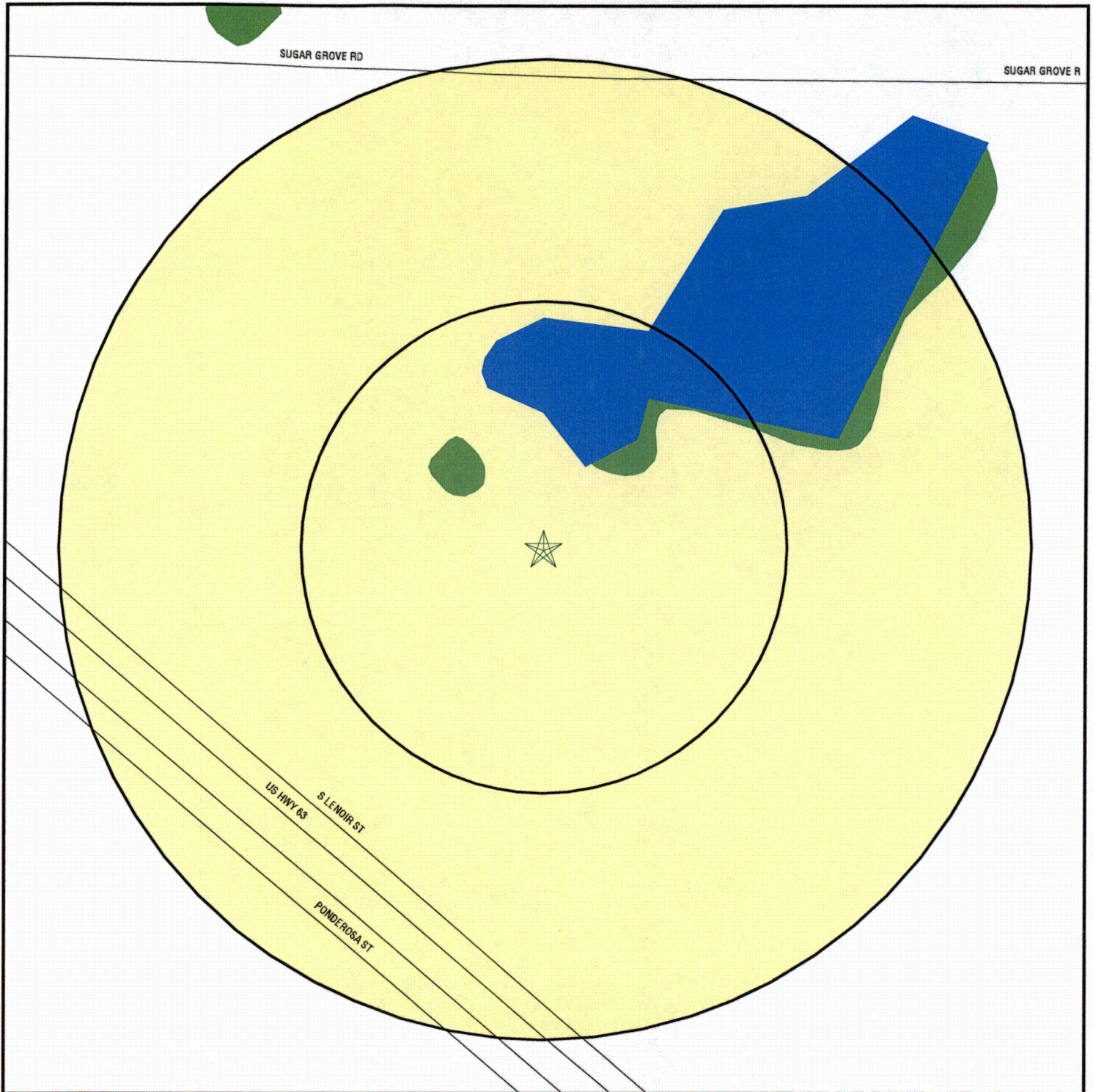


- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- National Priority List Sites
- Landfill Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory

SITE NAME: Discovery Ridge
 ADDRESS: New Haven Road/Lenoir Street
 Columbia MO 65201
 LAT/LONG: 38.9018 / 92.2806

CLIENT: Terracon
 CONTACT: Tim Bennett
 INQUIRY #: 1652726.1s
 DATE: April 11, 2006

DETAIL MAP - 1652726.1s



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Manufactured Gas Plants
- ⚡ Sensitive Receptors
- ☒ National Priority List Sites
- ☒ Landfill Sites
- ☒ Dept. Defense Sites

- ☒ Indian Reservations BIA
- ☒ Oil & Gas pipelines
- ☒ 100-year flood zone
- ☒ 500-year flood zone
- ☒ National Wetland Inventory

0 1/16 1/8 1/4 Miles

SITE NAME: Discovery Ridge
 ADDRESS: New Haven Road/Lenoir Street
 Columbia MO 65201
 LAT/LONG: 38.9018 / 92.2806

CLIENT: Terracon
 CONTACT: Tim Bennett
 INQUIRY #: 1652726.1s
 DATE: April 11, 2006

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<u>FEDERAL RECORDS</u>								
NPL		1.500	0	0	0	0	0	0
Proposed NPL		1.500	0	0	0	0	0	0
Delisted NPL		1.500	0	0	0	0	0	0
NPL RECOVERY		0.500	0	0	0	NR	NR	0
CERCLIS		1.000	0	0	0	0	NR	0
CERC-NFRAP		1.000	0	0	0	0	NR	0
CORRACTS		1.500	0	0	0	0	0	0
RCRA TSD		1.000	0	0	0	0	NR	0
RCRA Lg. Quan. Gen.		0.750	0	0	0	0	NR	0
RCRA Sm. Quan. Gen.		0.750	0	0	0	0	NR	0
ERNS		0.500	0	0	0	NR	NR	0
HMIRS		0.500	0	0	0	NR	NR	0
US ENG CONTROLS		1.000	0	0	0	0	NR	0
US INST CONTROL		1.000	0	0	0	0	NR	0
DOD		1.500	0	0	0	0	0	0
FUDS		1.500	0	0	0	0	0	0
US BROWNFIELDS		1.000	0	0	0	0	NR	0
CONSENT		1.500	0	0	0	0	0	0
ROD		1.500	0	0	0	0	0	0
UMTRA		1.000	0	0	0	0	NR	0
ODI		1.000	0	0	0	0	NR	0
TRIS		0.500	0	0	0	NR	NR	0
TSCA		0.500	0	0	0	NR	NR	0
FTTS		0.500	0	0	0	NR	NR	0
SSTS		0.500	0	0	0	NR	NR	0
PADS		0.500	0	0	0	NR	NR	0
MLTS		0.500	0	0	0	NR	NR	0
MINES		0.750	0	0	0	0	NR	0
FINDS		0.500	0	0	0	NR	NR	0
RAATS		0.500	0	0	0	NR	NR	0
<u>STATE AND LOCAL RECORDS</u>								
State Haz. Waste		1.500	0	0	0	0	0	0
DEL SHWS		1.500	0	0	0	0	0	0
State Landfill		1.000	0	0	0	0	NR	0
LUST		1.000	0	0	0	0	NR	0
UST		0.750	0	0	0	1	NR	1
LAST		1.000	0	0	0	0	NR	0
AST		0.750	0	0	0	0	NR	0
SPILLS		0.500	0	0	0	NR	NR	0
AUL		1.000	0	0	0	0	NR	0
VCP		1.000	0	0	0	0	NR	0
DRYCLEANERS		0.750	0	0	0	0	NR	0
BROWNFIELDS		1.000	0	0	0	0	NR	0
CDL		0.500	0	0	0	NR	NR	0
MO RRC		0.500	0	0	0	NR	NR	0
<u>TRIBAL RECORDS</u>								
INDIAN RESERV		1.500	0	0	0	0	0	0

MAP FINDINGS SUMMARY

<u>Database</u>	<u>Target Property</u>	<u>Search Distance (Miles)</u>	<u>< 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>> 1</u>	<u>Total Plotted</u>
<u>EDR PROPRIETARY RECORDS</u>								
Manufactured Gas Plants		1.500	0	0	0	0	0	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s) EDR ID Number
EPA ID Number

1 BLUE ACRES - LITTLE GENERAL
WNW 4001 PONDEROSA DR
1/2-1 COLUMBIA, MO 65201
3152 ft.

UST U001163270
N/A

Relative:
Higher

UST:

Actual:
800 ft.

Facility ID: ST0008250
Owner: BLUE ACRES, INC
5481 E ST CHARLES
COLUMBIA, MO 65201
Resp Party: Not reported
RP Telephone : Not reported
Tank ID: 1
Tank Type: Below Ground
Capacity: 8000
Meet 98: Yes
Telephone : (573) 449-8211
RP Phone 2 : -
Date Receive : 12/18/1992
Date Piping Installed : 1/1/1989
Other Type Of Tank Material : Not reported
Tank Internal Protection : Not reported
Other Tank Internal Protection : Not reported
Tank Internal Protection Date : Not reported
Tank External Protection : Not reported
Other Type Tank Extn Protec : Not reported
Tank External Protec Date : Not reported
Tank Rel Detectn Methods : Automatic tank guaging
Other Tank Rel Detection Methods : Not reported
Dt Tank Realease Detection Installed : 6/1/1998
Types Of Overfill : Automatic shutoff @ 95%
Piping System : Pressurized
Pipe Material : Fiberglass reinforced plastic
Other Type Of Pipe Mat : Not reported
Pipe Protection : Not reported
Pipe Protection Date : Not reported
Pipe Release Detection : LT
Other Type Of Pipe Rel Detctn : Not reported
Type Of Subst Tank Holds : Gasoline, including blends
Other Type Of Tank Subst : Not reported
Name Of Haz. Substance : Not reported
Case # Of The Primary Haz Sub : Not reported
Haz Substance A Mixture : No
Tank Last Used : Not reported
Tnk Permanently Closed/ Removed : Not reported
Tank Fees Waived : No
Registration Fee 585 : 75
Date Record Edited : 8/28/1998
Person Adding / Editing Record : NR\$VIETS
Amt Assessed By The Current Cycle : 75
Amount Curenly Due : 0
Tank Equiped With Spill Protection : Yes
Closure Notice NumbeNot reported
Tank Used For Emergency Genrtr : No
Archive Date : Not reported
Date Of Approval Letter : Not reported
Date Closure Report Recvd : Not reported
Firm Closing Tank : Not reported
Contact Person's Title : OWNER

RP Contact : Not reported
Owner ID: OW00711
Tank Status: Curenly in use
Substance: 3
Region : NE
Date Tank Installed : 1/1/1989
RP Undeliverable : No

Admin Fee 585 : Not reported
Date Record Added : 6/30/1995
Date Of NFA Letter : Not reported

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

BLUE ACRES - LITTLE GENERAL (Continued)

EDR ID Number
EPA ID Number

Database(s)

U001163270

Signer :	ADRON PERRY
Signer's Title :	SEC/TREAS
Active :	Yes
Facility Type :	U
Registration Start Date :	10/1/2003
Registration End Date :	9/30/2008
Certificate Printed :	Yes
Dt Certificate Printed :	11/17/2005
Create Invoice :	No
Receipt :	No
Archive :	No
House Bill :	No
Label Printed :	No
Facility Status :	Registered
Moratorium :	No
UST1 Flag :	Yes
UST1 Flag Date :	9/30/2003
UST2 Flag :	No
UST2 Flag Date :	Not reported
UST3 Flag :	No
UST3 Flag Date :	Not reported
Number Of Tanks Upgraded :	Not reported
Facility Address 2 :	Not reported
Method Data Was Obtained :	G3
Accuracy Of Geospatial Data :	8
Owner Of Geospatial Data :	5
Amount Of Deviation In Accuracy :	3.7
Deviation In Meters; Feet; Pdrop; Score :	PDOP
Geospatial Point Line Area Indicator :	P
Geospatial Horizontal Reference Datum :	3
Geospatial Source Data Location :	D9
Geospatial Data Collected By :	Interns
Geospatial Elevation Method :	Not reported
Geospatial Elevation Reference Datum :	Not reported
Date Gis Data Collected :	12/21/2001
Where Geospatial Data Was Collected On Site :	Not reported
Date Closed Null And Status Not C Or T When Sys Converted To Access :	No
Comments :	Not reported
Facility ID:	ST0008250
Owner:	BLUE ACRES, INC 5481 E ST CHARLES COLUMBIA, MO 65201
Resp Party:	Not reported
RP Telephone :	Not reported
Tank ID:	2
Tank Type:	Below Ground
Capacity:	8000
Meet 98:	Yes
Telephone :	(573) 449-8211
RP Phone 2 :	-
Date Receive :	12/18/1992
Date Piping Installed :	1/1/1989
Other Type Of Tank Material :	Not reported
Tank Internal Protection :	Not reported
Other Tank Internal Protection :	Not reported
Tank Internal Protection Date :	Not reported
RP Contact :	Not reported
Owner ID:	OW00711
Tank Status:	Currently in use
Substance:	3
Region :	NE
Date Tank Installed :	1/1/1989
RP Undeliverable :	No

Map ID
Direction
Distance
Distance (ft.)
Elevation

MAP FINDINGS

BLUE ACRES - LITTLE GENERAL (Continued)

EDR ID Number
EPA ID Number

Database(s)

U001163270

Tank External Protection :	Not reported	
Other Type Tank Extn Protec :	Not reported	
Tank External Protec Date :	Not reported	
Tank Rel Detectn Methods :	Automatic tank guaging	
Other Tank Rel Detection Methods :	Not reported	
Dt Tank Realease Detection Installed :	6/1/1998	
Types Of Overfill :	Automatic shutoff @ 95%	
Piping System :	Pressurized	
Pipe Material :	Fiberglass reinforced plastic	
Other Type Of Pipe Mat :	Not reported	
Pipe Protection :	Not reported	
Pipe Protection Date :	Not reported	
Pipe Release Detection :	LT	
Other Type Of Pipe Rel Detctn :	Not reported	
Type Of Subst Tank Holds :	Gasoline, including blends	
Other Type Of Tank Subst :	Not reported	
Name Of Haz. Substance :	Not reported	
Case # Of The Primary Haz Sub :	Not reported	
Haz Substance A Mixture :	No	
Tank Last Used :	Not reported	
Tnk Permanently Closed/ Removed :	Not reported	
Tank Fees Waived : No		Admin Fee 585 : Not reported
Registration Fee 585 : 75		Date Record Added : 6/30/1995
Date Record Edited :	8/28/1998	
Person Adding / Editing Record :	NR\$VIETS	
Amt Assessed By The Current Cycle :	75	
Amount Currenly Due :	0	
Tank Equiped With Spill Protection :	Yes	
Closure Notice Numbe	Not reported	Date Of NFA Letter : Not reported
Tank Used For Emergency Genrtr :	No	
Archive Date :	Not reported	
Date Of Approval Letter :	Not reported	
Date Closure Report Recvd :	Not reported	
Firm Closing Tank :	Not reported	
Contact Person's Title :	OWNER	
Signer :	ADRON PERRY	
Signer's Title :	SEC/TREAS	
Active :	Yes	
Facility Type :	U	
Registration Start Date :	10/1/2003	
Registration End Date :	9/30/2008	
Certificate Printed :	Yes	
Dt Certificate Printed :	11/17/2005	
Create Invoice :	No	
Receipt :	No	
Archive :	No	
House Bill :	No	
Label Printed :	No	
Facility Status :	Registered	
Moratorium :	No	
UST1 Flag :	Yes	
UST1 Flag Date :	9/30/2003	
UST2 Flag :	No	
UST2 Flag Date :	Not reported	
UST3 Flag :	No	
UST3 Flag Date :	Not reported	
Number Of Tanks Upgraded :	Not reported	

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

Database(s)
EDR ID Number
EPA ID Number

BLUE ACRES - LITTLE GENERAL (Continued)

U001163270

Facility Address 2 : Not reported
Method Data Was Obtained : G3
Accuracy Of Geospatial Data : 8
Owner Of Geospatial Data : 5
Amount Of Deviation In Accuracy : 3.7
Deviation In Meters; Feet; Pdrop; Score : PDOP
Geospatial Point Line Area Indicator : P
Geospatial Horizontal Reference Datum : 3
Geospatial Source Data Location : D9
Geospatial Data Collected By : Interns
Geospatial Elevation Method : Not reported
Geospatial Elevation Reference Datum : Not reported
Date Gis Data Collected : 12/21/2001
Where Geospatial Data Was Collected On Site : Not reported
Date Closed Null And Status Not C Or T When Sys Converted To Access : No
Comments : Not reported

Facility ID: ST0008250
Owner: BLUE ACRES, INC
5481 E ST CHARLES
COLUMBIA, MO 65201

Resp Party: Not reported
RP Telephone : Not reported
Tank ID: 3
Tank Type: Below Ground
Capacity: 8000
Meet 98: Yes
Telephone : (573) 449-8211
RP Phone 2 : -
Date Receive : 12/18/1992

RP Contact : Not reported
Owner ID: OW00711
Tank Status: Currently in use
Substance: 3
Region : NE
Date Tank Installed : 1/1/1989
RP Undeliverable : No

Date Piping Installed : 1/1/1989
Other Type Of Tank Material : Not reported
Tank Internal Protection : Not reported
Other Tank Internal Protection : Not reported
Tank Internal Protection Date : Not reported
Tank External Protection : Not reported
Other Type Tank Extn Protec : Not reported
Tank External Protec Date : Not reported
Tank Rel Detectn Methods : Automatic tank guaging
Other Tank Rel Detection Methods : Not reported
Dt Tank Realease Detection Installed : 6/1/1998
Types Of Overfill : Automatic shutoff @ 95%
Piping System : Pressurized
Pipe Material : Fiberglass reinforced plastic
Other Type Of Pipe Mat : Not reported
Pipe Protection : Not reported
Pipe Protection Date : Not reported
Pipe Release Detection : LT
Other Type Of Pipe Rel Detctn : Not reported
Type Of Subst Tank Holds : Gasoline, including blends
Other Type Of Tank Subst : Not reported
Name Of Haz. Substance : Not reported
Case # Of The Primary Haz Sub : Not reported
Haz Substance A Mixture : No
Tank Last Used : Not reported
Tnk Permanently Closed/ Removed : Not reported
Tank Fees Waived : No
Admin Fee 585 : Not reported

Map ID
Direction
Distance
Distance (ft.)
Elevation Site

MAP FINDINGS

EDR ID Number
EPA ID Number
Database(s)

BLUE ACRES - LITTLE GENERAL (Continued)

U001163270

Registration Fee 585 : 75
Date Record Edited : 8/28/1998
Person Adding / Editing Record : NR\$VIETS
Amt Assessed By The Current Cycle : 75
Amount Curently Due : 0
Tank Equiped With Spill Protection : Yes
Closure Notice NumbeNot reported
Tank Used For Emergency Genrtr : No
Archive Date : Not reported
Date Of Approval Letter : Not reported
Date Closure Report Recvd : Not reported
Firm Closing Tank : Not reported
Contact Person's Title : OWNER
Signer : ADRON PERRY
Signer's Title : SEC/TREAS
Active : Yes
Facility Type : U
Registration Start Date : 10/1/2003
Registration End Date : 9/30/2008
Certificate Printed : Yes
Dt Certificate Printed : 11/17/2005
Create Invoice : No
Receipt : No
Archive : No
House Bill : No
Label Printed : No
Facility Status : Registered
Moratorium : No
UST1 Flag : Yes
UST1 Flag Date : 9/30/2003
UST2 Flag : No
UST2 Flag Date : Not reported
UST3 Flag : No
UST3 Flag Date : Not reported
Number Of Tanks Upgraded : Not reported
Facility Address 2 : Not reported
Method Data Was Obtained : G3
Accuracy Of Geospatial Data : 8
Owner Of Geospatial Data : 5
Amount Of Deviation In Accuracy : 3.7
Deviation In Meters; Feet; Pdop; Score : PDOP
Geospatial Point Line Area Indicator : P
Geospatial Horizontal Reference Datum : 3
Geospatial Source Data Location : D9
Geospatial Data Collected By : Interns
Geospatial Elevation Method : Not reported
Geospatial Elevation Refernce Datum : Not reported
Date Gis Data Collected : 12/21/2001
Where Geospatial Data Was Collected On Site : Not reported
Date Closed Null And Status Not C Or T When Sys Converted To Access : No
Comments : Not reported

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BOONE COUNTY	S106614682	CITY OF COLUMBIA SANITARY LANDFILL	1.2 MILES E OF RT. B OFF PEABODY RD		SWF/LF
COLUMBIA	1007105493	FLEUR DE LITE	HWY 163	65201	RCRA-SQG
COLUMBIA	1007106044	WILLERT PRODUCTS INC	RR 2 BOX 156 RICHLAND RT Z	65201	RCRA-SQG
COLUMBIA	U001158855	EMERY PEURCULATOR	RT 2	65201	LUST, UST
COLUMBIA	S106976428	DAVIS CLEANERS	HIGHWAY 40 AND ILLINOISE		DRYCLEANERS
COLUMBIA	1000284099	WILLIAMS PIPE LINE CO - COLUMBIA	HWY 63 S	65201	RCRA-SQG, FINDS, CERC-NFRAP
COLUMBIA	1008176983	CENTRAL MISSOURI SHELTERED ENTERPRISES	HWY 63 S	65201	FTTS
COLUMBIA	A100270754	BREAKTIME #3112	HWY 63 S	65201	AST
COLUMBIA	U001158850	MURRAY & SONS GROCERY	HWY 63 N	65201	LUST, UST
COLUMBIA	U003980578	CUMMINS MISSOURI, INC	5221 HWY 63	65201	UST
COLUMBIA	S106142537		HIGHWAY 63 / HIGHWAY K		SPILLS, CDL
COLUMBIA	U001158844	MCGEE GROCERY	RT B	65201	LUST, UST
COLUMBIA	S106142495		BEHIND FAIRVIEW ELEMENTARY SCHOOL		SPILLS, CDL
COLUMBIA	1008334534	BLUFF RIDGE PLAT 1-E	BLUFF CREEK DR AND	65201	FINDS
COLUMBIA	S106142503		2518 E BUSINESS 70		SPILLS, CDL
COLUMBIA	S106749413		3820 ST. CHARLES ROAD	65201	SPILLS, CDL
COLUMBIA	S105361628		1081 DOZIER		SPILLS, CDL
COLUMBIA	1004742168	SIMON STEEL INC	5881 S HWY 63	65201	RCRA-SQG, FINDS
COLUMBIA	A100260542	LITTLE GENERAL STORE	6751 W HWY 40	65201	AST
COLUMBIA	S105364039	WATKINS MOTOR LINES, I-70 SPILL	I-70	65201	SPILLS, LAST
COLUMBIA	S106936111	CONOCO INC	HWY I-70	65201	LAST
COLUMBIA	S106657785		1900 SOUTHWEST I-70 DRIVE, APARTMENT 230		SPILLS, CDL
COLUMBIA	1007109683	STUCKEYS DQ #117	3054 HWY J	65201	RCRA-SQG
COLUMBIA	S106341595		KING LANE		SPILLS, CDL
COLUMBIA	S107258104		MARY LANE		SPILLS, CDL
COLUMBIA	S105360283		2203 MCKEE		SPILLS, CDL
COLUMBIA	S106142493		MILE 126, I-70		SPILLS, CDL
COLUMBIA	S107470130		MOREAU STREET		SPILLS, CDL
COLUMBIA	U000752683	RILEY & MCCUBBIN	RT NN	65201	UST
COLUMBIA	1007106746	BREAK TIME #3003	1416 S OLD HWY 63	65201	RCRA-SQG
COLUMBIA	S106142540		4001 SOUTH PONDEROSA	65201	SPILLS, CDL
COLUMBIA	S106142501		4001 SOUTH PONDEROSA AT LOT # 113		SPILLS, CDL
COLUMBIA	1007107014	RYDER TRUCK RENTAL	3511 RT PP	65201	RCRA-SQG
COLUMBIA	S106142500		3406 RANGE LINE		SPILLS, CDL
COLUMBIA	S106142494		2904 N. RANGELINE		SPILLS, CDL
COLUMBIA	S107406944	UNIVERSITY OF MISSOURI - SOUTH FARM	ROLLING HILLS ROAD	65201	SHWS
COLUMBIA	U003973922	LEATHERWOOD HILLS LITTLE GENERAL STORE	1641 W RT K	65201	UST
COLUMBIA	S107136084	UNIVERSITY OF MO - SINCLAIR FARM & ANIMAL SCIENCE	SINCLAIR FARM / UNIVERSITY OF MO		VCP
COLUMBIA	S106341708		1111 E. SOUTH ELIZABETH		SPILLS, CDL
COLUMBIA	99629027	STONE RIDGE SUBDIVISION NEW STREET ON RIGHT SIDE OF SMITH BL	STONE RIDGE SUBDIVISION NEW STREET ON RIGHT SIDE OF SMITH BL		ERNS
COLUMBIA	1008220378	DEER RIDGE, PLAT 3	THOMPSON RD/SPRING CRESS	65201	FINDS

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
COLUMBIA	S106341710		VANDIVER DRIVE		SPILLS, CDL
COLUMBIA	S106142539		VEHICLE STOP AT 3109 PARKER STREET		SPILLS, CDL
COLUMBIA	S106142505		10400 RT VV		SPILLS, CDL
COLUMBIA	S107470132		7500 HIGHWAY W		SPILLS, CDL
COLUMBIA	S106142536		WALLO ROAD		SPILLS, CDL
COLUMBIA	1007691925	SMITHTON RIDGE PLAT 3	1123 WILKS BLVD	65201	FINDS
COLUMBIA	1005439792	WILLERT HOME PRODUCTS INC	ROUTE Z RICHLAND RD	65201	SSTS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

FEDERAL RECORDS

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/24/2006	Source: EPA
Date Data Arrived at EDR: 03/01/2006	Telephone: N/A
Date Made Active in Reports: 03/31/2006	Last EDR Contact: 03/01/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 05/01/2006
	Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 8
Telephone: 303-312-6774

EPA Region 4
Telephone 404-562-8033

Proposed NPL: Proposed National Priority List Sites

Date of Government Version: 02/24/2006	Source: EPA
Date Data Arrived at EDR: 03/01/2006	Telephone: N/A
Date Made Active in Reports: 03/31/2006	Last EDR Contact: 03/01/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 05/01/2006
	Data Release Frequency: Quarterly

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/24/2006	Source: EPA
Date Data Arrived at EDR: 03/01/2006	Telephone: N/A
Date Made Active in Reports: 03/31/2006	Last EDR Contact: 03/01/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 05/01/2006
	Data Release Frequency: Quarterly

NPL RECOVERY: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991	Source: EPA
Date Data Arrived at EDR: 02/02/1994	Telephone: 202-564-4267
Date Made Active in Reports: 03/30/1994	Last EDR Contact: 03/06/2006
Number of Days to Update: 56	Next Scheduled EDR Contact: 05/22/2006
	Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/24/2005	Source: EPA
Date Data Arrived at EDR: 12/21/2005	Telephone: 703-413-0223
Date Made Active in Reports: 01/30/2006	Last EDR Contact: 03/21/2006
Number of Days to Update: 40	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Quarterly

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 10/24/2005	Source: EPA
Date Data Arrived at EDR: 12/21/2005	Telephone: 703-413-0223
Date Made Active in Reports: 01/30/2006	Last EDR Contact: 03/21/2006
Number of Days to Update: 40	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Quarterly

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/29/2005	Source: EPA
Date Data Arrived at EDR: 01/11/2006	Telephone: 800-424-9346
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 03/06/2006
Number of Days to Update: 41	Next Scheduled EDR Contact: 06/05/2006
	Data Release Frequency: Quarterly

RCRA: Resource Conservation and Recovery Act Information

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 02/21/2006	Source: EPA
Date Data Arrived at EDR: 03/01/2006	Telephone: 800-424-9346
Date Made Active in Reports: 03/31/2006	Last EDR Contact: 03/01/2006
Number of Days to Update: 30	Next Scheduled EDR Contact: 04/24/2006
	Data Release Frequency: Quarterly

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2005	Source: National Response Center, United States Coast Guard
Date Data Arrived at EDR: 01/12/2006	Telephone: 202-260-2342
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 01/12/2006
Number of Days to Update: 40	Next Scheduled EDR Contact: 04/24/2006
	Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2005	Source: U.S. Department of Transportation
Date Data Arrived at EDR: 01/16/2006	Telephone: 202-366-4555
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 01/16/2006
Number of Days to Update: 36	Next Scheduled EDR Contact: 04/17/2006
	Data Release Frequency: Annually

US ENG CONTROLS: Engineering Controls Sites List

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.

Date of Government Version: 08/02/2005	Source: Environmental Protection Agency
Date Data Arrived at EDR: 08/12/2005	Telephone: 703-603-8867
Date Made Active in Reports: 10/06/2005	Last EDR Contact: 03/03/2006
Number of Days to Update: 55	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

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.

Date of Government Version: 01/10/2005	Source: Environmental Protection Agency
Date Data Arrived at EDR: 02/11/2005	Telephone: 703-603-8867
Date Made Active in Reports: 04/06/2005	Last EDR Contact: 03/03/2006
Number of Days to Update: 54	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2004	Source: USGS
Date Data Arrived at EDR: 02/08/2005	Telephone: 703-692-8801
Date Made Active in Reports: 08/04/2005	Last EDR Contact: 02/06/2006
Number of Days to Update: 177	Next Scheduled EDR Contact: 05/08/2006
	Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/05/2005	Source: U.S. Army Corps of Engineers
Date Data Arrived at EDR: 01/19/2006	Telephone: 202-528-4285
Date Made Active in Reports: 02/21/2006	Last EDR Contact: 04/03/2006
Number of Days to Update: 33	Next Scheduled EDR Contact: 07/03/2006
	Data Release Frequency: Varies

US BROWNFIELDS: A Listing of Brownfields Sites

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 11/29/2005
Date Data Arrived at EDR: 12/05/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Semi-Annually

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 12/14/2004
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 04/25/2005
Number of Days to Update: 69

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 07/24/2006
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 12/07/2005
Date Data Arrived at EDR: 01/06/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 46

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 04/05/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 11/04/2005
Date Data Arrived at EDR: 11/28/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 63

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 03/20/2006
Next Scheduled EDR Contact: 06/19/2006
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2003	Source: EPA
Date Data Arrived at EDR: 07/13/2005	Telephone: 202-566-0250
Date Made Active in Reports: 08/17/2005	Last EDR Contact: 03/21/2006
Number of Days to Update: 35	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002	Source: EPA
Date Data Arrived at EDR: 04/27/2004	Telephone: 202-260-5521
Date Made Active in Reports: 05/21/2004	Last EDR Contact: 03/06/2006
Number of Days to Update: 24	Next Scheduled EDR Contact: 04/17/2006
	Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/17/2006	Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Date Data Arrived at EDR: 01/24/2006	Telephone: 202-566-1667
Date Made Active in Reports: 02/27/2006	Last EDR Contact: 03/20/2006
Number of Days to Update: 34	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Date of Government Version: 01/17/2006	Source: EPA
Date Data Arrived at EDR: 01/24/2006	Telephone: 202-566-1667
Date Made Active in Reports: 02/27/2006	Last EDR Contact: 03/20/2006
Number of Days to Update: 34	Next Scheduled EDR Contact: 06/19/2006
	Data Release Frequency: Quarterly

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2003	Source: EPA
Date Data Arrived at EDR: 01/03/2005	Telephone: 202-564-4203
Date Made Active in Reports: 01/25/2005	Last EDR Contact: 03/06/2006
Number of Days to Update: 22	Next Scheduled EDR Contact: 07/17/2006
	Data Release Frequency: Annually

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/27/2005	Source: EPA
Date Data Arrived at EDR: 02/08/2006	Telephone: 202-566-0500
Date Made Active in Reports: 02/27/2006	Last EDR Contact: 02/08/2006
Number of Days to Update: 19	Next Scheduled EDR Contact: 05/08/2006
	Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 02/10/2006
Date Data Arrived at EDR: 02/16/2006
Date Made Active in Reports: 03/31/2006
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 04/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Quarterly

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 11/08/2005
Date Data Arrived at EDR: 12/27/2005
Date Made Active in Reports: 01/30/2006
Number of Days to Update: 34

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/29/2006
Next Scheduled EDR Contact: 06/26/2006
Data Release Frequency: Semi-Annually

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 01/09/2006
Date Data Arrived at EDR: 01/16/2006
Date Made Active in Reports: 02/21/2006
Number of Days to Update: 36

Source: EPA
Telephone: N/A
Last EDR Contact: 04/03/2006
Next Scheduled EDR Contact: 07/03/2006
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 03/06/2006
Next Scheduled EDR Contact: 06/05/2006
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2003
Date Data Arrived at EDR: 06/17/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 48

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 03/17/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Biennially

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

STATE AND LOCAL RECORDS

SHWS: Registry of Confirmed Abandoned or Uncontrolled Hazardous Waste Disposal Sites

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 01/12/2006	Source: Department of Natural Resources
Date Data Arrived at EDR: 01/12/2006	Telephone: 573-751-1990
Date Made Active in Reports: 01/26/2006	Last EDR Contact: 03/27/2006
Number of Days to Update: 14	Next Scheduled EDR Contact: 06/26/2006
	Data Release Frequency: Quarterly

DEL SHWS: Registry Sites Withdrawn or Deleted

A list of sites that were removed from the Registry or for which Registry action was suspended due to cleanup.

Date of Government Version: 09/08/2005	Source: Department of Natural Resources
Date Data Arrived at EDR: 08/29/2005	Telephone: 573-522-3710
Date Made Active in Reports: 10/05/2005	Last EDR Contact: 03/27/2006
Number of Days to Update: 37	Next Scheduled EDR Contact: 06/26/2006
	Data Release Frequency: Annually

SWF/LF: Solid Waste Facility List

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 04/12/2005	Source: Department of Natural Resources
Date Data Arrived at EDR: 05/11/2005	Telephone: 573-751-5401
Date Made Active in Reports: 06/02/2005	Last EDR Contact: 02/03/2006
Number of Days to Update: 22	Next Scheduled EDR Contact: 04/17/2006
	Data Release Frequency: Quarterly

LUST: Leaking Underground Storage Tanks

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 12/16/2005	Source: Department of Natural Resources
Date Data Arrived at EDR: 01/10/2006	Telephone: 573-751-0135
Date Made Active in Reports: 01/26/2006	Last EDR Contact: 04/11/2006
Number of Days to Update: 16	Next Scheduled EDR Contact: 07/10/2006
	Data Release Frequency: Semi-Annually

UST: Petroleum Storage Tanks

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 12/16/2005	Source: Department of Natural Resources
Date Data Arrived at EDR: 01/10/2006	Telephone: 573-751-0135
Date Made Active in Reports: 01/24/2006	Last EDR Contact: 04/11/2006
Number of Days to Update: 14	Next Scheduled EDR Contact: 07/10/2006
	Data Release Frequency: Semi-Annually

LAST: Leaking Aboveground Storage Tanks

A listing of leaking aboveground storage tanks.

Date of Government Version: 12/16/2005	Source: Department of Natural Resources
Date Data Arrived at EDR: 01/10/2006	Telephone: 573-751-6822
Date Made Active in Reports: 01/26/2006	Last EDR Contact: 04/11/2006
Number of Days to Update: 16	Next Scheduled EDR Contact: 07/10/2006
	Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

AST: Aboveground Petroleum Storage Tanks
Registered Aboveground Storage Tanks.

Date of Government Version: 01/18/2006
Date Data Arrived at EDR: 01/18/2006
Date Made Active in Reports: 02/17/2006
Number of Days to Update: 30

Source: Department of Agriculture
Telephone: 573-751-7062
Last EDR Contact: 04/10/2006
Next Scheduled EDR Contact: 07/10/2006
Data Release Frequency: Semi-Annually

SPILLS: Environmental Response Tracking Database

Date of Government Version: 01/06/2006
Date Data Arrived at EDR: 01/09/2006
Date Made Active in Reports: 01/26/2006
Number of Days to Update: 17

Source: Department of Natural Resources
Telephone: 573-526-3349
Last EDR Contact: 04/10/2006
Next Scheduled EDR Contact: 07/10/2006
Data Release Frequency: Semi-Annually

AUL: Sites with Controls

Activity and use limitations include both engineering controls and institutional controls.

Date of Government Version: 12/20/2005
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 01/26/2006
Number of Days to Update: 14

Source: Department of Natural Resources
Telephone: 573-751-3176
Last EDR Contact: 04/11/2006
Next Scheduled EDR Contact: 07/10/2006
Data Release Frequency: Varies

VCP: Sites Participating in the Voluntary Cleanup Program

Date of Government Version: 12/20/2005
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 01/26/2006
Number of Days to Update: 14

Source: Department of Natural Resources
Telephone: 573-526-8913
Last EDR Contact: 04/11/2006
Next Scheduled EDR Contact: 07/10/2006
Data Release Frequency: Semi-Annually

DRYCLEANERS: Drycleaners in Missouri Listing

A listing of drycleaner facilities that are potentially eligible for reimbursement of department approved cleanup costs under the Drycleaning Environmental Response Trust Fund.

Date of Government Version: 02/14/2006
Date Data Arrived at EDR: 02/14/2006
Date Made Active in Reports: 03/14/2006
Number of Days to Update: 28

Source: Department of Natural Resources
Telephone: 573-526-8913
Last EDR Contact: 02/13/2006
Next Scheduled EDR Contact: 05/15/2006
Data Release Frequency: Varies

BROWNFIELDS: Brownfields Site List

Date of Government Version: 12/20/2005
Date Data Arrived at EDR: 01/12/2006
Date Made Active in Reports: 01/26/2006
Number of Days to Update: 14

Source: Department of Natural Resources
Telephone: 573-526-8913
Last EDR Contact: 04/11/2006
Next Scheduled EDR Contact: 07/10/2006
Data Release Frequency: Semi-Annually

CDL: Environmental Emergency Response System

Incidents reported to the Department of Natural Resources where drug lab materials were involved.

Date of Government Version: 01/06/2006
Date Data Arrived at EDR: 01/09/2006
Date Made Active in Reports: 01/26/2006
Number of Days to Update: 17

Source: Department of Natural Resources
Telephone: 573-751-3443
Last EDR Contact: 04/10/2006
Next Scheduled EDR Contact: 07/10/2006
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

RRC: Certified Hazardous Waste Resource Recovery Facilities

Date of Government Version: 12/12/2005
Date Data Arrived at EDR: 12/12/2005
Date Made Active in Reports: 12/23/2005
Number of Days to Update: 11

Source: Department of Natural Resources
Telephone: 573-751-3176
Last EDR Contact: 03/13/2006
Next Scheduled EDR Contact: 06/12/2006
Data Release Frequency: Semi-Annually

TRIBAL RECORDS

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2004
Date Data Arrived at EDR: 02/08/2005
Date Made Active in Reports: 08/04/2005
Number of Days to Update: 177

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 02/06/2006
Next Scheduled EDR Contact: 05/08/2006
Data Release Frequency: Semi-Annually

EDR PROPRIETARY RECORDS

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data

Source: PennWell Corporation
Telephone: (800) 823-6277

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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:

Source: American Hospital Association, Inc.
Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Medical Centers: Provider of Services Listing

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Licensed Child Care Facilities

Source: Department of Health & Senior Services

Telephone: 573-751-2450

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

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