Phase I Environmental Site Assessment

Approximately 20 Acres of Vacant Land
Edgerton, Kansas 66021

PSI Work Order # 06031248-1

Prepared for:

NAI Martens
435 S. Broadway
Wichita, Kansas 67202

Prepared by:

Professional Service Industries, Inc.
1211 West Cambridge Circle Drive
Kansas City, Kansas 66103

Date: 06/21/2016

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Project Summary

Report Section		Issues Identified	Routine Solution	REC	HREC	CREC	VEC	De-minimis	Notes
3.0	USER-PROVIDED INFORMATION								No Issues Identified
5.0	SITE RECONNAISSANCE								No Issues Identified
5.2	SUBJECT PROPERTY OBSERVATIONS								No Issues Identified
6.0	HISTORICAL USES								No Issues Identified
6.2	CURRENT AND PRIOR USE INTERVIEWS								No Issues Identified
7.0	ENVIRONMENTAL REGULATORY RECORDS REVIEW								No Issues Identified

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LIST OF COMMONLY USED ACRONYMS

AST	Above-ground Storage Tank
AUL	Activity and Land Use Limitation
AHERA	Asbestos Hazard Emergency Response Act
ACM	Asbestos-Containing Materials
AMSL	Above Mean Sea Level
APN	Assessor's Parcel Number
ASTM	American Society for Testing and Materials
BER	Business Environmental Risk
Bgs	Below the ground surface
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
COC	Contaminant of Concern
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CERCLIS	Comprehensive Environmental Response, Compensation and Liability Information System
CESQG	Conditionally Exempt Small Quantity Generator of Hazardous Waste
CREC	Controlled Recognized Environmental Condition
EP	Environmental Professional
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
HREC	Historical Recognized Environmental Condition
HVAC	Heating, Ventilation, and Air Conditioning
LLP	Landowner Liability Protection
LQG	Large Quantity Generator of Hazardous Waste
LBP	Lead-Based Paint
LUST	Leaking Underground Storage Tank
MCL	Maximum Concentration Level
MSDS	Material Safety Data Sheets (now referred to as Safety Data Sheets)
MTBE	Methyl tert Butyl Ether
Ug/L	Micrograms per liter
Mg/kg	Milligrams per Kilogram
Mg/L	Milligrams per Liter
NPL	National Priorities List (aka/Superfund)
NFA	No Further Action
ND	Not Detected
NOV	Notice of Violation
OSHA	Occupational Safety and Health Administration
ppb	Parts per billion
ppm	Parts per million
PCE	Perchloroethylene
pCi/L	Picocuries per liter
PCB	Polychlorinated Biphenyls
REC	Recognized Environmental Condition
RCRA	Resource Conservation and Recovery Act
TPH	Total Petroleum Hydrocarbons
TCE	Trichloroethylene
UST	Underground Storage Tank

USDA	United States Department of Agriculture
USGS	United States Geologic Survey
VEC	Vapor Encroachment Condition
VIC	Vapor Intrusion Condition
VOC	Volatile Organic Compound

CERTIFICATION

Professional Service Industries, Inc. (PSI) has completed a Phase I Environmental Site Assessment of the Approximately 20 Acres of Vacant Land located North of West 191st Street and East of Waverly Road in Edgerton, Kansas ("the Subject Property"). PSI performed the Phase I ESA in conformance with ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (the Practice). The assessment was completed at the request of NAI Martens ("the Client") in accordance with the scope of work outlined in PSI's Proposal No. 0603-180612, which was authorized by the Client.

The conclusions developed herein represent our professional judgment based on information and data available to us at the time of the assessment, and observations made at the time of our site reconnaissance. In accordance with ASTM E1527-13 § 4.6, the report is valid for a period of 180 days from the time of issuance.

Site Assessor: 

Cole Read, Environmental Technician

Reviewed by: 

Scott J. Dahlgren, Principal Consultant

Environmental Professional Certification

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

Environmental Professional: 

Scott J. Dahlgren, Principal Consultant

1.0 EXECUTIVE SUMMARY

Professional Service Industries, Inc. (PSI) performed a Phase I Environmental Site Assessment (Phase I ESA) of the Approximately 20 Acres of Vacant Land located North of West 191st Street and East of Waverly Road, in Edgerton, Kansas, 66021. PSI performed the assessment to comply with the contract between NAI Martens (the Client) and PSI.

1.1 FINDINGS

A summary of findings is provided below. The report should be read in its entirety to obtain a more complete understanding of the information provided and to aid in any decisions made or actions taken based on this information.

1.1.1 Site Description and Current Use

The subject property consisted of approximately 20 acres of vacant, grass and tree-covered land, with two apparent former pond areas.

1.1.2 Adjoining Property Description and Use

The use of the immediately adjoining properties is summarized in the table below.

Direction	Description of Property Use
North	The north adjoining property consisted of densely vegetated and partially wooded land.
Northeast	The northeastern adjoining properrty consisted of the Horizon Trail Apartment Complex.
South	The property was bound to the south by W.191st St. followed by agricultural land.
East	The southern portion of the eastern adjoining property consisted of a residential home. The northern portion of the eastern adjoining property consisted of agricultural land.
West	The southern portion of the western adjoining property consisted of a residential home. The northern portion of the western adjoining property consisted of J.B. Hunt Transport Inc.
Southwest	The southwestern adjoining property consisted of Jet Logistic Park.

1.1.3 Historical Use of Site and Surrounding Area

The subject property appeared to be vacant, grass and tree-covered land since at least 1948. The land has remained generally unchanged up to the present.

Except for the nearby roads, the area surrounding the subject property appeared to be generally open vacant land in 1940 to the present. By 2011, Horizon Trail Apartments started to be developed on the northeast adjoining property.

By 2015, the southern adjoining property was developed with Jet Logistic Park, and J.B. Hunt Transport Inc. was developed on the northern section of the western adjoining property.

1.1.4 Governmental Records Review

PSI subcontracted with EDR, Inc. to provide a review of governmental database records for spill sites, tanks, hazardous waste handlers, and other facilities of potential concern within proximity to the subject property.

1.1.5 Significant Data Gaps

The Standard Practice defines a Significant Data Gap as a gap that affects the ability to identify recognized environmental conditions (RECs). Findings and conclusions are subject to the limitations imposed by Significant Data Gaps. Based on our experience, the information that we gathered and evaluated did not present significant data gaps that affected our ability to identify RECs in connection with the subject property.

1.2 CONCLUSIONS

PSI performed a Phase I Environmental Site Assessment of the subject property in general accordance with the scope and limitations of ASTM Practice E 1527-13. Any exceptions to or deletions from this practice are described in Section 2.3 of this report. The following conclusions have been made with regard to evidence of Recognized Environmental Conditions (REC), Historical Recognized Environmental Conditions (HREC), Controlled Recognized Environmental Conditions (CREC), Vapor Encroachment Conditions (VEC), and De minimis conditions on the Subject Property, as defined in ASTM E 1527-13.

1.2.1 Recognized Environmental Conditions

This assessment has revealed no evidence of RECs in connection with the subject property.

1.2.2 Controlled Recognized Environmental Conditions

This assessment has revealed no evidence of CRECs in connection with the subject property.

1.2.3 Historical Recognized Environmental Conditions

This assessment has revealed no evidence of HRECs in connection with the subject property.

1.2.4 Vapor Encroachment Conditions

This assessment has revealed no evidence of VECs in connection with the subject property.

1.2.5 De Minimis Conditions

PSI did not identify any evidence of *de minimis* conditions on the subject property.

2.0 PHASE I ESA SCOPE AND METHODOLOGY

2.1 PURPOSE OF SERVICES

PSI performed the Phase I ESA in conformance with ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (the Practice). The purpose of the Practice was to define good commercial practice for conducting an environmental site assessment and as such, the Practice is intended to permit the user to satisfy one of the requirements to qualify for the Landowner Liability Protections (LLPs). The goal of the processes established by the Practice is to identify RECs in connection with the property.

2.2 PHASE I ESA METHODOLOGY

PSI performed a Phase I ESA of the subject property. The scope of our services and general methodology is presented below.

The information sources that PSI used, including published material, material obtained from commercial and other sources, is listed below and cited as it is presented in the report. The information or excerpts thereof is appended.

This assessment included four components:

- Records review;
- Reconnaissance;
- Interviews; and,
- Preparation of this report, including our evaluation.

2.3 LIMITATIONS, EXCEPTIONS, DEVIATIONS AND DATA GAP

PSI considers that limitations, exceptions, and deviations from the Practice manifest as a lack of or inability to obtain information required by the Practice. This represents the definition of the 'data gap' contained in the Practice. PSI listed the component objectives of the Practice on the appended Data Gap Worksheet and tracked the information obtained against the objectives. Therefore the limitations, exceptions and deviations are identified in the Worksheet.

In general, when required information was incomplete, not provided, otherwise not obtained, or indicated a need for additional information, PSI attempted to use information from other sources to meet the Practices' performance objectives. When the data gaps affected the Environmental Professional's ability to identify RECs, PSI considered the data gap(s) to be significant. PSI identified significant data gaps (if any) on the Data Gap Worksheet and reported them in Section 1.1.5.

2.4 SIGNIFICANT ASSUMPTIONS

PSI made the following assumptions in developing our Phase I ESA findings and conclusions:

- Regulatory Agency Information - PSI considers all information provided by our environmental database subcontractor regarding regulatory status of facilities to be complete, accurate, and current.
- Other Regulatory Information - PSI considers all information obtained from regulatory or enforcement agencies to be complete, accurate, and current.
- Title, Lien and AUL Information - PSI considers all information provided by real estate title record review firms regarding property use or ownership, encumbrances or other limitations, if provided, to be complete, accurate and current.
- Interviews - PSI considers all information provided through interviews to be complete, unbiased and provided in good faith.
- PSI interpreted and inferred the direction of the shallow groundwater movement based on the information we obtained and our experience. Actual groundwater flow may be locally influenced by many factors beyond the scope of this assessment. Subsurface investigation would be necessary to determine site-specific groundwater flow direction.

3.0 USER-PROVIDED INFORMATION

PSI considers the Client to be the 'User' of our assessment, defined in ASTM Practice E 1527 as "the party seeking to use ASTM E 1527 to complete an environmental site assessment of the property. A User may include, without limitation, a potential purchaser of property, a potential tenant of property, an owner of property, a lender, or a property manager. The User has specific obligations for completing a successful application of this practice...."

3.1 USER QUESTIONNAIRE

The EPA All Appropriate Inquiry Rule (40 CFR Part 312) and ASTM E1527 Section 6 require the User to answer certain questions related to the property, in order to obtain certain landowner liability protections (LLPs) from CERCLA liability. To facilitate this process, PSI provided the Client with a User Questionnaire, which is provided in the Appendix. A summary of the required questions and client responses is provided below:

Question	Yes	No	Unknown	N/A	Client did not respond
Did a search of recorded land title records or other sources identify any environmental liens or activity use limitations (AULs) that are in place on the Subject Property?			✔		
Do you have specialized knowledge or experience related to the Subject Property or nearby properties?		✔			
Does the purchase price being paid for the property reasonably reflect the fair market value of the property?	✔				
Are you aware of commonly known or reasonable ascertainable information about the property that would help the environmental professional to identify conditions indicative of a releases or threatened releases?	✔	✔			
Based on your knowledge and experience related to the property are there any obvious indicators that point to the presence or likely presence of releases at the property?		✔			
Are you aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on, or from the property?		✔			

Notes

PSI's client was aware that the subject property was farmland, but did not know about any specific releases of chemicals at the subject property, other than properly used agricultural chemicals.

3.2 TITLE RECORDS

Based on a review of the local tax assessor's records, provided by Johnson County Online Mapping Records, the subject property is currently owned by Joseph Allen Gast.

3.3 SUGGESTED INFORMATION

The client provided PSI with the following suggested information described by the Practice.

- The reason for performing the Phase I ESA.
- The type of property and type of property transaction.
- The complete and correct address of the property.
- The scope of services desired for the Phase I ESA, including any evaluation for business environmental risk that is beyond the scope of ASTM E1527.
- Identification of all parties who will rely upon the report.

3.4 HELPFUL DOCUMENTS

The Practice requires that the environmental professional ask the property owner, the key site manager (if any is identified), and the User for certain helpful documents about the property and certain legal proceedings involving hazardous substances and the subject property. PSI mailed or e-mailed questions or performed interviews requesting this information. The responses documenting the persons we corresponded with, and relevant information obtained, are appended where practical.

The Client indicated that they were unaware of any prior environmental reports or other helpful documents within the performance period of this assessment.

4.0 PHYSICAL SETTING

PSI reviewed a United States Geological Survey (USGS) topographic (topo) map, information from the United States Department of Agriculture (USDA) and/or Natural Resources Conservation Service (NRCS) and/or other information regarding the physical setting of the subject property to assist with the interpretation of subsurface water movement near the subject property. Physical setting information is summarized in the table below.

Summary of Physical Setting Information

Physical Setting Attributes	Description	Source
Subject Property Elevation	Approximately 1041-feet Above the Mean Sea Level (AMSL)	USGS Topographic Map 7.5 minute Gardner, Kansas Quadrangle 2012 And Site Reconnaissance Observations
Topographic Gradient:	The Subject Property and surrounding area slopes gently to the north.	Topo Maps
Closest Surface Water:	An intermittent creek on the northern adjoining property.	Topo Maps
Other resource or physical characteristics mapped on the subject property?	No	Topo Maps
Is a flood plain mapped on the subject property?	No	EDR Radius Map Report

Physical Setting Attributes	Description	Source
Predominant soil type mapped on the subject property:	The soil report identified Sibleyville Loam complex, 3 to 7 percent slopes on the subject property. The Sibleyville component makes up 85 percent of the map unit. The parent material consists of fine-loamy residuum weathered from sandstone. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 39 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent.	USDA NRCS Custom Soil Resource Report for Johnson County, Kansas (generated from website, 2016)
Anticipated groundwater flow direction	To the north.	Topo Maps
Oil and Gas Resources	None mapped on, or adjacent to Subject Property	EDR Radius Map Report
Mining Resources	None mapped on, or adjacent to Subject Property	Topo Maps

5.0 SITE RECONNAISSANCE

The location and approximate boundaries of the subject property are illustrated on the appended figures. The legal description of the subject property, if provided to PSI, is appended.

Mr. Nathan Farha, Broker of NAI Martens, granted PSI access to the subject property. Our assessor was unescorted during the site reconnaissance.

The ground reconnaissance consisted of observing the periphery of the subject property and viewing the subject property from accessible adjoining public access areas. Visual reconnaissance of adjoining properties was limited to areas and facilities that were readily observable from the subject property or from public access areas. PSI also systematically toured the interior portions of the subject property parcels to provide an overlapping field of view.

The peripheries of surface features and/or structures, where present on the subject property, were observed along with accessible interior common areas. PSI photo-documented selected features. The photo log is included in the Appendix.

5.1 SUBJECT PROPERTY DESCRIPTION AND CURRENT USES

General Site Information	
Subject Property Address	North of West 191st Street and East of Waverly Road, Edgerton, Kansas 66021
Parcel Size (acres)	Approximately 20 Acres
Site Contact/Escort	Mr. Nathan Farha/Not Applicable
Date of Reconnaissance	6/15/2016
Building Information	
Building Description	N/A
Size (sf)	N/A
No. Stories	N/A
Approx. Construction Date	N/A
Utilities	
Water	N/A
Wastewater/Sewer	N/A
Electricity	N/A
Natural Gas	N/A
Heating Source	N/A

The subject property consisted of approximately 20 acres of vacant, grass and tree-covered land.

5.2 SUBJECT PROPERTY OBSERVATIONS

A summary of the subject property uses and conditions is tabulated below. Detailed information is discussed following the summary for any "yes" answers, along with an opinion about the significance of the listing.

Identified? (check if Yes)	Item Description
Equipment/Activities/Uses	
	Emergency Generators
	Elevators
	Hydraulic Lifts
	Dry Cleaners/Laundromats
	Photo Processing
	Medical/Dental Offices - Biomedical Wastes
	Automotive/Equipment Repair
	Grease Traps and Oil/Water Separators
	Wastewater Treatment Systems
	Septic or Sewage Tanks
	Air Compressors
	Transformers or Other Mech./Elec. Equipment that could contain PCBs
	Pipeline Markers
	Oil and Gas Wells
	Stormwater Ponds
	Quarries, Pits, Ponds, Lagoons, or Sumps
	Use, Storage, or Disposal of Hazardous Substances
	Use, Storage, or Disposal of Petroleum Products
	Aboveground or Underground Storage Tanks (ASTs/USTs)
	Drums or Other Bulk Chemical Containers
	Suspect Containers/Unidentified Contents
	Drains and Sumps
	Landfills or Solid Waste Dumps

Identified? (check if Yes)	Item Description
	Drinking Water, Irrigation or Monitoring Wells
	Agrochemical Use/Application
	Railroad Spur/Tracks
Potential Evidence of Releases	
	Interior/Pavement Stains or Corrosion
	Stained Soil/Stressed Vegetation
	Chemical odors
	Surface water sheen, odors, discoloration, etc.
	Exterior Pipe Discharges/Unknown pipes/Effluent Discharges
	Pools of Liquid or Standing Water
	Solid Waste Dumping/Landfills/Suspect Fill Material
	Construction Debris/Material Stockpiles
	Other Uses or Conditions of Concern

PSI did not observe any of the above uses or conditions in connection with the subject property at the time of the site reconnaissance.

USE THE BELOW HEADINGS AS APPROPRIATE BASED ON YOUR SITE RECONNAISSANCE. ALSO NOTE THAT THE DISCUSSIONS ARE TYPICALLY GEARED AS GO-BY LANGUAGE FOR NON-REC SITUATIONS. MODIFY AS APPROPRIATE IF YOU HAVE A REC.

If you have checked multiple boxes associated with one observation (e.g, both use of petroleum products and AST/USTs were checked on a gas station site), you can modify the header names so that you are discussing this item only once. For the above example, create a header titled Use of Petroleum Products/ ASTs/USTs. Don't discuss the same issue under multiple sections.

Delete section headers that are not used. Use the check boxes in the TOC navigation pane to select the ones you don't need and then click the garbage can icon to delete them all at once.

A summary of our interpretation of the current and past uses and conditions of adjoining and surrounding property based on historical records and observations is provided below.

Identified? (check if Yes)	Item Description
Equipment/Activities/Uses	
	Emergency Generators
	Elevators
	Hydraulic Lifts
	Dry Cleaners/Laundromats
	Photo Processing
	Medical/Dental Offices - Biomedical Wastes
	Automotive/Equipment Repair
	Grease Traps and Oil/Water Separators
	Wastewater Treatment Systems
	Septic or Sewage Tanks
	Air Compressors
✔	Transformers or Other Mech/Elec. Equipment that could contain PCBs
	Pipeline Markers
	Oil and Gas Wells
	Stormwater Ponds
	Quarries, Pits, Ponds, Lagoons, or Sumps
	Use, Storage, or Disposal of Hazardous Substances
	Use, Storage, or Disposal of Petroleum Products
	Aboveground or underground Storage Tanks (ASTs/USTs)
	Drums or Other Bulk Chemical Containers
	Suspect Containers/Unidentified Contents
	Drains or Sumps
	Landfills or Solid Waste Dumps
	Drinking Water, Irrigation or monitoring Wells
	Agrochemical Use/Application
	Railroad Spur/Tracks

Identified? (check if Yes)	Item Description
Potential Evidence of Releases	
	Interior/Pavement Stains or Corrosion
	Stained Soil/Stressed Vegetation
	Chemical Odors
	Surface water sheen, odors, discoloration, etc.
	Exterior Pipe Discharges/unknown pipes/Effluent Discharges
	Pools of Liquid or Standing Water
	Solid Waste Dumping/Landfills/Suspect Fill Material
	Construction Debris/Material Stockpiles
	Other Uses or Conditions of Concern

Transformers or Other Mech./Elec. Equipment that could Contain PCBs

One pole-mounted electrical transformer was observed on the southeastern adjoining property. PSI observed Non-PCB labeling on the transformer at the time of the site reconnaissance. PSI believes the electrical equipment is the property and responsibility of Kansas City Power & Light, the local electrical utility company, who would be responsible for any cleanup related to the equipment that could not be attributed to tenant negligence. The identified electrical equipment appeared to be in good condition, with no apparent evidence of staining, leakage or corrosion noted. Based on its observed condition and the local utility ownership, the observed transformer is not considered evidence of a REC in connection to the subject property.

6.0 HISTORICAL USES

PSI utilized readily ascertainable historical data resources in order to research the history of the site and surrounding area. The intent of this review was to identify historical tenancies or uses of the subject property and surrounding area, which might be considered evidence of a recognized environmental condition. Generally, PSI reviewed the following readily ascertainable historic data resources, where they were available:

- Readily available historical topographic maps were reviewed to evaluate land development in the area over time. It should be noted that the scale of topographic maps in some cases does not allow for mapping of individual structures and developed areas may be shown by shading only.
- Selected historical aerial photographs were reviewed at 5-10 year intervals to obtain information concerning the development and history of the subject property and surroundings.
- PSI reviewed readily ascertainable historical city directories at 5-10 year intervals in order to obtain information on tenancies on the subject property and adjoining properties.
- PSI requested available historical fire insurance maps from EDR, Inc. The Sanborn Map Company and other regional providers historically mapped urban areas for use by insurance underwriters. In some cases these maps provide useful information in evaluating previous tenancies and uses of the subject property and surrounding area.

Copies of select historical documents are provided in the report appendix; however, it should be noted that some of the resources used by PSI may be copyrighted and PSI has summarized these resources herein, but we have not included copies of these resources in the appendix.

6.1 SUMMARY OF RESOURCES

PSI reviewed the following resources in order to evaluate the historic uses of the subject property and surrounding area:

Source Type	Years Reviewed	Source
USGS Topographic Maps	1887, 1893, 1957, 1970, 1975, 1995, 2012	EDR
Aerial Photographs	1948, 1959, 1966, 1970, 1975, 1982, 1985, 1991, 1996, 2002, 2005, 2006, 2008, 2010, 2012	EDR
Aerial Photographs	1991, 2002, 2003, 2004, 2205, 2006, 2007, 2008, 2010, 2011, 2012, 2013, 2014, 2015, 2016	GoogleEarth (reviewed only)
City Directories	1964, 1968, 1973, 1978, 1983, 1987, 1992, 1995, 1999, 2003, 2008, 2013	EDR

6.2 CURRENT AND PRIOR USE INTERVIEWS

PSI conducted interviews with persons who are knowledgeable of the current use and history of the site. The following individuals were interviewed:

Name	Title/Role	Date Interviewed	Comments
Mr. Jerry Holly	Edgerton Fire Department	6/17/2016	No RECs Identified

6.3 PRIOR INVESTIGATIONS

The client did not provide PSI with any prior environmental or geotechnical reports, permits or registrations, or other pertinent information regarding the history of the site for review.

6.4 SUMMARY HISTORY OF SITE AND SURROUNDING AREA

A chronological summary of the history/use of the subject property and immediately adjacent properties is provided in the following table.

Date	Resource	Interpreted Use/Observations
SUBJECT PROPERTY		
1897, 1893	Topo Maps	Specific land usage was not indicated. The subject property was not located in an urban area.
1948 through 2013 (all years reviewed)	Aerial Photography, Topo Maps, City Directories	The subject property appeared to be open farmland. No structures were depicted on the subject property.
NORTH ADJOINING PROPERTY		
1887, 1893	Topo Maps	Specific land usage was not indicated
1948 through 2010 (all years reviewed)	Aerial Photography, Topo Maps, City Directories	Generally unchanged open pasture or agricultural land.
2012	Aerial Photography, Topo Map, City Directory	Significant residential development was depicted to the northeast with the development of the Horizon Trail Apartments. Land to the northwest remained dense vegetation.
SOUTH ADJOINING PROPERTY		
1887, 1893	Topo Maps	Specific land usage was not indicated.

Date	Resource	Interpreted Use/Observations
1948 through 2013 (all years reviewed)	Aerial Photography, Topo Maps, City Directories	Land south beyond the highway appeared to be generally unchanged and remained open farmland extending south.
EAST ADJOINING PROPERTY		
1887, 1893	Topo Maps	Specific land usage was not indicated.
1948 through 1985 (all years reviewed)	Aerial Photography, Topo Maps, City Directories	The eastern adjoining property appeared to be open farmland. No structures were depicted on the subject property.
1991 through 2013 (all years reviewed)	Aerial Photography, Topo Maps, City Directories	A residential building with associated parking and landscape areas was developed on the eastern adjoining property.
WEST ADJOINING PROPERTY		
1887, 1893	Topo Maps	Specific land usage was not indicated.
1948 through 2013 (all years reviewed)	Aerial Photography, Topo Maps, City Directories	Except for a suspected residence the land appeared to be open farmland.

The subject property appeared to be vacant, grass and tree-covered land since at least 1948. The land has remained generally unchanged up to the present.

Except for the nearby roads, the area surrounding the subject property appeared to be generally open vacant land in 1940 to the present. By 2011, Horizon Trail Apartments started to be developed on the northeast adjoining property.

By 2015, the southern adjoining property was developed with Jet Logistic Park, and J.B. Hunt Transport Inc. was developed on the northern section of the western adjoining property.

7.0 ENVIRONMENTAL REGULATORY RECORDS REVIEW

7.1 DATABASE FINDINGS

PSI retained Environmental Data Resources, Inc. (EDR) to provide environmental database information attributed to the subject property and its surroundings. EDR obtains environmental databases published by local, state, tribal, and federal agencies and maps the information for electronic searches. EDR's service includes reporting Standard Environmental Records Sources and, in most cases, some Additional Environmental Records Sources.

The search was performed to Approximate Minimum Search Distances (AMSD) listed in ASTM E 1527-13. The search radius required by ASTM varies by database.

Unmappable (orphan) sites (if any were listed) having insufficient address information to be mapped were evaluated for potential location within the AMSD. Those that could be determined to be within the AMSD are discussed, as appropriate.

The distribution of listed sites with respect to the subject property is tabulated and mapped in EDR's Radius Map Report, which is appended. The reader is referred to the table, which can be found near the front of EDR's report. The full names of the acronyms used below and in EDR's report can be found in the Government Records Searched/Data Currency Tracking section of EDR's report.

7.1.1 Subject Property

The subject property was not listed on any of the searched governmental databases as a spill site or regulated facility.

7.1.2 Surrounding Properties

PSI identified a number of regulated facilities and/or spill sites within the search radius. However, none of these sites are adjacent to the subject property and PSI considered the remaining database listings unlikely to impact the subject property based upon factors including (but not limited to):

- The nature of the listing;
- The use of the facility;
- When the facility was listed and its current listed status;
- The developmental density of the setting;
- The potential for vapors to encroach from the property to the subject property;
- The distance between the listing and subject sites related to whether releases are likely to migrate based on local surface and subsurface drainage conditions; and/or
- The presence of intervening drainage divides; and/or inferred groundwater movement.

7.2 REGULATORY AGENCY INQUIRIES

PSI requested records or information about the subject property and/or surrounding area from the governmental agencies listed in the following sections. Information was requested by telephone, in person, via e-mail or through a written Freedom of Information Act (FOIA) request, as appropriate.

7.2.1 Fire Department

PSI contacted the City of Edgerton Fire Department for information related to any spills or hazardous materials incidents on the subject property. Mr. Jerry Holly, the desk officer indicated that after review of the fire department records, he found no records of any spills or hazardous materials incidents related to subject property.

7.2.2 Regulatory Agency Maintained Websites

PSI reviewed the website maintained by Johnson County, Kansas, regarding the subject property boundary and ownership.

8.0 VAPOR ENCROACHMENT SCREENING

8.1 METHODOLOGY

Vapor encroachment is an emerging concern associated with the potential for volatile chemicals, such as petroleum fuels and chlorinated solvents to migrate through the subsurface in the gas phase from contaminated soil and/or groundwater plumes. Vapor encroachment may be a concern if subsurface volatile contaminants migrate into occupied buildings through cracks and penetrations in the building slab.

The ASTM E1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment process requires the Environmental Professional to evaluate the potential for vapor encroachment onto the subject property, and to determine if such vapor encroachment constitutes evidence of a recognized environmental condition on the subject property. The E1527-13 Standard Practice does not specifically state the methods that must be used to screen for potential vapor encroachment issues. However, ASTM has developed a separate Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions (ASTM E2600-10). The vapor encroachment screening guidance outlines a methodology to conduct vapor encroachment screening, which will satisfy the vapor screening requirements under the Phase I ESA Standard Practice. PSI utilized the ASTM E2600-10 Standard Guide to conduct vapor encroachment screening for the subject property.

The goal of conducting Vapor Encroachment Screening (VES) is to identify a vapor encroachment condition (VEC), which is defined as the presence or likely presence of chemicals of concern (COC) vapors in the subsurface of the subject property caused by the release of vapors from contaminated soil either on or near the subject property. If a VEC is identified or cannot be ruled out, the environmental professional must determine whether the VEC represents evidence of a Recognized Environmental Condition on the subject property under the context of the Phase I ESA Standard Practice. It should be noted that the identification of a VEC on the subject property does not necessarily indicate that a potential for migration of vapors into existing or proposed structures on the subject property is likely. The environmental professional will identify the VEC as a recognized environmental condition where the potential for vapor migration into structures is considered likely, or where the contaminant concentrations in the soil, groundwater, or soil vapors on the subject property are significant and likely to result in enforcement against on-site or off-site responsible parties.

The VES utilizes information regarding the potential presence of releases on or near the subject property that were collected as a normal part of the Phase I ESA process, such as governmental database records, review of governmental files, historical data sources, etc. No additional data was collected specifically for the purpose of the VES. In order to identify potential sites of concern within the approximate minimum search distance, PSI reviewed Sanborn Maps, governmental database records, regulatory agency files, aerial photographs, topographic maps, and city directories.

The VES Standard Guide prescribes a two tier approach for screening of sites for potential vapor encroachment. In Tier I, potential sites of concern within the search radii are identified and the environmental professional must determine whether a VEC exists, is likely, cannot be ruled out, or does not exist based on the information that is available within the context of the Phase I ESA data gathering. If the available information indicates that a VEC is likely or cannot be ruled out based on available information, the environmental professional, in consultation with the User, may conduct Tier II screening to further evaluate the potential risk. Under Tier II, the environmental professional would review available

reports through the regulatory agency or other reasonably ascertainable sources to determine the status of assessment/remediation, size and migration pathways for any associated plumes, geologic conditions, and other geologic information. This information would be utilized to determine the distance between the plume and the target property boundary. For example, if the distance from the edge of a plume in a downgradient position to the subject property boundary exceeds 100 feet for VOCs or petroleum free product, or 30 feet for dissolved petroleum hydrocarbons (PHCs), then the site may be screened out and a VEC does not exist. Functionally, where Tier II information is readily available during the normal course of conducting the Phase I ESA, PSI has combined the Tier I and Tier II steps herein. Where agency files are not readily available for nearby contaminated sites within the typical schedule for a Phase I ESA, then Tier II screening might be recommended as a separate step subsequent to the Phase I ESA. Where Tier II screening is recommended, the sites of concern where data is lacking cannot be ruled out as a VEC until such time as the information is available and further screening is completed.

The VES Standard Guide requires the environmental professional to search for potential sites of concern within the following databases and search distances, where groundwater flow is not known and/or preferential pathways for groundwater or vapor flow may exist:

Standard Environmental Records Sources	Minimum Search Distance (miles) - VOCs, excluding PHCs	Minimum Search Distance (miles) - PHCs
State and tribal HWS lists	1/3	1/10
State or tribal-equivalent NPL	1/3	1/10
State or tribal-equivalent CERCLIS list	1/3	1/10
State or tribal landfill or solid waste site list	1/3	1/10
State or tribal leaking storage tank lists	1/3	1/10
State and tribal registered tank lists	Subject property only	Subject property only
State and tribal IC/EC registries	Subject property only	Subject property only
State and tribal voluntary cleanup site lists	1/3	1/10
State and tribal brownfield sites list	1/3	1/10
Federal NPL site list	1/3	1/10
Federal CERCLIS list	1/3	1/10
Federal RCRA CORRACTS list	1/3	1/10
Federal RCRA non-CORRACTS TSD List	1/3	1/10
Federal RCRA Generators List	Subject property only	Subject property only
Federal IC/EC registries	Subject property only	Subject property only
Federal ERNS list	Subject property only	Subject property only

The default search distances may be expanded or reduced in the upgradient, downgradient, or cross-gradient directions by the environmental professional based on experience in the local area and applying professional judgment to factors such as where a well-defined regional groundwater flow direction is identified, or whether other geologic features such as low permeability soils or hydrogeologic boundaries such as rivers or streams exist which would tend to limit the potential for migration of groundwater or vapors in a particular direction.

8.2 VES RESULTS

PSI did not identify any sites of concern within the VES search radii; therefore, PSI concludes that no VECs exist on the subject property.

8.3 VES LIMITATIONS

The VES process is not intended to be an exhaustive screening and cannot wholly eliminate uncertainty regarding the presence of VECs in connection with the subject property. Screening is intended to reduce, but not eliminate uncertainty regarding whether or not a VEC exists in connection with the subject property.

9.0 CONTRACT INFORMATION

9.1 STANDARD OF CARE AND WARRANTIES

Our services were not intended to be technically exhaustive. There is a possibility that with the proper application of methodologies, conditions may exist on the property that could not be identified within the scope of the assessment(s) or that were not reasonably identifiable from the available information.

No ESA can wholly eliminate uncertainty regarding the potential for RECs in connection with the property. The ESA was intended to reduce, but not eliminate uncertainty regarding the potential for RECs in connection with a property.

Our report is based on commonly known and reasonably ascertainable information, including limited, ground-level visual inspection of the property except where otherwise explicitly indicated, in general conformance with ASTM E 1527-13. Findings and conclusions derived from the methodologies described in the Practice contain all of the inherent limitations in the methodologies that are referred to in the Practice.

PSI has assumed that factual information provided to us by the Client, or obtained from governmental and historical research firm, the public domain, interviews, and other sources is accurate and unbiased. PSI assumes no liability for the accuracy of data provided to us by others.

PSI did not perform any exploratory probing or discovery, perform tests, operate any specific equipment, or take measurements or samples to perform the ESA scope. The ESA was not a building code, safety, regulatory or environmental compliance inspection. The ESA is not intended to reduce the risk of the presence of mold and physical deficiencies conducive to mold nor the risk that mold or physical deficiencies conducive to mold may pose to the buildings and building occupants.

The methodologies include reviewing information provided by other sources. PSI treats information obtained from the record reviews and interviews concerning the property as reliable and the ASTM protocol does not require PSI to independently verify the information. Therefore, PSI cannot and does not warrant or guarantee that the information provided by these other sources is accurate or complete.

PSI has performed the services in a manner consistent with that level of care and skill ordinarily exercised by other members of our profession currently practicing in the same locality and under similar conditions, within the limitations of ASTM E 1527-13 standard, and the All Appropriate Inquiries Rule established by the U.S. Environmental Protection Agency (40 C.F.R. Part 312). No other warranties are implied or expressed.

The observations and recommendations presented in this report are time dependent, and conditions will change. This report speaks only as of its date.

9.2 RELIANCE

NAI Martens, PSI's client, may rely on this report. In addition, Cohlmia, LLC, and Sunflower Bank may rely on this report on the condition that such reliance is subject to the limitations and conditions accepted by PSI's client in its contract with PSI.

9.3 USE BY OTHER PARTIES

This report was prepared pursuant to a contract between PSI and its client. That contractual relationship included an exchange of information about the property that was unique and serves as the basis upon which this report was prepared. Because of the importance of these understandings, our assessment may not be sufficient for the intended purposes of another party.

Reliance or any use of this report by anyone other than those parties identified above for which it was prepared, except with express written permission, is prohibited and therefore not foreseeable to PSI. Any unauthorized reliance on or use of this report, including any of the information or conclusions contained herein, will be at the third party's risk. No warranties or representations expressed or implied in this report are made to any such third party.

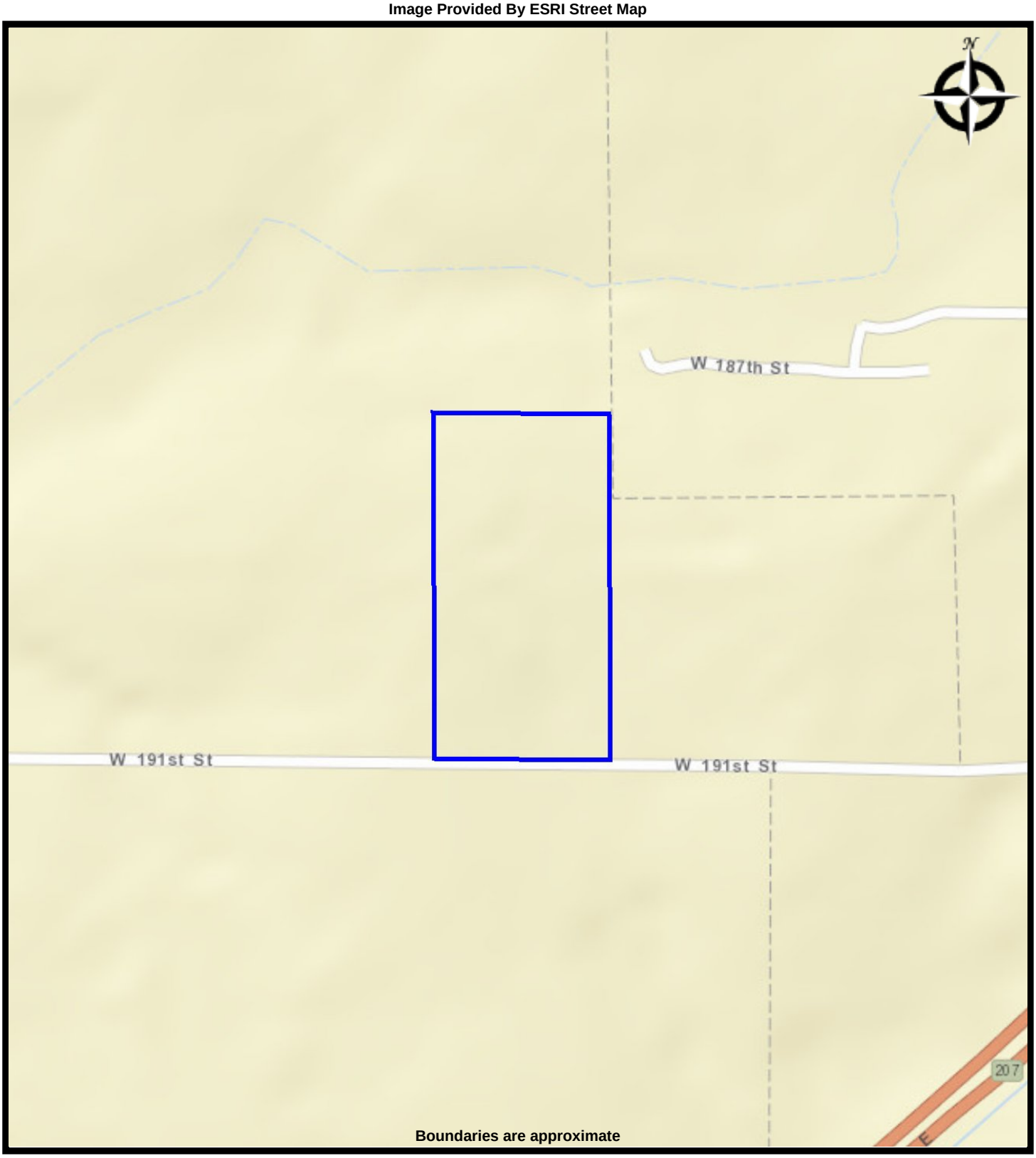
Third party reliance letters may be issued:

- upon timely request;
- subject to the permission by our original client; and
- payment of the then-current fee for such letters.

All third parties relying on our report, by such reliance, agree that such reliance is limited by our proposal and/or General Conditions, as applicable.

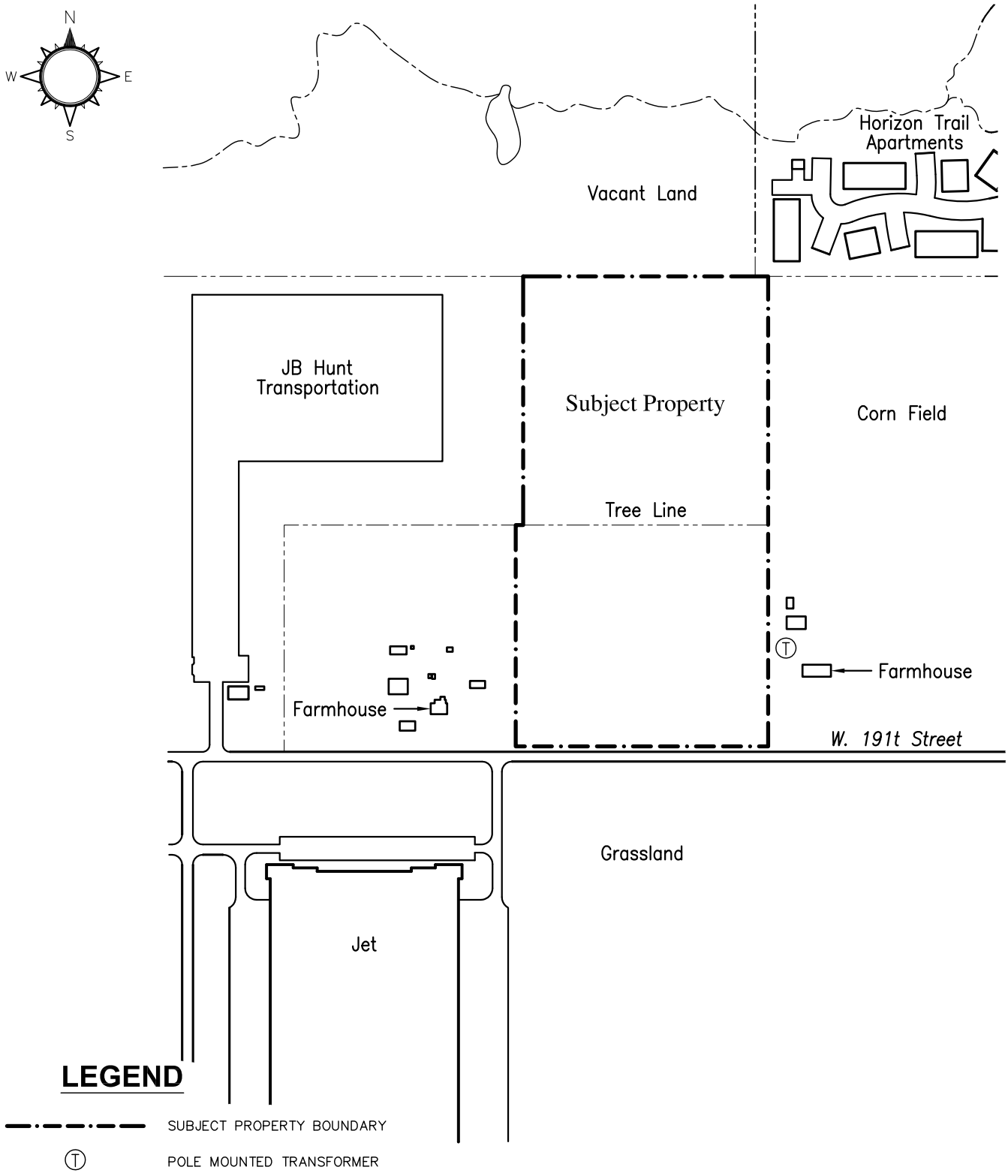
FIGURES

Image Provided By ESRI Street Map



STREET MAP
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 06031248-1



NOTE: All locations are approximate and must be field verified.

psi Information To Build On
Engineering • Consulting • Testing
Environmental Services
1211 W. Cambridge Circle Dr. Kansas City, KS 66103
PHONE: (913) 310-1600 FAX: (913) 310-1601

Figure 2 - Site Vicinity Sketch

Approximately 20 Acres of Vacant Land
Northeast of W. 191st St. & Waverly Rd.
Edgerton, Kansas 66021

Scale:	NO SCALE
Date:	6–13–16
File Name:	1248–001
Project Number:	06031248-1

PHOTOGRAPHS

Photo 1: View of interior subject property.

Photo 2: View looking north from subject property.

Photo 3: View looking northeast from northeast corner of subject property.

Photo 4: View looking southeast from interior of subject property.

Photo 5: View looking south from interior of subject property.

Photo 6: View looking west on West 191st. Street.

Photo 7: View looking west from interior of subject property.

Photo 8: View looking north from western edge of subject property.

Photo 9: View of dried up pond on subject property.

Photo 10: View of dried up pond on subject property.

Photo 11: View of northeastern adjoining property.

Photo 12: View of northeastern adjoining property.

Photo 13: View of southeastern adjoining residential home.

Photo 14: View looking east on east 191st. Street.

Photo 15: Southeastern view from subject property.

Photo 16: Southwest view from subject property.

Photo 17: View of southwestern adjoining residential property.

Photo 18: View of northwestern adjoining property

ENVIRONMENTAL DATABASE REPORT

Approximately 20 Acres Vacant Land
North of W. 191st Street and East of Waverly Road
Gardner, KS 66030

Inquiry Number: 4642915.2s
June 09, 2016

The EDR Radius Map™ Report with GeoCheck®

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

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

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 1527-13) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

NORTH OF W. 191ST STREET AND EAST OF WAVERLY ROAD
GARDNER, KS 66030

COORDINATES

Latitude (North):	38.7838400 - 38° 47' 1.82''
Longitude (West):	94.9377980 - 94° 56' 16.07''
Universal Tranverse Mercator:	Zone 15
UTM X (Meters):	331682.0
UTM Y (Meters):	4294365.5
Elevation:	1041 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5689816 GARDNER, KS
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20150624
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
NORTH OF W. 191ST STREET AND EAST OF WAVERLY ROAD
GARDNER, KS 66030

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	KCDA NIKE BATTERY 60	19500 SOUTH GARDNER	SHWS	Higher	3879, 0.735, SE

EXECUTIVE SUMMARY

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:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List

US INST CONTROL ---------- Sites with Institutional Controls

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ---------- Directory of Sanitary Landfills, Solid Waste Transfer Stations and Collector in Kansas
CITY DUMPS ---------- City Dump Listing

State and tribal leaking storage tank lists

LUST ---------- Leaking Underground Storage Tank Data
LAST ---------- Leaking Aboveground Storage Tanks
INDIAN LUST ---------- Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
UST ---------- Underground Storage Tank Data
AST ---------- Aboveground Storage Tank Data
INDIAN UST ---------- Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

INST CONTROL ---------- Institutional Controls Information

State and tribal voluntary cleanup sites

VCP ---------- Identified Sites List
INDIAN VCP ---------- Voluntary Cleanup Priority Listing

State and tribal Brownfields sites

BROWNFIELDS ---------- Identified Sites List

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ---------- A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ---------- Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory

Local Lists of Hazardous waste / Contaminated Sites

AOCONCERN ---------- Area of Concern
US HIST CDL ---------- Delisted National Clandestine Laboratory Register

CDL ---------- Clandestine Laboratory Data
US CDL ---------- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---------- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
SPILLS ---------- Kansas Spills Database

Other Ascertainable Records

RCRA NonGen / NLR ---------- RCRA - Non Generators / No Longer Regulated
FUDS ---------- Formerly Used Defense Sites
DOD ---------- Department of Defense Sites
SCRD DRYCLEANERS ---------- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---------- Financial Assurance Information
EPA WATCH LIST ---------- EPA WATCH LIST
2020 COR ACTION ---------- 2020 Corrective Action Program List
TSCA ---------- Toxic Substances Control Act
TRIS ---------- Toxic Chemical Release Inventory System
SSTS ---------- Section 7 Tracking Systems
ROD ---------- Records Of Decision
RMP ---------- Risk Management Plans
RAATS ---------- RCRA Administrative Action Tracking System
PRP ---------- Potentially Responsible Parties
PADS ---------- PCB Activity Database System
ICIS ---------- Integrated Compliance Information System
FTTS ---------- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---------- Material Licensing Tracking System
COAL ASH DOE ---------- Steam-Electric Plant Operation Data
COAL ASH EPA ---------- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---------- PCB Transformer Registration Database
RADINFO ---------- Radiation Information Database
HIST FTTS ---------- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---------- Incident and Accident Data
CONSENT ---------- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---------- Indian Reservations
FUSRAP ---------- Formerly Utilized Sites Remedial Action Program
UMTRA ---------- Uranium Mill Tailings Sites
LEAD SMELTERS ---------- Lead Smelter Sites
US AIRS ---------- Aerometric Information Retrieval System Facility Subsystem
US MINES ---------- Mines Master Index File
FINDS ---------- Facility Index System/Facility Registry System
UXO ---------- Unexploded Ordnance Sites
DOCKET HWC ---------- Hazardous Waste Compliance Docket Listing
AIRS ---------- Title V Source Information
COAL ASH ---------- Coal Ash Disposal Site Listing
DRYCLEANERS ---------- Registered Drycleaning Facilities
Financial Assurance ---------- Financial Assurance Information Listing
TIER 2 ---------- Tier 2 Information Listing
UIC ---------- Underground Injection Wells Database Listing

NPDES ---------- Wastewater Permit Listing
ECHO ---------- Enforcement & Compliance History Information
FUELS PROGRAM ---------- EPA Fuels Program Registered Listing

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---------- EDR Exclusive Historic Gas Stations
EDR Hist Cleaner ---------- EDR Exclusive Historic Dry Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS ---------- Recovered Government Archive State Hazardous Waste Facilities List
RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

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.

STANDARD ENVIRONMENTAL RECORDS

State- and tribal - equivalent CERCLIS

SHWS: The State Hazardous Waste Sites 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. The data come from the Department of Health & Environment's list: Summary of Bureau of Environmental Remediation Sites in Kansas.

A review of the SHWS list, as provided by EDR, and dated 01/14/2016 has revealed that there is 1 SHWS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
KCDA NIKE BATTERY 60 Facility Status: Active Project code: C404670890	19500 SOUTH GARDNER	SE 1/2 - 1 (0.735 mi.)	1	8

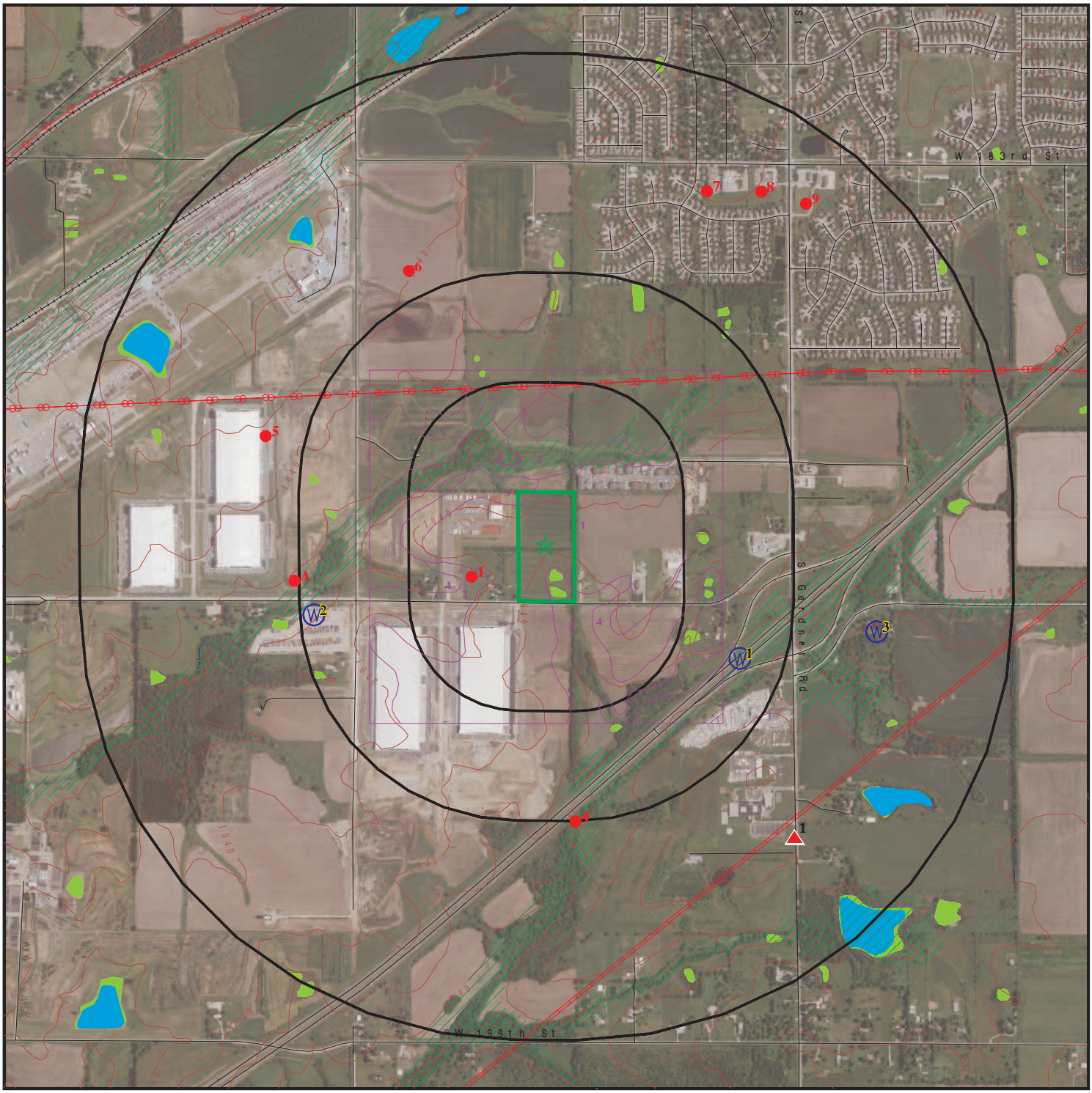
EXECUTIVE SUMMARY

Activity Status: C

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 4642915.2S



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

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Pipelines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

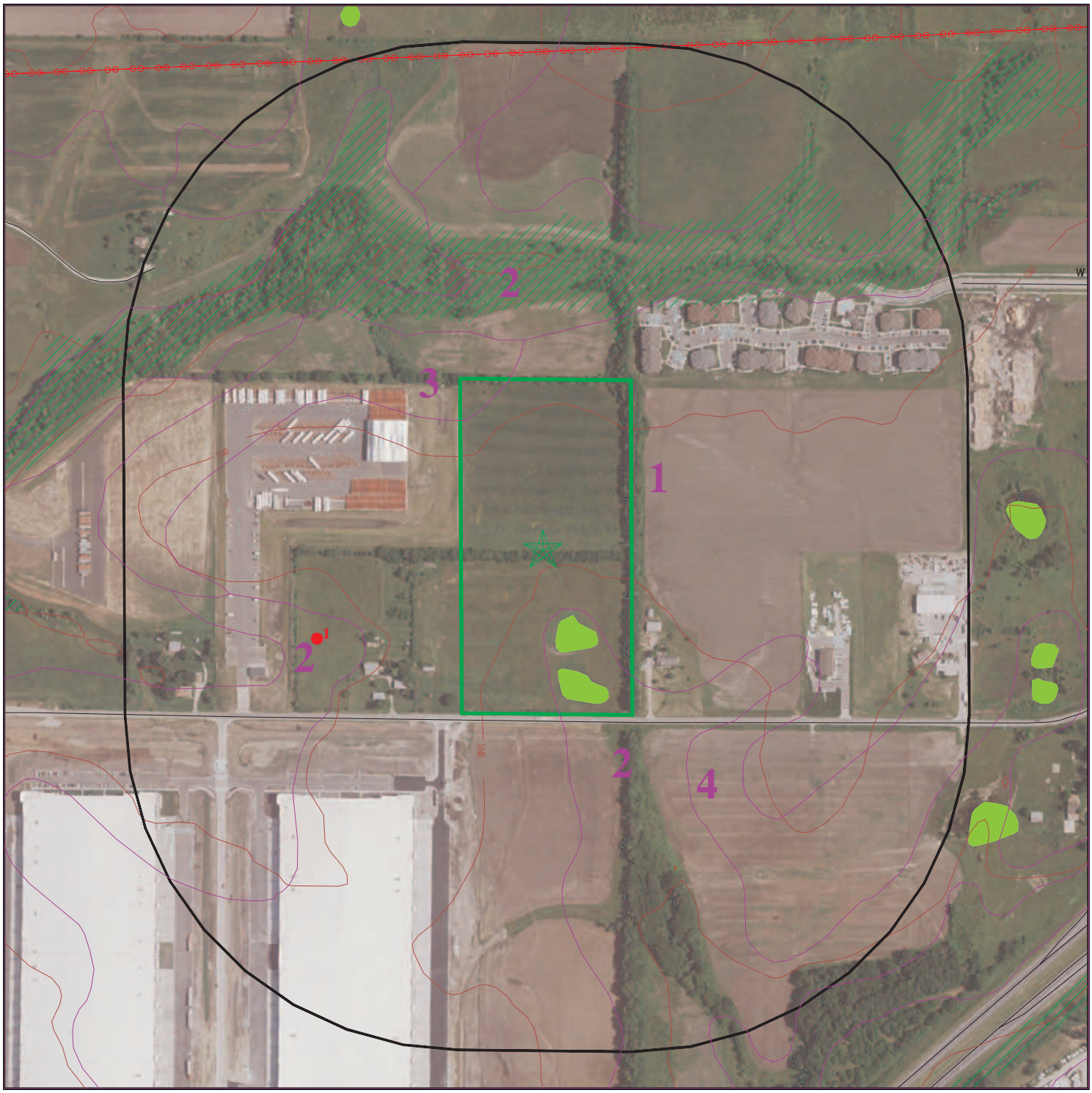
Areas of Concern

N

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Approximately 20 Acres Vacant Land	CLIENT:	PSI, Inc.
ADDRESS:	North of W. 191st Street and East of Waverly Road Gardner KS 66030	CONTACT:	Cole Read
LAT/LONG:	38.78384 / 94.937798	INQUIRY #:	4642915.2s
		DATE:	June 09, 2016 2:23 pm

DETAIL MAP - 4642915.2S



- 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
- Dept. Defense Sites

0 1/16 1/8 1/4 Miles

- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Areas of Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Approximately 20 Acres Vacant Land	CLIENT:	PSI, Inc.
ADDRESS:	North of W. 191st Street and East of Waverly Road Gardner KS 66030	CONTACT:	Cole Read
LAT/LONG:	38.78384 / 94.937798	INQUIRY #:	4642915.2s
		DATE:	June 09, 2016 2:25 pm

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		0	0	0	1	NR	1
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
CITY DUMPS	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST	0.500		0	0	0	NR	NR	0
LAST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
VCP	0.500		0	0	0	NR	NR	0
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
AOCONCERN	1.000		0	0	0	0	NR	0
US HIST CDL	TP		NR	NR	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
TIER 2	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	0	0	0	1	0	1

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
SE
1/2-1
0.735 mi.
3879 ft.

KCDA NIKE BATTERY 60
19500 SOUTH GARDNER ROAD
GARDNER, KS 66030

SHWS **S106517410**
N/A

Relative:
Higher

Actual:
1049 ft.

SHWS:

Site ID:	917
Has Env Use Control:	No
Project code:	C404670890
PM Name:	JACOBS, J.
Site Status:	**Active**
District Office:	NEDO
Lat/Long:	38.77638 / -94.92916
River Basin:	KS - Lower Republican
Aquifer Yield:	Unknown
Other Aquifers:	Soil Profile and Bedrock
Parent PC:	Not reported
Parent Name:	Not reported
CERCLIS ID:	KSSFN0703139
Discovery Date:	05/16/1990
Depth To GW:	0-10 feet
Depth To Bedrock:	0-10 feet
Aquifer Yield:	0-10 gpm
GW Flow Direction:	N
Acres Affected:	26-500 acres
Waste Present:	Yes
Product Present:	No
Program:	FUDS (Formerly Used Defense Sites)
Lead Agency:	BER - Remedial
Contaminants:	Heavy Metal, VOC, PCB
Media Act:	Ground Water, Soil
Media Pot:	Not reported
Source:	Abandoned Facility, Facility Operations, Other (see Site Narrative)
Land Use:	Other (see Site Narrative)
Private well:	Domestic
Waste Present:	Other (see Site Narrative)
Product:	Not reported
Receptor Act:	Not reported
Receptor Pot:	Not reported
Remed Air:	Not reported
Remed Soil:	Not reported
Remed Water:	Not reported
Remedir:	Not reported
Alias:	KC 60; KC NIKE 60; KCDA NIKE 60; NIKE 60; NIKE 60 CONTROL AND LAUNCH; NIKE 60 CONTROL SITE; NIKE 60 LAUNCHER SITE; NIKE MIDDLE SCHOOL; USD 231 GARDNER-EDGERTON-ANTIOCH
Eucan Number:	Not reported
Date:	Not reported
Activity Type:	Preliminary Investigation
Activity Status:	Completed
Activity Start Date:	03/01/2004
Activity End Date:	09/30/2005
Narrative:	The KCDA Nike 60 site was a former Nike Ajax and Hercules missile defense site. The site was one of four sites and a headquarters located around the Kansas City area to protect the city in case of foreign bomber squadron attack. The site consisted of a control facility (current middle school) and a launcher facility (currently abandoned). Both facilities are owned by the Gardner-Edgerton school

KCDA NIKE BATTERY 60 (Continued) **S106517410**

district. KDHE investigations have identified the potential for soil and groundwater contamination throughout the site area. VOCs, PNAs, petroleum compounds are likely. The USACE completed a site investigation in the Summer of 2003 at the control site facility. The launcher site investigation in 2004. Various chemicals were detected both below and above laboratory method detection limits with very few detected above Kansas Risk-Based levels.

A lead detection in groundwater exceeded the Kansas Risk Level, ho wever this detection was isolated and found at a depth of eight feet below grade. The USACE will recollect select soil and groundwater samples in the summer of 2004 to confirm detections and to delineate any potential
contaminants.

In 1998, KDHE conducted an Initial Site Screening that concluded a dditional investigation may need to be performed to assess for the potential of contaminants. On July 2, 2003, the USACE and KDHE collaborated to gather information from local files at Fort Leavenworth and the City of Leavenworth. In August 2003, trhe USACE and KDHE performd a site visit with access granted by the property owenr's caretaker. USTs were observed to be present onsite based on fill pipes. The property owner did not wish the USACE or KDHE to remove any USTs from the site and therefore the site is placed on hold until access is granted by the property owner to remove the USTS and further assess the
site.

A Site Inspection was performed in In 2005 to evaluate nine areas of interest. The SI Report, dated September 2005, concluded that risk levels posed by site-specific contaminants were within acceptable ranges for risks. KDHE reviewed and approved the USACE Final SI reports in comment letters dated October 24, 2005 for both each of the control and launcher areas.

Site ID:	917
Has Env Use Control:	No
Project code:	C404670890
PM Name:	JACOBS, J.
Site Status:	**Active**
District Office:	NEDO
Lat/Long:	38.77638 / -94.92916
River Basin:	KS - Lower Republican
Aquifer Yield:	Unknown
Other Aquifers:	Soil Profile and Bedrock
Parent PC:	Not reported
Parent Name:	Not reported
CERCLIS ID:	KSSFN0703139
Discovery Date:	05/16/1990
Depth To GW:	0-10 feet
Depth To Bedrock:	0-10 feet
Aquifer Yield:	0-10 gpm
GW Flow Direction:	N
Acres Affected:	26-500 acres
Waste Present:	Yes
Product Present:	No
Program:	FUDS (Formerly Used Defense Sites)
Lead Agency:	BER - Remedial
Contaminants:	Heavy Metal, VOC, PCB
Media Act:	Ground Water, Soil

KCDA NIKE BATTERY 60 (Continued) **S106517410**

Media Pot:	Not reported
Source:	Abandoned Facility, Facility Operations, Other (see Site Narrative)
Land Use:	Other (see Site Narrative)
Private well:	Domestic
Waste Present:	Other (see Site Narrative)
Product:	Not reported
Receptor Act:	Not reported
Receptor Pot:	Not reported
Remed Air:	Not reported
Remed Soil:	Not reported
Remed Water:	Not reported
Remedir:	Not reported
Alias:	KC 60; KC NIKE 60; KCDA NIKE 60; NIKE 60; NIKE 60 CONTROL AND LAUNCH; NIKE 60 CONTROL SITE; NIKE 60 LAUNCHER SITE; NIKE MIDDLE SCHOOL; USD 231 GARDNER-EDGERTON-ANTIOCH
Eucan Number:	Not reported
Date:	Not reported
Activity Type:	Preliminary Investigation
Activity Status:	Completed
Activity Start Date:	06/01/2003
Activity End Date:	09/30/2005
Narrative:	The KCDA Nike 60 site was a former Nike Ajax and Hercules missile defense site. The site was one of four sites and a headquarters located around the Kansas City area to protect the city in case of foreign bomber squadron attack. The site consisted of a control facility (current middle school) and a launcher facility (currently abandoned). Both facilities are owned by the Gardner-Edgerton school district. KDHE investigations have identified the potential for soil and groundwater contamination throughout the site area. VOCs, PNAs, petroleum compounds are likely. The USACE completed a site investigation in the Summer of 2003 at the control site facility. The launcher site investigation in 2004. Various chemicals were detected both below and above laboratory method detection limits with very few detected above Kansas Risk-Based levels. A lead detection in groundwater exceeded the Kansas Risk Level, ho wever this detection was isolated and found at a depth of eight feet below grade. The USACE will recollect select soil and groundwater samples in the summer of 2004 to confirm detections and to delineate any potential contaminants. In 1998, KDHE conducted an Initial Site Screening that concluded a dditional investigation may need to be performed to assess for the potential of contaminants. On July 2, 2003, the USACE and KDHE collaborated to gather information from local files at Fort Leavenworth and the City of Leavenworth. In August 2003, trhe USACE and KDHE performd a site visit with access granted by the property owenr's caretaker. USTs were observed to be present onsite based on fill pipes. The property owner did not wish the USACE or KDHE to remove any USTs from the site and therefore the site is placed on hold until access is granted by the property owner to remove the USTS and further assess the site. A Site Inspection was performed in In 2005 to evaluate nine areas of interest. The SI Report, dated September 2005, concluded that risk levels posed by site-specific contaminants were within acceptable ranges for risks. KDHE reviewed and approved the USACE Final SI reports in comment letters dated October 24, 2005 for both

KCDA NIKE BATTERY 60 (Continued) **S106517410**

each of the control and launcher areas.

Site ID:	917
Has Env Use Control:	No
Project code:	C404670890
PM Name:	JACOBS, J.
Site Status:	**Active**
District Office:	NEDO
Lat/Long:	38.77638 / -94.92916
River Basin:	KS - Lower Republican
Aquifer Yield:	Unknown
Other Aquifers:	Soil Profile and Bedrock
Parent PC:	Not reported
Parent Name:	Not reported
CERCLIS ID:	KSSFN0703139
Discovery Date:	05/16/1990
Depth To GW:	0-10 feet
Depth To Bedrock:	0-10 feet
Aquifer Yield:	0-10 gpm
GW Flow Direction:	N
Acres Affected:	26-500 acres
Waste Present:	Yes
Product Present:	No
Program:	FUDS (Formerly Used Defense Sites)
Lead Agency:	BER - Remedial
Contaminants:	Heavy Metal, VOC, PCB
Media Act:	Ground Water, Soil
Media Pot:	Not reported
Source:	Abandoned Facility, Facility Operations, Other (see Site Narrative)
Land Use:	Other (see Site Narrative)
Private well:	Domestic
Waste Present:	Other (see Site Narrative)
Product:	Not reported
Receptor Act:	Not reported
Receptor Pot:	Not reported
Remed Air:	Not reported
Remed Soil:	Not reported
Remed Water:	Not reported
Remedir:	Not reported
Alias:	KC 60; KC NIKE 60; KCDA NIKE 60; NIKE 60; NIKE 60 CONTROL AND LAUNCH; NIKE 60 CONTROL SITE; NIKE 60 LAUNCHER SITE; NIKE MIDDLE SCHOOL; USD 231 GARDNER-EDGERTON-ANTIOCH
Eucan Number:	Not reported
Date:	Not reported
Activity Type:	Site Reconnaissance and Evaluation
Activity Status:	Completed
Activity Start Date:	Not reported
Activity End Date:	10/15/1999
Narrative:	The KCDA Nike 60 site was a former Nike Ajax and Hercules missile defense site. The site was one of four sites and a headquarters located around the Kansas City area to protect the city in case of foreign bomber squadron attack. The site consisted of a control facility (current middle school) and a launcher facility (currently abandoned). Both facilities are owned by the Gardner-Edgerton school district. KDHE investigations have identified the potential for soil and groundwater contamination throughout the site area. VOCs, PNAs, petroleum compounds are likely. The USACE completed a site

KCDA NIKE BATTERY 60 (Continued) **S106517410**

investigation in the Summer of 2003 at the control site facility. The launcher site investigation in 2004. Various chemicals were detected both below and above laboratory method detection limits with very few detected above Kansas Risk-Based levels.

A lead detection in groundwater exceeded the Kansas Risk Level, ho wever this detection was isolated and found at a depth of eight feet below grade. The USACE will recollect select soil and groundwater samples in the summer of 2004 to confirm detections and to delineate any potential
contaminants.

In 1998, KDHE conducted an Initial Site Screening that concluded a dditional investigation may need to be performed to assess for the potential of contaminants. On July 2, 2003, the USACE and KDHE collaborated to gather information from local files at Fort Leavenworth and the City of Leavenworth. In August 2003, trhe USACE and KDHE performd a site visit with access granted by the property owenr's caretaker. USTs were observed to be present onsite based on fill pipes. The property owner did not wish the USACE or KDHE to remove any USTs from the site and therefore the site is placed on hold until access is granted by the property owner to remove the USTS and further assess the
site.

A Site Inspection was performed in In 2005 to evaluate nine areas of interest. The SI Report, dated September 2005, concluded that risk levels posed by site-specific contaminants were within acceptable ranges for risks. KDHE reviewed and approved the USACE Final SI reports in comment letters dated October 24, 2005 for both each of the control and launcher areas.

Count: 0 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

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.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

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: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 04/18/2016
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 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Quarterly

NPL LIENS: 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
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal Delisted NPL site list

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: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: N/A
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 04/18/2016
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/13/2015
Date Data Arrived at EDR: 01/06/2016
Date Made Active in Reports: 05/20/2016
Number of Days to Update: 135

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/08/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list 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). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS 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 the 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. The 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 potential NPL site.

Date of Government Version: 03/07/2016
Date Data Arrived at EDR: 04/05/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 10

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 04/05/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

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. 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). Transporters are individuals or entities that move hazardous waste from the generator offsite 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: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 913-551-7003
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

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. 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). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 913-551-7003
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

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. 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). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 913-551-7003
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

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. 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.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 913-551-7003
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015
Date Data Arrived at EDR: 05/29/2015
Date Made Active in Reports: 06/11/2015
Number of Days to Update: 13

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 05/16/2016
Next Scheduled EDR Contact: 08/29/2016
Data Release Frequency: Varies

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: 09/10/2015
Date Data Arrived at EDR: 09/11/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 53

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/25/2016
Next Scheduled EDR Contact: 09/12/2016
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: 09/10/2015
Date Data Arrived at EDR: 09/11/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 53

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/25/2016
Next Scheduled EDR Contact: 09/12/2016
Data Release Frequency: Varies

Federal ERNS list

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: 03/28/2016
Date Data Arrived at EDR: 03/30/2016
Date Made Active in Reports: 05/20/2016
Number of Days to Update: 51

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Identified Sites List

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: 01/14/2016
Date Data Arrived at EDR: 01/28/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 42

Source: Department of Health and Environment
Telephone: 785-296-1660
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Directory of Sanitary Landfills, Solid Waste Transfer Stations and Collector in Kansas

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: 02/15/2016
Date Data Arrived at EDR: 02/17/2016
Date Made Active in Reports: 04/14/2016
Number of Days to Update: 57

Source: Department of Health and Environment
Telephone: 785-296-1590
Last EDR Contact: 04/18/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Annually

CITY DUMPS: City Dump Listing

The City Dump Cleanup Program provides funds to cities or counties for the repair of old, unused municipal dump sites. These sites primarily operated between the 1940s and the 1970s before many counties had landfills and prior to the current regulations for solid waste disposal.

Date of Government Version: 02/29/2016
Date Data Arrived at EDR: 03/01/2016
Date Made Active in Reports: 04/14/2016
Number of Days to Update: 44

Source: Department of Health & Environment
Telephone: 785-296-6377
Last EDR Contact: 05/26/2016
Next Scheduled EDR Contact: 09/12/2016
Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Data

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: 01/12/2016
Date Data Arrived at EDR: 01/22/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 48

Source: Department of Health and Environment
Telephone: 785-296-1685
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Quarterly

LAST: Leaking Aboveground Storage Tanks
Leaking aboveground storage tank site locations.

Date of Government Version: 01/12/2016
Date Data Arrived at EDR: 01/22/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 48
Source: Department of Health & Environment
Telephone: 785-296-1685
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Quarterly

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/13/2015
Date Data Arrived at EDR: 10/23/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 118
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 02/25/2016
Date Data Arrived at EDR: 04/27/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 37
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 01/07/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 41
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/09/2015
Date Data Arrived at EDR: 02/12/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 112
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 12/11/2015
Date Data Arrived at EDR: 02/19/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 105
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/27/2015
Date Data Arrived at EDR: 10/29/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 67
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/05/2016
Date Data Arrived at EDR: 04/29/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 35
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 04/26/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Semi-Annually

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 02/17/2016
Date Data Arrived at EDR: 04/27/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 37
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Date Data Arrived at EDR: 02/16/2010
Date Made Active in Reports: 04/12/2010
Number of Days to Update: 55
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Varies

UST: Underground Storage Tank Data
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: 01/12/2016
Date Data Arrived at EDR: 01/22/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 48
Source: Department of Health and Environment
Telephone: 785-296-1685
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Quarterly

AST: Aboveground Storage Tank Data
Registered Aboveground Storage Tanks.

Date of Government Version: 01/12/2016
Date Data Arrived at EDR: 01/22/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 48
Source: Department of Health and Environment
Telephone: 785-296-1685
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Quarterly

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014
Date Data Arrived at EDR: 11/25/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 65
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 01/26/2016
Date Data Arrived at EDR: 02/05/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 119

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/25/2016
Date Data Arrived at EDR: 04/27/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 37

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/05/2016
Date Data Arrived at EDR: 04/29/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 35

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 04/26/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Semi-Annually

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 12/03/2015
Date Data Arrived at EDR: 02/04/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 120

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/05/2015
Date Data Arrived at EDR: 11/13/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 52

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/29/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 67

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 01/07/2016
Date Data Arrived at EDR: 01/08/2016
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 41

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 04/29/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Quarterly

State and tribal institutional control / engineering control registries

INST CONTROL: Institutional Controls Information

Sites that have institutional control information entered into the Identified Sites List database.

Date of Government Version: 01/14/2016
Date Data Arrived at EDR: 01/28/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 42

Source: Department of Health & Environment
Telephone: 785-296-8049
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

VCP: Identified Sites List

Sites included in the Identified Sites List that are identified as Voluntary Cleanup sites.

Date of Government Version: 01/14/2016
Date Data Arrived at EDR: 01/28/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 42

Source: Department of Health & Environment
Telephone: 785-296-8049
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 04/01/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Identified Sites List

Sites included in the Identified Sites List that are identified as Brownfields sites.

Date of Government Version: 01/14/2016
Date Data Arrived at EDR: 01/28/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 42

Source: Department of Health & Environment
Telephone: 785-296-8049
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/22/2015
Date Data Arrived at EDR: 12/23/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/22/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 04/27/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 04/21/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: No Update Planned

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

Local Lists of Hazardous waste / Contaminated Sites

AOCONCERN: Area of Concern

The City of Wichita has taken the lead for the investigation and remediation efforts with the Kansas Department of Health & Environment, Bureau of Remediation. The primary contaminates of concern are chlorinated solvents and their degradation products.

Date of Government Version: N/A
Date Data Arrived at EDR: 04/25/2002
Date Made Active in Reports: 06/28/2002
Number of Days to Update: 64

Source: Department of Environmental Health
Telephone: 315-268-8351
Last EDR Contact: 03/13/2007
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/18/2016
Date Data Arrived at EDR: 03/07/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 88
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/01/2016
Next Scheduled EDR Contact: 06/13/2016
Data Release Frequency: No Update Planned

CDL: Clandestine Laboratory Data
Clandestine meth lab location

Date of Government Version: 09/29/2009
Date Data Arrived at EDR: 10/02/2009
Date Made Active in Reports: 10/20/2009
Number of Days to Update: 18
Source: Department of Health and Environment
Telephone: 785-368-7301
Last EDR Contact: 05/16/2016
Next Scheduled EDR Contact: 08/29/2016
Data Release Frequency: Varies

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/18/2016
Date Data Arrived at EDR: 03/07/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 88
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/31/2016
Next Scheduled EDR Contact: 09/12/2016
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014
Date Data Arrived at EDR: 03/18/2014
Date Made Active in Reports: 04/24/2014
Number of Days to Update: 37
Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 04/26/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

Records of Emergency Release Reports

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

Date of Government Version: 06/24/2015
Date Data Arrived at EDR: 06/26/2015
Date Made Active in Reports: 09/02/2015
Number of Days to Update: 68
Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

SPILLS: Kansas Spills Database
All spills reported under the regulatory authority of the Department of Health & Environment and the Kansas Corporation Commission.

Date of Government Version: 02/29/2016
Date Data Arrived at EDR: 03/04/2016
Date Made Active in Reports: 04/14/2016
Number of Days to Update: 41

Source: Department of Health and Environment
Telephone: 785-296-1660
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Semi-Annually

SPILLS 2: Spills Database

All spills reported under the regulatory authority of the Kansas Corporation Commission.

Date of Government Version: 01/11/2016
Date Data Arrived at EDR: 01/13/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 57

Source: Kansas Corporation Commission
Telephone: 316-337-6626
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Varies

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

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. 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). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/09/2015
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 34

Source: Environmental Protection Agency
Telephone: 913-551-7003
Last EDR Contact: 03/30/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

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: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/11/2016
Next Scheduled EDR Contact: 06/20/2016
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: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 04/15/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 04/15/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Date Data Arrived at EDR: 03/09/2011
Date Made Active in Reports: 05/02/2011
Number of Days to Update: 54

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/20/2016
Next Scheduled EDR Contact: 08/29/2016
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/01/2015
Date Data Arrived at EDR: 09/03/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 61

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 05/18/2016
Next Scheduled EDR Contact: 08/29/2016
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 05/09/2016
Next Scheduled EDR Contact: 08/22/2016
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 05/12/2016
Next Scheduled EDR Contact: 08/22/2016
Data Release Frequency: Varies

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: 12/31/2012
Date Data Arrived at EDR: 01/15/2015
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 14

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/24/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Every 4 Years

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: 12/31/2014
Date Data Arrived at EDR: 11/24/2015
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 133

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/24/2016
Next Scheduled EDR Contact: 09/05/2016
Data Release Frequency: Annually

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: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/25/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Annually

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: 11/25/2013
Date Data Arrived at EDR: 12/12/2013
Date Made Active in Reports: 02/24/2014
Number of Days to Update: 74

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 06/07/2016
Next Scheduled EDR Contact: 09/19/2016
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2015
Date Data Arrived at EDR: 08/26/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 69

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 04/25/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

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: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties
A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 05/12/2016
Next Scheduled EDR Contact: 08/22/2016
Data Release Frequency: Quarterly

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: 07/01/2014
Date Data Arrived at EDR: 10/15/2014
Date Made Active in Reports: 11/17/2014
Number of Days to Update: 33
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 04/12/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/23/2015
Date Data Arrived at EDR: 02/06/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 31
Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 04/08/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Quarterly

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: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 05/20/2016
Next Scheduled EDR Contact: 09/05/2016
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 05/20/2016
Next Scheduled EDR Contact: 09/05/2016
Data Release Frequency: Quarterly

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: 03/07/2016
Date Data Arrived at EDR: 03/18/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 28
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 05/06/2016
Next Scheduled EDR Contact: 08/22/2016
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 04/15/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/11/2016
Next Scheduled EDR Contact: 06/20/2016
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Date Data Arrived at EDR: 10/19/2011
Date Made Active in Reports: 01/10/2012
Number of Days to Update: 83
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 04/26/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2015
Date Data Arrived at EDR: 07/09/2015
Date Made Active in Reports: 09/16/2015
Number of Days to Update: 69
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/08/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 05/04/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Varies

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: 12/31/2014
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/02/2015
Number of Days to Update: 46

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 03/24/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Varies

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: 12/31/2013
Date Data Arrived at EDR: 02/24/2015
Date Made Active in Reports: 09/30/2015
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 05/27/2016
Next Scheduled EDR Contact: 09/05/2016
Data Release Frequency: Biennially

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: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 04/15/2016
Next Scheduled EDR Contact: 07/25/2016
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/11/2016
Date Data Arrived at EDR: 03/15/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 80

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 05/09/2016
Next Scheduled EDR Contact: 08/22/2016
Data Release Frequency: Varies

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: 09/14/2010
Date Data Arrived at EDR: 10/07/2011
Date Made Active in Reports: 03/01/2012
Number of Days to Update: 146

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/23/2016
Next Scheduled EDR Contact: 09/05/2016
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014
Date Data Arrived at EDR: 11/26/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 64

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/07/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/24/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/20/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 69

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 03/24/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

US 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: 02/09/2016
Date Data Arrived at EDR: 03/02/2016
Date Made Active in Reports: 04/15/2016
Number of Days to Update: 44

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 06/02/2016
Next Scheduled EDR Contact: 09/12/2016
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 06/03/2016
Next Scheduled EDR Contact: 09/12/2016
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 06/03/2016
Next Scheduled EDR Contact: 09/12/2016
Data Release Frequency: Varies

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: 07/20/2015
Date Data Arrived at EDR: 09/09/2015
Date Made Active in Reports: 11/03/2015
Number of Days to Update: 55

Source: EPA
Telephone: (913) 551-7003
Last EDR Contact: 06/08/2016
Next Scheduled EDR Contact: 09/19/2016
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 10/25/2015
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 67

Source: Department of Defense
Telephone: 571-373-0407
Last EDR Contact: 04/18/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Varies

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 03/01/2016
Date Data Arrived at EDR: 03/03/2016
Date Made Active in Reports: 04/05/2016
Number of Days to Update: 33

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 05/25/2016
Next Scheduled EDR Contact: 09/12/2016
Data Release Frequency: Varies

AIRS: Title V Source Information

A listing of title V sources, including emissions information.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 01/27/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 43

Source: Department of Health & Environment
Telephone: 785-296-6427
Last EDR Contact: 04/11/2016
Next Scheduled EDR Contact: 07/11/2016
Data Release Frequency: Annually

COAL ASH: Coal Ash Disposal Site Listing

A listing of coal combustion waste landfills.

Date of Government Version: 05/04/2015
Date Data Arrived at EDR: 05/07/2015
Date Made Active in Reports: 05/11/2015
Number of Days to Update: 4

Source: Department of Health & Environment
Telephone: 785-296-1600
Last EDR Contact: 05/26/2016
Next Scheduled EDR Contact: 08/01/2016
Data Release Frequency: Varies

DRYCLEANERS: Registered Drycleaning Facilities
A listing of registered drycleaners.

Date of Government Version: 03/08/2016
Date Data Arrived at EDR: 03/15/2016
Date Made Active in Reports: 04/14/2016
Number of Days to Update: 30

Source: Department of Health & Environment
Telephone: 785-291-3250
Last EDR Contact: 05/26/2016
Next Scheduled EDR Contact: 09/12/2016
Data Release Frequency: Varies

Financial Assurance: Financial Assurance Information Listing
A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 01/12/2016
Date Data Arrived at EDR: 01/22/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 48

Source: Department of Health & Environment
Telephone: 785-296-1685
Last EDR Contact: 04/04/2016
Next Scheduled EDR Contact: 07/18/2016
Data Release Frequency: Quarterly

TIER 2: Tier 2 Information Listing
A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/10/2015
Date Made Active in Reports: 07/17/2015
Number of Days to Update: 7

Source: Department of Health & Environment
Telephone: 785-296-1688
Last EDR Contact: 03/21/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Annually

UIC: Underground Injection Wells Database Listing
A listing of underground injection wells.

Date of Government Version: 01/27/2016
Date Data Arrived at EDR: 01/29/2016
Date Made Active in Reports: 03/10/2016
Number of Days to Update: 41

Source: Department of Health & Environment
Telephone: 785-296-1367
Last EDR Contact: 04/26/2016
Next Scheduled EDR Contact: 08/08/2016
Data Release Frequency: Varies

NPDES: Wastewater Permit Listing
A listing of facilities with wastewater permits.

Date of Government Version: 08/18/2015
Date Data Arrived at EDR: 09/17/2015
Date Made Active in Reports: 03/14/2016
Number of Days to Update: 179

Source: Department of Health & Environment
Telephone: 785-296-5517
Last EDR Contact: 06/07/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information
ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/20/2015
Date Data Arrived at EDR: 09/23/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 103

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/23/2016
Next Scheduled EDR Contact: 07/04/2016
Data Release Frequency: Quarterly

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/22/2016
Date Data Arrived at EDR: 02/24/2016
Date Made Active in Reports: 05/20/2016
Number of Days to Update: 86

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/25/2016
Next Scheduled EDR Contact: 09/05/2016
Data Release Frequency: Quarterly

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: 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

EDR Hist Auto: EDR Exclusive Historic Gas Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

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: Varies

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

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: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health and Environment in Kansas.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Health and Environment
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health and Environment in Kansas.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/20/2014
Number of Days to Update: 203

Source: Department of Health and Environment
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health and Environment in Kansas.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/03/2014
Number of Days to Update: 186

Source: Department of Health and Environment
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

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.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 07/30/2013
Date Data Arrived at EDR: 08/19/2013
Date Made Active in Reports: 10/03/2013
Number of Days to Update: 45

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 05/13/2016
Next Scheduled EDR Contact: 08/29/2016
Data Release Frequency: No Update Planned

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 02/01/2016
Date Data Arrived at EDR: 02/03/2016
Date Made Active in Reports: 03/22/2016
Number of Days to Update: 48

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 05/06/2016
Next Scheduled EDR Contact: 08/15/2016
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2013
Date Data Arrived at EDR: 06/19/2015
Date Made Active in Reports: 07/15/2015
Number of Days to Update: 26

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 06/06/2016
Next Scheduled EDR Contact: 09/05/2016
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 04/14/2016
Date Made Active in Reports: 06/03/2016
Number of Days to Update: 50

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/14/2016
Next Scheduled EDR Contact: 06/27/2016
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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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.

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.

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 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, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

APPROXIMATELY 20 ACRES VACANT LAND
NORTH OF W. 191ST STREET AND EAST OF WAVERLY ROAD
GARDNER, KS 66030

TARGET PROPERTY COORDINATES

Latitude (North):	38.78384 - 38° 47' 1.82''
Longitude (West):	94.937798 - 94° 56' 16.07''
Universal Tranverse Mercator:	Zone 15
UTM X (Meters):	331682.0
UTM Y (Meters):	4294365.5
Elevation:	1041 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5689816 GARDNER, KS
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principal investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

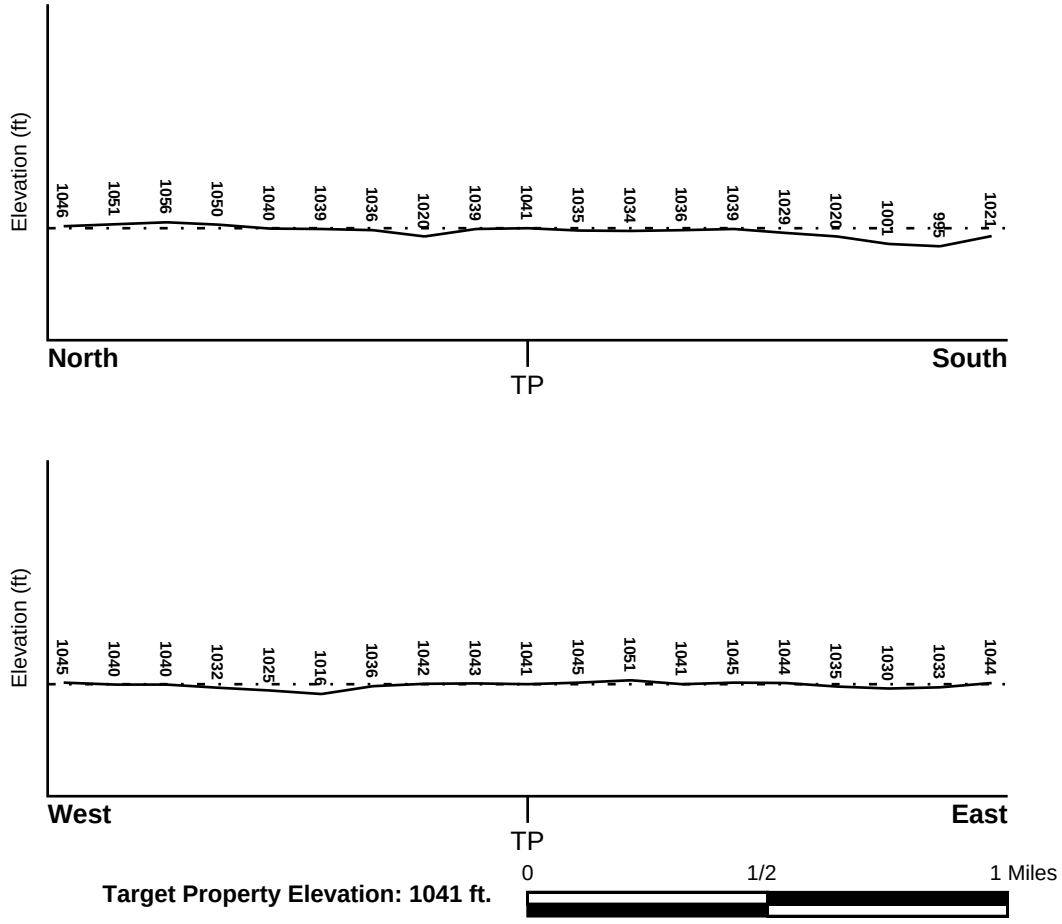
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General NW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' 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.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Target Property County	FEMA Flood Electronic Data
JOHNSON, KS	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 20091C - FEMA DFIRM Flood data

Additional Panels in search area: Not Reported

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
GARDNER	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

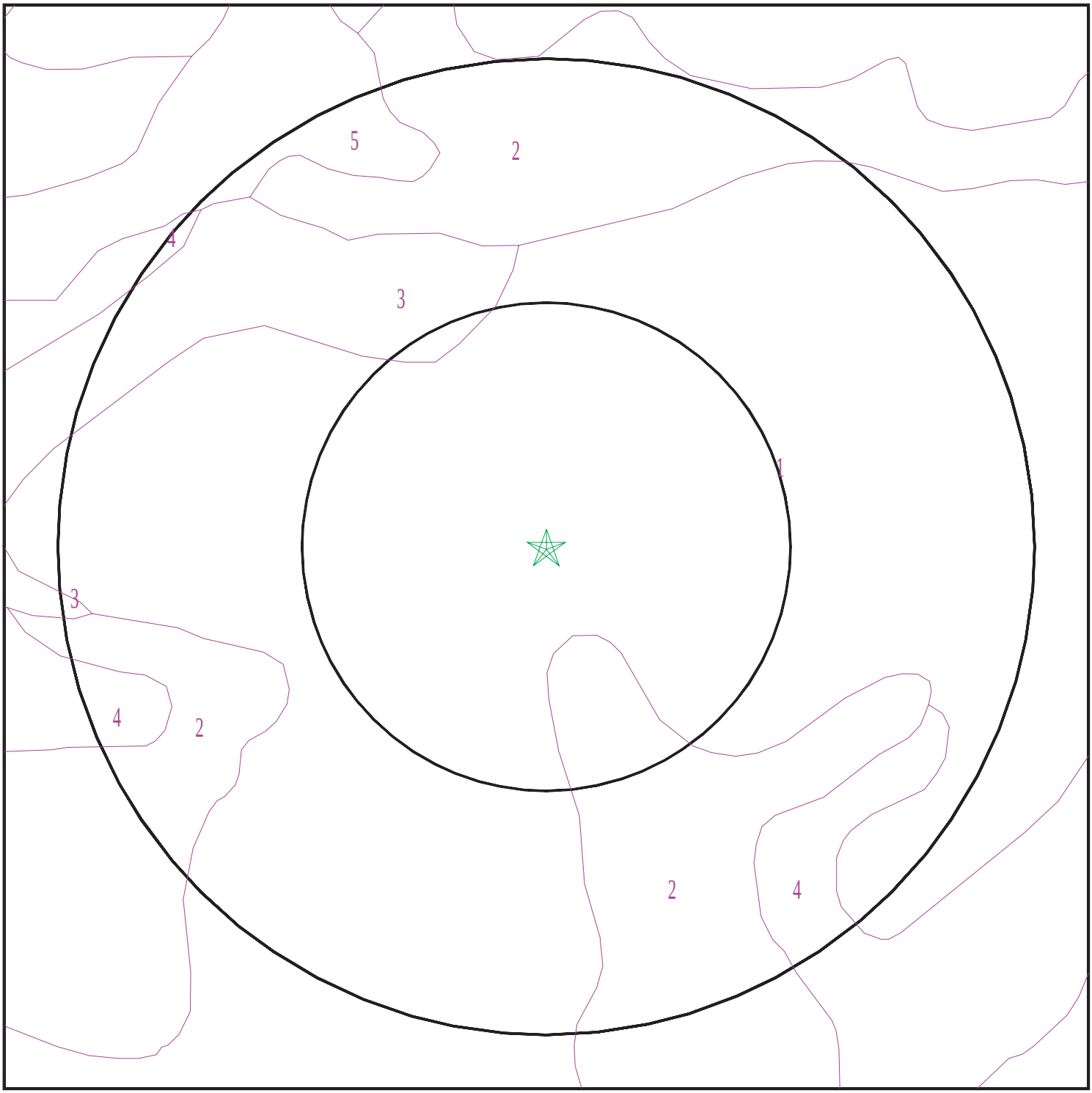
Era:	Paleozoic
System:	Pennsylvanian
Series:	Virgilian Series
Code:	PP4 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratifed Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 4642915.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	Approximately 20 Acres Vacant Land	CLIENT:	PSI, Inc.
ADDRESS:	North of W. 191st Street and East of Waverly Road Gardner KS 66030	CONTACT:	Cole Read
LAT/LONG:	38.78384 / 94.937798	INQUIRY #:	4642915.2s
		DATE:	June 09, 2016 2:26 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Woodson

Soil Surface Texture: silt loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Somewhat poorly drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 36 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4.233 Min: 1.411	Max: 6.5 Min: 5.6
2	7 inches	11 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4.233 Min: 1.411	Max: 6.5 Min: 5.6
3	11 inches	29 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 7.3 Min: 5.6
4	29 inches	42 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 7.3 Min: 5.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
5	42 inches	59 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.411 Min: 0.4233	Max: 7.8 Min: 5.6

Soil Map ID: 2

Soil Component Name: Summit

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 4.233 Min: 1.411	Max: 7.3 Min: 5.6
2	11 inches	24 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.411 Min: 0.4233	Max: 7.3 Min: 5.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	24 inches	42 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.411 Min: 0.4233	Max: 7.3 Min: 5.6
4	42 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 8.4 Min: 6.1

Soil Map ID: 3

Soil Component Name: Sibleyville

Soil Surface Texture: weathered bedrock

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	27 inches	31 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:
2	0 inches	7 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	7 inches	14 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.1
4	14 inches	27 inches	channery loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.1

Soil Map ID: 4

Soil Component Name: Wagstaff

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 30 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	7 inches	14 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4.233 Min: 1.411	Max: 7.3 Min: 5.6
3	14 inches	18 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.411 Min: 0.4233	Max: 7.3 Min: 5.6
4	18 inches	24 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.411 Min: 0.4233	Max: 7.3 Min: 5.6
5	24 inches	33 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.411 Min: 0.4233	Max: 7.3 Min: 5.6
6	33 inches	37 inches		Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 5

Soil Component Name: Verdigris

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6
2	9 inches	27 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6
3	27 inches	31 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6
4	31 inches	51 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6
5	51 inches	59 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	0.001
State Database	1.000

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No PWS System Found		

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

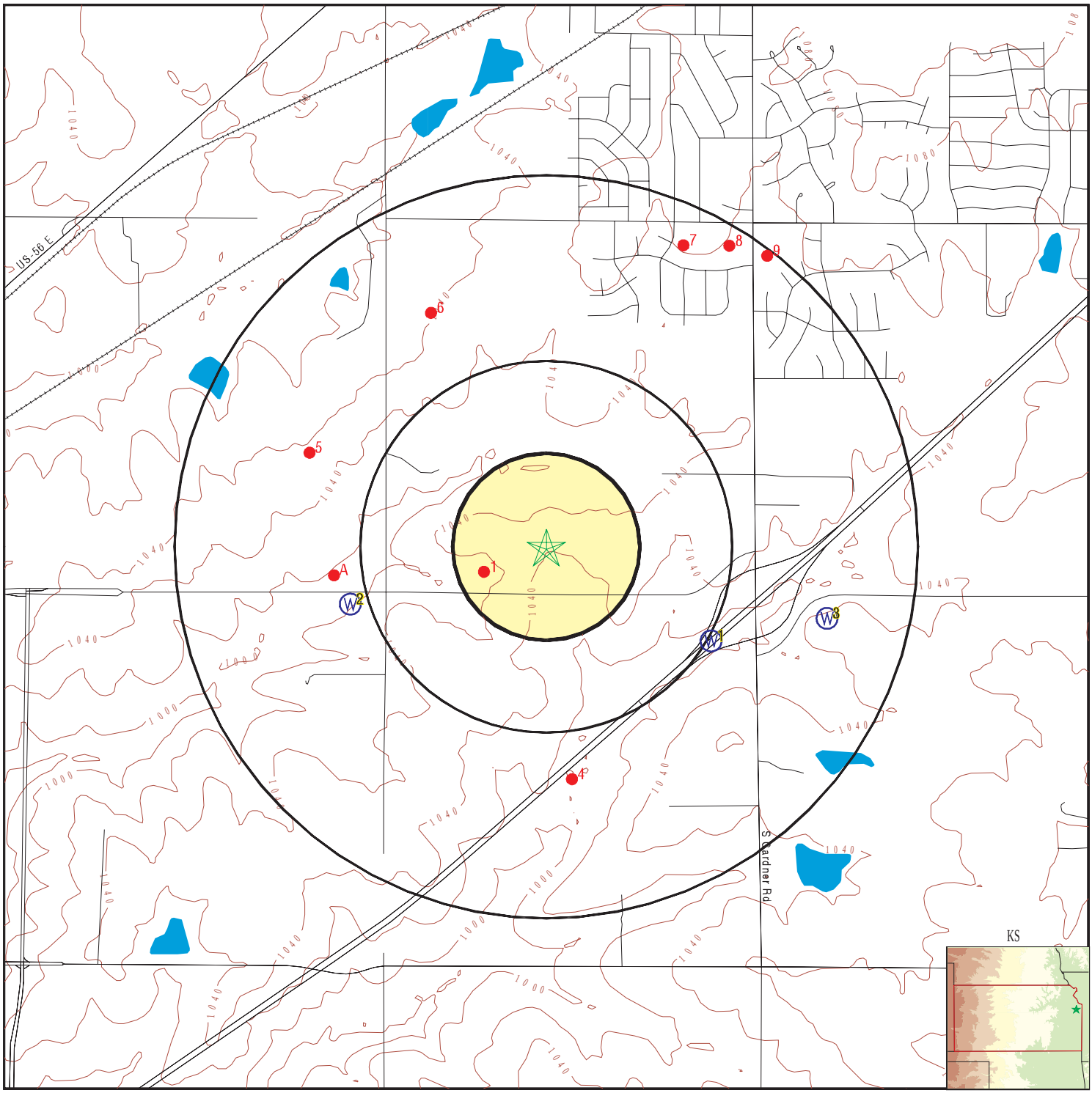
MAP ID	WELL ID	LOCATION FROM TP
1	KS8000000030790	1/2 - 1 Mile ESE
2	KS8000000237626	1/2 - 1 Mile WSW
3	KS8000000237950	1/2 - 1 Mile ESE

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	KSOG11000216641	1/8 - 1/4 Mile WSW
A2	KSOG11000301609	1/2 - 1 Mile West
A3	KSOG11000301610	1/2 - 1 Mile West
4	KSOG11000245367	1/2 - 1 Mile South
5	KSOG11000049885	1/2 - 1 Mile WNW
6	KSOG11000049887	1/2 - 1 Mile NNW
7	KSOG11000049886	1/2 - 1 Mile NNE
8	KSOG11000370207	1/2 - 1 Mile NNE
9	KSOG11000358634	1/2 - 1 Mile NE

PHYSICAL SETTING SOURCE MAP - 4642915.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Oil, gas or related wells

SITE NAME:	Approximately 20 Acres Vacant Land	CLIENT:	PSI, Inc.
ADDRESS:	North of W. 191st Street and East of Waverly Road Gardner KS 66030	CONTACT:	Cole Read
		INQUIRY #:	4642915.2s
LAT/LONG:	38.78384 / 94.937798	DATE:	June 09, 2016 2:26 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **ESE** **1/2 - 1 Mile** **Lower**	**KS WELLS**	**KS8000000030790**

Well id:	31262	County:	Johnson
Township:	15	Twn dir:	S
Range:	22	Range dir:	E
Section:	2	Spot:	C NE NE
Longitude:	-94.9293399		
Latitude:	38.7801557		
Long lat t:	From PLSS		
Owner:	Norman, Mi	Well use:	Domestic
Comple dat:	31-Jan-1994	Status:	CONSTRUCTED
Other id:	Not Reported		
Dwr number:	Not Reported		
Directions:	from Gardner: 1.75 mi S, .75 mi W		
Well depth:	180		
Elev:	Not Reported	Static dep:	45
Est yield:	15		
Driller:	Strader Drilling Co., Inc.		
Well kid:	1040170340		
Site id:	KS8000000030790		

---

2 **WSW** **1/2 - 1 Mile** **Lower**	**KS WELLS**	**KS8000000237626**

Well id:	466005	County:	Johnson
Township:	15	Twn dir:	S
Range:	22	Range dir:	E
Section:	3	Spot:	NW NE NE NE
Longitude:	-94.9473122		
Latitude:	38.781593		
Long lat t:	From PLSS		
Owner:	K-DOT	Well use:	Other
Comple dat:	06-Jan-2013	Status:	PLUGGED
Other id:	Not Reported		
Dwr number:	Not Reported		
Directions:	31275 W 191st, Edgerton		
Well depth:	16		
Elev:	Not Reported	Static dep:	12
Est yield:	Not Reported		
Driller:	Town Oil Field Service		
Well kid:	1044575454		
Site id:	KS8000000237626		

---

3 **ESE** **1/2 - 1 Mile** **Higher**	**KS WELLS**	**KS8000000237950**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Well id:	466407	County:	Johnson
Township:	15	Twn dir:	S
Range:	22	Range dir:	E
Section:	1	Spot:	NE NW NW
Longitude:	-94.9235619		
Latitude:	38.7810369		
Long lat t:	From PLSS		
Owner:	Johnson Co	Well use:	Domestic
Comple dat:	16-May-2013	Status:	PLUGGED
Other id:	Not Reported		
Dwr number:	Not Reported		
Directions:	27585 183rd St, Gardner		
Well depth:	25		
Elev:	Not Reported	Static dep:	7
Est yield:	Not Reported		
Driller:	Evans Energy Development, Inc.		
Well kid:	1044575453		
Site id:	KS8000000237950		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
WSW
1/8 - 1/4 Mile

OIL_GAS **KSOG11000216641**

Kid:	1002923313	State code:	15
County cod:	91	Api well n:	20049
Api workov:	Not Reported	Field name:	GARDNER
Field kid:	1000149141	Lease name:	DAILEY
Well name:	1	Well class:	Approved Intent to Drill
Operator n:	DAILEY WILLIAM P		
Operator k:	0	Principal :	6
Township:	14	Township d:	S
Range :	22	Range dire:	E
Section:	35	Subdivisio:	SW
Subdivis 1:	S2	Subdivis 2:	S2
Subdivis 3:	Not Reported	Spot:	Not Reported
Feet north:	300	Feet east :	1400
Reference :	SW	Rotary tot:	450
Status :	SWD	Spud date:	01-JUL-73
Permit dat:	Not Reported	Completion:	18-FEB-74
Api number:	15-091-20049	Plug date:	Not Reported
Elevation :	0	Elevation1:	1031
Elevatio 1:	0		
Producing :	Not Reported		
Nad27 lati:	38.7828426		
Nad27 long:	-94.9406626		
Nad83 lati:	38.7828506		
Nad83 long:	-94.9409052		
Completi 1:	1974	Well type:	SWD
Orig fid:	0	Site id:	KSOG11000216641

A2
West
1/2 - 1 Mile

OIL_GAS **KSOG11000301609**

Kid:	1030215114	State code:	15
County cod:	91	Api well n:	19119
Api workov:	0001	Field name:	Not Reported
Field kid:	0	Lease name:	KCPL CW
Well name:	3	Well class:	Spudded
Operator n:	Kansas City Power & Light Company		
Operator k:	1028712279	Principal :	Not Reported
Township:	14	Township d:	S
Range :	22	Range dire:	E
Section:	34	Subdivisio:	SE
Subdivis 1:	SE	Subdivis 2:	S2
Subdivis 3:	Not Reported	Spot:	Not Reported
Feet north:	239	Feet east :	-694
Reference :	SE	Rotary tot:	0
Status :	OTHER	Spud date:	Not Reported
Permit dat:	22-OCT-03	Completion:	Not Reported
Api number:	15-091-19119-0001	Plug date:	Not Reported
Elevation :	0	Elevation1:	1000
Elevatio 1:	0		
Producing :	Not Reported		

Nad27 lati:	38.7827053		
Nad27 long:	-94.9480078		
Nad83 lati:	38.7827132		
Nad83 long:	-94.9482507		
Completi 1:	Not Reported	Well type:	CATH
Orig fid:	0	Site id:	KSOG11000301609

A3
West
1/2 - 1 Mile

OIL_GAS **KSOG11000301610**

Kid:	1030215116	State code:	15
County cod:	91	Api well n:	19120
Api workov:	0001	Field name:	Not Reported
Field kid:	0	Lease name:	KCPL CW
Well name:	4	Well class:	Spudded
Operator n:	Kansas City Power & Light Company		
Operator k:	1028712279	Principal :	Not Reported
Township:	14	Township d:	S
Range :	22	Range dire:	E
Section:	34	Subdivisio:	SE
Subdivis 1:	SE	Subdivis 2:	S2
Subdivis 3:	Not Reported	Spot:	Not Reported
Feet north:	239	Feet east :	-764
Reference :	SE	Rotary tot:	0
Status :	OTHER	Spud date:	Not Reported
Permit dat:	22-OCT-03	Completion:	Not Reported
Api number:	15-091-19120-0001	Plug date:	Not Reported
Elevation :	0	Elevation1:	1000
Elevatio 1:	0		
Producing :	Not Reported		
Nad27 lati:	38.7827059		
Nad27 long:	-94.9482534		
Nad83 lati:	38.7827138		
Nad83 long:	-94.9484962		
Completi 1:	Not Reported	Well type:	CATH
Orig fid:	0	Site id:	KSOG11000301610

4
South
1/2 - 1 Mile

OIL_GAS **KSOG11000245367**

Kid:	1026597821	State code:	15
County cod:	91	Api well n:	20011
Api workov:	Not Reported	Field name:	Not Reported
Field kid:	0	Lease name:	GREUND
Well name:	1	Well class:	Approved Intent to Drill
Operator n:	HAROLD GREUND		
Operator k:	0	Principal :	Not Reported
Township:	15	Township d:	S
Range :	22	Range dire:	E
Section:	2	Subdivisio:	Not Reported

Subdivis 1:	Not Reported	Subdivis 2:	Not Reported
Subdivis 3:	Not Reported	Spot:	Not Reported
Feet north:	0	Feet east :	0
Reference :	Not Reported	Rotary tot:	0
Status :	OTHER	Spud date:	Not Reported
Permit dat:	Not Reported	Completion:	Not Reported
Api number:	15-091-20011	Plug date:	Not Reported
Elevation :	0	Elevation1:	0
Elevatio 1:	0		
Producing :	Not Reported		
Nad27 lati:	38.7747498		
Nad27 long:	-94.9362755		
Nad83 lati:	38.7747579		
Nad83 long:	-94.936518		
Completi 1:	Not Reported	Well type:	Not Reported
Orig fid:	0	Site id:	KSOG11000245367

5
WNW **OIL_GAS** **KSOG11000049885**
1/2 - 1 Mile

Kid:	1006733293	State code:	15
County cod:	91	Api well n:	70298
Api workov:	Not Reported	Field name:	Not Reported
Field kid:	0	Lease name:	FRAZIER
Well name:	2	Well class:	Plugged and Abandoned
Operator n:	J. D. FRAZIER		
Operator k:	0	Principal :	6
Township:	14	Township d:	S
Range :	22	Range dire:	E
Section:	34	Subdivisio:	SE
Subdivis 1:	NE	Subdivis 2:	W2
Subdivis 3:	W2	Spot:	Not Reported
Feet north:	1980	Feet east :	-1074
Reference :	SE	Rotary tot:	880
Status :	OIL-P&A	Spud date:	Not Reported
Permit dat:	Not Reported	Completion:	Not Reported
Api number:	15-091-70298	Plug date:	01-FEB-84
Elevation :	0	Elevation1:	0
Elevatio 1:	0		
Producing :	Not Reported		
Nad27 lati:	38.7874892		
Nad27 long:	-94.9493507		
Nad83 lati:	38.787497		
Nad83 long:	-94.9495936		
Completi 1:	Not Reported	Well type:	OIL
Orig fid:	0	Site id:	KSOG11000049885

6
NNW **OIL_GAS** **KSOG11000049887**
1/2 - 1 Mile

Kid:	1006733297	State code:	15
County cod:	91	Api well n:	70301
Api workov:	Not Reported	Field name:	Not Reported
Field kid:	0	Lease name:	MISTELE
Well name:	1	Well class:	Plugged and Abandoned
Operator n:	ED MISTELE		
Operator k:	0	Principal :	6
Township:	14	Township d:	S
Range :	22	Range dire:	E
Section:	35	Subdivisio:	NW
Subdivis 1:	W2	Subdivis 2:	Not Reported
Subdivis 3:	Not Reported	Spot:	Not Reported
Feet north:	0	Feet east :	0
Reference :	Not Reported	Rotary tot:	862
Status :	D&A	Spud date:	Not Reported
Permit dat:	Not Reported	Completion:	Not Reported
Api number:	15-091-70301	Plug date:	01-NOV-66
Elevation :	0	Elevation1:	0
Elevatio 1:	0		
Producing :	Not Reported		
Nad27 lati:	38.7929451		
Nad27 long:	-94.9433005		
Nad83 lati:	38.7929528		
Nad83 long:	-94.9435433		
Completi 1:	Not Reported	Well type:	D&A
Orig fid:	0	Site id:	KSOG11000049887

7
NNE
1/2 - 1 Mile

OIL_GAS **KSOG11000049886**

Kid:	1006733295	State code:	15
County cod:	91	Api well n:	70299
Api workov:	Not Reported	Field name:	Not Reported
Field kid:	0	Lease name:	BOYD
Well name:	1	Well class:	Plugged and Abandoned
Operator n:	J. A. MILLER		
Operator k:	0	Principal :	6
Township:	14	Township d:	S
Range :	22	Range dire:	E
Section:	35	Subdivisio:	NE
Subdivis 1:	NE	Subdivis 2:	NW
Subdivis 3:	Not Reported	Spot:	Not Reported
Feet north:	0	Feet east :	0
Reference :	Not Reported	Rotary tot:	885
Status :	D&A	Spud date:	Not Reported
Permit dat:	Not Reported	Completion:	Not Reported
Api number:	15-091-70299	Plug date:	01-SEP-65
Elevation :	0	Elevation1:	0
Elevatio 1:	0		
Producing :	Not Reported		
Nad27 lati:	38.7955812		
Nad27 long:	-94.9307238		
Nad83 lati:	38.795589		
Nad83 long:	-94.9309663		
Completi 1:	Not Reported	Well type:	D&A
Orig fid:	0	Site id:	KSOG11000049886

Map ID
Direction
Distance

Database EDR ID Number

8
NNE **OIL_GAS** **KSOG11000370207**
1/2 - 1 Mile

Kid:	1006733296	State code:	15
County cod:	91	Api well n:	70300
Api workov:	Not Reported	Field name:	Not Reported
Field kid:	0	Lease name:	BOYD-MOFFETT
Well name:	2	Well class:	Plugged and Abandoned
Operator n:	BOYD-MOFFETT		
Operator k:	0	Principal :	6
Township:	14	Township d:	S
Range :	22	Range dire:	E
Section:	35	Subdivisio:	NE
Subdivis 1:	NE	Subdivis 2:	NE
Subdivis 3:	Not Reported	Spot:	Not Reported
Feet north:	0	Feet east :	0
Reference :	Not Reported	Rotary tot:	873
Status :	D&A	Spud date:	Not Reported
Permit dat:	Not Reported	Completion:	Not Reported
Api number:	15-091-70300	Plug date:	01-APR-65
Elevation :	0	Elevation1:	0
Elevatio 1:	0		
Producing :	Not Reported		
Nad27 lati:	38.7955645		
Nad27 long:	-94.9284351		
Nad83 lati:	38.7955723		
Nad83 long:	-94.9286776		
Completi 1:	Not Reported	Well type:	D&A
Orig fid:	0	Site id:	KSOG11000370207

9
NE **OIL_GAS** **KSOG11000358634**
1/2 - 1 Mile

Kid:	1040722250	State code:	15
County cod:	91	Api well n:	19168
Api workov:	Not Reported	Field name:	Not Reported
Field kid:	0	Lease name:	FLEMING
Well name:	1	Well class:	Plugged and Abandoned
Operator n:	Gault, Ross		
Operator k:	1028005125	Principal :	Not Reported
Township:	14	Township d:	S
Range :	22	Range dire:	E
Section:	36	Subdivisio:	NW
Subdivis 1:	NW	Subdivis 2:	NW
Subdivis 3:	Not Reported	Spot:	Not Reported
Feet north:	4815	Feet east :	-5087
Reference :	SE	Rotary tot:	0
Status :	GAS-P&A	Spud date:	Not Reported
Permit dat:	Not Reported	Completion:	19-APR-06
Api number:	15-091-19168	Plug date:	19-APR-06
Elevation :	0	Elevation1:	0
Elevatio 1:	0		
Producing :	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Nad27 lati:	38.7951718		
Nad27 long:	-94.92655		
Nad83 lati:	38.7951796		
Nad83 long:	-94.9267922		
Completi 1:	2006	Well type:	GAS
Orig fid:	0	Site id:	KSOG11000358634

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: KS Radon

Radon Test Results

Zipcode	Avg Radon	Max Radon	Num Tests
66030	4.3	43.7	150

Federal EPA Radon Zone for JOHNSON County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 66030

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	2.400 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.800 pCi/L	100%	0%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 2003 & 2011 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, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Kansas Water Well Completion Records Database
Source: Kansas Geological Survey
Telephone: 913-864-3965

OTHER STATE DATABASE INFORMATION

Oil and Gas Well Location Database Listing
Source: Kansas Geological Survey
Telephone: 785-864-3965

RADON

State Database: KS Radon
Source: Department of Health & Environment
Telephone: 785-296-1500
Kansas Indoor Radon Measurements

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

USER QUESTIONNAIRE RESPONSES

USER QUESTIONNAIRE

Pursuant to ASTM E1527, ASTM E2600-10, and the EPA All Appropriate Inquiry Rule, the User of the report must answer specific questions regarding the property and supply this information to the Environmental Professional. While we understand that you may have only limited knowledge of the property, please answer the questions to the best of your ability based on your current knowledge, and return the completed questionnaire to PSI.

Phase I ESA Questions

1. Did a review of land title records (or judicial records where appropriate) identify any environmental cleanup liens filed or recorded against the subject property under federal, tribal, state or local law?
   ☐ No ☐ Yes ☒ Unknown

2. Did a review of land title records (or judicial records where appropriate) identify any activity and land use limitations (AULs), such as engineering controls, land use restrictions or institutional controls that are in place at the subject property and/or have been filed or recorded in a registry under federal, tribal, state, or local law?
   ☐ No ☐ Yes ☒ Unknown

3. Do you have any specialized knowledge or experience related to the subject property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the subject property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?
   ☒ No ☐ Yes

4. Does the purchase price being paid reasonably reflect the fair market value of the subject property?
   ☐ No ☒ Yes ☐ Not Applicable

   If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the property?
   ☐ No ☐ Yes

6. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example:
   (a) Do you know of the past uses of the property?
   ☐ No ☒ Yes
   (b) Do you know of specific chemicals that are present or were once present at the property?
   ☒ No ☐ Yes
   (c) Do you know of spills or other chemical releases that have taken place at the property?
   ☒ No ☐ Yes
   (d) Do you know of any environmental cleanups that have taken place at the property?
   ☒ No ☐ Yes

6. Based on your knowledge and experience related to the subject property are there any obvious indicators that point to the presence or likely presence of contamination at the subject property?
   ☒ No ☐ Yes

7. Do you know of any pending, threatened, or past litigation or administrative proceedings relevant to hazardous substances or petroleum products in, on, or from the property? ☒ No ☐ Yes

8. Do you know of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products?
   ☒ No ☐ Yes

Further Explain any Answers Requiring Clarification: Seller believes that this property has always been used for farming purposes. Seller believes that normal farm chemicals have been used to control weeds.

Vapor Encroachment Screening Questions

1. Currently, what type of property is the subject property?
☐ Commercial ☐ Industrial ☐ Residential ☐ Multi-Tenant ☒ Vacant Land

2. Are there buildings on the subject property?
☐ Yes ☒ No ☐ Unknown (If **yes**, indicate number and construction type):

3. Will buildings or structures be constructed on the subject property in the future?
☐ Yes ☐ No ☒ Unknown (If **yes**, indicate number and construction type)

4. If buildings exist or are proposed, do/will they have elevators?
☐ Yes ☐ No ☒ Unknown

5. What type of below-grade level exists or is proposed?
☐ Full/Partial Basement ☐ Crawl Space ☐ Parking Garage ☐ Multi-Level
☒ None/Unknown (If **none/unknown**, skip to question 11)

6. Is there ventilation currently/proposed in the below-grade level?
☐ Yes ☐ No ☐ Unknown

7. Are there sump pumps, floor drains or trenches existing or proposed in the below-grade level?
☐ Yes ☐ No ☐ Unknown

8. Is there a radon or methane mitigation system installed or proposed?
☐ Yes ☐ No ☐ Unknown (If **yes**, please indicate if passive or active):_____

9. What type of heating system exists or is proposed in the building? (check all that apply)
☐ Hot Air Circulation ☐ Hot Air Radiation ☐ Hot Water Radiation
☐ Hot Water Circulation ☐ Fireplace ☐ Radiant Floor Heat ☐ Fuel Oil Furnace
☐ Electric Baseboard ☐ Heat Pump ☐ Wood Stove ☐ Steam Radiation
☐ Coal Furnace ☐ Kerosene Heater ☐ Used Oil Heater ☐ Natural Gas Furnace
☐ Other

10. How are the utility systems fueled/powered or proposed to be fueled/powered? (check all that apply)

☐ Natural Gas ☐ Propane ☐ Kerosene ☐ Coal ☐ Wood ☐ Electricity
☐ Fuel Oil ☐ Solar ☐ Wind ☐ Other

11. Have there ever been any environmental problems at the subject property?
☐ Yes ☒ No ☐ Unknown (If **yes**, please describe)

12. Does/will a gas station or dry cleaner operate anywhere on the subject property?
☐ Yes ☐ No ☒ Unknown

13. Do/will any of the tenants use hazardous chemicals in relatively large quantities on the subject property?
☐ Yes ☒ No ☐ Unknown

14. Have any tenants ever complained about odors in the building or experienced health-related problems that may have been associated with the building?
☐ Yes ☐ No ☐ Unknown NA

15. Are the current or proposed operations on the subject property OSHA or EPA regulated?
☐ Yes ☒ No ☐ Unknown as to current operations

16. Are there any existing or proposed underground or aboveground storage tanks (ASTs/USTs) on the subject property?
☐ Yes ☒ No ☐ Unknown (if **yes**, please describe) as to current uses

17. Are there sensitive receptors (for example: children, elderly, people in poor health, and so forth) that occupy or will occupy the subject property?
☐ Yes ☐ No ☒ Unknown

Further Explain any Answers Requiring Clarification: _____

Helpful Documents Checklist
Pursuant to ASTM E 1527 §10.8, do you know whether any of the following documents exist related to the subject property, and if so, whether copies will be provided to PSI for review? If so, please submit such documentation to PSI as soon as practical. Please check all that apply.

☐ Environmental site assessment reports (for example: Phase I/II ESAs or RBCA reports)
☐ Environmental compliance audit reports; or risk assessments
☐ Environmental permits or hazardous waste generation notices or reports
☐ Registrations for above or underground storage tanks, or underground injection systems
☐ Safety data sheets (formerly known as Material Safety Data Sheets or MSDSs)
☐ Community right-to-know plans; safety plans; preparedness and prevention plans; spill prevention, countermeasure and control (SPCC) plans; etc.
☐ 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 on the property
☐ Geotechnical studies; or reports regarding hydrogeologic conditions on the property or vicinity
☐ Recorded activity and land use limitations (AULs)

Joseph A. Gast — Name (Authorized User Representative)
owner — Title
Joseph A Gast — Signature
6-9-16 — Date

CONTACT INFORMATION SHEET

Please provide contact information for the parties below (if known) and return to PSI along with the signed and completed Proposal Authorization & Payment Instructions and User Questionnaire.

PRIMARY USER CONTACT

SAME AS OWNER
Name

Address

City/State/Zip

Phone

SECONDARY USER CONTACT (If any)

Name

Address

City/State/Zip

Phone

CURRENT OWNER

JOSEPH A GAST
Name

22367 W 215TH
Address

SPRING HILL KS 66083
City/State/Zip

(913) 592-3900
Phone

KEY SITE MANAGER

Name

Address

City/State/Zip

Phone

CURRENT FACILITY OPERATOR

Name

Address

City/State/Zip

Phone

PAST OWNER OR OPERATOR

Name

Address

City/State/Zip

Phone

OTHER PARTIES LIKELY TO HAVE MATERIAL INFORMATION REGARDING PROPERTY OR VES

Name

Address

City/State/Zip

Phone

Name

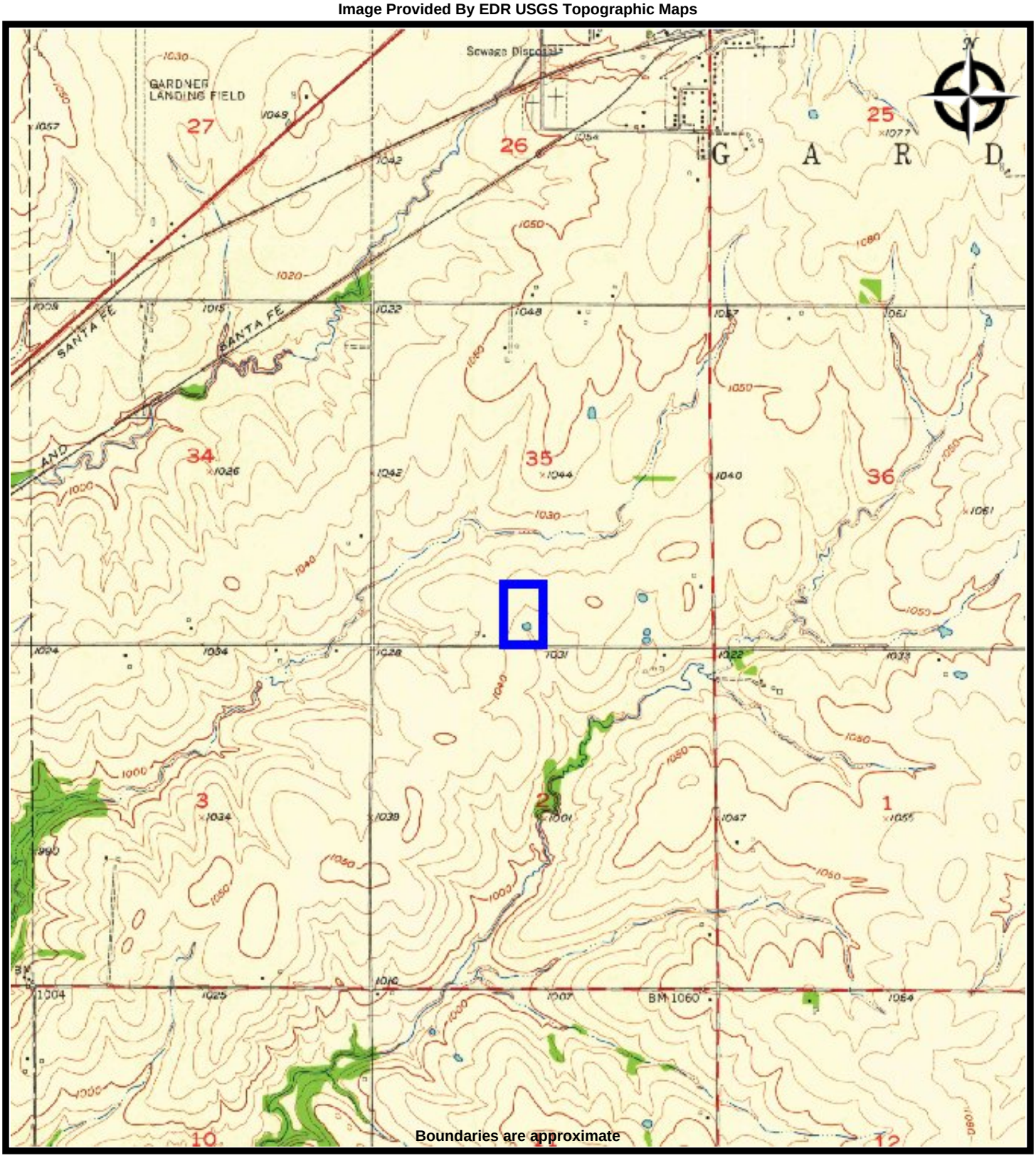
Address

City/State/Zip

Phone

HISTORICAL RESEARCH DOCUMENTATION

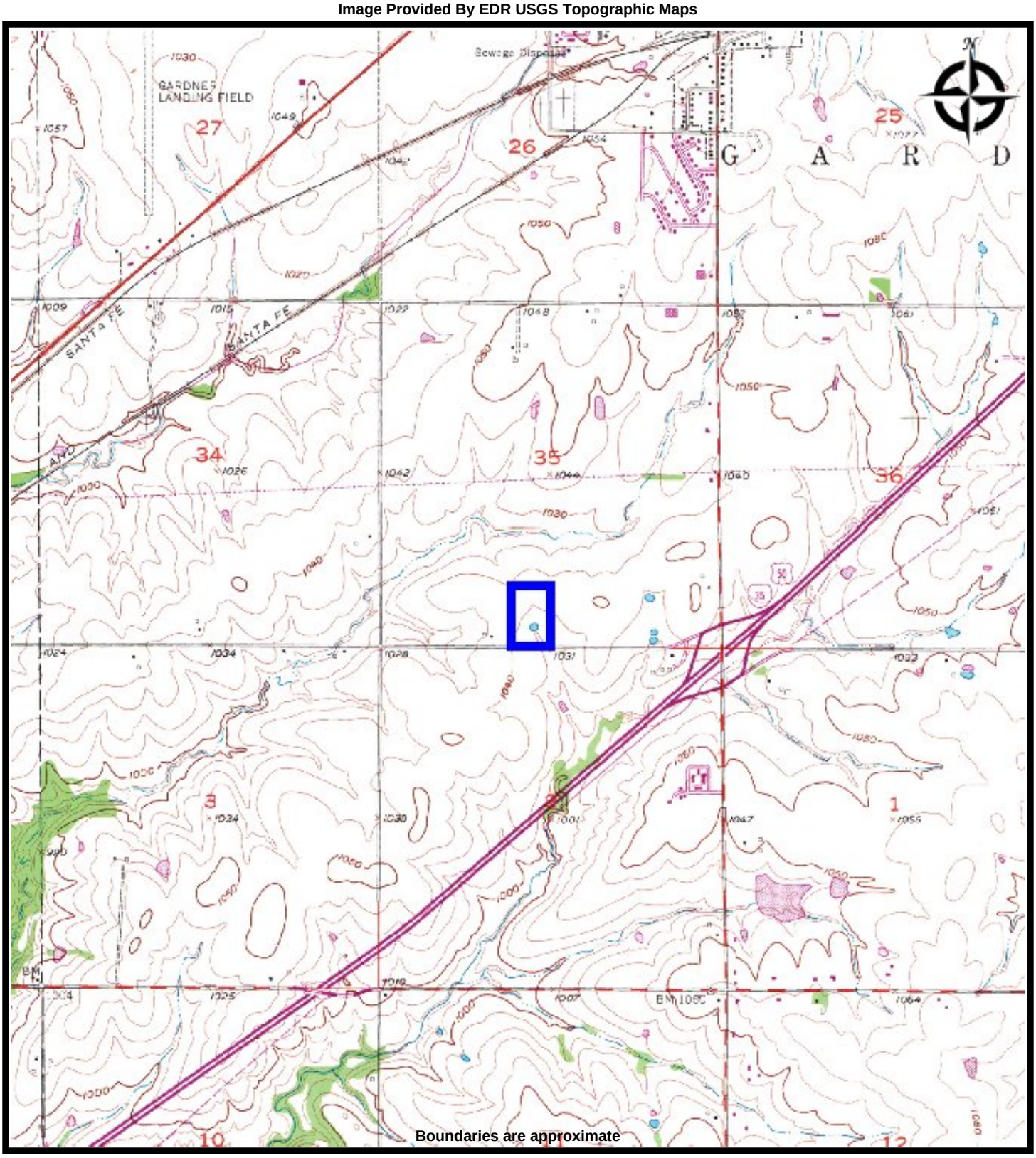
Image Provided By EDR USGS Topographic Maps



TOPO MAP - 1957
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

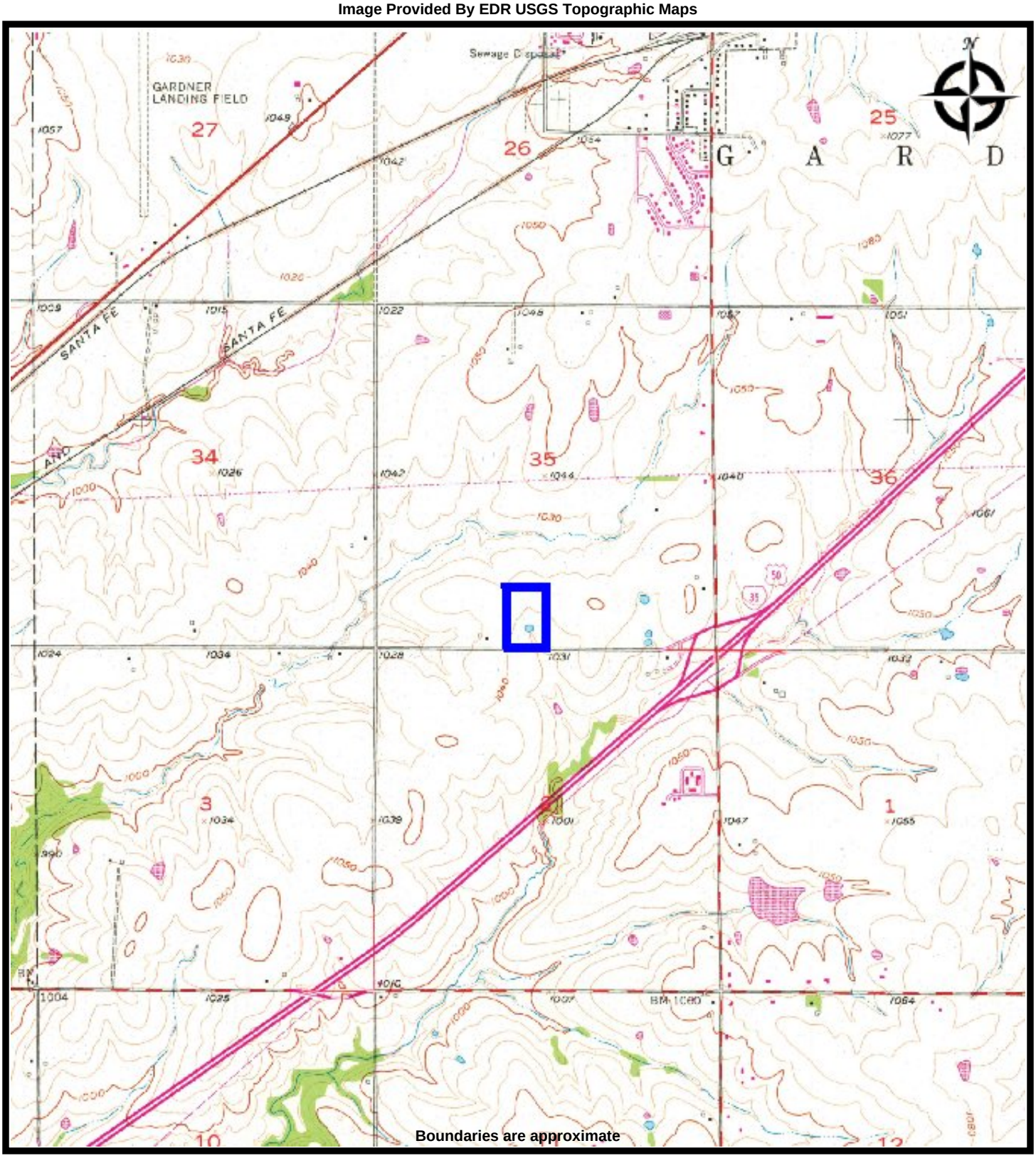
Image Provided By EDR USGS Topographic Maps



TOPO MAP - 1970
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

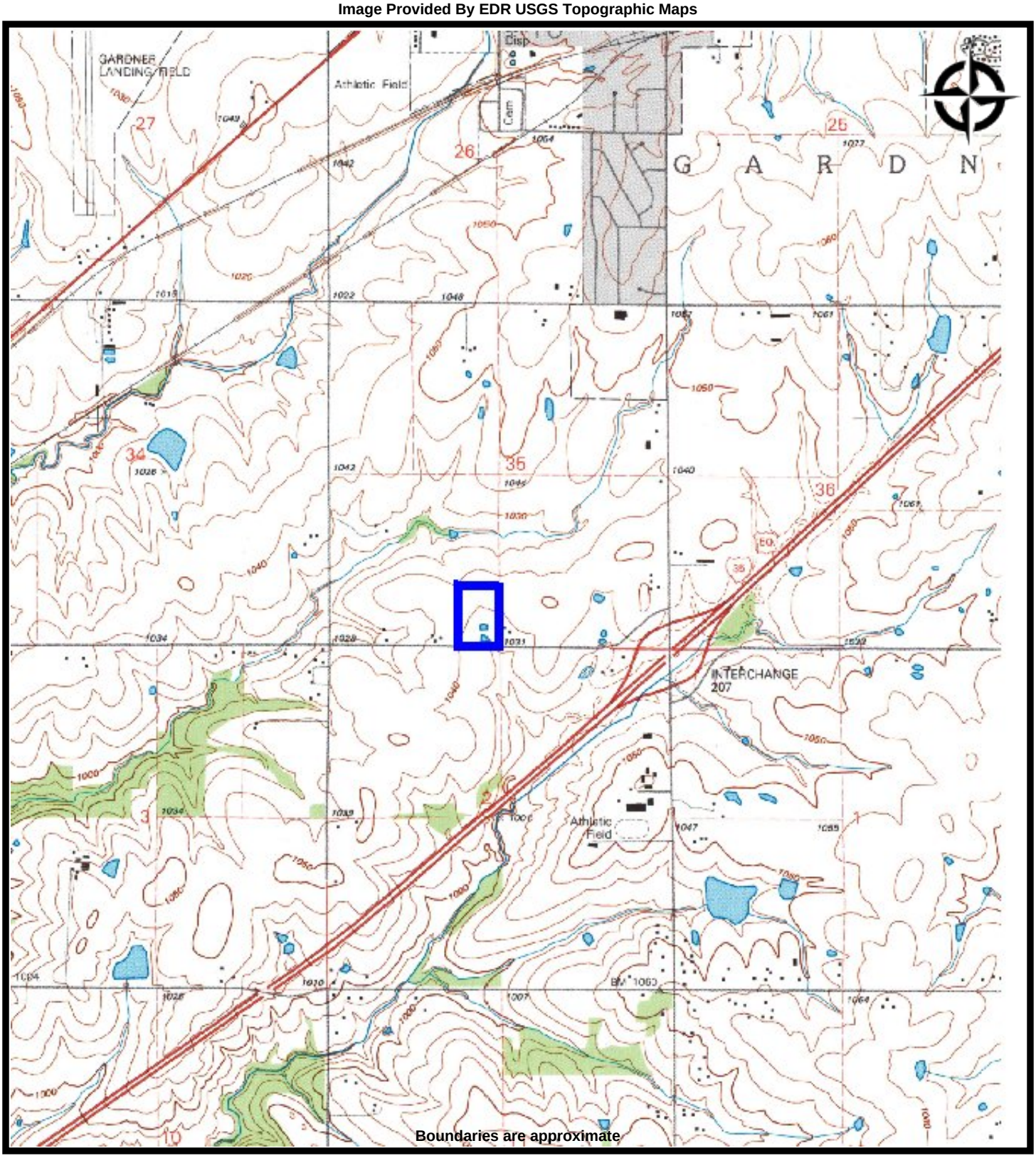
Image Provided By EDR USGS Topographic Maps



TOPO MAP - 1975
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

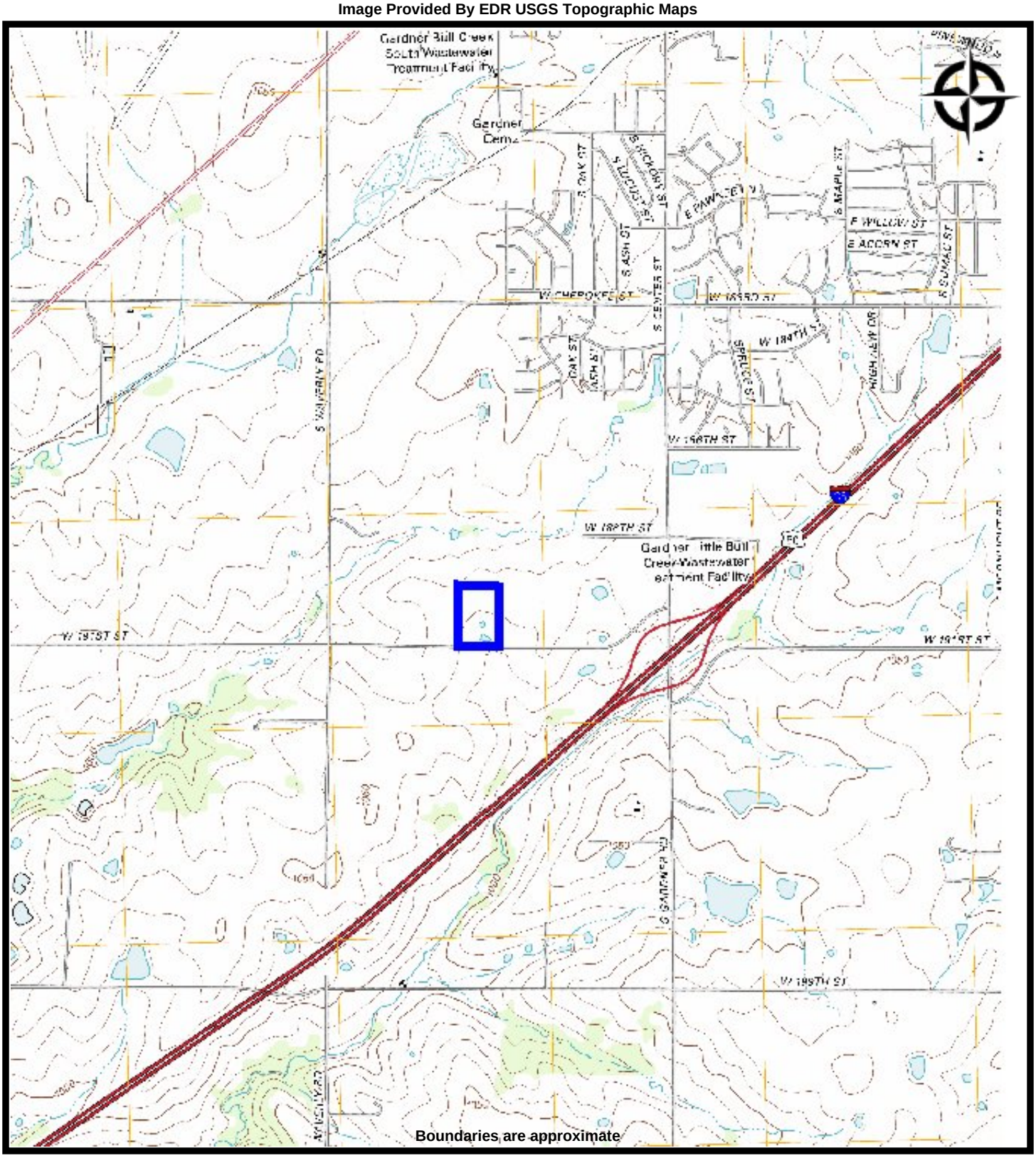
Image Provided By EDR USGS Topographic Maps



TOPO MAP - 1995
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

Image Provided By EDR USGS Topographic Maps



TOPO MAP - 2012
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

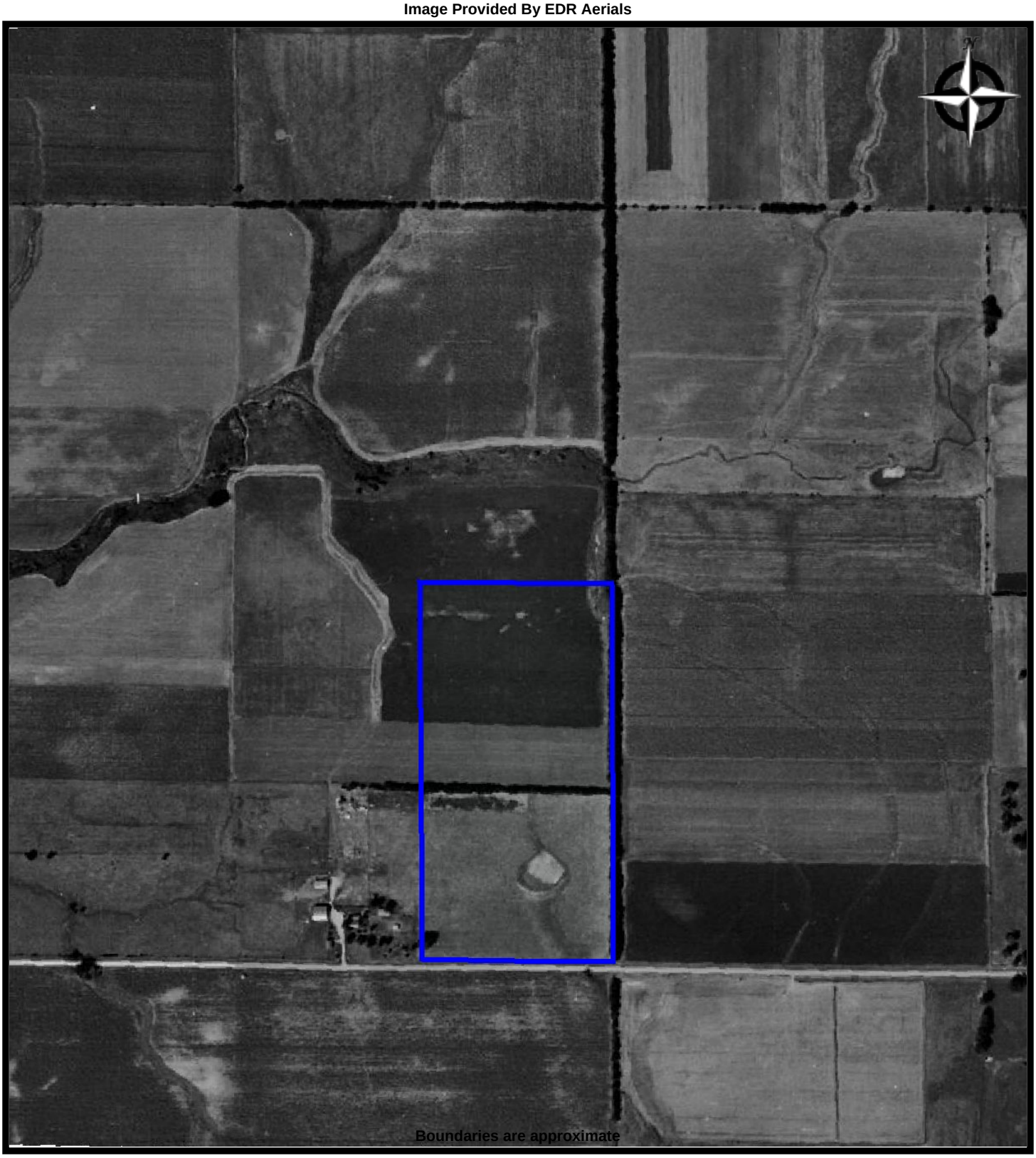
PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

Image Provided By EDR Aerials

AERIAL - 1948
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

Image Provided By EDR Aerials



AERIAL - 1959
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

Image Provided By EDR Aerials

AERIAL - 1966
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

Image Provided By EDR Aerials

AERIAL - 1970
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

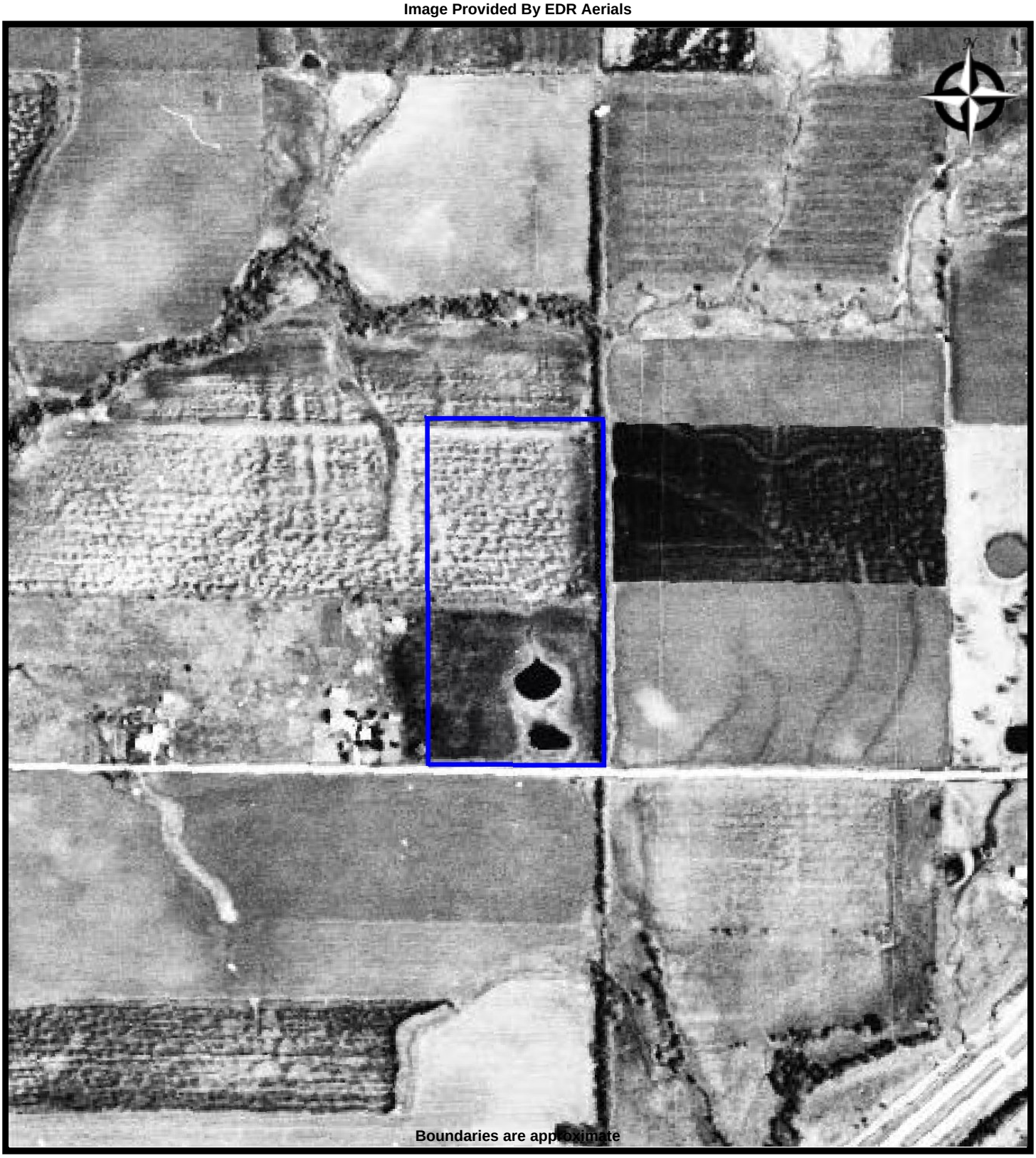
PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

Image Provided By EDR Aerials

AERIAL - 1975
20ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 06031248-1

Image Provided By EDR Aerials



psi

AERIAL - 1982
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

Image Provided By EDR Aerials

AERIAL - 1985
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
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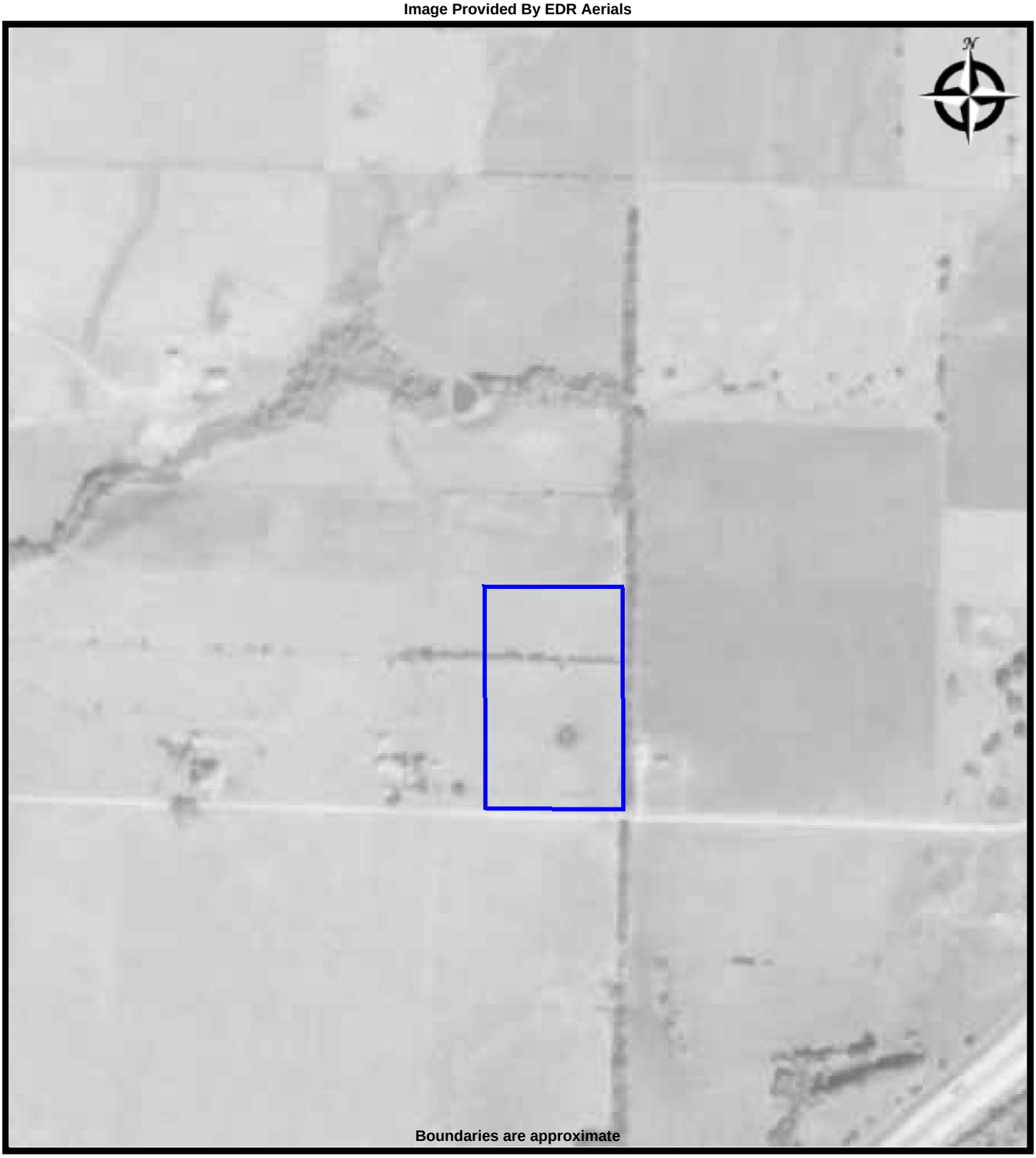
Image Provided By EDR Aerials



AERIAL - 1991
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

Image Provided By EDR Aerials

AERIAL - 1996
20 ACRES VACANT LAND
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DRAWN BY: Cole Read
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Image Provided By EDR Aerials

AERIAL - 2005
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

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PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
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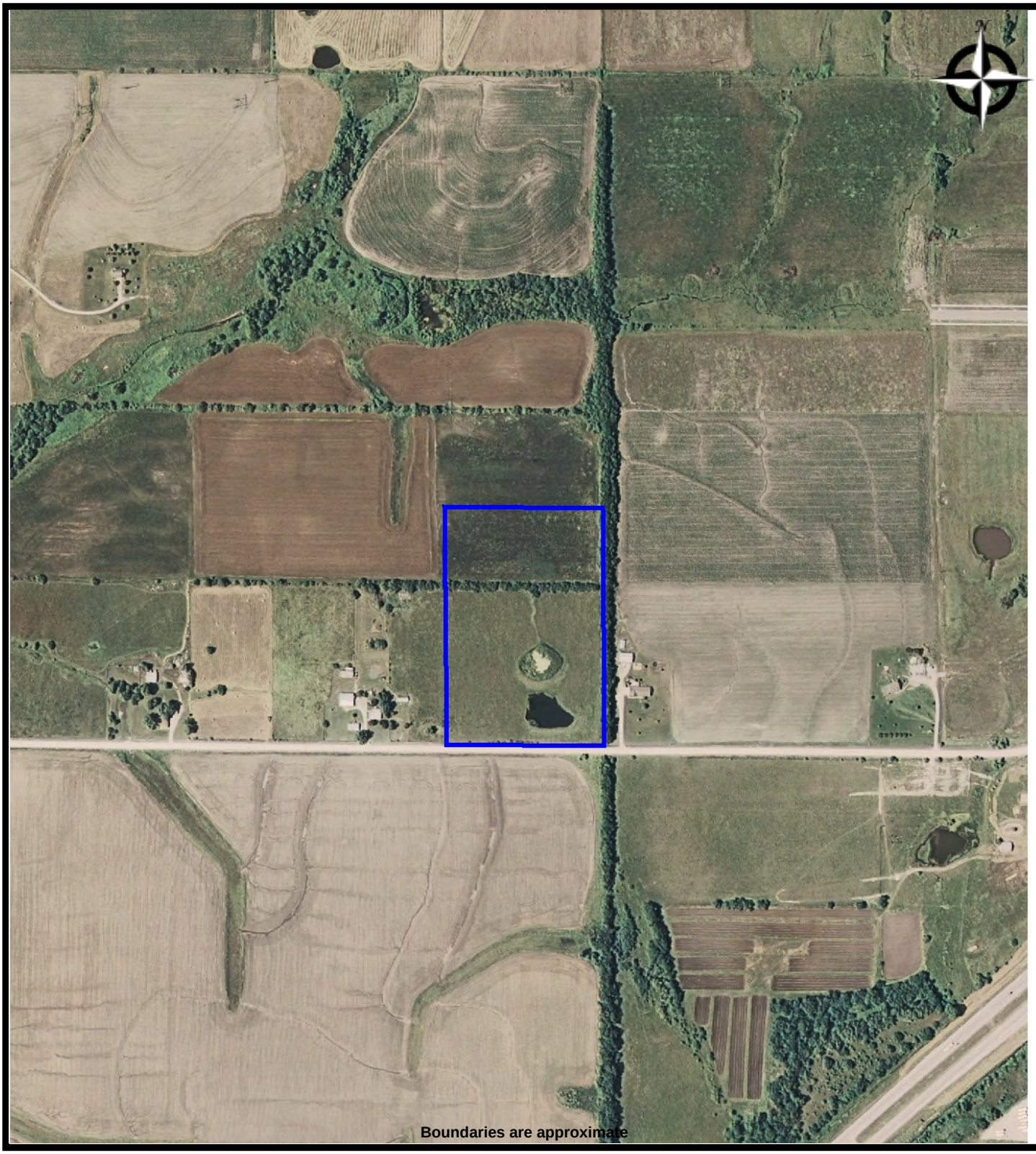
Image Provided By EDR Aerials



psi

AERIAL - 2006
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
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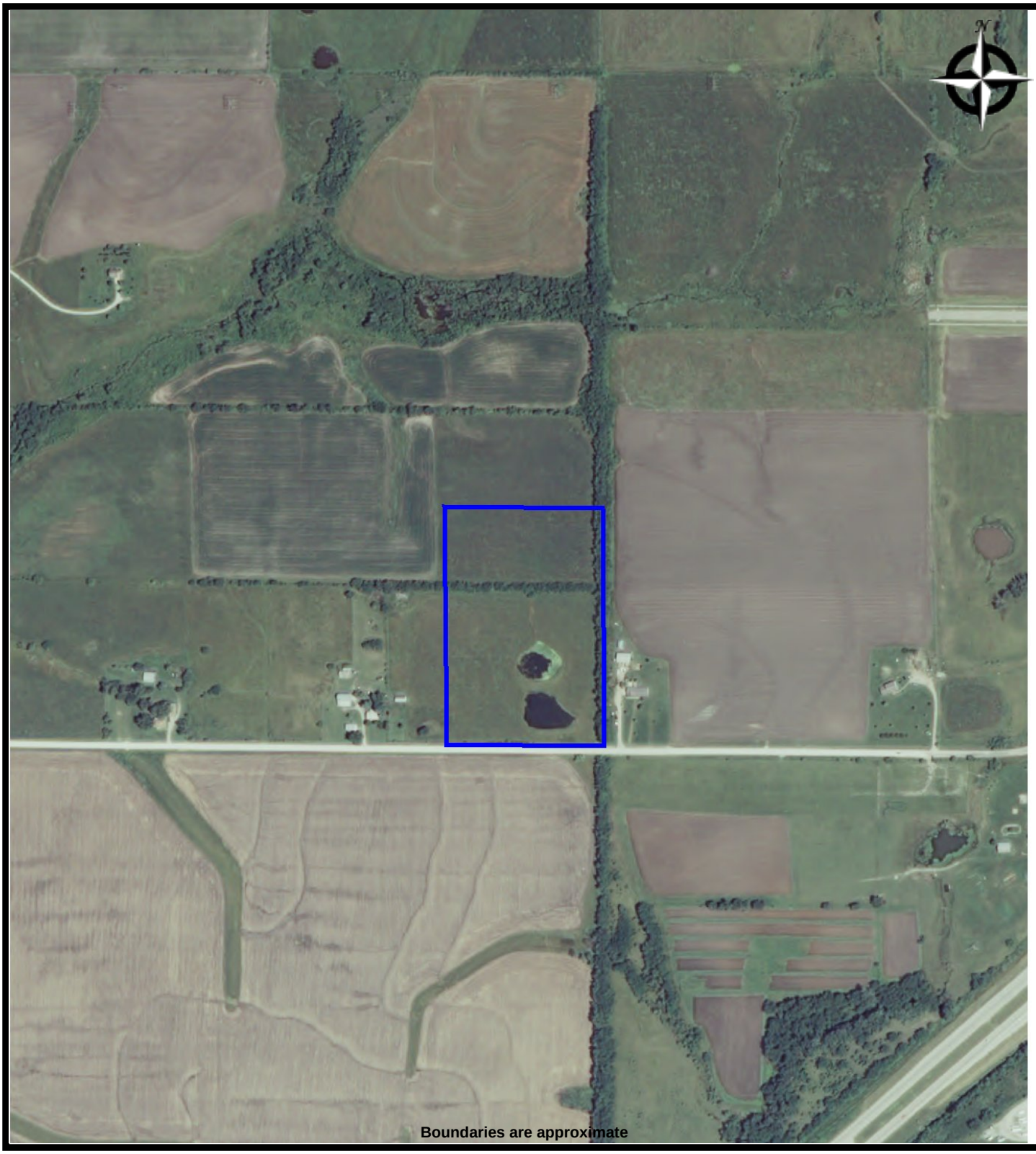
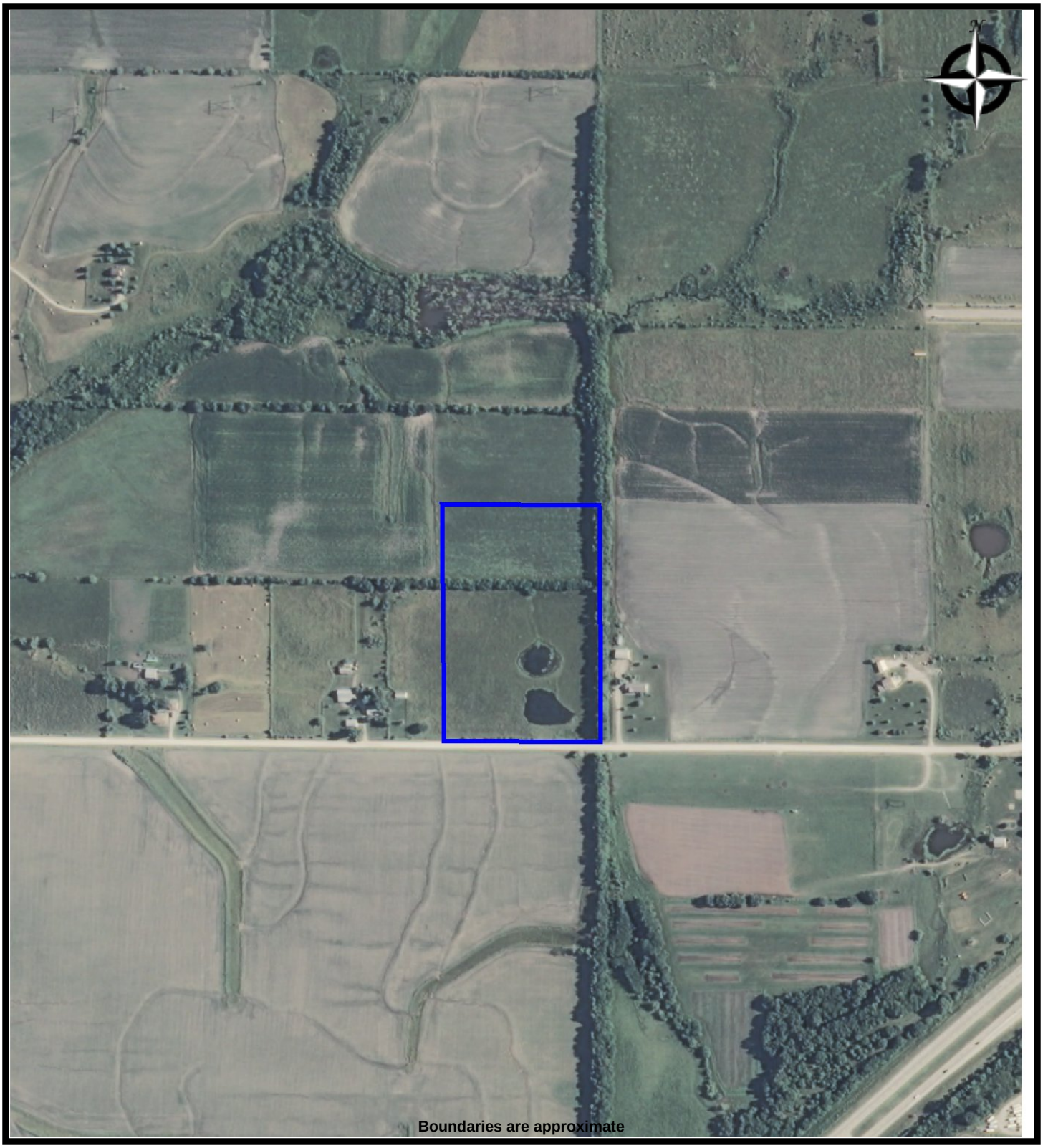
Image Provided By EDR Aerials



AERIAL - 2008
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

Image Provided By EDR Aerials



AERIAL - 2010
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
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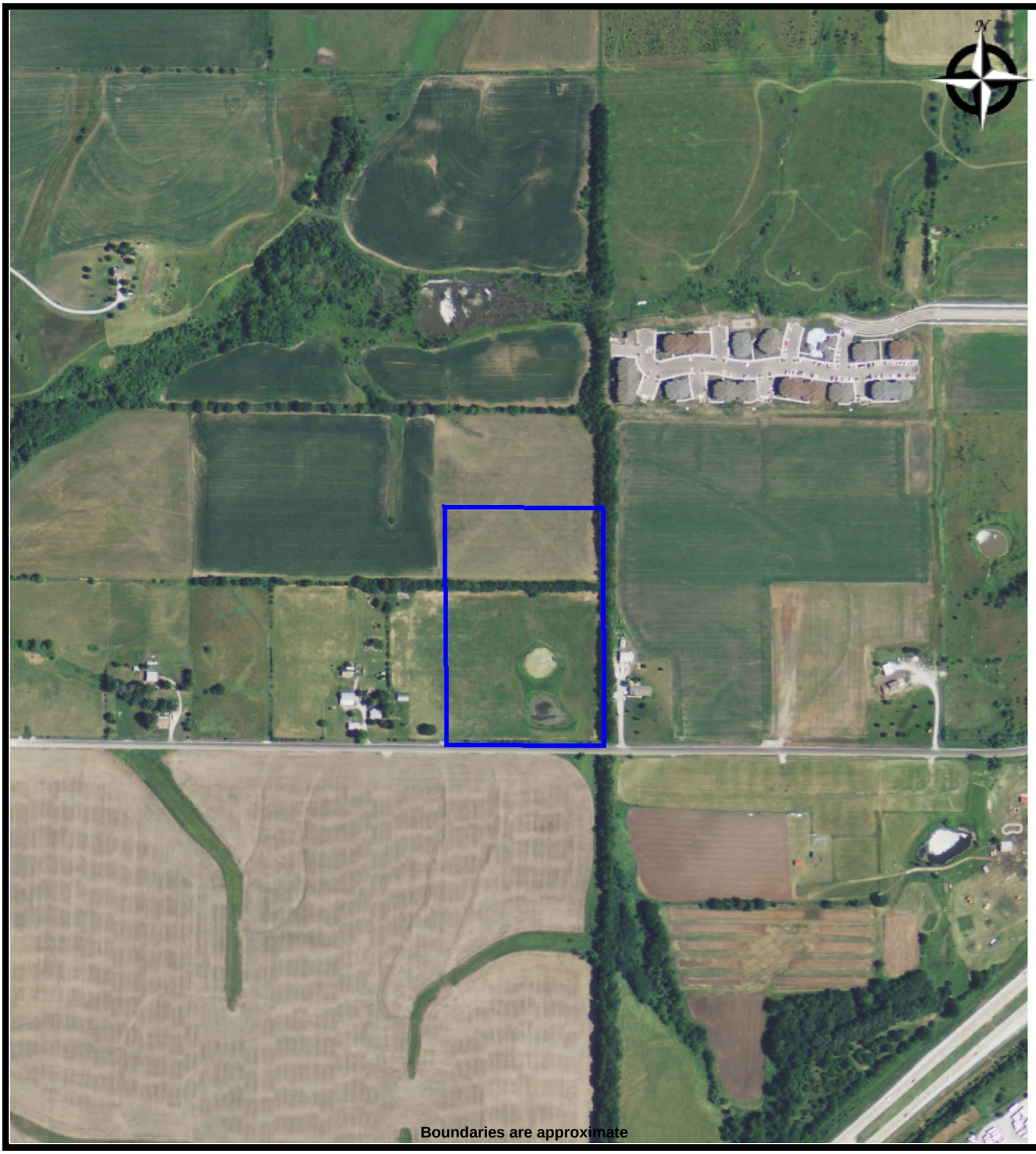
Image Provided By EDR Aerials



AERIAL - 2012
20 ACRES VACANT LAND
North of W. 191st Street and East of Waverly Road
Gardner, Kansas 66030

PREPARED FOR: NAI Martens
PROJ. MGR: Cole Read
DRAWN BY: Cole Read
DATE: 6/21/2016
PROJ. #: 0603-1248-1

Approximately 20 Acres Vacant Land
North of W. 191st Street and East of Waverly Road
Gardner, KS 66030

Inquiry Number: 4642915.5
June 16, 2016

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

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

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2013	☑	☐	Cole Information Services
2008	☑	☐	Cole Information Services
2003	☑	☐	Cole Information Services
1999	☑	☐	Cole Information Services
1995	☑	☐	Cole Information Services
1992	☑	☐	Cole Information Services
1987	☐	☐	Polk's City Directory
1983	☐	☐	Polk's City Directory
1978	☐	☐	Polk's City Directory
1973	☐	☐	Polk's City Directory
1968	☐	☐	Polk's City Directory
1964	☐	☐	Polk's City Directory

RECORD SOURCES

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FINDINGS

TARGET PROPERTY STREET

North of W. 191st Street and East of Waverly Road
Gardner, KS 66030

Year	*CD Image*	*Source*	
W 191ST ST			
2013	pg A1	Cole Information Services	
2008	pg A2	Cole Information Services	
2003	pg A3	Cole Information Services	
1999	pg A4	Cole Information Services	
1995	pg A5	Cole Information Services	
1992	pg A6	Cole Information Services	
1987	-	Polk's City Directory	Street not listed in Source
1983	-	Polk's City Directory	Street not listed in Source
1978	-	Polk's City Directory	Street not listed in Source
1973	-	Polk's City Directory	Street not listed in Source
1968	-	Polk's City Directory	Street not listed in Source
1964	-	Polk's City Directory	Street not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
W 193RD ST			
2013	-	Cole Information Services	Street not listed in Source
2008	-	Cole Information Services	Street not listed in Source
2003	-	Cole Information Services	Street not listed in Source
1999	-	Cole Information Services	Street not listed in Source
1995	-	Cole Information Services	Street not listed in Source
1992	-	Cole Information Services	Street not listed in Source
1987	-	Polk's City Directory	Street not listed in Source
1983	-	Polk's City Directory	Street not listed in Source
1978	-	Polk's City Directory	Street not listed in Source
1973	-	Polk's City Directory	Street not listed in Source
1968	-	Polk's City Directory	Street not listed in Source
1964	-	Polk's City Directory	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
✓	-	Cole Information Services

W 191ST ST 2013

24800	JERRY REED
24850	DEREK VARNEY
25545	ANTHONY DAVIS
25930	STEVEN CHRISTENSEN
26780	OCCUPANT UNKNOWN
26815	OCCUPANT UNKNOWN
27180	BEVERLY WALTER
27450	OCCUPANT UNKNOWN
27615	JOHN DEGRANDE
28060	JOHN COLE
28445	BRIAN KELLY
29419	PERRY BICE
29421	KERRY COX
29550	XPRESS TEXACO
29552	CAR POOL THE
29755	JEFF MULL
29960	OCCUPANT UNKNOWN
30280	NICKY JUDD
30600	KENNETH DAILEY
30830	OCCUPANT UNKNOWN
31115	ROB SHIPPY
31275	JEFFREY FINNEY
31435	TOM CROSS
	WISEMAN LAWN EQUIPMENT
31625	TJ LAMBRECHT CONSTRUCTION

Target Street	Cross Street	Source
✓	-	Cole Information Services

W 191ST ST 2008

24800	FRISKEY BUSINESS PET PHOTOS
	JERRY REED
24850	DEREK VARNEY
25545	ANTHONY DAVIS
25930	FIELDSTONE ORGANIC FARM
	STEVEN CHRISTENSEN
26780	RICHARD FIELDER
26815	OCCUPANT UNKNOWN
27180	BEVERLY WALTER
	WALTER FARMS
27450	GEORGE WALTER
27615	OCCUPANT UNKNOWN
28445	OCCUPANT UNKNOWN
29419	PERRY BICE
29421	OCCUPANT UNKNOWN
29550	EXPRESS
29960	IRONWOOD DEVELOPMENT LLC
	OCCUPANT UNKNOWN
30280	NICKY JUDD
30600	KENNETH DAILEY
30830	OCCUPANT UNKNOWN
31115	ROB SHIPPY
31275	FRED WARREN
31435	JIM WISEMAN
	WISEMAN LAWN EQUIPMENT

Target Street	Cross Street	Source
✓	-	Cole Information Services

W 191ST ST 2003

24800	JERRY REED
25545	ANTHONY DAVIS
25930	PAMELA NEE
26780	RICHARD FIELDER
26815	PAUL VANGOETHEM
27180	GEORGE WALTER
	WALTER FARMS
27450	GEORGE WALTER
27615	OCCUPANT UNKNOWN
28445	SALLY TRANELLO
29419	PERRY BICE
29421	HENRY CASTRO
29755	OCCUPANT UNKNOWN
29960	OCCUPANT UNKNOWN
30280	ROB LAQUET
30600	KENNETH DAILEY
30830	DONALD DAILEY
31115	LEN LADUE
31275	BOB TUNISON
	TUNISONS
31435	JIM WISEMAN
	WISEMAN LAWN EQUIPMENT
31555	JAMES KINCAIDE
31940	OCCUPANT UNKNOWN

Target Street	Cross Street	Source
✓	-	Cole Information Services

W 191ST ST 1999

24800	JERRY REED
24850	DEREK VARNEY
25545	ANTHONY DAVIS
25930	STEVEN CHRISTENSEN
26780	OCCUPANT UNKNOWN
26815	OCCUPANT UNKNOWN
27180	BEVERLY WALTER
	OCCUPANT UNKNOWN
27450	GEORGE WALTER
27615	OCCUPANT UNKNOWN
28060	JOHN COLE
28445	BRIAN KELLY
29419	PERRY BICE
29421	OCCUPANT UNKNOWN
29960	PATRICK BURTON
30280	NICKY JUDD
30600	KENNETH DAILEY
	OCCUPANT UNKNOWN
30830	REGGIE NIELSEN
31115	ROB SHIPPY
31275	SHANNON BOLLINGER

Target Street	Cross Street	Source
✓	-	Cole Information Services

W 191ST ST 1995

25545 PEFFER, JOHN
25930 GARDNER COMMERCIAL REAL ESTATE
HARSH, BRENDA J
27180 WALTER, GEORGE
28445 JACKSON, JOHN
29419 LONG, CHRIS
29421 BRENNEMAN, RUSSELL P
29755 SWANSON, JIM
30280 HOUCHINS, J J
30600 DAILEY, WILLIAM P
30830 DAILEY, DONALD
31115 LADUE, LEN
31275 TUNISON, ARTHUR N
31435 WISEMAN LAWN EQUIPMENT
WISEMAN, JIM
31555 KINCAIDE, JAMES R
31940 ROTHWELL, DOLORES A
32355 HOLTGRAVER, OMAR J

Target Street	Cross Street	Source
✓	-	Cole Information Services

W 191ST ST 1992

25930	SCRIVNER, BRENDA J
26815	VANGOETHEM, PAUL
29421	BRENNEMAN, RUSSELL P
30280	LAQUET, ROB
30600	DAILEY, WILLIAM P
30830	DAILEY, DONALD
31115	LADUE, LENNY
31275	TUNISON, ARTHUR N
31435	WISEMAN, JIM
31555	KINCAIDE, JAMES R
32355	HOLTGRAVER, OMAR J

Approximately 20 Acres Vacant Land

North of W. 191st Street and East of Waverly Road

Gardner, KS 66030

Inquiry Number: 4642915.3

June 09, 2016

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

06/09/16

Site Name:

Approximately 20 Acres Vacan
North of W. 191st Street and E
Gardner, KS 66030
EDR Inquiry # 4642915.3

Client Name:

PSI, Inc.
1211 West Cambridge Circle Drive
Kansas City, KS 66103
Contact: Cole Read

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by PSI, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 4481-4FAC-9A99

PO # NA

Project 06031248-1

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 4481-4FAC-9A99

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

PSI, Inc. (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

INTERVIEW DOCUMENTATION

Information To Build On
Engineering • Consulting • Testing

June 17, 2016

City of Edgerton, Kansas

Attention: Mr. Jerry Holly

RE: Phase I Environmental Site Assessment (ESA)
Request for Information
Vacant Land
191st St.
Edgerton, Kansas 66030
PSI Project Number 06031248-1

Dear Mr. Jerry Holly:

Professional Service Industries, Inc. (PSI) has been contracted to perform a Phase I ESA of the northeast corner of the vacant land located on West 191st St. in Edgerton, Kansas. As a routine part of our assessment, we request any information the local fire prevention authority might have pertaining to hazardous or ignitable materials storage (including fuel); hazardous or other spills on the property or vicinity; or any other information regarding the area that might indicate the presence of a potentially adverse environmental condition.

We understand that the property is undeveloped. The property of interest is generally bound: to the north by vacant land, to the northeast by Horizon Trail Apartments, to the east by a residential home and vacant farm land, to the south by West 191st St. followed by vacant farm land and to the southwest by West 191st St. followed by Jet Warehouse complex. To the east is a residential home and J.B. Hunt on the northwest portion of the subject property.

Thank you for your attention to this matter. If you have any questions, please do not hesitate to contact me at the phone number or fax listed below, or by e-mail at cole.read@psiusa.com.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Cole Read

Cole Read
Environmental Technician

Telephone: (913) 310-1604
Fax: (913) 310-1601

Cole Read

From: Jerry Holly <jerry.holly@jocofd1.org>
Sent: Friday, June 17, 2016 6:07 PM
To: Cole Read
Subject: Re: 191st. St. vacant Land

Cole, after checking all the records show no incidents at the above address.

On Jun 17, 2016 12:52, "Cole Read" <cole.read@psiusa.com> wrote:

> Good afternoon,
>
> Attached you will find a brief letter explaining what we are looking for and a site map of the subject property. If you have any questions please feel free to contact me.
>
> Thank You,
>
> **Cole Read**
>
> Environmental Technician
>
> **PROFESSIONAL SERVICE INDUSTRIES, INC. (PSI)**
>
> Intertek
> BuildingBetterTogether.
>
> 1211 West Cambridge Circle Drive l Kansas City, KS 66103
>
> Office: 913.310.1600 Cell: 816.718.2924
>
> cole.read@psiusa.com | www.psiusa.com | Intertek.com/building

DATA GAP WORKSHEET

Project or Property Name: Approximately 20 Acres of Vacant Land
Work Order Number: 06031248-1

DATA GAP WORKSHEET

Requirement	Status			Other Sources of Information	SDG*
Category Activity	**N/A**	**Complete**	**Incomplete**	**Reference Source(s) Obtained or What Sources PSI Used to Try To Close Data Gap**	**Blank if None**
User Responsibilities					
User Knowledge and Information		☒	☐		
Environmental Lien and AUL Information		☐	☒		
PSI Obtained Environmental Lien/AUL Search on Behalf of Client (**BOLD** YES or NO)		YES	**NO**		
PSI Obtained Chain-of-Title on Behalf of Client (**BOLD** YES or NO)		YES	**NO**		
Environmental Records Review					
Standard Environmental Records Source Information		☒	☐		
Discretionary or Local Environmental Records Source Information	☒	☐	☐		
Physical Setting Sources Review					
Standard Physical Setting Record Information (topo map)		☒	☐		
Additional Physical Setting Record Information	☐	☒	☐		
Historical Data Sources Review					
Property History Identified to 1948		☒	☐	According to the aerial photographs reviewed, the subject property appeared to be developed for agricultural use by 1948.	
Property History Identified to First Developed Use		☒	☐		
Gaps of >5 Years in Historical Data Sources		☒	☐		
Surrounding Property History Information		☒	☐		

Project or Property Name: Approximately 20 Acres of Vacant Land
Work Order Number: 06031248-1

DATA GAP WORKSHEET

Requirement	Status			Other Sources of Information	SDG*
Category Activity	N/A	Complete	Incomplete	**Reference Source(s) Obtained or What Sources PSI Used to Try To Close Data Gap**	**Blank if None**
Site Reconnaissance					
Observations: Exterior areas of the Subject Property	☐	☒	☐		
Observations: Interior of Buildings on the Subject Property	☒	☐	☐		
Current and Past Uses of the Subject Property	☐	☒	☐		
Observations: Adjoining Property	☐	☒	☐		
Current and Past Uses of the Adjoining Property	☐	☒	☐		
Uses of the Surrounding Property	☐	☒	☐		
Interviews (with…)					
Current Owner	☐	☒	☐		
Identified Key Site Manager	☐	☒	☐		
Non-Residential Major Occupants	☒	☐	☐		
Occupants with Operations Likely to Indicate RECs	☒	☐	☐		
Past Owners, Operators, and/or Occupants	☐	☐	☒	None identified by the client.	
If Subject Property Abandoned or Vacant, Owner or Occupants of Neighboring Properties	☒	☐	☐		
State or Local Government Official	☐	☒	☐		

Project or Property Name: Approximately 20 Acres of Vacant Land
Work Order Number: 06031248-1

DATA GAP WORKSHEET

Requirement	Status			Other Sources of Information	SDG*
Category Activity	**N/A**	**Complete**	**Incomplete**	**Reference Source(s) Obtained or What Sources PSI Used to Try To Close Data Gap**	**Blank if None**
FOIAs (to…)					
Fire Department	☒	☐	☐		
City of	☒	☐	☐		
State-Equivalent Environmental Department	☒	☐	☐		
Other Agency	☒	☐	☐		

Comments and Explanations Regarding Incomplete Data

Because of available historical documentation regarding property usage, PSI does not consider the lack of interviews with past owners, occupants, etc. to represent a SDG.

*** SDG = Significant Data Gap. List Identified SDG(s) in Section 1.1.1 of the Report**

SUPPLEMENTAL DOCUMENTATION

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Johnson County, Kansas

PSI's Project No.: 06031248-1

June 17, 2016

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:2,300 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Johnson County, Kansas
Survey Area Data: Version 14, Sep 9, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 16, 2012—Feb 25, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Johnson County, Kansas (KS091)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
7603	Sibleyville loam, 3 to 7 percent slopes	0.3	1.8%
8912	Summit silty clay loam, 3 to 7 percent slopes	2.4	12.4%
8962	Woodson silt loam, 1 to 3 percent slopes	16.6	85.8%
Totals for Area of Interest		**19.4**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments

on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Johnson County, Kansas

7603—Sibleyville loam, 3 to 7 percent slopes

Map Unit Setting

National map unit symbol: vl6h
Elevation: 1,000 to 1,030 feet
Mean annual precipitation: 31 to 47 inches
Mean annual air temperature: 55 to 59 degrees F
Frost-free period: 175 to 215 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Sibleyville and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sibleyville

Setting

Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Fine-loamy residuum weathered from sandstone

Typical profile

A - 0 to 7 inches: loam
Bt - 7 to 15 inches: loam
C - 15 to 27 inches: channery loam
Cr - 27 to 31 inches: bedrock

Properties and qualities

Slope: 3 to 7 percent
Depth to restrictive feature: 20 to 39 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: Loamy Upland (Draft) (PE 35-42) (R112XY015KS)

Minor Components

Woodson

Percent of map unit: 10 percent
Landform: Hillslopes

Landform position (two-dimensional): Summit
Ecological site: Clay Upland (PE 35-42) (R112XY007KS)

Summit
Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Ecological site: Clay Upland (PE 35-42) (R112XY007KS)

8912—Summit silty clay loam, 3 to 7 percent slopes

Map Unit Setting
National map unit symbol: 2thf7
Elevation: 770 to 1,300 feet
Mean annual precipitation: 31 to 47 inches
Mean annual air temperature: 52 to 63 degrees F
Frost-free period: 185 to 255 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Summit and similar soils: 87 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Summit

Setting
Landform: Interfluves
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex, concave
Across-slope shape: Concave
Parent material: Calcareous clayey colluvium and/or residuum weathered from shale

Typical profile
A - 0 to 10 inches: silty clay loam
BA - 10 to 22 inches: silty clay loam
Bt - 22 to 39 inches: silty clay
BC - 39 to 79 inches: silty clay

Properties and qualities
Slope: 3 to 7 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None

Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: Loamy Upland (Draft) (PE 35-42) (R112XY015KS)

Minor Components

Dennis

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Loamy Upland (Draft) (PE 35-42) (R112XY015KS)

Clareson

Percent of map unit: 3 percent
Landform: Interfluves
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Shallow Flats (Draft) (PE 35-42) (R112XY027KS)

Eram

Percent of map unit: 3 percent
Landform: Interfluves
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Clay Upland (PE 35-42) (R112XY007KS)

Aliceville

Percent of map unit: 2 percent
Landform: Interfluves
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Loamy Upland (Draft) (PE 35-42) (R112XY015KS)

8962—Woodson silt loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2thdw

Elevation: 810 to 1,200 feet
Mean annual precipitation: 37 to 43 inches
Mean annual air temperature: 54 to 61 degrees F
Frost-free period: 175 to 255 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Woodson and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodson

Setting

Landform: Divides
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Silty loess and/or silty and clayey alluvium

Typical profile

Ap - 0 to 8 inches: silt loam
Bt1 - 8 to 18 inches: silty clay
Bt2 - 18 to 31 inches: silty clay
BC - 31 to 43 inches: silty clay
C - 43 to 79 inches: silty clay

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 7.0
Available water storage in profile: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: D
Ecological site: Clay Upland (PE 35-42) (R112XY007KS)

Minor Components

Kenoma

Percent of map unit: 5 percent
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Clay Upland (PE 35-42) (R112XY007KS)

Eram

Percent of map unit: 3 percent
Landform: Interfluves
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Ecological site: Clay Upland (PE 35-42) (R112XY007KS)

Summit

Percent of map unit: 2 percent
Landform: Interfluves
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Base slope
Down-slope shape: Convex, concave
Across-slope shape: Concave
Ecological site: Loamy Upland (Draft) (PE 35-42) (R112XY015KS)

Aquolls

Percent of map unit: 0 percent
Landform: Divides
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: Clay Upland (PE 35-42) (R112XY007KS)

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

AOI Inventory

This folder contains a collection of tabular reports that present a variety of soil information. Included are various map unit description reports, special soil interpretation reports, and data summary reports.

Map Unit Description (Brief, Generated)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief, Generated)

Johnson County, Kansas

Map Unit: 7603—Sibleyville loam, 3 to 7 percent slopes

Component: Sibleyville (85%)

The Sibleyville component makes up 85 percent of the map unit. Slopes are 3 to 7 percent. This component is on hillslopes on uplands. The parent material consists of fine-loamy residuum weathered from sandstone. Depth to a root restrictive layer, bedrock, paralithic, is 20 to 39 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is very low. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. This component is in the R112XY015KS Loamy Upland (draft) (pe 35-42) ecological site. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria.

Component: Woodson (10%)

Generated brief soil descriptions are created for major components. The Woodson soil is a minor component.

Component: Summit (5%)

Generated brief soil descriptions are created for major components. The Summit soil is a minor component.

Map Unit: 8912—Summit silty clay loam, 3 to 7 percent slopes

Component: Summit (87%)

The Summit component makes up 87 percent of the map unit. Slopes are 3 to 7 percent. This component is on interfluves, plains. The parent material consists of calcareous clayey colluvium and/or residuum weathered from shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is moderately well drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 30 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 3 percent. This component is in the R112XY015KS Loamy Upland (draft) (pe 35-42) ecological site. Nonirrigated land capability

classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Dennis (5%)

The Dennis component makes up 85 percent of the map unit. Slopes are 3 to 5 percent. This component is on hillslopes on plains. The parent material consists of silty and clayey residuum weathered from shale. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is moderately low. Available water to a depth of 60 inches is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 24 inches during January, February, March, April, December. Organic matter content in the surface horizon is about 2 percent. This component is in the R112XY015KS Loamy Upland (draft) (pe 35-42) ecological site. Nonirrigated land capability classification is 3e. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Clareson (3%)

Generated brief soil descriptions are created for major components. The Clareson soil is a minor component.

Component: Eram (3%)

Generated brief soil descriptions are created for major components. The Eram soil is a minor component.

Component: Aliceville (2%)

Generated brief soil descriptions are created for major components. The Aliceville soil is a minor component.

Map Unit: 8962—Woodson silt loam, 1 to 3 percent slopes

Component: Woodson (90%)

The Woodson component makes up 90 percent of the map unit. Slopes are 1 to 3 percent. This component is on divides on plains. The parent material consists of silty loess and/or silty and clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is somewhat poorly drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches is moderate. Shrink-swell potential is high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 15 inches during January, February, March, April, May, November, December. Organic matter content in the surface horizon is about 3 percent. This component is in the R112XY007KS Clay Upland (pe 35-42) ecological site. Nonirrigated land capability classification is 2s. This soil does not meet hydric criteria. There are no saline horizons within 30 inches of the soil surface.

Component: Kenoma (5%)

Generated brief soil descriptions are created for major components. The Kenoma soil is a minor component.

Component: Eram (3%)

Generated brief soil descriptions are created for major components. The Eram soil is a minor component.

Component: Summit (2%)

Generated brief soil descriptions are created for major components. The Summit soil is a minor component.

Component: Aquolls (0%)

Generated brief soil descriptions are created for major components. The Aquolls soil is a minor component.

Soil Physical Properties

This folder contains a collection of tabular reports that present soil physical properties. The reports (tables) include all selected map units and components for each map unit. Soil physical properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

Engineering Properties

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and

C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Absence of an entry indicates that the data were not estimated. The asterisk '*' denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba).

Engineering Properties–Johnson County, Kansas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*Pct*	*Pct*					*Pct*	
7603—Sibleyville loam, 3 to 7 percent slopes														
Sibleyville	85	C	0-7	Loam	CL, SC	A-4, A-6, A-7	0- 0- 0	0- 0- 0	100-100 -100	84-91-100	67-79-93	45-55-67	27-37 -46	9-14-19
			7-15	Loam, clay loam, sandy clay loam	SC, CL	A-6, A-7	0- 0- 0	0- 0- 0	100-100 -100	84-91-100	69-80-97	48-57-72	32-39 -49	13-18-25
			15-27	Channery loam, channery clay loam, channery sandy clay loam	CL, SC	A-2, A-4, A-6, A-7	0- 0- 0	0- 9- 15	72-81-91	54-71-91	43-62-85	28-42-60	26-34 -42	9-15-21
			27-31	Bedrock	—	—	—	—	—	—	—	—	—	—
Woodson	10	D	0-10	Silt loam, silty clay loam	CL	A-6, A-7-6	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	90-95-100	85-93-100	33-40 -46	12-16-19
			10-21	Silty clay, clay	CH	A-7-6	0- 0- 0	0- 0- 0	100-100 -100	95-98-100	95-98-100	90-95-100	54-66 -77	29-36-44
			21-30	Silty clay, clay	CH	A-7-6	0- 0- 0	0- 0- 0	100-100 -100	95-98-100	95-98-100	90-95-100	53-65 -76	29-37-44
			30-48	Silty clay, clay	CH	A-7-6	0- 0- 0	0- 0- 0	100-100 -100	95-98-100	95-98-100	90-95-100	52-63 -74	29-37-44
			48-60	Silty clay, clay, silty clay loam	CH	A-7-6	0- 0- 0	0- 0- 0	100-100 -100	95-98-100	95-98-100	90-95-100	46-51 -74	25-29-45
Summit	5	D	0-9	Silty clay loam	CH, CL	A-7-6	0- 0- 0	0- 0- 0	90-95-100	75-85-100	75-85-99	70-80-93	42-47 -64	19-21-32
			9-17	Silty clay, silty clay loam, clay	CH, CL	A-7-6	0- 0- 0	0- 0- 0	85-92-100	72-84-100	70-83-99	68-80-95	47-62 -69	23-33-36
			17-24	Clay, silty clay	CH	A-7-6	0- 0- 0	0- 0- 0	85-92-100	65-80-100	65-80-99	63-77-96	54-66 -76	29-37-44
			24-41	Clay, silty clay	CH	A-7-6	0- 0- 0	0- 0- 0	90-95-100	70-83-100	68-83-99	66-80-95	52-59 -74	29-34-44
			41-61	Silty clay, clay	CH	A-7-6	0- 0- 0	0- 0- 0	100-100 -100	100-100 -100	90-95-99	85-93-95	51-55 -72	29-31-44

Engineering Properties–Johnson County, Kansas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*Pct*	*Pct*					*Pct*	
			61-73	Clay, silty clay, silty clay loam	CH, CL	A-7-6	0- 0- 0	0- 0- 0	85-93-100	75-88-100	70-85-100	55-77-98	46-53-66	25-31-41

Engineering Properties–Johnson County, Kansas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*Pct*	*Pct*					*Pct*	
8912—Summit silty clay loam, 3 to 7 percent slopes														
Summit	87	C	0-10	Silty clay loam, silty clay	CL, CH	A-6, A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	94-98-100	86-97-100	79-93-100	39-45-63	19-21-32
			10-22	Silty clay, silty clay loam, clay	CH, CL	A-7-6, A-7-5	0- 0- 0	0- 0- 0	100-100-100	94-98-100	86-97-100	79-92-100	43-50-63	22-25-32
			22-39	Clay, silty clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	90-97-100	82-94-100	74-88-100	52-58-75	29-32-44
			39-79	Clay, silty clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	100-100-100	90-97-100	82-94-100	74-88-100	52-58-75	29-32-44
Dennis	5	C	0-11	Silt loam	CL, CL-ML, ML	A-6, A-4, A-7-6	0- 0- 0	0- 0- 0	98-98-100	96-96-100	87-93-100	73-81-93	23-33-43	6-12-18
			11-17	Silty clay loam, silt loam, clay loam	CL, CL-ML	A-4, A-7-6	0- 0- 0	0- 0- 0	98-98-100	96-96-100	82-94-100	66-84-99	22-43-48	6-22-25
			17-22	Silty clay, silty clay loam, clay, clay loam	CH, CL	A-7-6, A-6	0- 0- 0	0- 0- 0	98-98-100	96-96-100	85-93-100	74-85-100	38-54-65	19-32-40
			22-68	Silty clay, silty clay loam, clay, clay loam	CH, CL	A-7-6, A-6	0- 0- 0	0- 0- 0	98-98-100	96-96-100	85-93-100	74-85-100	37-53-65	19-32-40
			68-79	Clay loam, silty clay loam, clay, silty clay	CL, CH	A-7-6, A-6	0- 0- 0	0- 0- 0	98-98-100	96-96-100	87-95-100	72-84-100	37-46-65	19-25-40
Clareson	3	D	0-8	Stony silty clay loam, silty clay loam	CH, CL, MH	A-7-5, A-7-6	0-20- 28	0- 4- 6	77-89-100	77-89-100	75-89-100	71-86-100	41-52-63	21-25-31
			8-14	Silty clay loam, stony silty clay loam	MH, CH, CL	A-7-6, A-7-5	0-20- 29	0- 4- 6	77-89-100	77-89-100	73-88-100	69-84-100	43-54-59	22-27-28

Engineering Properties–Johnson County, Kansas													
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*Pct*	*Pct*					*Pct*	
			14-25	Extremely flaggy silty clay, extremely flaggy silty clay loam, very flaggy silty clay, very flaggy silty clay loam	GC, CH	A-7-6, A-2-7	30-39-43	17-22-30	33-86-91	30-86-90	28-84-90	26-81-90	47-58-71	28-33-42
			25-30	Very flaggy silty clay, extremely flaggy clay, very flaggy clay, extremely flaggy silty clay	CH, GC	A-7-6	30-49-54	17-26-30	54-84-91	52-83-90	49-82-90	46-79-89	55-64-75	36-41-48
			30-79	Bedrock	—	—	—	—	—	—	—	—	—	—
Eram	3	D	0-10	Silty clay loam	CH, CL	A-6, A-7-6	0- 0- 0	0- 2- 3	91-95-100	90-94-100	83-91-100	75-84-98	38-47-55	19-24-28
			10-18	Clay loam, clay, silty clay	CH, CL	A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	89-95-100	82-91-99	45-56-67	25-32-40
			18-35	Clay loam, clay, silty clay	CH, CL	A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	85-95-100	81-91-100	45-55-66	25-32-40
			35-44	Bedrock	—	—	—	—	—	—	—	—	—	—
Aliceville	2	D	0-4	Silty clay loam	CH, MH, ML	A-7-6, A-7-5	0- 0- 0	0- 0- 1	99-100-100	99-100-100	88-99-100	84-95-100	41-50-57	14-22-27
			4-9	Silty clay loam	CH, CL, MH	A-7-6	0- 0- 0	0- 0- 1	98-100-100	97-100-100	91-99-100	84-92-96	44-49-55	19-24-27
			9-14	Silty clay, silty clay loam	CL, CH	A-7-6, A-7-5	0- 0- 0	0- 0- 1	97-100-100	97-100-100	84-99-100	78-94-100	43-56-64	19-29-34
			14-30	Silty clay loam, clay, silty clay, channery silty clay, channery clay, channery silty clay loam	CH, CL	A-7-6	0- 0- 9	0- 2- 12	73-95-100	71-94-100	62-92-100	59-88-100	47-59-68	25-33-40

Engineering Properties–Johnson County, Kansas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*Pct*	*Pct*					*Pct*	
			30-46	Flaggy silty clay, clay, flaggy clay, channery silty clay, bouldery clay, stony silty clay, stony clay, bouldery silty clay, channery clay, silty clay	CH, GC	A-7-6, A-7-5	0- 9- 51	0- 3- 24	64-96-100	61-96-100	49-93-100	46-89-100	47-65-87	27-40-57
			46-79	Bedrock	—	—	—	—	—	—	—	—	—	—

Engineering Properties–Johnson County, Kansas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*Pct*	*Pct*					*Pct*	
8962—Woodson silt loam, 1 to 3 percent slopes														
Woodson	90	D	0-8	Silty clay loam, silt loam	MH, CL	A-7-5, A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	95-99-100	90-95-100	30-38-50	12-16-19
			8-18	Clay, silty clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	94-98-100	89-94-100	83-94-100	78-91-100	52-58-77	29-33-44
			18-31	Silty clay, clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	94-98-100	89-94-100	83-94-100	78-91-100	52-58-77	29-33-44
			31-43	Silty clay, clay	CH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	94-98-100	89-94-100	83-94-100	78-91-100	51-57-74	29-33-44
			43-79	Silty clay, clay, silty clay loam	CL, CH	A-7-6, A-6	0- 0- 0	0- 0- 0	94-98-100	89-94-100	82-93-100	75-87-100	40-51-62	21-29-37
Kenoma	5	D	0-6	Silt loam	ML, CL	A-6, A-7-6, A-7-5	0- 0- 0	0- 0- 0	100-100-100	82-98-100	79-97-100	75-94-98	30-39-48	11-15-18
			6-11	Silt loam	CL, ML	A-6, A-7-6, A-7-5	0- 0- 0	0- 0- 0	100-100-100	82-98-100	79-97-100	75-94-98	30-39-48	11-15-18
			11-24	Silty clay, clay	CH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	100-100-100	81-94-100	77-93-100	73-92-100	51-66-82	30-39-49
			24-38	Silty clay, clay	CH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	100-100-100	81-94-100	77-93-100	73-92-100	51-66-82	30-39-49
			38-54	Silty clay loam, silty clay, clay	CH, CL	A-7-6	0- 0- 0	0- 0- 0	100-100-100	82-94-100	76-91-100	72-89-100	48-59-72	27-35-44
			54-69	Silty clay, clay	CH	A-7-6	0- 0- 0	0- 0- 0	100-100-100	74-91-100	71-89-100	68-87-98	54-57-61	32-34-37
			69-79	Bedrock	—	—	—	—	—	—	—	—	—	—
Eram	3	D	0-10	Silty clay loam	CL, CH	A-6, A-7-6	0- 0- 0	0- 2- 3	91-95-100	90-94-100	83-91-100	75-84-98	38-47-55	19-24-28
			10-18	Clay, silty clay, clay loam	CH, CL	A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	89-95-100	82-91-99	45-56-67	25-32-40

Engineering Properties–Johnson County, Kansas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*Pct*	*Pct*					*Pct*	
			18-35	Clay, silty clay, clay loam	CH, CL	A-7-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	85-95-100	81-91-100	45-55-66	25-32-40
			35-44	Bedrock	—	—	—	—	—	—	—	—	—	—
Summit	2	D	0-8	Silty clay loam	CL, CH	A-6, A-7-6, A-7-5	0- 0- 0	0- 0- 0	89-94-100	83-92-100	78-91-100	73-87-100	39-51-63	19-26-32
			8-14	Silty clay loam, clay, silty clay	CL, CH	A-7-6	0- 0- 0	0- 0- 0	89-92-100	76-84-100	70-82-100	66-78-100	43-51-59	22-28-33
			14-65	Silty clay, clay	CH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	89-92-100	76-83-100	70-81-100	66-76-100	51-57-75	29-32-44
			65-79	Clay, silty clay	CH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	89-92-100	76-83-100	70-81-100	66-76-100	51-57-75	29-32-44
Aquolls	0	D	0-8	Silty clay loam, silt loam	MH, CL	A-7-5, A-6	0- 0- 0	0- 0- 0	100-100-100	100-100-100	95-99-100	90-95-100	30-38-50	12-16-19
			8-14	Clay, silty clay	CH	A-7-5, A-7-6	0- 0- 0	0- 0- 0	94-98-100	89-94-100	83-94-100	78-91-100	52-58-77	29-33-44
			14-31	Silty clay, clay	CH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	94-98-100	89-94-100	83-94-100	78-91-100	52-58-77	29-33-44
			31-43	Silty clay, clay	CH	A-7-6, A-7-5	0- 0- 0	0- 0- 0	94-98-100	89-94-100	83-94-100	78-91-100	51-57-74	29-33-44
			43-79	Silty clay, clay, silty clay loam	CL, CH	A-7-6, A-6	0- 0- 0	0- 0- 0	94-98-100	89-94-100	82-93-100	75-87-100	40-51-62	21-29-37

Physical Soil Properties

This table shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In this table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In this table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In this table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, saturated hydraulic conductivity (Ksat), plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at 1/3- or 1/10-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2 millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates in the table are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity (Ksat) is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In this table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter. The content of organic matter in a soil can be maintained by returning crop residue to the soil.

Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and Ksat. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion by wind and/or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the "National Soil Survey Handbook."

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion.

There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Reference:
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. (http://soils.usda.gov)

Physical Soil Properties–Johnson County, Kansas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
7603—Sibleyville loam, 3 to 7 percent slopes														
Sibleyville	0-7	30-47- 55	20-32- 50	14-21- 27	1.30-1.35-1.40	4.23-9.00-14.11	0.18-0.20-0.21	1.4- 2.8- 4.1	1.0- 2.5-4.0	.24	.24	3	6	48
	7-15	25-45- 52	20-29- 50	20-26- 35	1.35-1.40-1.45	4.23-9.00-14.11	0.16-0.18-0.19	2.6- 3.9- 5.8	1.0- 1.5-2.0	.28	.28			
	15-27	25-49- 60	15-29- 50	14-22- 30	1.35-1.43-1.50	4.23-9.00-14.11	0.12-0.14-0.15	1.4- 3.0- 4.7	0.5- 0.8-1.0	.20	.37			
	27-31	—	—	—	—	0.00-0.10-1.40	—	—	—					
Woodson	0-10	1- 7- 10	50-70- 75	18-23- 27	1.25-1.35-1.45	1.41-3.00-4.23	0.22-0.23-0.24	2.4- 3.6- 4.6	2.0- 3.0-4.0	.49	.49	3	6	48
	10-21	1- 5- 10	35-45- 60	40-50- 60	1.30-1.38-1.45	0.01-0.21-0.42	0.12-0.13-0.15	7.9-10.4-13.0	1.5- 2.5-3.5	.28	.28			
	21-30	1- 5- 10	35-45- 60	40-50- 60	1.35-1.40-1.45	0.01-0.21-0.42	0.12-0.13-0.15	7.9-10.4-13.0	1.0- 2.0-3.0	.28	.28			
	30-48	1- 8- 10	35-42- 60	40-50- 60	1.35-1.40-1.45	0.01-0.21-0.42	0.10-0.13-0.15	7.9-10.4-13.0	0.5- 1.0-1.5	.28	.28			
	48-60	1- 8- 10	35-52- 60	35-40- 60	1.35-1.40-1.45	0.42-1.00-1.41	0.10-0.13-0.15	6.7- 7.9-17.0	0.2- 0.4-0.6	.37	.37			
Summit	0-9	1-10- 15	50-60- 65	27-30- 45	1.25-1.38-1.50	1.41-3.00-4.23	0.14-0.18-0.22	4.6- 5.4- 9.2	2.0- 3.0-4.0	.43	.43	5	6	48
	9-17	1- 7- 10	35-48- 60	32-45- 50	1.35-1.50-1.65	0.42-1.00-1.41	0.14-0.16-0.18	6.0- 9.2-10.4	2.0- 3.0-4.0	.28	.28			
	17-24	1- 5- 10	35-44- 60	40-51- 60	1.35-1.48-1.60	0.42-1.00-1.41	0.14-0.16-0.18	7.9-10.7-13.0	1.5- 2.0-2.5	.24	.24			
	24-41	1- 6- 10	35-48- 60	40-46- 60	1.35-1.48-1.60	0.42-1.00-1.41	0.14-0.16-0.18	7.9- 9.4-13.0	0.5- 1.0-1.5	.32	.32			

Physical Soil Properties–Johnson County, Kansas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
	41-61	1- 8- 10	35-49- 60	40-43- 60	1.35-1.48-1.60	0.42-1.00-1.41	0.14-0.16-0.18	7.9- 8.7-13.0	0.3- 0.7-0.9	.32	.32			
	61-73	1- 8- 10	35-50- 60	35-42- 55	1.35-1.48-1.60	0.42-1.00-1.41	0.14-0.16-0.18	6.7- 8.4-11.7	0.1- 0.2-0.3	.37	.37			

Physical Soil Properties–Johnson County, Kansas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
8912—Summit silty clay loam, 3 to 7 percent slopes														
Summit	0-10	5- 7- 20	40-63- 68	27-30- 45	1.25-1.38-1.50	1.41-2.82-4.23	0.16-0.18-0.20	3.1- 4.0- 8.9	1.0- 3.0-4.0	.32	.32	5	6	48
	10-22	5- 8- 25	37-57- 63	32-35- 45	1.25-1.38-1.50	1.41-2.82-4.23	0.16-0.18-0.20	4.0- 6.0- 8.9	1.0- 2.5-4.0	.37	.37			
	22-39	5-11- 20	27-44- 55	40-45- 60	1.35-1.50-1.60	0.42-0.92-1.41	0.10-0.14-0.18	6.1- 7.9-13.0	0.5- 1.0-2.0	.28	.28			
	39-79	5-11- 20	27-44- 55	40-45- 60	1.35-1.48-1.60	0.42-0.92-1.41	0.10-0.14-0.18	6.1- 7.9-13.0	1.0- 1.5-2.0	.28	.28			
Dennis	0-11	5-23- 35	50-58- 70	10-19- 27	1.25-1.40-1.55	4.23-9.17-14.11	0.15-0.20-0.24	0.7- 1.5- 2.7	1.0- 2.0-3.0	.43	.43	5	5	56
	11-17	0-19- 45	20-50- 73	10-31- 35	1.30-1.48-1.70	1.41-3.00-4.23	0.15-0.19-0.20	0.7- 3.2- 3.9	0.5- 1.3-2.0	.43	.43			
	17-22	6-15- 45	27-41- 60	28-44- 55	1.25-1.30-1.65	0.42-1.10-1.41	0.12-0.17-0.22	2.7- 5.3- 7.5	0.5- 0.8-1.0	.32	.32			
	22-68	6-15- 45	27-41- 60	28-44- 55	1.25-1.30-1.65	0.42-1.10-1.41	0.12-0.17-0.22	2.7- 5.3- 7.5	0.1- 0.5-1.0	.32	.32			
	68-79	9-18- 40	25-46- 60	28-36- 55	1.30-1.47-1.75	0.42-1.10-1.41	0.12-0.17-0.22	2.7- 3.9- 7.5	0.1- 0.5-1.0	.37	.37			
Clareson	0-8	0- 4- 10	52-60- 65	30-36- 39	1.20-1.35-1.45	1.00-2.00-4.00	0.13-0.16-0.17	2.6- 4.4- 7.4	1.0- 3.5-5.0	.17	.28	2	5	56
	8-14	0- 7- 15	49-55- 61	32-38- 39	1.20-1.31-1.45	1.00-2.00-4.00	0.13-0.16-0.17	2.7- 4.8- 7.8	1.0- 3.0-4.5	.20	.32			
	14-25	0- 7- 11	40-46- 50	39-47- 58	1.20-1.26-1.45	0.40-0.90-1.40	0.02-0.06-0.08	0.7- 3.5- 6.1	0.5- 2.0-3.0	.10	.32			
	25-30	0- 7- 10	29-36- 40	50-57- 66	1.10-1.25-1.45	0.40-0.60-1.40	0.01-0.03-0.06	0.9- 2.8- 6.8	0.3- 1.0-1.5	.05	.24			

Physical Soil Properties–Johnson County, Kansas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
	30-79	—	—	—	—	0.01-0.05-0.10	—	—	—					
Eram	0-10	1-13- 20	45-53- 70	27-34- 40	1.30-1.45-1.60	1.40-2.70-4.00	0.17-0.19-0.23	2.4- 3.6- 4.8	1.0- 2.0- 3.0	.32	.32	3	6	48
	10-18	3-10- 25	30-45- 50	35-45- 55	1.35-1.50-1.65	0.40-0.90-1.40	0.09-0.11-0.13	3.6- 5.4- 7.5	0.8- 1.5- 2.0	.28	.28			
	18-35	1-10- 25	30-45- 60	35-45- 55	1.35-1.50-1.65	0.40-0.90-1.40	0.11-0.12-0.13	3.6- 5.4- 7.5	0.5- 1.0- 1.5	.32	.32			
	35-44	—	—	—	—	0.01-0.20-0.42	—	—	—					
Aliceville	0-4	2- 6- 15	47-62- 68	27-32- 39	1.22-1.38-1.58	1.40-2.70-4.00	0.17-0.20-0.23	2.3- 4.0- 5.7	4.4- 4.5- 4.6	.28	.28	3	6	48
	4-9	2-10- 15	47-56- 65	28-34- 39	1.36-1.41-1.46	1.40-2.50-4.00	0.18-0.19-0.20	3.0- 4.5- 5.7	2.9- 3.2- 3.6	.28	.28			
	9-14	1- 8- 15	40-51- 57	28-40- 48	1.32-1.37-1.41	0.40-1.10-1.40	0.11-0.12-0.13	2.3- 4.7- 6.2	2.4- 2.9- 3.6	.32	.32			
	14-30	1- 9- 15	31-45- 60	36-46- 55	1.28-1.33-1.41	0.40-0.90-1.40	0.11-0.12-0.13	2.6- 5.7- 7.8	1.2- 1.8- 2.5	.28	.28			
	30-46	1- 9- 25	20-37- 55	40-54- 77	1.12-1.36-1.53	0.40-0.70-1.40	0.05-0.09-0.10	2.3- 6.6-12.7	0.5- 0.9- 1.7	.28	.28			
	46-79	—	—	—	—	0.01-0.05-0.10	—	—	—					

Physical Soil Properties–Johnson County, Kansas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
8962—Woodson silt loam, 1 to 3 percent slopes														
Woodson	0-8	1- 7- 10	62-70- 81	18-23- 28	1.16-1.30-1.44	1.41-3.00-4.23	0.21-0.22-0.24	1.9- 2.8- 3.8	1.0- 2.5-4.0	.49	.49	5	6	48
	8-18	1- 5- 10	30-50- 59	40-45- 60	1.30-1.40-1.45	0.01-0.21-0.42	0.08-0.10-0.12	6.0- 8.3-14.9	1.0- 1.5-3.0	.32	.32			
	18-31	1- 5- 10	30-50- 59	40-45- 60	1.30-1.40-1.45	0.01-0.21-0.42	0.08-0.10-0.12	6.0- 8.3-14.9	1.0- 1.5-3.0	.32	.32			
	31-43	1- 5- 10	30-50- 59	40-45- 60	1.30-1.40-1.45	0.01-0.21-0.42	0.08-0.14-0.20	6.0- 8.2-11.9	0.5- 1.0-1.5	.32	.32			
	43-79	1-10- 12	38-50- 60	30-40- 50	1.35-1.40-1.55	0.42-1.00-1.41	0.09-0.11-0.13	3.7- 6.9- 9.9	0.3- 0.5-1.0	.37	.37			
Kenoma	0-6	4- 6- 9	65-72- 75	18-22- 26	1.26-1.39-1.45	1.41-3.00-4.23	0.20-0.23-0.24	1.7- 2.6- 3.4	1.4- 3.3-5.2	.43	.43	3	6	48
	6-11	4- 6- 9	65-72- 75	18-22- 26	1.26-1.39-1.45	1.40-3.00-4.23	0.20-0.23-0.24	1.7- 2.6- 3.4	1.4- 3.3-5.2	.43	.43			
	11-24	2- 3- 6	32-44- 56	41-53- 66	1.27-1.32-1.42	0.01-0.21-0.42	0.08-0.11-0.13	6.0-10.4-14.9	0.3- 1.5-2.5	.28	.28			
	24-38	2- 3- 6	32-44- 56	41-53- 66	1.27-1.32-1.42	0.01-0.21-0.42	0.08-0.11-0.13	6.0-10.4-14.9	0.3- 1.5-2.5	.28	.28			
	38-54	4- 7- 12	35-45- 56	38-48- 60	1.20-1.39-1.56	0.40-0.90-1.40	0.07-0.14-0.20	6.0- 8.8-11.9	0.2- 0.4-1.0	.28	.28			
	54-69	5- 6- 12	38-47- 51	44-47- 50	1.20-1.39-1.56	0.40-0.90-1.40	0.07-0.10-0.12	6.7- 8.3- 9.7	0.2- 0.3-0.5	.32	.32			
	69-79	—	—	—	—	0.01-0.05-0.10	—	—	—					
Eram	0-10	1-13- 20	45-53- 70	27-34- 40	1.30-1.45-1.60	1.40-2.70-4.00	0.15-0.18-0.20	2.4- 3.6- 4.8	1.0- 2.0-3.0	.32	.32	3	6	48

Physical Soil Properties–Johnson County, Kansas														
Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors			Wind erodibility group	Wind erodibility index
										Kw	Kf	T		
	In	*Pct*	*Pct*	*Pct*	*g/cc*	*micro m/sec*	*In/In*	*Pct*	*Pct*					
	10-18	3-10- 25	30-45- 50	35-45- 55	1.35-1.50-1.65	0.40-0.90-1.40	0.10-0.13-0.18	3.6- 5.4- 7.5	0.8- 1.5-2.0	.28	.28			
	18-35	1-10- 25	30-45- 60	35-45- 55	1.35-1.50-1.65	0.40-0.90-1.40	0.10-0.14-0.18	3.6- 5.4- 7.5	0.5- 1.0-1.5	.32	.32			
	35-44	—	—	—	—	0.01-0.20-0.42	—	—	—					
Summit	0-8	5- 8- 20	40-56- 68	27-36- 39	1.25-1.38-1.50	0.40-0.90-1.40	0.21-0.21-0.23	3.1- 6.1- 8.9	1.0- 2.5-4.0	.28	.28	5	4	86
	8-14	5- 8- 25	30-53- 63	32-39- 45	1.35-1.50-1.65	0.40-0.90-1.40	0.13-0.14-0.23	3.7- 6.2- 8.7	1.0- 1.5-2.0	.37	.37			
	14-65	5-11- 20	20-44- 55	40-45- 60	1.35-1.48-1.60	0.42-1.00-1.41	0.09-0.10-0.12	6.0- 7.5-13.0	1.0- 1.5-2.0	.28	.28			
	65-79	5-11- 20	20-44- 55	40-45- 60	1.35-1.48-1.60	0.42-1.00-1.41	0.09-0.10-0.12	6.0- 7.5-13.0	1.0- 1.5-2.0	.28	.28			
Aquolls	0-8	1- 7- 10	62-70- 81	18-23- 28	1.16-1.30-1.44	1.41-3.00-4.23	0.21-0.22-0.24	1.9- 2.8- 3.8	1.0- 2.5-4.0	.49	.49	5	6	48
	8-14	1- 5- 10	30-50- 59	40-45- 60	1.30-1.40-1.45	0.01-0.21-0.42	0.08-0.10-0.12	6.0- 8.3-14.9	1.0- 1.5-3.0	.32	.32			
	14-31	1- 5- 10	30-50- 59	40-45- 60	1.30-1.40-1.45	0.01-0.21-0.42	0.08-0.10-0.12	6.0- 8.3-14.9	1.0- 1.5-3.0	.32	.32			
	31-43	1- 5- 10	30-50- 59	40-45- 60	1.30-1.40-1.45	0.01-0.21-0.42	0.08-0.14-0.20	6.0- 8.2-11.9	0.5- 1.0-1.5	.32	.32			
	43-79	1-10- 12	38-50- 60	30-40- 50	1.35-1.40-1.55	0.42-1.00-1.41	0.09-0.11-0.13	3.7- 6.9- 9.9	0.3- 0.5-1.0	.37	.37			

Water Features

This folder contains tabular reports that present soil hydrology information. The reports (tables) include all selected map units and components for each map unit. Water Features include ponding frequency, flooding frequency, and depth to water table.

Water Features

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which a water table, ponding, and/or flooding is most likely to be a concern.

Water table refers to a saturated zone in the soil. The water features table indicates, by month, depth to the top (*upper limit*) and base (*lower limit*) of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely

grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Absence of an entry indicates that the data were not estimated. The dash indicates no documented presence.

Water Features–Johnson County, Kansas										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
7603—Sibleyville loam, 3 to 7 percent slopes										
Sibleyville	C	Medium	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	—	—	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None

Water Features–Johnson County, Kansas										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
			December	—	—	—	—	None	—	None
Woodson	D	Very high	January	—	—	—	—	—	—	None
			February	0.3-0.7	1.8-2.2	—	—	—	—	None
			March	0.3-0.7	1.8-2.2	—	—	—	—	None
			April	0.3-0.7	1.8-2.2	—	—	—	—	None
			May	—	—	—	—	—	—	None
			June	—	—	—	—	—	—	None
			July	—	—	—	—	—	—	None
			August	—	—	—	—	—	—	None
			September	—	—	—	—	—	—	None
			October	—	—	—	—	—	—	None
			November	—	—	—	—	—	—	None
			December	—	—	—	—	—	—	None
Summit	D	High	January	—	—	—	—	—	—	None
			February	1.8-2.2	2.8-3.2	—	—	—	—	None
			March	1.8-2.2	2.8-3.2	—	—	—	—	None
			April	1.8-2.2	2.8-3.2	—	—	—	—	None
			May	—	—	—	—	—	—	None
			June	—	—	—	—	—	—	None
			July	—	—	—	—	—	—	None
			August	—	—	—	—	—	—	None
			September	—	—	—	—	—	—	None
			October	—	—	—	—	—	—	None
			November	—	—	—	—	—	—	None

Water Features–Johnson County, Kansas										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
			December	—	—	—	—	—	—	None

Water Features–Johnson County, Kansas										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
8912—Summit silty clay loam, 3 to 7 percent slopes										
Summit	C	—	January	2.0-3.0	2.5-3.5	—	—	None	—	None
			February	2.0-3.0	2.5-3.5	—	—	None	—	None
			March	2.0-3.0	2.5-3.5	—	—	None	—	None
			April	2.0-3.0	2.5-3.5	—	—	None	—	None
			May	2.0-3.0	2.5-3.5	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	2.0-3.0	2.5-3.5	—	—	None	—	None

Water Features–Johnson County, Kansas										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
			December	2.0-3.0	2.5-3.5	—	—	None	—	None
Dennis	C	—	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	1.0-2.0	2.7-6.6	—	—	None	—	None
			April	1.3-2.2	2.7-6.6	—	—	None	—	None
			May	1.5-2.1	>6.0	—	—	None	—	None
			June	1.6-2.7	>6.0	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None
			December	—	—	—	—	None	—	None
Clareson	D	—	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	—	—	—	—	None	—	None
			April	—	—	—	—	None	—	None
			May	—	—	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None

Water Features–Johnson County, Kansas										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
			December	—	—	—	—	None	—	None
Eram	D	—	January	1.3-2.5	2.5-3.3	—	—	None	—	None
			February	1.3-2.5	2.5-3.3	—	—	None	—	None
			March	1.3-2.5	2.5-3.3	—	—	None	—	None
			April	1.3-2.5	2.5-3.3	—	—	None	—	None
			May	1.3-2.5	2.5-3.3	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	1.3-2.5	2.5-3.3	—	—	None	—	None
			December	1.3-2.5	2.5-3.3	—	—	None	—	None
Aliceville	D	—	January	2.5-2.8	3.0-3.3	—	—	None	—	None
			February	2.5-2.8	3.0-3.3	—	—	None	—	None
			March	2.5-2.8	3.0-3.3	—	—	None	—	None
			April	2.5-2.8	3.0-3.3	—	—	None	—	None
			May	2.5-2.8	3.0-3.3	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	2.5-2.8	3.0-3.3	—	—	None	—	None

Water Features–Johnson County, Kansas										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
			December	2.5-2.8	3.0-3.3	—	—	None	—	None

Water Features–Johnson County, Kansas										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
8962—Woodson silt loam, 1 to 3 percent slopes										
Woodson	D	—	January	0.5-2.0	0.5-2.0	—	—	None	—	None
			February	0.5-2.0	0.5-2.0	—	—	None	—	None
			March	0.5-2.0	0.5-2.0	—	—	None	—	None
			April	0.5-2.0	0.5-2.0	—	—	None	—	None
			May	0.5-2.0	0.5-2.0	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	0.5-2.0	0.5-2.0	—	—	None	—	None

Water Features–Johnson County, Kansas										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
			December	0.5-2.0	0.5-2.0	—	—	None	—	None
Kenoma	D	—	January	—	—	—	—	None	—	None
			February	—	—	—	—	None	—	None
			March	1.4-1.8	4.2-6.6	—	—	None	—	None
			April	0.9-2.5	>6.0	—	—	None	—	None
			May	1.6-2.4	4.2-6.6	—	—	None	—	None
			June	2.3-3.3	4.2-6.6	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	—	—	—	—	None	—	None
			December	—	—	—	—	None	—	None
Eram	D	—	January	1.3-2.5	2.5-3.3	—	—	None	—	None
			February	1.3-2.5	2.5-3.3	—	—	None	—	None
			March	1.3-2.5	2.5-3.3	—	—	None	—	None
			April	1.3-2.5	2.5-3.3	—	—	None	—	None
			May	1.3-2.5	2.5-3.3	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	1.3-2.5	2.5-3.3	—	—	None	—	None

Water Features–Johnson County, Kansas										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
			December	1.3-2.5	2.5-3.3	—	—	None	—	None
Summit	D	—	January	2.0-3.0	2.5-3.5	—	—	None	—	None
			February	2.0-3.0	2.5-3.5	—	—	None	—	None
			March	2.0-3.0	2.5-3.5	—	—	None	—	None
			April	2.0-3.0	2.5-3.5	—	—	None	—	None
			May	2.0-3.0	2.5-3.5	—	—	None	—	None
			June	—	—	—	—	None	—	None
			July	—	—	—	—	None	—	None
			August	—	—	—	—	None	—	None
			September	—	—	—	—	None	—	None
			October	—	—	—	—	None	—	None
			November	2.0-3.0	2.5-3.5	—	—	None	—	None
			December	2.0-3.0	2.5-3.5	—	—	None	—	None
Aquolls	D	—	January	0.0-1.0	0.5-1.3	—	—	None	—	None
			February	0.0-1.0	0.5-1.3	—	—	None	—	None
			March	0.0-1.0	0.5-1.3	—	—	None	—	None
			April	0.0-1.0	0.5-1.3	—	—	None	—	None
			May	0.0-1.0	0.5-1.3	—	—	None	—	None
			June	0.0-1.0	0.5-1.3	—	—	None	—	None
			July	0.0-1.0	0.5-1.3	—	—	None	—	None
			August	0.0-1.0	0.5-1.3	—	—	None	—	None
			September	0.0-1.0	0.5-1.3	—	—	None	—	None
			October	0.0-1.0	0.5-1.3	—	—	None	—	None
			November	0.0-1.0	0.5-1.3	—	—	None	—	None

Water Features–Johnson County, Kansas										
Map unit symbol and soil name	Hydrologic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface depth	Duration	Frequency	Duration	Frequency
				Ft	*Ft*	*Ft*				
			December	0.0-1.0	0.5-1.3	—	—	None	—	None

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VAPOR ENCROACHMENT SCREENING DOCUMENTATION

Approximately 20 Acres Vacant Land
North of W. 191st Street and East of Waverly Road
Gardner, KS 66030

Inquiry Number: 4642915.6s
June 20, 2016

EDR Vapor Encroachment Screen

Prepared using EDR's Vapor Encroachment Worksheet

EDR® Environmental Data Resources Inc

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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

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 the ASTM Standard Practice for Assessment of Vapor Encroachment into Structures on Property Involved in Real Estate Transactions (E 2600).

		Summary		
STANDARD ENVIRONMENTAL RECORDS	**Maximum Search Distance***	**property**	**1/10**	**1/10 - 1/3**
Federal NPL	0.333	0	0	0
Federal CERCLIS	0.333	0	0	0
Federal RCRA CORRACTS facilities list	0.333	0	0	0
Federal RCRA TSD facilities list	0.333	0	0	0
Federal RCRA generators list	property	0	-	-
Federal institutional controls / engineering controls registries	0.333	0	0	0
Federal ERNS list	property	0	-	-
State and tribal - equivalent NPL	not searched	-	-	-
State and tribal - equivalent CERCLIS	0.333	0	0	0
State and tribal landfill / solid waste disposal	0.333	0	0	0
State and tribal leaking storage tank lists	0.333	0	0	0
State and tribal registered storage tank lists	property	0	-	-
State and tribal institutional control / engineering control registries	property	0	-	-
State and tribal voluntary cleanup sites	0.333	0	0	0
State and tribal Brownfields sites	0.333	0	0	0
Other Standard Environmental Records	1.0	0	0	0
HISTORICAL USE RECORDS				
Former manufactured Gas Plants	0.333	0	0	0
Historical Gas Stations	0.125	0	0	0
Historical Dry Cleaners	0.125	0	0	0
Exclusive Recovered Govt. Archives	property	0	-	-

*Each category may include several separate databases, each having a different search distance. For each category, the table reports the maximum search distance applied. See the section 'Record Sources and Currency' for information on individual databases.

EXECUTIVE SUMMARY

TARGET PROPERTY INFORMATION

ADDRESS

APPROXIMATELY 20 ACRES VACANT LAND
NORTH OF W. 191ST STREET AND EAST OF WAVERLY ROAD
GARDNER, KS 66030

COORDINATES

Latitude (North):	38.78384 - 38° 47′ 1.824646″
Longitude (West):	94.937798 - 94° 56′ 16.071167″
Elevation:	1041 ft. above sea level

EXECUTIVE SUMMARY

PHYSICAL SETTING INFORMATION

Flood Zone:	Available
NWI Wetlands:	Available

AQUIFLOW®

Search Radius: 0.333 Mile.

No Aquiflow sites reported.

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name:	Woodson
Soil Surface Texture:	silt loam
Hydrologic Group:	Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.
Soil Drainage Class:	Somewhat poorly drained
Hydric Status:	Not hydric
Corrosion Potential - Uncoated Steel:	High
Depth to Bedrock Min:	> 0 inches
Depth to Watertable Min:	> 36 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4.233 Min: 1.411	Max: 6.5 Min: 5.6

EXECUTIVE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
2	7 inches	11 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4.233 Min: 1.411	Max: 6.5 Min: 5.6
3	11 inches	29 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 7.3 Min: 5.6
4	29 inches	42 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 7.3 Min: 5.6
5	42 inches	59 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.411 Min: 0.4233	Max: 7.8 Min: 5.6

Soil Map ID: 2

Soil Component Name: Summit

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Moderately well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 61 inches

EXECUTIVE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	11 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 4.233 Min: 1.411	Max: 7.3 Min: 5.6
2	11 inches	24 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.411 Min: 0.4233	Max: 7.3 Min: 5.6
3	24 inches	42 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.411 Min: 0.4233	Max: 7.3 Min: 5.6
4	42 inches	59 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 0.4233 Min: 0.01	Max: 8.4 Min: 6.1

Soil Map ID: 3

Soil Component Name: Sibleyville

Soil Surface Texture: weathered bedrock

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

EXECUTIVE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	27 inches	31 inches	weathered bedrock	Not reported	Not reported	Max: Min:	Max: Min:
2	0 inches	7 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6
3	7 inches	14 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.1
4	14 inches	27 inches	channery loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Clayey sand.	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.1

Soil Map ID: 4

Soil Component Name: Wagstaff

Soil Surface Texture: silty clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 30 inches

Depth to Watertable Min: > 0 inches

EXECUTIVE SUMMARY

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6
2	7 inches	14 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4.233 Min: 1.411	Max: 7.3 Min: 5.6
3	14 inches	18 inches	silty clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 1.411 Min: 0.4233	Max: 7.3 Min: 5.6
4	18 inches	24 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.411 Min: 0.4233	Max: 7.3 Min: 5.6
5	24 inches	33 inches	silty clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.411 Min: 0.4233	Max: 7.3 Min: 5.6
6	33 inches	37 inches	Not Reported	Not reported	Not reported	Max: Min:	Max: Min:

Soil Map ID: 5

Soil Component Name: Verdigris

Soil Surface Texture: silt loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Moderately well drained

EXECUTIVE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	9 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6
2	9 inches	27 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6
3	27 inches	31 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6
4	31 inches	51 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6
5	51 inches	59 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 14.11 Min: 4.233	Max: 7.3 Min: 5.6

EXECUTIVE SUMMARY

SEARCH RESULTS

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

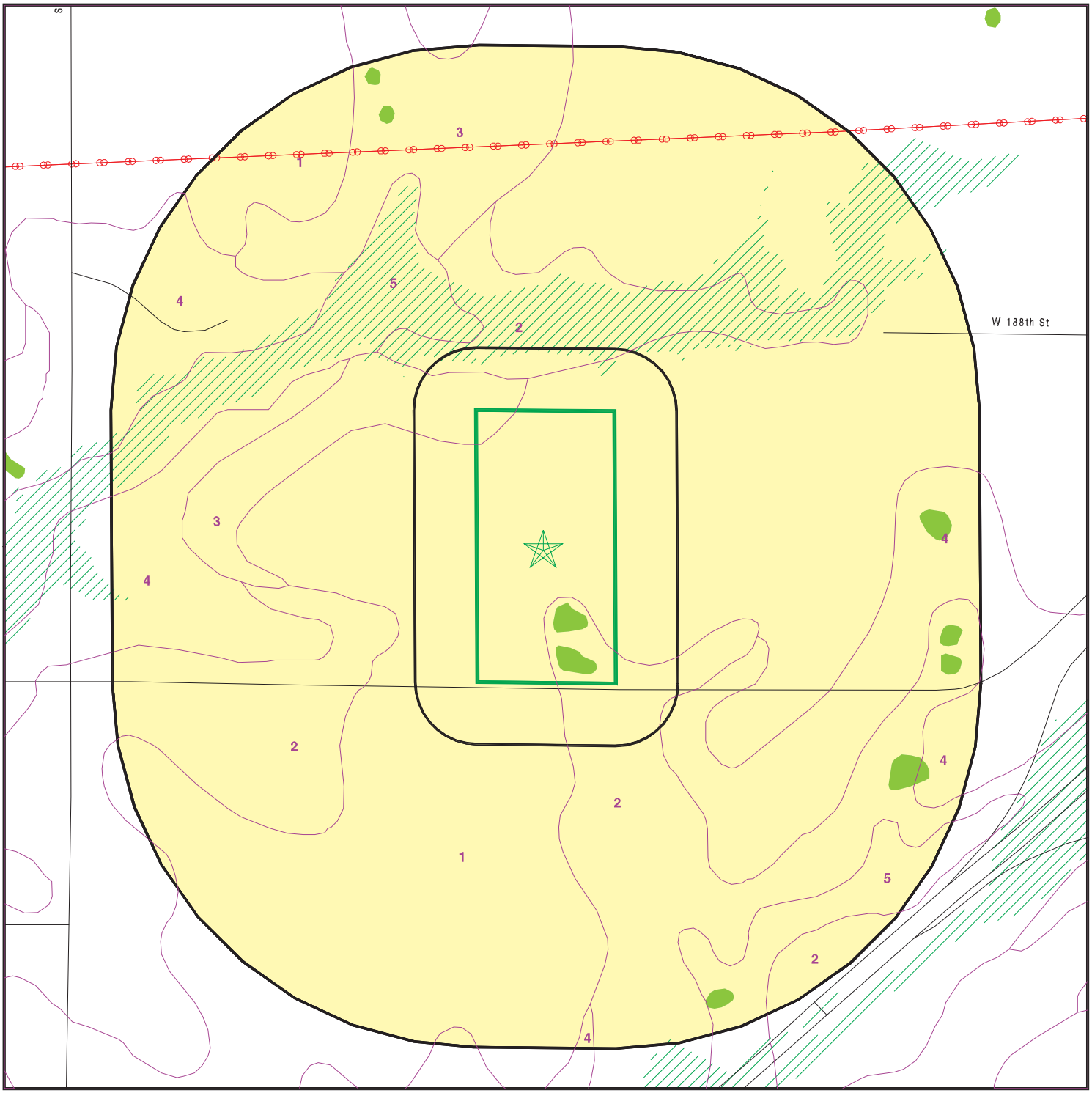
STANDARD ENVIRONMENTAL RECORDS

Name	Address	Dist/Dir	Map ID	Page
Not Reported				

HISTORICAL USE RECORDS

Name	Address	Dist/Dir	Map ID	Page
Not Reported				

PRIMARY MAP - 4642915.6S

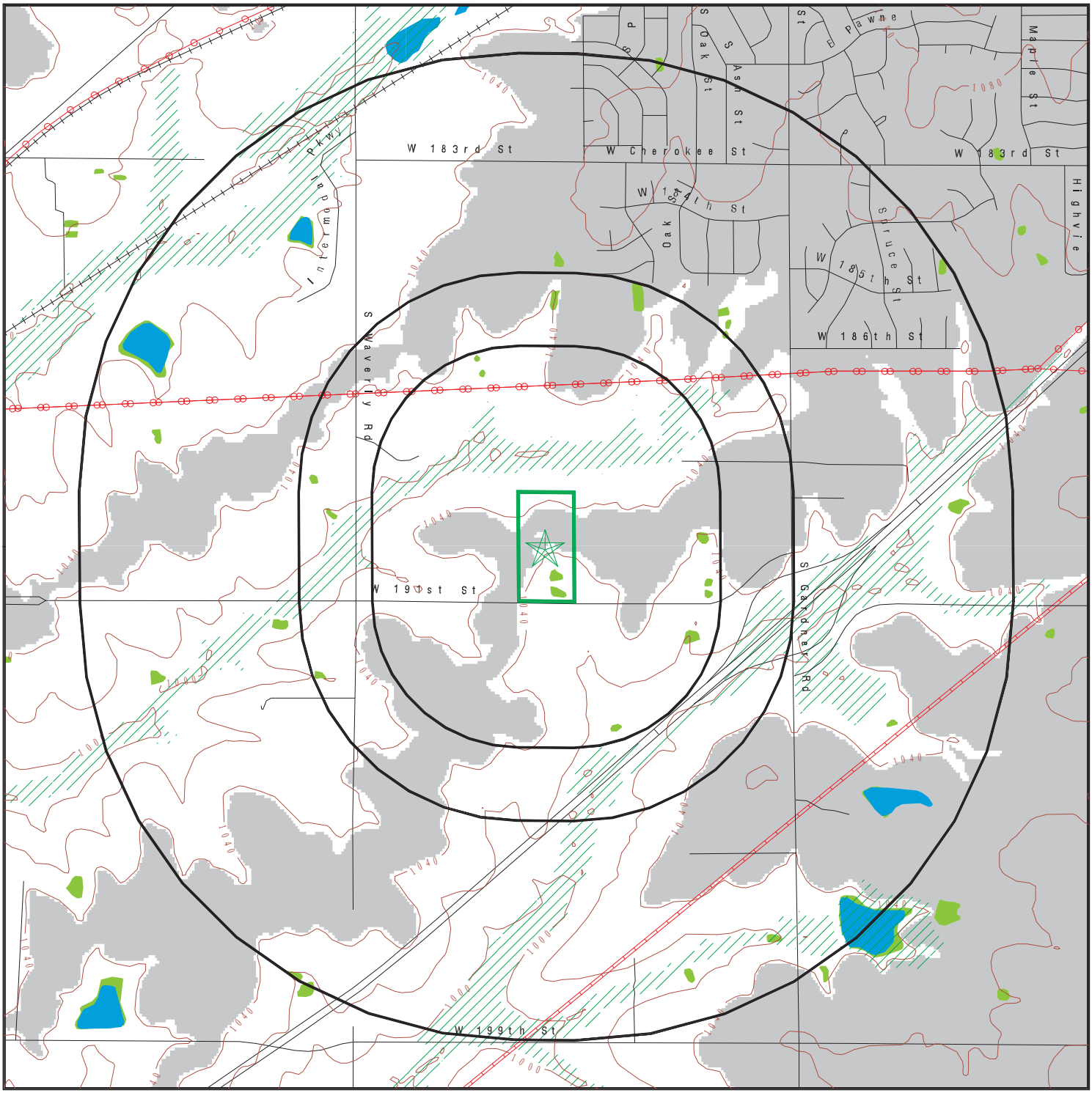


0 300 1/3 1/2 Miles

- 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
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- SSURGO Soil
- Areas of Concern

SITE NAME:	Approximately 20 Acres Vacant Land	CLIENT:	PSI, Inc.
ADDRESS:	North of W. 191st Street and East of Waverly Road Gardner KS 66030	CONTACT:	Cole Read
LAT/LONG:	38.78384 / 94.937798	INQUIRY #:	4642915.6s
		DATE:	June 09, 2016 3:09 pm

SECONDARY MAP - 4642915.6S



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

Dept. Defense Sites

0 1/3 1/2 1 Miles

Indian Reservations BIA

Contour Lines

Power transmission lines

Pipelines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

Upgradient Area

Areas of Concern

N

SITE NAME:	Approximately 20 Acres Vacant Land	CLIENT:	PSI, Inc.
ADDRESS:	North of W. 191st Street and East of Waverly Road Gardner KS 66030	CONTACT:	Cole Read
LAT/LONG:	38.78384 / 94.937798	INQUIRY #:	4642915.6s
		DATE:	June 09, 2016 3:06 pm

AERIAL PHOTOGRAPHY - 4642915.6s

SITE NAME:	Approximately 20 Acres Vacant Land	CLIENT:	PSI, Inc.
ADDRESS:	North of W. 191st Street and East of Waverly Road Gardner KS 66030	CONTACT:	Cole Read
		INQUIRY #:	4642915.6s
LAT/LONG:	38.78384 / 94.937798	DATE:	June 09, 2016 3:12 pm

MAP FINDINGS

LEGEND

FACILITY NAME **FACILITY ADDRESS, CITY, ST, ZIP**			EDR SITE ID NUMBER
▼ MAP ID#	Direction Distance Range Relative Elevation	(Distance feet / miles) Feet Above Sea Level	ASTM 2600 Record Sources found in this report. Each database searched has been assigned to one or more categories. For detailed information about categorization, see the section of the report Records Searched and Currency.

Worksheet:

Comments:

Comments may be added on the online Vapor Encroachment Worksheet.

DATABASE ACRONYM: Applicable categories (A hoverbox with database description).

RECORD SOURCES AND CURRENCY

To maintain currency of the following databases, EDR contacts the appropriate 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.

STANDARD ENVIRONMENTAL RECORDS

PRP: Potentially Responsible Parties
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Number of Days to Update: 3
Last EDR Contact :05/12/2016

Source: EPA
Telephone: 202-564-6023

RMP: Risk Management Plans
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 08/01/2015
Number of Days to Update: 69
Last EDR Contact :04/25/2016

Source: Environmental Protection Agency
Telephone: 202-564-8600

AIRS: Title V Source Information
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of title V sources, including emissions information.

Date of Government Version: 12/31/2014
Number of Days to Update: 43
Last EDR Contact :04/11/2016

Source: Department of Health & Environment
Telephone: 785-296-6427

AST: Aboveground Storage Tank Data
Standard Environmental Record Source: State and tribal registered storage tank lists
Search Distance: Property

Registered Aboveground Storage Tanks.

Date of Government Version: 01/12/2016
Number of Days to Update: 48
Last EDR Contact :04/04/2016

Source: Department of Health and Environment
Telephone: 785-296-1685

BROWNFIELDS: Identified Sites List
Standard Environmental Record Source: State and tribal Brownfields sites

RECORD SOURCES AND CURRENCY

Search Distance: 0.333 Mile

Sites included in the Identified Sites List that are identified as Brownfields sites.

Date of Government Version: 01/14/2016
Number of Days to Update: 42
Last EDR Contact :04/11/2016

Source: Department of Health & Environment
Telephone: 785-296-8049

CDL: Clandestine Laboratory Data

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

Clandestine meth lab location

Date of Government Version: 09/29/2009
Number of Days to Update: 18
Last EDR Contact :05/16/2016

Source: Department of Health and Environment
Telephone: 785-368-7301

CITY DUMPS: City Dump Listing

Standard Environmental Record Source: State and tribal landfill / solid waste disposal
Search Distance: 0.333 Mile

The City Dump Cleanup Program provides funds to cities or counties for the repair of old, unused municipal dump sites. These sites primarily operated between the 1940s and the 1970s before many counties had landfills and prior to the current regulations for solid waste disposal.

Date of Government Version: 02/29/2016
Number of Days to Update: 44
Last EDR Contact :05/26/2016

Source: Department of Health & Environment
Telephone: 785-296-6377

COAL ASH: Coal Ash Disposal Site Listing

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.333 Mile

A listing of coal combustion waste landfills.

Date of Government Version: 05/04/2015
Number of Days to Update: 4
Last EDR Contact :05/26/2016

Source: Department of Health & Environment
Telephone: 785-296-1600

DRYCLEANERS: Registered Drycleaning Facilities

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.25 Mile

A listing of registered drycleaners.

Date of Government Version: 03/08/2016
Number of Days to Update: 30
Last EDR Contact :05/26/2016

Source: Department of Health & Environment
Telephone: 785-291-3250

Financial Assurance: Financial Assurance Information Listing

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 01/12/2016
Source: Department of Health & Environment
Number of Days to Update: 48
Telephone: 785-296-1685
Last EDR Contact :04/04/2016

INST CONTROL: Institutional Controls Information

Standard Environmental Record Source: State and tribal institutional control / engineering control registries
Search Distance: Property

Sites that have institutional control information entered into the Identified Sites List database.

Date of Government Version: 01/14/2016
Source: Department of Health & Environment
Number of Days to Update: 42
Telephone: 785-296-8049
Last EDR Contact :04/11/2016

LAST: Leaking Aboveground Storage Tanks

Standard Environmental Record Source: State and tribal leaking storage tank lists
Search Distance: 0.333 Mile

Leaking aboveground storage tank site locations.

Date of Government Version: 01/12/2016
Source: Department of Health & Environment
Number of Days to Update: 48
Telephone: 785-296-1685
Last EDR Contact :04/04/2016

LUST: Leaking Underground Storage Tank Data

Standard Environmental Record Source: State and tribal leaking storage tank lists
Search Distance: 0.333 Mile

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: 01/12/2016
Source: Department of Health and Environment
Number of Days to Update: 48
Telephone: 785-296-1685
Last EDR Contact :04/04/2016

SHWS: Identified Sites List

Standard Environmental Record Source: State and tribal - equivalent CERCLIS
Search Distance: 0.333 Mile

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: 01/14/2016
Source: Department of Health and Environment
Number of Days to Update: 42
Telephone: 785-296-1660
Last EDR Contact :04/11/2016

SPILLS: Kansas Spills Database

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

All spills reported under the regulatory authority of the Department of Health & Environment and the Kansas Corporation Commission.

Date of Government Version: 02/29/2016
Number of Days to Update: 41
Last EDR Contact :04/11/2016
Source: Department of Health and Environment
Telephone: 785-296-1660

SPILLS 2: Spills Database

Standard Environmental Record Source: Other Standard Environmental Records

All spills reported under the regulatory authority of the Kansas Corporation Commission.

Date of Government Version: 01/11/2016
Number of Days to Update: 57
Last EDR Contact :04/11/2016
Source: Kansas Corporation Commission
Telephone: 316-337-6626

SWF/LF: Directory of Sanitary Landfills, Solid Waste Transfer Stations and Collector in Kansas

Standard Environmental Record Source: State and tribal landfill / solid waste disposal

Search Distance: 0.333 Mile

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: 02/15/2016
Number of Days to Update: 57
Last EDR Contact :04/18/2016
Source: Department of Health and Environment
Telephone: 785-296-1590

TIER 2: Tier 2 Information Listing

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report.

Date of Government Version: 12/31/2014
Number of Days to Update: 7
Last EDR Contact :03/21/2016
Source: Department of Health & Environment
Telephone: 785-296-1688

UIC: Underground Injection Wells Database Listing

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

A listing of underground injection wells.

Date of Government Version: 01/27/2016
Number of Days to Update: 41
Last EDR Contact :04/26/2016
Source: Department of Health & Environment
Telephone: 785-296-1367

UST: Underground Storage Tank Data

Standard Environmental Record Source: State and tribal registered storage tank lists

Search Distance: Property

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: 01/12/2016
Number of Days to Update: 48
Source: Department of Health and Environment
Telephone: 785-296-1685

Last EDR Contact :04/04/2016

VCP: Identified Sites List

Standard Environmental Record Source: State and tribal voluntary cleanup sites

Search Distance: 0.333 Mile

Sites included in the Identified Sites List that are identified as Voluntary Cleanup sites.

Date of Government Version: 01/14/2016 Source: Department of Health & Environment

Number of Days to Update: 42 Telephone: 785-296-8049

Last EDR Contact :04/11/2016

2020 COR ACTION: 2020 Corrective Action Program List

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.25 Mile

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 04/22/2013 Source: Environmental Protection Agency

Number of Days to Update: 6 Telephone: 703-308-4044

Last EDR Contact :05/12/2016

COAL ASH DOE: Steam-Electric Plant Operation Data

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005 Source: Department of Energy

Number of Days to Update: 76 Telephone: 202-586-8719

Last EDR Contact :04/15/2016

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014 Source: Environmental Protection Agency

Number of Days to Update: 40 Telephone: Not Reported

Last EDR Contact :03/11/2016

CONSENT: Superfund (CERCLA) Consent Decrees

Standard Environmental Record Source: Federal NPL

Search Distance: 0.333 Mile

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: 12/31/2014 Source: Department of Justice, Consent Decree Library

Number of Days to Update: 46 Telephone: Varies

Last EDR Contact :03/24/2016

CORRACTS: Corrective Action Report

Standard Environmental Record Source: Federal RCRA CORRACTS facilities list
Search Distance: 0.333 Mile

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/09/2015 Source: EPA
Number of Days to Update: 34 Telephone: 800-424-9346
Last EDR Contact :03/30/2016

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
Standard Environmental Record Source: State and tribal landfill / solid waste disposal
Search Distance: 0.333 Mile

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009 Source: EPA, Region 9
Number of Days to Update: 137 Telephone: 415-947-4219
Last EDR Contact :04/21/2016

DOT OPS: Incident and Accident Data
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012 Source: Department of Transporation, Office of Pipeline Safety
Number of Days to Update: 42 Telephone: 202-366-4595
Last EDR Contact :05/04/2016

Delisted NPL: National Priority List Deletions
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.333 Mile

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: 03/07/2016 Source: EPA
Number of Days to Update: 10 Telephone: Not Reported
Last EDR Contact :04/05/2016

ECHO: Enforcement & Compliance History Information
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/20/2015 Source: Environmental Protection Agency
Number of Days to Update: 103 Telephone: 202-564-2280
Last EDR Contact :03/23/2016

EPA WATCH LIST: EPA WATCH LIST
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Number of Days to Update: 88
Last EDR Contact :05/09/2016

Source: Environmental Protection Agency
Telephone: 617-520-3000

ERNS: Emergency Response Notification System

Standard Environmental Record Source: Federal ERNS list

Search Distance: Property

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

Date of Government Version: 03/28/2016
Number of Days to Update: 51
Last EDR Contact :03/30/2016

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180

FEMA UST: Underground Storage Tank Listing

Standard Environmental Record Source: State and tribal registered storage tank lists

Search Distance: Property

A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/01/2010
Number of Days to Update: 55
Last EDR Contact :04/11/2016

Source: FEMA
Telephone: 202-646-5797

FINDS: Facility Index System/Facility Registry System

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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: 07/20/2015
Number of Days to Update: 55
Last EDR Contact :06/08/2016

Source: EPA
Telephone: Not Reported

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

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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: 04/09/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667

Last EDR Contact :05/20/2016

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

Standard Environmental Record Source: Other Standard Environmental Records

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009 Source: EPA
Number of Days to Update: 25 Telephone: 202-566-1667
Last EDR Contact :05/20/2016

FUDS: Formerly Used Defense Sites

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

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: 01/31/2015 Source: U.S. Army Corps of Engineers
Number of Days to Update: 97 Telephone: 202-528-4285
Last EDR Contact :03/11/2016

FUELS PROGRAM: EPA Fuels Program Registered Listing

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/22/2016 Source: EPA
Number of Days to Update: 86 Telephone: 800-385-6164
Last EDR Contact :05/25/2016

FUSRAP: Formerly Utilized Sites Remedial Action Program

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 03/11/2016 Source: Department of Energy
Number of Days to Update: 80 Telephone: 202-586-3559
Last EDR Contact :05/09/2016

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006 Source: Environmental Protection Agency
Number of Days to Update: 40 Telephone: 202-564-2501

Last EDR Contact :12/17/2007

HMIRS: Hazardous Materials Information Reporting System
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

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

Date of Government Version: 06/24/2015
Number of Days to Update: 68
Last EDR Contact :03/30/2016
Source: U.S. Department of Transportation
Telephone: 202-366-4555

ICIS: Integrated Compliance Information System
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 01/23/2015
Number of Days to Update: 31
Last EDR Contact :04/08/2016
Source: Environmental Protection Agency
Telephone: 202-564-5088

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
Search Distance: 0.333 Mile

A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 10/27/2015
Number of Days to Update: 67
Last EDR Contact :04/29/2016
Source: EPA Region 1
Telephone: 617-918-1313

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 01/07/2016
Number of Days to Update: 41
Last EDR Contact :04/29/2016
Source: EPA Region 10
Telephone: 206-553-2857

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/05/2016
Number of Days to Update: 35
Last EDR Contact :04/26/2016
Source: EPA Region 4
Telephone: 404-562-8677

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 02/17/2016
Number of Days to Update: 37
Source: EPA, Region 5
Telephone: 312-886-7439

Last EDR Contact :04/27/2016

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 12/11/2015
Number of Days to Update: 105
Last EDR Contact :04/29/2016
Source: EPA Region 6
Telephone: 214-665-6597

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 10/09/2015
Number of Days to Update: 112
Last EDR Contact :04/29/2016
Source: EPA Region 7
Telephone: 913-551-7003

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 10/13/2015
Number of Days to Update: 118
Last EDR Contact :04/27/2016
Source: EPA Region 8
Telephone: 303-312-6271

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal leaking storage tank lists
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 02/25/2016
Number of Days to Update: 37
Last EDR Contact :04/27/2016
Source: Environmental Protection Agency
Telephone: 415-972-3372

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.333 Mile

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Number of Days to Update: 52
Last EDR Contact :04/27/2016
Source: Environmental Protection Agency
Telephone: 703-308-8245

INDIAN UST R1: Underground Storage Tanks on Indian Land
Standard Environmental Record Source: State and tribal registered storage tank lists
Search Distance: Property

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 10/20/2015
Number of Days to Update: 67
Last EDR Contact :04/29/2016
Source: EPA, Region 1
Telephone: 617-918-1313

INDIAN UST R10: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 01/07/2016
Number of Days to Update: 41
Last EDR Contact :04/29/2016

Source: EPA Region 10
Telephone: 206-553-2857

INDIAN UST R4: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/05/2016
Number of Days to Update: 35
Last EDR Contact :04/26/2016

Source: EPA Region 4
Telephone: 404-562-9424

INDIAN UST R5: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 11/05/2015
Number of Days to Update: 52
Last EDR Contact :04/27/2016

Source: EPA Region 5
Telephone: 312-886-6136

INDIAN UST R6: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 12/03/2015
Number of Days to Update: 120
Last EDR Contact :04/29/2016

Source: EPA Region 6
Telephone: 214-665-7591

INDIAN UST R7: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 09/23/2014
Number of Days to Update: 65
Last EDR Contact :04/29/2016

Source: EPA Region 7
Telephone: 913-551-7003

INDIAN UST R8: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 01/26/2016
Number of Days to Update: 119
Last EDR Contact :04/29/2016

Source: EPA Region 8
Telephone: 303-312-6137

INDIAN UST R9: Underground Storage Tanks on Indian Land

Standard Environmental Record Source: State and tribal registered storage tank lists

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 02/25/2016 Source: EPA Region 9
Number of Days to Update: 37 Telephone: 415-972-3368
Last EDR Contact :04/27/2016

INDIAN VCP R1: Voluntary Cleanup Priority Listing

Standard Environmental Record Source: State and tribal voluntary cleanup sites

Search Distance: Property

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015 Source: EPA, Region 1
Number of Days to Update: 142 Telephone: 617-918-1102
Last EDR Contact :04/01/2016

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

Standard Environmental Record Source: State and tribal voluntary cleanup sites

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008 Source: EPA, Region 7
Number of Days to Update: 27 Telephone: 913-551-7365
Last EDR Contact :04/20/2009

LEAD SMELTER 1: Lead Smelter Sites

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

A listing of former lead smelter site locations.

Date of Government Version: 11/25/2014 Source: Environmental Protection Agency
Number of Days to Update: 64 Telephone: 703-603-8787
Last EDR Contact :04/07/2016

LEAD SMELTER 2: Lead Smelter Sites

Standard Environmental Record Source: Other Standard Environmental Records

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001 Source: American Journal of Public Health
Number of Days to Update: 36 Telephone: 703-305-6451
Last EDR Contact :12/02/2009

LIENS 2: CERCLA Lien Information

Standard Environmental Record Source: Federal CERCLIS

Search Distance: Property

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/18/2014 Source: Environmental Protection Agency
Number of Days to Update: 37 Telephone: 202-564-6023

Last EDR Contact :04/26/2016

LUCIS: Land Use Control Information System

Standard Environmental Record Source: Federal institutional controls / engineering controls registries

Search Distance: 0.333 Mile

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/28/2015
Source: Department of the Navy
Number of Days to Update: 13
Telephone: 843-820-7326
Last EDR Contact :05/16/2016

MLTS: Material Licensing Tracking System

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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: 03/07/2016
Source: Nuclear Regulatory Commission
Number of Days to Update: 28
Telephone: 301-415-7169
Last EDR Contact :05/06/2016

NPL: National Priority List

Standard Environmental Record Source: Federal NPL

Search Distance: 0.333 Mile

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: 03/07/2016
Source: EPA
Number of Days to Update: 10
Telephone: Not Reported
Last EDR Contact :04/05/2016

NPL Site Boundaries

Sources:

EPA"s Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-566-0690

EPA Region 1
Telephone: 617-918-1102

EPA Region 2
Telephone: 212-637-4293

EPA Region 3
Telephone: 215-814-5418

EPA Region 4
Telephone: 404-562-8681

EPA Region 5
Telephone: 312-353-1063

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6118

EPA Region 9
Telephone: 415-947-4579

EPA Region 10
Telephone: 206-553-4479

NPL LIENS: Federal Superfund Liens

Standard Environmental Record Source: Federal NPL

Search Distance: Property

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
Number of Days to Update: 56
Telephone: 202-564-4267
Last EDR Contact :08/15/2011

ODI: Open Dump Inventory

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

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
Source: Environmental Protection Agency
Number of Days to Update: 39
Telephone: 800-424-9346
Last EDR Contact :06/09/2004

PADS: PCB Activity Database System

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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: 07/01/2014
Source: EPA
Number of Days to Update: 33
Telephone: 202-566-0500
Last EDR Contact :04/12/2016

PCB TRANSFORMER: PCB Transformer Registration Database

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 02/01/2011
Source: Environmental Protection Agency
Number of Days to Update: 83
Telephone: 202-566-0517
Last EDR Contact :04/26/2016

Proposed NPL: Proposed National Priority List Sites

Standard Environmental Record Source: Federal NPL

Search Distance: 0.333 Mile

A site that has been proposed for listing on the NationalPriorities List through the issuance of a proposed rule in the Federal Register.EPA then accepts public comments on the site, responds to the comments,and places on the NPL those sites that continue to meet therequirements for listing.

Date of Government Version: 03/07/2016 Source: EPA
Number of Days to Update: 10 Telephone: Not Reported
Last EDR Contact :04/05/2016

RAATS: RCRA Administrative Action Tracking System

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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 Source: EPA
Number of Days to Update: 35 Telephone: 202-564-4104
Last EDR Contact :06/02/2008

RADINFO: Radiation Information Database

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/07/2015 Source: Environmental Protection Agency
Number of Days to Update: 69 Telephone: 202-343-9775
Last EDR Contact :04/08/2016

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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. 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). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 12/09/2015 Source: Environmental Protection Agency
Number of Days to Update: 34 Telephone: 703-308-8895
Last EDR Contact :03/30/2016

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

Standard Environmental Record Source: Federal RCRA generators list

Search Distance: Property

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. 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.

Date of Government Version: 12/09/2015 Source: Environmental Protection Agency
Number of Days to Update: 34 Telephone: 703-308-8895
Last EDR Contact :03/30/2016

RECORD SOURCES AND CURRENCY

RCRA-LQG: RCRA - Large Quantity Generators

Standard Environmental Record Source: Federal RCRA generators list

Search Distance: Property

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. 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). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/09/2015 Source: Environmental Protection Agency

Number of Days to Update: 34 Telephone: 703-308-8895

Last EDR Contact :03/30/2016

RCRA-SQG: RCRA - Small Quantity Generators

Standard Environmental Record Source: Federal RCRA generators list

Search Distance: Property

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. 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). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 12/09/2015 Source: Environmental Protection Agency

Number of Days to Update: 34 Telephone: 703-308-8895

Last EDR Contact :03/30/2016

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

Standard Environmental Record Source: Federal RCRA TSD facilities list

Search Distance: 0.333 Mile

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. 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). Transporters are individuals or entities that move hazardous waste from the generator offsite 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: 12/09/2015 Source: Environmental Protection Agency

Number of Days to Update: 34 Telephone: 703-308-8895

Last EDR Contact :03/30/2016

ROD: Records Of Decision

Standard Environmental Record Source: Federal NPL

Search Distance: 0.333 Mile

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: 11/25/2013 Source: EPA

Number of Days to Update: 74 Telephone: 703-416-0223

Last EDR Contact :06/07/2016

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 03/07/2011
Source: Environmental Protection Agency
Number of Days to Update: 54
Telephone: 615-532-8599
Last EDR Contact :05/20/2016

SEMS: Superfund Enterprise Management System

Standard Environmental Record Source: Federal CERCLIS

Search Distance: 0.333 Mile

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list 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). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 03/07/2016
Source: EPA
Number of Days to Update: 10
Telephone: 800-424-9346
Last EDR Contact :04/05/2016

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS 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 the 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. The 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 potential NPL site.

Date of Government Version: 03/07/2016
Source: EPA
Number of Days to Update: 10
Telephone: 800-424-9346
Last EDR Contact :04/05/2016

SSTS: Section 7 Tracking Systems

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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: 12/31/2009
Source: EPA
Number of Days to Update: 77
Telephone: 202-564-4203
Last EDR Contact :04/25/2016

TRIS: Toxic Chemical Release Inventory System

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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: 12/31/2014 Source: EPA
Number of Days to Update: 133 Telephone: 202-566-0250
Last EDR Contact :05/24/2016

TSCA: Toxic Substances Control Act

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

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: 12/31/2012 Source: EPA
Number of Days to Update: 14 Telephone: 202-260-5521
Last EDR Contact :03/24/2016

UMTRA: Uranium Mill Tailings Sites

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.333 Mile

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: 09/14/2010 Source: Department of Energy
Number of Days to Update: 146 Telephone: 505-845-0011
Last EDR Contact :05/23/2016

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/20/2015 Source: EPA
Number of Days to Update: 69 Telephone: 202-564-2496
Last EDR Contact :03/24/2016

US AIRS MINOR: Air Facility System Data

Standard Environmental Record Source: Other Standard Environmental Records
A listing of minor source facilities.

Date of Government Version: 10/20/2015 Source: EPA
Number of Days to Update: 69 Telephone: 202-564-2496
Last EDR Contact :03/24/2016

US BROWNFIELDS: A Listing of Brownfields Sites

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: 0.333 Mile

RECORD SOURCES AND CURRENCY

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 12/22/2015
Number of Days to Update: 57
Last EDR Contact :03/22/2016

Source: Environmental Protection Agency
Telephone: 202-566-2777

US CDL: Clandestine Drug Labs

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/18/2016
Number of Days to Update: 88
Last EDR Contact :05/31/2016

Source: Drug Enforcement Administration
Telephone: 202-307-1000

US ENG CONTROLS: Engineering Controls Sites List

Standard Environmental Record Source: Federal institutional controls / engineering controls registries
Search Distance: Property

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: 09/10/2015
Number of Days to Update: 53
Last EDR Contact :05/25/2016

Source: Environmental Protection Agency
Telephone: 703-603-0695

US FIN ASSUR: Financial Assurance Information

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/01/2015
Number of Days to Update: 61
Last EDR Contact :05/18/2016

Source: Environmental Protection Agency
Telephone: 202-566-1917

US HIST CDL: National Clandestine Laboratory Register

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/18/2016
Number of Days to Update: 88
Last EDR Contact :03/01/2016

Source: Drug Enforcement Administration
Telephone: 202-307-1000

RECORD SOURCES AND CURRENCY

US INST CONTROL: Sites with Institutional Controls

Standard Environmental Record Source: Federal institutional controls / engineering controls registries

Search Distance: Property

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: 09/10/2015
Source: Environmental Protection Agency
Number of Days to Update: 53
Telephone: 703-603-0695
Last EDR Contact :05/25/2016

US MINES: Mines Master Index File

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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

Date of Government Version: 02/09/2016
Source: Department of Labor, Mine Safety and Health Administration
Number of Days to Update: 44
Telephone: 303-231-5959
Last EDR Contact :06/02/2016

AOCONCERN: Area of Concern

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

The City of Wichita has taken the lead for the investigation and remediation efforts with the Kansas Department of Health & Environment, Bureau of Remediation. The primary contaminates of concern are chlorinated solvents and their degradation products.

Date of Government Version: Not Reported
Source: Department of Environmental Health
Number of Days to Update: 64
Telephone: 315-268-8351
Last EDR Contact :03/13/2007

DOD: Department of Defense Sites

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: 0.333 Mile

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: 12/31/2005
Source: USGS
Number of Days to Update: 62
Telephone: 888-275-8747
Last EDR Contact :04/15/2016

INDIAN RESERV: Indian Reservations

Standard Environmental Record Source: Other Standard Environmental Records

Search Distance: Property

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: 12/31/2005
Source: USGS
Number of Days to Update: 34
Telephone: 202-208-3710
Last EDR Contact :04/15/2016

PWS: Public Water System Data

RECORD SOURCES AND CURRENCY

Standard Environmental Record Source: Other Standard Environmental Records
Search Distance: Property

This Safe Drinking Water Information System (SDWIS) file contains public water systems name and address, population served and the primary source of water

Date of Government Version: 12/17/2013
Number of Days to Update: 279
Last EDR Contact :05/31/2016

Source: EPA
Telephone: Not Reported

RECORD SOURCES AND CURRENCY

HISTORICAL USE RECORDS

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

Standard Environmental Record Source: Exclusive Recovered Govt. Archives

Search Distance: Property

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health and Environment in Kansas.

Date of Government Version: Not Reported
Source: Department of Health and Environment
Number of Days to Update: 186
Telephone: Not Reported
Last EDR Contact :06/01/2012

RGA LF: Recovered Government Archive Solid Waste Facilities List

Standard Environmental Record Source: Exclusive Recovered Govt. Archives

Search Distance: Property

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health and Environment in Kansas.

Date of Government Version: Not Reported
Source: Department of Health and Environment
Number of Days to Update: 203
Telephone: Not Reported
Last EDR Contact :06/01/2012

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

Standard Environmental Record Source: Exclusive Recovered Govt. Archives

Search Distance: Property

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Health and Environment in Kansas.

Date of Government Version: Not Reported
Source: Department of Health and Environment
Number of Days to Update: 186
Telephone: Not Reported
Last EDR Contact :06/01/2012

EDR Hist Auto: EDR Exclusive Historic Gas Stations

Standard Environmental Record Source: Historical Gas Stations

Search Distance: 0.125 Mile

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: 02/20/2007
Source: EDR, Inc.
Number of Days to Update: 42
Telephone: Not Reported
Last EDR Contact :02/21/2007

EDR Hist Cleaner: EDR Exclusive Historic Dry Cleaners

Standard Environmental Record Source: Historical Dry Cleaners

Search Distance: 0.125 Mile

RECORD SOURCES AND CURRENCY

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: 02/20/2007
Source: EDR, Inc.
Number of Days to Update: 42
Telephone: Not Reported
Last EDR Contact :02/21/2007

EDR MGP: EDR Proprietary Manufactured Gas Plants

Standard Environmental Record Source: Former manufactured Gas Plants

Search Distance: 0.333 Mile

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: 08/28/2009
Source: EDR, Inc.
Number of Days to Update: 55
Telephone: Not Reported
Last EDR Contact :11/30/2012

RECORD SOURCES AND CURRENCY

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5' minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

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 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW® Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW® Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services. The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

STREET AND ADDRESS INFORMATION

PERSONNEL QUALIFICATIONS

Cole Read
Environmental Technician
Kansas City, Kansas

Certifications/Registrations/Technical Training

AHERA Asbestos Inspector Training, 2015
Certified Asbestos Inspector, 2015 (Kansas, Missouri, Iowa, Nebraska, Arkansas)
Radiation Safety Training, XRF Device Operator 2015
Missouri Air Sampling Technician, 2016
40 Hour HAZWOPER, 2015

Professional Experience

Mr. Read has one year of work in a variety of environmental investigations. His recent experience includes conducting field investigations for: Phase I Environmental Site Assessments; asbestos; lead-based paint; and mold.

Representative Asbestos Project Experience

- Former Restaurant, Wichita, Kansas – Inspector for Asbestos Survey of a one-story, vacant building in preparation for demolition.
- Former Restaurant, Plaza Area, Kansas City, Missouri – Conducted Asbestos Survey in preparation for significant renovation of a vacant building.
- Masonic Lodge, Kansas City, Kansas – Inspector responsible for surveying a one-story occupied building in preparation for demolition.
- Dental Office, Kansas City, Kansas – Inspector for Asbestos Survey conducted over a partially occupied, multi-story, residential house/office.
- Congregation of St. Joseph, Kansas – Project manager and inspector for Asbestos. Responsible for conducting air monitoring and overseeing abatement work which included visual evaluation, sample collecting and final reporting.
- Department Store, Des Moines, Iowa-Inspector for Asbestos Survey conducted over an occupied commercial property for future renovation.
- Department Store, Springfield, Missouri-Inspector for Asbestos Survey conducted over an occupied commercial property for future renovation.
- Former Gas Station, Wichita, Kansas– Inspector for Asbestos Survey of a one-story, vacant building in preparation for demolition.
- Grain Silo, Topeka, Kansas-Project manager for abatement of existing roof. conducted air monitoring and personnel air monitoring and final reporting.
- Restaurant, Iowa City, Iowa-Project manager Inspector for Asbestos Survey and HHW of a one-story, vacant building in preparation for demolition.
- Additional Asbestos experience includes assisting other Environmental Technicians with field work assistance and report preparation.

Representative Lead-Based-Paint (LBP) Project Experience

- YMCA Facilities – Inspector for LBP surveys of four YMCA facilities in the Kansas City Metro area. The sites were occupied during the site investigation. The surveys were complicated by the multiple building additions and renovations which had occur over the years.
- VA Hospitals – Project manager and inspector for LBP, Asbestos, and Indoor Air Quality surveys of two VA hospitals. The sites were occupied during the site reconnaissance.

- Historical Buildings, Excelsior Springs – Inspector for LBP, Asbestos, and Indoor Air Quality surveys for three multi-story buildings. The surveys were complicated by the age of the building and the various finishes of the structure.

Representative Fungal Remediation Experience

- Senior housing complex, Mission, Kansas- Responsible for conducting an initial mold investigation. Services included: determination of water intrusion cause; conduct air and tape lift mold sampling; development of the remediation action plan; perform post remediation sampling; and reporting to document completion of the work.
- Department Store, St. Joseph, Missouri – Assessor responsible for conducting a limited mold investigation. Services included: initial mold investigation and air sampling: limited asbestos survey prior to remediation activities; development of a remediation action plan; post remediation visual inspection and air sampling; and final reporting.
- Department Store, Shawnee, Kansas – Project manager responsible for conducting an initial mold investigation. Services included: determination of water intrusion cause; conduct limited mold and asbestos sampling; development of the remediation action plan; perform post remediation sampling; and reporting to document completion of the work.
- Department Store, Liberty, Missouri – Project manager responsible for conducting an Indoor Air Quality (IAQ) Evaluation including a fungal evaluation. Investigated the conditions within the department store to provide data regarding potential fungal amplification and other IAQ concerns.
- Hospital, Kansas City, Missouri – Project manager responsible for conducting an IAQ evaluation which included visual evaluation, interviews, moisture observations and measurements, comfort parameters data collection, photographic documentation, air and surface sampling activities, and report preparation on multiple offices of concern within a hospital setting.

Year started with PSI: **2015**
Years experience with other firms: **0**

Scott J. Dahlgren
Senior Consultant
St. Louis, Missouri

Year started with PSI: **1992**
Years experience with other firms: **1**

Education

- Bachelor of Science in Geology and Geophysics, University of Missouri, Rolla

Certifications/Registrations/Technical Training

- Principal Consultant Designation, Phase I Environmental Site Assessments, PSI
- Principal Consultant Designation, Asbestos Surveys, PSI
- Principal Consultant Designation, Lead-Based Paint Surveys, PSI
- EPA AHERA Asbestos Inspector
- EPA AHERA Asbestos Management Planner
- EPA Lead-Based Paint Inspector
- EPA Lead-Based Paint Risk Assessor
- Certified or Licensed Asbestos Inspector, Missouri, Illinois, Iowa; Nebraska (inactive)
- Certified or Licensed Asbestos Management Planner, Missouri; Iowa (inactive); Nebraska (inactive)
- Certified or Licensed Asbestos Air Sampling Professional, Missouri, Illinois
- Licensed Lead-Based Paint Inspector, Missouri; Iowa (inactive)
- Licensed Lead-Based Paint Risk Assessor, Missouri; Iowa (inactive)
- OSHA 40-Hour Hazardous Waste Site Activity Training
- OSHA 8-Hour Hazardous Waste Supervisor Training
- Microscopial Identification of Asbestos, McCrone Research Institute
- Approved Asbestos Training Instructor, Inspector, Worker, Contractor, Supervisor, Management Planner, Illinois (not active)
- Approved Asbestos Training Instructor, Inspector, Worker, Management Planner, Missouri (not active)
- Approved Lead-Based Paint Training Instructor, Illinois, Missouri (neither active)
- Environmental Professional, Phase I and II Environmental Site Assessments (ESAs), PSI
- NIOSH 582 Equivalent Training
- RMD LPA-I, Lead Paint Inspection System Factory Training
- TSI Indoor Air Quality, With Hands-On Training Making Indoor Air Quality Measurements
- National Environmental Training Association, Designing and Delivering Effective Lead-Abatement Training
- IAQ and Mold Inspector Course, PSI
- Phase I and II ESA Training, PSI
- ASTM E2600 Vapor Encroachment Screening Training, ASTM
- Project Manager Certification, PSI
- Water Well Contractor, Nebraska (Inactive)
- Water Well Monitoring Technician, Nebraska (Inactive)
- Geo-Seal vapor Intrusion Barrier Certified Inspector, Land Science Technologies

Professional Experience

Mr. Dahlgren provides project coordination activities including proposal writing, scheduling of projects, staffing of projects, report delivery coordination, technical oversight of all environmental projects, and assistance in the preparation of geotechnical and property condition assessment reports for the St. Louis and Kansas City regional offices.

As a Phase I environmental site assessment (ESA), asbestos survey, and lead-based paint survey Principal Consultant, Mr. Dahlgren is responsible for review of proposals, reports, or any document with professional opinions in connection with a Phase I ESA or an asbestos or lead-based paint survey, and risk management and technical oversight regarding Phase I ESAs, and asbestos and lead-based paint surveys for offices throughout the country. He also assisted in the development of proposal and report templates and forms in general compliance with the current American Society of Testing and Materials (ASTM) Phase I ESA protocols.

In addition, Mr. Dahlgren provides physical condition assessments (PCAs), indoor air quality (IAQ) investigations, Phase I, II, and III ESAs, advanced environmental consulting services, underground storage tank (UST) assessments; lead-based paint risk assessment and inspection services, and asbestos inspection and air monitoring services. Mr. Dahlgren also provides assistance in the preparation of reports involving a full range of geotechnical services. Mr. Dahlgren formerly provided asbestos testing by polarized light microscopy (PLM) and phase contrast microscopy (PCM), and training services in lead-based paint disciplines, asbestos disciplines and hazardous waste operations (HAZWOPER) disciplines. Duties currently include project management and coordination, and conducting field operations, including sampling and inspection operations, report generation, and, formerly, instruction of training courses.

Mr. Dahlgren is also familiar with the working of a chemistry laboratory and has worked with soil, groundwater, and industrial hygiene (IH) samples as well as oil samples in an environmental laboratory setting. He also has experience in emergency spill response, as he helped write and partially implement a spill response protocol for an environmental laboratory in addition to being a lead instructor of the OSHA 40-hour HAZWOPER worker and supervisor course. Mr. Dahlgren brings this expertise and familiarity with diverse regulations and regulatory contacts, along with familiarity on most of the diverse equipment and sampling protocols necessary for a successful environmental project, investigation, or short or long term project management. He has over 23 years of environmental consulting experience.

Representative Phase I Environmental Site Assessment Project Experience

- Confidential National Restaurant Chain; Various Sites, St. Louis, St. Charles and Boone Counties, Missouri – Performed Phase I ESAs using the American Society for Testing and Materials (ASTM) protocol with short turnaround times in established restaurant facilities.

- Confidential Retail Property Developers; Various Sites, Missouri, Illinois and southern Iowa – Performed Phase I ESAs using the ASTM protocol at a variety of developed and undeveloped properties.
- Confidential National Restaurant Chain; Various Sites, St. Louis and St. Charles Counties, Missouri, Dodge, Douglas, and Sarpy Counties, Nebraska – Performed Phase I ESAs using the ASTM protocol with short turnaround times in established restaurant facilities.
- Confidential Newspaper Client; Various Sites, Dawson, Lincoln, Cheyenne, and Scotts Bluff Counties, Nebraska, Pottawattamie and Harrison Counties, Iowa – Performed Phase I ESAs using the ASTM protocol with short turnaround times in established newspaper facilities
- Confidential Bank Client, Exhaust Repair Facility; Sioux City, Iowa – Performed a Phase I ESA using the ASTM protocol with a short turnaround time. The assessment was complicated by the former presence of a gasoline service station prior to the current use and the presence of a gasoline station with free product present on an adjoining property.
- Confidential Bank Client, Former Meat Packing Plant; Omaha, Nebraska - Performed a Phase I ESA using the ASTM protocol. This plant included extensive freezer and mechanical systems on multiple levels.
- Confidential Client, Former Meat Slaughter and Processing Plant; Omaha, Nebraska - Performed a Phase I ESA using the ASTM protocol with a short turnaround time of a former meat packing plant that dated to the early 1900's and had been added on to piecemeal over the years, including numerous USTs and mechanical renovations on multiple levels. The client was to use the Phase I ESA for a self-audit.
- Confidential Car Dealership; Kansas City, Missouri - Performed Phase I ESAs using the ASTM protocol of two car dealership sites. One of these dealerships was a new dealership and one was a dealership dating back into the late 1970's, both with full service automotive repair facilities and the older dealership also had an auto body shop.
- Confidential Developer; Omaha, Nebraska – Performed two Phase I ESAs, with asbestos and LBP surveys on adjoining properties, one a former creamery and food warehouse, and one a former automotive repair facility and garden supply facility in a historic section of Omaha. The properties were vacant at the time of the assessment, but complicating factors included the presence of asbestos materials in poor condition, fire damage, a leaking UST incident, and offsite businesses of environmental concern.
- Confidential Law Firm, Restaurant Sites; South Central and South East, Kansas – Perform Phase I ESAs on approximately 25 operational fast-food restaurant sites as part of an acquisition process on a tight turnaround. Provided field services, report preparation, report review, and technical support services.

Representative Communications Tower Site Assessment Project Experience

- Confidential Communications Tower Developer; Iowa, South Dakota, and Nebraska – Performed field reconnaissance and historical research for approximately 25 sites for a client who was not able to cost-effectively perform the field work themselves.

- American Tower Corporation; Various Sites, Lincoln, Saint Genevieve, Saint Charles, and Perry Counties, Missouri – Performed Phase I ESAs of numerous proposed tower sites. In addition, assisted in the completion of the Federal Communications Commission National Environmental Protection Act checklist that was required for each of these sites. These projects were performed in an expedited manner with tight turnaround times.
- Confidential Communications Tower Developer; Sioux City, Iowa, South Dakota, and Nebraska – Performed the field reconnaissance and historical research for approximately 25 sites for a client who was not able to cost effectively perform the field work themselves.
- Confidential National Communications Carrier; Various Sites in Nebraska and Iowa – Performed Phase I ESAs of numerous proposed tower sites. In addition, performed research to assist in the completion of the Federal Communications Commission National Environmental Protection Act checklist for each site. This process was complicated by the requirements of the State Historical Society of Iowa, which had unusual consultation requirements.

Representative Hybrid and Advanced Environmental Site Assessment Project Experience

- Kansas Department of Health and Environment (KDHE), UST Trust Fund Project; Sedgwick, Hanston, and Scott City, Kansas – Performed pollution control assessments (PCAs) for underground storage tank facilities. Duties included supervision of drilling and sampling operations.
- NBS Partners; St. Louis, Missouri – Performed Phase II and III ESAs as part of a grant application for renovation and demolition of public housing. Investigation included the presence of offsite sources including a railroad and a cab company with USTs. Managed project from preliminary investigation through drilling, sampling, and final report preparation.
- First Union Real Estate; Fort Dodge, Iowa – Performed Phase II ESA at a shopping mall facility adjacent to several leaking underground storage tank (LUST) facilities. Supervised and managed all aspects of the project including drilling, sampling, and report preparation.
- Union 70 PCA; St. Louis, Missouri – Performed investigation to identify an unknown substance noted on a geotechnical boring log at a former car assembly plant. This investigation included drilling, sampling, and comprehensive laboratory analysis to identify the material.
- United States Postal Service, State of Iowa Underground Storage Tank Financial Responsibility Program; Wellman, Donnellson, LeClaire, and Cedar Falls, Iowa – Performed hybrid Phase I, II, and III environmental site investigations (ESIs) of post offices. This included developing a site history, scheduling and implementing drilling and sampling plans, conducting follow-up investigation of soil and groundwater contamination identified to determine the extent of the contamination plume, determining hydraulic conductivity of water-bearing zone, and producing final reports.

- Iowa UST Financial Responsibility Program; Cedar Rapids, Sioux City, Atlantic, Riverton, Denison, and Walnut, Iowa - Performed hybrid Phase I, II, and III ESIs of nearly 175 underground storage tank facilities. This included researching the site history and ownership of the facility, scheduling and implementing drilling and sampling plans, conducting multiple follow up investigations on soil and groundwater contamination identified to determine the extent of the contamination plume, determining hydraulic conductivity of water-bearing zone, and producing final reports.
- Nebraska Department of Roads; Fremont, Nebraska – Performed a Tier I Site Investigation, which is similar to a Risk-Based Corrective Action (RBCA) investigation, for a former gasoline station that had been demolished since the LUST incident and was, at the time of the investigation, a four-lane divided highway. During this investigation, the site conditions differed considerably from what was expected and PSI worked closely with the Nebraska Department of Environmental Quality to assist in developing the information needed to bring this site to a "No Further Action" status.

Representative Asbestos Project Experience

- Big River Zinc; Sauget, Illinois – Assisted in inspection of a metals processing plant. Also assisted in air monitoring of abatement of the asbestos-containing materials identified in the inspection.
- US Housing and Urban Development; St. Louis, Missouri – Assisted in performance of an asbestos and hazardous materials survey and assessment of a public housing complex which included a high-rise building and 13 low-rise apartment buildings. Also performed air monitoring and project supervision of abatement of the materials identified in the inspection phase of project.
- State of Missouri Design and Construction Division, St. Louis State Hospital Facility; Missouri – Coordinated and performed an asbestos and lead-based paint (LBP) survey of eight buildings at the state hospital complex. Buildings included a power plant, service tunnels, warehouse, offices, kitchen, gymnasium complex, smokestacks, and abandoned buildings.
- Confidential National Department Store Client; Various Sites, Iowa and Nebraska – Performed asbestos assessments of active department store properties in connection with a remodeling effort. The assessments were performed according to the client's protocol in a phased schedule with tight turnaround times to accommodate abatement after the assessment was performed and performance of remodeling activities in a timely manner.
- Confidential National Client; St. Louis, Missouri – Performed emergency assessments and sampling of suspect asbestos-containing building materials. Also assisted in the project supervision and air monitoring of abatement projects. The projects were performed on a 24-hour a day basis on weekends and holidays so as not to interfere with normal operations of the client.

Representative Lead-Based Paint Project Experience

- Confidential Hospital Parking Garage; St. Louis Area, Missouri – Performed XRF testing of client-selected items in a parking garage in advance of renovation and demolition activities in the garage.
- Salvation Army; St. Louis, Missouri – Performed XRF testing of a facility as part of a renovation project.
- Confidential Client; St. Louis, Missouri - Performed LBP wipe sampling in response to complaint from tenants of a housing complex.
- Confidential Client; St. Louis, Missouri – Performed paint chip sampling to identify the presence of LBP on existing components of a construction operation. Also performed wipe sampling to monitor the effectiveness of the abatement of materials identified as having LBP.
- State of Missouri Design and Construction Division, St. Louis State Hospital Facility; Missouri – Coordinated and performed a LBP and asbestos survey of eight buildings at the state hospital complex. Buildings included a power plant, service tunnels, warehouse, offices, kitchen, gymnasium complex, smokestacks, and abandoned buildings.

Representative Remediation Investigation Project Experience

- J.C. Penney Corporation; Hays, Kansas – Implemented an investigation into the feasibility of a chosen remediation method and installed necessary wells for the implementation of the chosen remediation method. Also performed ongoing monitoring well and irrigation well sampling required by the regulatory agency.

Representative Petroleum Project Experience

- Graybar Electric Company Inc.; St. Louis, Missouri – Provided supervision and regulatory reporting services on the closure of a 6,000 gallon heating oil UST in a confined area.
- United States National Guard; Doniphan, Missouri – Provided supervision and regulatory reporting services on the closure of a 500-gallon heating oil UST. Removal of the tank was complicated by the presence of utility lines over and immediately adjacent to the UST and the presence of a drainage ditch also immediately adjacent to UST. Tank was removed successfully without loss of any utility service to facility.

Representative Environmental Monitoring Project Experience

- Montgomery Ward; Topeka, Kansas – Performed periodic groundwater monitoring of leaking UST facility.
- Midas Realty Corporation; Overland, Missouri – Performed organic vapor monitoring of soils at a former UST facility as part of a geotechnical project related to a real estate transaction.

Representative Indoor Air Quality Assessment Project Experience

- Confidential Developer; St. Louis, Missouri – Performed and prepared the report for an investigation of a multi-story hotel building for the presence of indoor air contaminants and the presence of fungi during the course of a real estate transaction. The work also included the preparation of a "Mold Remediation and Prevention Plan" based on the results of the investigation.
- Confidential Developer; Omaha, Nebraska – Assisted in the performance of a physical condition assessment by performing an assessment of potential moisture intrusion and fungal growth in a strip mall type shopping property.
- Confidential Building Owner; Omaha, Nebraska – Performed IAQ investigation of a lease space in a multi-story office building in response to tenant complaints. The investigation was performed while the space was occupied by the tenant.

Representative Property Condition Assessment Project Experience

- Confidential Property Manager; Bella Vista, Arkansas – Performed property condition assessments on a shopping center and post office, and assisted in the performance of property condition assessments on three other shopping centers and a commercial building.
- Confidential Developer; St. Louis, Missouri – Assisted in the performance of a property condition assessment on a six building high-rise apartment complex, including an underground garage structure.
- Confidential Developer; Omaha, Nebraska – Assisted in the performance of a property condition assessment on two adjoining strip-mall type properties with a variety of tenant types.

Representative Geotechnical Project Experience

- Scharhag Architects; Kansas City, Missouri – Assisted in the performance of a geotechnical exploration in support of an addition to an existing church building.
- Confidential Client; Leawood, Kansas – Assisted in the performance of a geotechnical exploration in support of a new approximately 6,000-quare foot single-tenant office building.
- Confidential National Retail Food Chain; Platte City, Missouri – Assisted in the performance of a geotechnical exploration in support of a new retail restaurant facility.
- City of Lee's Summit, Missouri; Lee's Summit, Missouri – Assisted in the performance of a geotechnical exploration in support of a replacement fire station facility.
- Confidential Client; St. Charles, Missouri – Assisted in the performance of a geotechnical exploration in support of a new machine press in an existing facility. The placement of this machine press was complicated by undocumented fill issues, and the dynamic loading of the press itself.
- Confidential National Retail Chain; Locations in Missouri and Illinois – Assisted in the performance of a geotechnical exploration in support of new retail stores at various locations in the St. Louis Bi-State area.