

March 18, 2022  
ECT No. 220238-0100

Ms. Emily Truebner  
Free State Solar Project, LLC  
422 Admiral Boulevard  
Kansas City, Missouri 64106

**Re: Phase I Environmental Site Assessment  
Free State Solar Project  
Southeast of Highway 24 and East 1250 Road  
Douglas County, Kansas**

Dear Ms. Truebner:

Environmental Consulting & Technology, Inc. (ECT) is pleased to provide this Phase I Environmental Site Assessment (ESA) for the above-referenced property. This assessment was performed in accordance with the ASTM Standard Practice for Environmental Site Assessment: Phase I Environmental Site Assessment Process for Forestland or Rural Property (E2247-16). This Phase I ESA is valid through September 7, 2022, after which time certain components of this report may need updated. The date(s) of the most recent searches for environmental liens may alter this validity date. We appreciate the opportunity to work with you. Please feel free to contact us at 734.769.3004 should you have any questions concerning this report, or if we may assist you in any other matter.

Sincerely,

**Environmental Consulting & Technology, Inc.**



Laura Campbell  
Senior Associate Scientist



Rebecca M. Powell  
National Due Diligence Practice Leader

> **Phase I Environmental Site Assessment  
of the Free State Solar Project  
Douglas County, Kansas**

March 18, 2022  
ECT No. 220238-0100

for  
Free State Solar Project, LLC  
422 Admiral Boulevard  
Kansas City, Missouri 64106



3720 Wilder Road Unit B  
Bay City, Michigan 48706  
734.769.3004

## Document Review

The dual signatory process is an integral part of Environmental Consulting & Technology, Inc. (ECT) Document Review Policy No. 9.03. All ECT documents undergo technical/peer review prior to dispatching these documents to any outside entity.

The environmental assessment described herein was conducted by the undersigned employees of ECT. ECT's investigation consisted solely of the activities described in the Introduction of this report, and in accordance with the Terms and Conditions of the Standard Consulting Services Agreement signed prior to initiation of the assessment, as applicable.

This document has been authored and reviewed by the following employees:



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Laura Campbell

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Senior Associate Scientist

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March 18, 2022

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Rebecca M. Powell

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National Due Diligence Practice Leader

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March 18, 2022

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## PROJECT SUMMARY TABLE

**Free State Solar Project  
Southeast of Highway 24 and East 1250 Road  
Douglas County, Kansas**

Report Section		None	REC	CREC	HREC	DMC	Comments
3.0	Subject Property and Vicinity Descriptions		✓				REC#1: The unknown extent of soil/groundwater contamination at the east/northeast adjoining property (1941 Diagonal Rd Rear).
4.0	User Provided Information	✓					
5.0	Historical Review		✓				REC#1: See above
6.0	Regulatory Database Review		✓				REC#1: See Above
7.0	Regulatory Agency Records Review		✓				REC#1: See above
8.0	Interviews	✓					
9.2	Observed Hazardous Substances and/or Petroleum Products	✓					
9.3	Aboveground Storage Tanks	✓					
9.4	Electrical or Hydraulic Equipment Likely to Contain Fluids	✓					
9.5	Pits, Ponds, Ditches, Streams, or Lagoons	✓					
9.6	Wells	✓					
9.7	Other Field Observations	✓					

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## Common Acronyms and Abbreviations

AST	Aboveground Storage Tank
AAI	All Appropriate Inquiry
AUL	Activity and Use Limitation
API	American Petroleum Institute
ACM	Asbestos-Containing Material
bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
BER	Business Environmental Risk
CESQG	Conditionally Exempt Small Quantity Generator
COC	Constituent of Concern
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS	Comprehensive Environmental Response Compensation and Liability Information System
CREC	Controlled Recognized Environmental Condition
DMC	<i>De Minimis</i> Condition
ECHO	Enforcement and Compliance History Online
ECT	Environmental Consulting & Technology, Inc.
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FRS	Facility Registry Service
FOIA	Freedom of Information Act
HREC	Historical Recognized Environmental Condition
LLP	Landowner Liability Protection
LQG	Large Quantity Generator
LBP	Lead-Based Paint
LUST	Leaking Underground Storage Tank
MCL	Maximum Contaminant Level
MTBE	Methyl tert-butyl ether
µg/L	Micrograms per Liter
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
NPL	National Priority List
NPMS	National Pipeline Mapping System
NWIS	National Water Information System
NFA/NFR	No Further Action/Remediation
NOV	Notice of Violation
NRCS	Natural Resources Conservation Service
PPB	Parts per Billion
PPM	Parts per Million
PID	Photoionization Detector
PCE	Perchloroethylene, Tetrachloroethylene, Tetrachloroethene, PERC
PIN	Parcel Identification Number
PCB	Polychlorinated Biphenyls
PAH	Polycyclic Aromatic Hydrocarbon
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
SDS	Safety Data Sheet
SVOC	Semi-Volatile Organic Compound
SQG	Small Quantity Generator
SEMS	Superfund Enterprise Management System
SWF/LF	Solid Waste Facilities/Landfill
TCE	Trichloroethylene, Trichloroethene
TPH	Total Petroleum Hydrocarbons
TSDF	Treatment, Storage or Disposal Facility
USDA	United States Department of Agriculture
USGS	United States Geological Survey
UST	Underground Storage Tank
VSQG	Very Small Quantity Generator
VOC	Volatile Organic Compound

## 1.0 Executive Summary

Environmental Consulting & Technology, Inc. (ECT) was retained by Free State Solar Project, LLC (the Client) to conduct a Phase I ESA in conformance with the scope and limitations of the ASTM Standard Practice E2247-16 (Forestland or Rural Properties) and the EPA Standards and Practices for All Appropriate Inquiries (40 CFR Part 312) for the property located Southeast of Highway 24 and East 1250 Road in Douglas County, Kansas. Any exceptions to, or deletions from, this practice are described in [Section 2.5](#) of this report.

### 1.1 Property Description

The Subject Property encompasses approximately 809 acres of primarily agricultural land in Douglas County, Kansas and is being proposed for development of the Free State Solar Project.

A USGS Topographic Map is provided as **Figure 1** and a Subject Property Overview is provided as **Figure 2**. Any RECs identified as part of this assessment are depicted on **Figure 3** unless otherwise noted.

### 1.2 Evaluation

#### 1.2.1 Findings and Opinions

Based on the information reviewed as part of this Phase I ESA, ECT has identified the following findings and offers the below opinions as part of this Phase I ESA:

- **Historical Filling Station at East/Northeast Adjoining Property (REC #1) - Midland/Midland COOP/Capital City Oil (1941 Diagonal Rd Rear):** The Mid, LLC, enrolled this property into the Kansas Voluntary Cleanup and Property Redevelopment Program (VCPRP) on March 7, 2022. A fueling station historically operated on-site, and the associated fuel dispensers and ASTs remain abandoned on the property. The ASTs were reportedly not registered with the local fire marshall or Kansas Department of Health & Environment (KDHE). Information readily available on KDHE's website indicated that a Phase I and II ESA performed in 2021 revealed elevated concentrations of petroleum compounds and lead in soil and groundwater at the site. Based on the information submitted with the VCPRP application, the contamination detected at this Site was classified as Class II Contamination. Kansas defines Class II Contamination to *"mean that suspected or confirmed soil or groundwater contamination, or both, resulting from operations that have occurred on the*



*property is suspected or exists on or off the property."* Although ECT requested available records on file for this property from KDHE on March 14, 2022, no response has been received as of the date of this report. **Considering the adjoining, cross-gradient proximity of this site in relation to the Subject Property, it is the opinion of the EP that the unknown extent of soil and groundwater contamination constitutes a REC.**

## 1.2.2 Conclusion

Ms. Rebecca M. Powell, Environmental Professional, has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E2247-16 and the 30 CFR 312 (All Appropriate Inquiry) of the Subject Property, located at Southeast of Highway 24 and East 1250 Road in Midland, Douglas, Kansas. Any exceptions to, or deletions from, this practice are described in Section 2.5 of this report. **This assessment has revealed no evidence of RECs and/or CRECs, with the exception of the following:**

- **The unknown extent of soil/groundwater contamination at the east/northeast adjoining property (1941 Diagonal Rd Rear).**

## 1.2.3 Data Failure and Data Gaps

According to ASTM E2247-16, a data failure occurs when all the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the objectives have not been met. Pursuant to ASTM E2247-16, historical sources are required to identify the use of the property at five-year intervals back to first developed use or 1940, whichever is earlier. A data failure is a type of data gap (defined below).

A data gap is defined by ASTM E2247-16 as a lack or inability to obtain information required by the practice despite good faith efforts by the Environmental Professional to gather such information. Data gaps may result from incompleteness in any of the activities required by the practice, including, but not limited to the site reconnaissance and interviews.

The following data failures and/or data gaps have been identified as part of this assessment:

- ECT requested any available documentation pertaining to the Midland/Midland COOP/ Capital City Oil (1941 Diagonal Rd Rear) from the KDHE; however, no response has been received as of the publication date of this report. **ECT has been unable to determine**

**the extent of documented contamination at this property through searches of other records sources; therefore, it is the opinion of the EP that this data gap constitutes a REC.**

- ECT also requested any available documentation pertaining to the Subject Property or its vicinity from the from the Lawrence-Douglas County Public Health; however, no response has been received as of the publication date of this report. Based on the quality of information obtained from other sources (e.g., historical documentation, interviews, regulatory sources, site reconnaissance, etc.), it is the opinion of the EP that this limitation does not impact ECT's ability to identify RECs.
- ECT was unable to verify the heating source(s) of the historical structures formerly situated throughout the Subject Property. Based on the rural nature of the area, there is the potential for heating oil tanks to have been used as heating sources. However, it is likely that any buried heating oil tanks would have been removed during demolition activities. Therefore, it is the opinion of the EP that this limitation does not impact ECT's ability to identify RECs.
- Although topographic maps were available dating back to the late 1800s, historical usage information in the form of aerial photographs was not available until 1948. The ASTM standard requires that all obvious uses of the property shall be identified from the present, back to the property's first developed use, or back to 1940, whichever is earlier. The 1948 aerial photograph revealed the Subject Property was primarily agricultural and residential; therefore, this represents a data failure. However, given the nature of the Subject Property in 1948, ECT does not believe this represents a significant data gap.

## 2.0 Purpose and Scope of Work

This report documents the methods and findings of the Phase I ESA performed in conformance with the scope and limitations of ASTM Standard Practice E2247-16 and the EPA Standards and Practices for All Appropriate Inquiries (40 CFR 312) for the property located to the Southeast of Highway 24 and East 1250 Road in Douglas County, Kansas.

### 2.1 Scope of Work

The purpose of ASTM Practice E2247-16 is to define good commercial and customary practice in the United States of America for conducting an environmental site assessment of forestland or rural properties with respect to the range of contaminants within the scope of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA; 42 U.S.C. §9601) and petroleum products. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report.

The Phase I ESA conducted by ECT included, but was not limited to, the following services:

- A site visit of the Subject Property to look for evidence of a release(s) or potential release of petroleum products and hazardous materials;
- Observations of adjacent properties and the vicinity of the Subject Property;
- Interviews with individuals familiar with the Subject Property, as available;
- Review of regulatory agency and local files, as necessary;
- Review of historical documents, as available; and
- Preparation of a report presenting ECT's findings, including a summary of conclusions and recommendations, if requested.

The objective of Phase I ESAs is to provide all appropriate inquiries into the previous ownership and uses of the property consistent with good commercial and customary practice as defined at 42 U.S.C. §9601(35) (B) to permit a user to satisfy one of the requirements to qualify for the innocent landowner, contiguous property owner, or bona fide prospective purchaser limitations on CERCLA liability (a.k.a., landowner liability protections). The goal of Phase I ESAs is to identify current, historical, and controlled RECs and *de minimis* conditions in connection with the property, to the extent feasible pursuant to the processes prescribed in the ASTM E 2247-16 guidelines. The terms current, historical, and controlled RECs and *de minimis* conditions are defined by ASTM in the following paragraphs.

A REC is the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. The term includes hazardous substances or petroleum products even under conditions in compliance with laws.

A controlled REC is a REC resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).

A historical REC is a past release of any hazardous substances or petroleum products that has occurred in connection with the Subject Property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the Subject Property to any required controls.

A *de minimis* condition is a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* conditions are not current, historical, or controlled RECs.

## **2.2 Continued Viability of Phase I ESA**

According to ASTM Standard Practice E2247-16, a Phase I ESA meeting or exceeding the standard and completed less than 180 days prior to the date of acquisition of the property or (for transactions not involving an acquisition) the date of the intended transaction is presumed to be valid. If within this period the assessment will be used by a User different than the User for whom the assessment was originally prepared, the subsequent User must also satisfy the User's Responsibilities outlined in Section 6 of ASTM Standard Practice E2247-16.

A Phase I ESA meeting or exceeding ASTM E2247-16 requirements and for which the information was collected or updated within one year prior to the date of acquisition of the property or (for transactions not involving an acquisition) the date of the intended transaction may be used provided

that the below detailed components of the inquires were conducted or updated within 180 days of the date of purchase, or the date of the intended transaction. The initial collection or inquiry dates for each required component as applicable to this report have been detailed in the table below.

REPORT COMPONENT	INITIAL DATE OF COLLECTION OR INQUIRY
(i) Interviews with Owners, Operators, and Occupants	<b>March 15, 2022</b>
(ii) Searches for Recorded Environmental Liens	<b>Not Provided</b>
(iii) Reviews of Federal, Tribal, State, and Local Government Records	<b>March 11, 2022</b>
(iv) Visual Inspection of the Property and of Adjoining Properties	<b>March 17, 2022</b>
(v) Declaration by the EP responsible for the assessment or update	<b>March 18, 2022</b>

### 2.3 **Significant Assumptions**

ECT assumes that the information provided by the regulatory database electronic search report provider, the regulatory agencies, the local unit of government, and the current Subject Property owner(s) is true and reliable.

### 2.4 **Limitations and Exceptions**

The opinions and recommendations presented in this report are based upon the scope of services, information obtained through the performance of the services, and the schedule as agreed upon by ECT and the party for whom this report was originally prepared. This report is an instrument of professional service and was prepared in accordance with the generally accepted standards and level of skill and care under similar conditions and circumstances established by the environmental consulting industry. No representation, warranty, or guarantee, expressed or implied, is intended or given. To the extent that ECT relied upon any information prepared by other parties not under contract to ECT, ECT makes no representation as to the accuracy or completeness of such information. This report is expressly for the sole and exclusive use of the party for whom this report was originally prepared for a particular purpose. Only the party for whom this report was originally prepared and/or other specifically named parties have the right to make use of and rely upon this report. Reuse of this report or any portion thereof for other than its intended purpose, or if modified, or if used by third parties, shall be at the user’s sole risk.

The findings presented in this report apply solely to site conditions existing at the time when ECT’s assessment was performed. It must be recognized, however, that an ESA is intended for the purpose of determining the potential for contamination through limited research and investigative activities

and in no way represents a conclusive or complete site characterization. Conditions in other parts of the Subject Property may vary from those at the locations where data were collected. ECT's ability to interpret investigation results is related to the availability of the data and the extent of the investigation activities. As such, 100 percent confidence in ESA conclusions cannot reasonably be achieved.

ECT, therefore, does not provide any guarantees, certifications, or warranties that a property is free from environmental contamination. Furthermore, nothing contained in this document shall relieve any other party of its responsibility to abide by contract documents and applicable laws, codes, regulations, or standards.

## **2.5 Limiting Conditions and Deviations**

No limiting conditions and/or deviations were encountered as part of this Phase I ESA.

## **2.6 Special Terms and Conditions**

The scope of work for this Phase I ESA did not include testing of electrical equipment for the potential presence of polychlorinated biphenyls (PCBs), lead-based paint, or the assessment of natural hazards such as naturally occurring asbestos, radon, or methane gas, assessment of the potential presence of radionuclides, or assessment of non-chemical hazards such as the potential for damage from earthquakes or floods. This Phase I ESA also did not include an extensive assessment of the environmental compliance status of the Subject Property or of the businesses that have operated on-site, or a health-based risk assessment.

## **2.7 User Reliance**

This Phase I ESA was conducted for the use of and reliance by Free State Solar Project, LLC and their assignees and may be relied upon by these parties only. No use of the information contained in this report by others is permissible without receiving prior written authorization to do so from ECT. ECT is not responsible for independent conclusions, opinions, or recommendations made by others or otherwise based on the findings presented in this report.

### 3.0 Subject Property and Vicinity Descriptions

#### 3.1 Subject Property Characteristics

A summary of the Subject Property is included in the table below.

<b>SUBJECT PROPERTY DETAILS</b>	
<b>Project Name</b>	Free State Solar Project
<b>Location</b>	Douglas County, Kansas
<b>Approximate Acreage</b>	809 <small>Source: Client</small>
<b>Current Use</b>	Cultivated agricultural land
<b>Proposed Use</b>	Free State Solar Facility
<b>Areas of Environmental Interest</b>	Overhead transmission lines, AST, adjoining pipeline and railroad easements
<b>Observed Use of Hazardous Substances</b>	550-gallon diesel AST to fuel generator
<b>UTILITY INFORMATION</b>	
<b>Heating/Cooling Source</b>	None
<b>Potable Water Source</b>	None
<b>Sewage Disposal Provider</b>	None
<b>REGULATORY INFORMATION</b>	
<b>Regulatory Database Listings</b>	FRS, Risk Management Plan (RMP); refer to Section 6.2
<b>Activity and Use Limitations (AULs)</b>	None identified
<b>Environmental Liens</b>	None identified

The Subject Property encompasses approximately 809 acres of primarily agricultural land located in Douglas County, Kansas and is being proposed for development of the Free State Solar Project. A USGS Topographic Map is provided as [Figure 1](#) and a Subject Property Overview is provided as [Figure 2](#).

The Subject Property is situated in an area of agricultural development with sparse residences and associated outbuildings. Two drainage swales and a portion of an open water agricultural pond are present on the north-central portion of the site, as well as three overhead electrical transmission lines that transect the central/south portion and northeastern-most portions, feeding into an adjacent electrical substation. Public roadway North 2000 Rd bisects the entire central portion of the Subject Property in an east-west orientation, and roadway 1400 Rd bisects the eastern portion. U.S. Highway Route 24/59 (also referred to as Diagonal Rd) and a railroad easement bisect the northeastern portion

of the Subject Property and also serve to bind the eastern-most property extent of the site. The southern-most boundary is bordered by North 1900 Rd, with the western-most extent bound by public roadway East 1250 Rd.

Other areas of note in the general vicinity of the Subject Property include the unincorporated community of Midland adjacent to the northeast; the Douglas County-Jefferson County border (0.65 miles north); and the city center of Lawrence (3 miles south).

### 3.2 Vicinity Characteristics

A summary of the surrounding properties is included in the table below.

DIRECTION	OCCUPANT(S)/USE(S)	REGULATORY DATABASE LISTING(S)
<b>North</b>	Agricultural and rural residential land; Union Pacific Railroad	SPILLS-KS (associated with Union Pacific Railroad)
<b>East</b>	Agricultural and rural residential land  Kansas Power & Light Electrical Substation (2024 1400 Rd);  Ottawa Cooperative Association - Midland (1941 Diagonal Rd)	SPILLS-KS (associated with Union Pacific Railroad)  Tier 2-Kansas (T2-KS) (associated with Every Midland Junction Substation #8362024 1400 Rd)  FRS, RMP, Air Facility System (AFS), ECHO, Emergency Response Notification System (ERNS), T2-KS (associated with former Midland Farmers Cooperative Association/Pines International)
<b>South</b>	Agricultural and rural residential land	None
<b>West</b>	Agricultural and rural residential land	State Remediation Program (SRP), Delisted Hazardous Waste Site (DEL HWS), FRS (1927 East 1300 Rd)

Refer to [Section 6.0](#) for a discussion of regulatory database listings.

### 3.3 Physical Setting

The physical setting of the Subject Property is described in the table below.

TOPOGRAPHY	
<b>USGS Topographic Quadrangle</b>	<i>Midland, Kansas; Williamstown, Kansas</i>
<b>Approximate Elevation</b>	833 feet above sea level
<b>Nearest surface water</b>	Surface drains/watercourses and an open water pond are present traversing within the Subject Property. Mud Creek is located approximately 0.15 miles northeast; Kansas River is located 0.60 miles southwest.
Source(s): USGS, Database report	
SOILS	
<b>Soil Classification</b>	Wabash; Reading; Rossville; Martin; Eudora



<b>Soil Type</b>	Silt loam to silty clay
<b>Drainage Class</b>	Poorly drained to well-drained
<b>Source(s): NRCS, Database report</b>	
<b>GEOLOGY</b>	
<b>Physiographic Area/Region</b>	Central Irregular Plains Subprovince of the Great Plains
<b>Geologic Formation</b>	Virgilian Series; Pennsylvanian Formation
<b>Bedrock</b>	Alluvium
<b>Source(s): Database report</b>	
<b>HYDROLOGY</b>	
<b>Estimated Groundwater Flow<sup>1</sup></b>	East/Southeast
<b>Estimated Depth to Groundwater</b>	21 to 30 feet below ground surface
<b>Source(s): Database report, KDHE</b>	

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1. Groundwater flow direction can be influenced locally and regionally by the presence of local wetland features, surface topography, recharge and discharge areas, horizontal and vertical inconsistencies in the types of location of subsurface soils, and proximity to water pumping wells. Depth and gradient of the water table can change seasonally in response to variation in precipitation and recharge, and over time, in response to urban development, such as storm water controls, impervious surfaces, pumping wells, cleanup activities, dewatering, seawater intrusion barrier projects near the coast, and other factors.

## 4.0 User Provided Information

The User of this report is Free State Solar Project, LLC. Ms. Emily Truebner, authorized person for Free State Solar Project, LLC, provided a completed User Questionnaire as part of this assessment. The responses to the questionnaire have been summarized in the table below. A copy of the completed User Questionnaire is included in the appendices ([User Provided Information](#)).

QUESTIONS	YES	NO	COMMENTS
Did a search of recorded land title records (or judicial records where appropriate <sup>2</sup> ) identify any environmental liens filed or recorded against the property under federal, tribal, state, or local law?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Date of search: Not provided
Did a search of recorded land title records (or judicial records where appropriate) identify any AULs, such as engineering controls, land use restrictions or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state, or local law?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Date of search: Not provided
Do you have any specialized knowledge or experience related to the property or nearby properties?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Does the purchase price being paid for this property reasonably reflect the fair market value of the property?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Lease
Are you aware of any commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

### 4.1 Reason for Performing Phase I ESA

The reason for performing this Phase I ESA is to satisfy CERCLA requirements to quality for the innocent landowner, contiguous property owner, or bona fide prospective purchaser LLPs.

2. In certain jurisdictions, federal, tribal, state, or local statutes, or regulations specify that environmental liens and AULs be filed in judicial records rather than land title records. In such cases, judicial records must be searched for environmental liens and AULs.

## 5.0 Historical Review

### 5.1 Historical Sources Reviewed

ECT reviewed the following reasonably ascertainable standard historical sources, as described in ASTM E2247-16, to determine the previous uses and occupancies of the Subject Property, adjoining properties, and surrounding area.

Aerial photographs were obtained from EnviroSite Corporation (EnviroSite), which were sourced from the USGS, National Historical Aerial Program (NHAP), National Aerial Photography Program (NAPP), National Agriculture Imagery Program (NAIP), and/or Digital Orthophoto Quadrangle (DOQ). Additionally, ECT reviewed available aerial photographs on Google Earth™.

ECT reviewed topographic maps of the Subject Property and surrounding area. The current USGS 7.5-minute topographic map quadrant(s) are *Midland and Williamstown, Kansas*, which are dated 2018. Aerial photographs and topographic maps were reviewed on March 11, 2022.

Copies of the available aerial photographs and topographic maps are provided in the appendices ([Historical Sources](#)). The table below summarizes available historical source coverage for the Subject Property.

Dates	Aerial Photographs	Topographic Maps	Other Sources
Not Available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Prior to 1940	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1940 - 1945	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1946 - 1950	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1951 - 1955	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1956 - 1960	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
1961 - 1965	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1966 - 1970	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1971 - 1975	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1976 - 1980	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1981 - 1985	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1986 - 1990	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1991 - 1995	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1996 - 2000	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2001 - 2005	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2006 - 2010	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2011 - 2015	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016 - 2020	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Current	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 5.2 Subject Property Historical Summary

Based upon review of the available historical sources, a chronological summary of historical data for the Subject Property is included below.

DATES	SUBJECT PROPERTY DESCRIPTION/USE	SOURCE(S)
1886 1894	Primarily unimproved, flat land with a railroad, identified as Union Pacific Railroad, traversing through the northeastern portion.	Topographic maps
1948 1950	Primarily agricultural land. Beginning in 1948, roadways are visible as bisecting and/or binding the Subject Property, similarly as they currently exist. U.S. Highway 59/24 is visible near the northeastern portion of the Subject Property.  Three residential farmsteads are present on the Subject Property, one on the northeastern portion, south of the railroad along 1400 Rd, one along the north side of 2000 Rd, and one on the western/northwestern portion, also along 2000 Rd.  Patterns indicative of drainage swales are present on the south/central half of the site and a portion of a rectangular, agricultural pond is present on the north/northeastern boundary.	Aerial photographs Topographic maps
1960 1967 1970 1972	Similar to previous years with the addition of power transmission lines depicted through the central portion in a northeast-southwest orientation.	Aerial photographs Topographic maps
1977	Similar to previous years with the exception that one of the residential farmsteads along 2000 Rd (centrally located farmstead) is no longer visible.	Aerial photographs
1982 1985 1996	Similar to previous years with the exception that another previously existing residential farmstead (farmstead situated along 1400 Rd) is no longer visible, beginning in 1982.	Aerial photographs
2002	Similar to previous years with the exception that the western-most residential farmstead is no longer visible.	Aerial photographs
2006 2008 2009 2012 2016 2018 2019	Similar to current use/consistent with current configuration and site features.	Aerial photographs Topographic maps

## 5.3 Surrounding Area Historical Summary

Based upon review of the available historical sources, a chronological summary of historical data for the surrounding area is included below.

The Subject Property and surrounding properties have primarily consisted of agricultural land uses (various cultivated row crops) with sparsely scattered residential farmsteads dating back to at least 1948.

Dating back to at least 1948 to 2019, a multiple-building commercial operation, including a corner building with ASTs and an inlet and outlet drive consistent with a fueling station, was identified on the east/northeast adjacent property, beyond US Highway 59/24 and the railroad easement. Additional information presented in Sections 6.3 and 7.1 revealed that this complex was/is historically occupied by an agricultural supply, trade, and feed retailer (some observed ASTs appear to be associated with grain silos and liquid propane gas), that also included a vehicle fueling station at the southeast corner of 2000 Rd and 1400 Rd. Commercial operations appeared to be active from at least 1948 to 2019, and since the 1920s according to regulatory records. Refer to Section 7.1 for further discussion of the east/northeast adjoining property.

Surficial excavation and mining operations were identified approximately 1,000 feet north of the Subject Property from at least 1948 to 2019. Mining operations can be a potential environmental concern due to their yield of wastes and drainage of heavy concentrations of metals and acids from excavations and practices. Refer to Section 7.3 for further discussion.

DATES	SURROUNDING PROPERTY DESCRIPTION/USE	SOURCES(S)
1886 1894	Primarily unimproved land with small structures sparsely scattered throughout.	Topographic maps
1948 1950	Similar to the previous years; however, minor excavation activities are apparent approximately 1,000 feet north. Mixed-use commercial operations are depicted on the east/northeast adjoining property.	Aerial photographs Topographic maps
1960 1967 1969 1970 1972 1977 1982 1985 1996 2002 2006 2008 2009 2010 2018 2019	Primarily agricultural with scattered wooded lots and rural residential farmsteads and associated outbuildings interspersed throughout. The highway and railroad are visible.  Mining and ground disturbance activities prevalent to the north, substantially increasing in 1982 and with the addition of mining lagoons along the north side of U.S. Highway 59/24/Diagonal Rd.	Aerial photographs Topographic maps

## **5.4 Prior Environmental Reports**

ECT was not provided with and did not encounter any prior environmental reports completed for the Subject Property.

## 6.0 Regulatory Database Review

### 6.1 Database Finding Summary

ECT contracted Envirosearch to conduct a search of publicly available information from federal, state, tribal, and local environmental record sources in accordance with ASTM E2247-16. Data gathered during the regulatory database search is compiled by Envirosearch into a government records report (i.e., database report). This government records report, dated March 11, 2022, was reviewed by ECT on March 11, 2022.

The standard databases researched in accordance with ASTM E2247-16 requirements are listed below.

Standard Environmental Record Sources (where available)	Approximate Minimum Search Distance (miles)
<b>Federal Sources</b>	
NPL list	1.0
Delisted NPL list	0.50
CERCLIS list	0.50
CERCLIS-No Further Remedial Action Planned (NFRAP) list	0.50
RCRA Corrective Action (CORRACTS) facilities list	1.0
RCRA non-CORRACTS TSD facilities list	0.50
RCRA generators list	SP and Adjoining
Federal institutional control/engineering control registries	SP
Federal Emergency Response Notification System (ERNS) list	SP
<b>State Sources</b>	
<i>State- and tribal-equivalent NPL</i>	1.0
<i>State- and tribal-equivalent CERCLIS</i>	0.50
State and tribal landfill and/or solid waste disposal site lists	0.50
State and tribal leaking storage tank lists	0.50
State and tribal registered storage tank lists	SP and Adjoining
State and tribal institutional control/engineering control registries	SP
State and tribal voluntary cleanup sites	0.5
State and tribal Brownfield sites	0.50
SP = Subject Property	
<i>Italicized = State and tribal lists of hazardous waste sites identified for investigation or remediation</i>	

The database report, which includes a search of standard and additional record sources, identified the following hits for the Subject Property and/or surrounding area.

For full details pertaining to the databases searched, refer to the database report included in the appendices ([Regulatory Database Report](#)).

**Regulatory Report Summary**

Database	Search Radius	Target Property	Within 0.12mi	0.12mi to 0.25mi	0.25mi to 0.50mi	0.50mi to 1.00mi	Total
AFS	0	1	0	0	0	0	1
FRS	0	3	0	0	0	0	3
RMP	0.5	1	0	0	0	0	1
ECHO	0	1	0	0	0	0	1
DEL HWS - KS	1	0	1	1	0	1	3
HIST SPILLS - KS	0.125	0	1	0	0	0	1
PFAS - KS	0.5	0	0	1	0	0	1
SPILLS - KS	0.125	1	1	0	0	0	2
SRP - KS	0.5	0	1	1	0	0	2
SWF/LF - KS	0.5	0	0	1	0	0	1
T 2 - KS	0.25	1	1	0	0	0	2

**6.2 Subject Property Listings**

The Subject Property was incorrectly listed on the following regulatory databases:

**Target Property Summary**

Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
FRS, RMP	MIDLAND   FARMERS COOPERATIVE ASSOCIATION	1941 DIAGONAL RD REAR, MIDLAND   LAWRENCE   Midland, KS,	0.00/-	0.0	Not located on-site. Incorrectly plotted; refer to Midland COOP (1941 Diagonal Road Rear)

**6.3 Surrounding Properties**

Each surrounding property listing identified within the searched radius of the Subject Property was evaluated using ECT's professional judgement to determine its potential impact to the Subject Property. The distance of the listing from the Subject Property was included in ECT's evaluation, as well as the listing details, the regional topography, and the estimated groundwater flow. Based on ECT's evaluation, surrounding properties of potential environmental significance in relation to the Subject Property have been identified in the table below.



**Surrounding Properties Summary**

Database	Site Name	Address	Dist. (mi) / Dir.	Elev. diff. (ft)	Comments
SPILLS - KS	Union Pacific Railroad	Mile post 43.23, Lawrence, KS	0.01/E	1.9	10 gallons of curve grease spilled along railway in 2017; not a significant environmental concern
T 2 - KS	EVERGY - MIDLAND JUNCTION SUBSTATION #836	2024 E 1400 RD, LAWRENCE, KS, 66044	0.02/ENE	7.4	See below
AFS, ECHO, FRS	PINES INTERNATIONAL	R. R. 3, LAWRENCE   MIDLAND, KS, 66044	0.04/E	3.5	See below
FRS, ERNS, T2-KS	MIDLAND / MIDLAND COOP   CAPITAL CITY OIL-MIDLAND	1941 DIAGONAL ROAD REAR, LAWRENCE, KS, 66046	0.05/E	2.8	See below
HIST SPILLS - KS, SPILLS - KS	N/R / KPL	N/R, Lawrence, KS / 39.032403, -95.240842, Lawrence, KS	0.08/ENE	7.0	5 gallons of electrical insulating oil/ mineral oil spilled off-site in 1986; not a significant environmental concern
DEL HWS - KS, FRS, SRP-KS	BURR COMPLAINT	1927 E 1300 RD, LAWRENCE, KS, 66044	0.11/SW	-8.2	See below
DEL HWS - KS, FRS, SRP-KS, PFAS - KS, SWF/ LF	LAWRENCE CITY LANDFILL / CITY OF LAWRENCE	N/R, LAWRENCE, KS, 66044 / I-70 & Hwy 40 go 2.5 mi N on 24 to 2000r, Lawrence, KS	0.19/W	4.0	Also listed in Unmappable Properties as "Floodplain Landfill"; see below

- **Evergy Midland Junction Substation #836 - 2024 E1400 Road (adjoining northeast):** This substation was first listed in the T2-KS database under facility ID 389469 in February 2020. The database listing is in association with the use and storage of lead acid batteries. **No spills or releases were reported for the substation; therefore, it is the opinion of the EP that this property does not represent a REC.**

- **Pines International - R.R.3 (adjoining northeast):** The northeast adjoining property was listed under Registry ID 110010320900 in the AFS, FRS, and ECHO databases related to air permits associated with food production and manufacturing. ECT reviewed the ECHO database and determined that no violations were reported for this property. **Based on the nature of the listings and lack of regulatory violations, it is the opinion of the EP that this finding does not constitute a REC.**
- **Midland/Midland COOP/Capital City Oil - 1941 Diagonal Rd Rear (adjoining east/northeast):** The northeast adjoining historical bulk fuel station was listed in the FRS, ERNS, and T2-KS databases. Refer to Section 7.1 for additional details.
- **Burr Complaint - 1927 East 1300 Rd (adjoining south/southwest):** The facility was identified in the DEL HWS, FRS, and SRP databases. Refer to Section 7.1 for additional details.
- **Lawrence City Landfill / City of Lawrence/Floodplain Landfill (approximately 0.19 miles west/southwest):** This property was listed in the DEL HWS, FRS, SRP, SWF/LF, and per- and polyfluoroalkyl substances (PFAS) databases. In addition, the landfill was listed in the Unmappable Properties as CERCLIS No Further Remedial Action Planned (NFRAP), and the SEMS Archived Sites. Refer to Section 7.1 for additional details.

#### **6.4 Unmappable Properties**

Envirosite also provides an unmappable (or “orphan”) summary list which identifies properties that cannot be mapped due to poor or inadequate address information. The City of Lawrence Sanitary Landfill (addressed 1.5 miles west and 2 miles north of US 59 and US 24 junction) was identified in the Open Dump Inventory (ODI). This site is situated approximately 1,000-feet north of the Subject Property and historically operated as a mine. Refer to Section 7.3 for further discussion.

None of the remaining orphan sites identified by EnviroSite were determined to pose an environmental concern to the Subject Property.

## 7.0 Regulatory Agency Records Review

### 7.1 State Environmental Agency

ECT reviewed pertinent regulatory files associated with the standard database listings for the adjoining properties via the Kansas Department of Health & Environment (KDHE) Environmental Interest Finder webpage. Records available online were reviewed on March 16, 2022. In addition, ECT requested available documentation for these properties from KDHE on March 14, 2022. A summary of the records provided to ECT or available online is provided below.

- **Midland/Midland COOP/Capital City Oil - 1941 Diagonal Rd Rear (adjoining east/northeast):** The Mid, LLC, enrolled this property into the Kansas Voluntary Cleanup and Property Redevelopment Program (VCPRP) on March 7, 2022. The site consists of 0.42 acres and is improved with a two-story commercial building with a basement and was constructed sometime in the 1920s or 1930s. The building is currently vacant but was most recently occupied by a retail farm supply store. A filling station historically operated on-site, and the associated fuel dispensers and ASTs remain abandoned on the property. The ASTs were reportedly not registered with the Fire Marshall or KDHE. Information readily available on KDHE's website indicated that a Phase I and II ESA performed in 2021 revealed elevated concentrations of petroleum compounds and lead in soil and groundwater at the site. Based on the information submitted with the application, the contamination detected at this Site was classified as Class II Contamination. Kansas defines Class II Contamination to *"mean that suspected or confirmed soil or groundwater contamination, or both, resulting from operations that have occurred on the property is suspected or exists on or off the property."* Although ECT requested available records on file for this property from KDHE on March 14, 2022, no response has been received as of the date of this report. **Considering the adjoining, cross-gradient proximity of this site in relation to the Subject Property, it is the opinion of the EP that the unknown extent of soil and groundwater contamination constitutes a REC.**
- **Burr Complaint - 1927 East 1300 Rd (adjoining south/southwest):** The site was identified when Ms. Patti Burr informed KDHE that she had received medical test results indicating elevated levels of lead, mercury and cadmium in her blood, and had experienced historic hair loss. After obtaining property access, KDHE sampled the Burr Property and off-site areas

to evaluate whether heavy metals were present at concentrations exceeding applicable criteria. Soil and groundwater samples were submitted for total metals analysis by EPA Methods 6010 (except mercury) and EPA Method 245.1 for mercury. Water samples were also submitted for VOC analysis by EPA Method 8260, and SVOCs were also analyzed by EPA Method 8270 for soil samples. Given the lack of impacts identified, KDHE considered the issue resolved on June 30, 2005. **Based on the lack of reported impacts to soil or groundwater, it is the opinion of the EP that this property does not represent a REC.**

- **Lawrence City Landfill / City of Lawrence (approximately 0.19 miles west/southwest):** The site lies along the east side of the Kansas river between the river and the levy. According to KDHE, the landfill operations reportedly began in 1970 and continued until 1981. Following closure of the landfill operations, the property was designated as a wildlife preserve. As part of a research project, 24 monitoring wells were installed in 1973 and 1975 by the University of Kansas. Another investigation reportedly took place in 1986 as a result of the review of the landfill records and in consideration of the landfill's proximity to the Kansas River. Groundwater, sediment and surface water samples were collected to determine whether the landfill was adversely affecting the river. The specific analysis or results were not provided to ECT for review; however, based on the results, KDHE determined that VOC contamination was present, but the landfill was not significantly impacting the river. The site was transferred to the Bureau of Waste Management (BOWM) in January 2012. In 2019, the site was identified in KDHE's PFAS Inventory Project, which is a statewide inventory of potential sites with higher risk of PFAS contamination based on their past or current registered uses. ECT requested available records on file for this property from KDHE on March 14, 2022. A response received from the BOWM indicated that Superfund Sites are handled by EPA Region 7. **Given the cross-gradient location and overall proximity in relation to the Subject Property, it is the opinion of the EP that this property does not represent a REC.**

Copies of pertinent regulatory agency records are included in the appendices ([Regulatory Agency Documentation](#)).

## 7.2 Oil and Gas Pipelines/Wells

ECT reviewed the National Pipeline Mapping System (NPMS) on March 11, 2022 to evaluate if pipelines are located at the Subject Property. One active natural gas pipeline operated by Black Hills Energy extends along the northernmost property boundary (along Highway 59/24). In addition, a second active natural gas pipeline operated by Southern Star Central Gas Pipeline, Inc. adjoins the northeast portion of the subject property and extends south along North 1941 Diagonal Rd. Both pipelines cross the northeast adjoining Midland Co-Op property. No accidents or incidents were reported on-site or within close proximity to the Subject Property.

In addition, ECT reviewed the Kansas Corporation Commission - Conservation Division (KCC-CD)'s database on March 11, 2022. No oil, gas, or injection wells were identified on the Subject Property. According to the KCC-CD, one "other" well was registered in the northwest portion of the Subject Property (date not disclosed). The status was listed as, *"may not be an energy well, since water research wells and road construction wells are in database under some conditions."* Given that the operator of the well is listed as Kansas Geological Survey (KGS) under the lease name "Moore Core", it is likely the well was drilled as part of KGS hydrogeological research. **Based on this information, it is the opinion of the EP that the historical well does not represent a REC.**

Copies of pertinent oil/gas maps are included within the appendices ([Regulatory Database Report](#))

## 7.3 Mining and Mineral Exploration

On March 17, 2022, ECT searched for available mining information for the Subject Property using the KGS Directory of Kansas Industrial Mineral Producers' online Geology, Quarries, and Mines Interactive Mapper. No mines were identified on the Subject Property; however, N.R. Hamm Quarries, Inc. was identified approximately 1,000 feet north of the Subject Property. Records indicate that the facility historically operated as a limestone surface mine until its abandonment in 1993. Surface mining refers to the removal of the terrain surface to access underlying minerals. Regulatory records indicate this property is also known as the City of Lawrence Sanitary Landfill. **Given the proximity relative to the Subject Property, it is the opinion of the EP that this finding does not constitute a REC.**

## 8.0 Interviews

### 8.1 Past and Present Owners

The Subject Property parcels are each owned by Daniel Strong Trust/Trustees. ECT interviewed Mr. Daniel Strong on March 15, 2022. Refer to the below table for Mr. Strong's responses.

QUESTIONS	RESPONSE SUMMARY
How long have you owned and/or been affiliated with the property?	20+ years
What are the current uses of the property?	Farmland/cropland
What are the past uses of the property?	Farmland/cropland
What is the approximate age (or construction date) and size / square footage of current structure(s)?	No structures
If vacant or undeveloped, do you know of any prior improvements?	No
Are you aware of any current or previous well(s) and/or septic system(s)?	Yes, irrigation wells
Do any utilities currently service the property?	Yes, electric and water
Are you aware of any area of storage, used, generation or disposal of automotive, industrial, or agricultural chemicals, batteries, solvents, petroleum products, pesticides or related regulated chemicals?	No
Are you aware of any underground or aboveground storage tanks for any chemicals or petroleum products currently or historically located on the property?	No
Has the property been used as a waste landfill, dump, or disposal site?	No
Are you aware of any fill material that has been placed on the property?	No
Are you aware of any current or former oil or gas wells, or associated tanks / pipelines on the property?	No
Are you aware of any current or former (i.e., filled) pits, ponds, or lagoons located on the property?	No
Are you aware of any past cattle dipping vats on the property?	No
Are you aware of any petroleum or hazardous waste discharges or releases to the environment, or contamination impacts to the property's soil, groundwater, or surface waters?	No
Are you aware of any pending, threatened, or past environmental litigation, proceedings, or notices of possible violations of environmental laws or liability, or potential environmental concerns in connection with the property?	No
Are you aware of any past environmental assessment report(s) prepared for the property?	No

### 8.2 State and/or Local Government Officials

The following state and/or local government officials were interviewed as part of this assessment:

<b>Agency:</b>	Lawrence-Douglas County Public Health
<b>Contact Name:</b>	N/A
<b>Title:</b>	N/A
<b>Method:</b>	E-mail Inquiries on March 14, 2022 and March 17, 2022

<b>Comments:</b>	No response as of the date of this report.
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<b>Agency:</b>	Douglas County Government (Fire, Zoning)
<b>Contact Name:</b>	Karrey Britt
<b>Title:</b>	Freedom of Information Officer
<b>Method:</b>	E-mail inquiry on March 14, 2022
<b>Comments:</b>	Douglas County Consolidated Fire District No. 1 records do not show any calls for service for the locations requested. The Fire Chief added that he believes the area is primarily served by the City of Lawrence for fire protection. According to the Douglas County Zoning and Codes Department, there have been no previous structures, dumping sites, or landfills, nor could they see anything of this nature on the current aerial.

<b>Agency:</b>	Douglas County Conservation District
<b>Contact Name:</b>	Randy Winchester
<b>Title:</b>	District Manager
<b>Method:</b>	E-mail inquiry on March 14, 2022
<b>Comments:</b>	Response indicated that no records are on file for the Subject Property parcels or landowner(s).

Copies of state and/or local government correspondence and any provided documents are included in the appendices ([State/Local Interview Documentation](#)).

## 9.0 Site Reconnaissance

<b>RECONNAISSANCE OVERVIEW</b>	
<b>Site Reconnaissance Date:</b>	March 17, 2022
<b>ECT Assessor(s) Name &amp; Title:</b>	Mr. Sam Rimmert, Associate Scientist
<b>Escort &amp; Relationship to Property:</b>	None
<b>Methodology:</b>	Automobile reconnaissance via public roadways and available access roads with closer walkovers of identified areas of environmental interest unless otherwise disclosed as a limiting condition (see below; refer to <a href="#">Section 2.5</a> ).
<b>Access Limitations:</b>	None
<b>SUBJECT PROPERTY CONDITIONS</b>	
<b>Weather:</b>	79° Fahrenheit, cloudy
<b>General Topography:</b>	Relatively flat with gently rolling relief
<b>Current Use:</b>	Predominantly utilized for agricultural crop cultivation, void of occupants and/or other non-agricultural cultivation operations.
<b>Areas of Environmental Interest:</b>	Overhead transmission lines, AST, adjoining pipeline and railroad easements
<b>Roads and Corridors:</b>	Public roadways North 2000 Rd, 1400 Rd, U.S. Highway Route 24/59 (also referred to as Diagonal Rd), North 1900 Rd, East 1250 Rd.
<b>Other Transportation Corridors:</b>	Overhead electrical transmission lines cross the Subject Property; a railroad easement and buried pipelines

In accordance with ASTM E2247-16, the EP conducted a review of aerial photographs, regulatory records, and information obtained from interviews prior to the completion of the reconnaissance. Based on the EP’s review of these data sources, areas of environmental interest (if any) were identified and discussed with field personnel prior to the reconnaissance. The EP was in contact with field personnel, who transmitted photographs, video recordings, and/or live video feed, during the reconnaissance, and provided further guidance as necessary.

### 9.1 Subject Property Reconnaissance Summary

Field observations, as noted in the table below, are included on [Figure 2](#). Photographs taken during the reconnaissance are provided in the appendices ([Photographic Documentation](#)).

<b>OBSERVATION</b>	<b>YES</b>	<b>NO</b>
Hazardous Substances and/or Petroleum Products in Connection with Property Use	✓	☐
Hazardous Substances and/or Petroleum Products not in Connection with Property Use	☐	✓
Aboveground Storage Tanks (ASTs)	✓	☐
Underground Storage Tanks (USTs), vent pipes, fill pipes, or access ways indicating USTs may be present	☐	✓



OBSERVATION	YES	NO
Unidentified Substance Containers	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Strong, Pungent, or Noxious Odors	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Drains, Sumps, Clarifiers, or Pools of Liquid	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Electrical or Hydraulic Equipment Likely to Contain Fluids	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stained Soil or Pavement	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pits, Ponds, Ditches, Streams, or Lagoons	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Stained or Stressed Vegetation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Solid Waste Disposal	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Evidence of Fill Materials or Dumping of Debris	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wastewater or Storm Water Discharges	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Wells	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Septic Systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## 9.2 Observed Hazardous Substances and/or Petroleum Products

A diesel AST associated with the on-site lift station was observed in the north-central portion of the Subject Property. The AST is further discussed in Section 9.3.

## 9.3 Aboveground Storage Tanks

ECT observed one, 550-gallon, pad-mounted, steel AST in the north-central portion of the Subject Property. The AST fuels a generator that powers a lift station which serves to divert water from the surrounding agricultural fields into the northernmost pond. No leaks or stains were observed in the vicinity of the AST, and no sheens or evidence of adverse environmental impact were present at the pond.

## 9.4 Electrical or Hydraulic Equipment Likely to Contain Fluids

In the United States, PCBs were commercially manufactured from 1929 until production was banned in 1979 by the Toxic Substances Control Act (TSCA). Due to their non-flammability, chemical stability, high boiling point and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications, such as electrical, heat transfer, and hydraulic equipment, such as transformers, elevators, and hydraulic lifts.

At the time of the reconnaissance, multiple pole-mounted transformers were observed along public roadways. No labels were visible on the transformers to indicate their PCB status; however, they appeared to be in good condition with no evidence of leaks.

## **9.5 Pits, Ponds, Ditches, Streams, or Lagoons**

In addition to the agricultural drainage pond situated in the northern portion of the Subject Property, areas of surface water ponding and drainage ditches were observed throughout. No sheens, odors, or other indicators of environmental impact were observed associated with these features.

## **9.6 Wells**

No evidence of wells (i.e., monitoring, water supply, oil/gas, injection) was observed on the Subject Property during the site reconnaissance. Based on information provided by the landowner, ECT is aware that irrigation is supplied via private water wells. No environmental concerns were noted associated with the on-site water wells.

## **9.7 Other Field Observations**

ECT observed signage, piping, and vents associated with the on-site agricultural drainage network in the central and northern portions of the property. Refer to Section 9.2 for further discussion.

## 10.0 Environmental Professional Statement

I, Rebecca M. Powell, declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR §312. 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. A copy of the EP's resume, as well as others involved in the completion of this assessment, are included in the appendices ([Resumes of Environmental Consultants](#)).



Rebecca M. Powell

National Due Diligence Practice Leader

Environmental Professional

## 11.0 Non-Scope Considerations

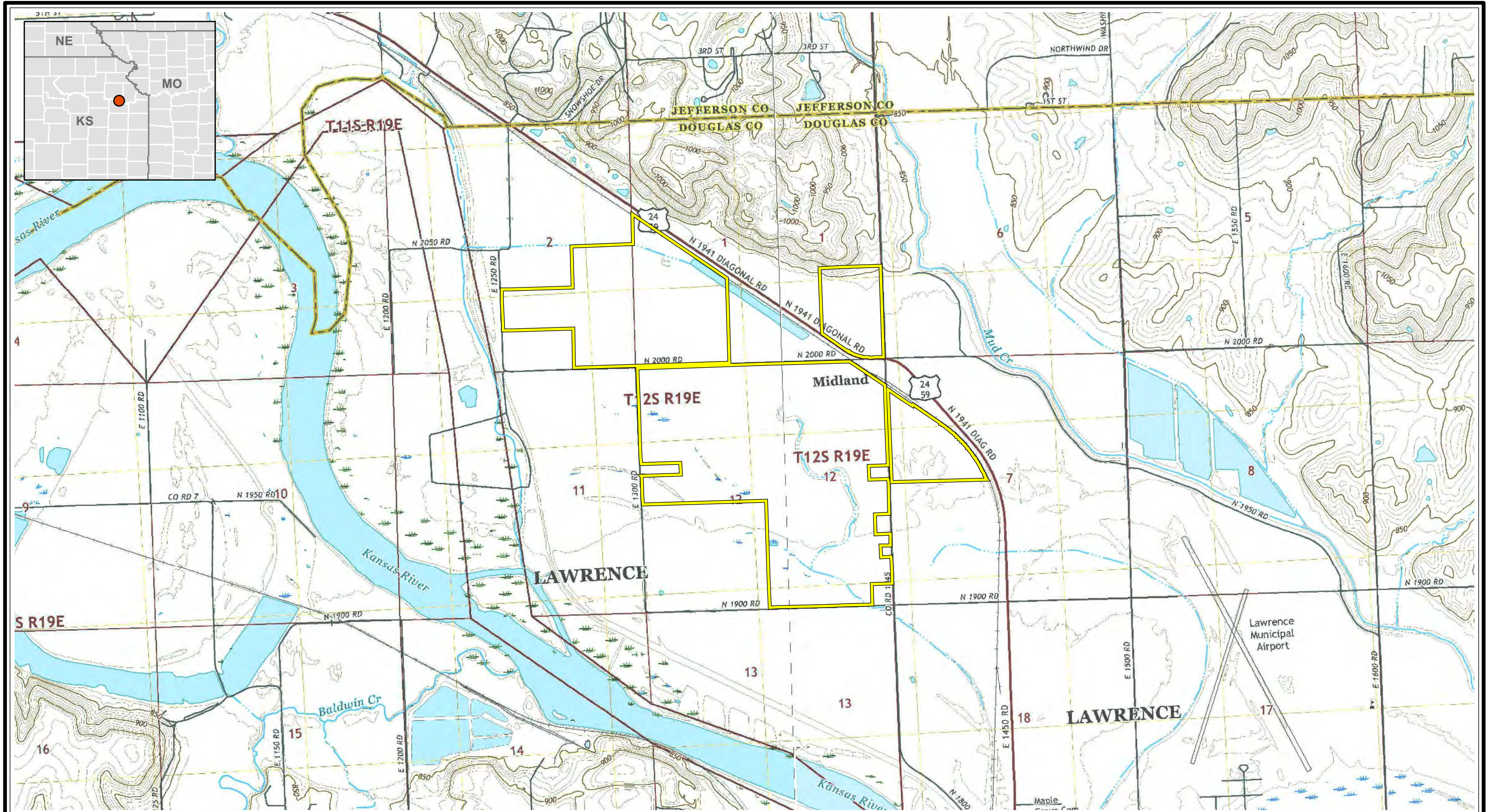
No non-scope considerations as defined in Appendix X5 of ASTM E2247-16 were included as part of this assessment.


## 12.0 References

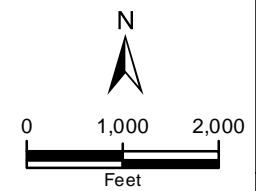
REFERENCED ITEM OR AGENCY	PUBLICATION OR INQUIRY DATE(S)	SOURCE
Aerial Photographs	1948, 1950, 1967, 1969, 1970, 1972, 1977, 1982, 1985, 1991, 1996, 2002, 2006, 2008, 2010, 2012, 2014, 2015, 2017, 2019	USGS, NAIP, NHAP, DOQ; compiled by EnviroSite
	2019	Google Earth™
Assessor Information	March 14, 2022	Douglas County
Depth to Groundwater Information	March 16, 2022	KDHE
Environmental Conservation	March 14, 2022	Douglas County Conservation District
Fire and Zoning Department	March 14, 2022	Douglas County Government
Geology Information	March 17, 2022	KGS
Health Department(s)	March 14, 2022 and March 17, 2022	Lawrence-Douglas County Public Health
Oil and Gas Authority	March 11, 2022	KCC-CD
Owner(s), Key Site Manager(s), and/or Occupant Interviews	March 15, 2022	Mr. Daniel Strong
Physiographic Information	March 11, 2022	EnviroSite, KGS
Pipeline Information	March 11, 2022	NPMS
Regulatory Database Report	March 11, 2022	EnviroSite
Soils Information	March 11, 2022	USDA-NRCS
Standard Practice	2016	ASTM Standard E2247-16, <i>Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland or Rural Property</i>
State Environmental Agency	March 16, 2022	KDHE
Topographic Maps	1886, 1894, 1960, 2009, 2010	USGS
	2018	USGS (Midland and Williamstown, Kansas)

## Appendix A

### Figures



 Project Boundary (± 809.9 ac)

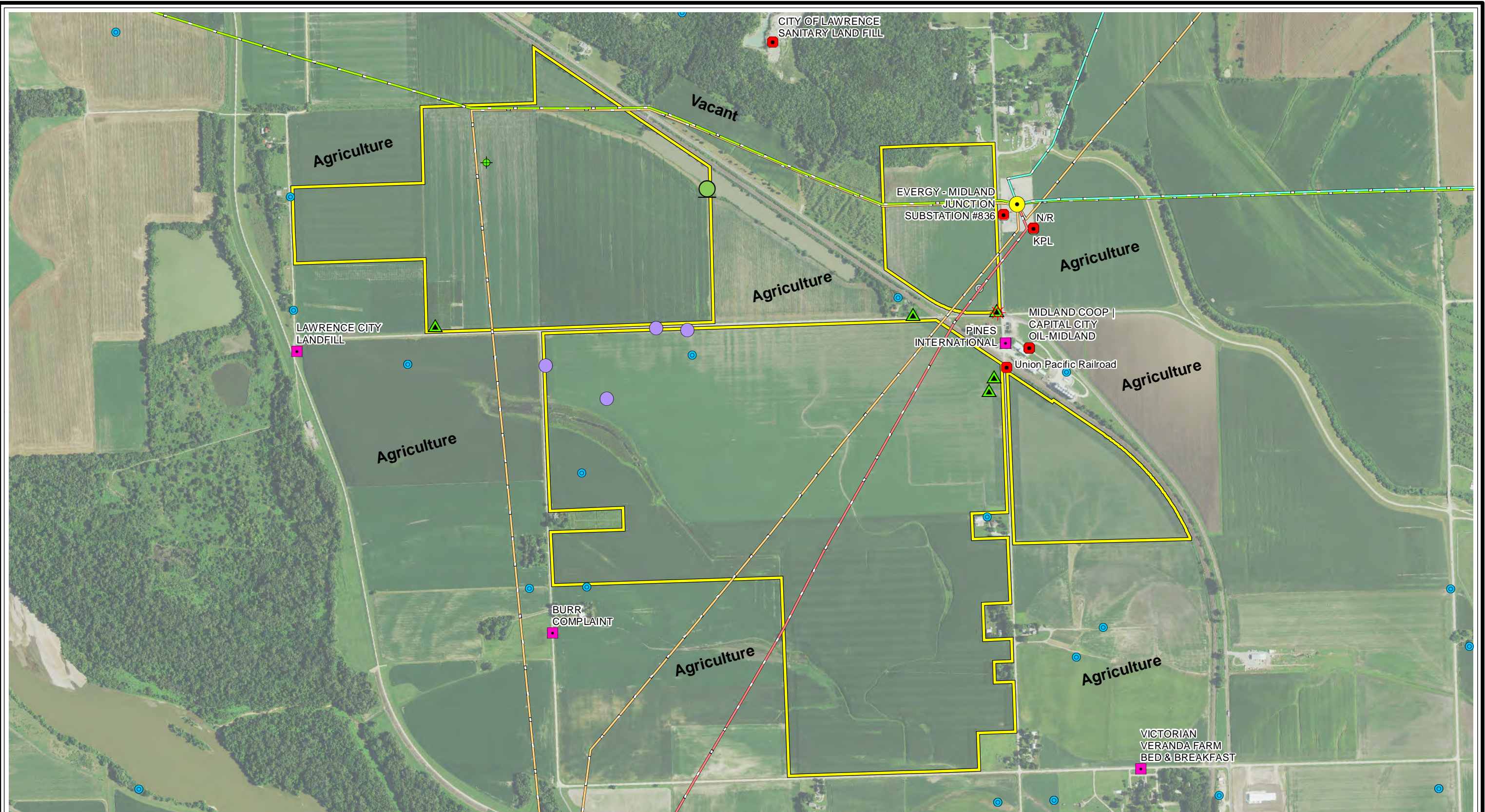


**Figure 1**  
**Topographic Map**

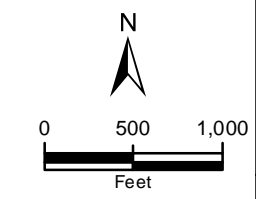
Free State Solar  
Douglas County, KS

Date: 3/16/2022





- |                               |                           |                            |            |                   |
|-------------------------------|---------------------------|----------------------------|------------|-------------------|
| Project Boundary (± 809.9 ac) | Transmission Line (HIFLD) | Substation (HIFLD)         | Other Well | Field Observation |
| 220-287 kV                    | EPA Facility              | Database Listings          | Water Well | Gas Line Marker   |
| 100-161 kV                    | Historical Structure      | Constructed                | Plugged    | AST               |
| Under 100 kV                  |                           | Agricultural Drain Feature |            |                   |
| Unknown                       |                           |                            |            |                   |



Base Layer: USDA NAIP 2021

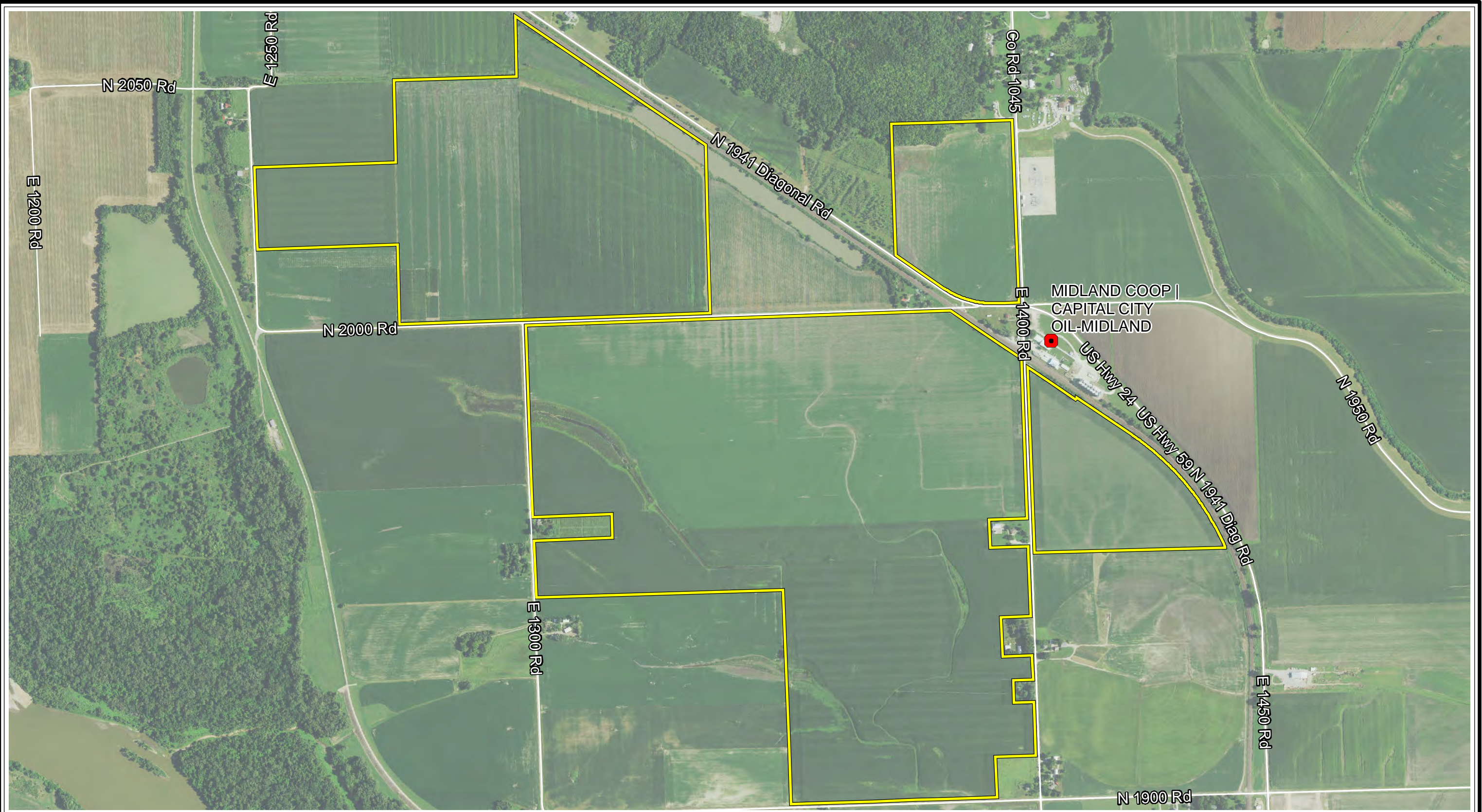
**Figure 2**  
**Subject Property Overview**

Free State Solar  
Douglas County, KS

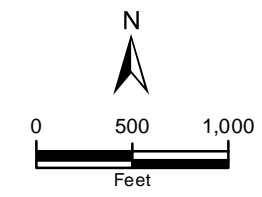
Date: 3/18/2022







- Project Boundary (± 809.9 ac)
- Midland COOP | Capital City Oil-Midland



Base Layer: USDA NAIP 2021

**Figure 3  
REC Locations**

Free State Solar  
Douglas County, KS  
Date: 3/18/2022



## Appendix B

### User Provided Information



### USER QUESTIONNAIRE

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user must provide the following information (if available) to the environmental professional. **Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.**

**Project Name:** Free State Solar Project, LLC

**County(ies) & State:** Douglas County and Jefferson County, KS

#### 1. ENVIRONMENTAL LIENS

Did a search of recorded land title records (or judicial records where appropriate<sup>1</sup>) identify any environmental liens filed or recorded against the property under federal, tribal, state, or local law?

NO

YES

Date of Search: \_\_\_\_\_

#### 2. ACTIVITY AND USE LIMITATIONS (AULs)

Did a search of recorded land title records (or judicial records where appropriate) identify any AULs, such as engineering controls, land use restrictions, or institutional controls that are in place at the property and/or have been filed or recorded against the property under federal, tribal, state, or local law?

NO

YES

Date of Search: \_\_\_\_\_

#### 3. SPECIALIZED KNOWLEDGE OR EXPERIENCE

Do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the 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

If yes, explain. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

<sup>1</sup> In certain jurisdictions, federal, tribal, state, or local statutes, or regulations specify that environmental liens and AULs be filed in judicial records rather than in land title records. In such cases judicial records must be searched for environmental liens and AULs.



**4. PURCHASE PRICE & FAIR MARKET VALUE**

Does the purchase price being paid for this property reasonably reflect the fair market value of the property? 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 If no, explain. \_\_\_\_\_

LEASE?

**5. COMMONLY KNOWN INFORMATION**

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, do you know the past uses of the property? Do you know if specific chemicals that are present or once were present at the property? Do you know of spills or other chemical releases that have taken place at the property? Do you know of any environmental cleanups that have taken place at the property?

NO  YES If yes, explain. \_\_\_\_\_

**6. DEGREE OF OBVIOUSNESS**

Based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?

NO  YES If yes, explain. \_\_\_\_\_

Completed By: Emily Truebner

Title: Authorized Person

Signature:   
Emily Truebner (Mar 25, 2022 09:24 CDT)

USER ENTITY: Free State Solar Project, LLC

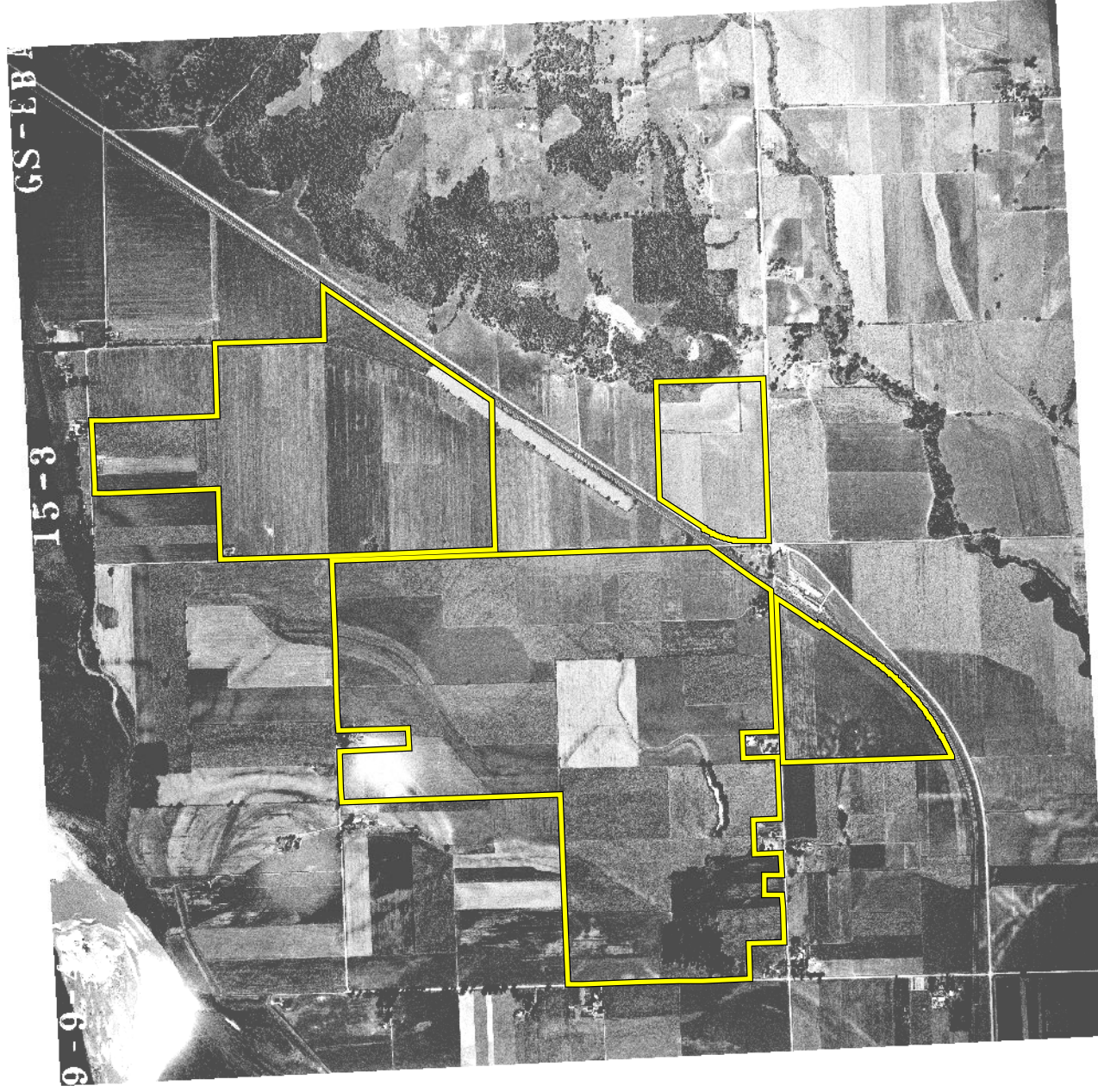
Date: 3/11/2022


Reason for Phase I: \_\_\_\_\_

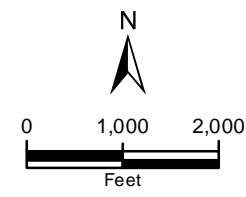
Other Reliance Entities: \_\_\_\_\_

## Appendix C

### Historical Sources



 Project Boundary (± 809.9 ac)



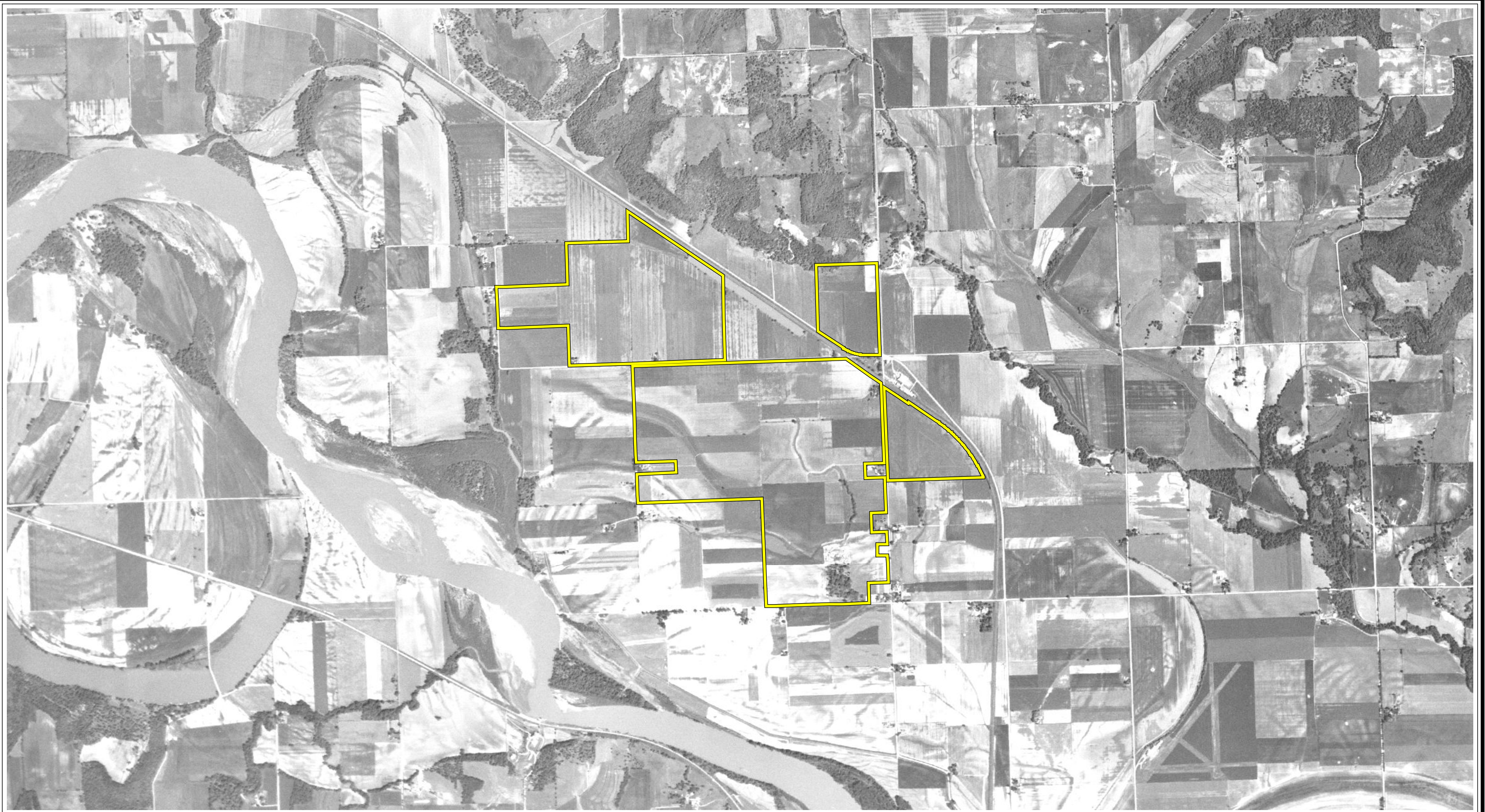
Base Layer: USGS Single Frame 1948


**Historical Aerial Map  
1948 Aerial Photograph**

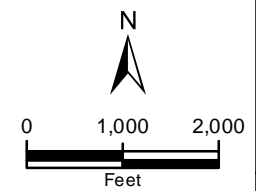
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary ( $\pm$  809.9 ac)



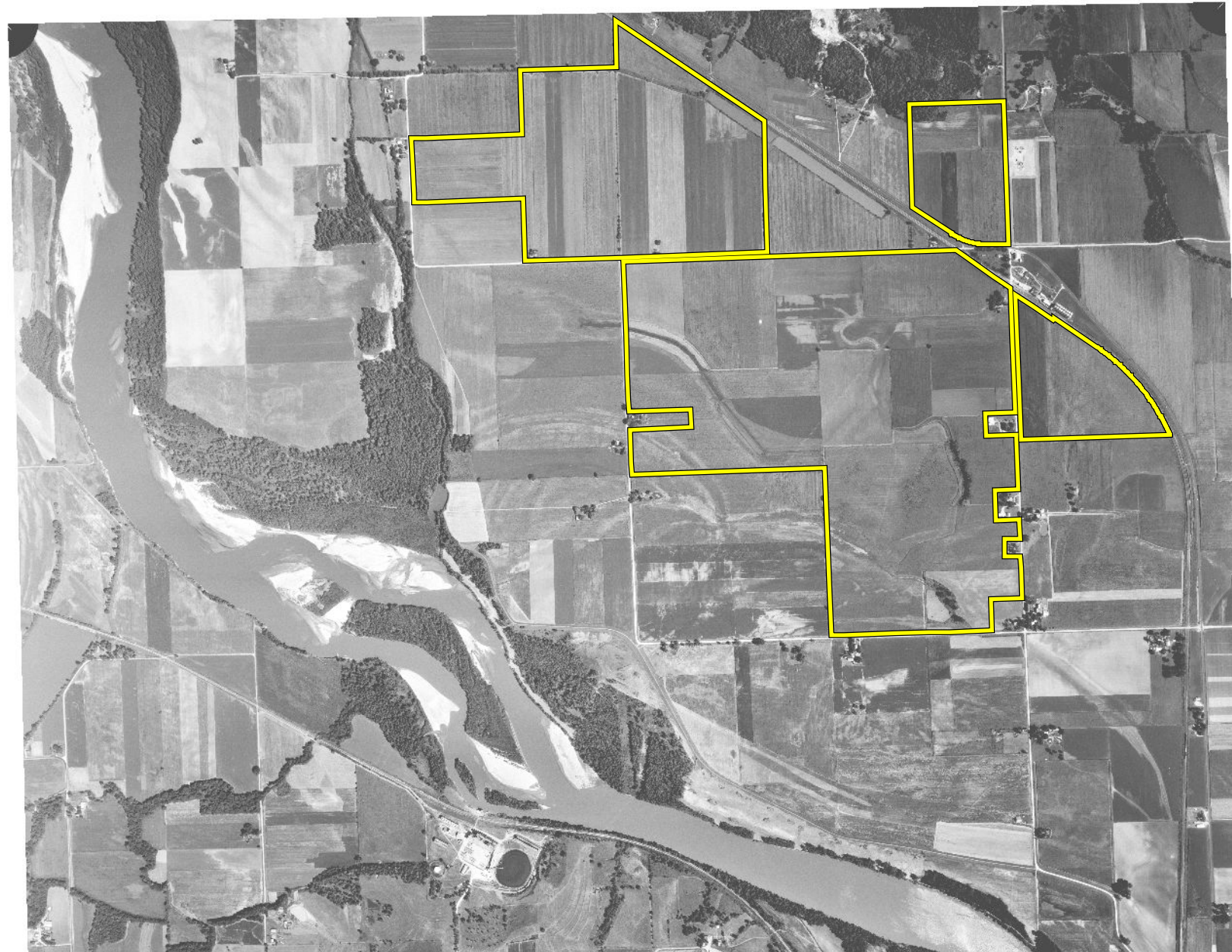
Base Layer: USGS Single Frame 1950


**Historical Aerial Map  
1950 Aerial Photograph**

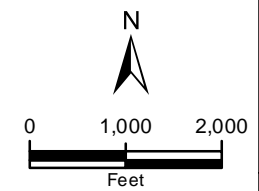
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary (± 809.9 ac)



Base Layer: USGS Single Frame 1967

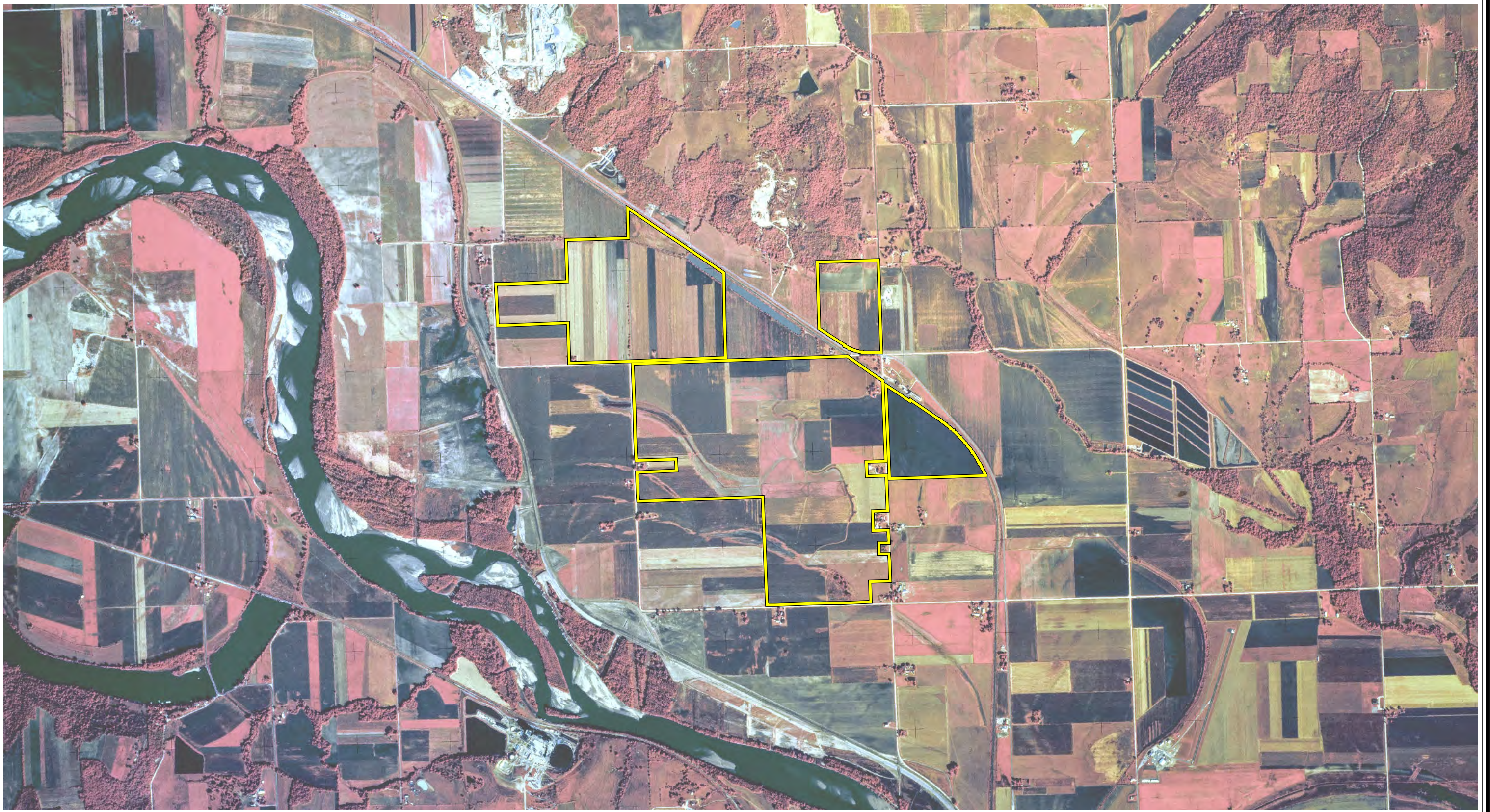
**Historical Aerial Map  
1967 Aerial Photograph**


Free State Solar  
Douglas County, KS

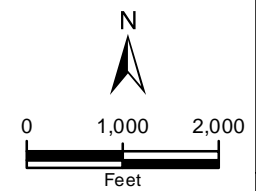
Date: 3/16/2022







 Project Boundary ( $\pm$  809.9 ac)



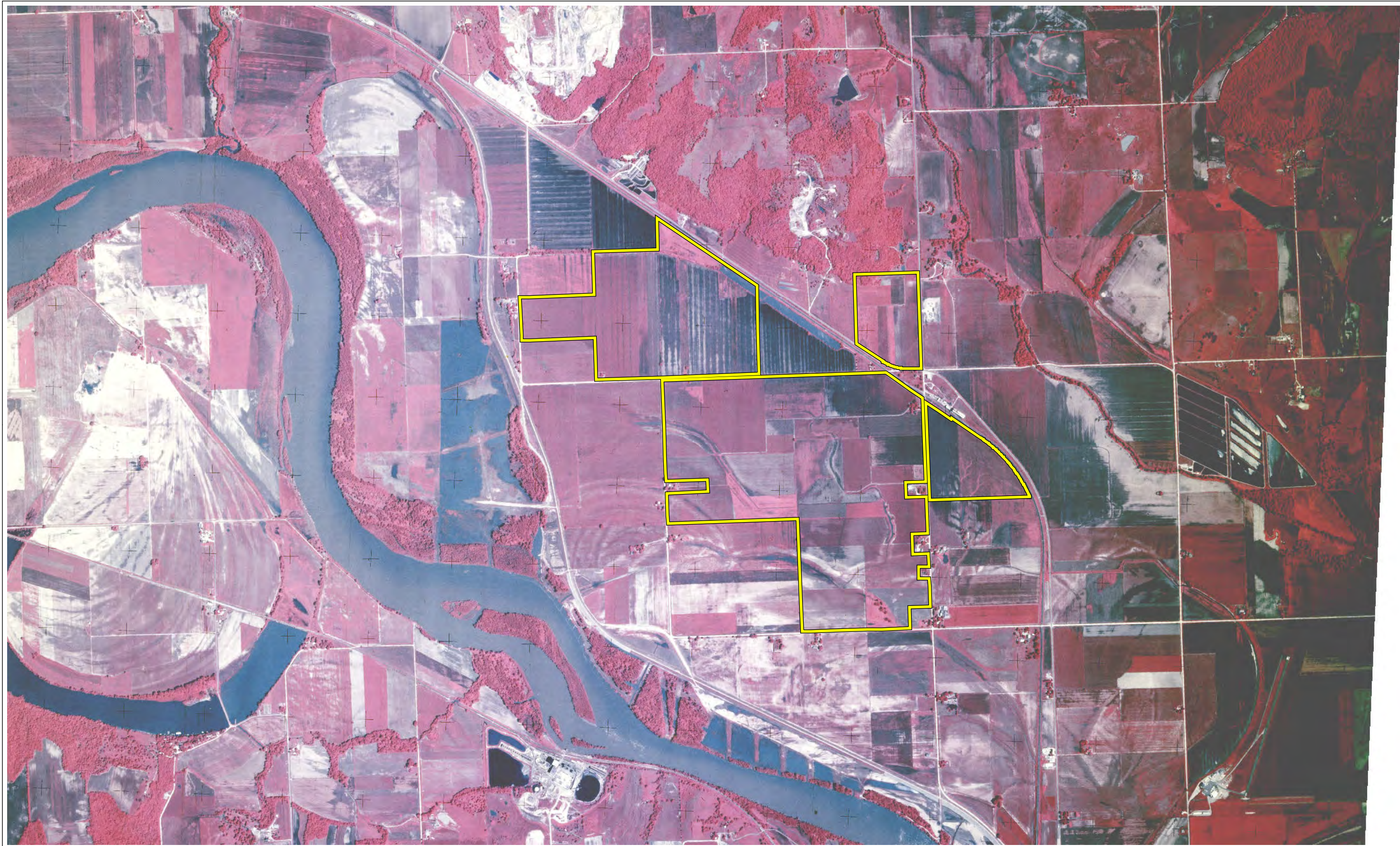
Base Layer: USGS Single Frame 1969


**Historical Aerial Map  
1969 Aerial Photograph**

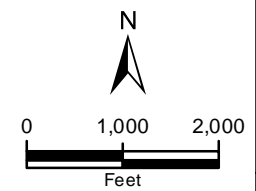
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary (± 809.9 ac)



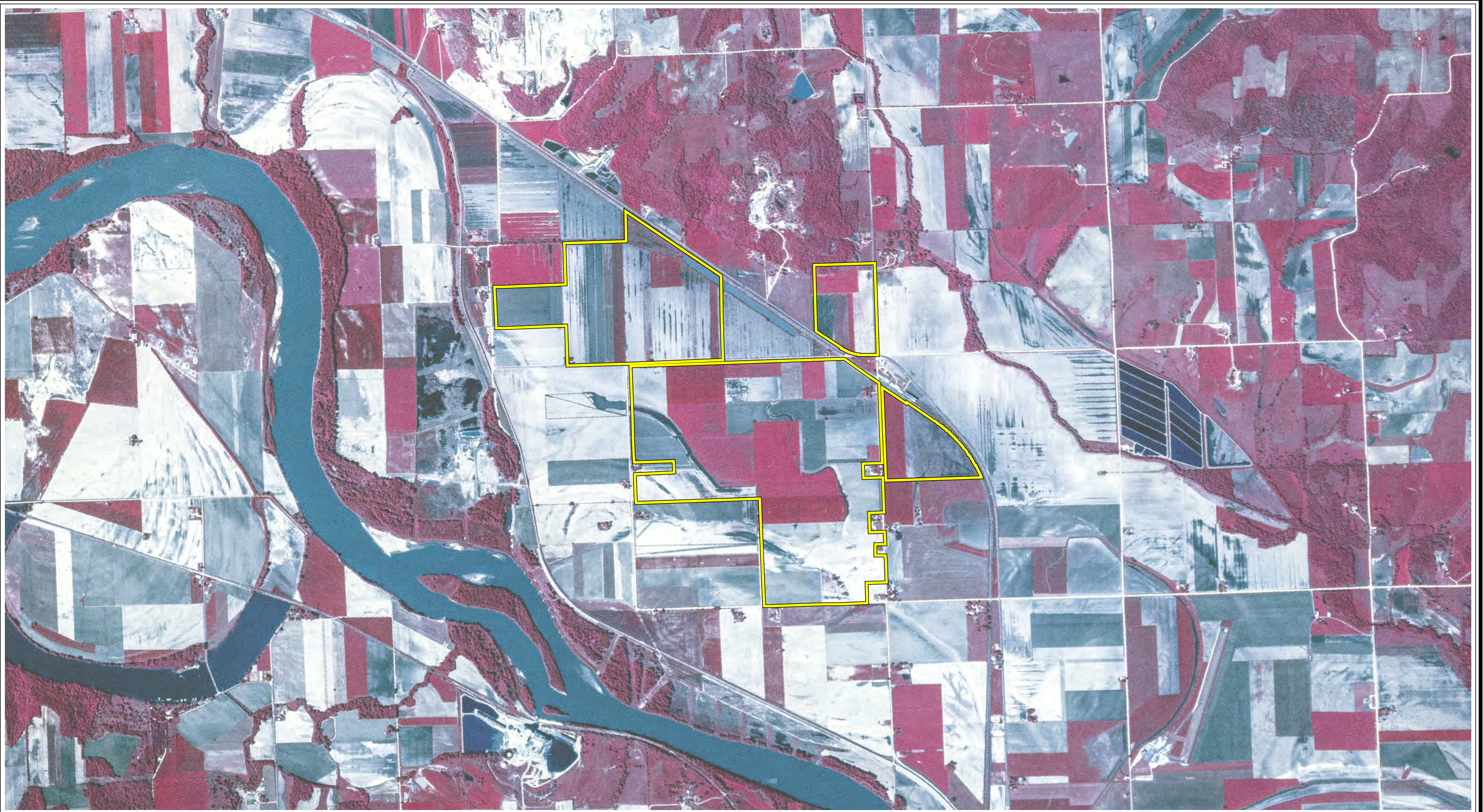
Base Layer: USGS Single Frame 1970


**Historical Aerial Map  
1970 Aerial Photograph**

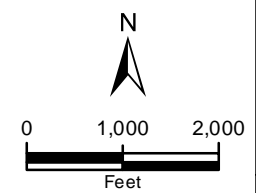
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary ( $\pm$  809.9 ac)



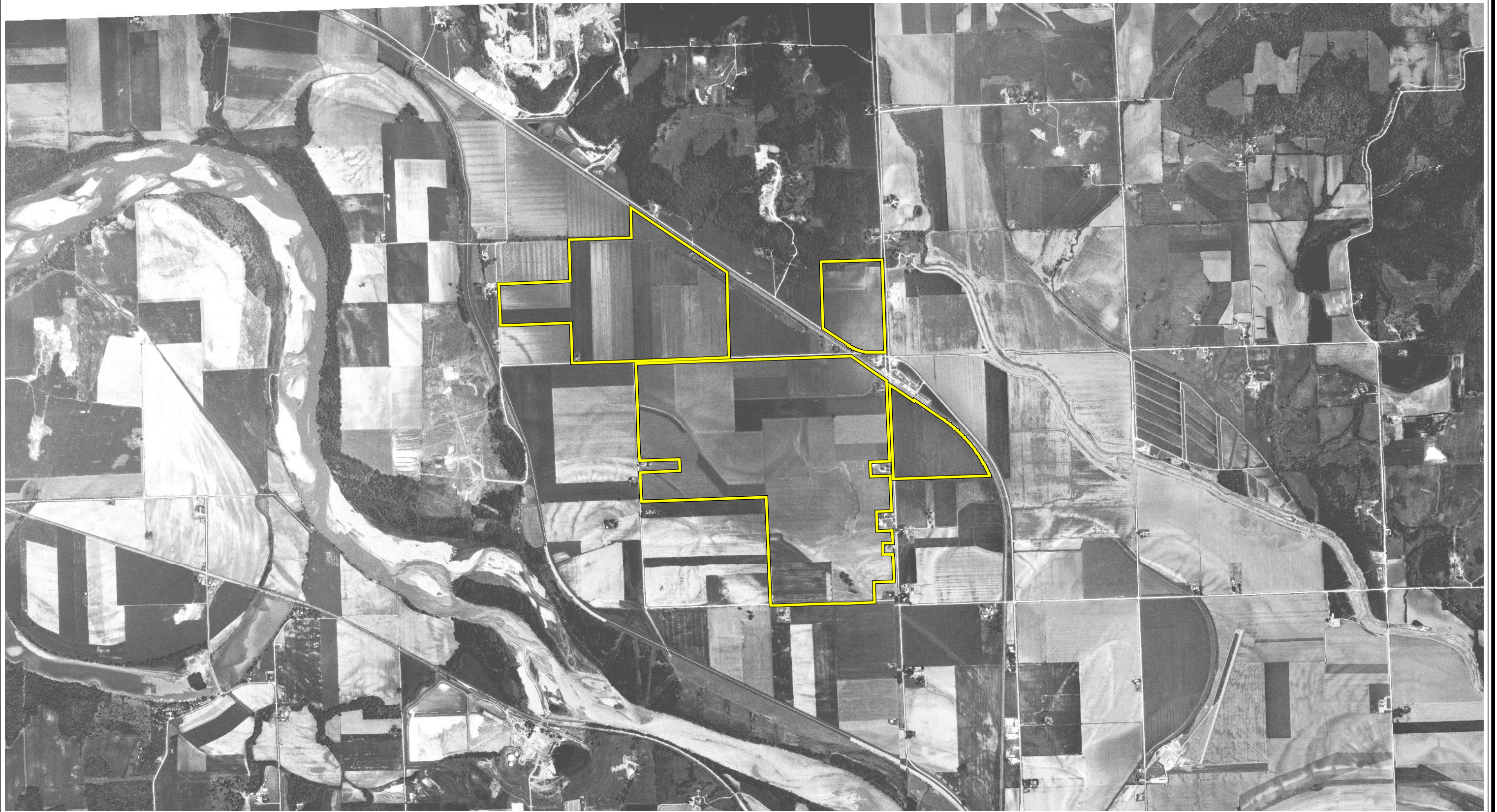
Base Layer: USGS Single Frame 1972


**Historical Aerial Map  
1972 Aerial Photograph**

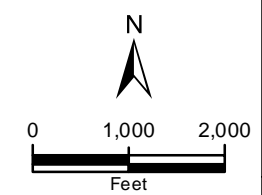
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary ( $\pm$  809.9 ac)



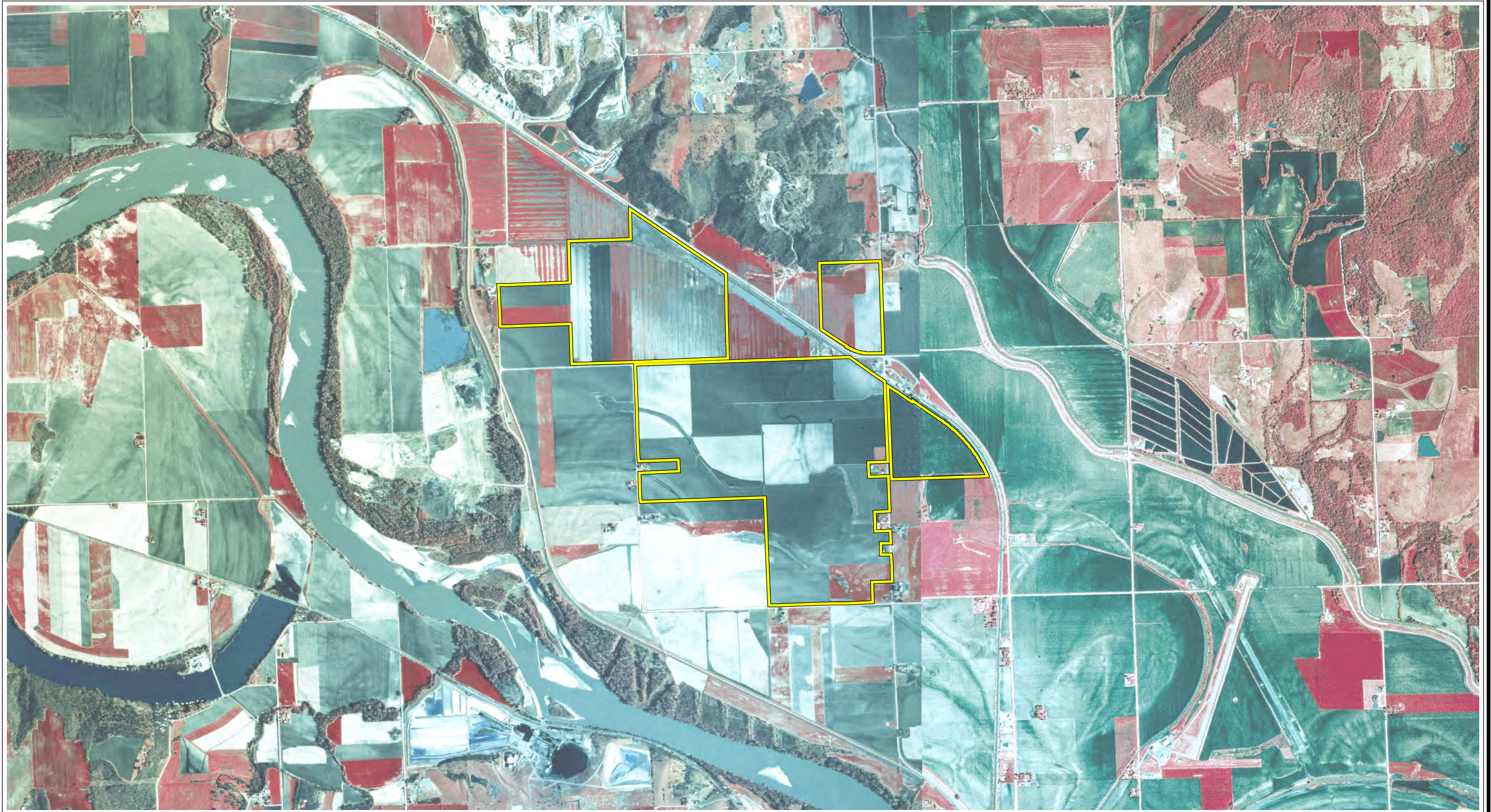
Base Layer: USGS Single Frame 1977


**Historical Aerial Map  
1977 Aerial Photograph**

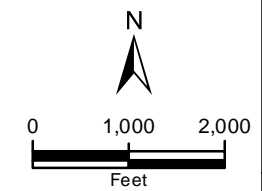
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary ( $\pm$  809.9 ac)



Base Layer: USGS NHAP 1982


**Historical Aerial Map  
1982 Aerial Photograph**

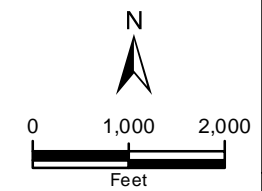
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary (± 809.9 ac)



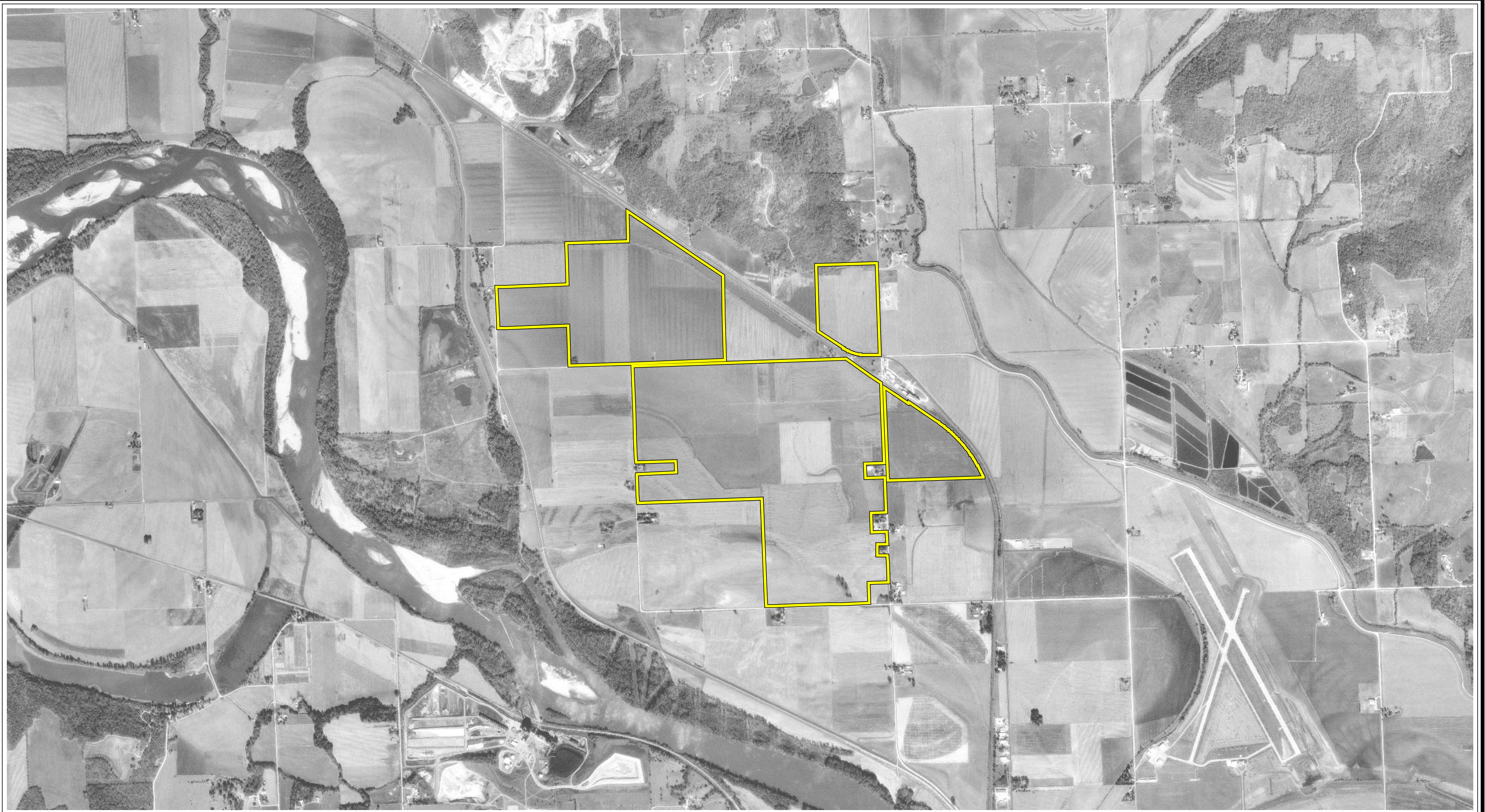
Base Layer: USGS NHAP 1985


**Historical Aerial Map  
1985 Aerial Photograph**

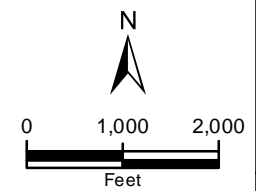
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary ( $\pm$  809.9 ac)



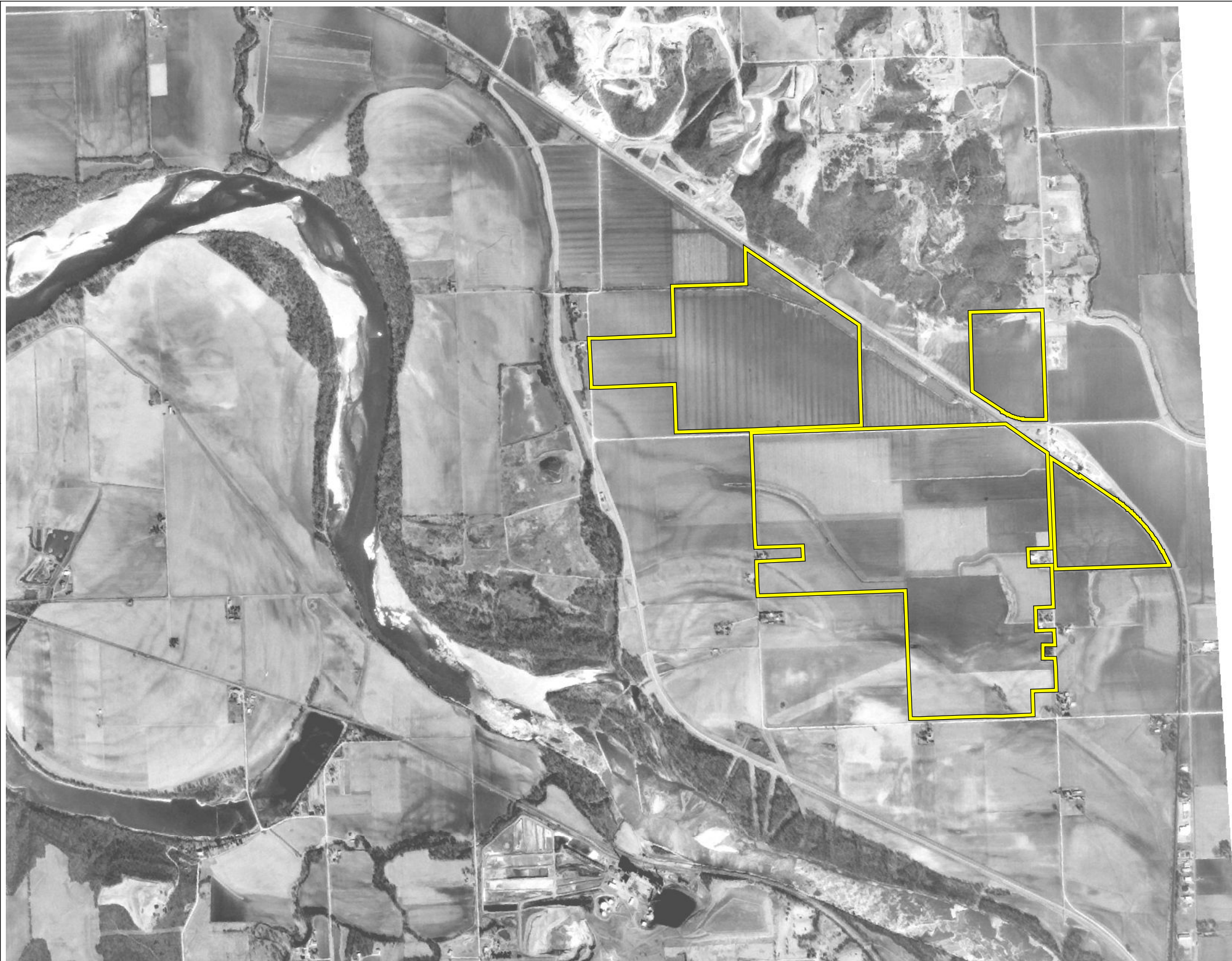
Base Layer: USGS DOQ 1991


**Historical Aerial Map  
1996 Aerial Orthophoto**

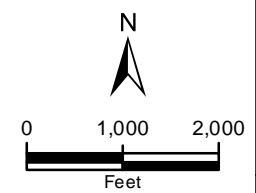
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary ( $\pm$  809.9 ac)



Base Layer: USGS NAPP 1996

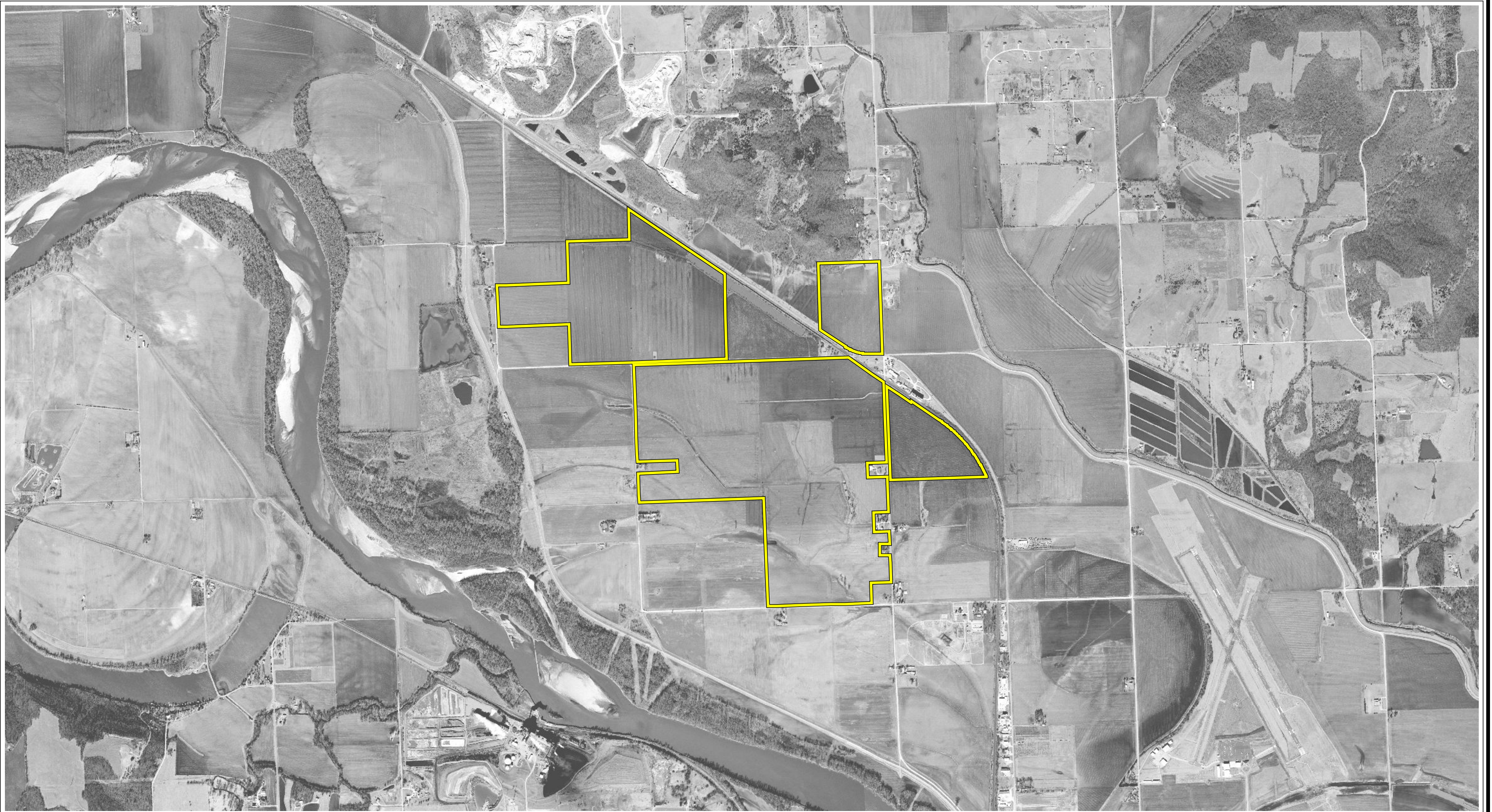
**Historical Aerial Map  
1996 Aerial Photograph**


Free State Solar  
Douglas County, KS

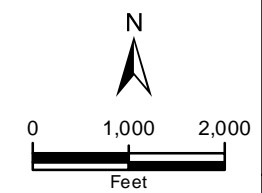
Date: 3/16/2022







 Project Boundary (± 809.9 ac)



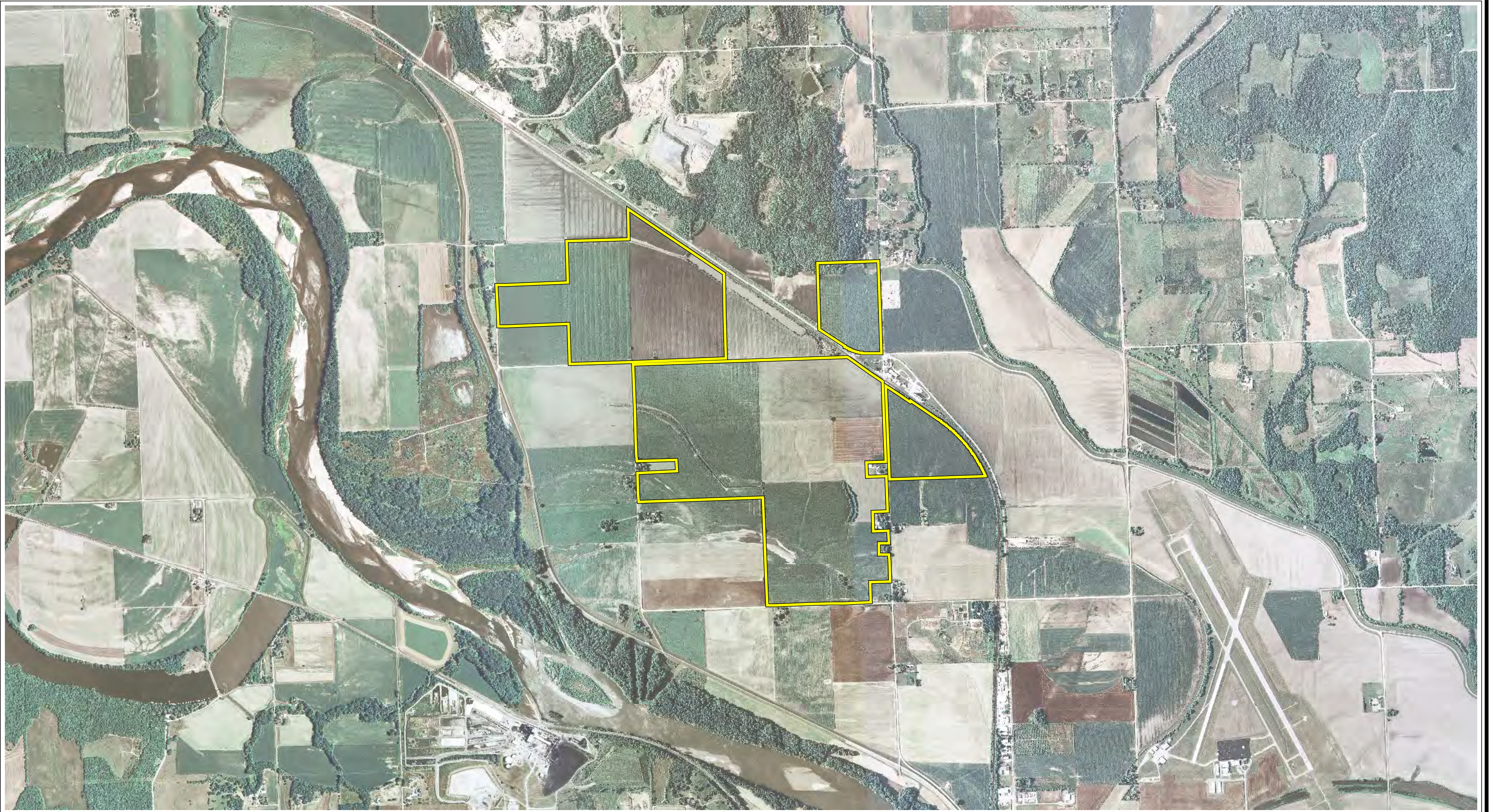
Base Layer: USGS DOQ 2002


**Historical Aerial Map  
2002 Aerial Orthophoto**

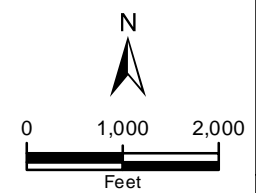
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary (± 809.9 ac)



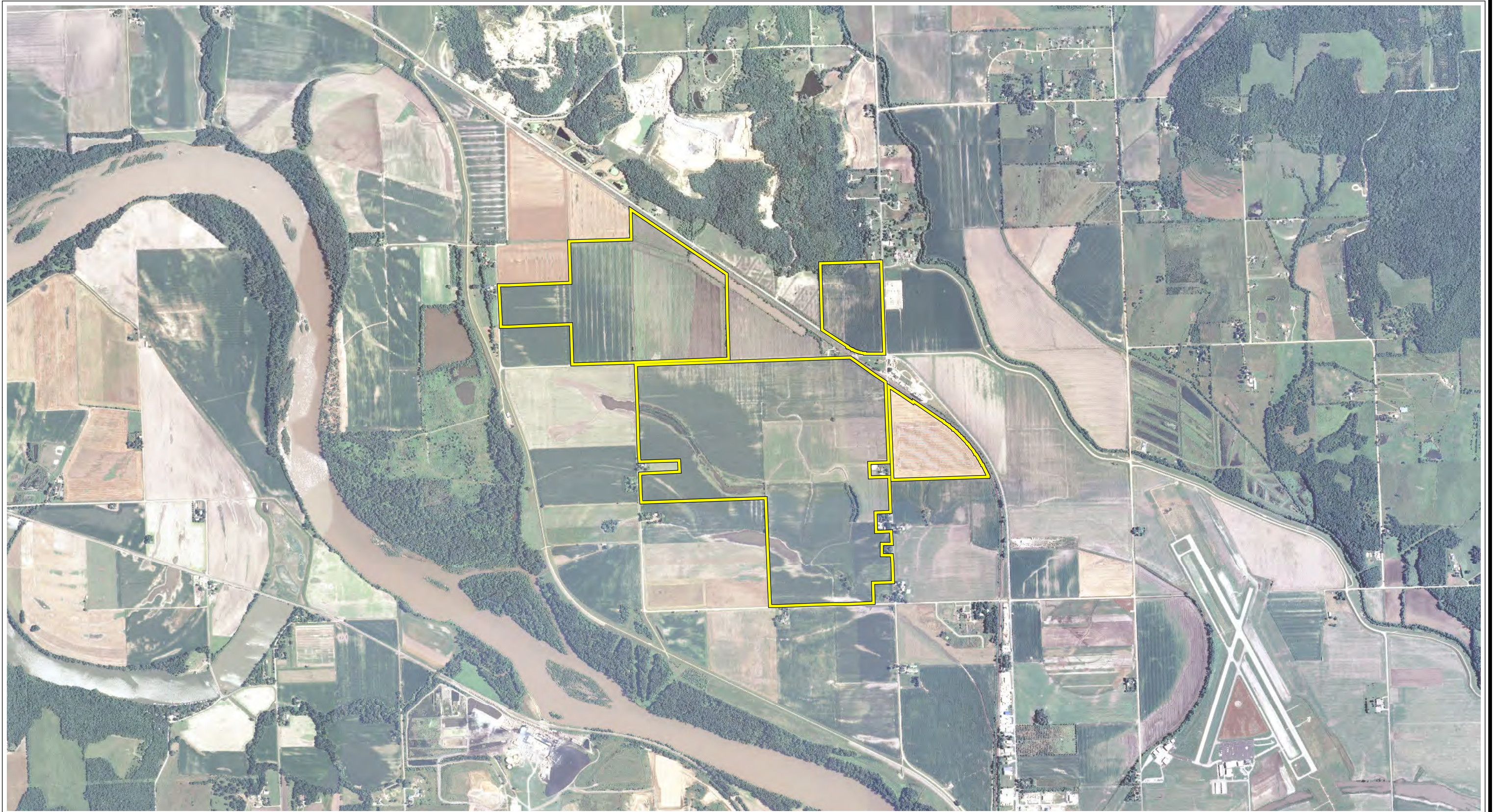
Base Layer: USDA NAIP 2006


**Historical Aerial Map  
2006 Aerial Orthophoto**

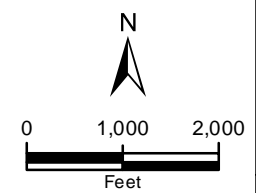
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary (± 809.9 ac)



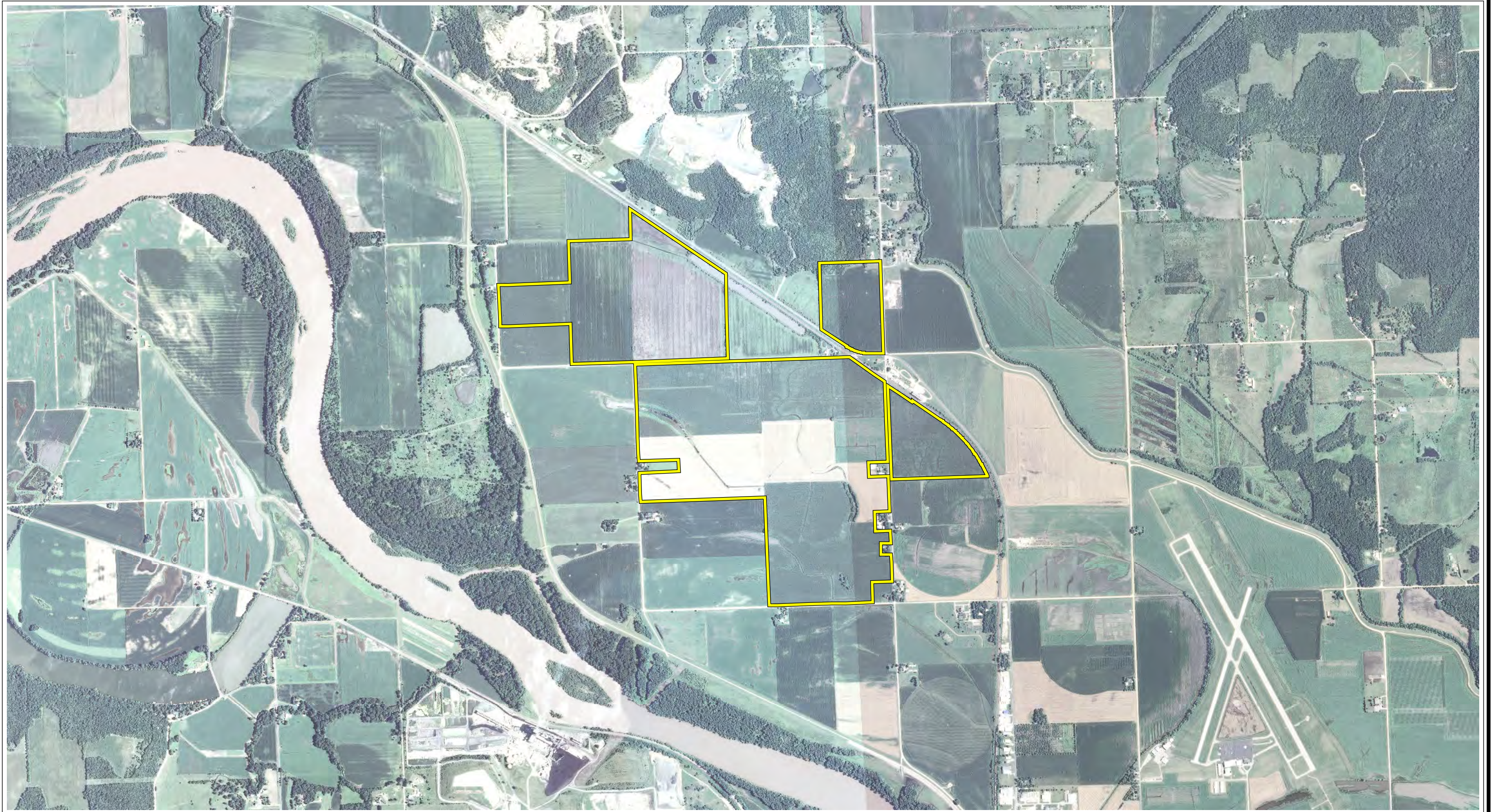
Base Layer: USDA NAIP 2008


**Historical Aerial Map  
2008 Aerial Orthophoto**

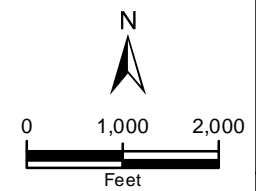
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary (± 809.9 ac)



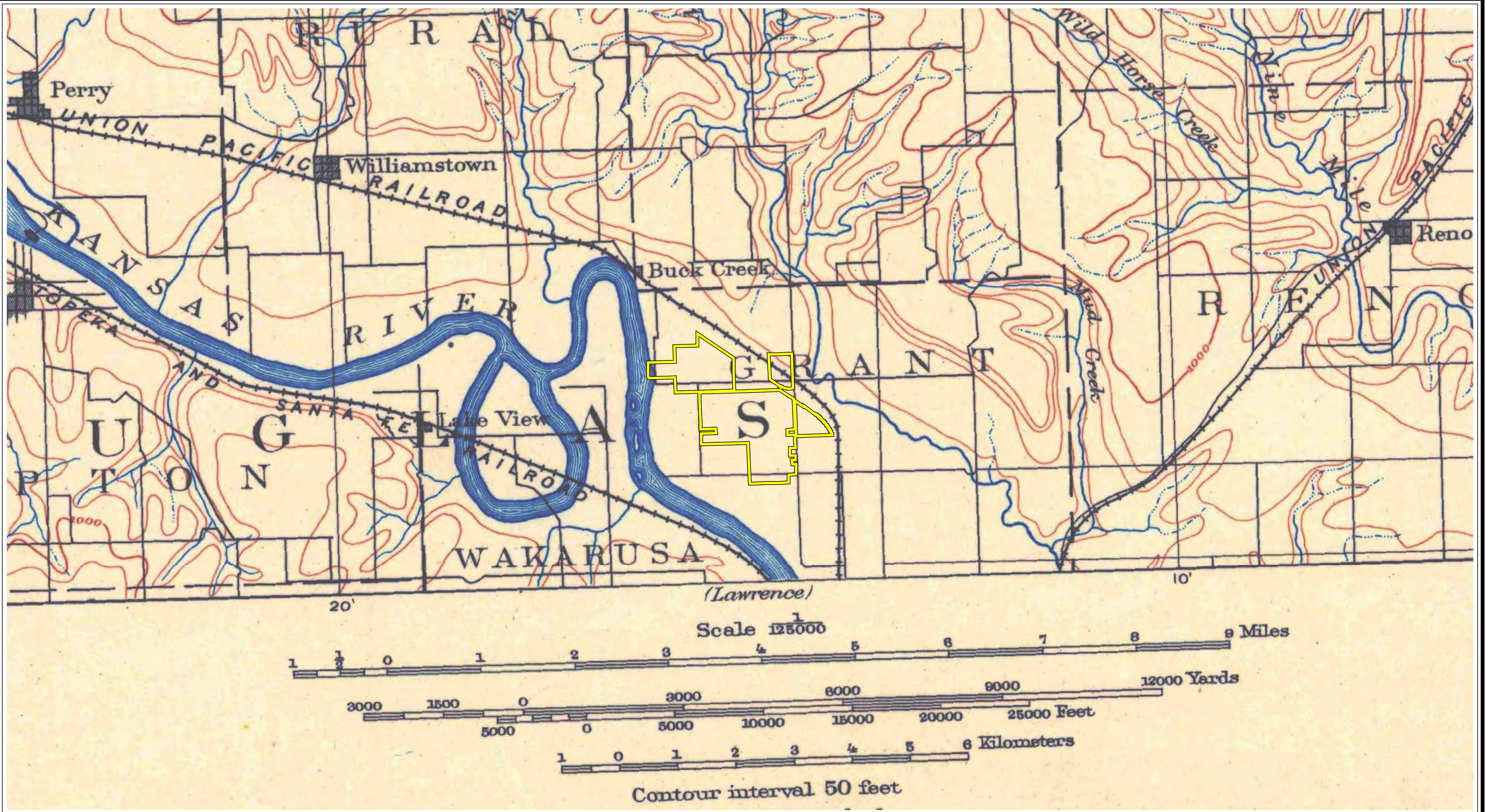
Base Layer: USDA NAIP 2010


**Historical Aerial Map  
2010 Aerial Orthophoto**

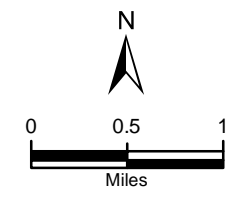
Free State Solar  
Douglas County, KS

Date: 3/16/2022





 Project Boundary ( $\pm$  809.9 ac)



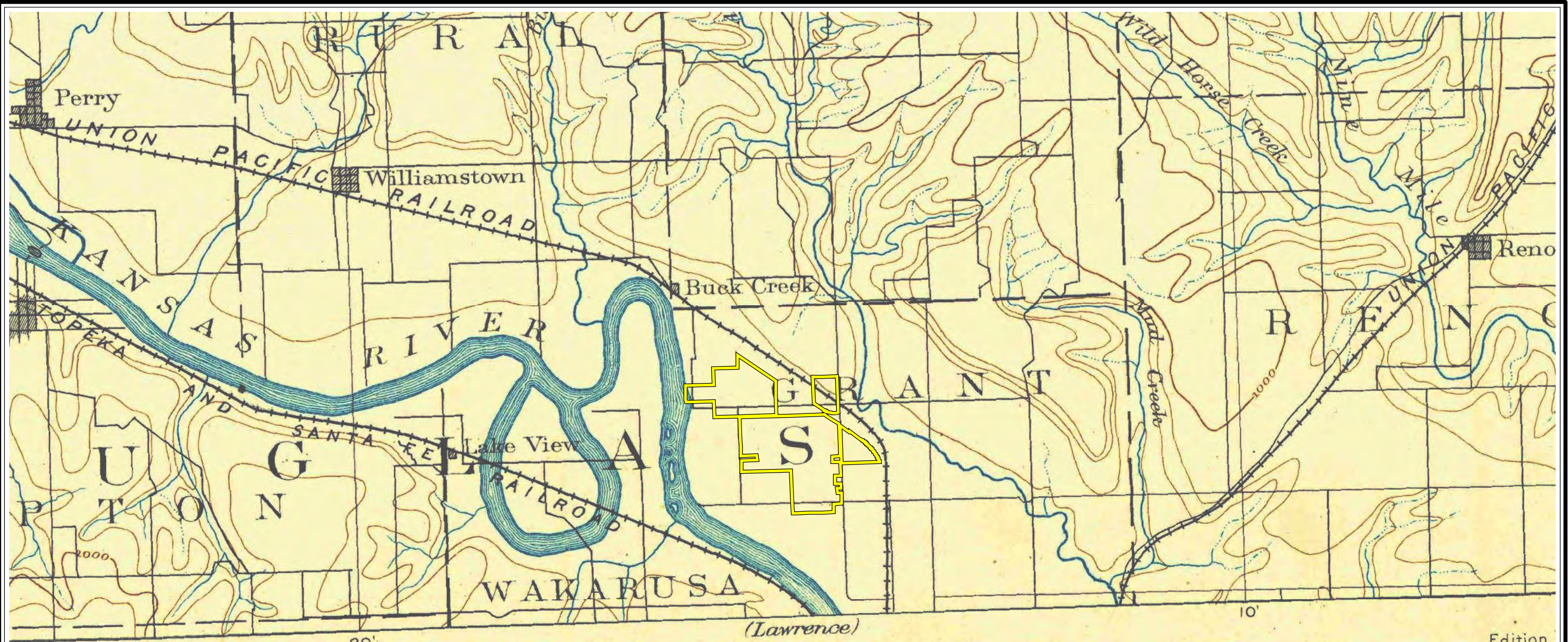
Historical Topographic Map  
Oskaloosa 1886

Free State Solar  
Douglas County, KS

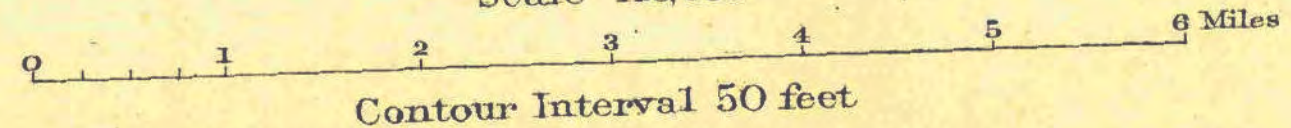
Date: 3/16/2022

Base Layer: USGS TOPO Quad Oskaloosa 1886






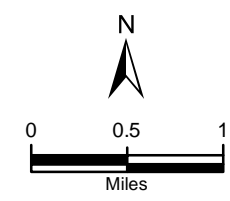
Scale 1:25,000



**USGS**  
**Historical File**  
**Topographic Division**

Edition

 Project Boundary (± 809.9 ac)

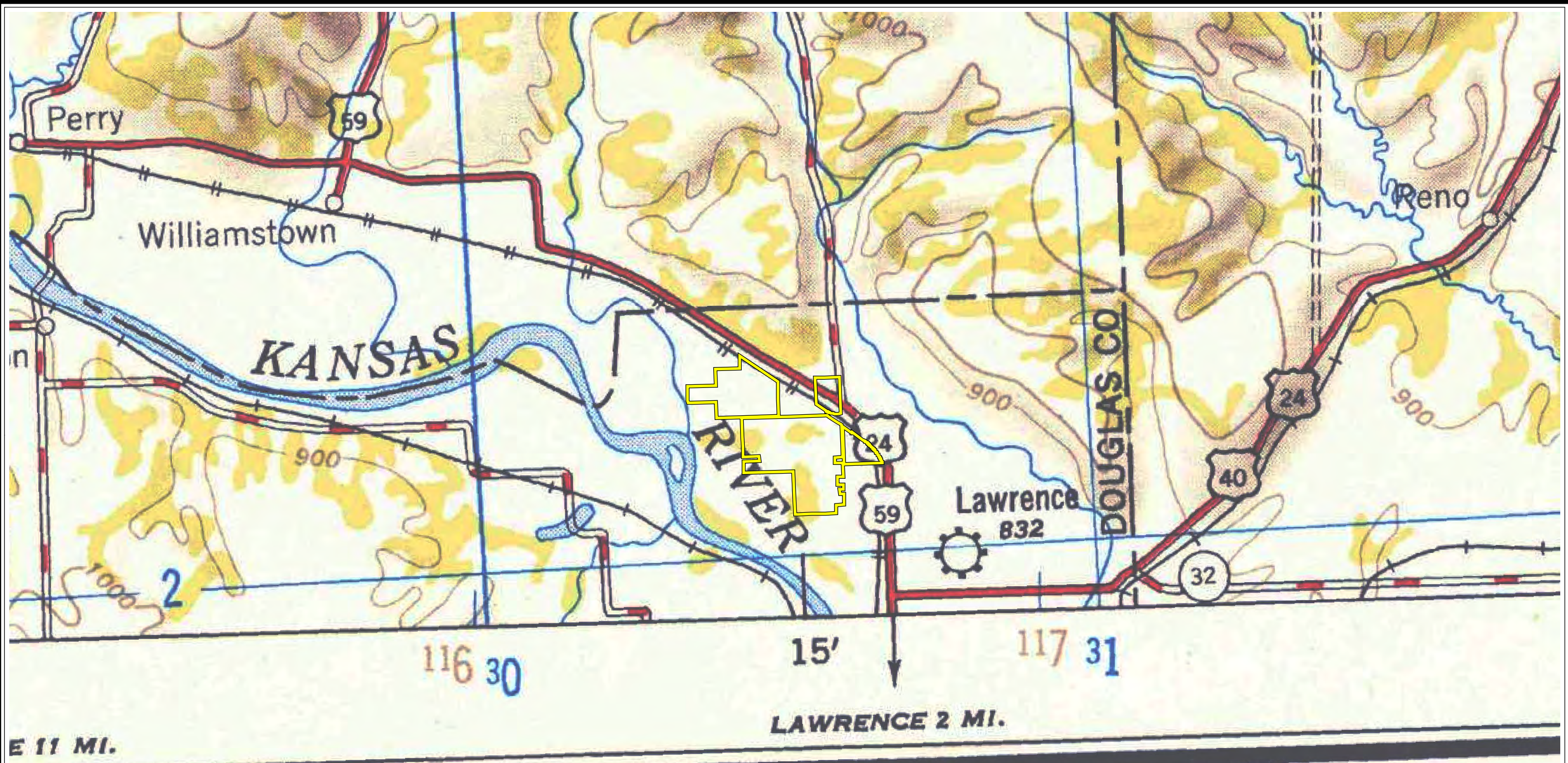



**Historical Topographic Map**  
**Oskaloosa 1894**

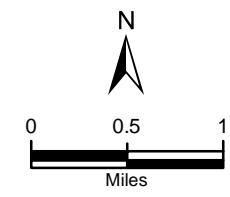
Free State Solar  
 Douglas County, KS  
 Date: 3/16/2022

Base Layer: USGS TOPO Quad Oskaloosa 1894





 Project Boundary (± 809.9 ac)

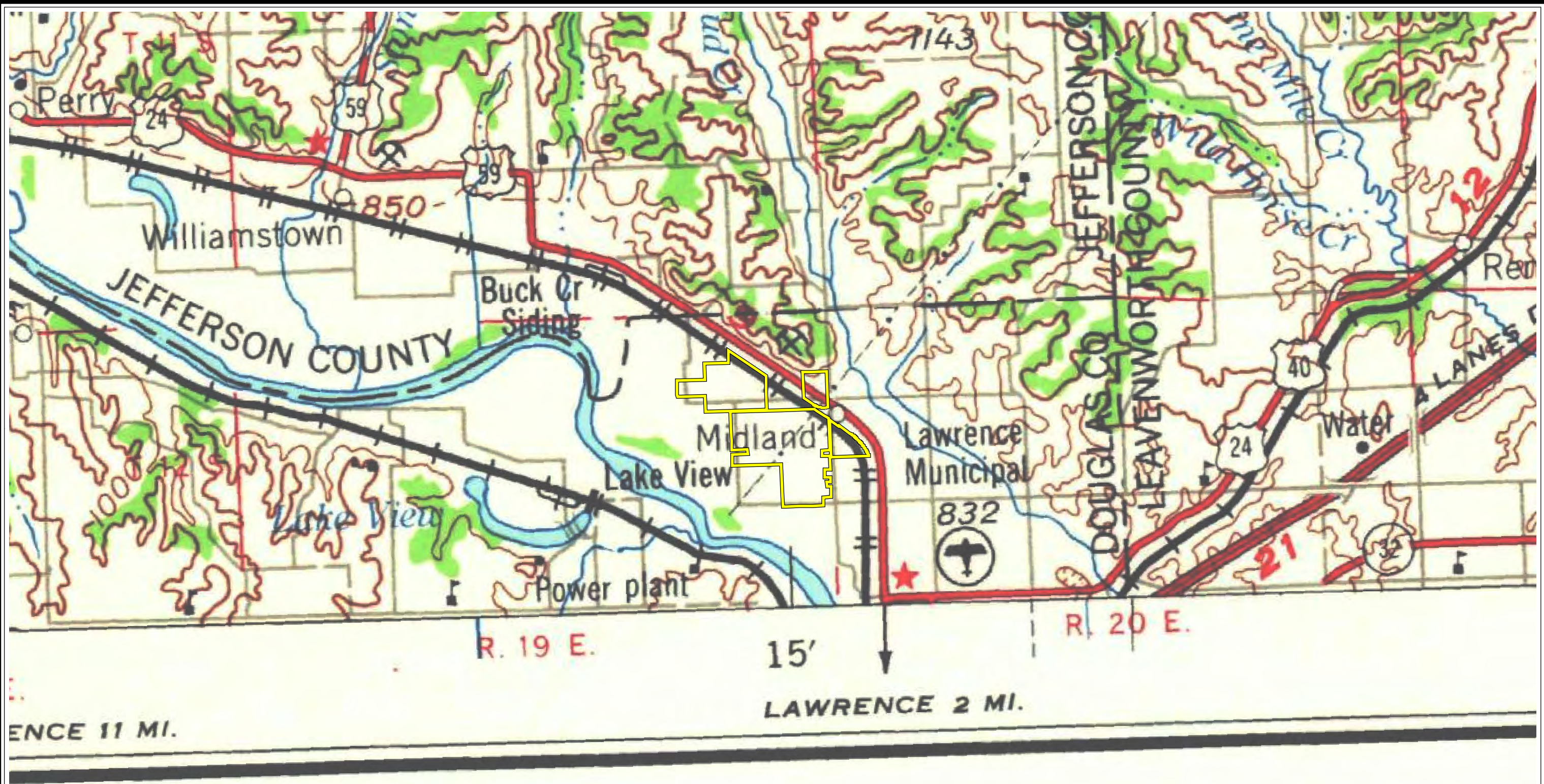


**Historical Topographic Map  
Kansas City 1950**

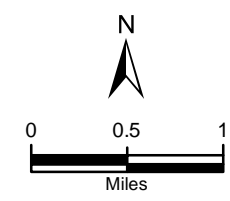
Free State Solar  
Douglas County, KS  
Date: 3/16/2022



Base Layer: USGS TOPO Quad Kansas City 1950



Project Boundary (± 809.9 ac)



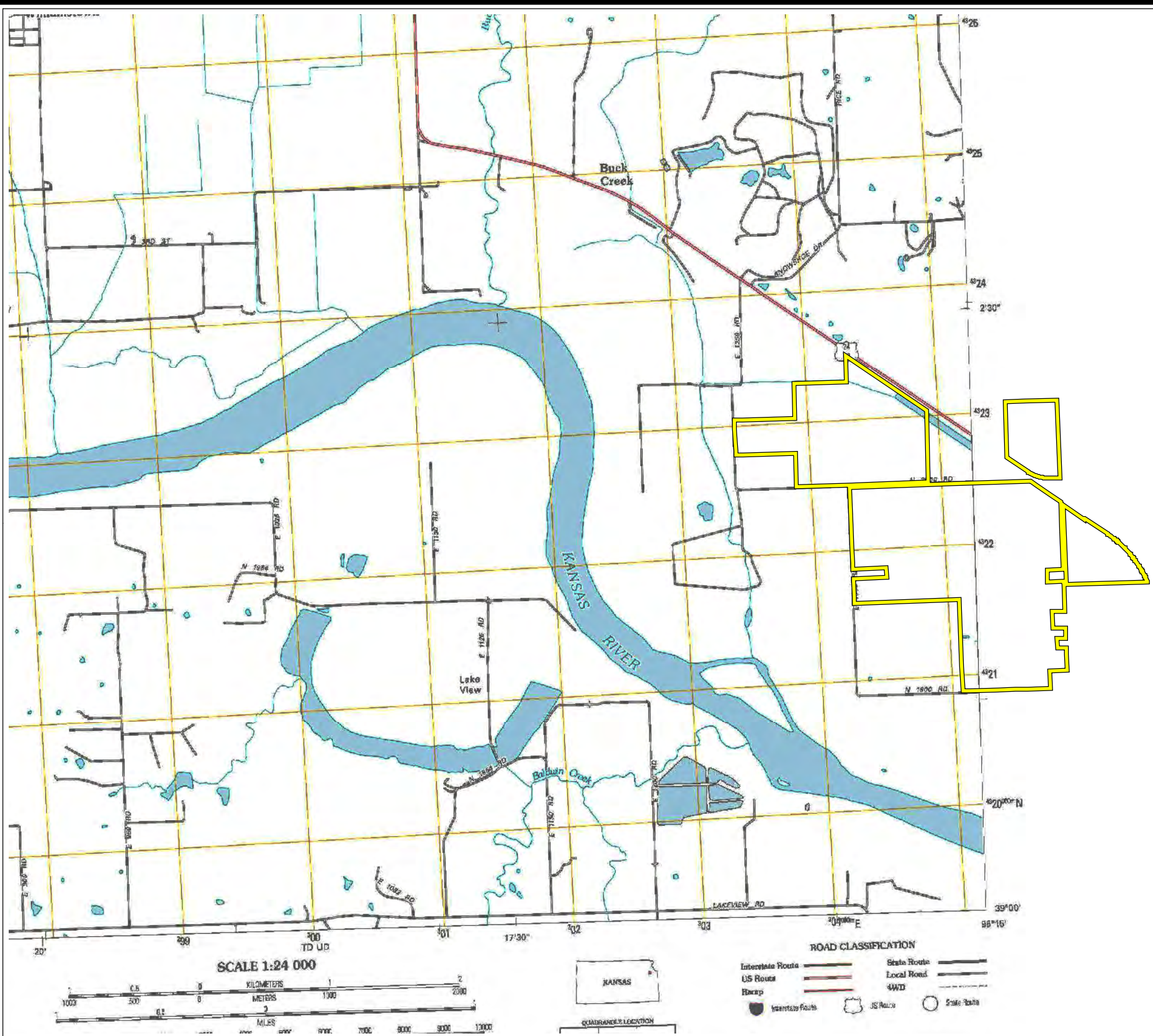
**Historical Topographic Map  
Kansas City 1960**

Free State Solar  
Douglas County, KS  
Date: 3/16/2022

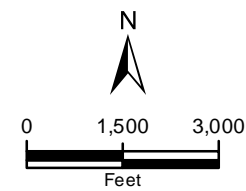


Base Layer: USGS TOPO Quad Kansas City 1960





Project Boundary (± 809.9 ac)

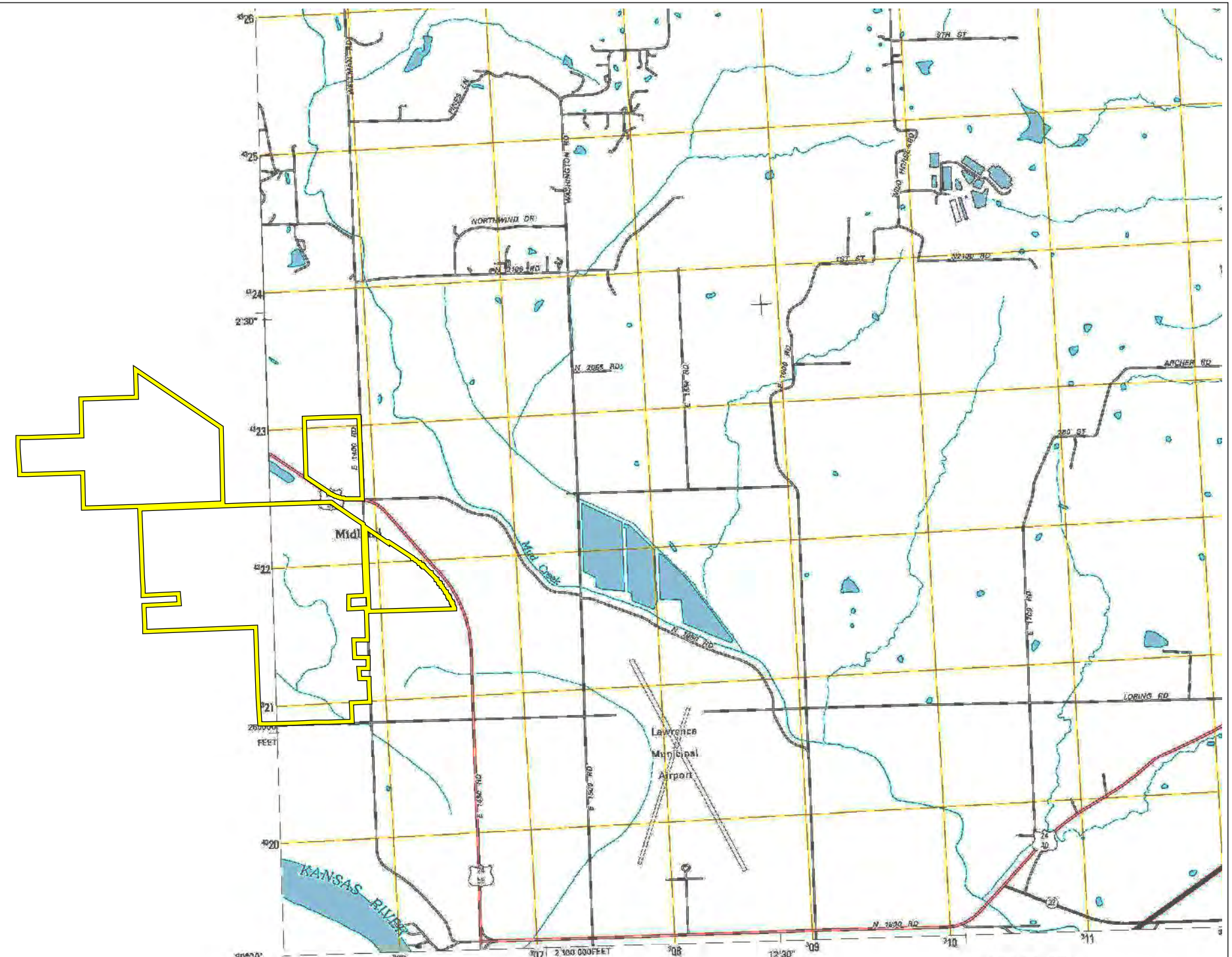


**Historical Topographic Map  
Williamstown 2009**

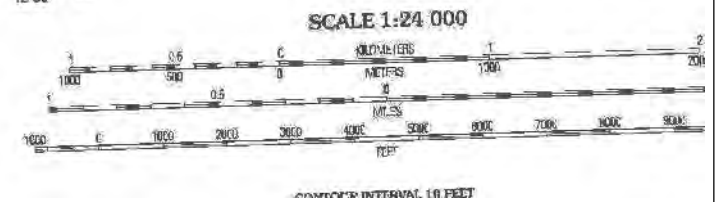
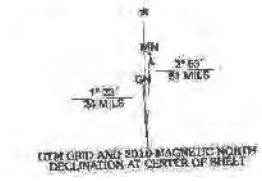
Free State Solar  
Douglas County, KS

Date: 3/16/2022

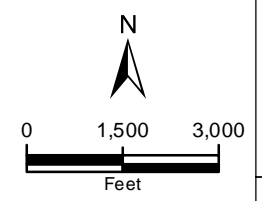




Produced by the United States Geological Survey  
 North American Datum of 1983 (NAD83)  
 World Geodetic System of 1984 (WGS84), Projection and  
 1,000-meter grid; Universal Transverse Mercator, Zone 19S  
 30,000-foot false Easting; Kansas Coordinate System of 1983  
 (north zone)



Project Boundary (± 809.9 ac)



**Historical Topographic Map  
 Midland 2010**

Free State Solar  
 Douglas County, KS  
 Date: 3/16/2022

Base Layer: USGS TOPO Quad Midland 2010



## Appendix D

### Regulatory Database Report



## Government Records Report | 2022

Order Number: 68644

Report Generated: 03/11/2022

Project Name: Free State Solar

Project Number:

Free State Solar  
Free State Solar  
Douglas County, KS

with [Envirosite Atlas](#)

---

2 Corporate Drive  
Suite 450  
Shelton, CT 06484  
Toll Free: 866-211-2028  
[www.envirositecorp.com](http://www.envirositecorp.com)

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<u>Executive Summary by Distance</u> .....	<u>2</u>
<u>Executive Summary by Database</u> .....	<u>3</u>
<u>Property Proximity Map</u> .....	<u>9</u>
<u>Area Map</u> .....	<u>10</u>
<u>Map Findings Summary</u> .....	<u>11</u>
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<u>Geological Landscape Records Searched</u> .....	<u>176</u>

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Envirosite Corporation has conducted a search of all reasonably ascertainable records in accordance with EPA's AAI (40 CFR Part 312) requirements and the ASTM E-1527-21 Environmental Site Assessments standard.

**SUBJECT PROPERTY INFORMATION:**

**ADDRESS:**

Free State Solar  
Free State Solar  
Douglas County, KS

**COORDINATES:**

Latitude (North):	39.026929 - 39°1'36.9"
Longitude (West):	-95.252914 - -95°15'10.5"
Universal Transverse Mercator:	Zone 15N
UTM X (Meters):	304979.71
UTM Y (Meters):	4322180.00
State Plane Coordinates:	1501 - Kansas North (US Survey Feet)
X Coordinate (Feet):	2092630.434 E
Y Coordinate (Feet):	264449.507 N

**ELEVATION:**

Elevation: 833 ft. above sea level

**USGS TOPOGRAPHIC MAP ASSOCIATED WITH SUBJECT PROPERTY:**

Subject Property Map: 39095-A2 Midland, KS  
Most Recent Revision: 2018

Subject Property Map: 39095-A3 Williamstown, KS  
Most Recent Revision: 2018

<u>MAP ID</u>	<u>SITE NAME</u>	<u>ADDRESS</u>	<u>DATABASE(S)</u>	<u>RELATIVE ELEVATION</u>	<u>DIRECTION / DISTANCE</u>
<b>1</b>	MIDLAND   FARMERS COOPERATIVE A...	1941 DIAGONAL ROAD REAR	FRS, RMP		SP
<b>A2</b>	Union Pacific Railroad	Mile post 43.23	SPILLS - KS	Higher	E / 0.011 mi., 57 ft.
<b>B3</b>	EVERGY - MIDLAND JUNCTION SUBSTA...	2024 E 1400 RD	T 2 - KS	Higher	ENE / 0.016 mi., 87 ft.
<b>A4</b>	PINES INTERNATIONAL	R. R. 3	AFS, ECHO, FRS	Higher	E / 0.042 mi., 223 ft.
<b>5</b>	MIDLAND	1941 DIAGONAL ROAD REAR	FRS	Higher	E / 0.053 mi., 280 ft.
<b>A6</b>	MIDLAND COOP   CAPITAL CITY OIL-M...	1941 DIAGONAL RD	ERNS, FRS, T 2 - KS	Higher	E / 0.070 mi., 371 ft.
<b>B7</b>	N R	N R	HIST SPILLS - KS	Higher	ENE / 0.080 mi., 423 ft.
<b>B8</b>	KPL	39.032403, -95.240842	SPILLS - KS	Higher	ENE / 0.080 mi., 425 ft.
<b>9</b>	BURR COMPLAINT	1927 E 1300 RD	DEL HWS - KS, FRS, SRP - KS	Lower	SW / 0.106 mi., 559 ft.
<b>C10</b>	LAWRENCE CITY LANDFILL	N R	DEL HWS - KS, FRS, SRP - KS	Higher	W / 0.194 mi., 1022 ft.
<b>C11</b>	CITY OF LAWRENCE	I-70 & Hwy 40 go 2.5 mi N...	PFAS - KS, SWF LF - KS	Higher	W / 0.194 mi., 1022 ft.
<b>12</b>	CALLERY CHEMICALS	LAWRENCE	DEL HWS - KS, FRS, SRP - KS	Lower	S / 0.511 mi., 2696 ft.

**SUBJECT PROPERTY SEARCH RESULTS:**

The subject property was identified in the following records. For more information on this property, see Map Findings section on page 17.

<u>SITE</u>	<u>DATABASE(S)</u>	<u>EPA ID</u>
MIDLAND   FARMERS COOPERATIVE ASSOCIATION 1941 DIAGONAL ROAD REAR MIDLAND   LAWRENCE   Midland, KS	FRS, RMP	N/R

**SEARCH RESULTS:**

**STATE- AND TRIBAL - EQUIVALENT CERCLIS**

DEL HWS - KS: Sites delisted from the HWS listing **3 SITES FOUND WITHIN 1 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
<i>C10</i>	<i>LAWRENCE CITY LANDFILL</i>	<i>N/R</i>	<i>W / 0.194 mi., 1022 ft.</i>	<i>53</i>
	- ID: Site ID 2514	Status: Transferred out of Bureau	Date: N/A	
	- ID: Activity Type Transfer Out of Bureau	Status: Completed	Date: 2012-01-01	

**LOWER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
<i>9</i>	<i>BURR COMPLAINT</i>	<i>1927 E 1300 RD</i>	<i>SW / 0.106 mi., 559 ft.</i>	<i>49</i>
	- ID: Site ID 1823	Status: Resolved	Date: N/A	
	- ID: Activity Type Resolved	Status: Completed	Date: 2005-06-30	
	- ID: Activity Type Site Reconnaissance and Evaluation	Status: Completed	Date: 2005-05-01	
	- ID: Activity Type Initial Site Screening	Status: Completed	Date: 2004-08-23	
<i>12</i>	<i>CALLERY CHEMICALS</i>	<i>LAWRENCE</i>	<i>S / 0.511 mi., 2696 ft.</i>	<i>57</i>
	- ID: Site ID 849	Status: Resolved	Date: N/A	
	- ID: Activity Type Resolved	Status: Completed	Date: 2005-01-12	
	- ID: Activity Type Supplemental Sampling Assessment	Status: Completed	Date: 2005-01-10	
	- ID: Activity Type Transfer Within Bureau	Status: Completed	Date: 2003-07-01	

SRP - KS: Site remediation program sites listing **2 SITES FOUND WITHIN .5 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
<i>C10</i>	<i>LAWRENCE CITY LANDFILL</i>	<i>N/R</i>	<i>W / 0.194 mi., 1022 ft.</i>	<i>53</i>
	- ID: Site ID 2514	Status: Transferred out of Bureau	Date: N/A	
	- ID: Activity Type Transfer Out of Bureau	Status: Completed	Date: 2012-01-01	

**LOWER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
<i>9</i>	<i>BURR COMPLAINT</i>	<i>1927 E 1300 RD</i>	<i>SW / 0.106 mi., 559 ft.</i>	<i>49</i>
	- ID: Site ID 1823	Status: Resolved	Date: N/A	
	- ID: Activity Type Resolved	Status: Completed	Date: 2005-06-30	
	- ID: Activity Type Site Reconnaissance and Evaluation	Status: Completed	Date: 2005-05-01	



**STATE- AND TRIBAL - EQUIVALENT CERCLIS (cont.)**

SRP - KS: Site remediation program sites listing **2 SITES FOUND WITHIN .5 MILE**

**LOWER ELEVATION (cont.)**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
	- ID: Activity Type Initial Site Screening	Status: Completed	Date: 2004-08-23	

**STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS**

SWF/LF - KS: List of solid waste facilities and landfills **1 SITE FOUND WITHIN .5 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
C11	CITY OF LAWRENCE	I-70 & Hwy 40 go 2.5 mi N on 24 to 2000r	W / 0.194 mi., 1022 ft.	56
	- ID: Permit Number 0186	Status: Closed: post-closure care	Date: N/A	

**RECORDS OF EMERGENCY RELEASE REPORTS**

HIST SPILLS - KS: Historical list of oil and chemical spill database **1 SITE FOUND WITHIN .125 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
B7	N/R	N/R	ENE / 0.080 mi., 423 ft.	47
	- ID: 17440	Status: Closed	Date: 1986-02-13	

SPILLS - KS: Oil and chemical spill database **2 SITES FOUND WITHIN .125 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
A2	Union Pacific Railroad	Mile post 43.23	E / 0.011 mi., 57 ft.	28
	- ID: 42233	Status: Closed	Date: 2018-01-09	
B8	KPL	39.032403, -95.240842	ENE / 0.080 mi., 425 ft.	48
	- ID: KDHE-17440	Status: Closed	Date: 1986-02-13	

**OTHER ASCERTAINABLE RECORDS**

PFAS - KS: List of PFAS sites and areas of interest. **1 SITE FOUND WITHIN .5 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
C11	CITY OF LAWRENCE	I-70 & Hwy 40 go 2.5 mi N on 24 to 2000r	W / 0.194 mi., 1022 ft.	56

T 2 - KS: List of facilities that submit an Emergency and Hazardous Chemical Inventory Form **2 SITES FOUND WITHIN .25 MILE**

**EQUAL/HIGHER ELEVATION**

<u>MAP ID</u>	<u>SITE NAME</u>	<u>SITE ADDRESS</u>	<u>DIRECTION/DISTANCE</u>	<u>PAGE</u>
B3	EVERGY - MIDLAND JUNCTION SUBSTATION #836	2024 E 1400 RD	ENE / 0.016 mi., 87 ft.	29
A6	MIDLAND COOP   CAPITAL CITY OIL-MIDLAND	1941 DIAGONAL RD	E / 0.070 mi., 371 ft.	34

Following sites were unable to be mapped.

<b>SITE NAME:</b>	<b>ADDRESS, CITY, ZIP:</b>	<b>DATABASE(S):</b>
CITY OF LAWRENCE SANITARY LAND FILL	1.5 MI W AND 2 MI N OF US 5..., LAWRENCE	ODI
City Of Lawrence, Public Works	7th Street And New Hampshir..., Lawrence	EPA LUST, HIST UST - KS, LUST - KS
Clinton State Park	Rr 1 Box 120e, Lawrence 66044	LUST - KS
Continental Oil Co.	1901 Massachusetts, Lawrence 66044	LUST - KS
Douglas Co Public Works	E 23rd St (hwy 10) & R..., Lawrence 66044	EPA LUST, HIST UST - KS, LUST - KS
Douglas Co Public Works	E 23rd (hwy 10) & Rr T..., Lawrence 66044	EPA LUST
DRAGSTRIP SANITARY LANDFILL	RT 1 DRAGSTRIP RD, LAWRENCE 66044	CERCLIS NFRAP, SEMS_8R_ARCHIVED SITES
First National Bank	9th & Massachusetts, Lawrence	EPA LUST, HIST UST - KS, LUST - KS
FLOODPLAIN LANDFILL	SEC 10 T12S R19E, LAWRENCE 66044	CERCLIS NFRAP, SEMS_8R_ARCHIVED SITES
Kdot, Lawrence	Hwy 24 & 40, Lawrence 66044	EPA LUST, HIST AST - KS, HIST UST - KS, LUST - KS
Ku, Gsp Dorm	10th & Louisiana, Lawrence	EPA LUST, HIST UST - KS, LUST - KS
Ku, Malott Hall	Kansas University, Lawrence	EPA LUST, HIST UST - KS, LUST - KS
Ku, Stone Stable	Sunnyside &, Lawrence	EPA LUST, HIST UST - KS, LUST - KS

**DATABASE(S) WITH NO MAPPED SITES:**

**FEDERAL RCRA NON-CORRACTS TSD FACILITIES LIST**

ARCHIVED RCRA TSDF	Archived Resource Conservation and Recovery Act: Treatment Storage and Disposal Facilities
RCRA_TSDF	Resource Conservation and Recovery Act: Treatment Storage and Disposal Facilities

**FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS**

AST PBS	ASTs at Bulk Petroleum Terminals
EPA UST	EPA UST Finder database
FEMA UST	FEMA Underground Storage Tanks
HIST INDIAN UST R6	Historical Underground Storage Tanks on Indian Land in EPA Region 6
HIST INDIAN UST R7	Historical Underground Storage Tanks on Indian Land in EPA Region 7
INDIAN UST R1	Underground Storage Tanks on Indian Land in EPA Region 1
INDIAN UST R10	Underground Storage Tanks on Indian Land in EPA Region 10
INDIAN UST R2	Underground Storage Tanks on Indian Land in EPA Region 2
INDIAN UST R4	Underground Storage Tanks on Indian Land in EPA Region 4
INDIAN UST R5	Underground Storage Tanks on Indian Land in EPA Region 5
INDIAN UST R6	Underground Storage Tanks on Indian Land in EPA Region 6
INDIAN UST R7	Underground Storage Tanks on Indian Land in EPA Region 7
INDIAN UST R8	Underground Storage Tanks on Indian Land in EPA Region 8
INDIAN UST R9	Underground Storage Tanks on Indian Land in EPA Region 9
AST - KS	Aboveground Storage Tanks
HIST AST - KS	Historical Aboveground Storage Tanks
HIST UST - KS	Historical Underground Storage Tanks
UST - KS	Underground Storage Tanks

**FEDERAL CERCLIS LIST**

CERCLIS NFRAP	Comprehensive Environmental Response Compensation and Liability Act No Further Remedial Action Planned
CERCLIS-HIST	Comprehensive Environmental Response Compensation and Liability Act
EPA SAA	EPA Superfund Alternative Approach
FEDERAL FACILITY	Federal Facility sites
SEMS_8R_ACTIVE SITES	Sites on SEMS Active Site Inventory
SEMS_8R_ARCHIVED SITES	Sites on SEMS Archived Site Inventory

**FEDERAL RCRA CORRACTS FACILITIES LIST**

CORRACTS	Hazardous Waste Corrective Action
HIST CORRACTS 2	Historical Hazardous Waste Corrective Action

**FEDERAL DELISTED NPL SITE LIST**

DELISTED NPL	Delisted National Priority List
DELISTED PROPOSED NPL	Delisted proposed National Priority List
SEMS_DELETED NPL	Sites Deleted from National Priorities List

**FEDERAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS**

EPA LF MOP	EPA Landfill Methane Outreach Project Database
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**FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS**

EPA LUST	EPA LUST
HIST INDIAN LUST R4	Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 4
HIST INDIAN LUST R8	Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 8
INDIAN LUST R1	Leaking Underground Storage Tanks on Indian Land in EPA Region 1
INDIAN LUST R10	Leaking Underground Storage Tanks on Indian Land in EPA Region 10
INDIAN LUST R2	Leaking Underground Storage Tanks on Indian Land in EPA Region 2
INDIAN LUST R4	Leaking Underground Storage Tanks on Indian Land in EPA Region 4
INDIAN LUST R5	Leaking Underground Storage Tanks on Indian Land in EPA Region 5
INDIAN LUST R6	Leaking Underground Storage Tanks on Indian Land in EPA Region 6
INDIAN LUST R7	Leaking Underground Storage Tanks on Indian Land in EPA Region 7
INDIAN LUST R8	Leaking Underground Storage Tanks on Indian Land in EPA Region 8
INDIAN LUST R9	Leaking Underground Storage Tanks on Indian Land in EPA Region 9
LAST - KS	Leaking Aboveground Storage Tanks
LUST - KS	Leaking Underground Storage Tanks

**FEDERAL ERNS LIST**

ERNS	Emergency Response Notification System
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**FEDERAL INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES**

FED E C	Engineering Controls
FED I C	Institutional Controls
RCRA IC_EC	RCRA sites with Institutional and Engineering Controls

**FEDERAL RCRA GENERATORS LIST**

HIST RCRA_CESQG	Historical Resource Conservation and Recovery Act_Conditionally Exempt Small Quantity Generators
HIST RCRA_LQG	Historical Resource Conservation and Recovery Act_Large Quantity Generators
HIST RCRA_NONGEN	Historical Resource Conservation and Recovery Act_Non Generators
HIST RCRA_SQG	Historical Resource Conservation and Recovery Act_Small Quantity Generators
RCRA_LQG	Resource Conservation and Recovery Act_Large Quantity Generators
RCRA_NONGEN	Resource Conservation and Recovery Act_Non Generators
RCRA_SQG	Resource Conservation and Recovery Act_Small Quantity Generators
RCRA_VSQG	Resource Conservation and Recovery Act_Very Small Quantity Generator

**FEDERAL NPL SITE LIST**

NPL	National Priority List
NPL EPA R1 GIS	GIS for EPA Region 1 NPL
NPL EPA R3 GIS	GIS for EPA Region 3 NPL
NPL EPA R6 GIS	GIS for EPA Region 6 NPL
NPL EPA R8 GIS	GIS for EPA Region 8 NPL
NPL EPA R9 GIS	GIS for EPA Region 9 NPL
PART NPL	Part National Priority List
PROPOSED NPL	Proposed National Priority List
SEMS_FINAL NPL	Sites included on the Final National Priorities List
SEMS_PROPOSED NPL	Sites Proposed to be Added to the National Priorities List

**STATE AND TRIBAL BROWNFIELD SITES**

TRIBAL BROWNFIELDS	Tribal Brownfields
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**STATE AND TRIBAL BROWNFIELD SITES (cont.)**

BROWNFIELDS - KS Brownfields

**STATE- AND TRIBAL - EQUIVALENT CERCLIS**

HWS - KS Hazardous Waste Sites

**STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS**

HIST LF - KS Historical Landfills

**STATE INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES**

IC EC - KS Engineering Controls & Institutional Controls

**STATE AND TRIBAL VOLUNTARY CLEANUP SITES**

VCP - KS Voluntary Cleanup Program

**LOCAL BROWNFIELD LISTS**

BROWNFIELDS-ACRES EPA ACRES Brownfields

FED BROWNFIELDS Federal Brownfields

**LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES**

FED CDL DOJ Clandestine Drug Labs

US HIST CDL Historical Clandestine Drug Labs

CDL - KS Clandestine Drug Labs

**LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES**

HIST INDIAN ODI R8 Historical Open Dump Inventory

INDIAN ODI R8 Open Dump Inventory

ODI Open Dump Inventory

TRIBAL ODI Indian Open Dump Inventory Sites

**RECORDS OF EMERGENCY RELEASE REPORTS**

HMIRS (DOT) Hazardous Materials Information Reporting Systems

**LOCAL LAND RECORDS**

LIENS 2 CERCLA Lien Information

**OTHER ASCERTAINABLE RECORDS**

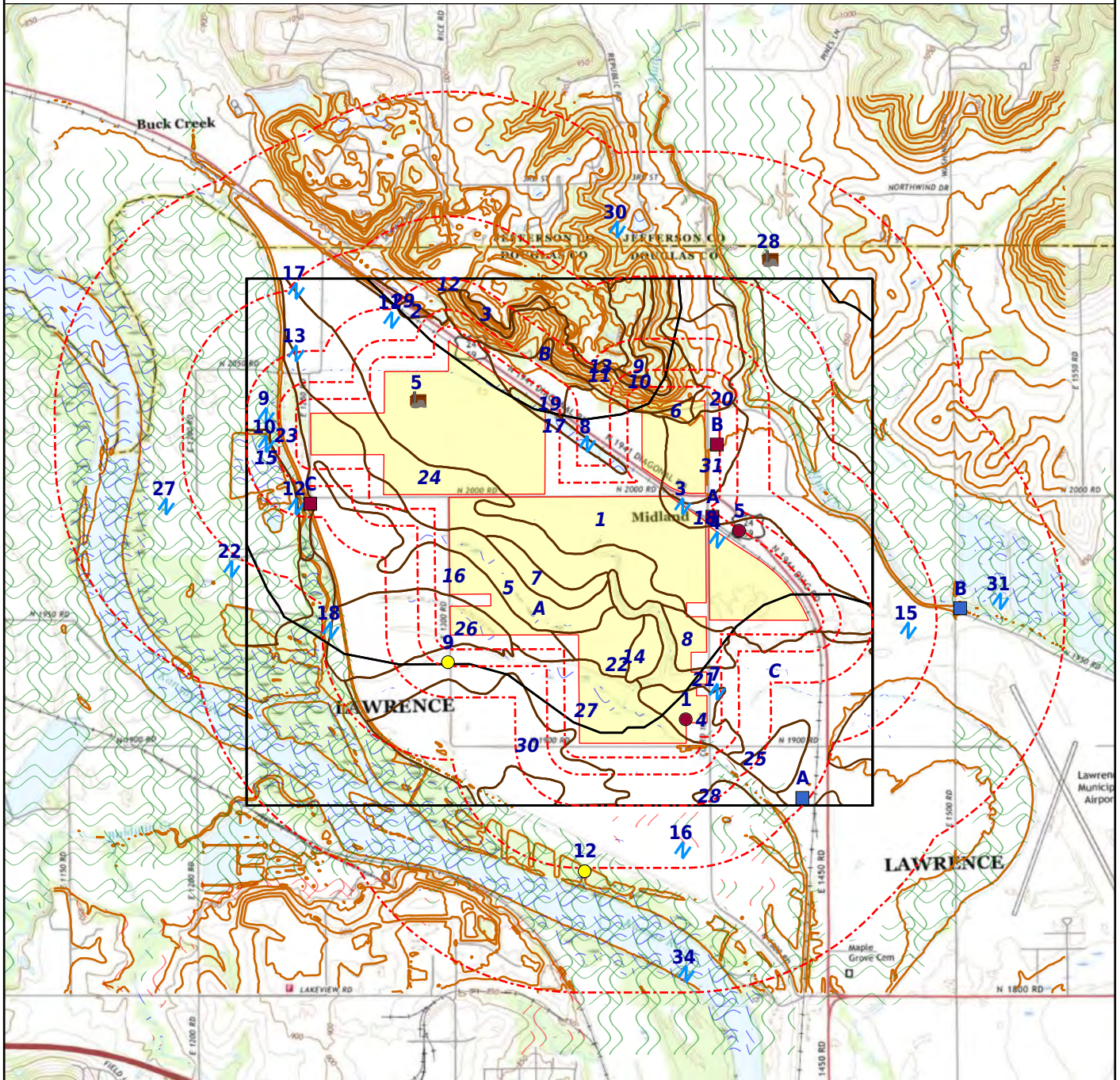
AFS Air Facility Systems  
ALT FUELING Alternative Fueling Stations  
BRS Biennial Reporting Systems  
CDC HAZDAT Hazardous Substance Release and Health Effects Information  
COAL ASH DOE Coal Ash: Department of Energy  
COAL ASH EPA Coal Ash: Environmental Protection Agency  
COAL GAS Coal Gas Plants  
COLLEGES COLLEGES  
COLLEGES 2 COLLEGES 2  
CONSENT (DECREEES) Superfund Consent Decree  
CORRECTIVE ACTIONS\_2020 Wastes - Hazardous Waste - Corrective Action  
DEBRIS EPA LF EPA Disaster Debris Landfill Sites  
DEBRIS EPA SWRCY EPA Disaster Debris Recovery Sites  
DOD Department of Defense  
DOT OPS Department of Transportation Office of Pipeline Safety  
ECHO EPA Enforcement and Compliance History Online  
ENOI Electronic Notice of Intent  
EPA FUELS EPA Fuels Registration, Reporting, and Compliance List  
EPA OSC EPA On-Site Coordinator  
EPA WATCH EPA Watch List  
FA HWF Financial Assurance for Hazardous Waste Facilities  
FEDLAND Federal Lands  
FTTS FIFRA/TSCA Tracking System  
FTTS INSP FIFRA/TSCA Tracking System: Inspections

**OTHER ASCERTAINABLE RECORDS (cont.)**

FUDS	Formerly Used Defense Sites
HIST AFS	Historical Air Facility Systems
HIST AFS 2	Historical Air Facility Systems
HIST DOD	Department of Defense historical sites
HIST LEAD_SMELTER	Historical Lead Smelter Sites
HIST MLTS	Historical Material Licensing Tracking Systems
HIST PCB TRANS	Historical Polychlorinated Biphenyl (PCB) Facilities
HIST PCS ENF	Historical Enforced Permit Compliance Facilities
HIST PCS FACILITY	Historical Permit Compliance Facilities
HIST SSTS	Historical Section 7 Tracking Systems
HOSPITALS	HOSPITALS
HWC DOCKET	Hazardous Waste Compliance Docket
ICIS	Integrated Compliance Information System
INACTIVE PCS	Inactive Permit Compliance Facilities
INDIAN RESERVATION	American Indian Lands
LUCIS	Land Use Control Information Systems
LUCIS 2	Land Use Control Information Systems 2
MANIFEST EPA	EPA Hazardous Waste Manifests
MINE OPERATIONS	Mines list from USGS
MINES	Mines
MINES USGS	Mines list from USGS
MLTS	Material Licensing Tracking Systems
NPL AOC	Areas related to NPL remediation sites
NPL LIENS	National Priority List Liens
NURSING HOMES	NURSING HOMES
OSHA	Occupational Safety & Health Administration
PADS	PCB Activity Database Systems
PCB TRANSFORMER	Polychlorinated Biphenyl (PCB) Waste
PCS ENF	Enforced Permit Compliance Facilities
PCS FACILITY	Permit Compliance Facilities
PFAS NPL	PFAS NPL Sites
PFAS TRIS	PFAS TRIS Sites
PFAS UCMR3	PFAS UCMR Samples
RAATS	RCRA Administrative Action Tracking Systems
RADINFO	Radiation Information Systems
ROD	Record of Decision
SCHOOLS PRIVATE	SCHOOLS PRIVATE
SCHOOLS PUBLIC	SCHOOLS PUBLIC
SCRD DRYCLEANERS	SCRD Drycleaners
SEMS_SMELTER	Sites on SEMS Potential Smelter Activity
SSTS	Section 7 Tracking Systems
STORMWATER	Storm Water Permits
TOSCA-PLANT	Toxic Substance Control Act: Plants
TRIS	Toxic Release Inventory Systems
UMTRA	Uranium Mill Tailing Sites
VAPOR	EPA Vapor Intrusion
AIRS - KS	Air Permits
COAL ASH - KS	Coal Ash sites
DAYCARE - KS	Daycare Facilities
DRYCLEANERS - KS	Drycleaners
EMI - KS	Emissions Inventory
HIST AIRS - KS	Historical Air Permits
HIST DRYCLEANERS - KS	Historical Drycleaners
UIC - KS	Underground Injection Controls

SUBJECT NAME: Free State Solar  
 ADDRESS: Free State Solar, Douglas County, KS  
 LAT/LONG: 39.026929 / -95.252914

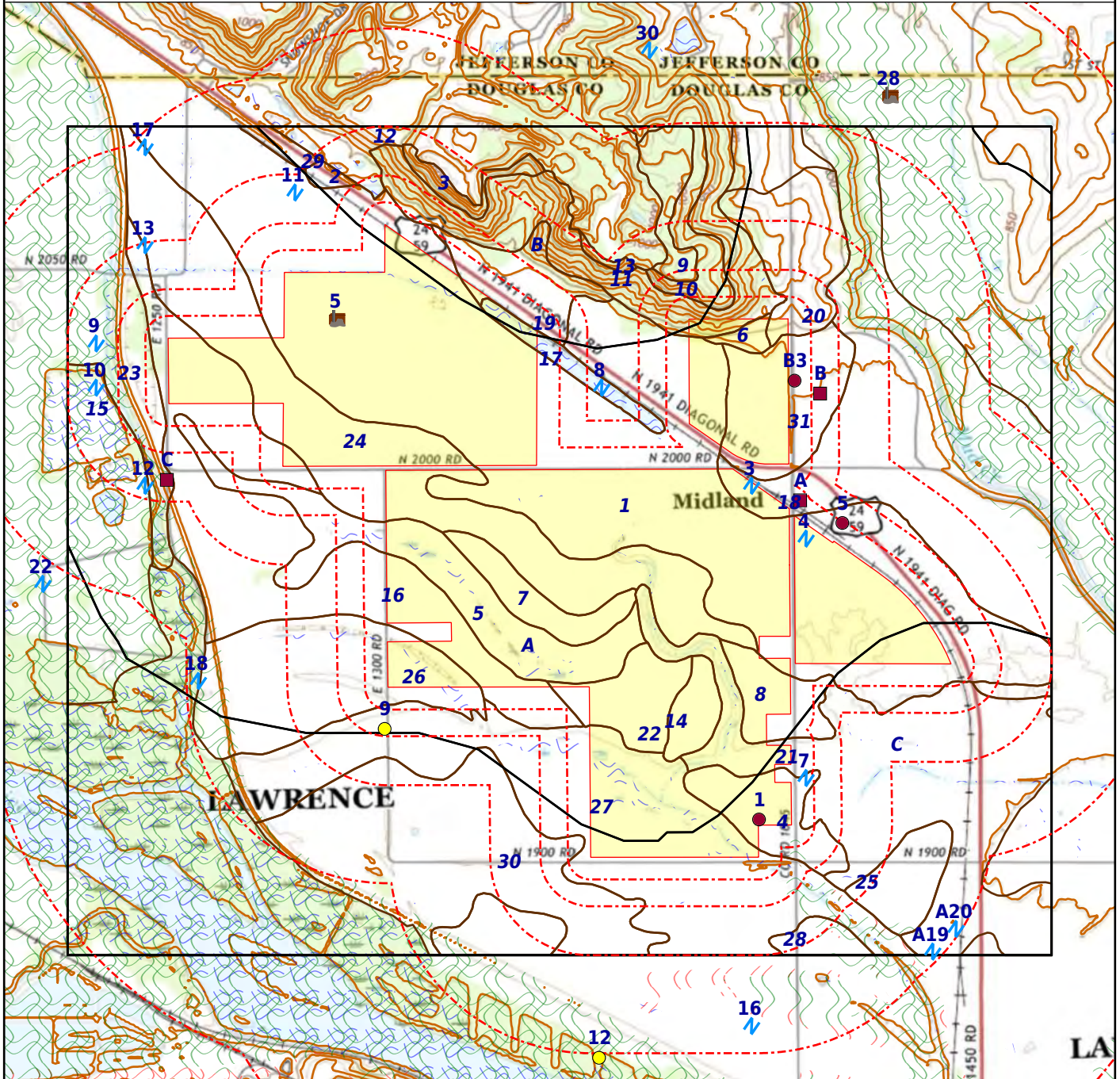
PREPARED FOR: Environmental Consulting & Technology...  
 ORDER #: 68644  
 REPORT DATE: March 11, 2022



- |   |  |  |   |
|---|--|--|---|
| <ul style="list-style-type: none"> <li>➤ Subject Property</li> <li>■ Department of Defense (No Data)</li> <li>🌊 FEMA FloodZone 100</li> <li>🌊 FEMA FloodZone 500</li> <li>🏠 National Priority List (No Data)</li> </ul> | <ul style="list-style-type: none"> <li>● Equal/Higher Elevation</li> <li>⊘ DFIRM Floodzone 100</li> <li>⊘ FEMA FloodZone 500</li> <li>👉 NWI</li> </ul> | <ul style="list-style-type: none"> <li>● Lower Elevation</li> <li>⊘ DFIRM Floodzone 500</li> <li>📄 Historical DOD (No Data)</li> </ul> | <ul style="list-style-type: none"> <li>➤ CDC HAZDAT (No Data)</li> <li>🏠 Federal Lands (No Data)</li> <li>🏠 Indian Reservation (No Data)</li> </ul> |
|---|--|--|---|

SUBJECT NAME: Free State Solar  
 ADDRESS: Free State Solar, Douglas County, KS  
 LAT/LONG: 39.026929 / -95.252914

PREPARED FOR: Environmental Consulting & Technology...  
 ORDER #: 68644  
 REPORT DATE: March 11, 2022



- |   |   |  |   |
|---|---|--|---|
| <ul style="list-style-type: none"> <li>➤ Subject Property</li> <li>■ Department of Defense (No Data)</li> <li>🌊 FEMA FloodZone 100</li> <li>🌊 FEMA FloodZone 500</li> <li>🏠 National Priority List (No Data)</li> </ul> | <ul style="list-style-type: none"> <li>● Equal/Higher Elevation</li> <li>⤴ DFIRM Floodzone 100</li> <li>⤴ DFIRM Floodzone 500</li> <li>🟡 Historical DOD (No Data)</li> <li>🌊 NWI</li> </ul> | <ul style="list-style-type: none"> <li>● Lower Elevation</li> <li>⤴ DFIRM Floodzone 500</li> <li>🟡 Historical DOD (No Data)</li> </ul> | <ul style="list-style-type: none"> <li>➤ CDC HAZDAT (No Data)</li> <li>🏠 Federal Lands (No Data)</li> <li>🏠 Indian Reservation (No Data)</li> </ul> |
|---|---|--|---|

<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
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**FEDERAL RCRA NON-CORRACTS TSD FACILITIES LIST**

ARCHIVED RCRA TSD		0.500	0	0	0	--	--	0
RCRA_TSD		0.500	0	0	0	--	--	0

**FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS**

AST PBS		0.250	0	0	--	--	--	0
EPA UST		0.250	0	0	--	--	--	0
FEMA UST		0.250	0	0	--	--	--	0
HIST INDIAN UST R6		0.250	0	0	--	--	--	0
HIST INDIAN UST R7		0.250	0	0	--	--	--	0
INDIAN UST R1		0.250	0	0	--	--	--	0
INDIAN UST R10		0.250	0	0	--	--	--	0
INDIAN UST R2		0.250	0	0	--	--	--	0
INDIAN UST R4		0.250	0	0	--	--	--	0
INDIAN UST R5		0.250	0	0	--	--	--	0
INDIAN UST R6		0.250	0	0	--	--	--	0
INDIAN UST R7		0.250	0	0	--	--	--	0
INDIAN UST R8		0.250	0	0	--	--	--	0
INDIAN UST R9		0.250	0	0	--	--	--	0
AST - KS		0.250	0	0	--	--	--	0
HIST AST - KS		0.250	0	0	--	--	--	0
HIST UST - KS		0.250	0	0	--	--	--	0
UST - KS		0.250	0	0	--	--	--	0

**FEDERAL CERCLIS LIST**

CERCLIS NFRAP		0.500	0	0	0	--	--	0
CERCLIS-HIST		0.500	0	0	0	--	--	0
EPA SAA		0.500	0	0	0	--	--	0
FEDERAL FACILITY		1.000	0	0	0	0	--	0
SEMS_8R_ACTIVE SITES		0.500	0	0	0	--	--	0
SEMS_8R_ARCHIVED SITES		0.500	0	0	0	--	--	0

**FEDERAL RCRA CORRACTS FACILITIES LIST**

CORRACTS		1.000	0	0	0	0	--	0
HIST CORRACTS 2		1.000	0	0	0	0	--	0

**FEDERAL DELISTED NPL SITE LIST**

DELISTED NPL		1.000	0	0	0	0	--	0
DELISTED PROPOSED NPL		1.000	0	0	0	0	--	0



<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
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**FEDERAL DELISTED NPL SITE LIST (cont.)**

SEMS_DELETED NPL		1.000	0	0	0	0	--	0
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**FEDERAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS**

EPA LF MOP		0.500	0	0	0	--	--	0
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**FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS**

EPA LUST		0.500	0	0	0	--	--	0
HIST INDIAN LUST R4		0.500	0	0	0	--	--	0
HIST INDIAN LUST R8		0.500	0	0	0	--	--	0
INDIAN LUST R1		0.500	0	0	0	--	--	0
INDIAN LUST R10		0.500	0	0	0	--	--	0
INDIAN LUST R2		0.500	0	0	0	--	--	0
INDIAN LUST R4		0.500	0	0	0	--	--	0
INDIAN LUST R5		0.500	0	0	0	--	--	0
INDIAN LUST R6		0.500	0	0	0	--	--	0
INDIAN LUST R7		0.500	0	0	0	--	--	0
INDIAN LUST R8		0.500	0	0	0	--	--	0
INDIAN LUST R9		0.500	0	0	0	--	--	0
LAST - KS		0.500	0	0	0	--	--	0
LUST - KS		0.500	0	0	0	--	--	0

**FEDERAL ERNS LIST**

ERNS		SP	0	--	--	--	--	0
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**FEDERAL INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES**

FED E C		0.500	0	0	0	--	--	0
FED I C		0.500	0	0	0	--	--	0
RCRA IC_EC		0.250	0	0	--	--	--	0

**FEDERAL RCRA GENERATORS LIST**

HIST RCRA_CESQG		0.250	0	0	--	--	--	0
HIST RCRA_LQG		0.250	0	0	--	--	--	0
HIST RCRA_NONGEN		0.250	0	0	--	--	--	0
HIST RCRA_SQG		0.250	0	0	--	--	--	0
RCRA_LQG		0.250	0	0	--	--	--	0
RCRA_NONGEN		0.250	0	0	--	--	--	0
RCRA_SQG		0.250	0	0	--	--	--	0
RCRA_VSQG		0.250	0	0	--	--	--	0

<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
<b>FEDERAL NPL SITE LIST</b>								
NPL		1.000	0	0	0	0	--	0
NPL EPA R1 GIS		1.000	0	0	0	0	--	0
NPL EPA R3 GIS		1.000	0	0	0	0	--	0
NPL EPA R6 GIS		1.000	0	0	0	0	--	0
NPL EPA R8 GIS		1.000	0	0	0	0	--	0
NPL EPA R9 GIS		1.000	0	0	0	0	--	0
PART NPL		1.000	0	0	0	0	--	0
PROPOSED NPL		1.000	0	0	0	0	--	0
SEMS_FINAL NPL		1.000	0	0	0	0	--	0
SEMS_PROPOSED NPL		1.000	0	0	0	0	--	0
<b>STATE AND TRIBAL BROWNFIELD SITES</b>								
TRIBAL BROWNFIELDS		0.500	0	0	0	--	--	0
BROWNFIELDS - KS		0.500	0	0	0	--	--	0
<b>STATE- AND TRIBAL - EQUIVALENT CERCLIS</b>								
DEL HWS - KS		1.000	1	1	0	1	--	3
HWS - KS		1.000	0	0	0	0	--	0
SRP - KS		0.500	1	1	0	--	--	2
<b>STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS</b>								
HIST LF - KS		0.500	0	0	0	--	--	0
SWF/LF - KS		0.500	0	1	0	--	--	1
<b>STATE INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES</b>								
IC EC - KS		0.500	0	0	0	--	--	0
<b>STATE AND TRIBAL VOLUNTARY CLEANUP SITES</b>								
VCP - KS		0.500	0	0	0	--	--	0
<b>LOCAL BROWNFIELD LISTS</b>								
BROWNFIELDS-ACRES		0.500	0	0	0	--	--	0
FED BROWNFIELDS		0.500	0	0	0	--	--	0
<b>LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES</b>								
FED CDL		SP	0	--	--	--	--	0
US HIST CDL		SP	0	--	--	--	--	0
CDL - KS		SP	0	--	--	--	--	0

<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
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**LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES**

HIST INDIAN ODI R8		0.500	0	0	0	--	--	0
INDIAN ODI R8		0.500	0	0	0	--	--	0
ODI		0.500	0	0	0	--	--	0
TRIBAL ODI		0.500	0	0	0	--	--	0

**RECORDS OF EMERGENCY RELEASE REPORTS**

HMIRS (DOT)		SP	0	--	--	--	--	0
HIST SPILLS - KS		0.125	1	--	--	--	--	1
SPILLS - KS		0.125	2	--	--	--	--	2

**LOCAL LAND RECORDS**

LIENS 2		SP	0	--	--	--	--	0
---------	--	----	---	----	----	----	----	---

**OTHER ASCERTAINABLE RECORDS**

AFS		SP	0	--	--	--	--	0
ALT FUELING		0.250	0	0	--	--	--	0
BRS		SP	0	--	--	--	--	0
CDC HAZDAT		1.000	0	0	0	0	--	0
COAL ASH DOE		0.500	0	0	0	--	--	0
COAL ASH EPA		0.500	0	0	0	--	--	0
COAL GAS		1.000	0	0	0	0	--	0
COLLEGES		SP	0	--	--	--	--	0
COLLEGES 2		SP	0	--	--	--	--	0
CONSENT (DECREES)		1.000	0	0	0	0	--	0
CORRECTIVE ACTIONS_2020		0.500	0	0	0	--	--	0
DEBRIS EPA LF		0.500	0	0	0	--	--	0
DEBRIS EPA SWRCY		0.500	0	0	0	--	--	0
DOD		1.000	0	0	0	0	--	0
DOT OPS		SP	0	--	--	--	--	0
ECHO		SP	0	--	--	--	--	0
ENOI		SP	0	--	--	--	--	0
EPA FUELS		SP	0	--	--	--	--	0
EPA OSC		0.125	0	--	--	--	--	0
EPA WATCH		SP	0	--	--	--	--	0
FA HWF		SP	0	--	--	--	--	0
FEDLAND		1.000	0	0	0	0	--	0
FRS	X	SP	--	--	--	--	--	1
FTTS		SP	0	--	--	--	--	0

<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
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**OTHER ASCERTAINABLE RECORDS (cont.)**

FTTS INSP		SP	0	--	--	--	--	0
FUDS		1.000	0	0	0	0	--	0
HIST AFS		SP	0	--	--	--	--	0
HIST AFS 2		SP	0	--	--	--	--	0
HIST DOD		1.000	0	0	0	0	--	0
HIST LEAD_SMELTER		SP	0	--	--	--	--	0
HIST MLTS		SP	0	--	--	--	--	0
HIST PCB TRANS		SP	0	--	--	--	--	0
HIST PCS ENF		SP	0	--	--	--	--	0
HIST PCS FACILITY		SP	0	--	--	--	--	0
HIST SSTS		SP	0	--	--	--	--	0
HOSPITALS		SP	0	--	--	--	--	0
HWC DOCKET		SP	0	--	--	--	--	0
ICIS		SP	0	--	--	--	--	0
INACTIVE PCS		SP	0	--	--	--	--	0
INDIAN RESERVATION		1.000	0	0	0	0	--	0
LUCIS		0.500	0	0	0	--	--	0
LUCIS 2		0.500	0	0	0	--	--	0
MANIFEST EPA		0.250	0	0	--	--	--	0
MINE OPERATIONS		0.250	0	0	--	--	--	0
MINES		0.250	0	0	--	--	--	0
MINES USGS		0.250	0	0	--	--	--	0
MLTS		SP	0	--	--	--	--	0
NPL AOC		1.000	0	0	0	0	--	0
NPL LIENS		SP	0	--	--	--	--	0
NURSING HOMES		SP	0	--	--	--	--	0
OSHA		SP	0	--	--	--	--	0
PADS		SP	0	--	--	--	--	0
PCB TRANSFORMER		SP	0	--	--	--	--	0
PCS ENF		SP	0	--	--	--	--	0
PCS FACILITY		SP	0	--	--	--	--	0
PFAS NPL		0.500	0	0	0	--	--	0
PFAS TRIS		0.500	0	0	0	--	--	0
PFAS UCMR3		0.500	0	0	0	--	--	0
RAATS		SP	0	--	--	--	--	0
RADINFO		SP	0	--	--	--	--	0

<u>DATABASE</u>	<u>SUBJECT PROPERTY</u>	<u>SEARCH DISTANCE (MILES)</u>	<u>&lt;1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt;1</u>	<u>TOTAL MAPPED</u>
<b>OTHER ASCERTAINABLE RECORDS (cont.)</b>								
RMP	X	0.500	0	0	0	--	--	1
ROD		1.000	0	0	0	0	--	0
SCHOOLS PRIVATE		SP	0	--	--	--	--	0
SCHOOLS PUBLIC		SP	0	--	--	--	--	0
SCRD DRYCLEANERS		0.250	0	0	--	--	--	0
SEMS_SMELTER		SP	0	--	--	--	--	0
SSTS		SP	0	--	--	--	--	0
STORMWATER		SP	0	--	--	--	--	0
TOSCA-PLANT		SP	0	--	--	--	--	0
TRIS		SP	0	--	--	--	--	0
UMTRA		0.500	0	0	0	--	--	0
VAPOR		0.500	0	0	0	--	--	0
AIRS - KS		SP	0	--	--	--	--	0
COAL ASH - KS		0.500	0	0	0	--	--	0
DAYCARE - KS		SP	0	--	--	--	--	0
DRYCLEANERS - KS		0.250	0	0	--	--	--	0
EMI - KS		SP	0	--	--	--	--	0
HIST AIRS - KS		SP	0	--	--	--	--	0
HIST DRYCLEANERS - KS		0.250	0	0	--	--	--	0
PFAS - KS		0.500	0	1	0	--	--	1
T 2 - KS		0.250	2	0	--	--	--	2
UIC - KS		SP	0	--	--	--	--	0

Map Id: 1  
 Direction:  
 Distance:  
 Elevation:  
 Relative:

**Site Name :** MIDLAND | FARMERS COOPERATIVE ASSOCIATION  
 1941 DIAGONAL ROAD REAR  
 MIDLAND | LAWRENCE | Midland, KS  
**Database(s) :** [FRS, RMP]

**EnviroSite ID:** 2449355  
**EPA ID:** N/R

FRS

Facility Name : MIDLAND  
 Facility Address : 1941 DIAGONAL ROAD REAR, MIDLAND, KS 66046  
 County : DOUGLAS

Site Details

Registry ID : 110000906707  
 FRS Facility URL : [Click here for hyperlink provided by the agency.](#)  
 Last Date in Agency List : 2022-02-17

Source Description

Source Description :

The RMP database stores the risk management plans reported by companies that handle, manufacture, use, or store certain flammable or toxic substances, as required under section 112(r) of the Clean Air Act (CAA).

FRS Environmental Interest

Source and System ID : RMP - 100000105469

RMP

Facility Name : FARMERS COOPERATIVE ASSOCIATION  
 Facility Address : 1941 DIAGONAL ROAD REAR, MIDLAND, KS 66046

Details for this site have been truncated due to the large number of available details for this site within this dataset. For the complete details for this site, contact your EnviroSite account representative for a complimentary site report containing all of the details available.

Facility ID : 19758  
 Facility County FIPS : 20045  
 LEPC : Douglas County LEPC  
 Facility URL : N/R  
 Facility Phone Number : N/R  
 Facility Email Address : N/R  
 Facility DUNS : 0  
 Parent Company Name : N/R  
 Company 2 Name : N/R  
 Company DUNS : 0  
 Company 2 DUNS : 0  
 Operator Name : Farmers Cooperative Association  
 Operator Address : P. O. Box 687, Lawrence, KS 66044  
 Operator Address 2 : N/R  
 Operator Phone : 7858410028  
 Emergency Contact Name : FRED GANTZ  
 Emergency Contact Title : OPERATIONS MANAGER  
 Emergency Contact Phone : 7858415911  
 Phone 24 : 7852244544  
 Emergency Contact Ext PIN : N/R

Map Id: 1  
 Direction:  
 Distance:  
 Elevation:  
 Relative:

**Site Name :** MIDLAND | FARMERS COOPERATIVE ASSOCIATION  
 1941 DIAGONAL ROAD REAR  
 MIDLAND | LAWRENCE | Midland, KS  
**Database(s) :** [FRS, RMP] **(cont.)**

**EnviroSite ID:** 2449355  
**EPA ID:** N/R

**RMP (cont.)**

Emergency Contact Email :	N/R
No Accidents :	True
Foreign State Prov :	N/R
Foreign Zip Code :	N/R
Foreign Country :	N/R
FTE :	1
Other EPA Facility ID :	N/R
EPA Facility ID :	100000105469
OSHA PSM :	False
EPCRA 302 :	True
CAA Title V :	False
Clear Air Op Permit ID :	N/R
Safety Inspection Date :	1999-05-13
Safety Inspection by :	KANSAS DEPARTMENT OF AGRICULTURE
OSHA Ranking :	False
Predictive Filing Flag :	False
Submission Type :	F
CBI Flag :	False
Completion Check Date :	2000-01-24
Receipt Date :	1999-06-21
Graphics Indicator :	False
Attachments Indicator :	False
Certification Received Flag :	True
Submission Method :	RMP*Submit
CBI Substantiation Flag :	False
Electronic Waiver Received Flag :	False
Postmark Date :	1999-06-18
De Registration Date :	N/R
De Registration Effective Date :	N/R
Anniversary Date :	2004-06-18
Error Report Date :	N/R
CBI Unsanitized Version Flag :	False
Version Number :	1.2.4
Facility Latitude :	39.016667
Facility Longitude :	-95.243694
Valid Latitude Longitude Flag :	True
FRS Description :	PLANT ENTRANCE (GENERAL)
FRS Method :	CENSUS-OTHER
Horizontal Accuracy Measure :	N/R
Horizontal Reference Datum Code :	N/R
Source Map Scale Number :	N/R
Last Date in Agency List :	2022-01-05

**Process Details**

Process ID :	27708
Process Facility ID :	19758
Process Description :	N/R

**Chemical Details**

Chemical Name :	Ammonia (anhydrous)
Chemical ID :	56
Quantity :	132000

Map Id: 1  
 Direction:  
 Distance:  
 Elevation:  
 Relative:

**Site Name :** MIDLAND | FARMERS COOPERATIVE ASSOCIATION  
 1941 DIAGONAL ROAD REAR  
 MIDLAND | LAWRENCE | Midland, KS  
**Database(s) :** [FRS, RMP] **(cont.)**

**EnviroSite ID:** 2449355  
**EPA ID:** N/R

RMP (cont.)

Chemical Name : Public OCA Chemical  
 Chemical ID : 0  
 Quantity : 0

RMP Summary

RMP Contact Name : FRED GANTZ  
 RMP Title : OPERATIONS MANAGER  
 RMP Description : MIDLAND  
 RMP Complete Flag : True

Accident History

Facility ID : 19758  
 Accident Date : N/R  
 Accident Time : N/R  
 Accident Release Duration : N/R  
 Release Event : N/R  
 Release Source : N/R  
 Other Release Source : N/R  
 Onsite Property Damage : N/R  
 Offsite Property Damage : N/R  
 Envir Damage : N/R  
 Envir Damage-Other : N/R  
 Initiating Event : N/R  
 Cause Equipment Failure : N/R  
 Cause-Other : N/R  
 Offsite Responders Notify : N/R  
 CBI Flag : N/R  
 Accident History ID : N/R

Facility Name : Midland  
 Facility Address : 1941 Diagonal Road Rear, Midland, KS 66046

Facility ID : 26365  
 Facility County FIPS : 20045  
 LEPC : N/R  
 Facility URL : N/R  
 Facility Phone Number : N/R  
 Facility Email Address : N/R  
 Facility DUNS : 0  
 Parent Company Name : Ottawa Cooperative Association  
 Company 2 Name : N/R  
 Company DUNS : 0  
 Company 2 DUNS : 0  
 Operator Name : Adrian Derousseau  
 Operator Address : 302 N. Main, Ottawa, KS 66067-0680  
 Operator Address 2 : PO Box 680  
 Operator Phone : 7852425170  
 Emergency Contact Name : Mark Domann  
 Emergency Contact Title : Location Manger  
 Emergency Contact Phone : 7858415331



Map Id: 1  
 Direction:  
 Distance:  
 Elevation:  
 Relative:

**Site Name :** MIDLAND | FARMERS COOPERATIVE ASSOCIATION  
 1941 DIAGONAL ROAD REAR  
 MIDLAND | LAWRENCE | Midland, KS  
**Database(s) :** [FRS, RMP] **(cont.)**

**Envirosite ID:** 2449355  
**EPA ID:** N/R

**RMP (cont.)**

Phone 24 :	9138862676
Emergency Contact Ext PIN :	911
Emergency Contact Email :	N/R
No Accidents :	False
Foreign State Prov :	N/R
Foreign Zip Code :	N/R
Foreign Country :	N/R
FTE :	2
Other EPA Facility ID :	N/R
EPA Facility ID :	100000105469
OSHA PSM :	False
EPCRA 302 :	True
CAA Title V :	False
Clear Air Op Permit ID :	N/R
Safety Inspection Date :	2001-08-27
Safety Inspection by :	KS Dept of Agriculture
OSHA Ranking :	False
Predictive Filing Flag :	False
Submission Type :	C
CBI Flag :	False
Completion Check Date :	2002-08-01
Receipt Date :	2002-07-30
Graphics Indicator :	False
Attachments Indicator :	False
Certification Received Flag :	True
Submission Method :	RMP*Submit
CBI Substantiation Flag :	False
Electronic Waiver Received Flag :	False
Postmark Date :	2002-07-24
De Registration Date :	N/R
De Registration Effective Date :	N/R
Anniversary Date :	2004-06-18
Error Report Date :	N/R
CBI Unsanitized Version Flag :	False
Version Number :	1.2.5
Facility Latitude :	39.016667
Facility Longitude :	-95.243694
Valid Latitude Longitude Flag :	True
FRS Description :	PLANT ENTRANCE (GENERAL)
FRS Method :	CENSUS-OTHER
Horizontal Accuracy Measure :	N/R
Horizontal Reference Datum Code :	N/R
Source Map Scale Number :	N/R
Last Date in Agency List :	2022-01-05

**Process Details**

Process ID :	37752
Process Facility ID :	26365
Process Description :	Midland NH3

Map Id: 1  
 Direction:  
 Distance:  
 Elevation:  
 Relative:

**Site Name :** MIDLAND | FARMERS COOPERATIVE ASSOCIATION  
 1941 DIAGONAL ROAD REAR  
 MIDLAND | LAWRENCE | Midland, KS

**Database(s) :** [FRS, RMP] **(cont.)**

**EnviroSite ID:** 2449355  
**EPA ID:** N/R

**RMP (cont.)**

Chemical Details

Chemical Name : Ammonia (anhydrous)  
 Chemical ID : 56  
 Quantity : 132000

Chemical Name : Public OCA Chemical  
 Chemical ID : 0  
 Quantity : 0

RMP Summary

RMP Contact Name : Calvin Pearson  
 RMP Title : Operations Manager  
 RMP Description : N/R  
 RMP Complete Flag : True

Accident History

Facility ID : 26365  
 Accident Date : N/R  
 Accident Time : N/R  
 Accident Release Duration : N/R  
 Release Event : N/R  
 Release Source : N/R  
 Other Release Source : N/R  
 Onsite Property Damage : N/R  
 Offsite Property Damage : N/R  
 Envir Damage : N/R  
 Envir Damage-Other : N/R  
 Initiating Event : N/R  
 Cause Equipment Failure : N/R  
 Cause-Other : N/R  
 Offsite Responders Notify : N/R  
 CBI Flag : N/R  
 Accident History ID : N/R

Facility ID : 25220  
 Facility County FIPS : 20045  
 LEPC : N/R  
 Facility URL : N/R  
 Facility Phone Number : N/R  
 Facility Email Address : N/R  
 Facility DUNS : 0  
 Parent Company Name : Ottawa Cooperative Association  
 Company 2 Name : N/R  
 Company DUNS : 0  
 Company 2 DUNS : 0  
 Operator Name : Adrian Derousseau  
 Operator Address : 302 N. Main, Ottawa, KS 66067-0680  
 Operator Address 2 : PO Box 680  
 Operator Phone : 7852425170  
 Emergency Contact Name : Mark Domann

Map Id: 1  
 Direction:  
 Distance:  
 Elevation:  
 Relative:

**Site Name :** MIDLAND | FARMERS COOPERATIVE ASSOCIATION  
 1941 DIAGONAL ROAD REAR  
 MIDLAND | LAWRENCE | Midland, KS  
**Database(s) :** [FRS, RMP] **(cont.)**

**Envirosite ID:** 2449355  
**EPA ID:** N/R

**RMP (cont.)**

Emergency Contact Title :	Location Manger
Emergency Contact Phone :	7858415331
Phone 24 :	7858430250
Emergency Contact Ext PIN :	911
Emergency Contact Email :	N/R
No Accidents :	False
Foreign State Prov :	N/R
Foreign Zip Code :	N/R
Foreign Country :	N/R
FTE :	2
Other EPA Facility ID :	N/R
EPA Facility ID :	100000105469
OSHA PSM :	False
EPCRA 302 :	True
CAA Title V :	False
Clear Air Op Permit ID :	N/R
Safety Inspection Date :	2001-08-27
Safety Inspection by :	KS Dept of Agriculture
OSHA Ranking :	False
Predictive Filing Flag :	False
Submission Type :	C
CBI Flag :	False
Completion Check Date :	2002-03-12
Receipt Date :	2002-03-12
Graphics Indicator :	False
Attachments Indicator :	False
Certification Received Flag :	True
Submission Method :	RMP*Submit
CBI Substantiation Flag :	False
Electronic Waiver Received Flag :	False
Postmark Date :	2002-03-06
De Registration Date :	N/R
De Registration Effective Date :	N/R
Anniversary Date :	2004-06-18
Error Report Date :	N/R
CBI Unsanitized Version Flag :	False
Version Number :	1.2.5
Facility Latitude :	39.016667
Facility Longitude :	-95.243694
Valid Latitude Longitude Flag :	True
FRS Description :	PLANT ENTRANCE (GENERAL)
FRS Method :	CENSUS-OTHER
Horizontal Accuracy Measure :	N/R
Horizontal Reference Datum Code :	N/R
Source Map Scale Number :	N/R
Last Date in Agency List :	2022-01-05

**Process Details**

Process ID :	36012
Process Facility ID :	25220
Process Description :	Midland NH3

Map Id: 1  
 Direction:  
 Distance:  
 Elevation:  
 Relative:

**Site Name :** MIDLAND | FARMERS COOPERATIVE ASSOCIATION  
 1941 DIAGONAL ROAD REAR  
 MIDLAND | LAWRENCE | Midland, KS  
**Database(s) :** [FRS, RMP] **(cont.)**

**Envirosite ID:** 2449355  
**EPA ID:** N/R

**RMP (cont.)**

Chemical Details

Chemical Name : Ammonia (anhydrous)  
 Chemical ID : 56  
 Quantity : 132000

Chemical Name : Public OCA Chemical  
 Chemical ID : 0  
 Quantity : 0

RMP Summary

RMP Contact Name : Calvin Pearson  
 RMP Title : Operations Manager  
 RMP Description : N/R  
 RMP Complete Flag : True

Accident History

Facility ID : 25220  
 Accident Date : N/R  
 Accident Time : N/R  
 Accident Release Duration : N/R  
 Release Event : N/R  
 Release Source : N/R  
 Other Release Source : N/R  
 Onsite Property Damage : N/R  
 Offsite Property Damage : N/R  
 Envir Damage : N/R  
 Envir Damage-Other : N/R  
 Initiating Event : N/R  
 Cause Equipment Failure : N/R  
 Cause-Other : N/R  
 Offsite Responders Notify : N/R  
 CBI Flag : N/R  
 Accident History ID : N/R

Facility Name : MIDLAND  
 Facility Address : 1941 DIAGONAL ROAD REAR, LAWRENCE, KS 66044

Facility ID : 27377  
 Facility County FIPS : 20045  
 LEPC : Douglas County LEPC  
 Facility URL : N/R  
 Facility Phone Number : N/R  
 Facility Email Address : N/R  
 Facility DUNS : 0  
 Parent Company Name : OTTAWA COOPERATIVE ASSOCIATION  
 Company 2 Name : N/R  
 Company DUNS : 0  
 Company 2 DUNS : 0  
 Operator Name : ADRIAN DEROUSSEAU

Map Id: 1  
 Direction:  
 Distance:  
 Elevation:  
 Relative:

**Site Name :** MIDLAND | FARMERS COOPERATIVE ASSOCIATION  
 1941 DIAGONAL ROAD REAR  
 MIDLAND | LAWRENCE | Midland, KS  
**Database(s) :** [FRS, RMP] **(cont.)**

**Envirosite ID:** 2449355  
**EPA ID:** N/R

**RMP (cont.)**

Operator Address :	302 N MAIN, OTTAWA, KS 66067
Operator Address 2 :	BOX 680
Operator Phone :	7852425170
Emergency Contact Name :	MARK DOMANN
Emergency Contact Title :	LOCATION MANAGER
Emergency Contact Phone :	7858415331
Phone 24 :	9138862676
Emergency Contact Ext PIN :	911
Emergency Contact Email :	N/R
No Accidents :	False
Foreign State Prov :	N/R
Foreign Zip Code :	N/R
Foreign Country :	N/R
FTE :	2
Other EPA Facility ID :	N/R
EPA Facility ID :	100000105469
OSHA PSM :	False
EPCRA 302 :	True
CAA Title V :	False
Clear Air Op Permit ID :	N/R
Safety Inspection Date :	2002-11-07
Safety Inspection by :	KANSAS DEPARTMENT OF AG
OSHA Ranking :	False
Predictive Filing Flag :	False
Submission Type :	R
CBI Flag :	False
Completion Check Date :	2003-01-17
Receipt Date :	2003-01-16
Graphics Indicator :	False
Attachments Indicator :	False
Certification Received Flag :	True
Submission Method :	RMP*Submit
CBI Substantiation Flag :	False
Electronic Waiver Received Flag :	False
Postmark Date :	2003-01-08
De Registration Date :	N/R
De Registration Effective Date :	N/R
Anniversary Date :	2008-01-08
Error Report Date :	N/R
CBI Unsanitized Version Flag :	False
Version Number :	2.0
Facility Latitude :	39.016667
Facility Longitude :	-95.243694
Valid Latitude Longitude Flag :	True
FRS Description :	PLANT ENTRANCE (GENERAL)
FRS Method :	CENSUS-OTHER
Horizontal Accuracy Measure :	N/R
Horizontal Reference Datum Code :	N/R
Source Map Scale Number :	N/R
Last Date in Agency List :	2022-01-05

**Process Details**

Process ID :	39397
Process Facility ID :	27377

Map Id: 1  
 Direction:  
 Distance:  
 Elevation:  
 Relative:

**Site Name :** MIDLAND | FARMERS COOPERATIVE ASSOCIATION  
 1941 DIAGONAL ROAD REAR  
 MIDLAND | LAWRENCE | Midland, KS  
**Database(s) :** [FRS, RMP] **(cont.)**

**EnviroSite ID:** 2449355  
**EPA ID:** N/R

RMP (cont.)

Process Description : MIDLAND NH3

Chemical Details

Chemical Name : Ammonia (anhydrous)  
 Chemical ID : 56  
 Quantity : 241400

Chemical Name : Public OCA Chemical  
 Chemical ID : 0  
 Quantity : 0

RMP Summary

RMP Contact Name : CALVIN PEARSON  
 RMP Title : OPERATIONS MANAGER  
 RMP Description : N/R  
 RMP Complete Flag : True

Accident History

Facility ID : 27377  
 Accident Date : 2002-09-30  
 Accident Time : 1530  
 Accident Release Duration : 00020  
 Release Event : Gas  
 Release Source : Joint  
 Other Release Source : N/R  
 Onsite Property Damage : 0  
 Offsite Property Damage : 0  
 Envir Damage : N/R  
 Envir Damage-Other : N/R  
 Initiating Event : a  
 Cause Equipment Failure : Equipment Failure  
 Cause-Other : N/R  
 Offsite Responders Notify : Notified and Responded  
 CBI Flag : False  
 Accident History ID : 4467

Accident History Chemicals

Accident Chemical ID : 4832  
 Accident History ID : N/R  
 Chemical ID : 56  
 Chemical Name : Ammonia (anhydrous)  
 Quantity Released : 90  
 Percent Weight : N/R

Facility Name : MIDLAND  
 Facility Address : 1941 DIAGONAL ROAD REAR, MIDLAND, KS 66046

Map Id: 1  
 Direction:  
 Distance:  
 Elevation:  
 Relative:

**Site Name :** MIDLAND | FARMERS COOPERATIVE ASSOCIATION  
 1941 DIAGONAL ROAD REAR  
 MIDLAND | LAWRENCE | Midland, KS  
**Database(s) :** [FRS, RMP] **(cont.)**

**EnviroSite ID:** 2449355  
**EPA ID:** N/R

**RMP (cont.)**

Facility ID :	1000004473
Facility County FIPS :	20045
LEPC :	Douglas County LEPC
Facility URL :	N/R
Facility Phone Number :	N/R
Facility Email Address :	N/R
Facility DUNS :	0
Parent Company Name :	OTTAWA COOPERATIVE ASSOCIATION
Company 2 Name :	N/R
Company DUNS :	0
Company 2 DUNS :	0
Operator Name :	ADRIAN DEROUSSEAU
Operator Address :	302 N MAIN, OTTAWA, KS 66067
Operator Address 2 :	BOX 680
Operator Phone :	7852425170
Emergency Contact Name :	CHRIS HETHERINGTON
Emergency Contact Title :	LOCATION MANAGER
Emergency Contact Phone :	7854185037
Phone 24 :	7854185037
Emergency Contact Ext PIN :	N/R
Emergency Contact Email :	cjpcoop@excite.com
No Accidents :	False
Foreign State Prov :	N/R
Foreign Zip Code :	N/R
Foreign Country :	N/R
FTE :	2
Other EPA Facility ID :	N/R
EPA Facility ID :	100000105469
OSHA PSM :	False
EPCRA 302 :	True
CAA Title V :	False
Clear Air Op Permit ID :	N/R
Safety Inspection Date :	2009-02-12
Safety Inspection by :	KANSAS DEPARTMENT OF AG
OSHA Ranking :	False
Predictive Filing Flag :	False
Submission Type :	R
CBI Flag :	False
Completion Check Date :	2009-06-04
Receipt Date :	2009-06-04
Graphics Indicator :	False
Attachments Indicator :	False
Certification Received Flag :	True
Submission Method :	RMP*eSubmit
CBI Substantiation Flag :	False
Electronic Waiver Received Flag :	False
Postmark Date :	2009-06-04
De Registration Date :	N/R
De Registration Effective Date :	N/R
Anniversary Date :	2014-06-04
Error Report Date :	N/R
CBI Unsanitized Version Flag :	False
Version Number :	1.0
Facility Latitude :	39.027608
Facility Longitude :	-095.239823
Valid Latitude Longitude Flag :	True

Map Id: 1  
 Direction:  
 Distance:  
 Elevation:  
 Relative:

**Site Name :** MIDLAND | FARMERS COOPERATIVE ASSOCIATION  
 1941 DIAGONAL ROAD REAR  
 MIDLAND | LAWRENCE | Midland, KS  
**Database(s) :** [FRS, RMP] **(cont.)**

**EnviroSite ID:** 2449355  
**EPA ID:** N/R

**RMP (cont.)**

FRS Description : PLANT ENTRANCE (GENERAL)  
 FRS Method : CENSUS-OTHER  
 Horizontal Accuracy Measure : 25  
 Horizontal Reference Datum Code : 002  
 Source Map Scale Number : N/R  
 Last Date in Agency List : 2022-01-05

**Process Details**

Process ID : 1000005423  
 Process Facility ID : 1000004473  
 Process Description : MIDLAND NH3

**Chemical Details**

Chemical Name : Ammonia (anhydrous)  
 Chemical ID : 56  
 Quantity : 332690

Chemical Name : Public OCA Chemical  
 Chemical ID : 0  
 Quantity : 0

**RMP Summary**

RMP Contact Name : CALVIN PEARSON  
 RMP Title : OPERATIONS MANAGER  
 RMP Description : N/R  
 RMP Complete Flag : True

**Accident History**

Facility ID : 1000004473  
 Accident Date : N/R  
 Accident Time : N/R  
 Accident Release Duration : N/R  
 Release Event : N/R  
 Release Source : N/R  
 Other Release Source : N/R  
 Onsite Property Damage : N/R  
 Offsite Property Damage : N/R  
 Envir Damage : N/R  
 Envir Damage-Other : N/R  
 Initiating Event : N/R  
 Cause Equipment Failure : N/R  
 Cause-Other : N/R  
 Offsite Responders Notify : N/R  
 CBI Flag : N/R  
 Accident History ID : N/R



Map Id: A2  
 Direction: E  
 Distance: 0.011 mi., 57 ft.  
 Elevation: 835 ft.  
 Relative: Higher

**Site Name :** Union Pacific Railroad  
 Mile post 43.23  
 Lawrence, KS  
**Database(s) :** [SPILLS - KS]

**Envirosite ID:** 2506067  
**EPA ID:** N/R

SPILLS - KS

Facility Name : Union Pacific Railroad  
 Facility Address : Mile post 43.23, Lawrence  
 County : Douglas

Site Details

Spill Date : 2017-08-14  
 Closed Date : 2018-01-09  
 Incident Date : 2017-08-14  
 Incident ID : 371E80A1815511E780E3005056BF7EBA  
 Spill ID : 42233  
 Spill Status : Closed  
 Spill Cause : Operator Error  
 Other Cause : N/R  
 Source : Motor Vehicle/Carrier  
 Other Source : N/R  
 Medium Affected : Soil  
 Other Medium : N/R  
 Water Way Type : N/R  
 Water Way Name : N/R  
 Spiller License : N/R  
 Lead Agency : KDHE  
 KDHE District : NE  
 Facility Number : N/R  
 Facility Name : N/R  
 Approx Location : Kansas Subdivision north of Lawrence  
 Section/Township/Range : N/R  
 Material Combo : 10 Gallons of Curve Grease  
 Material Type : Other  
 NRC Number : N/R  
 NRC Notification : No  
 LEPC Notified : No

Spiller Action Taken : Per 12/31/17 UPRR email, 'GPS: 39.028015 / W 95.242110. An anonymous caller reported what appeared to be oil sludge approximately four foot in diameter and four inches deep near Milepost 43.23 of the Kansas Subdivision north of Lawrence, KS. Inspection

Cleanup Method : Physical Removal  
 Latitude : 39.02802  
 Longitude : -95.24211  
 Detailed Report : [Click here for hyperlink provided by the agency.](#)  
 Last Date in Agency List : 2021-12-28

Map Id: B3  
Direction: ENE  
Distance: 0.016 mi., 87 ft.  
Elevation: 841 ft.  
Relative: Higher

**Site Name :** EVERGY - MIDLAND JUNCTION  
SUBSTATION #836  
2024 E 1400 RD  
LAWRENCE, KS 66044

**Database(s) :** [T 2 - KS]

**Envirosite ID:** 35879565  
**EPA ID:** N/R

T 2 - KS

**Facility Name :** EVERGY - MIDLAND JUNCTION SUBSTATION #836  
**Facility Address :** 2024 E 1400 RD, LAWRENCE, KS 66044  
**County :** DOUGLAS

### Site Details

**Facility ID :** 389469  
**RMP Facility ID :** n/a  
**PID Number :** KS01408  
**FID Number :** DG00384  
**TRIF ID :** n/a  
**Track ID :** moestrei  
**Track Date :** 20200303 185243  
**Created Date :** 2020-02-27  
**Updated Date :** 2020-03-03  
**Report Year :** 2020  
**Annual or Revision :** annual  
**Max Occupants :** N/R  
**Manned or Unmanned :** unmanned  
**New Facility :** Y  
**Nearest Cross Street :** N/R  
**Facility Phone :** 785-749-5001  
**Facility Latitude :** 39.0330813  
**Facility Longitude :** -95.2414100  
**Section/Township/Range :** N/R  
**SIC :** 4911 - ELECTRIC SERVICES  
**NAICS :** 221122 - Electric Power Distribution  
**Section Code :** 312  
**Submission Type :** 0  
**Send to :** N/R  
**Rep Name :** none  
**Rep Title :** none  
**Download :** 3  
**QA :** 0  
**Tier Contact Name :** MICHAEL PAULSEN  
**Tier Title :** ECC  
**Tier Email :** michael.paulsen@evergy.com  
**Tier Phone :** 785-575-1549  
**Tier Phone 24 :** 785-217-5786  
**Subject 302 :** Y  
**Subject 112 :** N  
**Emergency Name 1 :** DISTRIBUTION  
**Emergency Title 1 :** DISTRIBUTION SYS OP  
**Emergency Phone 1 :** 785-575-1265  
**Emergency 24 Phone 1 :** 785-575-1265  
**Emergency Email 1 :** N/R  
**Emergency Name 2 :** N/R  
**Emergency Title 2 :** N/R  
**Emergency Phone 2 :** N/R  
**Emergency 24 Phone 2 :** N/R  
**Emergency Email 2 :** N/R  
**Last Date in Agency List :** 2022-01-17

Map Id: B3  
 Direction: ENE  
 Distance: 0.016 mi., 87 ft.  
 Elevation: 841 ft.  
 Relative: Higher

**Site Name :** EVERGY - MIDLAND JUNCTION  
 SUBSTATION #836  
 2024 E 1400 RD  
 LAWRENCE, KS 66044

**Database(s) :** [T 2 - KS] **(cont.)**

Envirosite ID: 35879565  
 EPA ID: N/R

T 2 - KS **(cont.)**

Chemical

Chemical ID : 959080  
 Chemical Name : LEAD ACID BATTERIES  
 CAS Number : 7664-93-9  
 Trade Secret : 0  
 EHS : 1  
 Solid : N/R  
 Liquid : 1  
 Gas : N/R  
 Pure : N/R  
 Mix : N/R  
 Fire : N/R  
 Pressure : N/R  
 Reactive : N/R  
 Delayed : N/R  
 Immediate : N/R  
 Max Daily Amount : 879  
 Avg Daily Amount : 879  
 Days on Site : 365  
 Opt Report : N/R

Chemical Storage

Storage ID : 1310728  
 Business ID Remove : 0  
 Facility ID Remove : 0  
 User ID Remove : 0  
 Chemical ID Remove : 0  
 Chemical Name : LEAD ACID BATTERIES  
 Container : Battery  
 Pressure : Ambient Pressure  
 Temperature : Ambient temperature  
 Storage Location : CONTROL HOUSE  
 Confidential : N/R

User

User ID : 45293  
 Group ID : 1  
 Name : EVERGY INC  
 Address : 818 S KANSAS, TOPEKA, KS 66612  
 Country : USA  
 DUN BRAD : 173479478  
 Phone : 785-217-5786  
 Mailing Name : N/R  
 Mailing Street : KS  
 Mailing Attn. : N/R  
 Mailing Phone : N/R  
 Submitter : MICHAEL PAULSEN  
 Signature : MICHAEL PAULSEN  
 County : N/R  
 Region : 0  
 Email : michael.paulsen@evergy.com

Map Id: A4  
 Direction: E  
 Distance: 0.042 mi., 223 ft.  
 Elevation: 837 ft.  
 Relative: Higher

**Site Name :** PINES INTERNATIONAL  
 R. R. 3  
 LAWRENCE | MIDLAND, KS 66044

**Database(s) :** [AFS, ECHO, FRS]

**Envirosite ID:** 2420597  
**EPA ID:** N/R

AFS

Facility Name : PINES INTERNATIONAL  
 Facility Address : R. R. 3, MIDLAND, KS 66044  
 County : Douglas

Facility Summary

Program System ID : KS0000002004500054  
 Facility Registry ID : 110010320900  
 EPA Region : EPA Region 7 - IA, KS, MO, NE  
 SIC : 2099 - FOOD PREPARATIONS, NOT ELSEWHERE CLASSIFIED  
 NAICS : 311999 - All Other Miscellaneous Food Manufacturing  
 Facility Type : Privately Owned Facility  
 Air Pollutant Class : Minor Emissions  
 Air Operating Status : Operating  
 Current High Priority Violation (HPV): No Violation Identified  
 Local Control Region Name : N/R  
 Last Date in Agency List : 2022-02-08

Air Pollutant Details

Program System ID : KS0000002004500054  
 Pollutant : TOTAL PARTICULATE MATTER  
 Substance Registry Services ID (SRS): 1647643  
 Chemical Abstract Service Number : N/R  
 Air Pollutant Class : Minor Emissions

Air Violation History Details

HPV Day Zero Date : N/R  
 HPV Resolved Date : N/R  
 Program System ID : KS0000002004500054  
 Activity ID : N/R  
 Agency Type : N/R  
 State Code : N/R  
 Air Local Control Region Code (LCON): N/R  
 Comp Determination UID : N/R  
 Enforcement Response Policy : N/R  
 Program : N/R  
 Pollutant : N/R  
 Earliest Determination Date of Federally Reportable Violation (FRV): N/R

ECHO

Facility Name : PINES INTERNATIONAL  
 Facility Address : R. R. 3, LAWRENCE, KS 66044  
 County : DOUGLAS

Last Inspection Date : N/R  
 Registry ID : 110010320900  
 FIPS Code : 20045  
 EPA Region : 07  
 Inspection Count : 0

Map Id: A4  
 Direction: E  
 Distance: 0.042 mi., 223 ft.  
 Elevation: 837 ft.  
 Relative: Higher

**Site Name :** PINES INTERNATIONAL  
 R. R. 3  
 LAWRENCE | MIDLAND, KS 66044

**Database(s) :** [AFS, ECHO, FRS] **(cont.)**

EnviroSite ID: 2420597  
 EPA ID: N/R

ECHO **(cont.)**

Last Inspection Days :	N/R
Informal Count :	0
Last Informal Action Date :	N/R
Formal Action Count :	0
Last Formal Action Date :	N/R
Total Penalties :	0
Penalty Count :	N/R
Last Penalty Date :	N/R
Last Penalty Amount :	N/R
QTRS IN NC :	0
Programs IN SNC :	0
Current Compliance Status :	No Violation Identified
Three-Year Compliance Status :	
Collection Method :	ADDRESS MATCHING-HOUSE NUMBER
Reference Point :	N/R
Accuracy Meters :	183
Derived Tribes :	N/R
Derived HUC :	10270104
Derived WBD :	102701040503
Derived STCTY FIPS :	20045
Derived Zip :	66044
Derived CD113 :	02
Derived CB2010 :	200450001001017
MYRTK Universe :	NNN
NPDES IDs :	N/R
CWA Permit Types :	N/R
CWA Compliance Tracking :	N/R
CWA NAICS :	N/R
CWA SICS :	N/R
CWA Inspection Count :	N/R
CWA Last Inspection Days :	N/R
CWA Informal Count :	N/R
CWA Formal Action Count :	N/R
CWA Last Formal Action Date :	N/R
CWA Penalties :	N/R
CWA Last Penalty Date :	N/R
CWA Last Penalty Amount :	N/R
CWA Quarters IN NC :	N/R
CWA Current Compliance Status :	N/R
CWA Current SNC Flag :	N
CWA 13 Quarters Compliance Status :	N/R
CWA 13 Quarters Effluent Exceedances:	N/R
CWA Three-Year QNCR Codes :	N/R
DFR URL :	<a href="#">Click here for hyperlink provided by the agency.</a>
Facility SIC :	2099
Facility NAICS :	311999 - All Other Miscellaneous Food Manufacturing
Facility Last Inspection EPA Date :	N/R
Facility Last Inspection State Date :	N/R
Facility Last Formal Act EPA Date :	N/R
Facility Last Formal Act State Date :	N/R
Facility Last Informal Act EPA Date :	N/R
Facility Last Informal Act State Date:	N/R
Facility Federal Agency :	N/R
TRI Reporter :	N/R
Facility Imp Water Flag :	N/R
Current SNC Flag :	N
Indian County Flag :	N

Map Id: A4  
 Direction: E  
 Distance: 0.042 mi., 223 ft.  
 Elevation: 837 ft.  
 Relative: Higher

**Site Name :** PINES INTERNATIONAL  
 R. R. 3  
 LAWRENCE | MIDLAND, KS 66044

**Database(s) :** [AFS, ECHO, FRS] **(cont.)**

**Envirosite ID:** 2420597  
**EPA ID:** N/R

**ECHO (cont.)**

Federal Flag :	N/R
US Mexico Border Flag :	N/R
Chesapeake Bay Flag :	N/R
AIR Flag :	Y
NPDES Flag :	N
SDWIS Flag :	N
RCRA Flag :	N
TRI Flag :	N
GHG Flag :	N
Major Flag :	N/R
Active Flag :	Y
NAA Flag :	N
Latitude :	39.028775
Longitude :	-95.242125
Last Date in Agency List :	2022-01-17

**FRS**

Facility Name :	PINES INTERNATIONAL
Facility Address :	R. R. 3, LAWRENCE, KS 66044
County :	DOUGLAS

**Site Details**

Registry ID :	110010320900
FRS Facility URL :	<a href="#">Click here for hyperlink provided by the agency.</a>
Last Date in Agency List :	2022-02-17

**Source Description**

Source Description :	AIR contains compliance and permit data for stationary sources of air pollution regulated by the EPA, State, and Local air pollution agencies. AFS contains compliance and permit data for stationary sources of air pollution regulated by the EPA, State, and Local air pollution agencies. The Kansas Facility Profiler (KS-FP) is a geographically-based data warehouse that presents information about facilities and locations of interest to the Kansas Department of Health and Environment (KDHE). It has in excess of twenty environmental interests which contain information on closed facilities, completed cleanups, and past operations, as well as data on current operations and activities.
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**FRS Environmental Interest**

Source and System ID :	AIRS/AFS - 2004500054 ICIS - KS0000002004500054 KS-FP - 1356562
------------------------	---

Map Id: 5  
Direction: E  
Distance: 0.053 mi., 280 ft.  
Elevation: 836 ft.  
Relative: Higher

**Site Name :** MIDLAND  
1941 DIAGONAL ROAD REAR  
LAWRENCE, KS 66046  
**Database(s) :** [FRS]

**Envirosite ID:** 33149971  
**EPA ID:** N/R

FRS

Facility Name : MIDLAND  
Facility Address : 1941 DIAGONAL ROAD REAR, LAWRENCE, KS 66046  
County : DOUGLAS

Site Details

Registry ID : 110000906707  
FRS Facility URL : [Click here for hyperlink provided by the agency.](#)  
Last Date in Agency List : 2021-05-03

Source Description

Source Description :

The RMP database stores the risk management plans reported by companies that handle, manufacture, use, or store certain flammable or toxic substances, as required under section 112(r) of the Clean Air Act (CAA).

FRS Environmental Interest  
Source and System ID : RMP - 100000105469

Map Id: A6  
Direction: E  
Distance: 0.070 mi., 371 ft.  
Elevation: 836 ft.  
Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
MIDLAND  
1941 DIAGONAL RD  
LAWRENCE | MIDLAND, KS 66046  
**Database(s) :** [ERNS, FRS, T 2 - KS]

**Envirosite ID:** 2429793  
**EPA ID:** N/R

ERNS

Facility Address : 1941 DIAGONAL RD, MIDLAND, KS  
County : DOUGLAS

Incident Information

Incident Date Time : 2002-09-30 15:30:00  
Type of Incident : STORAGE TANK  
Incident Cause : EQUIPMENT FAILURE  
Incident DTG : OCCURRED  
Incident Location : N/R  
Sequence Number : 624398  
Potential Flag : N/R

Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**Envirosite ID:** 2429793  
**EPA ID:** N/R

**ERNS (cont.)**

Description of Incident : THE SUPPLY LINE CONNECTED TO AN ANHYDROUS AMMONIA STORAGE TANK RUPTURED CAUSING THE MATERIAL TO RELEASE INTO THE ATMOSPHERE.

Last Date in Agency List : 2015-12-23

**Incident Response Summary**

Date Time Received : 2002-09-30 16:38:34  
 Date Time Completed : 2002-09-30 16:44:59  
 Call Type : Incident  
 Source : TELEPHONE  
 Responsible Company : OTTAWA ASC.  
 Responsible Org Type : PRIVATE ENTERPRISE  
 Responsible City : OTTAWA  
 Responsible State : KS  
 Responsible Zip : N/R

**Incident Details Summary**

Remedial Action : IN THE PROCESS OF SECURING THE RELEASE  
 Medium : ATMOSPHERE  
 Medium Description : AIR  
 Body of Water : N/R  
 Weather Conditions : CLEAR  
 Water Temperature : N/R  
 Water Supply Contaminated : U  
 Waterway Closed : N  
 Waterway Description : N/R

**Additional Incident Details Summary**

Actual Amount : 0  
 Actual Amount Units : UNKNOWN AMOUNT  
 Capacity of Tank : 30000  
 Capacity of Tank Units : GALLON(S)  
 Continuous Release Begin Date : N/R  
 Continuous Release End Date : N/R  
 Continuous Release Change Date : N/R  
 Continuous Release Permit : N/R  
 Continuous Release Type : N/R  
 Description of Tank : ANHYDROUS AMMONIA SUPPLY  
 Device Operational : Y  
 DOT Crossing Number : N/R  
 DOT Regulated : U  
 NPDES : N/R  
 NPDES Compliance : U  
 Pipeline Aboveground : ABOVE  
 Pipeline Covered : U  
 Pipeline Type : N/R  
 Tank ID : N/R  
 Tank Regulated : U  
 Tank Regulated by : N/R



Map Id: A6  
Direction: E  
Distance: 0.070 mi., 371 ft.  
Elevation: 836 ft.  
Relative: Higher

<b>Site Name :</b> MIDLAND COOP   CAPITAL CITY OIL-MIDLAND 1941 DIAGONAL RD LAWRENCE   MIDLAND, KS 66046
<b>Database(s) :</b> [ERNS, FRS, T 2 - KS] <b>(cont.)</b>

**EnviroSite ID:** 2429793  
**EPA ID:** N/R

### ERNS (cont.)

#### Materials Involved Summary

Name of Material :	AMMONIA, ANHYDROUS
CAS Number :	007664-41-7
Amount of Material :	0
Unit of Measure :	UNKNOWN AMOUNT
UN Number :	N/R
CHRIS Code :	AMA
Reached Water :	NO
Amount in Water :	N/R
Unit of Measure (Reach Water) :	N/R

### FRS

Facility Name :	CAPITAL CITY OIL-MIDLAND
Facility Address :	1941 DIAGONAL RD, LAWRENCE, KS 66046
County :	DOUGLAS

#### Site Details

Registry ID :	110024599718
FRS Facility URL :	<a href="#">Click here for hyperlink provided by the agency.</a>
Last Date in Agency List :	2022-02-17

#### Source Description

##### Source Description :

The Kansas Facility Profiler (KS-FP) is a geographically-based data warehouse that presents information about facilities and locations of interest to the Kansas Department of Health and Environment (KDHE). It has in excess of twenty environmental interests which contain information on closed facilities, completed cleanups, and past operations, as well as data on current operations and activities.

#### FRS Environmental Interest

Source and System ID :	KS-FP - 50210008
------------------------	------------------

Facility Name :	MIDLAND COOP
Facility Address :	1941 DIAGONAL RD, LAWRENCE, KS 66046
County :	DOUGLAS

#### Site Details

Registry ID :	110024676180
FRS Facility URL :	<a href="#">Click here for hyperlink provided by the agency.</a>
Last Date in Agency List :	2022-02-17

Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**EnviroSite ID:** 2429793  
**EPA ID:** N/R

**FRS (cont.)**

Source Description

Source Description :

The Kansas Facility Profiler (KS-FP) is a geographically-based data warehouse that presents information about facilities and locations of interest to the Kansas Department of Health and Environment (KDHE). It has in excess of twenty environmental interests which contain information on closed facilities, completed cleanups, and past operations, as well as data on current operations and activities.

FRS Environmental Interest  
 Source and System ID :

KS-FP - 50210012

T 2 - KS

Facility Name : MIDLAND COOP  
 Facility Address : 1941 DIAGONAL RD, LAWRENCE, KS 66046  
 County : DOUGLAS

Site Details

Facility ID : 357363  
 RMP Facility ID : 1000 0010 5469  
 PID Number : KS0237  
 FID Number : DG00257  
 TRIF ID : n/a  
 Track ID : moestrei  
 Track Date : 20200506 222816  
 Created Date : N/R  
 Updated Date : 2020-05-06  
 Report Year : 2019  
 Annual or Revision : annual  
 Max Occupants : N/R  
 Manned or Unmanned : N/R  
 New Facility : N/R  
 Nearest Cross Street : E1400 RD  
 Facility Phone : 785-841-5331  
 Facility Latitude : 39.028611  
 Facility Longitude : -95.241159  
 Section/Township/Range : N/R  
 SIC : 5191 - FARM SUPPLIES  
 NAICS : 424910 - Farm Supplies Merchant Wholesalers  
 Section Code : 312  
 Submission Type : 0  
 Send to : 0  
 Rep Name : BOB NUTT  
 Rep Title : CROP PRODUCTION MGR  
 Download : 3  
 QA : 0  
 Tier Contact Name : BOB NUTT  
 Tier Title : CROP PROD MGR  
 Tier Email : bobn106@sbcglobal.net  
 Tier Phone : 785-242-1032  
 Tier Phone 24 : 785-418-5031

Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**EnviroSite ID:** 2429793  
**EPA ID:** N/R

T 2 - KS **(cont.)**

Subject 302 :	Y
Subject 112 :	Y
Emergency Name 1 :	CLARK WENGER
Emergency Title 1 :	GEN MGR
Emergency Phone 1 :	785-242-5170
Emergency 24 Phone 1 :	913-206-3849
Emergency Email 1 :	N/R
Emergency Name 2 :	DAVID KAINZ
Emergency Title 2 :	BRANCH MGR
Emergency Phone 2 :	785-418-7952
Emergency 24 Phone 2 :	785-893-1937
Emergency Email 2 :	N/R
Last Date in Agency List :	2021-03-05

Chemical

Chemical ID :	952541
Chemical Name :	ANHYDROUS AMMONIA
CAS Number :	7664-41-7
Trade Secret :	0
EHS :	1
Solid :	N/R
Liquid :	1
Gas :	1
Pure :	N/R
Mix :	N/R
Fire :	N/R
Pressure :	N/R
Reactive :	N/R
Delayed :	N/R
Immediate :	N/R
Max Daily Amount :	355000
Avg Daily Amount :	130000
Days on Site :	365
Opt Report :	1

Chemical Storage

Storage ID :	1189348
Business ID Remove :	0
Facility ID Remove :	0
User ID Remove :	0
Chemical ID Remove :	0
Chemical Name :	ANHYDROUS AMMONIA
Container :	Above Ground Tank
Pressure :	Greater than ambient pressure
Temperature :	Ambient temperature
Storage Location :	EAST END OF LOT
Confidential :	N/R

Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**EnviroSite ID:** 2429793  
**EPA ID:** N/R

T 2 - KS **(cont.)**

Mixture

Mixture ID : 309282  
 Chemical ID : 952541  
 Chemical Name : ANHYDROUS AMMONIA  
 Component : ANHYDROUS AMMONIA  
 Percent : N/R  
 CAS Number : 7664-41-7

User

User ID : 45816  
 Group ID : 1  
 Name : OTTAWA COOP ASSN  
 Address : PO BOX 680, OTTAWA, KS 66067  
 Country : USA  
 DUN BRAD : N/R  
 Phone : 785-242-5170  
 Mailing Name : N/R  
 Mailing Street : KS  
 Mailing Attn. : N/R  
 Mailing Phone : N/R  
 Submitter : BOB NUTT  
 Signature : BOB NUTT  
 County : N/R  
 Region : 0  
 Email : bobn106@sbcglobal.net

Site Details

Facility ID : 357363  
 RMP Facility ID : 1000 0010 5469  
 PID Number : KS0237  
 FID Number : DG00257  
 TRIF ID : n/a  
 Track ID : moestrei  
 Track Date : 2019-04-10 19:36:11  
 Created Date : N/R  
 Updated Date : 2019-04-10  
 Report Year : 2018  
 Annual or Revision : annual  
 Max Occupants : N/R  
 Manned or Unmanned : N/R  
 New Facility : N/R  
 Nearest Cross Street : E1400 RD  
 Facility Phone : (785)841-5331  
 Facility Latitude : 39.028611  
 Facility Longitude : -95.241159  
 Section/Township/Range : N/R  
 SIC : 5191 - FARM SUPPLIES  
 NAICS : 424910 - Farm Supplies Merchant Wholesalers  
 Section Code : 312  
 Submission Type : 0  
 Send to : 0  
 Rep Name : BOB NUTT

Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**EnviroSite ID:** 2429793  
**EPA ID:** N/R

T 2 - KS **(cont.)**

Rep Title :	CROP PRODUCTION MGR
Download :	3
QA :	0
Tier Contact Name :	BOB NUTT
Tier Title :	CROP PROD MGR
Tier Email :	bobn106@sbcglobal.net
Tier Phone :	785-242-1032
Tier Phone 24 :	785-418-5031
Subject 302 :	Y
Subject 112 :	Y
Emergency Name 1 :	CLARK WENGER
Emergency Title 1 :	GEN MGR
Emergency Phone 1 :	(785)242-5170
Emergency 24 Phone 1 :	913-206-3849
Emergency Email 1 :	N/R
Emergency Name 2 :	DAVID KAINZ
Emergency Title 2 :	BRANCH MGR
Emergency Phone 2 :	785-418-7952
Emergency 24 Phone 2 :	785-893-1937
Emergency Email 2 :	N/R
Last Date in Agency List :	2020-01-24

Chemical

Chemical ID :	903910
Chemical Name :	ANHYDROUS AMMONIA (82-0-0)
CAS Number :	7664417
Trade Secret :	0
EHS :	1
Solid :	N/R
Liquid :	1
Gas :	1
Pure :	N/R
Mix :	N/R
Fire :	N/R
Pressure :	1
Reactive :	N/R
Delayed :	N/R
Immediate :	1
Max Daily Amount :	245140
Avg Daily Amount :	122570
Days on Site :	365
Opt Report :	1

Chemical ID :	952541
Chemical Name :	ANHYDROUS AMMONIA
CAS Number :	7664-41-7
Trade Secret :	0
EHS :	1
Solid :	N/R
Liquid :	1
Gas :	1
Pure :	N/R
Mix :	N/R

Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**EnviroSite ID:** 2429793  
**EPA ID:** N/R

T 2 - KS **(cont.)**

Fire : N/R  
 Pressure : N/R  
 Reactive : N/R  
 Delayed : N/R  
 Immediate : N/R  
 Max Daily Amount : 355000  
 Avg Daily Amount : 130000  
 Days on Site : 365  
 Opt Report : 1

Chemical Storage

Storage ID : 1189348  
 Business ID Remove : 0  
 Facility ID Remove : 0  
 User ID Remove : 0  
 Chemical ID Remove : 0  
 Chemical Name : ANHYDROUS AMMONIA  
 Container : Above Ground Tank  
 Pressure : Greater than ambient pressure  
 Temperature : Ambient temperature  
 Storage Location : EAST END OF LOT  
 Confidential : N/R

Storage ID : 1189348  
 Business ID Remove : 0  
 Facility ID Remove : 0  
 User ID Remove : 0  
 Chemical ID Remove : 0  
 Chemical Name : ANHYDROUS AMMONIA (82-0-0)  
 Container : Above Ground Tank  
 Pressure : Greater than ambient pressure  
 Temperature : Ambient temperature  
 Storage Location : EAST END OF LOT  
 Confidential : N/R

Mixture

Mixture ID : 270430  
 Chemical ID : 952541  
 Chemical Name : ANHYDROUS AMMONIA  
 Component : ANHYDROUS AMMONIA  
 Percent : N/R  
 CAS Number : 7664-41-7

User

User ID : 45816  
 Group ID : 1  
 Name : OTTAWA COOP ASSN  
 Address : PO BOX 680, OTTAWA, KS 66067  
 Country : USA

Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**Envirosite ID:** 2429793  
**EPA ID:** N/R

T 2 - KS **(cont.)**

DUN BRAD : N/R  
 Phone : (785)242-5170  
 Mailing Name : OTTAWA COOP ASSN  
 Mailing Street : PO BOX 680, OTTAWA, KS 66067  
 Mailing Attn. : BOB NUTT  
 Mailing Phone : (785)242-5170  
 Submitter : BOB NUTT  
 Signature : BOB NUTT  
 County : N/R  
 Region : 0  
 Email : bobn106@sbcglobal.net

Site Details

Facility ID : 357363  
 RMP Facility ID : 100000105469  
 PID Number : KS0237  
 FID Number : DG00257  
 TRIF ID : N/R  
 Track ID : xzi248  
 Track Date : 2017-02-23 16:43:02  
 Created Date : N/R  
 Updated Date : 2017-02-23  
 Report Year : 2017  
 Annual or Revision : annual  
 Max Occupants : N/R  
 Manned or Unmanned : N/R  
 New Facility : N/R  
 Nearest Cross Street : E1400 Road  
 Facility Phone : (785)841-5331  
 Facility Latitude : 39  
 Facility Longitude : -95  
 Section/Township/Range : SEC: 7, TWP: 12S, RNG: 20E  
 SIC : 5191 - FARM SUPPLIES  
 NAICS : 115116 - Farm Management Services  
 Section Code : 302  
 Submission Type : 0  
 Send to : 0  
 Rep Name : BOB NUTT  
 Rep Title : CROP PRODUCTION MGR  
 Download : 3  
 QA : 0  
 Tier Contact Name : BOB NUTT  
 Tier Title : CROP PRODUCTION MANAGER  
 Tier Email : bobn106@sbcglobal.net  
 Tier Phone : 785-242-1032  
 Tier Phone 24 : 785-418-5031  
 Subject 302 : Y  
 Subject 112 : N  
 Emergency Name 1 : CLARK WENGER  
 Emergency Title 1 : GEN MGR  
 Emergency Phone 1 : (785)242-5170  
 Emergency 24 Phone 1 : 913-206-3849  
 Emergency Email 1 : N/R  
 Emergency Name 2 : DAVID KAINZ

Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**EnviroSite ID:** 2429793  
**EPA ID:** N/R

T 2 - KS **(cont.)**

Emergency Title 2 : BRANCH MGR  
 Emergency Phone 2 : 785-418-7952  
 Emergency 24 Phone 2 : 785-893-1937  
 Emergency Email 2 : N/R  
 Last Date in Agency List : 2018-04-11

Chemical

Chemical ID : 903910  
 Chemical Name : ANHYDROUS AMMONIA (82-0-0)  
 CAS Number : 7664417  
 Trade Secret : 0  
 EHS : 1  
 Solid : N/R  
 Liquid : 1  
 Gas : 1  
 Pure : N/R  
 Mix : N/R  
 Fire : N/R  
 Pressure : 1  
 Reactive : N/R  
 Delayed : N/R  
 Immediate : 1  
 Max Daily Amount : 245140  
 Avg Daily Amount : 122570  
 Days on Site : 365  
 Opt Report : 1

Chemical ID : 952541  
 Chemical Name : ANHYDROUS AMMONIA  
 CAS Number : 7664-41-7  
 Trade Secret : 0  
 EHS : 1  
 Solid : N/R  
 Liquid : 1  
 Gas : 1  
 Pure : N/R  
 Mix : N/R  
 Fire : N/R  
 Pressure : N/R  
 Reactive : N/R  
 Delayed : N/R  
 Immediate : N/R  
 Max Daily Amount : 355000  
 Avg Daily Amount : 130000  
 Days on Site : 365  
 Opt Report : 1

Chemical Storage

Storage ID : 1189348  
 Business ID Remove : 0  
 Facility ID Remove : 0



Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**EnviroSite ID:** 2429793  
**EPA ID:** N/R

T 2 - KS **(cont.)**

User ID Remove : 0  
 Chemical ID Remove : 0  
 Chemical Name : ANHYDROUS AMMONIA  
 Container : Above Ground Tank  
 Pressure : Greater than ambient pressure  
 Temperature : Ambient temperature  
 Storage Location : EAST END OF LOT  
 Confidential : N/R

Storage ID : 1189348  
 Business ID Remove : 0  
 Facility ID Remove : 0  
 User ID Remove : 0  
 Chemical ID Remove : 0  
 Chemical Name : ANHYDROUS AMMONIA (82-0-0)  
 Container : Above Ground Tank  
 Pressure : Greater than ambient pressure  
 Temperature : Ambient temperature  
 Storage Location : EAST END OF LOT  
 Confidential : N/R

Mixture

Mixture ID : 270430  
 Chemical ID : 952541  
 Chemical Name : ANHYDROUS AMMONIA  
 Component : ANHYDROUS AMMONIA  
 Percent : N/R  
 CAS Number : 7664-41-7

User

User ID : 45816  
 Group ID : 1  
 Name : OTTAWA COOP ASSN  
 Address : PO BOX 680, OTTAWA, KS 66067  
 Country : USA  
 DUN BRAD : N/R  
 Phone : (785)242-5170  
 Mailing Name : OTTAWA COOP ASSN  
 Mailing Street : PO BOX 680, OTTAWA, KS 66067  
 Mailing Attn. : BOB NUTT  
 Mailing Phone : (785)242-5170  
 Submitter : BOB NUTT  
 Signature : BOB NUTT  
 County : N/R  
 Region : 0  
 Email : bobn106@sbcglobal.net

Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**Envirosite ID:** 2429793  
**EPA ID:** N/R

T 2 - KS **(cont.)**

Site Details

Facility ID :	357363
RMP Facility ID :	1000 0010 5469
PID Number :	KS0237
FID Number :	DG00257
TRIF ID :	n/a
Track ID :	moestrei
Track Date :	20210506 024807
Created Date :	N/R
Updated Date :	2021-05-05
Report Year :	2020
Annual or Revision :	annual
Max Occupants :	N/R
Manned or Unmanned :	N/R
New Facility :	N/R
Nearest Cross Street :	E1400 RD
Facility Phone :	785-841-5331
Facility Latitude :	39.0286110
Facility Longitude :	-95.2411590
Section/Township/Range :	N/R
SIC :	5191 - FARM SUPPLIES
NAICS :	424910 - Farm Supplies Merchant Wholesalers
Section Code :	312
Submission Type :	0
Send to :	0
Rep Name :	BOB NUTT
Rep Title :	CROP PRODUCTION MGR
Download :	3
QA :	0
Tier Contact Name :	BOB NUTT
Tier Title :	CROP PROD MGR
Tier Email :	bobn106@sbcglobal.net
Tier Phone :	785-242-1032
Tier Phone 24 :	785-418-5031
Subject 302 :	Y
Subject 112 :	Y
Emergency Name 1 :	CLARK WENGER
Emergency Title 1 :	GEN MGR
Emergency Phone 1 :	785-242-5170
Emergency 24 Phone 1 :	913-206-3849
Emergency Email 1 :	N/R
Emergency Name 2 :	DAVID KAINZ
Emergency Title 2 :	BRANCH MGR
Emergency Phone 2 :	785-418-7952
Emergency 24 Phone 2 :	785-893-1937
Emergency Email 2 :	N/R
Last Date in Agency List :	2022-01-17

Chemical

Chemical ID :	952541
Chemical Name :	ANHYDROUS AMMONIA
CAS Number :	7664-41-7
Trade Secret :	0
EHS :	1

Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**EnviroSite ID:** 2429793  
**EPA ID:** N/R

T 2 - KS **(cont.)**

Solid : N/R  
 Liquid : 1  
 Gas : 1  
 Pure : N/R  
 Mix : N/R  
 Fire : N/R  
 Pressure : N/R  
 Reactive : N/R  
 Delayed : N/R  
 Immediate : N/R  
 Max Daily Amount : 355000  
 Avg Daily Amount : 130000  
 Days on Site : 365  
 Opt Report : 1

Chemical Storage

Storage ID : 1189348  
 Business ID Remove : 0  
 Facility ID Remove : 0  
 User ID Remove : 0  
 Chemical ID Remove : 0  
 Chemical Name : ANHYDROUS AMMONIA  
 Container : Above Ground Tank  
 Pressure : Greater than ambient pressure  
 Temperature : Ambient temperature  
 Storage Location : EAST END OF LOT  
 Confidential : N/R

Mixture

Mixture ID : 339743  
 Chemical ID : 952541  
 Chemical Name : ANHYDROUS AMMONIA  
 Component : ANHYDROUS AMMONIA  
 Percent : N/R  
 CAS Number : 7664-41-7

User

User ID : 45816  
 Group ID : 1  
 Name : OTTAWA COOP ASSN  
 Address : PO BOX 680, OTTAWA, KS 66067  
 Country : USA  
 DUN BRAD : N/R  
 Phone : 785-242-5170  
 Mailing Name : N/R  
 Mailing Street : KS  
 Mailing Attn. : N/R  
 Mailing Phone : N/R  
 Submitter : BOB NUTT  
 Signature : BOB NUTT

Map Id: A6  
 Direction: E  
 Distance: 0.070 mi., 371 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** MIDLAND COOP | CAPITAL CITY OIL-  
 MIDLAND  
 1941 DIAGONAL RD  
 LAWRENCE | MIDLAND, KS 66046

**Database(s) :** [ERNS, FRS, T 2 - KS] **(cont.)**

**Envirosite ID:** 2429793  
**EPA ID:** N/R

T 2 - KS **(cont.)**

County : N/R  
 Region : 0  
 Email : bobn106@sbcglobal.net

Map Id: B7  
 Direction: ENE  
 Distance: 0.080 mi., 423 ft.  
 Elevation: 840 ft.  
 Relative: Higher

**Site Name :** N/R  
 N/R  
 Lawrence, KS

**Database(s) :** [HIST SPILLS - KS]

**Envirosite ID:** 41432597  
**EPA ID:** N/R

HIST SPILLS - KS

Facility Address : Lawrence, KS  
 County : N/R

Discovery Date : 1986-02-12  
 Spill Date : N/R  
 Reported Date : 1986-02-12  
 Status : Closed  
 Sta Closed Date : 1986-02-13  
 Sta Followup Req : N/R  
 EPA Number : N/R  
 Spill Number : 17440  
 Spill or Complaint : Spill  
 Spill Stage : Initial Assessment  
 Cause : equipment failure  
 Source Description : N/R  
 Cause Description : N/R  
 Damage Description : N/R  
 Response Action Taken : N/R  
 Cleanup Description : N/R  
 Cleanup Method : physical removal  
 Med Affected : soil  
 Med Waterway : N/R  
 Med Waterway Type : N/R  
 Inc District : NE  
 Inc GPS Source : N/R  
 Inc Highway Designation : N/R  
 Inc Highway Type : N/R  
 Inc KCC District : Chanute  
 Inc Mile Post : N/R  
 Inc Off Latitude : 39.03241  
 Inc Off Longitude : -95.24085  
 Inc Quarter 1 : SW  
 Inc Quarter 2 : SW  
 Inc Quarter 3 : NW  
 Inc Quarter 4 : N/R  
 Inc Range : 20E  
 Inc Section : 06

Map Id: B7  
 Direction: ENE  
 Distance: 0.080 mi., 423 ft.  
 Elevation: 840 ft.  
 Relative: Higher

**Site Name :** N/R  
 N/R  
 Lawrence, KS  
**Database(s) :** [HIST SPILLS - KS] (*cont.*)

**Envirosite ID:** 41432597  
**EPA ID:** N/R

HIST SPILLS - KS (*cont.*)

Inc Township : 12S  
 Comments : N/R  
 Last Date in Agency List : 2016-03-07

Map Id: B8  
 Direction: ENE  
 Distance: 0.080 mi., 425 ft.  
 Elevation: 840 ft.  
 Relative: Higher

**Site Name :** KPL  
 39.032403, -95.240842  
 Lawrence, KS  
**Database(s) :** [SPILLS - KS]

**Envirosite ID:** 20811785  
**EPA ID:** N/R

SPILLS - KS

Facility Name : KPL  
 Facility Address : Lawrence  
 County : Douglas

Site Details

Spill Date : 1986-02-12  
 Closed Date : 1986-02-13  
 Incident Date : 1986-02-12  
 Incident ID : 9207AADD3D67429FACA03CE0D18D0512  
 Spill ID : KDHE-17440  
 Spill Status : Closed  
 Spill Cause : equipment failure  
 Other Cause : N/R  
 Source : fixed facility,transformer  
 Other Source : N/R  
 Medium Affected : soil  
 Other Medium : N/R  
 Water Way Type : N/R  
 Water Way Name : N/R  
 Spiller License : N/R  
 Lead Agency : KDHE  
 KDHE District : NE  
 Facility Number : N/R  
 Facility Name : N/R  
 Approx Location : N/R  
 Section/Township/Range : SEC: 06, TWP: 12S, RNG: 20E  
 Material Combo : 5 gallons of electrical insulating oil/mineral oil  
 Material Type : transformer oil (non-PCB)  
 NRC Number : N/R  
 NRC Notification : Unknown  
 LEPC Notified : N/R  
 Spiller Action Taken : N/R  
 Cleanup Method : physical removal  
 Latitude : 39.03241  
 Longitude : -95.24085  
 Detailed Report : [Click here for hyperlink provided by the agency.](#)  
 Last Date in Agency List : 2021-12-28

Map Id: 9  
 Direction: SW  
 Distance: 0.106 mi., 559 ft.  
 Elevation: 825 ft.  
 Relative: Lower

**Site Name :** BURR COMPLAINT  
 1927 E 1300 RD  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS]

**EnviroSite ID:** 2428865  
**EPA ID:** N/R

DEL HWS - KS

Facility Name :	BURR COMPLAINT
Facility Address :	1927 E 1300 RD, LAWRENCE
County :	DOUGLAS
Discovery Date :	N/R
Site ID :	1823
Project Code :	C402371893
PM Name :	BER - A&R
Site Status :	Resolved
County Abbreviation :	DG
District Office :	NEDO
Riverbasin :	N/R
Aquifer :	N/R
Other Aquifers :	N/R
Aquifer Yield :	501-1000 gpm
Parent PC :	N/R
Parent Name :	N/R
Cerclis Number :	N/R
Depth to GW :	21-30 feet
Depth to Bedrock :	51-100 feet
GW Flow Direction :	W-NW
Acres Affected :	<5 acres
Waste Present :	N
Product Present :	N
Program Name :	Site Assessment
Other Names :	N/R
Lead Agency :	BER - Assessment and Restoration
Contaminant Type :	N/R
Media Act :	N/R
Media Pot :	N/R
Source :	N/R
Land Use :	Agricultural, Residential
Well Type :	Domestic, Irrigation
Waste :	N/R
Product :	N/R
Receptor Act :	N/R
Receptor Pot :	N/R
Air Remediation :	N/R
Soil Remediation :	N/R
Water Remediation :	N/R
IR Remediation :	N/R
Environmental Use Control in Place :	No
EUCA Number :	N/R
Date EUCA Signed :	N/R
Latitude :	39.02025
Longitude :	-95.2628

Site Narrative :

The site was identified when Ms. Patti Burr related to KDHE that she had received medical test results indicating elevated levels of lead, mercury and cadmium in her blood, and had experienced historic hair loss. While the blood and urine levels were not "dangerously high", the results indicated "elevated" levels as reported to her in 2004. No previous regulatory concerns were identified on the property itself; however the former City of Lawrence dump is located approximately one mile northwest of the Burr property, and the LEC is located approximately one mile south. Ms. Burr indicated in the KDHE interview that she had used a former sandpoint well for over 15 years, and has noticed gradual health changes in that time. A new well was installed approximately 3 years ago, and the

Map Id: 9  
 Direction: SW  
 Distance: 0.106 mi., 559 ft.  
 Elevation: 825 ft.  
 Relative: Lower

**Site Name :** BARR COMPLAINT  
 1927 E 1300 RD  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS] **(cont.)**

**EnviroSite ID:** 2428865  
**EPA ID:** N/R

DEL HWS - KS **(cont.)**

sandpoint is not operable (nor was sampled during this investigation). The house has a filtration system, and samples were obtained both pre- and post-filter. After obtaining property access, KDHE sampled the Burr Property and off-site areas. The objective of the sampling activity was to evaluate the concerns especially of heavy metals on the property. Since metals are naturally occurring, a series of off-site background and potential downwind locations were also selected for surficial soil samples. Five (5) off-site sample locations were selected north (prevailing upwind direction) of the LEC, and two (2) south of the Burr property. Eleven samples were collected on-site. Soil samples were collected with stainless steel trowels into prepared laboratory containers after homogenization. Background samples were collected on February 22, 2005. On-site samples were collected on February 23, 2005. Four direct push locations were also sampled with KDHE's Geoprobe unit for filtered metals and VOCs on February 23, 2005. Ground water samples were obtained by advancing a mill slot to the desired depth, purging a minimum of two (2) liters from probe rods with disposable polyethylene tubing and a stainless steel check valve, and obtaining the samples. The private well was sampled by allowing a 15-minute high volume purge, and then reducing the flow for sampling. The private well was sampled both before and after the filtration unit. Since direct-push samples had to be filtered because of turbidity, all water samples collected for metals analysis were filtered. Samples were submitted to KDHE's Health and Environment Laboratory for analysis. Soil and water samples were submitted for total metals analysis by EPA Methods 6010 (except mercury) and EPA Method 245.1 for mercury. Water samples were also submitted for VOC analysis by EPA Method 8260. Because SVOCs, especially PAHs have historically been released by coal power plants, SVOCs were also analyzed by EPA Method 8270 for soil samples. A. Ground Water Results: KDHE's laboratory reported no detections of VOCs. Arsenic was detected below the maximum contaminant level (MCL) of 10 ug/l in the private well samples both pre- and post-filtering system. Arsenic was detected at 11 ug/l, slightly above its MCL in ground water probe sample BP-2, but below in the remainder of ground water samples. Cadmium, mercury and lead were not detected in any ground water samples. B. Soil Samples: A mean and standard deviation was calculated for the metals results identified in the background samples. One commonly utilized convention to determine if metals results are significantly elevated above background is to use a mean plus two standard deviations (Mean + 2s) concentration. CERCLA guidance relies on a three times the maximum background sample results to attribute a release; however for some constituents that have low residential action levels this may not always be sufficiently sensitive to evaluate potential releases for risk. The three time

Last Date in Agency List : 2021-10-19

Activity Details

Activity Start Date : 2004-08-30  
 Activity End Date : 2005-05-01  
 Activity Type : Site Reconnaissance and Evaluation  
 Activity Status : Completed

Activity Start Date : 2004-06-25  
 Activity End Date : 2004-08-23  
 Activity Type : Initial Site Screening  
 Activity Status : Completed

Activity Start Date : N/R  
 Activity End Date : 2005-06-30  
 Activity Type : Resolved  
 Activity Status : Completed

FRS

Facility Name : BARR COMPLAINT  
 Facility Address : 1927 E 1300 RD, LAWRENCE, KS 66044  
 County : DOUGLAS

Map Id: 9  
 Direction: SW  
 Distance: 0.106 mi., 559 ft.  
 Elevation: 825 ft.  
 Relative: Lower

**Site Name :** BURR COMPLAINT  
 1927 E 1300 RD  
 LAWRENCE, KS 66044

**Database(s) :** [DEL HWS - KS, FRS, SRP - KS] **(cont.)**

**EnviroSite ID:** 2428865  
**EPA ID:** N/R

**FRS (cont.)**

Site Details

Registry ID : 110017938838  
 FRS Facility URL : [Click here for hyperlink provided by the agency.](#)  
 Last Date in Agency List : 2022-02-17

Source Description

Source Description :

The Kansas Facility Profiler (KS-FP) is a geographically-based data warehouse that presents information about facilities and locations of interest to the Kansas Department of Health and Environment (KDHE). It has in excess of twenty environmental interests which contain information on closed facilities, completed cleanups, and past operations, as well as data on current operations and activities.

FRS Environmental Interest

Source and System ID : KS-FP - 4615782

SRP - KS

Facility Name : BURR COMPLAINT  
 Facility Address : 1927 E 1300 RD, LAWRENCE  
 County : DOUGLAS

Discovery Date : N/R  
 Site ID : 1823  
 Project Code : C402371893  
 PM Name : BER - A&R  
 Site Status : Resolved  
 County Abbreviation : DG  
 District Office : NEDO  
 Riverbasin : N/R  
 Aquifer : N/R  
 Other Aquifers : N/R  
 Aquifer Yield : 501-1000 gpm  
 Parent PC : N/R  
 Parent Name : N/R  
 Cerclis Number : N/R  
 Depth to GW : 21-30 feet  
 Depth to Bedrock : 51-100 feet  
 GW Flow Direction : W-NW  
 Acres Affected : <5 acres  
 Waste Present : N  
 Product Present : N  
 Program Name : Site Assessment  
 Other Names : N/R  
 Lead Agency : BER - Assessment and Restoration  
 Contaminant Type : N/R  
 Media Act : N/R  
 Media Pot : N/R  
 Source : N/R  
 Land Use : Agricultural, Residential  
 Well Type : Domestic, Irrigation



Map Id: 9  
 Direction: SW  
 Distance: 0.106 mi., 559 ft.  
 Elevation: 825 ft.  
 Relative: Lower

**Site Name :** BURR COMPLAINT  
 1927 E 1300 RD  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS] **(cont.)**

**EnviroSite ID:** 2428865  
**EPA ID:** N/R

SRP - KS **(cont.)**

Waste : N/R  
 Product : N/R  
 Receptor Act : N/R  
 Receptor Pot : N/R  
 Air Remediation : N/R  
 Soil Remediation : N/R  
 Water Remediation : N/R  
 IR Remediation : N/R  
 Environmental Use Control in Place : No  
 EUCA Number : N/R  
 Date EUCA Signed : N/R  
 Latitude : 39.02025  
 Longitude : -95.2628

Site Narrative :

The site was identified when Ms. Patti Burr related to KDHE that she had received medical test results indicating elevated levels of lead, mercury and cadmium in her blood, and had experienced historic hair loss. While the blood and urine levels were not "dangerously high", the results indicated "elevated" levels as reported to her in 2004. No previous regulatory concerns were identified on the property itself; however the former City of Lawrence dump is located approximately one mile northwest of the Burr property, and the LEC is located approximately one mile south. Ms. Burr indicated in the KDHE interview that she had used a former sandpoint well for over 15 years, and has noticed gradual health changes in that time. A new well was installed approximately 3 years ago, and the sandpoint is not operable (nor was sampled during this investigation). The house has a filtration system, and samples were obtained both pre- and post-filter. After obtaining property access, KDHE sampled the Burr Property and off-site areas. The objective of the sampling activity was to evaluate the concerns especially of heavy metals on the property. Since metals are naturally occurring, a series of off-site background and potential downwind locations were also selected for surficial soil samples. Five (5) off-site sample locations were selected north (prevailing upwind direction) of the LEC, and two (2) south of the Burr property. Eleven samples were collected on-site. Soil samples were collected with stainless steel trowels into prepared laboratory containers after homogenization. Background samples were collected on February 22, 2005. On-site samples were collected on February 23, 2005. Four direct push locations were also sampled with KDHE's Geoprobe unit for filtered metals and VOCs on February 23, 2005. Ground water samples were obtained by advancing a mill slot to the desired depth, purging a minimum of two (2) liters from probe rods with disposable polyethylene tubing and a stainless steel check valve, and obtaining the samples. The private well was sampled by allowing a 15-minute high volume purge, and then reducing the flow for sampling. The private well was sampled both before and after the filtration unit. Since direct-push samples had to be filtered because of turbidity, all water samples collected for metals analysis were filtered. Samples were submitted to KDHE's Health and Environment Laboratory for analysis. Soil and water samples were submitted for total metals analysis by EPA Methods 6010 (except mercury) and EPA Method 245.1 for mercury. Water samples were also submitted for VOC analysis by EPA Method 8260. Because SVOCs, especially PAHs have historically been released by coal power plants, SVOCs were also analyzed by EPA Method 8270 for soil samples. A. Ground Water Results: KDHE's laboratory reported no detections of VOCs. Arsenic was detected below the maximum contaminant level (MCL) of 10 ug/l in the private well samples both pre- and post-filtering system. Arsenic was detected at 11 ug/l, slightly above its MCL in ground water probe sample BP-2, but below in the remainder of ground water samples. Cadmium, mercury and lead were not detected in any ground water samples. B. Soil Samples: A mean and standard deviation was calculated for the metals results identified in the background samples. One commonly utilized convention to determine if metals results are significantly elevated above background is to use a mean plus two standard deviations (Mean + 2s) concentration. CERCLA guidance relies on a three times the maximum background sample results to attribute a release; however for some constituents that have low residential action levels this may not always be sufficiently sensitive to evaluate potential releases for risk. The three time

Last Date in Agency List : 2021-10-19

Map Id: 9  
 Direction: SW  
 Distance: 0.106 mi., 559 ft.  
 Elevation: 825 ft.  
 Relative: Lower

**Site Name :** BURR COMPLAINT  
 1927 E 1300 RD  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS] **(cont.)**

**Envirosite ID:** 2428865  
**EPA ID:** N/R

SRP - KS **(cont.)**

Activity Details

Activity Start Date :	2004-08-30
Activity End Date :	2005-05-01
Activity Type :	Site Reconnaissance and Evaluation
Activity Status :	Completed
Activity Start Date :	2004-06-25
Activity End Date :	2004-08-23
Activity Type :	Initial Site Screening
Activity Status :	Completed
Activity Start Date :	N/R
Activity End Date :	2005-06-30
Activity Type :	Resolved
Activity Status :	Completed

Map Id: C10  
 Direction: W  
 Distance: 0.194 mi., 1022 ft.  
 Elevation: 837 ft.  
 Relative: Higher

**Site Name :** LAWRENCE CITY LANDFILL  
 N/R  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS]

**Envirosite ID:** 20539345  
**EPA ID:** N/R

DEL HWS - KS

Facility Name :	LAWRENCE CITY LANDFILL
Facility Address :	LAWRENCE
County :	DOUGLAS
Discovery Date :	N/R
Site ID :	2514
Project Code :	C402372566
PM Name :	TRANSFERRED
Site Status :	Transferred out of Bureau
County Abbreviation :	DG
District Office :	NEDO
Riverbasin :	KS - Lower Republican
Aquifer :	N/R
Other Aquifers :	N/R
Aquifer Yield :	N/R
Parent PC :	N/R
Parent Name :	N/R
Cerclis Number :	N/R
Depth to GW :	0-10 feet
Depth to Bedrock :	21-30 feet
GW Flow Direction :	S
Acres Affected :	26-500 acres
Waste Present :	Y
Product Present :	N

Map Id: C10  
 Direction: W  
 Distance: 0.194 mi., 1022 ft.  
 Elevation: 837 ft.  
 Relative: Higher

**Site Name :** LAWRENCE CITY LANDFILL  
 N/R  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS] **(cont.)**

**Envirosite ID:** 20539345  
**EPA ID:** N/R

DEL HWS - KS **(cont.)**

Program Name : Landfill  
 Other Names : N/R  
 Lead Agency : BER - Assessment and Restoration  
 Contaminant Type : VOC  
 Media Act : N/R  
 Media Pot : N/R  
 Source : Closed Permitted Landfill  
 Land Use : Other (see Site Narrative)  
 Well Type : N/R  
 Waste : Solid Waste  
 Product : N/R  
 Receptor Act : N/R  
 Receptor Pot : N/R  
 Air Remediation : N/R  
 Soil Remediation : N/R  
 Water Remediation : N/R  
 IR Remediation : N/R  
 Environmental Use Control in Place : No  
 EUCA Number : N/R  
 Date EUCA Signed : N/R  
 Latitude : 39.029202  
 Longitude : -95.271004

Site Narrative :

The site is located approximately seven miles northwest of the city of Lawrence. It lies along the east side of the Kansas river between the river and the levy. The landfill operations began in 1970 and continued until 1981. Monitoring wells were installed in 1973 by KU as part of a research project. More wells were installed in 1975. Out of the total 24 wells at least five are recorded as destroyed. Only seven have been located since 2008. The wells are made of galvanized steel and may not be suitable for sampling. None of the wells has been sampled since 1986. An investigation took place in 1986 as a result of review of the landfill records and proximity to the Kansas River. Groundwater, sediment and surface water samples were collected to determine if the landfill was adversely affecting the river. Based on the results the Landfill was determined to be not significantly impacting the river in a negative way. Once the landfill was closed it was designated as a wildlife preserve and continues to be used as such. The last site inspection was in November of 2008. Site transferred to Bureau of Waste Management 1/1/12.

Last Date in Agency List : 2021-10-19

Activity Details

Activity Start Date : N/R  
 Activity End Date : 2012-01-01  
 Activity Type : Transfer Out of Bureau  
 Activity Status : Completed

FRS

Facility Name : LAWRENCE CITY LANDFILL  
 Facility Address : LAWRENCE, KS 66044  
 County : DOUGLAS

Site Details

Registry ID : 110041302202  
 FRS Facility URL : [Click here for hyperlink provided by the agency.](#)

Map Id: C10  
 Direction: W  
 Distance: 0.194 mi., 1022 ft.  
 Elevation: 837 ft.  
 Relative: Higher

**Site Name :** LAWRENCE CITY LANDFILL  
 N/R  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS] **(cont.)**

**Envirosite ID:** 20539345  
**EPA ID:** N/R

**FRS (cont.)**

Last Date in Agency List : 2022-02-17

Source Description

Source Description :

The Kansas Facility Profiler (KS-FP) is a geographically-based data warehouse that presents information about facilities and locations of interest to the Kansas Department of Health and Environment (KDHE). It has in excess of twenty environmental interests which contain information on closed facilities, completed cleanups, and past operations, as well as data on current operations and activities.

FRS Environmental Interest

Source and System ID : KS-FP - 71259191

SRP - KS

Facility Name : LAWRENCE CITY LANDFILL  
 Facility Address : LAWRENCE  
 County : DOUGLAS

Discovery Date : N/R  
 Site ID : 2514  
 Project Code : C402372566  
 PM Name : TRANSFERRED  
 Site Status : Transferred out of Bureau  
 County Abbreviation : DG  
 District Office : NEDO  
 Riverbasin : KS - Lower Republican  
 Aquifer : N/R  
 Other Aquifers : N/R  
 Aquifer Yield : N/R  
 Parent PC : N/R  
 Parent Name : N/R  
 Cerclis Number : N/R  
 Depth to GW : 0-10 feet  
 Depth to Bedrock : 21-30 feet  
 GW Flow Direction : S  
 Acres Affected : 26-500 acres  
 Waste Present : Y  
 Product Present : N  
 Program Name : Landfill  
 Other Names : N/R  
 Lead Agency : BER - Assessment and Restoration  
 Contaminant Type : VOC  
 Media Act : N/R  
 Media Pot : N/R  
 Source : Closed Permitted Landfill  
 Land Use : Other (see Site Narrative)  
 Well Type : N/R  
 Waste : Solid Waste  
 Product : N/R  
 Receptor Act : N/R

Map Id: C10  
 Direction: W  
 Distance: 0.194 mi., 1022 ft.  
 Elevation: 837 ft.  
 Relative: Higher

**Site Name :** LAWRENCE CITY LANDFILL  
 N/R  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS] **(cont.)**

**EnviroSite ID:** 20539345  
**EPA ID:** N/R

SRP - KS **(cont.)**

Receptor Pot : N/R  
 Air Remediation : N/R  
 Soil Remediation : N/R  
 Water Remediation : N/R  
 IR Remediation : N/R  
 Environmental Use Control in Place : No  
 EUCA Number : N/R  
 Date EUCA Signed : N/R  
 Latitude : 39.029202  
 Longitude : -95.271004

Site Narrative :

The site is located approximately seven miles northwest of the city of Lawrence. It lies along the east side of the Kansas river between the river and the levy. The landfill operations began in 1970 and continued until 1981. Monitoring wells were installed in 1973 by KU as part of a research project. More wells were installed in 1975. Out of the total 24 wells at least five are recorded as destroyed. Only seven have been located since 2008. The wells are made of galvanized steel and may not be suitable for sampling. None of the wells has been sampled since 1986. An investigation took place in 1986 as a result of review of the landfill records and proximity to the Kansas River. Groundwater, sediment and surface water samples were collected to determine if the landfill was adversely affecting the river. Based on the results the Landfill was determined to be not significantly impacting the river in a negative way. Once the landfill was closed it was designated as a wildlife preserve and continues to be used as such. The last site inspection was in November of 2008. Site transferred to Bureau of Waste Management 1/1/12.

Last Date in Agency List : 2021-10-19

Activity Details

Activity Start Date : N/R  
 Activity End Date : 2012-01-01  
 Activity Type : Transfer Out of Bureau  
 Activity Status : Completed

Map Id: C11  
 Direction: W  
 Distance: 0.194 mi., 1022 ft.  
 Elevation: 841 ft.  
 Relative: Higher

**Site Name :** CITY OF LAWRENCE  
 I-70 & Hwy 40 go 2.5 mi N on 24 to 2000r  
 Lawrence, KS  
**Database(s) :** [PFAS - KS, SWF/LF - KS]

**EnviroSite ID:** 2491685  
**EPA ID:** N/R

PFAS - KS

Facility Name : CITY OF LAWRENCE  
 Facility Address : I-70 & Hwy 40 go 2.5 mi N on 24 to 2000r, Lawrence  
 County : Douglas

Site Details

BUSDNSNO : N/R  
 Status : N/R

Map Id: C11  
 Direction: W  
 Distance: 0.194 mi., 1022 ft.  
 Elevation: 841 ft.  
 Relative: Higher

**Site Name :** CITY OF LAWRENCE  
 I-70 & Hwy 40 go 2.5 mi N on 24 to 2000r  
 Lawrence, KS  
**Database(s) :** [PFAS - KS, SWF/LF - KS] **(cont.)**

**Envirosite ID:** 2491685  
**EPA ID:** N/R

PFAS - KS **(cont.)**

Line of Business : N/R  
 Trade Style : N/R  
 Year Start Date : 0  
 Employees on Site : N/R  
 SIC Code : 0  
 SIC Description : N/R  
 NAICS Code 1 : 0  
 NAICS Description 1 : N/R  
 NAICS Code 2 : 0  
 NAICS Description 2 : N/R  
 NAICS Code 3 : 0  
 NAICS Description 3 : N/R  
 NAICS Code 4 : 0  
 NAICS Description 4 : N/R  
 NAICS Code 5 : N/R  
 NAICS Description 5 : N/R  
 NAICS Code 6 : N/R  
 NAICS Description 6 : N/R  
 Latitude : 39.029202  
 Longitude : -95.271031  
 Last Date in Agency List : 2022-02-23

SWF/LF - KS

Facility Name : CITY OF LAWRENCE  
 Facility Address : I-70 & Hwy 40 go 2.5 mi N on 24 to 2000r, Lawrence  
 County : Douglas

Permit Number : 0186  
 Permit Type : Solid waste permit  
 Permit Type Description : Municipal Solid Waste  
 Status : Closed: post-closure care  
 SW Key : 87  
 Collect Method : Garmin 3+  
 Feature Type : Facility  
 Telephone : N/R  
 Latitude : 39.02920151  
 Longitude : -95.27103053  
 Last Date in Agency List : 2021-12-10

Map Id: 12  
 Direction: S  
 Distance: 0.511 mi., 2696 ft.  
 Elevation: 824 ft.  
 Relative: Lower

**Site Name :** CALLERY CHEMICALS  
 LAWRENCE  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS]

**Envirosite ID:** 21649711  
**EPA ID:** N/R

DEL HWS - KS

Facility Name : CALLERY CHEMICALS  
 Facility Address : LAWRENCE, LAWRENCE

Map Id: 12  
 Direction: S  
 Distance: 0.511 mi., 2696 ft.  
 Elevation: 824 ft.  
 Relative: Lower

**Site Name :** CALLERY CHEMICALS  
 LAWRENCE  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS] **(cont.)**

**Envirosite ID:** 21649711  
**EPA ID:** N/R

DEL HWS - KS **(cont.)**

County :	DOUGLAS
Discovery Date :	1985-01-01
Site ID :	849
Project Code :	C402300008
PM Name :	BER - A&R
Site Status :	Resolved
County Abbreviation :	DG
District Office :	NEDO
Riverbasin :	KS - Lower Republican
Aquifer :	Unknown
Other Aquifers :	N/R
Aquifer Yield :	0-10 gpm
Parent PC :	N/R
Parent Name :	N/R
Cerclis Number :	KSD980631907
Depth to GW :	21-30 feet
Depth to Bedrock :	0-10 feet
GW Flow Direction :	E
Acres Affected :	N/R
Waste Present :	N
Product Present :	N
Program Name :	Site Assessment
Other Names :	N/R
Lead Agency :	BER - Assessment and Restoration
Contaminant Type :	Inorganic, SVOC, Other (see Site Narrative)
Media Act :	Ground Water, Soil
Media Pot :	N/R
Source :	Facility Operations, Spill
Land Use :	Agricultural, Commercial, Industrial
Well Type :	N/R
Waste :	N/R
Product :	N/R
Receptor Act :	N/R
Receptor Pot :	N/R
Air Remediation :	N/R
Soil Remediation :	N/R
Water Remediation :	N/R
IR Remediation :	N/R
Environmental Use Control in Place :	No
EUCA Number :	N/R
Date EUCA Signed :	N/R
Latitude :	39.00784
Longitude :	-95.25106

Site Narrative :

5/9/58 KDHE permit #6203 allows less than 450 lbs/day of Boron discharge into the Lawrence Sewage Treatment Plant. Company produced diborane for use as high energy rocket propellant between 1958 and 1960 on 15 acre site. Boric acid (boron) is the principal contaminant. Following a site inspection in 1981 the Department recommended that top soil and reseeding be done on the burn area. Site inspection follow-up occurred along with the installation of monitoring wells. Boron to 330 ppb detected in burn area soil; to 1400 ppb in monitoring well #2 and 590 ppb in monitoring well #3 during investigation August-October 1984. Groundwater depth is 30 feet and generally flows east. Well #1 NE/4, SW/4, SW/4, Sec. 31-T12S-R19E Well #2 NW/4, SE/4, SW/4, Sec. 31-T12S-R19E Well #3 SW/4, SE/4, SW/4, Sec. 31-T12S-R19E Land use- Livestock grazing area, site is entirely fenced in. Site proposed for delisting (12/18/89). Additional citizen and municipal concerns prompted reassessment.

Map Id: 12  
 Direction: S  
 Distance: 0.511 mi., 2696 ft.  
 Elevation: 824 ft.  
 Relative: Lower

**Site Name :** CALLERY CHEMICALS  
 LAWRENCE  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS] **(cont.)**

**Envirosite ID:** 21649711  
**EPA ID:** N/R

DEL HWS - KS **(cont.)**

Reassessment initiated 06/04. The Callery Chemical site is located in Lawrence, Douglas County, Kansas. The site was referred to KDHE's Site Assessment program in 2004 when concerns regarding the abandoned former Callery Chemical plant emerged from citizens and the municipality. In 1980, EPA completed a Preliminary Assessment (PA) of the site after a citizen's complaint indicating additional sampling was needed. In 1985 KDHE completed a Site Inspection (SI) of the site which involved collection of ground water samples and surface soil samples. Boron was detected at a maximum of 1.4 mg/l in ground water, and 330 mg/kg in surficial soils. The SI concluded a significant exposure threat to human health and the environment did not exist at the site, but the SI was only based on the samples previously described. The site was subsequently recommended for no further remedial action planned (NFRAP) and was archived from the CERCLA active sites database (CERCLIS). The SSA identified levels of boron in soils and ground water above three times background but below EPA Region IX's Preliminary Remediation Goals (PRGs). The maximum boron detection in ground water was 4.1 mg/l at the former burn area compared to the EPA PRG of 7.3 mg/l. The maximum soil detection for boron was also in the burn area at 4,500 mg/kg with a corresponding PRG level of 100,000 mg/kg. Lead was identified in one sample at 450 mg/kg in the lab area above RSK residential standards (400 mg/kg) but below RSK non-residential standards (1,000 mg/kg). Since the Callery site is within the boundaries of a proposed coal combustion product (CCP) landfill, non-residential screening standards are appropriate considering the future land use. Several petroleum constituents were identified in subsurface soils above the soil to ground water pathway RSK levels; however these were not detected in ground water at the site and are likely relics of former open-ground burning which was conducted in the burn area. 1,1-dichloroethane was detected at trace levels in the lab area. Since a remaining significant release of hazardous substances does not appear to be present at the site, and considering the site will be overseen by KDHE's Bureau of Waste Management for the construction, operation, and closure of the CCP landfill, no change in site status (NFRAP/Archive) appears to be necessary.

Last Date in Agency List : 2021-10-19

Activity Details

Activity Start Date : 2005-01-12  
 Activity End Date : 2005-01-12  
 Activity Type : Resolved  
 Activity Status : Completed

Activity Start Date : 2004-07-30  
 Activity End Date : 2005-01-10  
 Activity Type : Supplemental Sampling Assessment  
 Activity Status : Completed

Activity Start Date : 2003-07-01  
 Activity End Date : 2003-07-01  
 Activity Type : Transfer Within Bureau  
 Activity Status : Completed

FRS

Facility Name : CALLERY CHEMICALS  
 Facility Address : LAWRENCE, LAWRENCE, KS 66044  
 County : DOUGLAS

Site Details

Registry ID : 110017579057  
 FRS Facility URL : [Click here for hyperlink provided by the agency.](#)  
 Last Date in Agency List : 2022-02-17



Map Id: 12  
 Direction: S  
 Distance: 0.511 mi., 2696 ft.  
 Elevation: 824 ft.  
 Relative: Lower

**Site Name :** CALLERY CHEMICALS  
 LAWRENCE  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS] **(cont.)**

**Envirosite ID:** 21649711  
**EPA ID:** N/R

**FRS (cont.)**

Source Description

Source Description :

The Kansas Facility Profiler (KS-FP) is a geographically-based data warehouse that presents information about facilities and locations of interest to the Kansas Department of Health and Environment (KDHE). It has in excess of twenty environmental interests which contain information on closed facilities, completed cleanups, and past operations, as well as data on current operations and activities.

FRS Environmental Interest

Source and System ID : KS-FP - 1500679

SRP - KS

Facility Name :	CALLERY CHEMICALS
Facility Address :	LAWRENCE, LAWRENCE
County :	DOUGLAS
Discovery Date :	1985-01-01
Site ID :	849
Project Code :	C402300008
PM Name :	BER - A&R
Site Status :	Resolved
County Abbreviation :	DG
District Office :	NEDO
Riverbasin :	KS - Lower Republican
Aquifer :	Unknown
Other Aquifers :	N/R
Aquifer Yield :	0-10 gpm
Parent PC :	N/R
Parent Name :	N/R
Cerclis Number :	KSD980631907
Depth to GW :	21-30 feet
Depth to Bedrock :	0-10 feet
GW Flow Direction :	E
Acres Affected :	N/R
Waste Present :	N
Product Present :	N
Program Name :	Site Assessment
Other Names :	N/R
Lead Agency :	BER - Assessment and Restoration
Contaminant Type :	Inorganic, SVOC, Other (see Site Narrative)
Media Act :	Ground Water, Soil
Media Pot :	N/R
Source :	Facility Operations, Spill
Land Use :	Agricultural, Commercial, Industrial
Well Type :	N/R
Waste :	N/R
Product :	N/R
Receptor Act :	N/R
Receptor Pot :	N/R
Air Remediation :	N/R
Soil Remediation :	N/R
Water Remediation :	N/R

Map Id: 12  
 Direction: S  
 Distance: 0.511 mi., 2696 ft.  
 Elevation: 824 ft.  
 Relative: Lower

**Site Name :** CALLERY CHEMICALS  
 LAWRENCE  
 LAWRENCE, KS 66044  
**Database(s) :** [DEL HWS - KS, FRS, SRP - KS] **(cont.)**

**Envirosite ID:** 21649711  
**EPA ID:** N/R

SRP - KS **(cont.)**

IR Remediation : N/R  
 Environmental Use Control in Place : No  
 EUCA Number : N/R  
 Date EUCA Signed : N/R  
 Latitude : 39.00784  
 Longitude : -95.25106

Site Narrative :

5/9/58 KDHE permit #6203 allows less than 450 lbs/day of Boron discharge into the Lawrence Sewage Treatment Plant. Company produced diborane for use as high energy rocket propellant between 1958 and 1960 on 15 acre site. Boric acid (boron) is the principal contaminant. Following a site inspection in 1981 the Department recommended that top soil and reseeded be done on the burn area. Site inspection follow-up occurred along with the installation of monitoring wells. Boron to 330 ppb detected in burn area soil; to 1400 ppb in monitoring well #2 and 590 ppb in monitoring well #3 during investigation August-October 1984. Groundwater depth is 30 feet and generally flows east. Well #1 NE/4, SW/4, SW/4, Sec. 31-T12S-R19E Well #2 NW/4, SE/4, SW/4, Sec. 31-T12S-R19E Well #3 SW/4, SE/4, SW/4, Sec. 31-T12S-R19E Land use- Livestock grazing area, site is entirely fenced in. Site proposed for delisting (12/18/89). Additional citizen and municipal concerns prompted reassessment. Reassessment initiated 06/04. The Callery Chemical site is located in Lawrence, Douglas County, Kansas. The site was referred to KDHE's Site Assessment program in 2004 when concerns regarding the abandoned former Callery Chemical plant emerged from citizens and the municipality. In 1980, EPA completed a Preliminary Assessment (PA) of the site after a citizen's complaint indicating additional sampling was needed. In 1985 KDHE completed a Site Inspection (SI) of the site which involved collection of ground water samples and surface soil samples. Boron was detected at a maximum of 1.4 mg/l in ground water, and 330 mg/kg in surficial soils. The SI concluded a significant exposure threat to human health and the environment did not exist at the site, but the SI was only based on the samples previously described. The site was subsequently recommended for no further remedial action planned (NFRAP) and was archived from the CERCLA active sites database (CERCLIS). The SSA identified levels of boron in soils and ground water above three times background but below EPA Region IX's Preliminary Remediation Goals (PRGs). The maximum boron detection in ground water was 4.1 mg/l at the former burn area compared to the EPA PRG of 7.3 mg/l. The maximum soil detection for boron was also in the burn area at 4,500 mg/kg with a corresponding PRG level of 100,000 mg/kg. Lead was identified in one sample at 450 mg/kg in the lab area above RSK residential standards (400 mg/kg) but below RSK non-residential standards (1,000 mg/kg). Since the Callery site is within the boundaries of a proposed coal combustion product (CCP) landfill, non-residential screening standards are appropriate considering the future land use. Several petroleum constituents were identified in subsurface soils above the soil to ground water pathway RSK levels; however these were not detected in ground water at the site and are likely relics of former open-ground burning which was conducted in the burn area. 1,1-dichloroethane was detected at trace levels in the lab area. Since a remaining significant release of hazardous substances does not appear to be present at the site, and considering the site will be overseen by KDHE's Bureau of Waste Management for the construction, operation, and closure of the CCP landfill, no change in site status (NFRAP/Archive) appears to be necessary.

Last Date in Agency List : 2021-10-19

Activity Details

Activity Start Date : 2005-01-12  
 Activity End Date : 2005-01-12  
 Activity Type : Resolved  
 Activity Status : Completed

Activity Start Date : 2004-07-30  
 Activity End Date : 2005-01-10  
 Activity Type : Supplemental Sampling Assessment  
 Activity Status : Completed

Map Id: 12  
Direction: S  
Distance: 0.511 mi., 2696 ft.  
Elevation: 824 ft.  
Relative: Lower

<b>Site Name :</b> CALLERY CHEMICALS LAWRENCE LAWRENCE, KS 66044
<b>Database(s) :</b> [DEL HWS - KS, FRS, SRP - KS] <b>(cont.)</b>

**Envirosite ID:** 21649711  
**EPA ID:** N/R

### SRP - KS **(cont.)**

Activity Start Date :	2003-07-01
Activity End Date :	2003-07-01
Activity Type :	Transfer Within Bureau
Activity Status :	Completed

<b><u>ENVIROSITE ID</u></b>	<b><u>NAME</u></b>	<b><u>ADDRESS</u></b>	<b><u>CITY</u></b>	<b><u>ZIP</u></b>	<b><u>DATABASE(S)</u></b>
<a href="#"><u>20826668</u></a>	CITY OF LAWRENCE SANITARY...	1.5 MI W AND 2 MI N OF US...	LAWRENCE		ODI
<a href="#"><u>44351475</u></a>	City Of Lawrence, Public ...	7th Street And New Hampsh...	Lawrence		EPA LUST, HIST UST - ...
<a href="#"><u>35338997</u></a>	Clinton State Park	Rr 1, Box 120e	Lawrence	66044	LUST - KS
<a href="#"><u>32947635</u></a>	Continental Oil Co.	1901 Massachusetts	Lawrence	66044	LUST - KS
<a href="#"><u>44360032</u></a>	Douglas Co Public Works	E 23rd St (hwy 10) & Rr T...	Lawrence	66044	EPA LUST, HIST UST - ...
<a href="#"><u>43117481</u></a>	Douglas Co Public Works	E 23rd (hwy 10) & Rr Trac...	Lawrence	66044	EPA LUST
<a href="#"><u>41461836</u></a>	DRAGSTRIP SANITARY LANDFI...	RT 1 DRAGSTRIP RD	LAWRENCE	66044	CERCLIS NFRAP, SEMS...
<a href="#"><u>44350018</u></a>	First National Bank	9th & Massachusetts	Lawrence		EPA LUST, HIST UST - ...
<a href="#"><u>41466336</u></a>	FLOODPLAIN LANDFILL	SEC 10 T12S R19E	LAWRENCE	66044	CERCLIS NFRAP, SEMS...
<a href="#"><u>44347632</u></a>	Kdot, Lawrence	Hwy 24 & 40	Lawrence	66044	EPA LUST, HIST AST - K...
<a href="#"><u>44360764</u></a>	Ku, Gsp Dorm	10th & Louisiana	Lawrence		EPA LUST, HIST UST - ...
<a href="#"><u>44349640</u></a>	Ku, Malott Hall	Kansas University	Lawrence		EPA LUST, HIST UST - ...
<a href="#"><u>20900274</u></a>	Ku, Stone Stable	Sunnyside &	Lawrence		EPA LUST, HIST UST - ...

**FEDERAL RCRA NON-CORRACTS TSD FACILITIES LIST**

ARCHIVED RCRA TSD: Resource Conservation and Recovery Act hazardous waste transportation storage disposal and treatment facilities

Agency Version Date: 12/30/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 215-814-2469
Planned Next Contact: 03/28/2022	Most Recent Contact: 12/30/2021

RCRA\_TSD: Resource Conservation and Recovery Act hazardous waste transportation storage disposal and treatment facilities

Agency Version Date: 12/30/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 215-814-2469
Planned Next Contact: 03/28/2022	Most Recent Contact: 12/30/2021

**FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS**

AST PBS: Bulk petroleum terminals with a total bulk storage capacity of 50,000 barrels or more.

Agency Version Date: 02/22/2022	Agency: Department of Homeland Security
Agency Update Frequency: Quarterly	Agency Contact: 202-853-5361
Planned Next Contact: 05/20/2022	Most Recent Contact: 02/22/2022

EPA UST: Facilities listed in the EPA UST Finder database

Agency Version Date: 11/19/2021	Agency: EPA
Agency Update Frequency: Quarterly	Agency Contact: (202) 566-1667
Planned Next Contact: 05/12/2022	Most Recent Contact: 02/15/2022

FEMA UST: FEMA underground storage tank listing

Agency Version Date: 10/08/2021	Agency: FEMA
Agency Update Frequency: Varies	Agency Contact: 202-212-5283
Planned Next Contact: 04/01/2022	Most Recent Contact: 01/04/2022

HIST INDIAN UST R6: Historical Underground Storage Tanks on Indian Land in EPA Region 6

Agency Version Date: 12/03/2021	Agency: U.S. Environmental Protection Agency Region 6
Agency Update Frequency: Semi Annually	Agency Contact: 855-246-3642
Planned Next Contact: 05/27/2022	Most Recent Contact: 03/01/2022

HIST INDIAN UST R7: Historical Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 08/10/2021	Agency: U.S. Environmental Protection Agency Region 7
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 05/12/2022	Most Recent Contact: 02/15/2022

INDIAN UST R1: Underground Storage Tanks on Indian Land in EPA Region 1

Agency Version Date: 01/18/2022	Agency: U.S. Environmental Protection Agency Region 1
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 04/15/2022	Most Recent Contact: 10/18/2021

INDIAN UST R10: Underground Storage Tanks on Indian Land in EPA Region 10

Agency Version Date: 02/14/2022	Agency: U.S. Environmental Protection Agency Region 10
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 05/12/2022	Most Recent Contact: 02/14/2022

**FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS (cont.)**

INDIAN UST R2: Underground Storage Tanks on Indian Land in EPA Region 2

Agency Version Date: 12/07/2016	Agency: U.S. Environmental Protection Agency Region 2
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 04/19/2022	Most Recent Contact: 01/21/2022

INDIAN UST R4: Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 02/14/2022	Agency: U.S. Environmental Protection Agency Region 4
Agency Update Frequency: Semi Annually	Agency Contact: 855-246-3642
Planned Next Contact: 05/12/2022	Most Recent Contact: 02/14/2022

INDIAN UST R5: Underground Storage Tanks on Indian Land in EPA Region 5

Agency Version Date: 01/31/2022	Agency: U.S. Environmental Protection Agency Region 5
Agency Update Frequency: Varies	Agency Contact: 855-246-3642
Planned Next Contact: 04/28/2022	Most Recent Contact: 01/31/2022

INDIAN UST R6: Underground Storage Tanks on Indian Land in EPA Region 6

Agency Version Date: 03/01/2022	Agency: U.S. Environmental Protection Agency Region 6
Agency Update Frequency: Semi Annually	Agency Contact: 855-246-3642
Planned Next Contact: 05/27/2022	Most Recent Contact: 03/01/2022

INDIAN UST R7: Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 01/31/2022	Agency: U.S. Environmental Protection Agency Region 7
Agency Update Frequency: Varies	Agency Contact: 855-246-3642
Planned Next Contact: 04/28/2022	Most Recent Contact: 01/31/2022

INDIAN UST R8: Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 01/17/2022	Agency: U.S. Environmental Protection Agency Region 8
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 04/14/2022	Most Recent Contact: 01/17/2022

INDIAN UST R9: Underground Storage Tanks on Indian Land in EPA Region 9

Agency Version Date: 01/17/2022	Agency: U.S. Environmental Protection Agency Region 9
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 04/14/2022	Most Recent Contact: 01/17/2022

AST - KS: Aboveground storage tank listing

Agency Version Date: 02/17/2022	Agency: Kansas Department of Health and Environment
Agency Update Frequency: Annually	Agency Contact: 785-296-1684
Planned Next Contact: 05/16/2022	Most Recent Contact: 02/17/2022

HIST AST - KS: List of aboveground storage tanks that are no longer in current agency list.

Agency Version Date: 06/01/2021	Agency: Kansas Department of Health and Environment
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 05/09/2022	Most Recent Contact: 02/10/2022

HIST UST - KS: List of underground storage tanks that are no longer in current agency list.

Agency Version Date: 06/01/2021	Agency: Kansas Department of Health and Environment
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 05/09/2022	Most Recent Contact: 02/10/2022

**FEDERAL, STATE, AND TRIBAL REGISTERED STORAGE TANK LISTS (cont.)**

UST - KS: Underground storage tank listing

Agency Version Date: 02/17/2022  
 Agency Update Frequency: Annually  
 Planned Next Contact: 05/16/2022

Agency: Kansas Department of Health and Environment  
 Agency Contact: 785-296-1684  
 Most Recent Contact: 02/17/2022

**FEDERAL CERCLIS LIST**

CERCLIS NFRAP: The CERCLIS sites with No Further Remedial Action Planned from the CERCLIS program database. The Environmental Protection Agency decommissioned the CERCLIS data in 2014. The last update was November 12, 2013.

Agency Version Date: 10/25/2013  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/26/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 800-424-9346  
 Most Recent Contact: 01/28/2022

CERCLIS-HIST: The CERCLIS program database contains information on the assessment and remediation of federal hazardous waste sites. The Environmental Protection Agency decommissioned the CERCLIS data in 2014. The last update was November 12, 2013.

Agency Version Date: 10/29/2013  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/26/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 800-424-9346  
 Most Recent Contact: 01/28/2022

EPA SAA: Listing of Sites with Superfund Alternative Approach Agreements.

Agency Version Date: 11/01/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/25/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 800-424-9346  
 Most Recent Contact: 01/27/2022

FEDERAL FACILITY: Sites where Federal Facilities Restoration and Reuse Office (FFRRO) arranged cleanup for Base Closure and Property Transfer at Federal Facilities

Agency Version Date: 11/02/2021  
 Agency Update Frequency: Varies  
 Planned Next Contact: 04/26/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 703-603-8712  
 Most Recent Contact: 01/28/2022

SEMS\_8R\_ACTIVE SITES: The Active Site Inventory Report displays site and location information at active SEMS sites. An active site is one at which site assessment, removal, remedial, enforcement, cost recovery, or oversight activities are being planned or conducted. NPL sites include latitude and longitude information. For non-NPL sites, a brief site status is provided.

Agency Version Date: 11/02/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/26/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 703-603-8867  
 Most Recent Contact: 01/28/2022

SEMS\_8R\_ARCHIVED SITES: The Archived Site Inventory displays site and location information at sites archived from SEMS. An archived site is one at which EPA has determined that assessment has been completed and no further remedial action is planned under the Superfund program at this time.

Agency Version Date: 11/02/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/26/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 703-603-8867  
 Most Recent Contact: 01/28/2022

**FEDERAL RCRA CORRACTS FACILITIES LIST**

CORRACTS: List of facilities where Resource Conservation and Recovery Act Corrective Action Program used to investigate and remediate hazardous releases

Agency Version Date: 12/30/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 03/28/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 202-566-1667  
 Most Recent Contact: 12/30/2021

**FEDERAL RCRA CORRACTS FACILITIES LIST (cont.)**

HIST CORRACTS 2: List of facilities where Resource Conservation and Recovery Act Corrective Action Program used to investigate and remediate hazardous releases that are no longer in current agency list.

Agency Version Date: 10/12/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: 202-566-1667
Planned Next Contact: 05/23/2022	Most Recent Contact: 02/24/2022

**FEDERAL DELISTED NPL SITE LIST**

DELISTED NPL: National Priority List of sites that were delisted and no longer require action

Agency Version Date: 11/02/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

DELISTED PROPOSED NPL: Sites that have been delisted from the proposed National Priority List

Agency Version Date: 11/02/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

SEMS\_DELETED NPL: All Deleted National Priority List Sties

Agency Version Date: 11/02/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

**FEDERAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS**

EPA LF MOP: Sites in the EPA Landfill Methane Outreach Program

Agency Version Date: 12/29/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 03/25/2022	Most Recent Contact: 12/29/2021

**FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS**

EPA LUST: Releases listed in the EPA UST Finder database

Agency Version Date: 11/19/2021	Agency: EPA
Agency Update Frequency: Quarterly	Agency Contact: (202) 566-1667
Planned Next Contact: 05/12/2022	Most Recent Contact: 02/15/2022

HIST INDIAN LUST R4: Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 08/23/2021	Agency: U.S. Environmental Protection Agency Region 4
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 05/12/2022	Most Recent Contact: 02/15/2022

HIST INDIAN LUST R8: Historical Leaking Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 08/16/2021	Agency: U.S. Environmental Protection Agency Region 8
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 05/04/2022	Most Recent Contact: 02/07/2022

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land in EPA Region 1

Agency Version Date: 10/21/2021	Agency: U.S. Environmental Protection Agency Region 1
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 04/15/2022	Most Recent Contact: 01/18/2022



**FEDERAL, STATE, AND TRIBAL LEAKING STORAGE TANK LISTS (cont.)**

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land in EPA Region 10

Agency Version Date: 02/14/2022	Agency: U.S. Environmental Protection Agency Region 10
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 05/12/2022	Most Recent Contact: 02/14/2022

INDIAN LUST R2: Leaking Underground Storage Tanks on Indian Land in EPA Region 2

Agency Version Date: 12/07/2016	Agency: U.S. Environmental Protection Agency Region 2
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 04/19/2022	Most Recent Contact: 01/21/2022

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land in EPA Region 4

Agency Version Date: 02/14/2022	Agency: U.S. Environmental Protection Agency Region 4
Agency Update Frequency: Semi Annually	Agency Contact: 855-246-3642
Planned Next Contact: 05/12/2022	Most Recent Contact: 02/14/2022

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land in EPA Region 5

Agency Version Date: 01/31/2022	Agency: U.S. Environmental Protection Agency Region 5
Agency Update Frequency: Varies	Agency Contact: 855-246-3642
Planned Next Contact: 04/28/2022	Most Recent Contact: 01/31/2022

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land in EPA Region 6

Agency Version Date: 02/03/2022	Agency: U.S. Environmental Protection Agency Region 6
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 05/02/2022	Most Recent Contact: 02/03/2022

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land in EPA Region 7

Agency Version Date: 08/10/2021	Agency: U.S. Environmental Protection Agency Region 7
Agency Update Frequency: Varies	Agency Contact: 855-246-3642
Planned Next Contact: 04/28/2022	Most Recent Contact: 01/31/2022

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land in EPA Region 8

Agency Version Date: 02/04/2022	Agency: U.S. Environmental Protection Agency Region 8
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 05/03/2022	Most Recent Contact: 02/04/2022

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land in EPA Region 9

Agency Version Date: 01/17/2022	Agency: U.S. Environmental Protection Agency Region 9
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 04/14/2022	Most Recent Contact: 01/17/2022

LAST - KS: Sites with leaking aboveground storage tanks

Agency Version Date: 01/26/2022	Agency: Kansas Department of Health and Environment
Agency Update Frequency: Varies	Agency Contact: 785-296-1684
Planned Next Contact: 04/22/2022	Most Recent Contact: 01/26/2022

LUST - KS: Sites with leaking Underground Storage Tanks

Agency Version Date: 01/26/2022	Agency: Kansas Department of Health and Environment
Agency Update Frequency: Varies	Agency Contact: 785-296-1684
Planned Next Contact: 04/22/2022	Most Recent Contact: 01/26/2022

**FEDERAL ERNS LIST**

ERNS: Emergency Response Notification System records of reported spills

Agency Version Date: 01/21/2022	Agency: National Response Center United States Coast Guard
Agency Update Frequency: Annually	Agency Contact: N/R
Planned Next Contact: 04/19/2022	Most Recent Contact: 01/21/2022

**FEDERAL INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES**

FED E C: Federal listing of remediation sites with engineering controls

Agency Version Date: 02/22/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 800-424-9346
Planned Next Contact: 05/20/2022	Most Recent Contact: 02/22/2022

FED I C: Federal listing of remediation sites with institutional controls

Agency Version Date: 02/22/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 800-424-9346
Planned Next Contact: 05/20/2022	Most Recent Contact: 02/22/2022

RCRA IC\_EC: Sites with institutional or engineering controls related to Resource Conservation and Recovery Act

Agency Version Date: 02/04/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 215-814-2469
Planned Next Contact: 05/03/2022	Most Recent Contact: 02/04/2022

**FEDERAL RCRA GENERATORS LIST**

HIST RCRA\_CESQG: List of Resource Conservation and Recovery Act licensed conditionally exempt small quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: 215-814-2469
Planned Next Contact: 05/23/2022	Most Recent Contact: 02/24/2022

HIST RCRA\_LQG: List of Resource Conservation and Recovery Act licensed large quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: 215-814-2469
Planned Next Contact: 05/23/2022	Most Recent Contact: 02/24/2022

HIST RCRA\_NONGEN: List of Resource Conservation and Recovery Act licensed non-generators that are no longer in current agency list.

Agency Version Date: 10/12/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: 215-814-2469
Planned Next Contact: 05/23/2022	Most Recent Contact: 02/24/2022

HIST RCRA\_SQG: List of Resource Conservation and Recovery Act licensed small quantity generators that are no longer in current agency list.

Agency Version Date: 10/12/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: 215-814-2469
Planned Next Contact: 05/23/2022	Most Recent Contact: 02/24/2022

**FEDERAL RCRA GENERATORS LIST (cont.)**

RCRA\_LQG: Resource Conservation and Recovery Act listing of licensed large quantity generators

Agency Version Date: 12/30/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 215-814-2469
Planned Next Contact: 03/28/2022	Most Recent Contact: 12/30/2021

RCRA\_NONGEN: Resource Conservation and Recovery Act listing of licensed non-generators

Agency Version Date: 12/30/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 215-814-2469
Planned Next Contact: 03/28/2022	Most Recent Contact: 12/30/2021

RCRA\_SQG: Resource Conservation and Recovery Act listing of licensed small quantity generators

Agency Version Date: 12/30/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 215-814-2469
Planned Next Contact: 03/28/2022	Most Recent Contact: 12/30/2021

RCRA\_VSQG: Resource Conservation and Recovery Act listing of licensed very small quantity generators.

Agency Version Date: 12/30/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 215-814-2469
Planned Next Contact: 03/28/2022	Most Recent Contact: 12/30/2021

**FEDERAL NPL SITE LIST**

NPL: List of priority contaminated sites among identified releases or threatened releases of hazardous substances pollutants or contaminants nationally

Agency Version Date: 11/02/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

NPL EPA R1 GIS: Geospatial data for the Environmental Protection Agency Region 1 National Priority List subject to environmental regulation

Agency Version Date: 11/02/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-2132
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

NPL EPA R3 GIS: Geospatial data for the Environmental Protection Agency Region 3 National Priority List subject to environmental regulation

Agency Version Date: 11/02/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-2132
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

NPL EPA R6 GIS: Geospatial data for the Environmental Protection Agency Region 6 National Priority List subject to environmental regulation

Agency Version Date: 11/02/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-2132
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

NPL EPA R8 GIS: Geospatial data for the Environmental Protection Agency Region 8 National Priority List subject to environmental regulation

Agency Version Date: 11/02/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-2132
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

**FEDERAL NPL SITE LIST (cont.)**

NPL EPA R9 GIS: Geospatial data for the Environmental Protection Agency Region 9 National Priority List subject to environmental regulation

Agency Version Date: 08/06/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/26/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 202-566-2132  
 Most Recent Contact: 01/28/2022

PART NPL: Sites that are a part of an National Priority List site referred to as the parent site

Agency Version Date: 11/02/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/26/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 703-603-8867  
 Most Recent Contact: 01/28/2022

PROPOSED NPL: Sites that have been proposed for the National Priority List

Agency Version Date: 11/02/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/26/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 703-603-8867  
 Most Recent Contact: 01/28/2022

SEMS\_FINAL NPL: All Included National Priority List Sites

Agency Version Date: 11/02/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/26/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 703-603-8867  
 Most Recent Contact: 01/28/2022

SEMS\_PROPOSED NPL: All Proposed National Priority List Sites

Agency Version Date: 11/02/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/26/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 703-603-8867  
 Most Recent Contact: 01/28/2022

**STATE AND TRIBAL BROWNFIELD SITES**

TRIBAL BROWNFIELDS: Tribal brownfield remediation site listing

Agency Version Date: 02/10/2017  
 Agency Update Frequency: No Longer Maintained  
 Planned Next Contact: 03/16/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: 855-246-3642  
 Most Recent Contact: 12/21/2021

BROWNFIELDS - KS: Brownfield remediation program site listing

Agency Version Date: 10/12/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/05/2022

Agency: Kansas Department of Health and Environment  
 Agency Contact: 785-296-1660  
 Most Recent Contact: 01/07/2022

**STATE- AND TRIBAL - EQUIVALENT CERCLIS**

DEL HWS - KS: Sites delisted from the HWS listing

Agency Version Date: 10/12/2021  
 Agency Update Frequency: Varies  
 Planned Next Contact: 04/05/2022

Agency: Department of Health and Environment  
 Agency Contact: (785) 296-1500  
 Most Recent Contact: 01/07/2022

HWS - KS: Sites listed on the Hazardous Waste list

Agency Version Date: 10/12/2021  
 Agency Update Frequency: Varies  
 Planned Next Contact: 04/05/2022

Agency: Department of Health and Environment  
 Agency Contact: (785) 296-1500  
 Most Recent Contact: 01/07/2022

## STATE- AND TRIBAL - EQUIVALENT CERCLIS (cont.)

SRP - KS: Site remediation program sites listing

Agency Version Date: 10/12/2021  
Agency Update Frequency: Quarterly  
Planned Next Contact: 04/05/2022

Agency: Kansas Department of Health and Environment  
Agency Contact: 785-296-1660  
Most Recent Contact: 01/07/2022

## STATE AND TRIBAL LANDFILL AND/OR SOLID WASTE DISPOSAL SITE LISTS

HIST LF - KS: List of landfills that are no longer in current agency list.

Agency Version Date: 07/26/2019  
Agency Update Frequency: Quarterly  
Planned Next Contact: 05/23/2022

Agency: Department of Health and Environment  
Agency Contact: (785) 296-0724  
Most Recent Contact: 02/24/2022

SWF/LF - KS: List of solid waste facilities and landfills

Agency Version Date: 11/30/2021  
Agency Update Frequency: Varies  
Planned Next Contact: 05/20/2022

Agency: Department of Health and Environment  
Agency Contact: (785) 296-0724  
Most Recent Contact: 02/24/2022

## STATE INSTITUTIONAL CONTROLS / ENGINEERING CONTROLS REGISTRIES

IC EC - KS: Remediations sites with Engineering & Institutional Controls

Agency Version Date: 10/12/2021  
Agency Update Frequency: Quarterly  
Planned Next Contact: 04/05/2022

Agency: Kansas Department of Health and Environment  
Agency Contact: 785-296-1660  
Most Recent Contact: 01/07/2022

## STATE AND TRIBAL VOLUNTARY CLEANUP SITES

VCP - KS: Voluntary cleanup remediation program site listing

Agency Version Date: 10/12/2021  
Agency Update Frequency: Quarterly  
Planned Next Contact: 04/05/2022

Agency: Kansas Department of Health and Environment  
Agency Contact: 785-296-1660  
Most Recent Contact: 01/07/2022

## LOCAL BROWNFIELD LISTS

BROWNFIELDS-ACRES: EPA Brownfields Assessment, Cleanup and Redevelopment Exchange System.

Agency Version Date: 09/17/2021  
Agency Update Frequency: Quarterly  
Planned Next Contact: 03/10/2022

Agency: U.S. Environmental Protection Agency  
Agency Contact: 855-246-3642  
Most Recent Contact: 12/14/2021

FED BROWNFIELDS: Federal brownfield remediation sites

Agency Version Date: 01/24/2022  
Agency Update Frequency: Semi Annually  
Planned Next Contact: 04/21/2022

Agency: U.S. Environmental Protection Agency  
Agency Contact: 855-246-3642  
Most Recent Contact: 01/24/2022

## LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES

FED CDL: The U.S. Department of Justice listing of clandestine drug lab locations

Agency Version Date: 01/12/2022  
Agency Update Frequency: Quarterly  
Planned Next Contact: 04/11/2022

Agency: U.S. Department of Justice  
Agency Contact: 202-307-7610  
Most Recent Contact: 01/12/2022

**LOCAL LISTS OF HAZARDOUS WASTE / CONTAMINATED SITES (cont.)**

US HIST CDL: The U.S. Department of Justice historical listing of clandestine drug lab locations

Agency Version Date: 08/05/2019	Agency: U.S. Department of Justice
Agency Update Frequency: Quarterly	Agency Contact: 202-307-7610
Planned Next Contact: 05/16/2022	Most Recent Contact: 02/16/2022

CDL - KS: Methamphetamine Contaminated Properties

Agency Version Date: 11/09/2021	Agency: Department of Health and Environment
Agency Update Frequency: No update	Agency Contact: (785) 291-3121
Planned Next Contact: 04/29/2022	Most Recent Contact: 02/03/2022

**LOCAL LISTS OF LANDFILL / SOLID WASTE DISPOSAL SITES**

HIST INDIAN ODI R8: List of Region 8 Indian land open dump inventory sites maintained within the STARS program that is no longer in current agency list.

Agency Version Date: 11/12/2018	Agency: Indian Health Service
Agency Update Frequency: Annually	Agency Contact: 855-246-3642
Planned Next Contact: 04/07/2022	Most Recent Contact: 01/11/2022

INDIAN ODI R8: Region 8 Indian land open dump inventory sites maintained within the STARS program

Agency Version Date: 01/28/2022	Agency: Indian Health Service
Agency Update Frequency: Varies	Agency Contact: 855-246-3642
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

ODI: Open dump inventory sites

Agency Version Date: 10/03/2017	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: No Update	Agency Contact: 855-246-3642
Planned Next Contact: 05/10/2022	Most Recent Contact: 02/11/2022

TRIBAL ODI: Indian land open dump inventory for all regions

Agency Version Date: 02/21/2022	Agency: Indian Health Service
Agency Update Frequency: Varies	Agency Contact: 301-443-3593
Planned Next Contact: 05/19/2022	Most Recent Contact: 02/21/2022

**RECORDS OF EMERGENCY RELEASE REPORTS**

HMIRS (DOT): Hazardous Material spills reported by the Department of Transportation

Agency Version Date: 12/22/2021	Agency: U.S. Department of Transportation
Agency Update Frequency: Varies	Agency Contact: (202) 366-4996
Planned Next Contact: 03/18/2022	Most Recent Contact: 12/22/2021

HIST SPILLS - KS: Historical list of oil and chemical spill database

Agency Version Date: 04/25/2018	Agency: Department of Health and Environment
Agency Update Frequency: No Longer Maintained	Agency Contact: (785) 291-3121
Planned Next Contact: 04/21/2022	Most Recent Contact: 01/25/2022

SPILLS - KS: Oil and chemical spill database

Agency Version Date: 12/16/2021	Agency: Department of Health and Environment
Agency Update Frequency: Varies	Agency Contact: (785) 291-3121
Planned Next Contact: 03/14/2022	Most Recent Contact: 12/16/2021

**LOCAL LAND RECORDS**

LIENS 2: Comprehensive Environmental Response Compensation and Liability Act sites with liens

Agency Version Date: 05/11/2017	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: 800-424-9346
Planned Next Contact: 03/16/2022	Most Recent Contact: 12/20/2021

**OTHER ASCERTAINABLE RECORDS**

AFS: Air Facility Systems Quarterly Extract

Agency Version Date: 01/31/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 566-1667
Planned Next Contact: 04/28/2022	Most Recent Contact: 01/31/2022

ALT FUELING: Alternative Fueling Stations by fuel type.

Agency Version Date: 12/29/2021	Agency: U.S. Department of Energy
Agency Update Frequency: Quarterly	Agency Contact: N/R
Planned Next Contact: 03/25/2022	Most Recent Contact: 12/29/2021

BRS: Reporting of hazardous waste generation and management from large quantity generators

Agency Version Date: 12/30/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Biennial	Agency Contact: (202) 566-1667
Planned Next Contact: 03/28/2022	Most Recent Contact: 12/30/2021

CDC HAZDAT: The Agency for Toxic Substances and Disease Registry's Hazardous Substance Release/Health Effects Database.

Agency Version Date: 08/21/2020	Agency: Agency for Toxic Substances and Disease Registry
Agency Update Frequency: Varies	Agency Contact: 770-488-6399
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

COAL ASH DOE: List of existing and planned generators with 1 megawatt or greater of combined capacity that are utilizing coal ash impoundments.

Agency Version Date: 09/29/2021	Agency: Department of Energy
Agency Update Frequency: Varies	Agency Contact: (202) 586-8800
Planned Next Contact: 03/22/2022	Most Recent Contact: 12/24/2021

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

Agency Version Date: 02/18/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 04/29/2022	Most Recent Contact: 02/01/2022

COAL GAS: Manufactured Gas Plant locations

Agency Version Date: 01/07/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 04/05/2022	Most Recent Contact: 01/07/2022

COLLEGES: List of major Universities & Colleges

Agency Version Date: 02/08/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 04/15/2022	Most Recent Contact: 01/18/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

COLLEGES 2: List of Universities & Colleges

Agency Version Date: 02/08/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 04/18/2022	Most Recent Contact: 01/19/2022

CONSENT (DECREEES): Legal decisions regarding responsibility for Superfund locations

Agency Version Date: 11/02/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (800) 424-9346
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

CORRECTIVE ACTIONS\_2020: In 2009 the EPA created the 2020 Corrective Action Baseline list of contaminated or potentially contaminated sites with a cleanup goal to complete 95% by the year 2020. The names on the list indicate the facility owners who may or may not have caused the contamination.

Agency Version Date: 12/21/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: N/R
Planned Next Contact: 04/19/2022	Most Recent Contact: 01/21/2022

DEBRIS EPA LF: EPA list of designated landfill facilities for the safe disposal of disaster debris.

Agency Version Date: 01/14/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 04/12/2022	Most Recent Contact: 01/14/2022

DEBRIS EPA SWRCY: EPA list of facilities for the safe recovery, recycling, and disposal of disaster debris.

Agency Version Date: 01/14/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 855-246-3642
Planned Next Contact: 04/12/2022	Most Recent Contact: 01/14/2022

DOD: Department of Defense sites from the Protected Areas Database (PAD-US)

Agency Version Date: 11/02/2021	Agency: United States Geologic Survey (USGS)
Agency Update Frequency: Varies	Agency Contact: 1-888-275-8747
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

DOT OPS: Incident Data Report

Agency Version Date: 02/14/2022	Agency: U.S. Department of Transportation
Agency Update Frequency: Varies	Agency Contact: (202) 366-4996
Planned Next Contact: 05/12/2022	Most Recent Contact: 02/14/2022

ECHO: ECHO is EPA Enforcement and Compliance History Online website to search for facilities in your community to assess their compliance with environmental regulations related to CAA, CWA, RCRA, & SDWA.

Agency Version Date: 12/24/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 202-566-1667
Planned Next Contact: 03/22/2022	Most Recent Contact: 12/24/2021

ENOI: The Electronic Notice of Intent (eNOI) database contains construction sites and industrial facilities that submit permit requests to EPA for Construction General Permits (CGP) and Multi-Sector General Permits (MSGP).

Agency Version Date: 03/19/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 566-1667
Planned Next Contact: 06/02/2022	Most Recent Contact: 03/08/2022



**OTHER ASCERTAINABLE RECORDS (cont.)**

EPA FUELS: List of companies and facilities registered to participate in EPA Fuel Programs under Title 40 CFR Part 80.

Agency Version Date: 02/04/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 564-2307
Planned Next Contact: 05/03/2022	Most Recent Contact: 02/04/2022

EPA OSC: Listing of oil spills and hazardous substance release sites requiring EPA On-Site Coordinators.

Agency Version Date: 09/24/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 564-2307
Planned Next Contact: 03/17/2022	Most Recent Contact: 12/21/2021

EPA WATCH: The EPA Watch List was used 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. EPA maintained the lists from 2011 - 2013.

Agency Version Date: 02/09/2018	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: (202) 564-2307
Planned Next Contact: 03/16/2022	Most Recent Contact: 12/20/2021

FA HWF: Hazardous Waste Facilities with Financial Assurance

Agency Version Date: 01/06/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (800) 424-9346
Planned Next Contact: 04/04/2022	Most Recent Contact: 01/06/2022

FEDLAND: Federal Lands from the Protected Areas Database (PAD-US)

Agency Version Date: 11/02/2021	Agency: United States Geologic Survey (USGS)
Agency Update Frequency: Varies	Agency Contact: 1-888-275-8747
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

FRS: Facility Registry Systems

Agency Version Date: 02/09/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 05/06/2022	Most Recent Contact: 02/09/2022

FTTS: Tracking of administrative and enforcement activities related to FIFRA/TSCA

Agency Version Date: 04/06/2013	Agency: Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: (202) 564-2280
Planned Next Contact: 04/01/2022	Most Recent Contact: 01/05/2022

FTTS INSP: Tracking of inspections related to FIFRA/TSCA

Agency Version Date: 05/08/2017	Agency: Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: (202) 564-2280
Planned Next Contact: 03/25/2022	Most Recent Contact: 12/30/2021

FUDS: Defense sites that require cleanup

Agency Version Date: 02/07/2022	Agency: US Army Corps of Engineering
Agency Update Frequency: Varies	Agency Contact: (202) 761-0011
Planned Next Contact: 05/05/2022	Most Recent Contact: 02/07/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

HIST AFS: List of Air Facility Systems Quarterly Extract that are no longer in current agency list.

Agency Version Date: 06/14/2019	Agency: Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 566-1667
Planned Next Contact: 03/16/2022	Most Recent Contact: 12/20/2021

HIST AFS 2: List of Air Facility Systems Quarterly Extract that are no longer in current agency list.

Agency Version Date: 11/26/2018	Agency: Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (202) 566-1667
Planned Next Contact: 04/14/2022	Most Recent Contact: 01/18/2022

HIST DOD: Department of Defense historical sites

Agency Version Date: 08/17/2018	Agency: Environmental Protection Agency
Agency Update Frequency: No Longer Maintained	Agency Contact: (800) 424-9346
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

HIST LEAD\_SMELTER: List of former lead smelter sites that is no longer in current agency list.

Agency Version Date: 12/12/2018	Agency: Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: (202) 566-1667
Planned Next Contact: 04/01/2022	Most Recent Contact: 01/05/2022

HIST MLTS: List of sites in possession/use of radioactive materials regulated by NRC that is no longer in current agency list.

Agency Version Date: 07/13/2016	Agency: Nuclear Regulatory Commission
Agency Update Frequency: Annually	Agency Contact: (800) 397-4209
Planned Next Contact: 04/11/2022	Most Recent Contact: 01/12/2022

HIST PCB TRANS: List of PCB Disposal Facilities that are no longer in current agency list.

Agency Version Date: 01/18/2018	Agency: Environmental Protection Agency
Agency Update Frequency: No Update	Agency Contact: (703) 308-8404
Planned Next Contact: 05/03/2022	Most Recent Contact: 02/04/2022

HIST PCS ENF: List of permitted facilities to discharge wastewater (Federal equivalent to NPDES) that are no longer in current agency list.

Agency Version Date: 12/08/2018	Agency: Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: (202) 564-6582
Planned Next Contact: 05/17/2022	Most Recent Contact: 02/18/2022

HIST PCS FACILITY: List of Permitted facilities to discharge wastewater (Federal equivalent to NPDES) that are no longer in current agency list.

Agency Version Date: 12/18/2018	Agency: Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: (202) 564-6582
Planned Next Contact: 05/17/2022	Most Recent Contact: 02/18/2022

HIST SSTS: List of tracking of facilities who produce pesticides and their quantity that are no longer in current agency list.

Agency Version Date: 02/13/2019	Agency: Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: (202) 566-1667
Planned Next Contact: 05/06/2022	Most Recent Contact: 02/08/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

HOSPITALS: List of major Hospitals

Agency Version Date: 02/08/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 04/15/2022

Agency: DHS Homeland Infrastructure Foundation  
 Agency Contact: N/R  
 Most Recent Contact: 01/18/2022

HWC DOCKET: Listing of Federal facilities which are managing or have managed hazardous waste; or have had a release of hazardous waste.

Agency Version Date: 11/09/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 05/03/2022

Agency: U.S. Environmental Protection Agency  
 Agency Contact: (202) 564-2307  
 Most Recent Contact: 02/03/2022

ICIS: Comprised of all Federal Administrative and Judicial enforcement information [intended to replace PCS] by tracking enforcement and compliance information (also contains what used to be known as FFTS)

Agency Version Date: 12/28/2021  
 Agency Update Frequency: Varies  
 Planned Next Contact: 03/25/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 566-1667  
 Most Recent Contact: 12/28/2021

INACTIVE PCS: Inactive Permitted facilities to discharge wastewater

Agency Version Date: 12/28/2021  
 Agency Update Frequency: Varies  
 Planned Next Contact: 03/25/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 564-6582  
 Most Recent Contact: 12/28/2021

INDIAN RESERVATION: American Indian Lands from the Protected Areas Database (PAD-US)

Agency Version Date: 01/28/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 04/26/2022

Agency: United States Geologic Survey (USGS)  
 Agency Contact: 1-888-275-8747  
 Most Recent Contact: 01/28/2022

LUCIS: Land Use Control Information Systems

Agency Version Date: 12/21/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 03/18/2022

Agency: Department of the Navy: BRAC PMO  
 Agency Contact: (619) 532-0900  
 Most Recent Contact: 12/21/2021

LUCIS 2: Land Use Control Information Systems

Agency Version Date: 01/17/2018  
 Agency Update Frequency: No Longer Maintained  
 Planned Next Contact: 05/03/2022

Agency: Department of the Navy: BRAC PMO  
 Agency Contact: (619) 532-0900  
 Most Recent Contact: 02/04/2022

MANIFEST EPA: EPA Hazardous Waste Electronic Manifest System (e-Manifest)

Agency Version Date: 11/12/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 05/06/2022

Agency: Environmental Protection Agency  
 Agency Contact: (202) 566-1667  
 Most Recent Contact: 02/08/2022

MINE OPERATIONS: Mine plants and operations for commodities monitored by the National Minerals Information Center of the USGS

Agency Version Date: 02/11/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 05/10/2022

Agency: USGS Mineral Resources Program  
 Agency Contact: (703) 648-5953  
 Most Recent Contact: 02/11/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

MINES: Mines Master Index Files

Agency Version Date: 12/29/2021	Agency: Department of Labor
Agency Update Frequency: Varies	Agency Contact: (202) 693-9400
Planned Next Contact: 03/28/2022	Most Recent Contact: 12/29/2021

MINES USGS: Listing of all active mines and mineral plants in 2003

Agency Version Date: 02/11/2022	Agency: USGS Mineral Resources Program
Agency Update Frequency: Varies	Agency Contact: (703) 648-5953
Planned Next Contact: 05/10/2022	Most Recent Contact: 02/11/2022

MLTS: Sites in possession/use of radioactive materials regulated by NRC

Agency Version Date: 10/26/2021	Agency: Nuclear Regulatory Commission
Agency Update Frequency: Varies	Agency Contact: (800) 397-4209
Planned Next Contact: 04/19/2022	Most Recent Contact: 01/21/2022

NPL AOC: Areas of Concern related to NPL remediation sites

Agency Version Date: 11/02/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: N/R
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

NPL LIENS: National Priority List of sites with Liens

Agency Version Date: 11/02/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 703-603-8867
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

NURSING HOMES: List of Nursing Homes

Agency Version Date: 01/14/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 04/12/2022	Most Recent Contact: 01/14/2022

OSHA: OSHA's listing of inspections violations and fatality information

Agency Version Date: 12/27/2021	Agency: Occupational Safety & Health Administration
Agency Update Frequency: Varies	Agency Contact: 800-321-6742
Planned Next Contact: 03/24/2022	Most Recent Contact: 12/27/2021

PADS: Listing of generators transporters commercial store/ brokers and disposers of PCB

Agency Version Date: 01/28/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (703) 308-8404
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

PCB TRANSFORMER: Disposal and Storage of Polychlorinated Biphenyl (PCB) Waste

Agency Version Date: 11/16/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: (703) 308-8404
Planned Next Contact: 05/10/2022	Most Recent Contact: 02/11/2022

PCS ENF: Permitted facilities to discharge wastewater (Federal equivalent to NPDES)

Agency Version Date: 12/28/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 564-6582
Planned Next Contact: 03/25/2022	Most Recent Contact: 12/28/2021

**OTHER ASCERTAINABLE RECORDS (cont.)**

PCS FACILITY: Permitted facilities to discharge wastewater (Federal equivalent to NPDES)

Agency Version Date: 12/28/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 564-6582
Planned Next Contact: 03/25/2022	Most Recent Contact: 12/28/2021

PFAS NPL: List of NPL sites with PFAS or PFOA contamination

Agency Version Date: 01/05/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 04/01/2022	Most Recent Contact: 01/05/2022

PFAS TRIS: List of TRIS sites where PFAS or PFOA are used/manufactured/ treated/ transported/released.

Agency Version Date: 12/28/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 03/25/2022	Most Recent Contact: 12/28/2021

PFAS UCMR3: List of PWS wells sampled for Unregulated Contaminant Monitoring Rule (UCMR)

Agency Version Date: 03/08/2022	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 06/02/2022	Most Recent Contact: 03/08/2022

RAATS: Listing of major violators with enforcement actions issued under RCRA. Includes administrative and civil actions filed by the EPA. This dataset is no longer maintained.

Agency Version Date: 09/23/2019	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 04/18/2022	Most Recent Contact: 01/20/2022

RADINFO: EPA regulated facilities with radiation and radioactive materials

Agency Version Date: 08/01/2019	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 04/06/2022	Most Recent Contact: 01/10/2022

RMP: Facilities producing/handling/ process/ distribute/ store specific chemicals report plans required by the Clean Air Act

Agency Version Date: 01/04/2022	Agency: Environmental Protection Agency
Agency Update Frequency: Monthly	Agency Contact: (202) 564-2534
Planned Next Contact: 04/01/2022	Most Recent Contact: 01/04/2022

ROD: Permanent remedy at an NPL site

Agency Version Date: 11/02/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (800) 424-9346
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

SCHOOLS PRIVATE: List of Private Schools

Agency Version Date: 02/08/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 04/15/2022	Most Recent Contact: 01/18/2022

SCHOOLS PUBLIC: List of Public Schools

Agency Version Date: 02/08/2022	Agency: DHS Homeland Infrastructure Foundation
Agency Update Frequency: Varies	Agency Contact: N/R
Planned Next Contact: 04/15/2022	Most Recent Contact: 01/18/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners

Agency Version Date: 09/09/2021	Agency: Environmental Protection Agency
Agency Update Frequency: No Update	Agency Contact: (202) 566-1667
Planned Next Contact: 05/27/2022	Most Recent Contact: 03/02/2022

SEMS\_SMELTER: This report includes sites that have smelting-related, or potentially smelting-related, indicators in the SEMS database. The report includes information on the site location as well as contaminants of concern.

Agency Version Date: 11/02/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Quarterly	Agency Contact: 703-603-8867
Planned Next Contact: 04/26/2022	Most Recent Contact: 01/28/2022

SSTS: Tracking of facilities who produce pesticides and their quantity

Agency Version Date: 12/10/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Annually	Agency Contact: (202) 566-1667
Planned Next Contact: 06/02/2022	Most Recent Contact: 03/08/2022

STORMWATER: Permitted storm water sites

Agency Version Date: 12/21/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 03/18/2022	Most Recent Contact: 12/21/2021

TOSCA-PLANT: Plants controlled by the Toxic Substance Control Act

Agency Version Date: 12/16/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 03/14/2022	Most Recent Contact: 12/16/2021

TRIS: Information regarding toxic chemicals that are being used/manufactured/ treated/ transported/released into the environment

Agency Version Date: 12/28/2021	Agency: Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: (202) 566-1667
Planned Next Contact: 03/25/2022	Most Recent Contact: 12/28/2021

UMTRA: Uranium Recovery Sites

Agency Version Date: 07/08/2021	Agency: United States Nuclear Regulatory Commission
Agency Update Frequency: Varies	Agency Contact: (301) 415-8200
Planned Next Contact: 03/25/2022	Most Recent Contact: 12/29/2021

VAPOR: EPA Vapor Intrusion Database

Agency Version Date: 03/19/2021	Agency: U.S. Environmental Protection Agency
Agency Update Frequency: Varies	Agency Contact: 855-246-3642
Planned Next Contact: 06/03/2022	Most Recent Contact: 03/08/2022

AIRS - KS: Listing of facilities with air permits

Agency Version Date: 02/17/2022	Agency: Kansas Department of Health and Environment
Agency Update Frequency: Quarterly	Agency Contact: 785.296.6422
Planned Next Contact: 05/16/2022	Most Recent Contact: 02/17/2022

**OTHER ASCERTAINABLE RECORDS (cont.)**

COAL ASH - KS: Coal Ash Disposal Sites

Agency Version Date: 12/19/2017  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 04/27/2022

Agency: Kansas Department of Health and Environment  
 Agency Contact: 785.296.1591  
 Most Recent Contact: 01/31/2022

DAYCARE - KS: Child Care Facilities

Agency Version Date: 02/11/2022  
 Agency Update Frequency: Varies  
 Planned Next Contact: 05/09/2022

Agency: Department of Health and Environment  
 Agency Contact: (785) 296-1270  
 Most Recent Contact: 02/11/2022

DRYCLEANERS - KS: Registered Drycleaners

Agency Version Date: 12/20/2021  
 Agency Update Frequency: Varies  
 Planned Next Contact: 03/17/2022

Agency: Department of Health and Environment  
 Agency Contact: (785) 291-3121  
 Most Recent Contact: 12/20/2021

EMI - KS: Kansas Emissions Data System

Agency Version Date: 01/07/2022  
 Agency Update Frequency: Annually  
 Planned Next Contact: 04/05/2022

Agency: Kansas Department of Health and Environment  
 Agency Contact: 785.296.1582  
 Most Recent Contact: 01/07/2022

HIST AIRS - KS: Historical listing of facilities with air permits.

Agency Version Date: 11/15/2018  
 Agency Update Frequency: No Longer Maintained  
 Planned Next Contact: 05/06/2022

Agency: Kansas Department of Health and Environment  
 Agency Contact: 785.296.6422  
 Most Recent Contact: 02/08/2022

HIST DRYCLEANERS - KS: List of Registered Drycleaners that are no longer in current agency list.

Agency Version Date: 09/23/2021  
 Agency Update Frequency: Varies  
 Planned Next Contact: 03/17/2022

Agency: Department of Health and Environment  
 Agency Contact: (785) 291-3121  
 Most Recent Contact: 12/20/2021

PFAS - KS: List of PFAS sites and areas of interest.

Agency Version Date: 02/14/2022  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 05/11/2022

Agency: Kansas Department of Health & Environment  
 Agency Contact: N/R  
 Most Recent Contact: 02/14/2022

T 2 - KS: List of facilities that submit an Emergency and Hazardous Chemical Inventory Form

Agency Version Date: 12/21/2021  
 Agency Update Frequency: Quarterly  
 Planned Next Contact: 03/18/2022

Agency: Kansas Department of Health and Environment  
 Agency Contact: 785.296.1688  
 Most Recent Contact: 12/21/2021

UIC - KS: Underground Injection Controls

Agency Version Date: 12/21/2021  
 Agency Update Frequency: Varies  
 Planned Next Contact: 03/17/2022

Agency: Department of Health and Environment  
 Agency Contact: (785) 296-5517  
 Most Recent Contact: 12/20/2021

**SUBJECT PROPERTY ADDRESS:**

Free State Solar  
 Free State Solar  
 Douglas County, KS

**SUBJECT PROPERTY COORDINATES:**

Latitude(North):	39.026929 - 39°1'36.9"
Longitude(West):	-95.252914 - -95°15'10.5"
Universal Transverse Mercator:	Zone 15N
UTM X (Meters):	304979.71
UTM Y (Meters):	4322180.00
State Plane Coordinates:	1501 - Kansas North (US Survey Feet)
X Coordinate (Feet):	2092630.434 E
Y Coordinate (Feet):	264449.507 N

**ELEVATION:**

Elevation: 833 ft. above sea level

**USGS TOPOGRAPHIC MAP:**

Subject Property Map:	39095-A2 Midland, KS
Most Recent Revision:	2018
Subject Property Map:	39095-A3 Williamstown, KS
Most Recent Revision:	2018

**GEOHYDROLOGY DATA:**

**SUBJECT PROPERTY TOPOGRAPHY:**

Topographic Gradient: North

**DFIRM FLOOD ZONE:**

	DFIRM Flood
Subject Property County:	Electronic Data:
DOUGLAS	Yes - refer to the PROPERTY PROXIMITY MAP and AREA MAP
Flood Plain Panel at Subject Property:	20045C0067D (Eff. date 8/5/2010) 20045C0088E (Eff. date 9/2/2015) 20103C0300G (Eff. date 7/16/2015) 20045C0069E (Eff. date 9/2/2015) 20045C0090E (Eff. date 9/2/2015) 20087C0400D (Eff. date 11/4/2009) 20087C0370D (Eff. date 12/17/2010)
Additional Panels in search area:	20045C0066D (Eff. date 8/5/2010) 20045C0089E (Eff. date 9/2/2015) 20045C0068E (Eff. date 9/2/2015)



**FEMA FLOOD ZONE:**

	FEMA Flood
Subject Property County:	Electronic Data:
DOUGLAS	Yes - refer to the PROPERTY PROXIMITY MAP and AREA MAP
Flood Plain Panel at Subject Property:	2000870030B
Additional Panels in search area:	2000870010B 2000900010A 2000900020A 2000870040B

**NATIONAL WETLAND INVENTORY:**

	NWI Electronic
<u>NWI Quad at Subject Property:</u>	<u>Data Coverage:</u>
Midland	Yes - refer to the Geological Findings Map

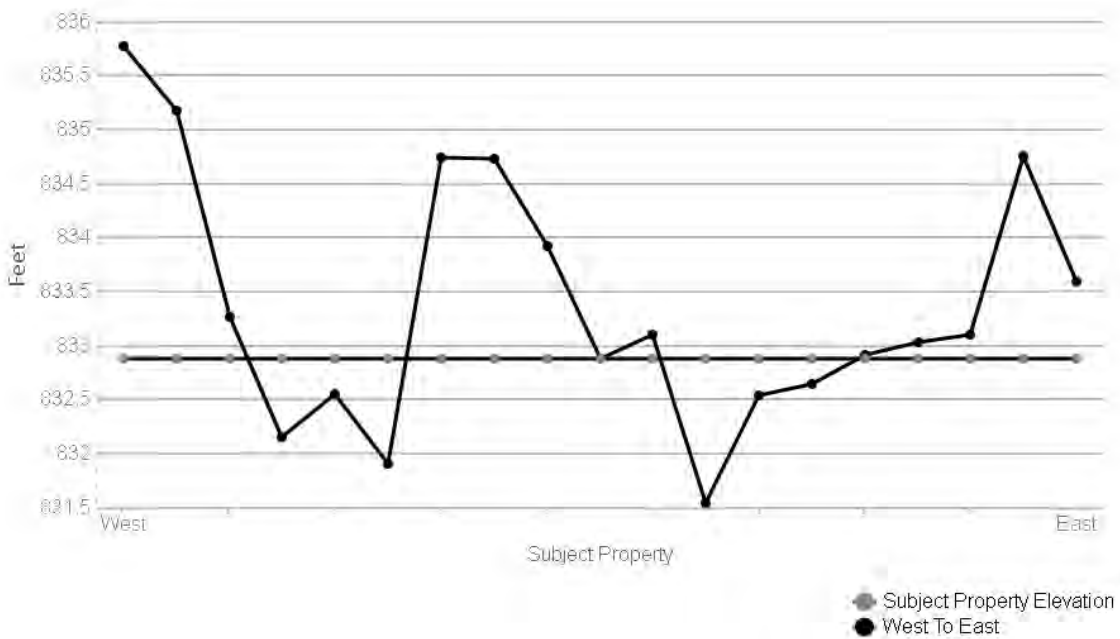
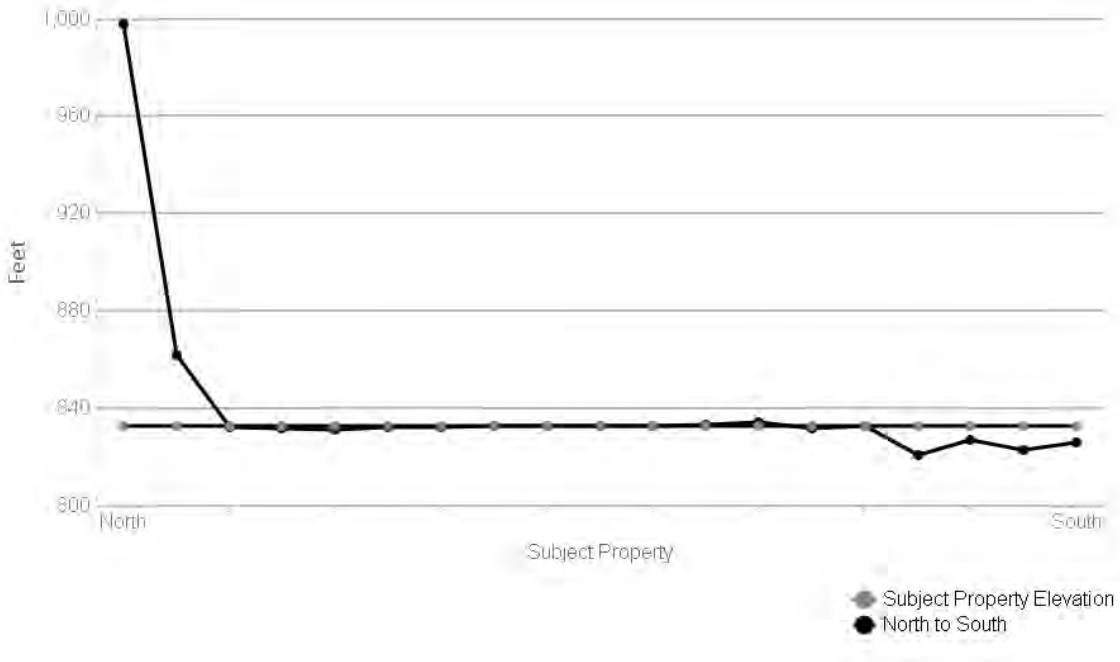
**LITHOSTRATIGRAPHIC INFORMATION:**

**ROCK STRATIGRAPHIC UNIT:**

**GEOLOGIC AGE IDENTIFICATION**

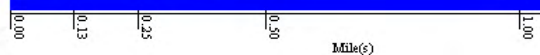
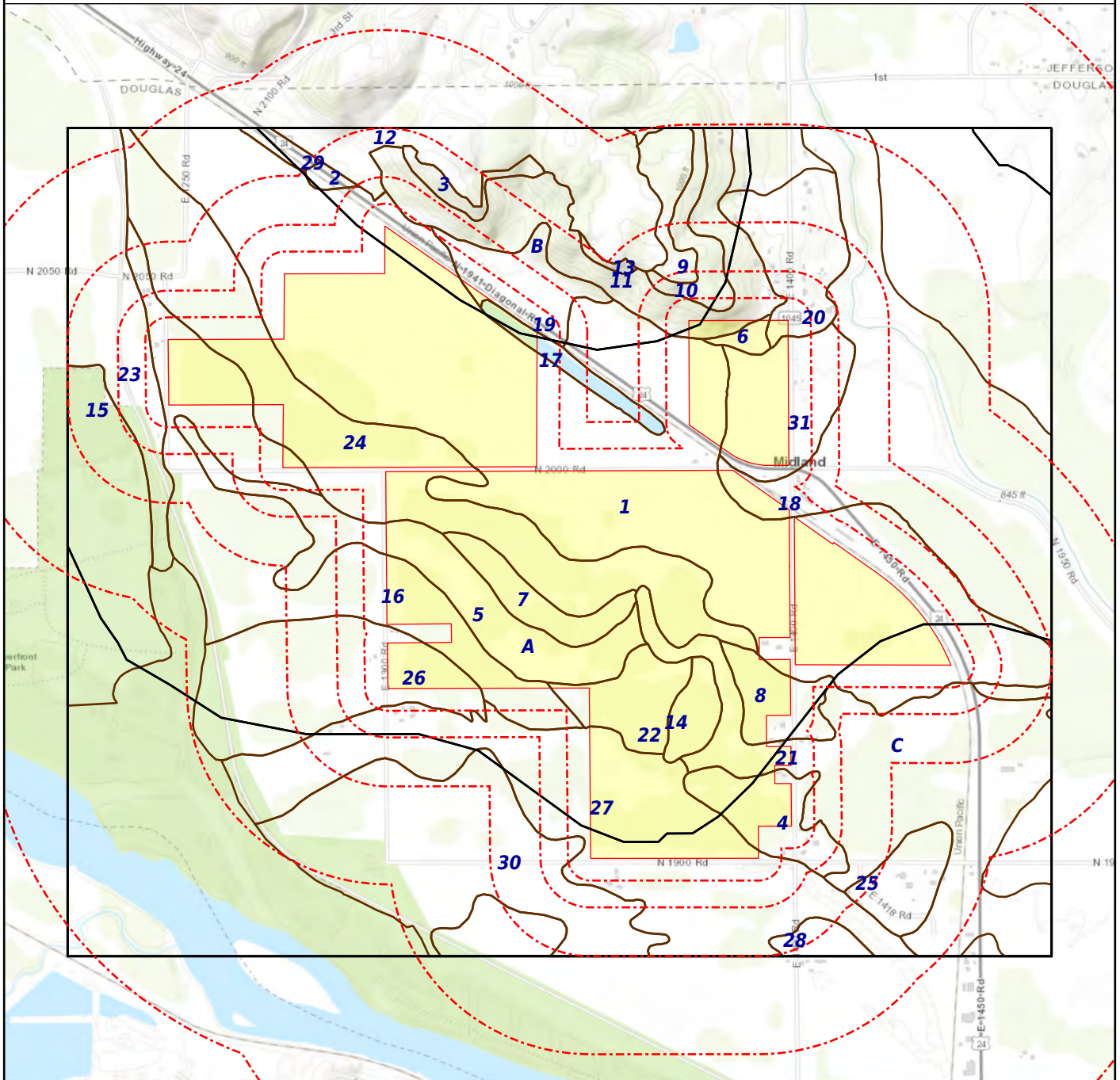
Era:	Paleozoic	Category: 83 PP4 Virgilian Series
System:	Pennsylvanian	
Series:	Virgilian Series	
Code:	PP4	

**SURROUNDING ELEVATION PROFILES:**



SUBJECT NAME: Free State Solar  
ADDRESS: Free State Solar, Douglas County, KS  
LAT/LONG: 39.026929 / -95.252914

PREPARED FOR: Environmental Consulting & Technology...  
ORDER #: 68644  
REPORT DATE: March 11, 2022



+ Subject Property      - SSURGO      - STATSGO

**SOIL COMPOSITION IN GENERAL AREA OF SUBJECT PROPERTY:**

Agency source: Soil Conservation Service, US Department of Agriculture

**SOIL MAP ID 1**

**SSURGO**

USDA Soil Name	Wabash, Series
USDA Soil Texture	Silty clay
Hydrologic Soil Group	D
Soil Drainage Class	Poorly drained
Hydric Classification	85
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-13	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.4233	5.6-7.3
2	13-25	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.4233	5.6-7.3
3	25-41	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and	0.01-0.4233	5.6-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
3	25-41	Silty clay	Transportation Officials, 1984.	the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.4233	5.6-7.3
4	41-71	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.4233	5.6-7.3
5	71-131	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.4233	5.6-7.3
6	131-203	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM	0.01-0.4233	5.6-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
6	131-203	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	test D 2487, in ASTM, 1984).	0.01-0.4233	5.6-7.8

**SOIL MAP ID 2**

**SSURGO**

USDA Soil Name	Kennebec, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	C
Soil Drainage Class	Moderately well drained
Hydric Classification	5
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5-7.3
2	20-104	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials,	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent	1.41-4.23	5-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	20-104	Silt loam	1984.	on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5-7.3
3	104-137	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6-7.3
4	137-200	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6-7.3

**SOIL MAP ID 3**

**SSURGO**

USDA Soil Name	Rosendale, Series
USDA Soil Texture	Silty clay
Hydrologic Soil Group	D
Soil Drainage Class	Moderately well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.42-1.41	6.5-7.2
2	20-34	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.42-1.41	7-7.3
3	34-52	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.42	7.3-8.1
4	52-75	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75	0.01-0.42	7.3-8.1



Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
4	52-75	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.42	7.3-8.1
5	75-101	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.42	7.3-8.2
6	101-140		No data	No data	0.001-1.41	0-0

**SOIL MAP ID 4**

**SSURGO**

USDA Soil Name	Eudora, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	1
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM	4.23-14.11	5.1-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	test D 2487, in ASTM, 1984).	4.23-14.11	5.1-7.8
2	18-40	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.8
3	40-58	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8
4	58-91	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.6-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
5	91-200	Very fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	6.6-8.4

**SOIL MAP ID 5**

**SSURGO**

USDA Soil Name	Kimo, Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	D
Soil Drainage Class	Somewhat poorly drained
Hydric Classification	5
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.4233-1.411	6.1-8.4
2	18-38	Silty clay	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75	0.4233-1.411	6.6-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	18-38	Silty clay	of State Highway and Transportation Officials, 1984.	mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.4233-1.411	6.6-8.4
3	38-58	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.4233-1.411	6.6-8.4
4	58-69	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200), clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.4233-1.411	6.6-8.4
5	69-152	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.233-14.11	6.6-8.4
6	152-203	Silt loam	Silt-Clay materials (more than 35%	Reference: This is a classification of soil	4.233-14.11	6.6-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
6	152-203	Silt loam	passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.233-14.11	6.6-8.4

**SOIL MAP ID 6**

**SSURGO**

USDA Soil Name	Martin, Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	C/D
Soil Drainage Class	Moderately well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-15	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5.6-6.5
2	15-35	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and	1.41-4.23	5.6-6.5

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	15-35	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5.6-6.5
3	35-48	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.42-1.41	5.6-7.8
4	48-142	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.42-1.41	5.6-7.8
5	142-165	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in	0.42-1.41	5.6-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
5	142-165	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	organic matter (ASTM test D 2487, in ASTM, 1984).	0.42-1.41	5.6-8.4
6	165-200	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.42-1.41	5.6-8.4

**SOIL MAP ID 7**

**SSURGO**

USDA Soil Name	Rossville, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75	4.23-14.11	5.6-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Transportation Officials, 1984.	mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
2	18-36	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
3	36-53	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
4	53-99	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8



Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
5	99-145	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8
6	145-203	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-8.4

**SOIL MAP ID 8**

**SSURGO**

USDA Soil Name	Rossville, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction	4.23-14.11	5.6-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
2	18-36	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
3	36-53	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
4	53-99	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
5	99-145	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8
6	145-203	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-8.4

**SOIL MAP ID 9**

**SSURGO**

USDA Soil Name	Pawnee, Series
USDA Soil Texture	Clay loam
Hydrologic Soil Group	D
Soil Drainage Class	Moderately well drained
Hydric Classification	1
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-15	Clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction	1.41-4.23	5.1-6

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-15	Clay loam	Transportation Officials, 1984.	purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5.1-6
2	15-22	Clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5.1-6
3	22-31	Clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.42	6.1-7.8
4	31-105	Clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.42	7.4-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
5	105-130	Clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.42-1.41	7.9-8.4
6	130-200	Clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.42-1.41	7.9-8.4

**SOIL MAP ID 10**

**SSURGO**

USDA Soil Name	Rosendale, Series
USDA Soil Texture	Silty clay
Hydrologic Soil Group	D
Soil Drainage Class	Moderately well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction	0.42-1.41	6.5-7.2

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silty clay	Transportation Officials, 1984.	purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.42-1.41	6.5-7.2
2	20-34	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.42-1.41	7-7.3
3	34-52	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.42	7.3-8.1
4	52-75	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.42	7.3-8.1

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
5	75-101	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.42	7.3-8.2
6	101-140		No data	No data	0.001-1.41	0-0

**SOIL MAP ID 11**

**SSURGO**

USDA Soil Name	Vinland, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	D
Soil Drainage Class	Somewhat excessively drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.233-14.11	5.6-7.8
2	20-30	Silty clay loam	Reference: This is a classification of soil material for highway and airfield	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference:	4.233-14.11	5.6-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	20-30	Silty clay loam	construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.233-14.11	5.6-7.8
3	30-41	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.233-14.11	5.6-7.8
4	41-200	No data	No data	No data	0.001-1.4	0-0

**SOIL MAP ID 12**

**SSURGO**

USDA Soil Name	Pits,Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

**SOIL MAP ID 13**

**SSURGO**

USDA Soil Name	Vinland,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	D
Soil Drainage Class	Somewhat excessively drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Moderate



Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-19	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.233-14.11	5.6-7.8
2	19-30	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.233-14.11	5.6-7.8
3	30-40	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.233-14.11	5.6-7.8
4	40-200	No data	No data	No data	0.001-1.4	0-0

**SOIL MAP ID 14**

**SSURGO**

USDA Soil Name	Rossville, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
2	18-36	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
3	36-53	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM	4.23-14.11	5.6-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
3	36-53	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
4	53-99	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8
5	99-145	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8
6	145-203	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and	4.23-14.11	6.1-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
6	145-203	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-8.4

**SOIL MAP ID 15**

**SSURGO**

USDA Soil Name	Pits,Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

**SOIL MAP ID 16**

**SSURGO**

USDA Soil Name	Rossville,Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	18-36	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
3	36-53	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.3
4	53-99	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8
5	99-145	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75	4.23-14.11	6.1-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
5	99-145	Silt loam	Transportation Officials, 1984.	mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8
6	145-203	Silt loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-8.4

**SOIL MAP ID 17**

**SSURGO**

USDA Soil Name	Water,Miscellaneous area
USDA Soil Texture	Not Reported
Hydrologic Soil Group	Not Reported
Soil Drainage Class	Not Reported
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Not Reported

**SOIL MAP ID 18**

**SSURGO**

USDA Soil Name	Kennebec, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	C
Soil Drainage Class	Moderately well drained
Hydric Classification	5
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5-7.3
2	20-104	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5-7.3
3	104-137	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6-7.3
4	137-200	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75	1.41-4.23	6-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
4	137-200	Silty clay loam	Transportation Officials, 1984.	mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6-7.3

**SOIL MAP ID 19**

**SSURGO**

USDA Soil Name	Kennebec, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	C
Soil Drainage Class	Moderately well drained
Hydric Classification	5
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5-7.3
2	20-104	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in	1.41-4.23	5-7.3



Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	20-104	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5-7.3
3	104-137	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6-7.3
4	137-200	Silty clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6-7.3

**SOIL MAP ID 20**

**SSURGO**

USDA Soil Name	Falleaf, Series
USDA Soil Texture	Fine sandy loam
Hydrologic Soil Group	C
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-15	Fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	4.5-6.5
2	15-25	Fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	4.5-6.5
3	25-117	Clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5.6-7.8
4	117-216	Clay loam	Silt-Clay materials (more than 35% passing No. 200) clayey	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%),	1.41-4.23	6.1-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
4	117-216	Clay loam	soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6.1-7.3

**SOIL MAP ID 21**

**SSURGO**

USDA Soil Name	Eudora, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	5
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-30	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.233-14.11	6.1-7.8
2	30-183	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM,	4.233-14.11	6.6-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	30-183	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	1984).	4.233-14.11	6.6-8.4

**SOIL MAP ID 22**

**SSURGO**

USDA Soil Name	Reading, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	C
Soil Drainage Class	Moderately well drained
Hydric Classification	1
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-6.5
2	20-36	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and	1.41-4.23	5.6-6.5

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	20-36	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5.6-6.5
3	36-99	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5.6-7.3
4	99-142	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6.1-7.3
5	142-200	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM,	1.41-4.23	6.1-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
5	142-200	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	1984).	1.41-4.23	6.1-7.8

**SOIL MAP ID 23**

**SSURGO**

USDA Soil Name	Eudora, Series
USDA Soil Texture	Fine sandy loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	1
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.1-7.8
2	18-40	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials,	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and	4.23-14.11	5.6-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	18-40	Silt loam	1984.	the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.8
3	40-58	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8
4	58-91	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.6-8.4
5	91-200	Very fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	6.6-8.4

**SOIL MAP ID 24**

**SSURGO**

USDA Soil Name	Reading, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	C
Soil Drainage Class	Moderately well drained
Hydric Classification	1
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-6.5
2	20-36	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5.6-6.5
3	36-99	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM	1.41-4.23	5.6-7.3



Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
3	36-99	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	test D 2487, in ASTM, 1984).	1.41-4.23	5.6-7.3
4	99-142	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6.1-7.3
5	142-200	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6.1-7.8

**SOIL MAP ID 25**

**SSURGO**

USDA Soil Name	Eudora, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	1
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.1-7.8
2	18-40	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.8
3	40-58	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
4	58-91	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.6-8.4
5	91-200	Very fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	6.6-8.4

**SOIL MAP ID 26**

**SSURGO**

USDA Soil Name	Eudora, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	1
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM,	4.23-14.11	5.1-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	1984).	4.23-14.11	5.1-7.8
2	18-40	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.8
3	40-58	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8
4	58-91	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM,	4.23-14.11	6.6-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
4	58-91	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	1984).	4.23-14.11	6.6-8.4
5	91-200	Very fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	6.6-8.4

**SOIL MAP ID 27**

**SSURGO**

USDA Soil Name	Eudora, Series
USDA Soil Texture	Fine sandy loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	1
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.1-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	18-40	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.8
3	40-58	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8
4	58-91	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.6-8.4
5	91-200	Very fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM,	14.11-42.34	6.6-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
5	91-200	Very fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	1984).	14.11-42.34	6.6-8.4

**SOIL MAP ID 28**

**SSURGO**

USDA Soil Name	Eudora, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	1
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-18	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.1-7.8
2	18-40	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in	4.23-14.11	5.6-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
2	18-40	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-7.8
3	40-58	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.1-7.8
4	58-91	Silt loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	6.6-8.4
5	91-200	Very fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14.11-42.34	6.6-8.4



**SOIL MAP ID 29**

**SSURGO**

USDA Soil Name	Wabash, Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	D
Soil Drainage Class	Poorly drained
Hydric Classification	90
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-15	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.4233-1.411	5.6-7.3
2	15-41	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.4233-1.411	5.6-7.3
3	41-132	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM	0.01-0.4233	5.6-7.8

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
3	41-132	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	test D 2487, in ASTM, 1984).	0.01-0.4233	5.6-7.8
4	132-200	Silty clay	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984).	FINE-GRAINED SOILS, Silts and clays (liquid limit is 50% or more), Fat Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	0.01-0.4233	5.6-7.8

**SOIL MAP ID 30**

**SSURGO**

USDA Soil Name	Stonehouse, Series
USDA Soil Texture	Fine sandy loam
Hydrologic Soil Group	A
Soil Drainage Class	Excessively drained
Hydric Classification	1
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-23	Fine sandy loam	Silt-Clay materials (more than 35% passing NO. 200), silty soils. Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc.	FINE-GRAINED SOILS, Silts and clays, (liquid limit is less than 50%), Silt. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size	14-42	6.1-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-23	Fine sandy loam	of State Highway and Transportation Officials, 1984.	distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14-42	6.1-7.3
2	23-58	Loamy fine sand	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42-141	6.1-7.8
3	58-79	Loamy sand	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42-141	6.1-7.8
4	79-114	Fine sand	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42-141	6.1-7.8
5	114-180	Sandy loam	Reference: This is a classification of soil material for highway	Reference: This is a classification of soil material designed for	14-42	6.1-8.4

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
5	114-180	Sandy loam	and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	14-42	6.1-8.4
6	180-203	Loamy fine sand	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	42-141	6.1-8.4

**SOIL MAP ID 31**

**SSURGO**

USDA Soil Name	Reading, Series
USDA Soil Texture	Silt loam
Hydrologic Soil Group	C
Soil Drainage Class	Well drained
Hydric Classification	1
Corrosion Potential - Uncoated Steel	Moderate

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in	4.23-14.11	5.6-6.5

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-20	Silt loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	organic matter (ASTM test D 2487, in ASTM, 1984).	4.23-14.11	5.6-6.5
2	20-36	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5.6-6.5
3	36-99	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	5.6-7.3
4	99-142	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and	1.41-4.23	6.1-7.3

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
4	99-142	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6.1-7.3
5	142-200	Silty clay loam	Reference: This is a classification of soil material for highway and airfield construction (Procedure M 145-73 in Am. Assoc. of State Highway and Transportation Officials, 1984.	FINE-GRAINED SOILS, Silts and clays (liquid limit is less than 50%), Lean Clay. Reference: This is a classification of soil material designed for general construction purposes. It is dependent on the particle size distribution of the <75 mm, the liquid limit, and the plasticity index and on whether the soil material is high in organic matter (ASTM test D 2487, in ASTM, 1984).	1.41-4.23	6.1-7.8

**SOIL MAP ID A**

**STATSGO**

USDA Soil Name	Wabash, Series
USDA Soil Texture	Silty clay
Hydrologic Soil Group	D
Soil Drainage Class	Poorly drained
Hydric Classification	44
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-19	Silty clay	No data	No data	0-0.4234	5.1-7.3
2	19-60	No data	No data	No data	0-0.4234	5.1-7.8

**SOIL MAP ID B**

**STATSGO**

USDA Soil Name	Martin, Series
USDA Soil Texture	Silty clay loam
Hydrologic Soil Group	C
Soil Drainage Class	Moderately well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	High

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-9	Silty clay loam	No data	No data	1.4114-4.2343	5.6-6.5
2	9-14	Silty clay loam	No data	No data	1.4114-4.2343	5.6-7.3
3	14-48	No data	No data	No data	0.4234-1.4114	5.6-7.3
4	48-80	No data	No data	No data	0.4234-1.4114	5.6-7.8

**SOIL MAP ID C**

**STATSGO**

USDA Soil Name	Eudora, Series
USDA Soil Texture	Fine sandy loam
Hydrologic Soil Group	B
Soil Drainage Class	Well drained
Hydric Classification	0
Corrosion Potential - Uncoated Steel	Low

Layer	Depth (inches)	Soil Texture	AASHTO Group	Unified Soil Description	Saturated Hydraulic Conductivity micro m/sec	Soil Reaction pH
1	0-14	Fine sandy loam	No data	No data	14.1143-42.343	6.1-7.8
2	14-60	No data	No data	No data	4.2343-14.1143	6.6-8.4

**WATER AGENCY DATA:**

**WATER AGENCY SEARCH DISTANCES:**

<u>DATABASE:</u> NWIS OIL & GAS WELLS - KS PWS	<u>SEARCH DISTANCE (MILES):</u> 1.000 1.000 1.000
---	--

<u>DISTANCE TO NEAREST:</u> NWIS OIL & GAS WELLS - KS PWS	<u>DISTANCE:</u> 0.000 mi / 0 ft 0.000 mi / 0 ft N/A
--	---

**FEDERAL WATER AGENCY DATA SUMMARY:**

<u>MAP ID:</u>	<u>WELL ID:</u>	<u>LOCATION FROM SP:</u>
3	390144095143801	< 1/8 Mile ENE
4	390137095142901	< 1/8 Mile E
7	390105095142901	< 1/8 Mile SE
8	390157095150301   390157095150302	1/8 - 1/4 Mile NNE
9	390203095162701	1/8 - 1/4 Mile WNW
10	390157095162701	1/8 - 1/4 Mile WNW
11	390223095155401	1/8 - 1/4 Mile NW
12	390144095161901	1/8 - 1/4 Mile W
13	390216095161901	1/8 - 1/4 Mile WNW
15	390118095133901	1/4 - 1/2 Mile ESE
16	390032095143801	1/4 - 1/2 Mile SSE
17	390229095161901	1/4 - 1/2 Mile NW
18	390118095161001	1/4 - 1/2 Mile WSW
A19	390042095140801   390042095140802	1/4 - 1/2 Mile SE
A20	390045095140402	1/4 - 1/2 Mile SE
22	390131095163601	1/2 - 1 Mile W
27	390144095165301	1/2 - 1 Mile W
B29	390124095132301	1/2 - 1 Mile E
30	390242095145501	1/2 - 1 Mile NNE
31	390124095131501	1/2 - 1 Mile E
34	390006095143701	1/2 - 1 Mile SSE

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

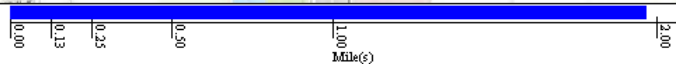
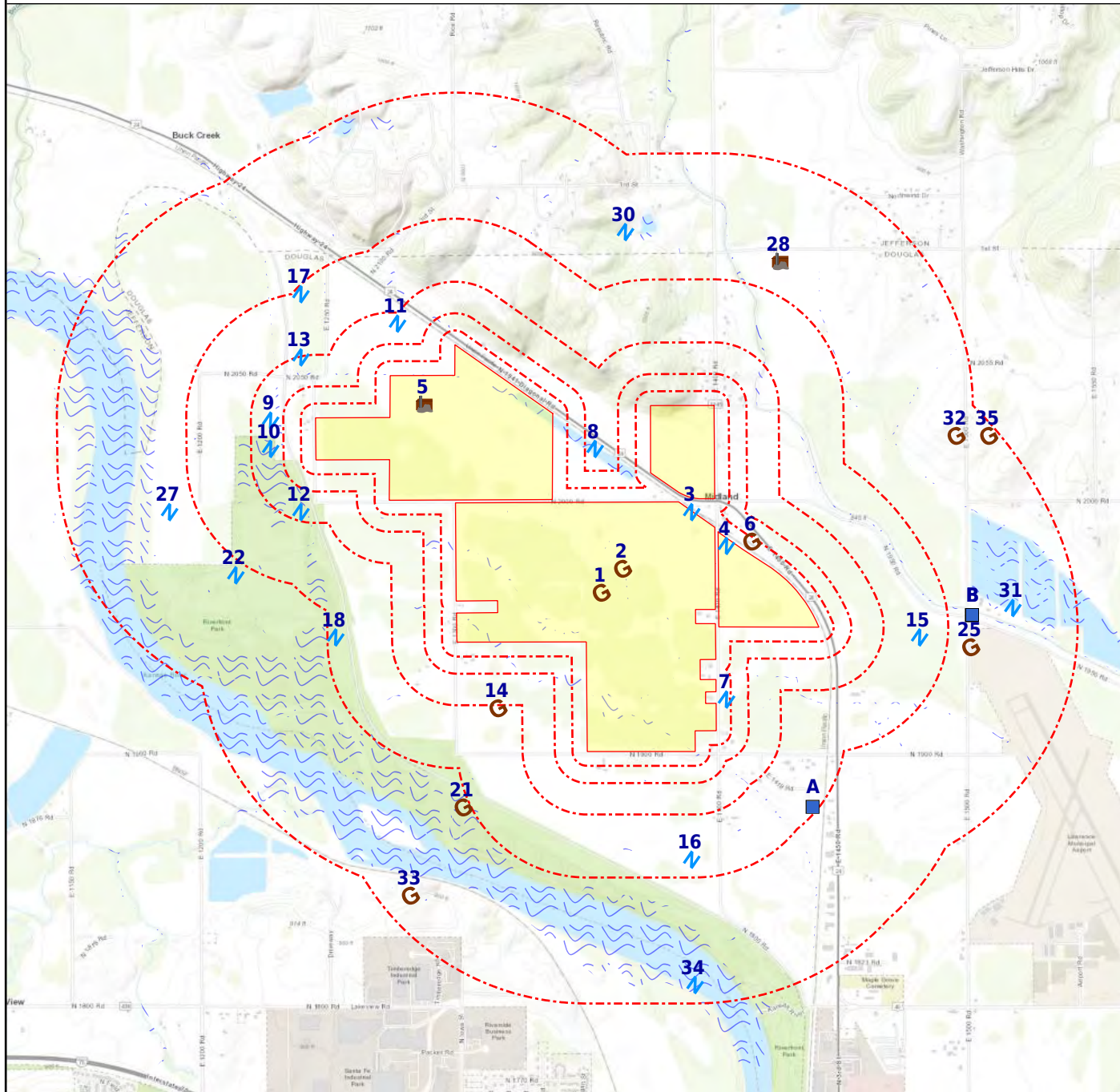
**STATE/LOCAL WATER AGENCY DATA SUMMARY:**

<u>MAP ID:</u>	<u>WELL ID:</u>	<u>LOCATION FROM SP:</u>
5	1006461374   1006462326	< 1/8 Mile NW
28	1002907084	1/2 - 1 Mile NE



SUBJECT NAME: Free State Solar  
 ADDRESS: Free State Solar, Douglas County, KS  
 LAT/LONG: 39.026929 / -95.252914

PREPARED FOR: Environmental Consulting & Technology...  
 ORDER #: 68644  
 REPORT DATE: March 11, 2022



- + Subject Property
  - N NWI
- Basins (No Data)
  - ↘ NWIS
- A Geologic Cluster with Water Well
  - 1 Oil & Gas Wells
- G Geological Site

Map Id: 1  
Direction: SE  
Distance: 0.000 mi., 0 ft.  
Elevation: 834 ft.  
Relative: Higher

**Site Name :** T-L TWR  
39.024256, -95.250547  
LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE]

**Envirosite ID:** 2487424  
**EPA ID:** N/R

## DIGITAL OBSTACLE

Date of Action : 2018-01-29  
Action : Add  
FAA Study Number : 2013ACE036550E  
OBS Number : 20-051034  
Obstacle Type : T-L TWR  
City Name : LAWRENCE  
State Identifier : KS  
Country Identifier : USA  
Type of Lighting : None  
Verification Status : Unverified  
Quantity : 1  
Mark Indicator : None  
Above Ground Level Height (Feet) : 00065  
Above Mean Sea Level Height (Feet) : 00899  
Horizontal Accuracy : +-250'  
Vertical Accuracy : +-50'  
Latitude : 39 01 27.32N  
Longitude : 095 15 01.97W

Map Id: 2  
Direction: ESE  
Distance: 0.000 mi., 0 ft.  
Elevation: 833 ft.  
Relative: Lower

**Site Name :** T-L TWR  
39.025617, -95.249008  
LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE]

**Envirosite ID:** 2489538  
**EPA ID:** N/R

## DIGITAL OBSTACLE

Date of Action : 2018-01-29  
Action : Add  
FAA Study Number : 2013ACE036560E  
OBS Number : 20-051150  
Obstacle Type : T-L TWR  
City Name : LAWRENCE  
State Identifier : KS  
Country Identifier : USA  
Type of Lighting : None  
Verification Status : Unverified  
Quantity : 1  
Mark Indicator : None  
Above Ground Level Height (Feet) : 00065  
Above Mean Sea Level Height (Feet) : 00897  
Horizontal Accuracy : +-250'  
Vertical Accuracy : +-50'  
Latitude : 39 01 32.22N  
Longitude : 095 14 56.43W

Map Id: 3  
 Direction: ENE  
 Distance: 0.000 mi., 0 ft.  
 Elevation: 835 ft.  
 Relative: Higher

**Site Name :** 390144095143801  
 39.02889, -95.244139  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21109391  
**EPA ID:** N/R

NWIS

Site Identification Number :	390144095143801
Site Type :	Well
Station Name :	125 19E 01DDD 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	SESESES01 T12S R19E 6
Name of Location Map :	MIDLAND
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	837.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	1.
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Alluvial terrace
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	56.0
Hole Depth :	N/R
Source of Depth Data :	M
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1966-06-13
Field Water-level Measurements End Date:	1976-12-09
Field Water-Level Measurements Count:	31
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.02889
Longitude :	-95.244139
Last Date in Agency List :	2022-03-04

Map Id: 4  
 Direction: E  
 Distance: 0.000 mi., 0 ft.  
 Elevation: 834 ft.  
 Relative: Higher

**Site Name :** 390137095142901  
 39.026946, -95.241639  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21206742  
**EPA ID:** N/R

NWIS

Site Identification Number :	390137095142901
Site Type :	Well
Station Name :	12S 20E 07BBB 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	NWNWNWS07 T12S R20E 6
Name of Location Map :	MIDLAND
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	826.80
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	1.
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Alluvial terrace
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	48.7
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1948-10-01
Field Water-level Measurements End Date:	1948-10-01
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.026946
Longitude :	-95.241639
Last Date in Agency List :	2022-03-04

Map Id: 5  
 Direction: NW  
 Distance: 0.000 mi., 0 ft.  
 Elevation: 834 ft.  
 Relative: Higher

**Site Name :** 1006461374 | 1006462326  
 39.035055, -95.263306  
 KS  
**Database(s) :** [OIL & GAS WELLS - KS]

**Envirosite ID:** 21481356  
**EPA ID:** N/R

## OIL & GAS WELLS - KS

KID : 1006462326  
 API Number : N/R  
 Well Type : N/R  
 Status : Other

Status Description : may not be an energy well, since water research wells and road construction wells are in database under some conditions

Well Name : 2  
 Well Class : N/R  
 Plug Date : N/R  
 Completion : N/R  
 SPUD Date : N/R  
 Permit Date : N/R  
 Completion Date : N/R  
 County : Douglas  
 State Code Number : 15  
 FIPS Code : 45  
 API Well Number : 0  
 API Workover : N/R  
 Field Name : N/R  
 Field KID : 0  
 Lease Name : Moore Core  
 Operator Name : KANSAS GEOLOGICAL SURVEY  
 Operator KID : 0  
 Principal : 6  
 Section/Township/Range : SEC: 2, TWP: 12S, RNG: 19E  
 Subdivision : SE  
 Subdivision 1 : NE  
 Subdivision 2 : N/R  
 Subdivision 3 : N/R  
 Spot : N/R  
 Feet North : 0  
 Feet East : 0  
 Reference : N/R  
 Rotary Total : 0  
 Elevation : 0  
 Elevation (Elevation of Kelly Bushing): 0  
 Elevation (Elevation of Groundlevel): 0  
 Producing : N/R  
 NAD27 Latitude : 39.0350392  
 NAD27 Longitude : -95.2630535  
 NAD83 Latitude : 39.0350403  
 NAD83 Longitude : -95.2633038  
 Last Date in Agency List : 2022-02-10

KID : 1006461374  
 API Number : N/R  
 Well Type : N/R  
 Status : Other

Status Description : may not be an energy well, since water research wells and road construction wells are in database under some conditions

Well Name : 1  
 Well Class : N/R

Map Id: 5  
 Direction: NW  
 Distance: 0.000 mi., 0 ft.  
 Elevation: 834 ft.  
 Relative: Higher

**Site Name :** 1006461374 | 1006462326  
 39.035055, -95.263306  
 KS  
**Database(s) :** [OIL & GAS WELLS - KS] **(cont.)**

**Envirosite ID:** 21481356  
**EPA ID:** N/R

**OIL & GAS WELLS - KS (cont.)**

Plug Date :	N/R
Completion :	N/R
SPUD Date :	N/R
Permit Date :	N/R
Completion Date :	N/R
County :	Douglas
State Code Number :	15
FIPS Code :	45
API Well Number :	0
API Workover :	N/R
Field Name :	Unknown
Field KID :	0
Lease Name :	Moore Core
Operator Name :	KANSAS GEOLOGICAL SURVEY
Operator KID :	0
Principal :	6
Section/Township/Range :	SEC: 2, TWP: 12S, RNG: 19E
Subdivision :	SE
Subdivision 1 :	NE
Subdivision 2 :	N/R
Subdivision 3 :	N/R
Spot :	N/R
Feet North :	0
Feet East :	0
Reference :	N/R
Rotary Total :	0
Elevation :	0
Elevation (Elevation of Kelly Bushing):	0
Elevation (Elevation of Groundlevel):	0
Producing :	N/R
NAD27 Latitude :	39.0350392
NAD27 Longitude :	-95.2630535
NAD83 Latitude :	39.0350403
NAD83 Longitude :	-95.2633038
Last Date in Agency List :	2022-02-10

Map Id: 6  
 Direction: E  
 Distance: 0.030 mi., 160 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** AG EQUIP  
 39.027203, -95.239794  
 LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE]

**Envirosite ID:** 2465346  
**EPA ID:** N/R

**DIGITAL OBSTACLE**

Date of Action :	2013-03-19
Action :	Add
FAA Study Number :	N/R
OBS Number :	20-023128
Obstacle Type :	AG EQUIP
City Name :	LAWRENCE
State Identifier :	KS

Map Id: 6  
 Direction: E  
 Distance: 0.030 mi., 160 ft.  
 Elevation: 836 ft.  
 Relative: Higher

**Site Name :** AG EQUIP  
 39.027203, -95.239794  
 LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE] **(cont.)**

**Envirosite ID:** 2465346  
**EPA ID:** N/R

**DIGITAL OBSTACLE (cont.)**

Country Identifier :	USA
Type of Lighting :	Red
Verification Status :	Verified
Quantity :	1
Mark Indicator :	Unknown
Above Ground Level Height (Feet) :	00113
Above Mean Sea Level Height (Feet) :	00947
Horizontal Accuracy :	+ -20'
Vertical Accuracy :	+ -3'
Latitude :	39 01 37.93N
Longitude :	095 14 23.26W

Map Id: 7  
 Direction: SE  
 Distance: 0.031 mi., 166 ft.  
 Elevation: 826 ft.  
 Relative: Lower

**Site Name :** 390105095142901  
 39.018057, -95.241639  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21129603  
**EPA ID:** N/R

**NWIS**

Site Identification Number :	390105095142901
Site Type :	Well
Station Name :	12S 20E 07CBC 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	SWNWSWS07 T12S R20E 6
Name of Location Map :	MIDLAND
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	826.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	1.
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Valley flat
Flags for the Type of Data Collected:	NANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y Y
National Aquifer :	Alluvial aquifers
Local Aquifer :	Quaternary Alluvium
Local Aquifer Type :	N/R
Well Depth :	29.0
Hole Depth :	N/R





Map Id: 8  
 Direction: NNE  
 Distance: 0.155 mi., 819 ft.  
 Elevation: 829 ft.  
 Relative: Lower

**Site Name :** 390157095150301 | 390157095150302  
 39.032501, -95.251083  
 KS  
**Database(s) :** [NWIS] (*cont.*)

**Envirosite ID:** 21205150  
**EPA ID:** N/R

**NWIS (*cont.*)**

Drainage Area : N/R  
 Contributing Drainage Area : N/R  
 Data Reliability : Data have been checked by the reporting agency.  
 Data-Other GW Files : N/R  
 National Aquifer : N/R  
 Local Aquifer : N/R  
 Local Aquifer Type : N/R  
 Well Depth : 82.0  
 Hole Depth : N/R  
 Source of Depth Data : N/R  
 Project Number : N/R  
 Real-Time Data Flag : N/R  
 Peak-Streamflow Data Begin Date : N/R  
 Peak-Streamflow Data End Date : N/R  
 Peak-Streamflow Data Count : N/R  
 Water-Quality Data Begin Date : N/R  
 Water-Quality Data End Date : N/R  
 Water-Quality Data Count : N/R  
 Field Water-Level Measurements Begin Date: N/R  
 Field Water-level Measurements End Date: N/R  
 Field Water-Level Measurements Count: N/R  
 Site-Visit Data Begin Date : N/R  
 Site-Visit Data End Date : N/R  
 Site-Visit Data Count : N/R  
 Latitude : 39.032501  
 Longitude : -95.251083  
 Last Date in Agency List : 2022-03-04

Site Identification Number : 390157095150302  
 Site Type : Well  
 Station Name : 12S 19E 01DBC 02  
 Agency : U.S. Geological Survey  
 District : N/R  
 State : KS  
 County : Douglas County  
 Country : USA  
 Land Net Location : SWNWSES01 T12S R19E 6  
 Name of Location Map : MIDLAND  
 Scale of Location Map : 24000  
 Altitude of Gage/Land Surface : 835.00  
 Method Altitude Determined : Interpolated from topographic map.  
 Altitude Accuracy : 5.  
 Altitude Datum : National Geodetic Vertical Datum of 1929  
 Hydrologic Unit : Lower Kansas, Kansas  
 Drainage Basin : Tennessee Region  
 Topographic Setting : Alluvial terrace  
 Flags for the Type of Data Collected: NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO  
 Flags for Instruments at Site : NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN  
 Date of First Construction : N/R  
 Date Site Established or Inventoried: N/R  
 Drainage Area : N/R  
 Contributing Drainage Area : N/R  
 Data Reliability : Data have been checked by the reporting agency.  
 Data-Other GW Files : Y

Map Id: 8  
 Direction: NNE  
 Distance: 0.155 mi., 819 ft.  
 Elevation: 829 ft.  
 Relative: Lower

**Site Name :** 390157095150301 | 390157095150302  
 39.032501, -95.251083  
 KS  
**Database(s) :** [NWIS] (*cont.*)

**Envirosite ID:** 21205150  
**EPA ID:** N/R

**NWIS (*cont.*)**

National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	81.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1957-01-01
Field Water-level Measurements End Date:	1957-01-01
Field Water-Level Measurements Count:	0
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.032501
Longitude :	-95.251083
Last Date in Agency List :	2022-03-04

Map Id: 9  
 Direction: WNW  
 Distance: 0.184 mi., 970 ft.  
 Elevation: 823 ft.  
 Relative: Lower

**Site Name :** 390203095162701  
 39.034168, -95.274417  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21207118  
**EPA ID:** N/R

**NWIS**

Site Identification Number :	390203095162701
Site Type :	Well
Station Name :	125 19E 02CAB 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	NWNESWS02 T12S R19E 6
Name of Location Map :	WILLIAMSTOWN
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	823.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	1.
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region



Map Id: 10  
 Direction: WNW  
 Distance: 0.185 mi., 977 ft.  
 Elevation: 818 ft.  
 Relative: Lower

**Site Name :** 390157095162701  
 39.032501, -95.274417  
 KS  
**Database(s) :** [NWIS] (*cont.*)

**Envirosite ID:** 21206956  
**EPA ID:** N/R

**NWIS (*cont.*)**

Land Net Location :	SWNESWS02 T12S R19E 6
Name of Location Map :	WILLIAMSTOWN
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	824.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.1
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Valley flat
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y
National Aquifer :	Alluvial aquifers
Local Aquifer :	Quaternary Alluvium
Local Aquifer Type :	N/R
Well Depth :	60.0
Hole Depth :	N/R
Source of Depth Data :	M
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1969-08-08
Water-Quality Data End Date :	1969-10-02
Water-Quality Data Count :	2
Field Water-Level Measurements Begin Date:	1969-08-01
Field Water-level Measurements End Date:	1969-08-01
Field Water-Level Measurements Count:	0
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.032501
Longitude :	-95.274417
Last Date in Agency List :	2022-03-04



Map Id: 12  
 Direction: W  
 Distance: 0.225 mi., 1188 ft.  
 Elevation: 827 ft.  
 Relative: Lower

**Site Name :** 390144095161901  
 39.02889, -95.272195  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21206804  
**EPA ID:** N/R

NWIS

Site Identification Number :	390144095161901
Site Type :	Well
Station Name :	125 19E 02CDD 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	SESEWS02 T12S R19E 6
Name of Location Map :	WILLIAMSTOWN
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	826.70
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.1
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Valley flat
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y
National Aquifer :	Alluvial aquifers
Local Aquifer :	Quaternary Alluvium
Local Aquifer Type :	N/R
Well Depth :	60.0
Hole Depth :	N/R
Source of Depth Data :	M
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1969-08-08
Water-Quality Data End Date :	1969-10-02
Water-Quality Data Count :	2
Field Water-Level Measurements Begin Date:	1969-08-01
Field Water-level Measurements End Date:	1969-08-01
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.02889
Longitude :	-95.272195
Last Date in Agency List :	2022-03-04

Map Id: 13  
 Direction: WNW  
 Distance: 0.241 mi., 1271 ft.  
 Elevation: 835 ft.  
 Relative: Higher

**Site Name :** 390216095161901  
 39.037779, -95.272195  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21195037  
**EPA ID:** N/R

## NWIS

Site Identification Number :	390216095161901
Site Type :	Well
Station Name :	125 19E 02BDA 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	NESENWS02 T12S R19E 6
Name of Location Map :	WILLIAMSTOWN
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	833.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	1.
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Alluvial terrace
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	N/R
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	54.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	N/R
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	N/R
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	N/R
Field Water-Level Measurements Begin Date:	N/R
Field Water-level Measurements End Date:	N/R
Field Water-Level Measurements Count:	N/R
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	N/R
Latitude :	39.037779
Longitude :	-95.272195
Last Date in Agency List :	2022-03-04

Map Id: 14  
Direction: SSW  
Distance: 0.273 mi., 1440 ft.  
Elevation: 828 ft.  
Relative: Lower

<b>Site Name :</b> T-L TWR 39.017575, -95.258028 LAWRENCE, KS
<b>Database(s) :</b> [DIGITAL OBSTACLE]

**Envirosite ID:** 2488409  
**EPA ID:** N/R

## DIGITAL OBSTACLE

Date of Action :	2018-01-29
Action :	Add
FAA Study Number :	2013ACE036540E
OBS Number :	20-051066
Obstacle Type :	T-L TWR
City Name :	LAWRENCE
State Identifier :	KS
Country Identifier :	USA
Type of Lighting :	None
Verification Status :	Unverified
Quantity :	1
Mark Indicator :	None
Above Ground Level Height (Feet) :	00065
Above Mean Sea Level Height (Feet) :	00894
Horizontal Accuracy :	+ -250'
Vertical Accuracy :	+ -50'
Latitude :	39 01 03.27N
Longitude :	095 15 28.90W

Map Id: 15  
Direction: ESE  
Distance: 0.383 mi., 2024 ft.  
Elevation: 831 ft.  
Relative: Lower

<b>Site Name :</b> 390118095133901 39.021668, -95.22775 KS
<b>Database(s) :</b> [NWIS]

**Envirosite ID:** 21263841  
**EPA ID:** N/R

## NWIS

Site Identification Number :	390118095133901
Site Type :	Well
Station Name :	12S 20E 07ADC 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	SWSENE07 T12S R20E 6
Name of Location Map :	MIDLAND
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	834.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	1.
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Alluvial terrace
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R



Map Id: 15  
 Direction: ESE  
 Distance: 0.383 mi., 2024 ft.  
 Elevation: 831 ft.  
 Relative: Lower

**Site Name :** 390118095133901  
 39.021668, -95.22775  
 KS  
**Database(s) :** [NWIS] (*cont.*)

**Envirosite ID:** 21263841  
**EPA ID:** N/R

**NWIS (*cont.*)**

Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	84.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1940-12-01
Field Water-level Measurements End Date:	1940-12-01
Field Water-Level Measurements Count:	0
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.021668
Longitude :	-95.22775
Last Date in Agency List :	2022-03-04

Map Id: 16  
 Direction: SSE  
 Distance: 0.438 mi., 2314 ft.  
 Elevation: 825 ft.  
 Relative: Lower

**Site Name :** 390032095143801  
 39.00889, -95.244139  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21215432  
**EPA ID:** N/R

**NWIS**

Site Identification Number :	390032095143801
Site Type :	Well
Station Name :	12S 19E 13ADA 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	NESENE13 T12S R19E 6
Name of Location Map :	MIDLAND
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	821.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	1.
Altitude Datum :	National Geodetic Vertical Datum of 1929

Map Id: 16  
 Direction: SSE  
 Distance: 0.438 mi., 2314 ft.  
 Elevation: 825 ft.  
 Relative: Lower

**Site Name :** 390032095143801  
 39.00889, -95.244139  
 KS  
**Database(s) :** [NWIS] (*cont.*)

**Envirosite ID:** 21215432  
**EPA ID:** N/R

**NWIS (*cont.*)**

Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Valley flat
Flags for the Type of Data Collected:	NANNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y
National Aquifer :	Alluvial aquifers
Local Aquifer :	Quaternary Alluvium
Local Aquifer Type :	N/R
Well Depth :	42.0
Hole Depth :	N/R
Source of Depth Data :	M
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1966-05-01
Water-Quality Data End Date :	1966-05-01
Water-Quality Data Count :	1
Field Water-Level Measurements Begin Date:	1966-06-01
Field Water-level Measurements End Date:	1983-12-07
Field Water-Level Measurements Count:	50
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.00889
Longitude :	-95.244139
Last Date in Agency List :	2022-03-04

Map Id: 17  
 Direction: NW  
 Distance: 0.471 mi., 2490 ft.  
 Elevation: 834 ft.  
 Relative: Higher

**Site Name :** 390229095161901  
 39.04139, -95.272195  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21109781  
**EPA ID:** N/R

**NWIS**

Site Identification Number :	390229095161901
Site Type :	Well
Station Name :	12S 19E 02BAA 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS











Map Id: 21  
Direction: SSW  
Distance: 0.537 mi., 2834 ft.  
Elevation: 824 ft.  
Relative: Lower

<b>Site Name :</b> T-L TWR 39.01185, -95.260478 LAWRENCE, KS
<b>Database(s) :</b> [DIGITAL OBSTACLE]

**Envirosite ID:** 2489834  
**EPA ID:** N/R

## DIGITAL OBSTACLE

Date of Action :	2018-01-29
Action :	Add
FAA Study Number :	2013ACE036530E
OBS Number :	20-051149
Obstacle Type :	T-L TWR
City Name :	LAWRENCE
State Identifier :	KS
Country Identifier :	USA
Type of Lighting :	None
Verification Status :	Unverified
Quantity :	1
Mark Indicator :	None
Above Ground Level Height (Feet) :	00080
Above Mean Sea Level Height (Feet) :	00906
Horizontal Accuracy :	+ -250'
Vertical Accuracy :	+ -50'
Latitude :	39 00 42.66N
Longitude :	095 15 37.72W

Map Id: 22  
Direction: W  
Distance: 0.564 mi., 2977 ft.  
Elevation: 828 ft.  
Relative: Lower

<b>Site Name :</b> 390131095163601 39.025279, -95.276917 KS
<b>Database(s) :</b> [NWIS]

**Envirosite ID:** 21212312  
**EPA ID:** N/R

## NWIS

Site Identification Number :	390131095163601
Site Type :	Well
Station Name :	12S 19E 11BBD 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	SENWNWS11 T12S R19E 6
Name of Location Map :	WILLIAMSTOWN
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	830.10
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	.1
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Valley flat
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R



Map Id: 22  
 Direction: W  
 Distance: 0.564 mi., 2977 ft.  
 Elevation: 828 ft.  
 Relative: Lower

**Site Name :** 390131095163601  
 39.025279, -95.276917  
 KS  
**Database(s) :** [NWIS] (*cont.*)

**Envirosite ID:** 21212312  
**EPA ID:** N/R

**NWIS (*cont.*)**

Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y
National Aquifer :	Alluvial aquifers
Local Aquifer :	Quaternary Alluvium
Local Aquifer Type :	N/R
Well Depth :	65.0
Hole Depth :	N/R
Source of Depth Data :	M
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1969-08-11
Water-Quality Data End Date :	1969-10-02
Water-Quality Data Count :	2
Field Water-Level Measurements Begin Date:	1969-08-01
Field Water-level Measurements End Date:	1969-08-01
Field Water-Level Measurements Count:	0
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.025279
Longitude :	-95.276917
Last Date in Agency List :	2022-03-04

Map Id: B23  
 Direction: E  
 Distance: 0.583 mi., 3079 ft.  
 Elevation: 832 ft.  
 Relative: Lower

**Site Name :** POLE  
 39.022394, -95.223969  
 LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE]

**Envirosite ID:** 2468331  
**EPA ID:** N/R

**DIGITAL OBSTACLE**

Date of Action :	2013-03-19
Action :	Add
FAA Study Number :	N/R
OBS Number :	20-023133
Obstacle Type :	POLE
City Name :	LAWRENCE
State Identifier :	KS
Country Identifier :	USA
Type of Lighting :	Unknown
Verification Status :	Verified
Quantity :	1
Mark Indicator :	Unknown
Above Ground Level Height (Feet) :	00033
Above Mean Sea Level Height (Feet) :	00866
Horizontal Accuracy :	+ -50'

Map Id: B23  
 Direction: E  
 Distance: 0.583 mi., 3079 ft.  
 Elevation: 832 ft.  
 Relative: Lower

**Site Name :** POLE  
 39.022394, -95.223969  
 LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE] **(cont.)**

**Envirosite ID:** 2468331  
**EPA ID:** N/R

**DIGITAL OBSTACLE (cont.)**

Vertical Accuracy : +-20'  
 Latitude : 39 01 20.62N  
 Longitude : 095 13 26.29W

Map Id: B24  
 Direction: E  
 Distance: 0.586 mi., 3097 ft.  
 Elevation: 834 ft.  
 Relative: Higher

**Site Name :** POLE  
 39.022942, -95.223928  
 LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE]

**Envirosite ID:** 2472855  
**EPA ID:** N/R

**DIGITAL OBSTACLE**

Date of Action : 2013-03-19  
 Action : Add  
 FAA Study Number : N/R  
 OBS Number : 20-023134  
 Obstacle Type : POLE  
 City Name : LAWRENCE  
 State Identifier : KS  
 Country Identifier : USA  
 Type of Lighting : Unknown  
 Verification Status : Verified  
 Quantity : 1  
 Mark Indicator : Unknown  
 Above Ground Level Height (Feet) : 00041  
 Above Mean Sea Level Height (Feet) : 00875  
 Horizontal Accuracy : +-50'  
 Vertical Accuracy : +-20'  
 Latitude : 39 01 22.59N  
 Longitude : 095 13 26.14W

Map Id: 25  
 Direction: ESE  
 Distance: 0.587 mi., 3100 ft.  
 Elevation: 830 ft.  
 Relative: Lower

**Site Name :** POLE  
 39.021131, -95.224014  
 LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE]

**Envirosite ID:** 2468688  
**EPA ID:** N/R

**DIGITAL OBSTACLE**

Date of Action : 2013-03-19  
 Action : Add  
 FAA Study Number : N/R  
 OBS Number : 20-023125  
 Obstacle Type : POLE  
 City Name : LAWRENCE

Map Id: 25  
 Direction: ESE  
 Distance: 0.587 mi., 3100 ft.  
 Elevation: 830 ft.  
 Relative: Lower

**Site Name :** POLE  
 39.021131, -95.224014  
 LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE] **(cont.)**

**Envirosite ID:** 2468688  
**EPA ID:** N/R

**DIGITAL OBSTACLE (cont.)**

State Identifier :	KS
Country Identifier :	USA
Type of Lighting :	Unknown
Verification Status :	Verified
Quantity :	1
Mark Indicator :	Unknown
Above Ground Level Height (Feet) :	00032
Above Mean Sea Level Height (Feet) :	00861
Horizontal Accuracy :	+ -20'
Vertical Accuracy :	+ -3'
Latitude :	39 01 16.07N
Longitude :	095 13 26.45W

Map Id: B26  
 Direction: E  
 Distance: 0.590 mi., 3114 ft.  
 Elevation: 837 ft.  
 Relative: Higher

**Site Name :** POLE  
 39.023756, -95.223989  
 LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE]

**Envirosite ID:** 2468412  
**EPA ID:** N/R

**DIGITAL OBSTACLE**

Date of Action :	2013-03-19
Action :	Add
FAA Study Number :	N/R
OBS Number :	20-023135
Obstacle Type :	POLE
City Name :	LAWRENCE
State Identifier :	KS
Country Identifier :	USA
Type of Lighting :	Unknown
Verification Status :	Verified
Quantity :	1
Mark Indicator :	Unknown
Above Ground Level Height (Feet) :	00041
Above Mean Sea Level Height (Feet) :	00878
Horizontal Accuracy :	+ -50'
Vertical Accuracy :	+ -20'
Latitude :	39 01 25.52N
Longitude :	095 13 26.36W

Map Id: 27  
 Direction: W  
 Distance: 0.612 mi., 3231 ft.  
 Elevation: 830 ft.  
 Relative: Lower

**Site Name :** 390144095165301  
 39.02889, -95.281639  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21186806  
**EPA ID:** N/R

NWIS

Site Identification Number :	390144095165301
Site Type :	Well
Station Name :	125 19E 03DDD 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	SESESES03 T12S R19E 6
Name of Location Map :	WILLIAMSTOWN
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	826.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	1.
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Valley flat
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y
National Aquifer :	Alluvial aquifers
Local Aquifer :	Quaternary Alluvium
Local Aquifer Type :	N/R
Well Depth :	50.0
Hole Depth :	N/R
Source of Depth Data :	M
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1966-05-25
Water-Quality Data End Date :	1966-05-25
Water-Quality Data Count :	1
Field Water-Level Measurements Begin Date:	1966-06-13
Field Water-level Measurements End Date:	1970-06-09
Field Water-Level Measurements Count:	7
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.02889
Longitude :	-95.281639
Last Date in Agency List :	2022-03-04

Map Id: 28  
 Direction: NE  
 Distance: 0.616 mi., 3254 ft.  
 Elevation: 846 ft.  
 Relative: Higher

**Site Name :** 1002907084  
 39.043303, -95.237735  
 KS  
**Database(s) :** [OIL & GAS WELLS - KS]

**Envirosite ID:** 21950762  
**EPA ID:** N/R

OIL & GAS WELLS - KS

KID :	1002907084
API Number :	15-045-20358
Well Type :	D&A
Status :	Dry & Abandoned
Status Description :	never produced, now plugged and abandoned
Well Name :	1
Well Class :	Plugged and Abandoned
Plug Date :	1983-06-30
Completion :	1983
SPUD Date :	1983-06-06
Permit Date :	1983-05-20
Completion Date :	1983-06-10
County :	Douglas
State Code Number :	15
FIPS Code :	45
API Well Number :	20358
API Workover :	N/R
Field Name :	Wildcat
Field KID :	0
Lease Name :	Kitsmiller
Operator Name :	Strata Tech Oil Co.
Operator KID :	1027997120
Principal :	6
Section/Township/Range :	SEC: 6, TWP: 12S, RNG: 20E
Subdivision :	NW
Subdivision 1 :	NW
Subdivision 2 :	NE
Subdivision 3 :	SW
Spot :	N/R
Feet North :	-330
Feet East :	1320
Reference :	NW
Rotary Total :	1423
Elevation :	0
Elevation (Elevation of Kelly Bushing):	840
Elevation (Elevation of Groundlevel):	0
Producing :	N/R
NAD27 Latitude :	39.0432872
NAD27 Longitude :	-95.2374827
NAD83 Latitude :	39.0432883
NAD83 Longitude :	-95.2377324
Last Date in Agency List :	2022-02-10

Map Id: B29  
 Direction: E  
 Distance: 0.622 mi., 3285 ft.  
 Elevation: 829 ft.  
 Relative: Lower

**Site Name :** 390124095132301  
 39.023335, -95.223305  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21158663  
**EPA ID:** N/R

**NWIS**

Site Identification Number :	390124095132301
Site Type :	Well
Station Name :	125 20E 08BCB 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	NWSWNWS08 T12S R20E 6
Name of Location Map :	MIDLAND
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	832.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	1.
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Alluvial terrace
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y
National Aquifer :	N/R
Local Aquifer :	Newman Terrace Deposits
Local Aquifer Type :	N/R
Well Depth :	82.0
Hole Depth :	N/R
Source of Depth Data :	M
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1966-04-25
Water-Quality Data End Date :	1966-04-25
Water-Quality Data Count :	1
Field Water-Level Measurements Begin Date:	1966-10-11
Field Water-level Measurements End Date:	1967-03-14
Field Water-Level Measurements Count:	1
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.023335
Longitude :	-95.223305
Last Date in Agency List :	2022-03-04

Map Id: 30  
 Direction: NNE  
 Distance: 0.690 mi., 3643 ft.  
 Elevation: 895 ft.  
 Relative: Higher

**Site Name :** 390242095145501  
 39.045001, -95.248861  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21217524  
**EPA ID:** N/R

NWIS

Site Identification Number :	390242095145501
Site Type :	Well
Station Name :	11S 19E 36DCA 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Jefferson County
Country :	USA
Land Net Location :	NESWSES36 T11S R19E 6
Name of Location Map :	N/R
Scale of Location Map :	N/R
Altitude of Gage/Land Surface :	900.00
Method Altitude Determined :	Interpolated from topographic map.
Altitude Accuracy :	5.
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Upland draw
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y
National Aquifer :	N/R
Local Aquifer :	N/R
Local Aquifer Type :	N/R
Well Depth :	36.0
Hole Depth :	N/R
Source of Depth Data :	N/R
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	N/R
Water-Quality Data End Date :	N/R
Water-Quality Data Count :	0
Field Water-Level Measurements Begin Date:	1967-05-01
Field Water-level Measurements End Date:	1967-05-01
Field Water-Level Measurements Count:	0
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.045001
Longitude :	-95.248861
Last Date in Agency List :	2022-03-04





Map Id: 32  
Direction: ENE  
Distance: 0.856 mi., 4521 ft.  
Elevation: 889 ft.  
Relative: Higher

**Site Name :** T-L TWR  
39.033231, -95.225108  
LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE]

**Envirosite ID:** 2470408  
**EPA ID:** N/R

## DIGITAL OBSTACLE

Date of Action : 2013-03-19  
Action : Add  
FAA Study Number : N/R  
OBS Number : 20-023127  
Obstacle Type : T-L TWR  
City Name : LAWRENCE  
State Identifier : KS  
Country Identifier : USA  
Type of Lighting : Unknown  
Verification Status : Verified  
Quantity : 1  
Mark Indicator : Unknown  
Above Ground Level Height (Feet) : 00066  
Above Mean Sea Level Height (Feet) : 00955  
Horizontal Accuracy : +-20'  
Vertical Accuracy : +-3'  
Latitude : 39 01 59.63N  
Longitude : 095 13 30.39W

Map Id: 33  
Direction: SSW  
Distance: 0.900 mi., 4751 ft.  
Elevation: 887 ft.  
Relative: Higher

**Site Name :** T-L TWR  
39.006817, -95.264269  
LAWRENCE, KS  
**Database(s) :** [DIGITAL OBSTACLE]

**Envirosite ID:** 2488609  
**EPA ID:** N/R

## DIGITAL OBSTACLE

Date of Action : 2018-01-29  
Action : Add  
FAA Study Number : 2013ACE03652OE  
OBS Number : 20-051033  
Obstacle Type : T-L TWR  
City Name : LAWRENCE  
State Identifier : KS  
Country Identifier : USA  
Type of Lighting : None  
Verification Status : Unverified  
Quantity : 1  
Mark Indicator : None  
Above Ground Level Height (Feet) : 00065  
Above Mean Sea Level Height (Feet) : 00958  
Horizontal Accuracy : +-250'  
Vertical Accuracy : +-50'  
Latitude : 39 00 24.54N  
Longitude : 095 15 51.37W

Map Id: 34  
 Direction: SSE  
 Distance: 0.937 mi., 4949 ft.  
 Elevation: 814 ft.  
 Relative: Lower

**Site Name :** 390006095143701  
 39.001668, -95.243861  
 KS  
**Database(s) :** [NWIS]

**Envirosite ID:** 21120293  
**EPA ID:** N/R

NWIS

Site Identification Number :	390006095143701
Site Type :	Well
Station Name :	125 19E 13DDA 01
Agency :	U.S. Geological Survey
District :	N/R
State :	KS
County :	Douglas County
Country :	USA
Land Net Location :	NESESES13 T12S R19E 6
Name of Location Map :	MIDLAND
Scale of Location Map :	24000
Altitude of Gage/Land Surface :	827.00
Method Altitude Determined :	Level or other surveyed method.
Altitude Accuracy :	1.
Altitude Datum :	National Geodetic Vertical Datum of 1929
Hydrologic Unit :	Lower Kansas, Kansas
Drainage Basin :	Tennessee Region
Topographic Setting :	Valley flat
Flags for the Type of Data Collected:	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNO
Flags for Instruments at Site :	NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
Date of First Construction :	N/R
Date Site Established or Inventoried:	N/R
Drainage Area :	N/R
Contributing Drainage Area :	N/R
Data Reliability :	Data have been checked by the reporting agency.
Data-Other GW Files :	Y
National Aquifer :	Alluvial aquifers
Local Aquifer :	Quaternary Alluvium
Local Aquifer Type :	N/R
Well Depth :	52.0
Hole Depth :	N/R
Source of Depth Data :	M
Project Number :	N/R
Real-Time Data Flag :	0
Peak-Streamflow Data Begin Date :	N/R
Peak-Streamflow Data End Date :	N/R
Peak-Streamflow Data Count :	0
Water-Quality Data Begin Date :	1966-05-23
Water-Quality Data End Date :	1966-05-23
Water-Quality Data Count :	1
Field Water-Level Measurements Begin Date:	1966-05-23
Field Water-level Measurements End Date:	1975-03-12
Field Water-Level Measurements Count:	9
Site-Visit Data Begin Date :	N/R
Site-Visit Data End Date :	N/R
Site-Visit Data Count :	0
Latitude :	39.001668
Longitude :	-95.243861
Last Date in Agency List :	2022-03-04

Map Id: 35  
Direction: ENE  
Distance: 0.954 mi., 5036 ft.  
Elevation: 888 ft.  
Relative: Higher

<b>Site Name :</b> T-L TWR 39.033228, -95.222694 LAWRENCE, KS
<b>Database(s) :</b> [DIGITAL OBSTACLE]

Envirosite ID: 2470014  
EPA ID: N/R

## DIGITAL OBSTACLE

Date of Action :	2013-03-19
Action :	Add
FAA Study Number :	N/R
OBS Number :	20-023126
Obstacle Type :	T-L TWR
City Name :	LAWRENCE
State Identifier :	KS
Country Identifier :	USA
Type of Lighting :	Unknown
Verification Status :	Verified
Quantity :	1
Mark Indicator :	Unknown
Above Ground Level Height (Feet) :	00064
Above Mean Sea Level Height (Feet) :	00951
Horizontal Accuracy :	+ -20'
Vertical Accuracy :	+ -3'
Latitude :	39 01 59.62N
Longitude :	095 13 21.70W

## **RADON DATA:**

STATE SOURCE: No Available Data

FEDERAL AREA RADON INFORMATION FOR: 66044

NUMBER OF SAMPLE SITES: 20

<b><u>Area:</u></b>	<b><u>Average Activity:</u></b>	<b><u>% &lt;4 pCi/L:</u></b>	<b><u>% 4-20 pCi/L:</u></b>	<b><u>% &gt;20 pCi/L:</u></b>
basement	3.4375 pCi/L	68.75%	31.25%	0%
first floor	1.325 pCi/L	100%	0%	0%

FEDERAL EPA RADON ZONE FOR DOUGLAS COUNTY: Zone = 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 < 2 pCi/L

## HIST PWS ENF

Historical Public Water Supply locations with Enforcement Violations

Environmental Protection Agency

(800) 426-4791

List of Safe Drinking Water Information Systems (SDWIS) with enforcement violations that are no longer in current agency list.

## NWIS

National Water Information Systems

United States Geological Society

(703) 648-5953

Information on all water resources for the United States. This database contains all current and historical data for the nation.

## PWS

Public Water Supply

Environmental Protection Agency

(800) 426-4791

Safe drinking water information Systems

## PWS ENF

Public Water Supply locations with Enforcement Violations

Environmental Protection Agency

(800) 426-4791

Safe drinking water information Systems with enforcement violations

## FLOOD Q3

Flood data

Environmental Protection Agency

(202) 566-1667

Q3 Flood Data

## HYDROLOGIC UNIT

Hydrologic Unit Maps

USGS

The United States Geological Survey created a hierarchical system of hydrologic units originally called regions, sub-regions, accounting units, and cataloging units. Each unit was assigned a unique Hydrologic Unit Code (HUC). As first implemented the system had 21 regions, 221 subregions, 378 accounting units, and 2,264 cataloging units. Over time the system was changed and expanded. As of 2010 there are six levels in the hierarchy, represented by hydrologic unit codes from 2 to 12 digits long, called regions, subregions, basins, subbasins, watersheds, and subwatersheds. The table below describes the system's hydrologic unit levels and their characteristics, along with example names and codes.

## WETLANDS NWI

National Wetland Inventory

U.S. Fish and Wildlife Service

(703) 358-2171

Wetland Inventory for the United States

## SSURGO

Detailed Soil Data Map

Natural Resources Conservation Service: U.S. Department of Agriculture

(202) 690-4985

Detailed Soil Data Map

## STATSGO & MUI

General Soil Data Map

Natural Resources Conservation Service: U.S. Department of Agriculture  
(202) 690-4985

General Soil Data Map

## USGS GEOLOGIC AGE

USGS Digital Data Series DDS

Natural Resources Conservation Service: U.S. Department of Agriculture  
(202) 690-4985

USGS Digital Data Series DDS: Geologic Age and Rock Stratigraphic Unit

## OIL & GAS WELLS - KS

Oil and Gas Wells

Kansas Geological Survey

(785) 864-3965

Locations of oil and gas wells

## RADON

National Radon Database

U.S. Environmental Protection Agency

215-814-2469

A study of the EPA/State Residential Radon Survey and the National Residential Radon Survey.

## RADON EPA

RADON EPA

U.S. Environmental Protection Agency

215-814-2469

EPA list of Radon zones

## AIRPORT FACILITIES

Airport landing facilities

Federal Aviation Administration

(866) 835-5322

Airport landing facilities

## BASINS

Better Assessment Science Integrating point & Non-point Sources

U.S. Environmental Protection Agency

855-246-3642

Integrated geographical information system national watershed data and environmental assessment known as Better Assessment Science Integrating point & Non-point Sources

## DIGITAL OBSTACLE

Obstacles of interest to aviation users

Federal Aviation Administration

855-379-6518

The Digital Obstacle File describes all known obstacles of interest to aviation users in the U.S. with limited coverage of the Pacific the Caribbean Canada and Mexico. The obstacles are assigned unique numerical identifiers; accuracy codes and listed in order of ascending latitude within each state or area by FAA Region.

EPICENTERS

National Geographical Data Center

National Geographical Data Center

303-497-6826

List of recent and historic earthquakes and information.

FLOOD DFIRM

National Flood Hazard Layer Database

Federal Emergency Management Agency

The National Flood Hazard Layer Database (NFHL) is a computer database that contains the flood hazard map information from FEMA's Flood Map Modernization program. These map data are from Digital Flood Insurance Rate Map (DFIRM) databases and Letters of Map Revision.

## Appendix E

### Regulatory Agency Documentation





[KORA Request Home](#)

**Requestor Details ( \* indicates required field):**

**\* First Name**

Lindsay

**\* Last Name**

Landin

**Business Name**

ECT

**\* Street Address Line 1**

2200 Commonwealth Blvd Ste 300

Street Address Line 2

\* City

\* State

\* Zip Code

\* Phone Number

\* Email

Description of Records Requested :

Please provide a description of the records you would like to inspect or have produced. Please indicate the type of record you are seeking, the title or name of the document, dates, document numbers, facility or location of the subject property. Specificity in a request will assist in speeding up the search and potentially reduce the fees for the request. You may upload an attachment if necessary.

If your request concerns an environmental site or facility, please submit as much of the following information as possible: the site or facility name, identification number, and the precise location (address, latitude/longitude, or legal description). This information can usually be found using the KDHE Environmental Interest Finder (KEIF) website at <https://maps.kdhe.state.ks.us/keif/>.

\* Description

-Lawrence City Landfill (C402372566), Lawrence, Douglas County: A copy of the 1986 groundwater, sediment, and surface water investigation with supporting figures/maps and analytical data.  
-Floodplain Landfill, Section 10 Township 12S, Range 19E, Lawrence, Douglas County (EPA ID: KSD981712391): any available documentation

Please check the appropriate Division that this request should be routed to. If you are uncertain which Division is most appropriate or if more than one applies, please select "KORA Officer".

\* Select Division

Check any Bureaus that this request should be routed to. If you are uncertain which Bureaus apply, select 'Unknown'.

- Unknown
- Environment Administration
- Bureau of Air
- Bureau of Environmental Field Services
- Bureau of Waste Management
- Bureau of Water
- Kansas Health & Environmental Laboratories
- Bureau of Remediation

**File(s) To Include (Optional):**

Please upload any relevant documents to your request. (docx, doc, pdf, msg)

FLOODPLAIN LANDFILL \_ Superfund Site Profile \_ Superfund Site Information \_ US EPA.pdf ✕ Remove

KDHE BER ISL Detail Page.pdf ✕ Remove

Choose File(s)

*You have a compatible browser and may drag your files into the grey area above to attach them.*

**Desired File Format :**

- \* Select Format**
- Scan of Records (Electronic Copy, typically in tiff or pdf format)  Inspect Records at KDHE
  - Paper Copy

**Scan of Records (Electronic Copy, typically in tiff or pdf format)**

- CD/DVD via Mail
- Email (if <20 MB)
- Microsoft Office 360 Dropbox (If available)

**Fees :** Please note KDHE assesses fees for staff time, copies, shipping, and materials necessary to provide the records. KDHE may require advanced payment for these services. KDHE will contact you if the amount will exceed the authorized amount indicated below.

***I hereby authorize KDHE to fulfill the above request and bill me for any fees, provided the fee amount does not exceed \$  .\****

**Prohibited Uses :** K.S.A. 45-230 prohibits the use of names and addresses derived from public records for certain commercial purposes. Violation of this law can result in a civil penalty not to exceed \$500 for each violation.

Before submitting your request, please ensure that all information provided is correct. Requests with incomplete or incorrect contact information may not be processed.

***By checking the "I agree" checkbox below, requester does not intend to, and will not, use any list of names or addresses contained in or derived from the records or information for the purpose of selling or offering for sale any property or service to any person listed or to any person who resides at any address listed, or sell, give or otherwise make available to any person any list of names or addresses contained in or derived from the records or information for the purpose of allowing that person to sell or offer for sale any property or service to any person listed or to any person who resides at any address listed.***

\*  I Agree

\* Signature

Date

**Provide Your Full Name**

Retype the characters from the picture:



Type the code from the image

Submit Request

© 1996-2021 Kansas Department of Health and Environment  
Curtis State Office Building, 1000 SW Jackson, Topeka, Kansas 66612

Curtis State Office Building  
1000 SW Jackson, suite 410  
Topeka, Kansas 66612-1367

Kansas Department of Health and Environment

# Preliminary Removal Site Evaluation



A PreCERCLIS Survey for

Burr Property Site  
Lawrence, Douglas County,  
Kansas

May 2005



# **Preliminary Removal Site Evaluation**

## **Burr Property Site Lawrence, Kansas**

Prepared by  
Kansas Department of Health and Environment  
Bureau of Environmental Remediation  
Remedial Section  
Site Assessment Program

May 2005

State ID: C4-023-71893

Project Manager: Randolph L. Brown, L.P.G., Environmental Geologist  
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## **1. Introduction**

This document presents the findings of a Pre-CERLCLIS Preliminary Removal Site Evaluation (SRE) assessment conducted by the Kansas Department of Health and Environment (KDHE) to evaluate the Burr Property site in Lawrence, Douglas County, Kansas. The assessment was conducted as part of continuing cooperative agreement with the U.S. Environmental Protection Agency (EPA) to perform investigations of selected sites to evaluate potential or actual releases of hazardous substances, pollutants, or contaminants in Kansas. These investigations are performed under the authority of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986 and consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) 40 CFR §§ 300.400-300.425.

## **2. Site Location and Description**

The Burr Property site is located at 1927 E 1300 Road near Lawrence, Douglas County, Kansas in Section 11, Township 12 south, Range 19 east of the public lands survey system at latitude 39.02025° North and longitude -95.26280° West (See Figure 1)(Reference 1).

The site is a residential property surrounded by agricultural property, the Kansas River levee, and other residences. The Burr Property is directly across the Kansas River to the north of the Lawrence Energy Center (LEC) power plant, which would place it in the predominant downwind direction from the LEC.

## **3. Site Background**

The site was identified when Ms. Patti Burr related to KDHE that she had received medical test results indicating elevated levels of lead, mercury and cadmium in her blood, and had experienced historic hair loss. While the blood and urine levels were not “dangerously high”, the results indicated “elevated” levels as reported to her in 2004. No previous regulatory concerns were identified on the property itself; however the former City of Lawrence dump is located approximately one mile northwest of the Burr property, and the LEC is located approximately one mile south. Ms. Burr indicated in the KDHE interview that she had used a former sandpoint well for over 15 years, and has noticed gradual health changes in that time. A new well was installed approximately three (3) years ago, and the sandpoint is not operable (nor was sampled during this investigation). The house has a filtration system, and samples were obtained both pre- and post-filter.

## **4. Physical Setting**

The site is situated in the alluvial plain of the Kansas River. Soils at the site are the Eudora silt loam and the Eudora-Kimo fine sandy loam soils on flat (0 to 2 percent slopes) surfaces.



Eudora soils are deep, nearly level well-drained soils that have a silt, silty sand, or sandy subsoil (Reference 4).

The soils at the site are underlain by Quaternary-aged alluvial deposits consisting of approximately 70-90 feet of sand and gravel. The alluvium rests upon shale of Pleasanton Group (References 2 and 5). The Pleasanton Shale should act as the lower confining stratigraphic unit in the area.

Ground water flow direction in the area from historic studies is reported to be to the west-southwest. Ground water movement at the site is likely largely influenced by the river stage of the Kansas River and at high river stages, ground water flow direction may fluctuate as much as 180 degrees from lower river stage conditions.

## **5. Assessment Activities**

After obtaining property access, KDHE sampled the Burr Property and off-site areas. The objective of the sampling activity was to evaluate the concerns especially of heavy metals on the property. Since metals are naturally occurring, a series of off-site background and potential downwind locations were also selected for surficial soil samples.

Five (5) off-site sample locations were selected north (prevailing upwind direction) of the LEC, and two (2) south of the Burr property. Eleven (11) samples were collected on-site.

Soil samples were collected with stainless steel trowels into prepared laboratory containers after homogenization. Background samples were collected on February 22, 2005. On-site samples were collected on February 23, 2005. Four (4) direct push locations were also sampled with KDHE's Geoprobe unit for filtered metals and volatile organic compounds (VOCs) on February 23, 2005.

Ground water samples were obtained by advancing a mill slot to the desired depth, purging a minimum of two (2) liters from probe rods with disposable polyethylene tubing and a stainless steel check valve, and obtaining the samples. The private well was sampled by allowing a 15-minute high volume purge, and then reducing the flow for sampling. The private well was sampled both before and after the filtration unit.

Since direct-push samples had to be filtered because of turbidity, all water samples collected for metals analysis were filtered. Samples were submitted to KDHE's Health and Environment Laboratory for analysis. Soil and water samples were submitted for total metals analysis by EPA Methods 6010 (except mercury) and EPA Method 245.1 for mercury. Water samples were also submitted for VOC analysis by EPA Method 8260.

Because semi-volatile organic compounds (SVOCs), especially polynuclear aromatic hydrocarbons (PAHs) have historically been released by coal power plants, SVOCs were also analyzed by EPA Method 8270 for soil samples.

#### A. Ground Water Results:

KDHE's laboratory reported no detections of VOCs. Arsenic was detected below the maximum contaminant level (MCL) of 10 ug/l in the private well samples both pre- and post-filtering system. Arsenic was detected at 11 ug/l, slightly above its MCL in ground water probe sample BP-2, but below in the remainder of ground water samples. Cadmium, mercury and lead were not detected in any ground water samples.

#### B. Soil Samples:

A mean and standard deviation was calculated for the metals results identified in the background samples. One commonly utilized convention to determine if metals results are significantly elevated above background is to use a mean plus two standard deviations (Mean + 2 $\sigma$ ) concentration. CERCLA guidance relies on a three times the maximum background sample results to attribute a release; however for some constituents that have low residential action levels this may not always be sufficiently sensitive to evaluate potential releases for risk. The three times the maximum background (3X) approach was also calculated for CERCLA purposes for this investigation.

Lead was not detected above its mean + 2 $\sigma$  calculated concentration of 54 mg/Kg with the exception of Burr-1. Burr-1 was collected in the fire pit at the western edge of the Burr yard. Lead was detected at 240 mg/Kg in Burr-1, still well below its residential RSK concentration of 400 mg/kg. This sample also exceeded its 3X background concentration of 150 mg/Kg for lead. Arsenic, and cadmium were not detected above respective mean + 2 $\sigma$  concentrations in soils. Mercury was not detected in any samples.

Several PAHs were detected in sample Burr-1. Of these, benzo(a)pyrene and indeno(1,2,3-c,d)pyrene were detected above RSK levels. Benzo(a)pyrene was detected at 1.9 mg/Kg, with a residential RSK level of 1.9 mg/Kg, and indeno(1,2,3-c,d)pyrene was detected at 1.7 mg/Kg, above its residential RSK level of 0.76 mg/Kg. Sample Burr-7 indicated a trace of bis(2-ethylhexyl)phthalate below RSKs; this is often attributable to cross contamination from plastic containers, gloves, sample bags, etc. and is not apparently attributable to the site.

## **6. Conclusions**

The data collected for this assessment did not indicate that a significant release of the primary constituents of concern, lead, mercury, arsenic, and cadmium, has occurred at the Burr property. The private well sample indicates both pre- and post-filter samples within current MCLs. The only sample with elevated metals above background was Burr-1, which indicated lead below residential RSK levels but above the calculated site-specific background ranges.

Sample Burr-1 also indicated some PAHS at low levels, with two slightly exceeding residential RSK levels. The proximity of this location to the fire pit makes these results attributable (especially lead and PAHs) to burning in the pit. PAHs and metals are very commonly found in ash residues (References 5-9).

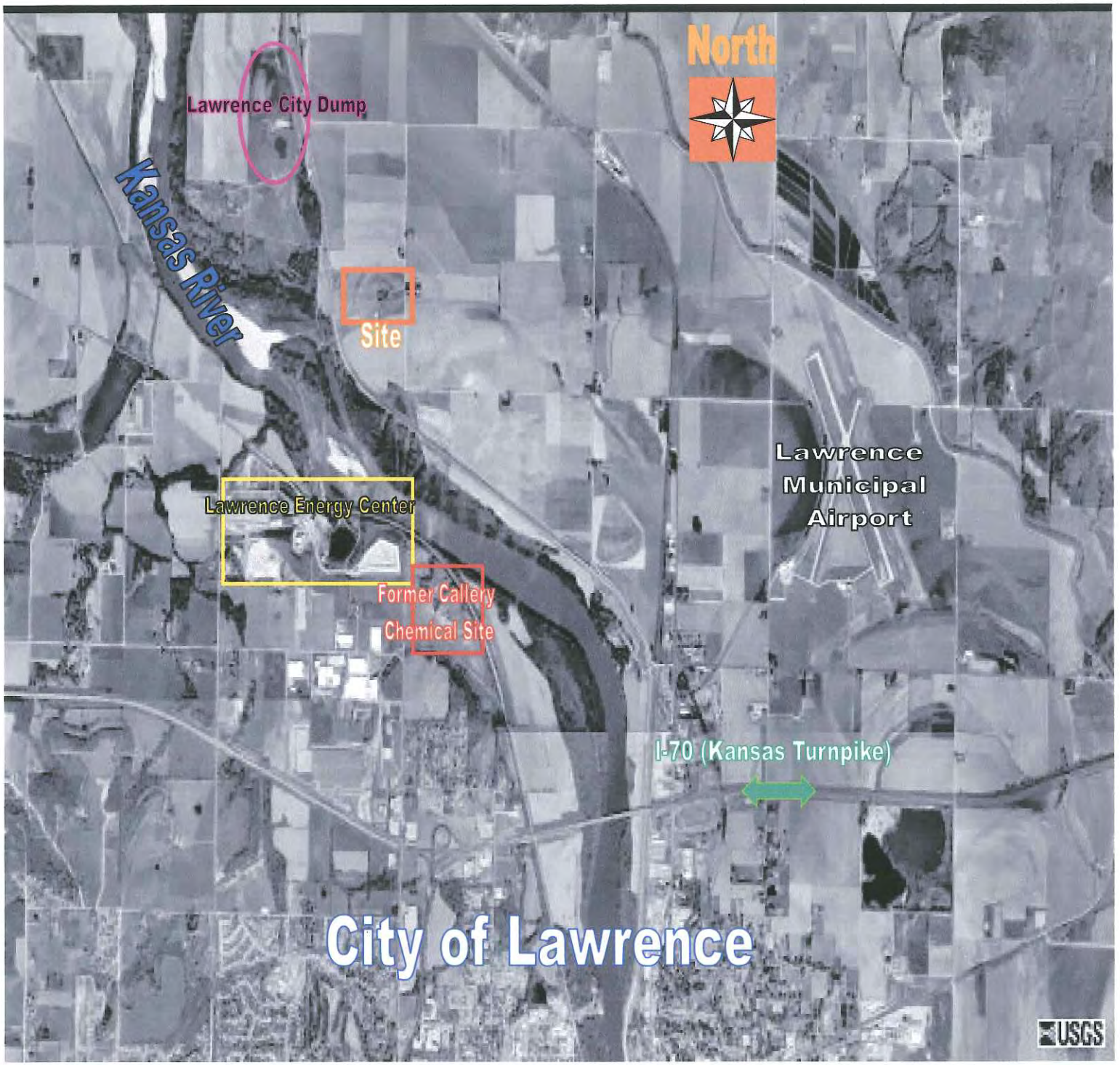
The site-wide data, when compared with off-site and potential downwind locations, does not indicate a widespread release of heavy metals to soils via the air pathway from the LEC. It should be noted that this investigation was of a screening level, and did not include high volume air sampling which would be needed to definitively evaluate the air pathway.

Based upon available information, soils and ground water at the site do not warrant further CERCLA response consistent with § 300.420 of the NCP. The Bureau of Air and Radiation (BAR) will be provided with the site information to determine if this site warrants further evaluation of the air pathway via high-volume air sampling.

## 7. References

1. United State Geological Survey, TerraServer Aerial Photographs, 2005.
2. O'Connor, Howard, *Geology and Ground Water Resources of Douglas County*, Kansas Geological Survey Bulletin 148, 1960.
3. WWC-5 Database, Kansas Department of Health and Environment, 2005.
4. United States Department of Agriculture, Soil Conservation Service, *Soil Survey of Douglas County, Kansas*, 1977.
5. Perkiömäki, Jonna, *Wood Ash Use in Coniferous Forests*, Dissertation, University of Helsinki, Finland, 2004.
6. Valenti, Joseph and Clayton, Russell, *Emissions from Outdoor Wood-burning Residential Hot Water Furnaces*, EPA-600/R-98-017, 1998.
7. Jon Brady and Dennis Dobson, Chemists, Kansas Department of Health and Environment, Division of Health and Environmental Laboratories, May 5, 2005 conversation with Randolph L. Brown, Environmental Geologist, Kansas Department of Health and Environment.
8. United States Agency for Toxic Substances and Disease Registry (ATSDR), *Toxicological Profile for Lead*, revised July 1999.
9. United States Agency for Toxic Substances and Disease Registry (ATSDR), *Toxicological Profile for Lead*, revised August 1995.
10. Kansas Department of Health and Environment, *Supplemental Sampling Assessment (SSA) of the Callery Chemical Site*, 2005.

## **Appendix A: Tables and Figures**



**Figure 1**  
**Site and Surrounding Area**

**Scale 1" = 2,560'**

**Source: USGS**

North



## Figure 2 Ground Water Sample Locations

**Legend:**       Direct Push Sample Location

 Private Well Location


**Scale 1" = 60 feet**

North

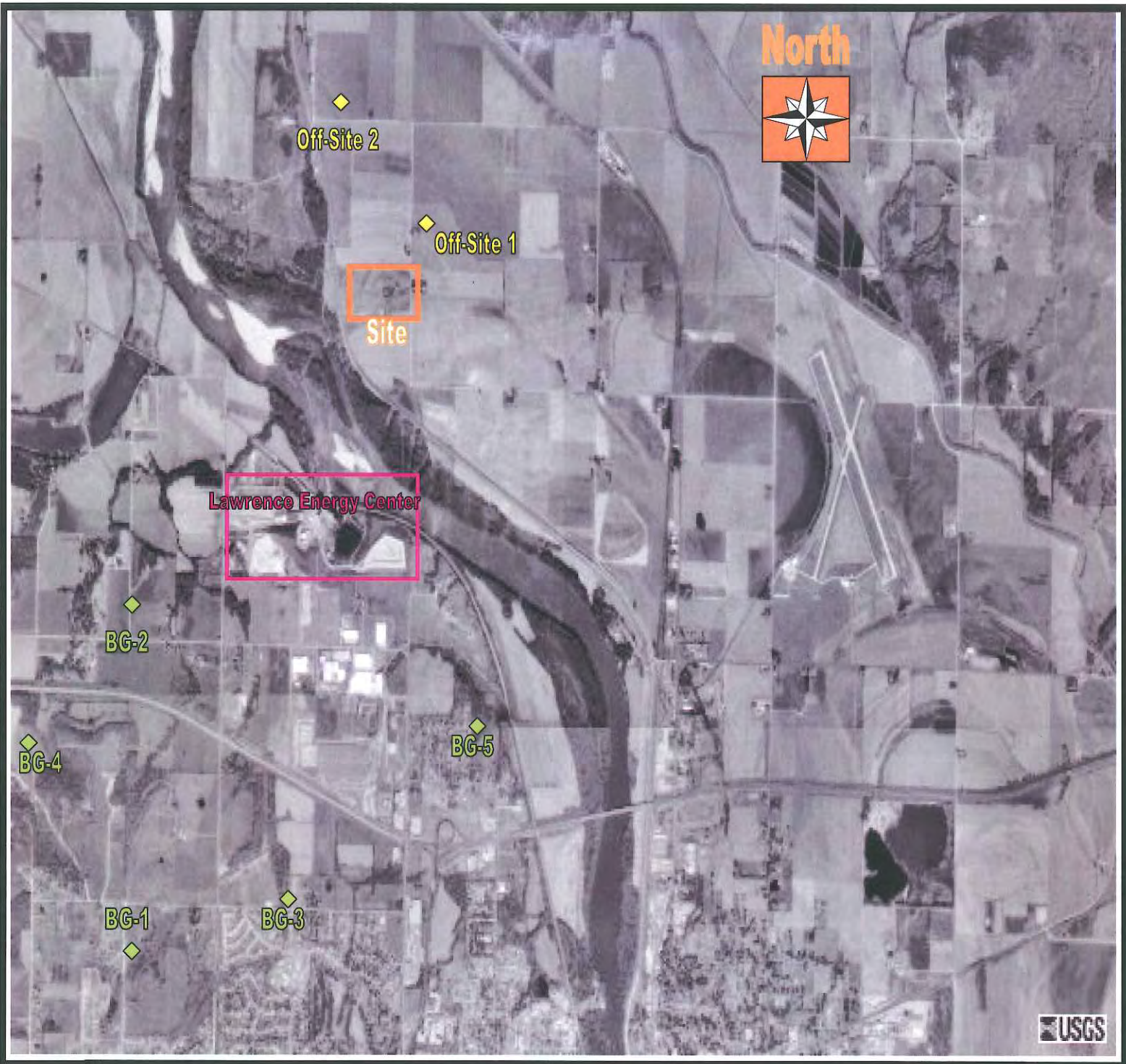


USGS

**Figure 3**  
**Surficial Soil Sample Locations**

**Legend:**  **Surficial Soil Sample**

**Scale 1" = 60 feet**



**Figure 4**

**Off-Site Surficial Soil Sample Locations**

**Legend:**



Downwind Surficial Soil Sample



Upwind Background Surficial Soil Sample

Scale 1" = 2,560'



Table 1: Soil Sample Metals Results

Sample I.D.	Lead (mg/Kg):	Arsenic (mg/Kg):	Cadmium (mg/Kg):	Mercury (mg/Kg):
On-site:				
Burr-1	240	5.5	<1.0	<0.050
Burr-2	9.9	<5.0	<1.0	<0.050
Burr-3	59	<5.0	<1.0	<0.050
Burr-4	8.8	<5.0	<1.0	<0.050
Burr-5	8.9	<5.0	<1.0	<0.050
Burr-6	9.7	<5.0	<1.0	<0.050
Burr-7	8.0	<5.0	<1.0	<0.050
Burr-8	8.9	<5.0	<1.0	<0.050
Burr-9	36	<5.0	<1.0	<0.050
Burr-10	26	<5.0	<1.0	<0.050
Burr-Garden	33	<5.0	<1.0	<0.050
Off-site background:				
BG-1	50	19	9.4	<0.050
BG-2	19	6.1	<1.0	<0.050
BG-3	24	8.8	<1.0	<0.050
BG-4	22	7.2	1.7	<0.050
BG-5	12	5.5	<1.0	<0.050
Mean	25.4	9.32	2.82	ND
$\sigma$	14.48447	5.554908	3.690799	ND
Mean + 2 $\sigma$	54.4	20.4	10.2	ND
3X Max Background:	150	57	28.2	ND
Off-site downwind:				
Off-site #1	8.6	<5.0	<1.0	<0.050
Off-site #2	15	<5.0	<1.0	<0.050

Table 2: Water Sample Results

Sample I.D.	Lead (ug/L):	Arsenic (ug/L):	Cadmium (ug/L):	Mercury (ug/L):
Burr Well Pre-Filter	<1.0	7.5	<1.0	<0.50
Burr Well Post-filter (filtered)	<1.0	7.4	<1.0	<0.50
BP-1	<1.0	1.2	<1.0	<0.50
BP-2	<1.0	11	<1.0	<0.50
BP-3	<1.0	4.1	<1.0	<0.50
BP-4	<1.0	<1.0	<1.0	<0.50
Maximum Contaminant Levels:	15	10	5	2

Table 3: Semi-volatile Organic Analysis (SVOC) Soil Results  
(Note: Only samples with detections are included)

Constituent:	Burr-1	Burr-7	Off-site-1	Residential KDHE RSK:
Phenathrene	1.7	ND		Not established (no EPA Region IX PRG nor Region III RBC)
Fluoranthene	5.0	ND	2.2	220 – RSK
Pyrene	4.5	ND	1.6	140 – RSK
Chrysene	1.9	ND		6.4 – RSK
Benzo(a)anthracence	1.9	ND		12 – RSK
Benzo(b)fluoranthene:	2.4	ND		12 – RSK
Benzo(k)fluoranthene	1.1	ND		10 – RSK
Benzo(a)pyrene	1.9	ND		1.2 – RSK
Indeno(1,2,3-c,d)pyrene	1.7	ND		0.76- RSK
Benzo(g,h,i)perylene	1.3	ND		Not established (no EPA Region IX PRG nor Region III RBC)
Bis(2-ethylhexyl)phthalate	ND	36		600 – RSK

Table 4: Global Positioning Satellite (GPS) Coordinates for Sample Locations

Sample I.D.:	Latitude	Longitude:	Accuracy (feet)
Burr-1	39.02012	95.26369	± 19
Burr-2	39.01978	95.26356	± 14
Burr-3	39.02025	95.26280	± 16
Burr-4	39.02028	95.26224	± 15
Burr-5	39.02074	95.26116	± 16
Burr-6	39.02056	95.26315	± 15
Burr-7	39.02049	95.26369	± 16
Burr-8	39.02018	95.26415	± 16
Burr-9	39.02021	95.26305	± 22
Burr-10	39.02029	95.26336	± 16
Burr-Garden	39.01997	95.26295	± 21
Off-site – 1	39.02148	95.26091	± 18
Off-site – 2	39.02964	95.26905	± 16
BG-1	38.98373	95.28835	± 31
BG-2	39.00053	95.27436	± 23
BG-3	38.98663	95.27769	± 18
BG-4	38.99472	95.29782	± 15
BG-5	38.99814	95.25448	± 17

## **Appendix B: Photographic Record**



Photo 1

Date: February 23, 2005 Direction: Viewing South  
Burr Residence with Lawrence Energy Center (LEC) visible in background



Photo 2

Date: February 23, 2005 Direction: Viewing Southeast  
Direct push sample location, Burr Residence visible in background



Photo 3

Date: February 23, 2005 Direction: Viewing South  
Direct-push sample location with Lawrence Energy Center (LEC) visible in background



Photo 4

Date: February 23, 2005 Direction: Viewing South  
Direct-push sample location with Lawrence Energy Center (LEC) visible in background

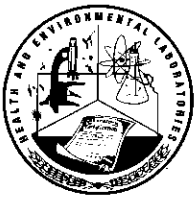


Photo 5

Date: February 23, 2005 Direction: Viewing North  
Burr Residence visible in background behind direct-push sample location

## **Appendix C: Laboratory Reports**





**DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES**  
**Kansas Department of Health and Environment**  
**Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001**



**REPORT OF ANALYSIS**

**INORGANIC CHEMISTRY**

Report To: BUREAU OF ENV REMEDIATION  
 CURTIS SOB SUITE 410  
 ATTN: Randy Brown  
 TOPEKA KS 66612

Analysis Code: PT      Lab Number: 448198

Site ID: 4EM80  
 Account Code: EP

Collection Location: Burr-1  
 Collector: Randy Brown - BER  
 Date/Time Collected: 02/16/05 12:35

Matrix: Soil

Collect Depth: 0.5  
 Date/Time Received: 02/23/05 16:21

Sample Comments: PAHS 18270 low levels. Amended Report per RBrown.

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum (Total)	11000	mg/Kg	03/10/05	EPA 6010
Antimony (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Arsenic (Total)	5.5	mg/Kg	03/10/05	EPA 6010
Barium (Total)	240	mg/Kg	03/10/05	EPA 6010
Beryllium (Total)	0.33	mg/Kg	03/10/05	EPA 6010
Boron (Total)	9.9	mg/Kg	03/10/05	EPA 6010
Cadmium (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Calcium (Total)	15000	mg/Kg	03/10/05	EPA 6010
Chromium (Total)	26	mg/Kg	03/10/05	EPA 6010
Cobalt (Total)	4.5	mg/Kg	03/10/05	EPA 6010
Copper (Total)	18	mg/Kg	03/10/05	EPA 6010
Iron (Total)	11000	mg/Kg	03/10/05	EPA 6010
Lead (Total)	240	mg/Kg	03/10/05	EPA 6010
Magnesium (Total)	2300	mg/Kg	03/10/05	EPA 6010
Manganese (Total)	220	mg/Kg	03/10/05	EPA 6010
Mercury (Total)	< 0.050	mg/Kg	03/02/05	EPA 245.1
Molybdenum (Total)	< 2.0	mg/Kg	03/10/05	EPA 6010
Nickel (Total)	11	mg/Kg	03/10/05	EPA 6010
Percent Solids	68	Percent	02/24/05	EPA 1311
Potassium (Total)	3800	mg/Kg	03/10/05	EPA 6010
Selenium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Silica (Total)	2200	mg/Kg	03/10/05	EPA 6010
Silver (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Sodium (Total)	160	mg/Kg	03/10/05	EPA 6010
Thallium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Vanadium (Total)	26	mg/Kg	03/10/05	EPA 6010
Zinc (Total)	190	mg/Kg	03/10/05	EPA 6010

**Analytical Comments:**

Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB  
 Date Reported: 03/14/05  
 Copies To: File

< - Not Detected at Indicated Level  
 \* - Holding Time Exceeded

**RECEIVED**

APR 20 2005

ENVIRONMENTAL



# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION  
CURTIS SOB SUITE 410  
ATTN: Randy Brown  
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448203

Site ID: 4EM80  
Account Code: EP

Collection Location: Burr-2  
Collector: Randy Brown - BER  
Date/Time Collected: 02/16/05 12:45

Matrix: Soil Collect Depth: 0.5  
Date/Time Received: 02/23/05 16:21

Sample Comments: PAHS 18270 low levels

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum (Total)	9600	mg/Kg	04/04/05	EPA 6010
Antimony (Total)	< 5.0	mg/Kg	04/04/05	EPA 6010
Arsenic (Total)	< 5.0	mg/Kg	04/04/05	EPA 6010
Barium (Total)	110	mg/Kg	04/04/05	EPA 6010
Beryllium (Total)	0.30	mg/Kg	04/04/05	EPA 6010
Boron (Total)	< 5.0	mg/Kg	04/04/05	EPA 6010
Cadmium (Total)	< 1.0	mg/Kg	04/04/05	EPA 6010
Calcium (Total)	2900	mg/Kg	04/04/05	EPA 6010
Chromium (Total)	14	mg/Kg	04/04/05	EPA 6010
Cobalt (Total)	4.1	mg/Kg	04/04/05	EPA 6010
Copper (Total)	7.9	mg/Kg	04/04/05	EPA 6010
Iron (Total)	9000	mg/Kg	04/04/05	EPA 6010
Lead (Total)	9.9	mg/Kg	04/04/05	EPA 6010
Magnesium (Total)	1700	mg/Kg	04/04/05	EPA 6010
Manganese (Total)	190	mg/Kg	04/04/05	EPA 6010
Mercury (Total)	< 0.050	mg/Kg	03/02/05	EPA 245.1
Molybdenum (Total)	< 2.0	mg/Kg	04/04/05	EPA 6010
Nickel (Total)	8.5	mg/Kg	04/04/05	EPA 6010
Percent Solids	77	Percent	02/24/05	EPA 1311
Potassium (Total)	2600	mg/Kg	04/04/05	EPA 6010
Selenium (Total)	< 5.0	mg/Kg	04/04/05	EPA 6010
Silica (Total)	1900	mg/Kg	04/04/05	EPA 6010
Silver (Total)	< 1.0	mg/Kg	04/04/05	EPA 6010
Sodium (Total)	92	mg/Kg	04/04/05	EPA 6010
Thallium (Total)	< 5.0	mg/Kg	04/04/05	EPA 6010
Vanadium (Total)	25	mg/Kg	04/04/05	EPA 6010
Zinc (Total)	44	mg/Kg	04/04/05	EPA 6010

#### Analytical Comments:

Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB  
Date Reported: 04/11/05  
Copies To: File

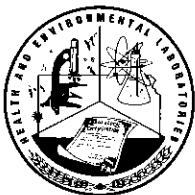
< - Not Detected at Indicated Level  
\* - Holding Time Exceeded

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APR 13 2005

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

BUREAU OF  
ENVIRONMENTAL REMEDIATION



# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION  
CURTIS SOB SUITE 410  
ATTN: Randy Brown  
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448201

4EM80

Site ID:  
Account Code: EP

Collection Location: Burr-3  
Collector: Randy Brown - BER  
Date/Time Collected: 02/16/05 13:00

Matrix: Soil Collect Depth: 0.5  
Date/Time Received: 02/23/05 16:21

Sample Comments: PAHS 18270 low levels

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum (Total)	9000	mg/Kg	03/10/05	EPA 6010
Antimony (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Arsenic (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Barium (Total)	120	mg/Kg	03/10/05	EPA 6010
Beryllium (Total)	0.26	mg/Kg	03/10/05	EPA 6010
Boron (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Cadmium (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Calcium (Total)	4300	mg/Kg	03/10/05	EPA 6010
Chromium (Total)	13	mg/Kg	03/10/05	EPA 6010
Cobalt (Total)	3.7	mg/Kg	03/10/05	EPA 6010
Copper (Total)	6.8	mg/Kg	03/10/05	EPA 6010
Iron (Total)	8500	mg/Kg	03/10/05	EPA 6010
Lead (Total)	59	mg/Kg	03/10/05	EPA 6010
Magnesium (Total)	1900	mg/Kg	03/10/05	EPA 6010
Manganese (Total)	190	mg/Kg	03/10/05	EPA 6010
Mercury (Total)	< 0.050	mg/Kg	03/02/05	EPA 245.1
Molybdenum (Total)	< 2.0	mg/Kg	03/10/05	EPA 6010
Nickel (Total)	8.8	mg/Kg	03/10/05	EPA 6010
Percent Solids	74	Percent	02/24/05	EPA 1311
Potassium (Total)	2300	mg/Kg	03/10/05	EPA 6010
Selenium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Silica (Total)	2900	mg/Kg	03/10/05	EPA 6010
Silver (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Sodium (Total)	77	mg/Kg	03/10/05	EPA 6010
Thallium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Vanadium (Total)	19	mg/Kg	03/10/05	EPA 6010
Zinc (Total)	58	mg/Kg	03/10/05	EPA 6010

#### Analytical Comments:

Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB  
Date Reported: 03/14/05  
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CLIA No. 17D0648254

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DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION
CURTIS SOB SUITE 410
ATTN: Randy Brown
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448195

4EM80

Site ID:
Account Code: EP

Collection Location: Burr-4
Collector: Randy Brown - BER
Date/Time Collected: 02/16/05 13:15

Matrix: Soil Collect Depth: 0.5
Date/Time Received: 02/23/05 16:21

Sample Comments: PAHS 18270 low levels

Table with 5 columns: Parameter, Analytical Result, Units, Analysis Date, Analytical Method. Lists various elements like Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Percent Solids, Potassium, Selenium, Silica, Silver, Sodium, Thallium, Vanadium, Zinc.

Analytical Comments:

Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB
Date Reported: 03/14/05
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**Kansas Department of Health and Environment**  
**Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001**



**REPORT OF ANALYSIS**

**INORGANIC CHEMISTRY**

Report To: BUREAU OF ENV REMEDIATION  
 CURTIS SOB SUITE 410  
 ATTN: Randy Brown  
 TOPEKA KS 66612

Analysis Code: PT      Lab Number: 448199

4EM80

Site ID:  
 Account Code: EP

Collection Location: Burr-5  
 Collector: Randy Brown - BER  
 Date/Time Collected: 02/16/05 13:25

Matrix: Soil

Collect Depth: 0.5  
 Date/Time Received: 02/23/05 16:21

Sample Comments: PAHS 18270 low levels Amended report per RBrown. JAB

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum (Total)	9400	mg/Kg	03/10/05	EPA 6010
Antimony (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Arsenic (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Barium (Total)	86	mg/Kg	03/10/05	EPA 6010
Beryllium (Total)	0.33	mg/Kg	03/10/05	EPA 6010
Boron (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Cadmium (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Calcium (Total)	110000	mg/Kg	03/10/05	EPA 6010
Chromium (Total)	12	mg/Kg	03/10/05	EPA 6010
Cobalt (Total)	3.4	mg/Kg	03/10/05	EPA 6010
Copper (Total)	8.1	mg/Kg	03/10/05	EPA 6010
Iron (Total)	11000	mg/Kg	03/10/05	EPA 6010
Lead (Total)	8.9	mg/Kg	03/10/05	EPA 6010
Magnesium (Total)	4900	mg/Kg	03/10/05	EPA 6010
Manganese (Total)	420	mg/Kg	03/10/05	EPA 6010
Mercury (Total)	< 0.050	mg/Kg	03/02/05	EPA 245.1
Molybdenum (Total)	< 2.0	mg/Kg	03/10/05	EPA 6010
Nickel (Total)	13	mg/Kg	03/10/05	EPA 6010
Percent Solids	82	Percent	02/24/05	EPA 1311
Potassium (Total)	2300	mg/Kg	03/10/05	EPA 6010
Selenium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Silica (Total)	2300	mg/Kg	03/10/05	EPA 6010
Silver (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Sodium (Total)	130	mg/Kg	03/10/05	EPA 6010
Thallium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Vanadium (Total)	19	mg/Kg	03/10/05	EPA 6010
Zinc (Total)	36	mg/Kg	03/10/05	EPA 6010

**Analytical Comments:**

Results for total metals are expressed on a dry weight basis. Sample site Corrected.

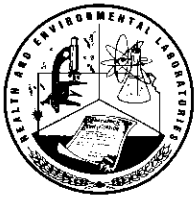
Reporting Analyst: JAB  
 Date Reported: 03/14/05  
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Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION
CURTIS SOB SUITE 410
ATTN: Randy Brown
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448194

4EM80

Site ID:
Account Code: EP

Collection Location: Burr-6
Collector: Randy Brown - BER
Date/Time Collected: 02/16/05 13:30

Matrix: Soil Collect Depth: 0.5
Date/Time Received: 02/23/05 16:21

Sample Comments: PAHS 18270 low levels

Table with 5 columns: Parameter, Analytical Result, Units, Analysis Date, Analytical Method. Lists various elements like Aluminum, Antimony, Arsenic, etc., with their respective results and methods.

Analytical Comments:
Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB
Date Reported: 03/14/05
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DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION
CURTIS SOB SUITE 410
ATTN: Randy Brown
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448206

4EM80

Site ID:
Account Code: EP

Collection Location: Burr-7
Collector: Randy Brown - BER
Date/Time Collected: 02/16/05 13:45

Matrix: Soil Collect Depth: 0.5
Date/Time Received: 02/23/05 16:20

Sample Comments: PAHS 18270 low levels

Table with 5 columns: Parameter, Analytical Result, Units, Analysis Date, Analytical Method. Lists various metals and their concentrations.

Analytical Comments:
Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB
Date Reported: 03/14/05
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**Kansas Department of Health and Environment**  
**Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001**



**REPORT OF ANALYSIS**

**INORGANIC CHEMISTRY**

Report To: BUREAU OF ENV REMEDIATION  
 CURTIS SOB SUITE 410  
 ATTN: Randy Brown  
 TOPEKA KS 66612

Analysis Code: PT      Lab Number: 448191

4EM80

Site ID:  
 Account Code: EP

Collection Location: Burr-8  
 Collector: Randy Brown - BER  
 Date/Time Collected: 02/16/05 14:00

Matrix: Soil

Collect Depth: 0.5  
 Date/Time Received: 02/23/05 16:20

Sample Comments: PAHS 18270 low levels

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum (Total)	10000	mg/Kg	03/10/05	EPA 6010
Antimony (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Arsenic (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Barium (Total)	160	mg/Kg	03/10/05	EPA 6010
Beryllium (Total)	0.30	mg/Kg	03/10/05	EPA 6010
Boron (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Cadmium (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Calcium (Total)	3100	mg/Kg	03/10/05	EPA 6010
Chromium (Total)	15	mg/Kg	03/10/05	EPA 6010
Cobalt (Total)	4.7	mg/Kg	03/10/05	EPA 6010
Copper (Total)	7.5	mg/Kg	03/10/05	EPA 6010
Iron (Total)	10000	mg/Kg	03/10/05	EPA 6010
Lead (Total)	8.9	mg/Kg	03/10/05	EPA 6010
Magnesium (Total)	2000	mg/Kg	03/10/05	EPA 6010
Manganese (Total)	260	mg/Kg	03/10/05	EPA 6010
Mercury (Total)	< 0.050	mg/Kg	03/02/05	EPA 245.1
Molybdenum (Total)	< 2.0	mg/Kg	03/10/05	EPA 6010
Nickel (Total)	9.4	mg/Kg	03/10/05	EPA 6010
Percent Solids	75	Percent	02/24/05	EPA 1311
Potassium (Total)	3200	mg/Kg	03/10/05	EPA 6010
Selenium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Silica (Total)	2300	mg/Kg	03/10/05	EPA 6010
Silver (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Sodium (Total)	110	mg/Kg	03/10/05	EPA 6010
Thallium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Vanadium (Total)	27	mg/Kg	03/10/05	EPA 6010
Zinc (Total)	36	mg/Kg	03/10/05	EPA 6010

**Analytical Comments:**

Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB  
 Date Reported: 03/14/05  
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DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION  
CURTIS SOB SUITE 410  
ATTN: Randy Brown  
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448207

4EM80

Site ID:  
Account Code: EP

Collection Location: Burr-9  
Collector: Randy Brown - BER  
Date/Time Collected: 02/16/05 14:15

Matrix: Soil Collect Depth: 0.5  
Date/Time Received: 02/23/05 16:20

Sample Comments: PAHS 18270 low levels

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum (Total)	10000	mg/Kg	03/10/05	EPA 6010
Antimony (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Arsenic (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Barium (Total)	140	mg/Kg	03/10/05	EPA 6010
Beryllium (Total)	0.34	mg/Kg	03/10/05	EPA 6010
Boron (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Cadmium (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Calcium (Total)	6000	mg/Kg	03/10/05	EPA 6010
Chromium (Total)	14	mg/Kg	03/10/05	EPA 6010
Cobalt (Total)	4.3	mg/Kg	03/10/05	EPA 6010
Copper (Total)	7.9	mg/Kg	03/10/05	EPA 6010
Iron (Total)	11000	mg/Kg	03/10/05	EPA 6010
Lead (Total)	36	mg/Kg	03/10/05	EPA 6010
Magnesium (Total)	2100	mg/Kg	03/10/05	EPA 6010
Manganese (Total)	200	mg/Kg	03/10/05	EPA 6010
Mercury (Total)	< 0.050	mg/Kg	03/02/05	EPA 245.1
Molybdenum (Total)	< 2.0	mg/Kg	03/10/05	EPA 6010
Nickel (Total)	11	mg/Kg	03/10/05	EPA 6010
Percent Solids	78	Percent	02/28/05	EPA 1311
Potassium (Total)	3000	mg/Kg	03/10/05	EPA 6010
Selenium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Silica (Total)	2000	mg/Kg	03/10/05	EPA 6010
Silver (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Sodium (Total)	120	mg/Kg	03/10/05	EPA 6010
Thallium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Vanadium (Total)	27	mg/Kg	03/10/05	EPA 6010
Zinc (Total)	77	mg/Kg	03/10/05	EPA 6010

Analytical Comments:

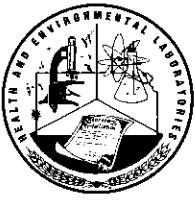
Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB  
Date Reported: 03/14/05  
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Kansas Department of Health and Environment
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REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION
CURTIS SOB SUITE 410
ATTN: Randy Brown
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448200

4EM80

Site ID:
Account Code: EP

Collection Location: Burr-10
Collector: Randy Brown - BER
Date/Time Collected: 02/16/05 14:30

Matrix: Soil Collect Depth: 0.5
Date/Time Received: 02/23/05 16:20

Sample Comments: PAHS 18270 low levels

Table with 5 columns: Parameter, Analytical Result, Units, Analysis Date, Analytical Method. Lists various elements like Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Percent Solids, Potassium, Selenium, Silica, Silver, Sodium, Thallium, Vanadium, Zinc with their respective results and methods.

Analytical Comments:
Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB
Date Reported: 03/14/05
Copies To: File

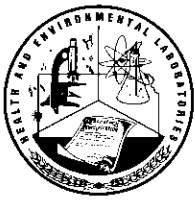
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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION  
CURTIS SOB SUITE 410  
ATTN: Randy Brown  
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448204

4EM80

Site ID:  
Account Code: EP

Collection Location: Burr - Off site -1  
Collector: Randy Brown - BER  
Date/Time Collected: 02/16/05 14:15

Matrix: Soil

Collect Depth: 0.5  
Date/Time Received: 02/23/05 16:20

Sample Comments: PAHS 18270 low levels

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum (Total)	9500	mg/Kg	03/10/05	EPA 6010
Antimony (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Arsenic (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Barium (Total)	110	mg/Kg	03/10/05	EPA 6010
Beryllium (Total)	0.37	mg/Kg	03/10/05	EPA 6010
Boron (Total)	7.6	mg/Kg	03/10/05	EPA 6010
Cadmium (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Calcium (Total)	67000	mg/Kg	03/10/05	EPA 6010
Chromium (Total)	12	mg/Kg	03/10/05	EPA 6010
Cobalt (Total)	3.6	mg/Kg	03/10/05	EPA 6010
Copper (Total)	11	mg/Kg	03/10/05	EPA 6010
Iron (Total)	10000	mg/Kg	03/10/05	EPA 6010
Lead (Total)	8.6	mg/Kg	03/10/05	EPA 6010
Magnesium (Total)	3900	mg/Kg	03/10/05	EPA 6010
Manganese (Total)	350	mg/Kg	03/10/05	EPA 6010
Mercury (Total)	< 0.050	mg/Kg	03/02/05	EPA 245.1
Molybdenum (Total)	< 2.0	mg/Kg	03/10/05	EPA 6010
Nickel (Total)	12	mg/Kg	03/10/05	EPA 6010
Percent Solids	74	Percent	02/28/05	EPA 1311
Potassium (Total)	2600	mg/Kg	03/10/05	EPA 6010
Selenium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Silica (Total)	3600	mg/Kg	03/10/05	EPA 6010
Silver (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Sodium (Total)	110	mg/Kg	03/10/05	EPA 6010
Thallium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Vanadium (Total)	18	mg/Kg	03/10/05	EPA 6010
Zinc (Total)	46	mg/Kg	03/10/05	EPA 6010

#### Analytical Comments:

Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB  
Date Reported: 03/14/05  
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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION  
CURTIS SOB SUITE 410  
ATTN: Randy Brown  
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448196

4EM80

Site ID:  
Account Code: EP

Collection Location: Burr - Off Site #2  
Collector: Randy Brown - BER  
Date/Time Collected: 02/16/05 15:00

Matrix: Soil Collect Depth: 0.5  
Date/Time Received: 02/23/05 16:20

Sample Comments: PAHS 18270 low levels

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum (Total)	17000	mg/Kg	03/10/05	EPA 6010
Antimony (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Arsenic (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Barium (Total)	200	mg/Kg	03/10/05	EPA 6010
Beryllium (Total)	0.64	mg/Kg	03/10/05	EPA 6010
Boron (Total)	11	mg/Kg	03/10/05	EPA 6010
Cadmium (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Calcium (Total)	44000	mg/Kg	03/10/05	EPA 6010
Chromium (Total)	21	mg/Kg	03/10/05	EPA 6010
Cobalt (Total)	7.1	mg/Kg	03/10/05	EPA 6010
Copper (Total)	16	mg/Kg	03/10/05	EPA 6010
Iron (Total)	17000	mg/Kg	03/10/05	EPA 6010
Lead (Total)	15	mg/Kg	03/10/05	EPA 6010
Magnesium (Total)	4800	mg/Kg	03/10/05	EPA 6010
Manganese (Total)	430	mg/Kg	03/10/05	EPA 6010
Mercury (Total)	< 0.050	mg/Kg	03/02/05	EPA 245.1
Molybdenum (Total)	< 2.0	mg/Kg	03/10/05	EPA 6010
Nickel (Total)	17	mg/Kg	03/10/05	EPA 6010
Percent Solids	46	Percent	02/24/05	EPA 1311
Potassium (Total)	4900	mg/Kg	03/10/05	EPA 6010
Selenium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Silica (Total)	2500	mg/Kg	03/10/05	EPA 6010
Silver (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Sodium (Total)	170	mg/Kg	03/10/05	EPA 6010
Thallium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Vanadium (Total)	36	mg/Kg	03/10/05	EPA 6010
Zinc (Total)	88	mg/Kg	03/10/05	EPA 6010

#### Analytical Comments:

Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB  
Date Reported: 03/14/05  
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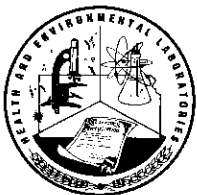
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**DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES**  
**Kansas Department of Health and Environment**  
**Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001**



**REPORT OF ANALYSIS**

**INORGANIC CHEMISTRY**

Report To: BUREAU OF ENV REMEDIATION  
 CURTIS SOB SUITE 410  
 ATTN: Randy Brown  
 TOPEKA KS 66612

Analysis Code: PT      Lab Number: 448202

4EM80

Site ID:  
 Account Code: EP

Collection Location: B6-1  
 Collector: Randy Brown - BER  
 Date/Time Collected: 02/15/05 15:00

Matrix: Soil      Collect Depth: 0.5  
 Date/Time Received: 02/23/05 16:20

Sample Comments: PAHS 18270 low levels

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum (Total)	27000	mg/Kg	03/10/05	EPA 6010
Antimony (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Arsenic (Total)	19	mg/Kg	03/10/05	EPA 6010
Barium (Total)	170	mg/Kg	03/10/05	EPA 6010
Beryllium (Total)	1.1	mg/Kg	03/10/05	EPA 6010
Boron (Total)	13	mg/Kg	03/10/05	EPA 6010
Cadmium (Total)	9.4	mg/Kg	03/10/05	EPA 6010
Calcium (Total)	69000	mg/Kg	03/10/05	EPA 6010
Chromium (Total)	130	mg/Kg	03/10/05	EPA 6010
Cobalt (Total)	9.2	mg/Kg	03/10/05	EPA 6010
Copper (Total)	85	mg/Kg	03/10/05	EPA 6010
Iron (Total)	24000	mg/Kg	03/10/05	EPA 6010
Lead (Total)	50	mg/Kg	03/10/05	EPA 6010
Magnesium (Total)	6000	mg/Kg	03/10/05	EPA 6010
Manganese (Total)	650	mg/Kg	03/10/05	EPA 6010
Mercury (Total)	< 0.050	mg/Kg	03/02/05	EPA 245.1
Molybdenum (Total)	12	mg/Kg	03/10/05	EPA 6010
Nickel (Total)	77	mg/Kg	03/10/05	EPA 6010
Percent Solids	70	Percent	02/24/05	EPA 1311
Potassium (Total)	6700	mg/Kg	03/10/05	EPA 6010
Selenium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Silica (Total)	4500	mg/Kg	03/10/05	EPA 6010
Silver (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Sodium (Total)	260	mg/Kg	03/10/05	EPA 6010
Thallium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Vanadium (Total)	210	mg/Kg	03/10/05	EPA 6010
Zinc (Total)	420	mg/Kg	03/10/05	EPA 6010

**Analytical Comments:**

Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB  
 Date Reported: 03/14/05  
 Copies To: File

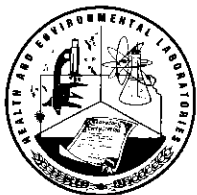
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 Laboratory Customer Service - (785) 296-1620  
 Laboratory Fax - (785) 296-1641  
 CLIA No. 17D0648254

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DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION
CURTIS SOB SUITE 410
ATTN: Randy Brown
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448192

4EM80

Site ID:
Account Code: EP

Collection Location: B6-2
Collector: Randy Brown - BER
Date/Time Collected: 02/15/05 15:35

Matrix: Soil Collect Depth: 0.5
Date/Time Received: 02/23/05 16:21

Sample Comments: PAHS 18270 low levels

Table with 5 columns: Parameter, Analytical Result, Units, Analysis Date, Analytical Method. Lists various metals and their concentrations.

Analytical Comments:

Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB
Date Reported: 03/14/05
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CLIA No. 17D0648254



DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION
CURTIS SOB SUITE 410
ATTN: Randy Brown
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448197

4EM80

Site ID:
Account Code: EP

Collection Location: B6-3
Collector: Randy Brown - BER
Date/Time Collected: 02/15/05 15:50

Matrix: Soil Collect Depth: 0.5
Date/Time Received: 02/23/05 16:21

Sample Comments: PAHS 18270 low levels

Table with 5 columns: Parameter, Analytical Result, Units, Analysis Date, Analytical Method. Lists various metals and their concentrations.

Analytical Comments:
Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB
Date Reported: 03/14/05
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DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

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Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION
CURTIS SOB SUITE 410
ATTN: Randy Brown
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448205

4EM80

Site ID:
Account Code: EP

Collection Location: B6-4
Collector: Randy Brown - BER
Date/Time Collected: 02/15/05 16:00

Matrix: Soil Collect Depth: 0.5
Date/Time Received: 02/23/05 16:20

Sample Comments: PAHS 18270 low levels

Table with 5 columns: Parameter, Analytical Result, Units, Analysis Date, Analytical Method. Lists various metals and their concentrations.

Analytical Comments:
Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB
Date Reported: 03/14/05
Copies To: File

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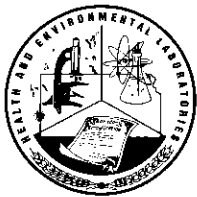
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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION  
CURTIS SOB SUITE 410  
ATTN: Randy Brown  
TOPEKA KS 66612

Analysis Code: PT Lab Number: 448193

4EM80

Site ID:  
Account Code: EP

Collection Location: B6-5  
Collector: Randy Brown - BER  
Date/Time Collected: 02/15/05 16:30

Matrix: Soil Collect Depth: 0.5  
Date/Time Received: 02/23/05 16:21

Sample Comments: PAHS 18270 low levels

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum (Total)	21000	mg/Kg	03/10/05	EPA 6010
Antimony (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Arsenic (Total)	5.5	mg/Kg	03/10/05	EPA 6010
Barium (Total)	220	mg/Kg	03/10/05	EPA 6010
Beryllium (Total)	0.76	mg/Kg	03/10/05	EPA 6010
Boron (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Cadmium (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Calcium (Total)	7000	mg/Kg	03/10/05	EPA 6010
Chromium (Total)	21	mg/Kg	03/10/05	EPA 6010
Cobalt (Total)	6.4	mg/Kg	03/10/05	EPA 6010
Copper (Total)	9.3	mg/Kg	03/10/05	EPA 6010
Iron (Total)	17000	mg/Kg	03/10/05	EPA 6010
Lead (Total)	12	mg/Kg	03/10/05	EPA 6010
Magnesium (Total)	2500	mg/Kg	03/10/05	EPA 6010
Manganese (Total)	310	mg/Kg	03/10/05	EPA 6010
Mercury (Total)	< 0.050	mg/Kg	03/02/05	EPA 245.1
Molybdenum (Total)	< 2.0	mg/Kg	03/10/05	EPA 6010
Nickel (Total)	16	mg/Kg	03/10/05	EPA 6010
Percent Solids	79	Percent	02/24/05	EPA 1311
Potassium (Total)	2300	mg/Kg	03/10/05	EPA 6010
Selenium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Silica (Total)	2700	mg/Kg	03/10/05	EPA 6010
Silver (Total)	< 1.0	mg/Kg	03/10/05	EPA 6010
Sodium (Total)	150	mg/Kg	03/10/05	EPA 6010
Thallium (Total)	< 5.0	mg/Kg	03/10/05	EPA 6010
Vanadium (Total)	37	mg/Kg	03/10/05	EPA 6010
Zinc (Total)	37	mg/Kg	03/10/05	EPA 6010

#### Analytical Comments:

Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB  
Date Reported: 03/14/05  
Copies To: File

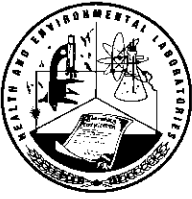
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**DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES**  
**Kansas Department of Health and Environment**  
**Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001**



**REPORT OF ANALYSIS**

**INORGANIC CHEMISTRY**

Report To: BUREAU OF ENV REMEDIATION  
 CURTIS SOB SUITE 410  
 ATTN: Randy Brown  
 TOPEKA KS 66612

Analysis Code: PT      Lab Number: 448208

4EM80

Site ID:  
 Account Code: EP

Collection Location: Burr Garden  
 Collector: Randy Brown - BER  
 Date/Time Collected: 02/16/05 12:55

Matrix: Soil      Collect Depth: 0.5  
 Date/Time Received: 02/23/05 16:20

Sample Comments: PAHS 18270 low levels

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum (Total)	15000	mg/Kg	03/21/05	EPA 6010
Antimony (Total)	< 5.0	mg/Kg	03/21/05	EPA 6010
Arsenic (Total)	< 5.0	mg/Kg	03/21/05	EPA 6010
Barium (Total)	170	mg/Kg	03/21/05	EPA 6010
Beryllium (Total)	0.44	mg/Kg	03/21/05	EPA 6010
Boron (Total)	13	mg/Kg	03/21/05	EPA 6010
Cadmium (Total)	< 1.0	mg/Kg	03/21/05	EPA 6010
Calcium (Total)	7800	mg/Kg	03/21/05	EPA 6010
Chromium (Total)	22	mg/Kg	03/21/05	EPA 6010
Cobalt (Total)	5.2	mg/Kg	03/21/05	EPA 6010
Copper (Total)	15	mg/Kg	03/21/05	EPA 6010
Iron (Total)	12000	mg/Kg	03/21/05	EPA 6010
Lead (Total)	33	mg/Kg	03/21/05	EPA 6010
Magnesium (Total)	2700	mg/Kg	03/21/05	EPA 6010
Manganese (Total)	240	mg/Kg	03/21/05	EPA 6010
Mercury (Total)	< 0.050	mg/Kg	03/02/05	EPA 245.1
Molybdenum (Total)	< 2.0	mg/Kg	03/21/05	EPA 6010
Nickel (Total)	11	mg/Kg	03/21/05	EPA 6010
Percent Solids	77	Percent	02/28/05	EPA 1311
Potassium (Total)	4200	mg/Kg	03/21/05	EPA 6010
Selenium (Total)	< 5.0	mg/Kg	03/21/05	EPA 6010
Silica (Total)	2100	mg/Kg	03/21/05	EPA 6010
Silver (Total)	< 1.0	mg/Kg	03/21/05	EPA 6010
Sodium (Total)	170	mg/Kg	03/21/05	EPA 6010
Thallium (Total)	< 5.0	mg/Kg	03/21/05	EPA 6010
Vanadium (Total)	33	mg/Kg	03/21/05	EPA 6010
Zinc (Total)	96	mg/Kg	03/21/05	EPA 6010

Analytical Comments:  
 Results for total metals are expressed on a dry weight basis.

Reporting Analyst: JAB  
 Date Reported: 03/23/05  
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REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION
CURTIS SOB SUITE 410
ATTN: Randy Brown
TOPEKA KS 66612

Analysis Code: PT Lab Number: 447443

4EM80

Site ID:
Account Code: EP

Collection Location: Burr Property Pre-filter Filtered
Collector: Randy Brown - KDHE/BER Matrix: Water
Date/Time Collected: 02/03/05 16:15

Collect Depth:
Date/Time Received: 02/08/05 08:09

Sample Comments: Drinking water detection limits

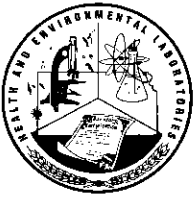
Table with 5 columns: Parameter, Analytical Result, Units, Analysis Date, Analytical Method. Lists various elements like Aluminum, Antimony, Arsenic, etc., with their respective results and methods.

Reporting Analyst: JAB
Date Reported: 02/25/05
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REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION
CURTIS SOB SUITE 410
ATTN: Randy Brown
TOPEKA KS 66612

Analysis Code: PT Lab Number: 447444

4EM80

Site ID:
Account Code: EP

Collection Location: Burr Property Post filter- Unfiltered
Collector: Randy Brown Matrix: Water
Date/Time Collected: 02/03/05 11:30

Collect Depth:
Date/Time Received: 02/08/05 08:09

Sample Comments:

Table with 5 columns: Parameter, Analytical Result, Units, Analysis Date, Analytical Method. Lists various elements like Aluminum, Antimony, Arsenic, etc., with their respective results and methods.

Reporting Analyst: JAB
Date Reported: 02/25/05
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REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION  
CURTIS SOB SUITE 410  
ATTN: Randy Brown  
TOPEKA KS 66612

Analysis Code: PT Lab Number: 447427

Site ID: 4EM80  
Account Code: EP

Collection Location: Burr Property BP-1  
Collector: John Cregan - KDHE/BER  
Date/Time Collected: 02/03/05 11:30

Matrix: Water Collect Depth: 26.0  
Date/Time Received: 02/04/05 14:10

Sample Comments:

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum	17	ug/L	02/22/05	EPA 200.8
Antimony	< 1.0	ug/L	02/22/05	EPA 200.8
Arsenic	1.2	ug/L	02/22/05	EPA 200.8
Barium	340	ug/L	02/22/05	EPA 200.8
Beryllium	< 1.0	ug/L	02/22/05	EPA 200.8
Boron	< 0.050	mg/L	02/17/05	EPA 200.7
Cadmium	< 1.0	ug/L	02/22/05	EPA 200.8
Calcium	110	mg/L	02/17/05	EPA 200.7
Chromium	< 1.0	ug/L	02/22/05	EPA 200.8
Cobalt	< 0.010	mg/L	02/17/05	EPA 200.7
Copper	1.2	ug/L	02/22/05	EPA 200.8
Iron	< 0.010	mg/L	02/17/05	EPA 200.7
Lead	< 1.0	ug/L	02/22/05	EPA 200.8
Magnesium	7.1	mg/L	02/17/05	EPA 200.7
Manganese	380	ug/L	02/22/05	EPA 200.8
Mercury	< 0.50	ug/L	02/10/05	EPA 245.1
Molybdenum	0.023	mg/L	02/17/05	EPA 200.7
Nickel	10	ug/L	02/22/05	EPA 200.8
Potassium	5.9	mg/L	02/17/05	EPA 200.7
Selenium	3.0	ug/L	02/22/05	EPA 200.8
Silica	44	mg/L	02/17/05	EPA 200.7
Silver	< 1.0	ug/L	02/22/05	EPA 200.8
Sodium	6.7	mg/L	02/17/05	EPA 200.7
Thallium	< 1.0	ug/L	02/22/05	EPA 200.8
Vanadium	< 0.0050	mg/L	02/17/05	EPA 200.7
Zinc	0.0095	mg/L	02/17/05	EPA 200.7

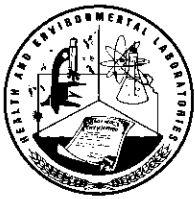
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Date Reported: 02/25/05  
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REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION
CURTIS SOB SUITE 410
ATTN: Randy Brown
TOPEKA KS 66612

Analysis Code: PT Lab Number: 447428

Site ID: 4EM80
Account Code: EP

Collection Location: Burr Property BP-2
Collector: John Cregan - KDHE/BER
Date/Time Collected: 02/03/05 14:00

Matrix: Water Collect Depth: 28.5
Date/Time Received: 02/04/05 14:10

Sample Comments:

Table with 5 columns: Parameter, Analytical Result, Units, Analysis Date, Analytical Method. Lists various elements like Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silica, Silver, Sodium, Thallium, Vanadium, Zinc with their respective results and methods.

Reporting Analyst: JAB
Date Reported: 02/25/05
Copies To: File

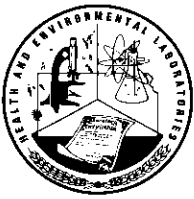
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Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION  
CURTIS SOB SUITE 410  
ATTN: Randy Brown  
TOPEKA KS 66612

Analysis Code: PT Lab Number: 447429

4EM80

Site ID:  
Account Code: EP

Collection Location: Burr Property BP-3  
Collector: John Cregan - KDHE/BER  
Date/Time Collected: 02/03/05 14:45

Matrix: Water

Collect Depth: 28.5  
Date/Time Received: 02/04/05 14:10

Sample Comments:

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum	15	ug/L	02/22/05	EPA 200.8
Antimony	< 1.0	ug/L	02/22/05	EPA 200.8
Arsenic	4.1	ug/L	02/22/05	EPA 200.8
Barium	290	ug/L	02/22/05	EPA 200.8
Beryllium	< 1.0	ug/L	02/22/05	EPA 200.8
Boron	< 0.050	mg/L	02/17/05	EPA 200.7
Cadmium	< 1.0	ug/L	02/22/05	EPA 200.8
Calcium	110	mg/L	02/17/05	EPA 200.7
Chromium	< 1.0	ug/L	02/22/05	EPA 200.8
Cobalt	< 0.010	mg/L	02/17/05	EPA 200.7
Copper	1.5	ug/L	02/22/05	EPA 200.8
Iron	< 0.010	mg/L	02/17/05	EPA 200.7
Lead	< 1.0	ug/L	02/22/05	EPA 200.8
Magnesium	5.6	mg/L	02/17/05	EPA 200.7
Manganese	96	ug/L	02/22/05	EPA 200.8
Mercury	< 0.50	ug/L	02/10/05	EPA 245.1
Molybdenum	< 0.020	mg/L	02/17/05	EPA 200.7
Nickel	6.5	ug/L	02/22/05	EPA 200.8
Potassium	5.2	mg/L	02/17/05	EPA 200.7
Selenium	1.4	ug/L	02/22/05	EPA 200.8
Silica	52	mg/L	02/17/05	EPA 200.7
Silver	< 1.0	ug/L	02/22/05	EPA 200.8
Sodium	6.1	mg/L	02/17/05	EPA 200.7
Thallium	< 1.0	ug/L	02/22/05	EPA 200.8
Vanadium	0.015	mg/L	02/17/05	EPA 200.7
Zinc	0.0087	mg/L	02/17/05	EPA 200.7

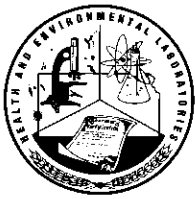
Reporting Analyst: JAB  
Date Reported: 02/25/05  
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**Kansas Department of Health and Environment**  
**Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001**



**REPORT OF ANALYSIS**

**INORGANIC CHEMISTRY**

Report To: BUREAU OF ENV REMEDIATION  
 CURTIS SOB SUITE 410  
 ATTN: Randy Brown  
 TOPEKA KS 66612

Analysis Code: PT      Lab Number: 447430

4EM80

Site ID:  
 Account Code: EP

Collection Location: Burr Property BP-4  
 Collector: John Cregan - KDHE/BER  
 Date/Time Collected: 02/03/05 15:15

Matrix: Water

Collect Depth:  
 Date/Time Received: 02/04/05 14:11

Sample Comments: Drinking Water detection limits

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum	15	ug/L	02/22/05	EPA 200.8
Antimony	< 1.0	ug/L	02/22/05	EPA 200.8
Arsenic	< 1.0	ug/L	02/22/05	EPA 200.8
Barium	280	ug/L	02/22/05	EPA 200.8
Beryllium	< 1.0	ug/L	02/22/05	EPA 200.8
Boron	0.084	mg/L	02/17/05	EPA 200.7
Cadmium	< 1.0	ug/L	02/22/05	EPA 200.8
Calcium	160	mg/L	02/17/05	EPA 200.7
Chromium	< 1.0	ug/L	02/22/05	EPA 200.8
Cobalt	0.014	mg/L	02/17/05	EPA 200.7
Copper	1.5	ug/L	02/22/05	EPA 200.8
Iron	0.094	mg/L	02/17/05	EPA 200.7
Lead	< 1.0	ug/L	02/22/05	EPA 200.8
Magnesium	13	mg/L	02/17/05	EPA 200.7
Manganese	300	ug/L	02/22/05	EPA 200.8
Mercury	< 0.50	ug/L	02/10/05	EPA 245.1
Molybdenum	0.021	mg/L	02/17/05	EPA 200.7
Nickel	14	ug/L	02/22/05	EPA 200.8
Potassium	8.9	mg/L	02/17/05	EPA 200.7
Selenium	4.6	ug/L	02/22/05	EPA 200.8
Silica	38	mg/L	02/17/05	EPA 200.7
Silver	< 1.0	ug/L	02/22/05	EPA 200.8
Sodium	32	mg/L	02/17/05	EPA 200.7
Thallium	< 1.0	ug/L	02/22/05	EPA 200.8
Vanadium	< 0.0050	mg/L	02/17/05	EPA 200.7
Zinc	0.020	mg/L	02/17/05	EPA 200.7

Reporting Analyst: JAB  
 Date Reported: 02/25/05  
 Copies To: File

< - Not Detected at Indicated Level  
 \* - Holding Time Exceeded

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BUREAU OF  
 ENVIRONMENTAL REMEDIATION





**DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES**  
**Kansas Department of Health and Environment**  
**Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001**



**REPORT OF ANALYSIS**

**INORGANIC CHEMISTRY**


Report To: BUREAU OF ENV REMEDIATION      Analysis Code: PT      Lab Number: 447431  
 CURTIS SOB SUITE 410  
 ATTN: Randy Brown  
 TOPEKA KS 66612      Site ID: 4EM80

Collection Location: Burr Property- Well - Prefilter-Unfiltered      Account Code: EP  
 Collector: John Cregan - KDHE/BER      Matrix: Water      Collect Depth:  
 Date/Time Collected: 02/03/05 16:15      Date/Time Received: 02/04/05 14:12

Sample Comments: Drinking Water detection limits

Parameter	Analytical Result	Units	Analysis Date	Analytical Method
Aluminum	13	ug/L	02/22/05	EPA 200.8
Antimony	< 1.0	ug/L	02/22/05	EPA 200.8
Arsenic	7.3	ug/L	02/22/05	EPA 200.8
Barium	< 1.0	ug/L	02/22/05	EPA 200.8
Beryllium	< 1.0	ug/L	02/22/05	EPA 200.8
Boron	0.053	mg/L	02/17/05	EPA 200.7
Cadmium	< 1.0	ug/L	02/22/05	EPA 200.8
Calcium	0.17	mg/L	02/17/05	EPA 200.7
Chromium	< 1.0	ug/L	02/22/05	EPA 200.8
Cobalt	< 0.010	mg/L	02/17/05	EPA 200.7
Copper	80	ug/L	02/22/05	EPA 200.8
Iron	< 0.010	mg/L	02/17/05	EPA 200.7
Lead	< 1.0	ug/L	02/22/05	EPA 200.8
Magnesium	< 0.050	mg/L	02/17/05	EPA 200.7
Manganese	< 1.0	ug/L	02/22/05	EPA 200.8
Mercury	< 0.50	ug/L	02/10/05	EPA 245.1
Molybdenum	< 0.020	mg/L	02/17/05	EPA 200.7
Nickel	< 1.0	ug/L	02/22/05	EPA 200.8
Potassium	0.25	mg/L	02/17/05	EPA 200.7
Selenium	1.6	ug/L	02/22/05	EPA 200.8
Silica	43	mg/L	02/17/05	EPA 200.7
Silver	< 1.0	ug/L	02/22/05	EPA 200.8
Sodium	160	mg/L	02/17/05	EPA 200.7
Thallium	< 1.0	ug/L	02/22/05	EPA 200.8
Vanadium	0.016	mg/L	02/17/05	EPA 200.7
Zinc	0.0084	mg/L	02/17/05	EPA 200.7

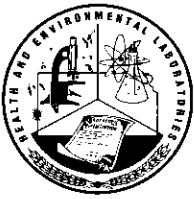
Reporting Analyst: JAB  
 Date Reported: 02/25/05  
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< - Not Detected at Indicated Level  
 \* - Holding Time Exceeded

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2005



DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

INORGANIC CHEMISTRY

Report To: BUREAU OF ENV REMEDIATION
CURTIS SOB SUITE 410
ATTN: Randy Brown
TOPEKA KS 66612

Analysis Code: PT Lab Number: 447432

4EM80

Site ID:
Account Code: EP

Collection Location: Burr Property- Well - Postfilter/filtered
Collector: John Cregan - KDHE/BER Matrix: Water
Date/Time Collected: 02/03/05 11:30

Collect Depth:
Date/Time Received: 02/04/05 14:12

Sample Comments: Drinking water detection limits

Table with 5 columns: Parameter, Analytical Result, Units, Analysis Date, Analytical Method. Lists various elements like Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silica, Silver, Sodium, Thallium, Vanadium, Zinc with their respective results and methods.

Reporting Analyst: JAB
Date Reported: 02/25/05
Copies To: File

Handwritten signature of JAB

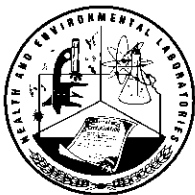
< - Not Detected at Indicated Level
\* - Holding Time Exceeded

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MAR 03 2005

BUREAU OF ENVIRONMENTAL REMEDIATION

Duane R. Boline, Ph.D., Director
Laboratory Customer Service - (785) 296-1620
Laboratory Fax - (785) 296-1641
CLIA No. 17D0648254



# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: VG      Lab Number: 447420  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/04/05  
TOPEKA, KS 66612      Report Date: 02/10/05

Acct No: 4EM80      Site ID No.:      Sample Type: WATER      Program Code: EP  
Site: BURR PROPERTY TRIP BLANK      No. Composited:  
Collected By: JOHN GREGAN KDH/BER      Depth:      Date: 02/03/05      Time:

VOLATILE ORGANIC COMPOUNDS	CONCENTRATION ( ug/L )	Analysis Date	EPA Method
Vinyl Chloride	< 0.50	02/07/05	8260
1,1-Dichloroethylene	< 0.50	02/07/05	8260
Dichloromethane	< 0.50	02/07/05	8260
trans 1,2-Dichloroethylene	< 0.50	02/07/05	8260
cis 1,2-Dichloroethylene	< 0.50	02/07/05	8260
1,1,1-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloromethane	< 0.50	02/07/05	8260
Benzene	< 0.50	02/07/05	8260
1,2-Dichloroethane	< 0.50	02/07/05	8260
Trichloroethylene	< 0.50	02/07/05	8260
1,2-Dichloropropane	< 0.50	02/07/05	8260
Toluene	< 0.50	02/07/05	8260
1,1,2-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloroethylene	< 0.50	02/07/05	8260
Chlorobenzene	< 0.50	02/07/05	8260
Ethylbenzene	< 0.50	02/07/05	8260
Xylene	< 0.50	02/07/05	8260
Styrene	< 0.50	02/07/05	8260
1,4-Dichlorobenzene	< 0.50	02/07/05	8260
1,2-Dichlorobenzene	< 0.50	02/07/05	8260
1,2,4-Trichlorobenzene	< 0.50	02/07/05	8260
Chloromethane	< 0.50	02/07/05	8260
Bromomethane	< 0.50	02/07/05	8260
Chloroethane	< 0.50	02/07/05	8260
1,1-Dichloroethane	< 0.50	02/07/05	8260
2,2-Dichloropropane	< 0.50	02/07/05	8260
Trichloromethane (THM)	< 0.50	02/07/05	8260
1,1-Dichloropropene	< 0.50	02/07/05	8260
Dibromomethane	< 0.50	02/07/05	8260
Bromodichloromethane (THM)	< 0.50	02/07/05	8260
1,3-Dichloropropane	< 0.50	02/07/05	8260
Dibromochloromethane (THM)	< 0.50	02/07/05	8260
1,1,1,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromoform (THM)	< 0.50	02/07/05	8260
1,1,2,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromobenzene	< 0.50	02/07/05	8260
1,2,3-Trichloropropane	< 0.50	02/07/05	8260
ortho-Chlorotoluene	< 0.50	02/07/05	8260
para-Chlorotoluene	< 0.50	02/07/05	8260
1,3-Dichlorobenzene	< 0.50	02/07/05	8260
Ethylene Dibromide (EDB)	< 0.010	02/07/05	8260
1,2-Dibromo-3-chloropropane	< 0.020	02/07/05	8260
Fluorotrichloromethane	< 0.50	02/07/05	8260
Dichlorodifluoromethane	< 0.50	02/07/05	8260
Isopropylbenzene	< 0.50	02/07/05	8260
n-Propylbenzene	< 0.50	02/07/05	8260
1,3,5-Trimethylbenzene	< 0.50	02/07/05	8260
tert-Butylbenzene	< 0.50	02/07/05	8260
1,2,4-Trimethylbenzene	< 0.50	02/07/05	8260
sec-Butylbenzene	< 0.50	02/07/05	8260
para-Isopropyltoluene	< 0.50	02/07/05	8260
n-Butylbenzene	< 0.50	02/07/05	8260
Naphthalene	< 0.50	02/07/05	8260
Methyl tert-butyl ether	< 0.50	02/07/05	8260

Chemist: Richard L. Pierce *RLP*

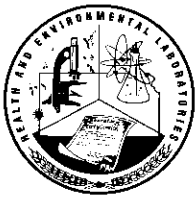
< - Not Detected at Indicated Level

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Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: VG      Lab Number: 447421  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/04/05  
TOPEKA, KS 66612      Report Date: 02/10/05

Acct No: 4EM80      Site ID No.:      Sample Type: WATER      Program Code: EP  
Site: BURR PROPERTY BP-4      Depth: 26.0      Date: 02/03/05      Time: 15:15  
Collected By: JOHN GREGAN, KDHE/BER      No. Compositd:

VOLATILE ORGANIC COMPOUNDS	CONCENTRATION ( ug/L )	Analysis Date	EPA Method
Vinyl Chloride	< 0.50	02/07/05	8260
1,1-Dichloroethylene	< 0.50	02/07/05	8260
Dichloromethane	< 0.50	02/07/05	8260
trans 1,2-Dichloroethylene	< 0.50	02/07/05	8260
cis 1,2-Dichloroethylene	< 0.50	02/07/05	8260
1,1,1-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloromethane	< 0.50	02/07/05	8260
Benzene	< 0.50	02/07/05	8260
1,2-Dichloroethane	< 0.50	02/07/05	8260
Trichloroethylene	< 0.50	02/07/05	8260
1,2-Dichloropropane	< 0.50	02/07/05	8260
Toluene	< 0.50	02/07/05	8260
1,1,2-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloroethylene	< 0.50	02/07/05	8260
Chlorobenzene	< 0.50	02/07/05	8260
Ethylbenzene	< 0.50	02/07/05	8260
Xylene	< 0.50	02/07/05	8260
Styrene	< 0.50	02/07/05	8260
1,4-Dichlorobenzene	< 0.50	02/07/05	8260
1,2-Dichlorobenzene	< 0.50	02/07/05	8260
1,2,4-Trichlorobenzene	< 0.50	02/07/05	8260
Chloromethane	< 0.50	02/07/05	8260
Bromomethane	< 0.50	02/07/05	8260
Chloroethane	< 0.50	02/07/05	8260
1,1-Dichloroethane	< 0.50	02/07/05	8260
2,2-Dichloropropane	< 0.50	02/07/05	8260
Trichloromethane (THM)	< 0.50	02/07/05	8260
1,1-Dichloropropene	< 0.50	02/07/05	8260
Dibromomethane	< 0.50	02/07/05	8260
Bromodichloromethane (THM)	< 0.50	02/07/05	8260
1,3-Dichloropropane	< 0.50	02/07/05	8260
Dibromochloromethane (THM)	< 0.50	02/07/05	8260
1,1,1,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromoform (THM)	< 0.50	02/07/05	8260
1,1,2,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromobenzene	< 0.50	02/07/05	8260
1,2,3-Trichloropropane	< 0.50	02/07/05	8260
ortho-Chlorotoluene	< 0.50	02/07/05	8260
para-Chlorotoluene	< 0.50	02/07/05	8260
1,3-Dichlorobenzene	< 0.50	02/07/05	8260
Ethylene Dibromide (EDB)	< 0.010	02/07/05	8260
1,2-Dibromo-3-chloropropane	< 0.020	02/07/05	8260
Fluorotrichloromethane	< 0.50	02/07/05	8260
Dichlorodifluoromethane	< 0.50	02/07/05	8260
Isopropylbenzene	< 0.50	02/07/05	8260
n-Propylbenzene	< 0.50	02/07/05	8260
1,3,5-Trimethylbenzene	< 0.50	02/07/05	8260
tert-Butylbenzene	< 0.50	02/07/05	8260
1,2,4-Trimethylbenzene	< 0.50	02/07/05	8260
sec-Butylbenzene	< 0.50	02/07/05	8260
para-Isopropyltoluene	< 0.50	02/07/05	8260
n-Butylbenzene	< 0.50	02/07/05	8260
Naphthalene	< 0.50	02/07/05	8260
Methyl tert-butyl ether	< 0.50	02/07/05	8260

Chemist: Richard L. Pierce *RLP*

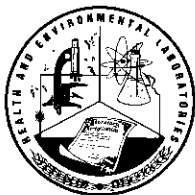
< - Not Detected at Indicated Level

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Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: VG      Lab Number: 447422  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/04/05  
TOPEKA, KS 66612      Report Date: 02/10/05

Acct No: 4EM80      Site ID No.:      Sample Type: WATER      Program Code: EP  
Site: BURR PROPERTY BP-2      No. Compositd:  
Collected By: JOHN CREGAN, KDHE/BER      Depth: 28.5      Date: 02/03/05      Time: 14:00

VOLATILE ORGANIC COMPOUNDS	CONCENTRATION ( ug/L )	Analysis Date	EPA Method
Vinyl Chloride	< 0.50	02/07/05	8260
1,1-Dichloroethylene	< 0.50	02/07/05	8260
Dichloromethane	< 0.50	02/07/05	8260
trans 1,2-Dichloroethylene	< 0.50	02/07/05	8260
cis 1,2-Dichloroethylene	< 0.50	02/07/05	8260
1,1,1-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloromethane	< 0.50	02/07/05	8260
Benzene	< 0.50	02/07/05	8260
1,2-Dichloroethane	< 0.50	02/07/05	8260
Trichloroethylene	< 0.50	02/07/05	8260
1,2-Dichloropropane	< 0.50	02/07/05	8260
Toluene	< 0.50	02/07/05	8260
1,1,2-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloroethylene	< 0.50	02/07/05	8260
Chlorobenzene	< 0.50	02/07/05	8260
Ethylbenzene	< 0.50	02/07/05	8260
Xylene	< 0.50	02/07/05	8260
Styrene	< 0.50	02/07/05	8260
1,4-Dichlorobenzene	< 0.50	02/07/05	8260
1,2-Dichlorobenzene	< 0.50	02/07/05	8260
1,2,4-Trichlorobenzene	< 0.50	02/07/05	8260
Chloromethane	< 0.50	02/07/05	8260
Bromomethane	< 0.50	02/07/05	8260
Chloroethane	< 0.50	02/07/05	8260
1,1-Dichloroethane	< 0.50	02/07/05	8260
2,2-Dichloropropane	< 0.50	02/07/05	8260
Trichloromethane (THM)	< 0.50	02/07/05	8260
1,1-Dichloropropene	< 0.50	02/07/05	8260
Dibromomethane	< 0.50	02/07/05	8260
Bromodichloromethane (THM)	< 0.50	02/07/05	8260
1,3-Dichloropropane	< 0.50	02/07/05	8260
Dibromochloromethane (THM)	< 0.50	02/07/05	8260
1,1,1,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromoform (THM)	< 0.50	02/07/05	8260
1,1,1,2,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromobenzene	< 0.50	02/07/05	8260
1,2,3-Trichloropropane	< 0.50	02/07/05	8260
ortho-Chlorotoluene	< 0.50	02/07/05	8260
para-Chlorotoluene	< 0.50	02/07/05	8260
1,3-Dichlorobenzene	< 0.50	02/07/05	8260
Ethylene Dibromide (EDB)	< 0.010	02/07/05	8260
1,2-Dibromo-3-chloropropane	< 0.020	02/07/05	8260
Fluorotrichloromethane	< 0.50	02/07/05	8260
Dichlorodifluoromethane	< 0.50	02/07/05	8260
Isopropylbenzene	< 0.50	02/07/05	8260
n-Propylbenzene	< 0.50	02/07/05	8260
1,3,5-Trimethylbenzene	< 0.50	02/07/05	8260
tert-Butylbenzene	< 0.50	02/07/05	8260
1,2,4-Trimethylbenzene	< 0.50	02/07/05	8260
sec-Butylbenzene	< 0.50	02/07/05	8260
para-Isopropyltoluene	< 0.50	02/07/05	8260
n-Butylbenzene	< 0.50	02/07/05	8260
Naphthalene	< 0.50	02/07/05	8260
Methyl tert-butyl ether	< 0.50	02/07/05	8260

Chemist: Richard L. Pierce *RLP*

< - Not Detected at Indicated Level

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Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: VG      Lab Number: 447423  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/04/05  
TOPEKA, KS 66612      Report Date: 02/10/05

Acct No: 4EM80      Site ID No.:  
Site: BURR PROPERTY BP-1      Sample Type: WATER      Program Code: EP  
Collected By: JOHN CREGAN/KDHE/BER      Depth: 26.0      Date: 02/03/05      No. Composit: 1  
Time: 11:30

VOLATILE ORGANIC COMPOUNDS	CONCENTRATION ( ug/L )	Analysis Date	EPA Method
Vinyl Chloride	< 0.50	02/07/05	8260
1,1-Dichloroethylene	< 0.50	02/07/05	8260
Dichloromethane	< 0.50	02/07/05	8260
trans 1,2-Dichloroethylene	< 0.50	02/07/05	8260
cis 1,2-Dichloroethylene	< 0.50	02/07/05	8260
1,1,1-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloromethane	< 0.50	02/07/05	8260
Benzene	< 0.50	02/07/05	8260
1,2-Dichloroethane	< 0.50	02/07/05	8260
Trichloroethylene	< 0.50	02/07/05	8260
1,2-Dichloropropane	< 0.50	02/07/05	8260
Toluene	< 0.50	02/07/05	8260
1,1,2-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloroethylene	< 0.50	02/07/05	8260
Chlorobenzene	< 0.50	02/07/05	8260
Ethylbenzene	< 0.50	02/07/05	8260
Xylene	< 0.50	02/07/05	8260
Styrene	< 0.50	02/07/05	8260
1,4-Dichlorobenzene	< 0.50	02/07/05	8260
1,2-Dichlorobenzene	< 0.50	02/07/05	8260
1,2,4-Trichlorobenzene	< 0.50	02/07/05	8260
Chloromethane	< 0.50	02/07/05	8260
Bromomethane	< 0.50	02/07/05	8260
Chloroethane	< 0.50	02/07/05	8260
1,1-Dichloroethane	< 0.50	02/07/05	8260
2,2-Dichloropropane	< 0.50	02/07/05	8260
Trichloromethane (THM)	< 0.50	02/07/05	8260
1,1-Dichloropropene	< 0.50	02/07/05	8260
Dibromomethane	< 0.50	02/07/05	8260
Bromodichloromethane (THM)	< 0.50	02/07/05	8260
1,3-Dichloropropane	< 0.50	02/07/05	8260
Dibromochloromethane (THM)	< 0.50	02/07/05	8260
1,1,1,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromoform (THM)	< 0.50	02/07/05	8260
1,1,1,2,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromobenzene	< 0.50	02/07/05	8260
1,2,3-Trichloropropane	< 0.50	02/07/05	8260
ortho-Chlorotoluene	< 0.50	02/07/05	8260
para-Chlorotoluene	< 0.50	02/07/05	8260
1,3-Dichlorobenzene	< 0.50	02/07/05	8260
Ethylene Dibromide (EDB)	< 0.010	02/07/05	8260
1,2-Dibromo-3-chloropropane	< 0.020	02/07/05	8260
Fluorotrichloromethane	< 0.50	02/07/05	8260
Dichlorodifluoromethane	< 0.50	02/07/05	8260
Isopropylbenzene	< 0.50	02/07/05	8260
n-Propylbenzene	< 0.50	02/07/05	8260
1,3,5-Trimethylbenzene	< 0.50	02/07/05	8260
tert-Butylbenzene	< 0.50	02/07/05	8260
1,2,4-Trimethylbenzene	< 0.50	02/07/05	8260
sec-Butylbenzene	< 0.50	02/07/05	8260
para-Isopropyltoluene	< 0.50	02/07/05	8260
n-Butylbenzene	< 0.50	02/07/05	8260
Naphthalene	< 0.50	02/07/05	8260
Methyl tert-butyl ether	< 0.50	02/07/05	8260

Chemist: Richard L. Pierce *RLP*

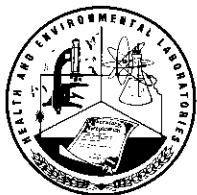
< - Not Detected at Indicated Level

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FEB 14 2005

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

BUREAU OF  
ENVIRONMENTAL REMEDIATION



# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: VG      Lab Number: 447424  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/04/05  
TOPEKA, KS 66612      Report Date: 02/10/05

Acct No: 4EM80      Site ID No.:      Sample Type: WATER      Program Code: EP  
Site: BURR PROPERTY WELL, PRE-FILTER      No. Compositd:  
Collected By: JOHN CREGAN, KDHE/BER      Depth:      Date: 02/03/05      Time: 16:15

VOLATILE ORGANIC COMPOUNDS	CONCENTRATION ( ug/L )	Analysis Date	EPA Method
Vinyl Chloride	< 0.50	02/07/05	8260
1,1-Dichloroethylene	< 0.50	02/07/05	8260
Dichloromethane	< 0.50	02/07/05	8260
trans 1,2-Dichloroethylene	< 0.50	02/07/05	8260
cis 1,2-Dichloroethylene	< 0.50	02/07/05	8260
1,1,1-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloromethane	< 0.50	02/07/05	8260
Benzene	< 0.50	02/07/05	8260
1,2-Dichloroethane	< 0.50	02/07/05	8260
Trichloroethylene	< 0.50	02/07/05	8260
1,2-Dichloropropane	< 0.50	02/07/05	8260
Toluene	< 0.50	02/07/05	8260
1,1,2-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloroethylene	< 0.50	02/07/05	8260
Chlorobenzene	< 0.50	02/07/05	8260
Ethylbenzene	< 0.50	02/07/05	8260
Xylene	< 0.50	02/07/05	8260
Styrene	< 0.50	02/07/05	8260
1,4-Dichlorobenzene	< 0.50	02/07/05	8260
1,2-Dichlorobenzene	< 0.50	02/07/05	8260
1,2,4-Trichlorobenzene	< 0.50	02/07/05	8260
Chloromethane	< 0.50	02/07/05	8260
Bromomethane	< 0.50	02/07/05	8260
Chloroethane	< 0.50	02/07/05	8260
1,1-Dichloroethane	< 0.50	02/07/05	8260
2,2-Dichloropropane	< 0.50	02/07/05	8260
Trichloromethane (THM)	< 0.50	02/07/05	8260
1,1-Dichloropropene	< 0.50	02/07/05	8260
Dibromomethane	< 0.50	02/07/05	8260
Bromodichloromethane (THM)	< 0.50	02/07/05	8260
1,3-Dichloropropane	< 0.50	02/07/05	8260
Dibromochloromethane (THM)	< 0.50	02/07/05	8260
1,1,1,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromoform (THM)	< 0.50	02/07/05	8260
1,1,1,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromobenzene	< 0.50	02/07/05	8260
1,2,3-Trichloropropane	< 0.50	02/07/05	8260
ortho-Chlorotoluene	< 0.50	02/07/05	8260
para-Chlorotoluene	< 0.50	02/07/05	8260
1,3-Dichlorobenzene	< 0.50	02/07/05	8260
Ethylene Dibromide (EDB)	< 0.010	02/07/05	8260
1,2-Dibromo-3-chloropropane	< 0.020	02/07/05	8260
Fluorotrichloromethane	< 0.50	02/07/05	8260
Dichlorodifluoromethane	< 0.50	02/07/05	8260
Isopropylbenzene	< 0.50	02/07/05	8260
n-Propylbenzene	< 0.50	02/07/05	8260
1,3,5-Trimethylbenzene	< 0.50	02/07/05	8260
tert-Butylbenzene	< 0.50	02/07/05	8260
1,2,4-Trimethylbenzene	< 0.50	02/07/05	8260
sec-Butylbenzene	< 0.50	02/07/05	8260
para-Isopropyltoluene	< 0.50	02/07/05	8260
n-Butylbenzene	< 0.50	02/07/05	8260
Naphthalene	< 0.50	02/07/05	8260
Methyl tert-butyl ether	< 0.50	02/07/05	8260

Chemist: Richard L. Pierce *RLP*

< - Not Detected at Indicated Level

**RECEIVED**

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

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BUREAU OF  
ENVIRONMENTAL REMEDIATION



# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: VG      Lab Number: 447425  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/04/05  
TOPEKA, KS 66612      Report Date: 02/10/05

Acct No: 4EM80      Site ID No.:      Sample Type: WATER      Program Code: EP  
Site: BURR PROPERTY WELL POST FILTER/FILTERED      No. Compositd:  
Collected By: JOHN CREGAN, KDHE/BER      Depth:      Date: 02/03/05      Time: 11:30

VOLATILE ORGANIC COMPOUNDS	CONCENTRATION ( ug/L )	Analysis Date	EPA Method
Vinyl Chloride	< 0.50	02/07/05	8260
1,1-Dichloroethylene	< 0.50	02/07/05	8260
Dichloromethane	< 0.50	02/07/05	8260
trans 1,2-Dichloroethylene	< 0.50	02/07/05	8260
cis 1,2-Dichloroethylene	< 0.50	02/07/05	8260
1,1,1-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloromethane	< 0.50	02/07/05	8260
Benzene	< 0.50	02/07/05	8260
1,2-Dichloroethane	< 0.50	02/07/05	8260
Trichloroethylene	< 0.50	02/07/05	8260
1,2-Dichloropropane	< 0.50	02/07/05	8260
Toluene	< 0.50	02/07/05	8260
1,1,2-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloroethylene	< 0.50	02/07/05	8260
Chlorobenzene	< 0.50	02/07/05	8260
Ethylbenzene	< 0.50	02/07/05	8260
Xylene	< 0.50	02/07/05	8260
Styrene	< 0.50	02/07/05	8260
1,4-Dichlorobenzene	< 0.50	02/07/05	8260
1,2-Dichlorobenzene	< 0.50	02/07/05	8260
1,2,4-Trichlorobenzene	< 0.50	02/07/05	8260
Chloromethane	< 0.50	02/07/05	8260
Bromomethane	< 0.50	02/07/05	8260
Chloroethane	< 0.50	02/07/05	8260
1,1-Dichloroethane	< 0.50	02/07/05	8260
2,2-Dichloropropane	< 0.50	02/07/05	8260
Trichloromethane (THM)	< 0.50	02/07/05	8260
1,1-Dichloropropene	< 0.50	02/07/05	8260
Dibromomethane	< 0.50	02/07/05	8260
Bromodichloromethane (THM)	< 0.50	02/07/05	8260
1,3-Dichloropropane	< 0.50	02/07/05	8260
Dibromochloromethane (THM)	< 0.50	02/07/05	8260
1,1,1,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromoform (THM)	< 0.50	02/07/05	8260
1,1,2,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromobenzene	< 0.50	02/07/05	8260
1,2,3-Trichloropropane	< 0.50	02/07/05	8260
ortho-Chlorotoluene	< 0.50	02/07/05	8260
para-Chlorotoluene	< 0.50	02/07/05	8260
1,3-Dichlorobenzene	< 0.50	02/07/05	8260
Ethylene Dibromide (EDB)	< 0.010	02/07/05	8260
1,2-Dibromo-3-chloropropane	< 0.020	02/07/05	8260
Fluorotrichloromethane	< 0.50	02/07/05	8260
Dichlorodifluoromethane	< 0.50	02/07/05	8260
Isopropylbenzene	< 0.50	02/07/05	8260
n-Propylbenzene	< 0.50	02/07/05	8260
1,3,5-Trimethylbenzene	< 0.50	02/07/05	8260
tert-Butylbenzene	< 0.50	02/07/05	8260
1,2,4-Trimethylbenzene	< 0.50	02/07/05	8260
sec-Butylbenzene	< 0.50	02/07/05	8260
para-Isopropyltoluene	< 0.50	02/07/05	8260
n-Butylbenzene	< 0.50	02/07/05	8260
Naphthalene	< 0.50	02/07/05	8260
Methyl tert-butyl ether	< 0.50	02/07/05	8260

Chemist: Richard L. Pierce *RLP*

< - Not Detected at Indicated Level

**RECEIVED**

FEB 14 2005

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

BUREAU OF  
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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: VG      Lab Number: 447426  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/04/05  
TOPEKA, KS 66612      Report Date: 02/10/05

Acct No: 4EM80      Site ID No.:  
Site: BURR PROPERTY ~~PSRP-3~~      Sample Type: WATER      Program Code: EP  
Collected By: JOHN CREGAN KDHE/BER      Depth: 28.5      Date: 02/03/05      Time: 14:45  
No. Compositied:

VOLATILE ORGANIC COMPOUNDS	CONCENTRATION ( ug/L )	Analysis Date	EPA Method
Vinyl Chloride	< 0.50	02/07/05	8260
1,1-Dichloroethylene	< 0.50	02/07/05	8260
Dichloromethane	< 0.50	02/07/05	8260
trans 1,2-Dichloroethylene	< 0.50	02/07/05	8260
cis 1,2-Dichloroethylene	< 0.50	02/07/05	8260
1,1,1-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloromethane	< 0.50	02/07/05	8260
Benzene	< 0.50	02/07/05	8260
1,2-Dichloroethane	< 0.50	02/07/05	8260
Trichloroethylene	< 0.50	02/07/05	8260
1,2-Dichloropropane	< 0.50	02/07/05	8260
Toluene	< 0.50	02/07/05	8260
1,1,2-Trichloroethane	< 0.50	02/07/05	8260
Tetrachloroethylene	< 0.50	02/07/05	8260
Chlorobenzene	< 0.50	02/07/05	8260
Ethylbenzene	< 0.50	02/07/05	8260
Xylene	< 0.50	02/07/05	8260
Styrene	< 0.50	02/07/05	8260
1,4-Dichlorobenzene	< 0.50	02/07/05	8260
1,2-Dichlorobenzene	< 0.50	02/07/05	8260
1,2,4-Trichlorobenzene	< 0.50	02/07/05	8260
Chloromethane	< 0.50	02/07/05	8260
Bromomethane	< 0.50	02/07/05	8260
Chloroethane	< 0.50	02/07/05	8260
1,1-Dichloroethane	< 0.50	02/07/05	8260
2,2-Dichloropropane	< 0.50	02/07/05	8260
Trichloromethane (THM)	< 0.50	02/07/05	8260
1,1-Dichloropropene	< 0.50	02/07/05	8260
Dibromomethane	< 0.50	02/07/05	8260
Bromodichloromethane (THM)	< 0.50	02/07/05	8260
1,3-Dichloropropane	< 0.50	02/07/05	8260
Dibromochloromethane (THM)	< 0.50	02/07/05	8260
1,1,1,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromoform (THM)	< 0.50	02/07/05	8260
1,1,2,2-Tetrachloroethane	< 0.50	02/07/05	8260
Bromobenzene	< 0.50	02/07/05	8260
1,2,3-Trichloropropane	< 0.50	02/07/05	8260
ortho-Chlorotoluene	< 0.50	02/07/05	8260
para-Chlorotoluene	< 0.50	02/07/05	8260
1,3-Dichlorobenzene	< 0.50	02/07/05	8260
Ethylene Dibromide (EDB)	< 0.010	02/07/05	8260
1,2-Dibromo-3-chloropropane	< 0.020	02/07/05	8260
Fluorotrichloromethane	< 0.50	02/07/05	8260
Dichlorodifluoromethane	< 0.50	02/07/05	8260
Isopropylbenzene	< 0.50	02/07/05	8260
n-Propylbenzene	< 0.50	02/07/05	8260
1,3,5-Trimethylbenzene	< 0.50	02/07/05	8260
tert-Butylbenzene	< 0.50	02/07/05	8260
1,2,4-Trimethylbenzene	< 0.50	02/07/05	8260
sec-Butylbenzene	< 0.50	02/07/05	8260
para-Isopropyltoluene	< 0.50	02/07/05	8260
n-Butylbenzene	< 0.50	02/07/05	8260
Naphthalene	< 0.50	02/07/05	8260
Methyl tert-butyl ether	< 0.50	02/07/05	8260

Chemist: Richard L. Pierce *RLP*

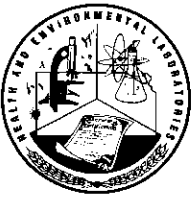
< - Not Detected at Indicated Level

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FEB 14 2005

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

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ENVIRONMENTAL REMEDIATION



# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: BE      Lab Number: 448199  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/23/05  
TOPEKA, KS 66612      Report Date: 03/30/05

Acct No: 4EM80      Site ID No.:      Sample Type: SOIL      Program Code: EP  
Site: BURR-1      Depth: 0.5      Date: 02/16/05      No. Compositied:  
Collected By: RANDY BROWN- BER      Time: ~~13:25~~  
12:35

SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS	CONCENTRATION ( mg/Kg )	Analysis Date	EPA Method
Hexachloroethane	< 1.0	03/24/05	8270
Bis(2-chloroethyl) ether	< 1.0	03/24/05	8270
Bis(2-chloroisopropyl) ether	< 1.0	03/24/05	8270
N-Nitrosodi-n-propylamine	< 1.0	03/24/05	8270
Isophorone	< 1.0	03/24/05	8270
Nitrobenzene	< 1.0	03/24/05	8270
Hexachlorobutadiene	< 1.0	03/24/05	8270
1,2,4-Trichlorobenzene	< 1.0	03/24/05	8270
Naphthalene	< 1.0	03/24/05	8270
Bis(2-chloroethoxy)methane	< 1.0	03/24/05	8270
Hexachlorocyclopentadiene	< 1.0	03/24/05	8270
2-Chloronaphthalene	< 1.0	03/24/05	8270
Acenaphthylene	< 1.0	03/24/05	8270
Acenaphthene	< 1.0	03/24/05	8270
Dimethyl phthalate	< 1.0	03/24/05	8270
2,6-Dinitrotoluene	< 1.0	03/24/05	8270
Fluorene	< 1.0	03/24/05	8270
4-Chlorophenyl phenyl ether	< 1.0	03/24/05	8270
2,4-Dinitrotoluene	< 1.0	03/24/05	8270
Diethyl phthalate	< 1.0	03/24/05	8270
Hexachlorobenzene	< 1.0	03/24/05	8270
4-Bromophenyl phenyl ether	< 1.0	03/24/05	8270
Phenanthrene	1.7	03/24/05	8270
Anthracene	< 1.0	03/24/05	8270
Di-n-butyl phthalate	< 1.0	03/24/05	8270
Fluoranthene	5.0	03/24/05	8270
Pyrene	4.5	03/24/05	8270
Butyl benzyl phthalate	< 1.0	03/24/05	8270
Bis(2-ethylhexyl)phthalate	< 5.0	03/24/05	8270
Chrysene	1.9	03/24/05	8270
Benzo(a)anthracene	1.9	03/24/05	8270
Benzo(b)fluoranthene	2.4	03/24/05	8270
Benzo(k)fluoranthene	1.1	03/24/05	8270
Di-n-octyl phthalate	< 5.0	03/24/05	8270
Benzo(a)pyrene	1.9	03/24/05	8270
Indeno(1,2,3-c,d)pyrene	1.7	03/24/05	8270
Dibenzo(a,h)anthracene	< 1.0	03/24/05	8270
Benzo(g,h,i)perylene	1.3	03/24/05	8270
Benzyl alcohol	< 1.0	03/24/05	8270
4-Chloroaniline	< 5.0	03/24/05	8270
2-Nitroaniline	< 5.0	03/24/05	8270
3-Nitroaniline	< 5.0	03/24/05	8270
4-Nitroaniline	< 5.0	03/24/05	8270
Dibenzofuran	< 1.0	03/24/05	8270
2-Methylnaphthalene	< 1.0	03/24/05	8270

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 77% Solids.

Chemist: Dennis L. Dobson *DLD*

< - Not Detected at Indicated Level

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APR 20 2005

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

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ENVIRONMENTAL REMEDIATION



# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: BE      Lab Number: 448203  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/23/05  
TOPEKA, KS 66612      Report Date: 03/30/05

Acct No: 4EM80      Site ID No.:      Sample Type: SOIL      Program Code: EP  
Site: BURR-2      Depth: 0.5      Date: 02/16/05      Time: 12:45  
Collected By: RANDY BROWN- BER      No. Compositied:

SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS	CONCENTRATION ( mg/Kg )	Analysis Date	EPA Method
Hexachloroethane	< 1.0	03/24/05	8270
Bis(2-chloroethyl)ether	< 1.0	03/24/05	8270
Bis(2-chloroisopropyl)ether	< 1.0	03/24/05	8270
N-Nitrosodi-n-propylamine	< 1.0	03/24/05	8270
Isophorone	< 1.0	03/24/05	8270
Nitrobenzene	< 1.0	03/24/05	8270
Hexachlorobutadiene	< 1.0	03/24/05	8270
1,2,4-Trichlorobenzene	< 1.0	03/24/05	8270
Naphthalene	< 1.0	03/24/05	8270
Bis(2-chloroethoxy)methane	< 1.0	03/24/05	8270
Hexachlorocyclopentadiene	< 1.0	03/24/05	8270
2-Chloronaphthalene	< 1.0	03/24/05	8270
Acenaphthylene	< 1.0	03/24/05	8270
Acenaphthene	< 1.0	03/24/05	8270
Dimethyl phthalate	< 1.0	03/24/05	8270
2,6-Dinitrotoluene	< 1.0	03/24/05	8270
Fluorene	< 1.0	03/24/05	8270
4-Chlorophenyl phenyl ether	< 1.0	03/24/05	8270
2,4-Dinitrotoluene	< 1.0	03/24/05	8270
Diethyl phthalate	< 1.0	03/24/05	8270
Hexachlorobenzene	< 1.0	03/24/05	8270
4-Bromophenyl phenyl ether	< 1.0	03/24/05	8270
Phenanthrene	< 1.0	03/24/05	8270
Anthracene	< 1.0	03/24/05	8270
Di-n-butyl phthalate	< 1.0	03/24/05	8270
Fluoranthene	< 1.0	03/24/05	8270
Pyrene	< 1.0	03/24/05	8270
Butyl benzyl phthalate	< 1.0	03/24/05	8270
Bis(2-ethylhexyl)phthalate	< 5.0	03/24/05	8270
Chrysene	< 1.0	03/24/05	8270
Benzo(a)anthracene	< 1.0	03/24/05	8270
Benzo(b)fluoranthene	< 1.0	03/24/05	8270
Benzo(k)fluoranthene	< 1.0	03/24/05	8270
Di-n-octyl phthalate	< 5.0	03/24/05	8270
Benzo(a)pyrene	< 1.0	03/24/05	8270
Indeno(1,2,3-c,d)pyrene	< 1.0	03/24/05	8270
Dibenzo(a,h)anthracene	< 1.0	03/24/05	8270
Benzo(g,h,i)perylene	< 1.0	03/24/05	8270
Benzyl alcohol	< 1.0	03/24/05	8270
4-Chloroaniline	< 5.0	03/24/05	8270
2-Nitroaniline	< 5.0	03/24/05	8270
3-Nitroaniline	< 5.0	03/24/05	8270
4-Nitroaniline	< 5.0	03/24/05	8270
Dibenzofuran	< 1.0	03/24/05	8270
2-Methylnaphthalene	< 1.0	03/24/05	8270

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 77% Solids.

Chemist: Dennis L. Dobson *DL*

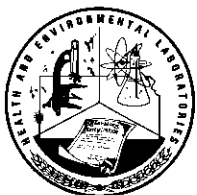
< - Not Detected at Indicated Level

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APR 11 2005

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

BUREAU OF  
ENVIRONMENTAL REMEDIATION



# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: BE      Lab Number: 448201  
Address: CURTIS SOB, SUITE 410, ATN: RANDY BROWN      Date Rec'd: 02/23/05  
TOPEKA, KS 66612      Report Date: 03/30/05

Acct No: 4EM80      Site ID No.:      Sample Type: SOIL      Program Code: EP  
Site: BURR-3      No. Composited:  
Collected By: RANDY BROWN- BER      Depth: 0.5      Date: 02/16/05      Time: 13:00

SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS	CONCENTRATION ( mg/Kg )	Analysis Date	EPA Method
Hexachloroethane	< 1.0	03/24/05	8270
Bis(2-chloroethyl)ether	< 1.0	03/24/05	8270
Bis(2-chloroisopropyl)ether	< 1.0	03/24/05	8270
N-Nitrosodi-n-propylamine	< 1.0	03/24/05	8270
Isophorone	< 1.0	03/24/05	8270
Nitrobenzene	< 1.0	03/24/05	8270
Hexachlorobutadiene	< 1.0	03/24/05	8270
1,2,4-Trichlorobenzene	< 1.0	03/24/05	8270
Napthalene	< 1.0	03/24/05	8270
Bis(2-chloroethoxy)methane	< 1.0	03/24/05	8270
Hexachlorocyclopentadiene	< 1.0	03/24/05	8270
2-Chloronapthalene	< 1.0	03/24/05	8270
Acenaphthylene	< 1.0	03/24/05	8270
Acenaphthene	< 1.0	03/24/05	8270
Dimethyl phthalate	< 1.0	03/24/05	8270
2,6-Dinitrotoluene	< 1.0	03/24/05	8270
Fluorene	< 1.0	03/24/05	8270
4-Chlorophenyl phenyl ether	< 1.0	03/24/05	8270
2,4-Dinitrotoluene	< 1.0	03/24/05	8270
Diethyl phthalate	< 1.0	03/24/05	8270
Hexachlorobenzene	< 1.0	03/24/05	8270
4-Bromophenyl phenyl ether	< 1.0	03/24/05	8270
Phenanthrene	< 1.0	03/24/05	8270
Anthracene	< 1.0	03/24/05	8270
Di-n-butyl phthalate	< 1.0	03/24/05	8270
Fluoranthene	< 1.0	03/24/05	8270
Pyrene	< 1.0	03/24/05	8270
Butyl benzyl phthalate	< 1.0	03/24/05	8270
Bis(2-ethylhexyl)phthalate	< 5.0	03/24/05	8270
Chrysene	< 1.0	03/24/05	8270
Benzo(a)anthracene	< 1.0	03/24/05	8270
Benzo(b)fluoranthene	< 1.0	03/24/05	8270
Benzo(k)fluoranthene	< 1.0	03/24/05	8270
Di-n-octyl phthalate	< 5.0	03/24/05	8270
Benzo(a)pyrene	< 1.0	03/24/05	8270
Indeno(1,2,3-c,d)pyrene	< 1.0	03/24/05	8270
Dibenzo(a,h)anthracene	< 1.0	03/24/05	8270
Benzo(g,h,i)perylene	< 1.0	03/24/05	8270
Benzyl alcohol	< 1.0	03/24/05	8270
4-Chloroaniline	< 5.0	03/24/05	8270
2-Nitroaniline	< 5.0	03/24/05	8270
3-Nitroaniline	< 5.0	03/24/05	8270
4-Nitroaniline	< 5.0	03/24/05	8270
Dibenzofuran	< 1.0	03/24/05	8270
2-Methylnapthalene	< 1.0	03/24/05	8270

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 75% Solids.

Chemist: Dennis L. Dobson *DL*

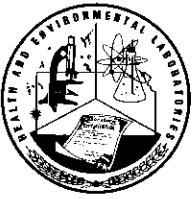
< - Not Detected at Indicated Level

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Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

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DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION Analysis Code: BE Lab Number: 448195
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN Date Rec'd: 02/23/05
TOPEKA, KS 66612 Report Date: 03/30/05

Acct No: 4EM80 Site ID No.: Sample Type: SOIL Program Code: EP
Site: BURR-4 No. Composited:
Collected By: RANDY BROWN- BER Depth: 0.5 Date: 02/16/05 Time: 13:15

Table with 4 columns: SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS, CONCENTRATION (mg/Kg), Analysis Date, and EPA Method. Lists various chemical compounds and their detection levels.

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 76% Solids.

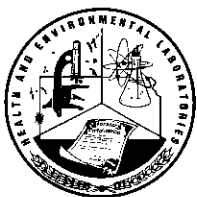
Chemist: Dennis L. Dobson <- Not Detected at Indicated Level

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APR 11 2005

Duane R. Boline, Ph.D., Director
Laboratory Customer Service - (785) 296-1620
Laboratory Fax - (785) 296-1641
CLIA No. 17D0648254

BUREAU OF ENVIRONMENTAL REMEDIATION



# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: BE      Lab Number: 448198  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/23/05  
TOPEKA, KS 66612      Report Date: 04/07/05

Acct No: 4EM80      Site ID No.:      Sample Type: SOIL      Program Code: EP  
Site: BURR-~~7~~      No. Composed:  
Collected By: RANDY BROWN- BER      Depth: 0.5      Date: 02/16/05      Time: 11:25

SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS	CONCENTRATION ( mg/Kg )	Analysis Date	EPA Method
Hexachloroethane	< 1.0	03/24/05	8270
Bis(2-chloroethyl)ether	< 1.0	03/24/05	8270
Bis(2-chloroisopropyl)ether	< 1.0	03/24/05	8270
N-Nitrosodi-n-propylamine	< 1.0	03/24/05	8270
Isophorone	< 1.0	03/24/05	8270
Nitrobenzene	< 1.0	03/24/05	8270
Hexachlorobutadiene	< 1.0	03/24/05	8270
1,2,4-Trichlorobenzene	< 1.0	03/24/05	8270
Naphthalene	< 1.0	03/24/05	8270
Bis(2-chloroethoxy)methane	< 1.0	03/24/05	8270
Hexachlorocyclopentadiene	< 1.0	03/24/05	8270
2-Chloronaphthalene	< 1.0	03/24/05	8270
Acenaphthylene	< 1.0	03/24/05	8270
Acenaphthene	< 1.0	03/24/05	8270
Dimethyl phthalate	< 1.0	03/24/05	8270
2,6-Dinitrotoluene	< 1.0	03/24/05	8270
Fluorene	< 1.0	03/24/05	8270
4-Chlorophenyl phenyl ether	< 1.0	03/24/05	8270
2,4-Dinitrotoluene	< 1.0	03/24/05	8270
Diethyl phthalate	< 1.0	03/24/05	8270
Hexachlorobenzene	< 1.0	03/24/05	8270
4-Bromophenyl phenyl ether	< 1.0	03/24/05	8270
Phenanthrene	< 1.0	03/24/05	8270
Anthracene	< 1.0	03/24/05	8270
Di-n-butyl phthalate	< 1.0	03/24/05	8270
Fluoranthene	< 1.0	03/24/05	8270
Pyrene	< 1.0	03/24/05	8270
Butyl benzyl phthalate	< 1.0	03/24/05	8270
Bis(2-ethylhexyl)phthalate	< 5.0	03/24/05	8270
Chrysene	< 1.0	03/24/05	8270
Benzo(a)anthracene	< 1.0	03/24/05	8270
Benzo(b)fluoranthene	< 1.0	03/24/05	8270
Benzo(k)fluoranthene	< 1.0	03/24/05	8270
Di-n-octyl phthalate	< 5.0	03/24/05	8270
Benzo(a)pyrene	< 1.0	03/24/05	8270
Indeno(1,2,3-c,d)pyrene	< 1.0	03/24/05	8270
Dibenzo(a,h)anthracene	< 1.0	03/24/05	8270
Benzo(g,h,i)perylene	< 1.0	03/24/05	8270
Benzyl alcohol	< 1.0	03/24/05	8270
4-Chloroaniline	< 5.0	03/24/05	8270
2-Nitroaniline	< 5.0	03/24/05	8270
3-Nitroaniline	< 5.0	03/24/05	8270
4-Nitroaniline	< 5.0	03/24/05	8270
Dibenzofuran	< 1.0	03/24/05	8270
2-Methylnaphthalene	< 1.0	03/24/05	8270

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 71% Solids.

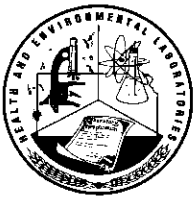
Chemist: Dennis L. Dobson *DL*      < - Not Detected at Indicated Level

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## APR 11 2005

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: BE      Lab Number: 448194  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/23/05  
TOPEKA, KS 66612      Report Date: 03/30/05

Acct No: 4EM80      Site ID No.:      Sample Type: SOIL      Program Code: EP  
Site: BURR-6      Depth: 0.5      Date: 02/16/05      Time: 13:30  
Collected By: RANDY BROWN- BER      No. Compositied:

SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS	CONCENTRATION ( mg/Kg )	Analysis Date	EPA Method
Hexachloroethane	< 1.1	03/23/05	8270
Bis(2-chloroethyl)ether	< 1.1	03/23/05	8270
Bis(2-chloroisopropyl)ether	< 1.1	03/23/05	8270
N-Nitrosodi-n-propylamine	< 1.1	03/23/05	8270
Isophorone	< 1.1	03/23/05	8270
Nitrobenzene	< 1.1	03/23/05	8270
Hexachlorobutadiene	< 1.1	03/23/05	8270
1,2,4-Trichlorobenzene	< 1.1	03/23/05	8270
Naphthalene	< 1.1	03/23/05	8270
Bis(2-chloroethoxy)methane	< 1.1	03/23/05	8270
Hexachlorocyclopentadiene	< 1.1	03/23/05	8270
2-Chloronaphthalene	< 1.1	03/23/05	8270
Acenaphthylene	< 1.1	03/23/05	8270
Acenaphthene	< 1.1	03/23/05	8270
Dimethyl phthalate	< 1.1	03/23/05	8270
2,6-Dinitrotoluene	< 1.1	03/23/05	8270
Fluorene	< 1.1	03/23/05	8270
4-Chlorophenyl phenyl ether	< 1.1	03/23/05	8270
2,4-Dinitrotoluene	< 1.1	03/23/05	8270
Diethyl phthalate	< 1.1	03/23/05	8270
Hexachlorobenzene	< 1.1	03/23/05	8270
4-Bromophenyl phenyl ether	< 1.1	03/23/05	8270
Phenanthrene	< 1.1	03/23/05	8270
Anthracene	< 1.1	03/23/05	8270
Di-n-butyl phthalate	< 1.1	03/23/05	8270
Fluoranthene	< 1.1	03/23/05	8270
Pyrene	< 1.1	03/23/05	8270
Butyl benzyl phthalate	< 1.1	03/23/05	8270
Bis(2-ethylhexyl)phthalate	< 5.5	03/23/05	8270
Chrysene	< 1.1	03/23/05	8270
Benzo(a)anthracene	< 1.1	03/23/05	8270
Benzo(b)fluoranthene	< 1.1	03/23/05	8270
Benzo(k)fluoranthene	< 1.1	03/23/05	8270
Di-n-octyl phthalate	< 5.5	03/23/05	8270
Benzo(a)pyrene	< 1.1	03/23/05	8270
Indeno(1,2,3-c,d)pyrene	< 1.1	03/23/05	8270
Dibenzo(a,h)anthracene	< 1.1	03/23/05	8270
Benzo(g,h,i)perylene	< 1.1	03/23/05	8270
Benzyl alcohol	< 1.1	03/23/05	8270
4-Chloroaniline	< 5.5	03/23/05	8270
2-Nitroaniline	< 5.5	03/23/05	8270
3-Nitroaniline	< 5.5	03/23/05	8270
4-Nitroaniline	< 5.5	03/23/05	8270
Dibenzofuran	< 1.1	03/23/05	8270
2-Methylnaphthalene	< 1.1	03/23/05	8270

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 75% Solids.

Chemist: Dennis L. Dobson *DL*

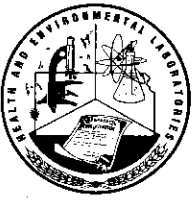
< - Not Detected at Indicated Level

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Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

BUREAU OF  
ENVIRONMENTAL REMEDIATION



DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION Analysis Code: BE Lab Number: 448206
Address: CURTIS SOB, SUITE 410, RANDY BROWN Date Rec'd: 02/23/05
TOPEKA, KS 66612 Report Date: 04/07/05

Acct No: 4EM80 Site ID No.: Sample Type: SOIL Program Code: EP
Site: BURR-7 No. Compositied:
Collected By: RANDY BROWN- BER Depth: 0.5 Date: 02/16/05 Time: 13:45

Table with 4 columns: SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS, CONCENTRATION (mg/Kg), Analysis Date, and EPA Method. Lists various chemical compounds and their detection levels.

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 72% Solids.

Chemist: Dennis L. Dobson

< - Not Detected at Indicated Level

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Duane R. Boline, Ph.D., Director
Laboratory Customer Service - (785) 296-1620
Laboratory Fax - (785) 296-1641
CLIA No. 17D0648254

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BUREAU OF ENVIRONMENTAL REMEDIATION





DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION Analysis Code: BE Lab Number: 448191
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN Date Rec'd: 02/23/05
TOPEKA, KS 66612 Report Date: 03/30/05

Acct No: 4EM80 Site ID No.: Sample Type: SOIL Program Code: EP
Site: BURR-8 No. Compositied:
Collected By: RANDY BROWN- BER Depth: 0.5 Date: 02/16/05 Time: 14:00

Table with 4 columns: SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS, CONCENTRATION (mg/Kg), Analysis Date, and EPA Method. Lists various chemical compounds and their detection levels.

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 75% Solids.

Chemist: Dennis L. Dobson [Signature]

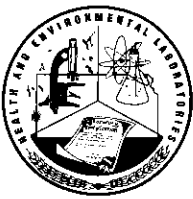
< - Not Detected at Indicated Level

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CLIA No. 17D0648254

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DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION Analysis Code: BE Lab Number: 448207
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN Date Rec'd: 02/23/05
TOPEKA, KS 66612 Report Date: 03/30/05

Acct No: 4EM80 Site ID No.: Sample Type: SOIL Program Code: EP
Site: BURR-9 No. Composit:
Collected By: RANDY BROWN- BER Depth: 0.5 Date: 02/16/05 Time: 14:15

Table with 4 columns: SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS, CONCENTRATION (mg/Kg), Analysis Date, and EPA Method. Lists various chemical compounds and their detection levels.

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 76% Solids.

Chemist: Dennis L. Dobson

< - Not Detected at Indicated Level

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CLIA No. 17D0648254

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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: BE      Lab Number: 448200  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/23/05  
TOPEKA, KS 66612      Report Date: 03/30/05

Acct No: 4EM80      Site ID No.:      Sample Type: SOIL      Program Code: EP  
Site: BURR-10      No. Compositd:  
Collected By: RANDY BROWN- BER      Depth: 0.5      Date: 02/16/05      Time: 14:30

SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS	CONCENTRATION ( mg/Kg )	Analysis Date	EPA Method
Hexachloroethane	< 1.0	03/23/05	8270
Bis(2-chloroethyl)ether	< 1.0	03/23/05	8270
Bis(2-chloroisopropyl)ether	< 1.0	03/23/05	8270
N-Nitrosodi-n-propylamine	< 1.0	03/23/05	8270
Isophorone	< 1.0	03/23/05	8270
Nitrobenzene	< 1.0	03/23/05	8270
Hexachlorobutadiene	< 1.0	03/23/05	8270
1,2,4-Trichlorobenzene	< 1.0	03/23/05	8270
Naphthalene	< 1.0	03/23/05	8270
Bis(2-chloroethoxy)methane	< 1.0	03/23/05	8270
Hexachlorocyclopentadiene	< 1.0	03/23/05	8270
2-Chloronaphthalene	< 1.0	03/23/05	8270
Acenaphthylene	< 1.0	03/23/05	8270
Acenaphthene	< 1.0	03/23/05	8270
Dimethyl phthalate	< 1.0	03/23/05	8270
2,6-Dinitrotoluene	< 1.0	03/23/05	8270
Fluorene	< 1.0	03/23/05	8270
4-Chlorophenyl phenyl ether	< 1.0	03/23/05	8270
2,4-Dinitrotoluene	< 1.0	03/23/05	8270
Diethyl phthalate	< 1.0	03/23/05	8270
Hexachlorobenzene	< 1.0	03/23/05	8270
4-Bromophenyl phenyl ether	< 1.0	03/23/05	8270
Phenanthrene	< 1.0	03/23/05	8270
Anthracene	< 1.0	03/23/05	8270
Di-n-butyl phthalate	< 1.0	03/23/05	8270
Fluoranthene	< 1.0	03/23/05	8270
Pyrene	< 1.0	03/23/05	8270
Butyl benzyl phthalate	< 1.0	03/23/05	8270
Bis(2-ethylhexyl)phthalate	< 5.0	03/23/05	8270
Chrysene	< 1.0	03/23/05	8270
Benzo(a)anthracene	< 1.0	03/23/05	8270
Benzo(b)fluoranthene	< 1.0	03/23/05	8270
Benzo(k)fluoranthene	< 1.0	03/23/05	8270
Di-n-octyl phthalate	< 5.0	03/23/05	8270
Benzo(a)pyrene	< 1.0	03/23/05	8270
Indeno(1,2,3-c,d)pyrene	< 1.0	03/23/05	8270
Dibenzo(a,h)anthracene	< 1.0	03/23/05	8270
Benzo(g,h,i)perylene	< 1.0	03/23/05	8270
Benzyl alcohol	< 1.0	03/23/05	8270
4-Chloroaniline	< 5.0	03/23/05	8270
2-Nitroaniline	< 5.0	03/23/05	8270
3-Nitroaniline	< 5.0	03/23/05	8270
4-Nitroaniline	< 5.0	03/23/05	8270
Dibenzofuran	< 1.0	03/23/05	8270
2-Methylnaphthalene	< 1.0	03/23/05	8270

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 76% Solids.

Chemist: Dennis L. Dobson *DLD*

< - Not Detected at Indicated Level

# RECEIVED

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

APR 11 2005

BUREAU OF  
ENVIRONMENTAL REMEDIATION



**DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES**  
**Kansas Department of Health and Environment**  
**Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001**



**REPORT OF ANALYSIS**

**ORGANIC CHEMISTRY**

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: BE      Lab Number: 448208  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/23/05  
TOPEKA, KS 66612      Report Date: 03/30/05

Acct No: 4EM80      Site ID No.:      Sample Type: SOIL      Program Code: EP  
Site: BURR GARDEN      No. Compositd:  
Collected By: RANDY BROWN- BER      Depth: 0.5      Date: 02/16/05      Time: 12:55

SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS	CONCENTRATION ( mg/Kg )	Analysis Date	EPA Method
Hexachloroethane	< 1.0	03/24/05	8270
Bis(2-chloroethyl)ether	< 1.0	03/24/05	8270
Bis(2-chloroisopropyl)ether	< 1.0	03/24/05	8270
N-Nitrosodi-n-propylamine	< 1.0	03/24/05	8270
Isophorone	< 1.0	03/24/05	8270
Nitrobenzene	< 1.0	03/24/05	8270
Hexachlorobutadiene	< 1.0	03/24/05	8270
1,2,4-Trichlorobenzene	< 1.0	03/24/05	8270
Naphthalene	< 1.0	03/24/05	8270
Bis(2-chloroethoxy)methane	< 1.0	03/24/05	8270
Hexachlorocyclopentadiene	< 1.0	03/24/05	8270
2-Chloronaphthalene	< 1.0	03/24/05	8270
Acenaphthylene	< 1.0	03/24/05	8270
Acenaphthene	< 1.0	03/24/05	8270
Dimethyl phthalate	< 1.0	03/24/05	8270
2,6-Dinitrotoluene	< 1.0	03/24/05	8270
Fluorene	< 1.0	03/24/05	8270
4-Chlorophenyl phenyl ether	< 1.0	03/24/05	8270
2,4-Dinitrotoluene	< 1.0	03/24/05	8270
Diethyl phthalate	< 1.0	03/24/05	8270
Hexachlorobenzene	< 1.0	03/24/05	8270
4-Bromophenyl phenyl ether	< 1.0	03/24/05	8270
Phenanthrene	< 1.0	03/24/05	8270
Anthracene	< 1.0	03/24/05	8270
Di-n-butyl phthalate	< 1.0	03/24/05	8270
Fluoranthene	< 1.0	03/24/05	8270
Pyrene	< 1.0	03/24/05	8270
Butyl benzyl phthalate	< 1.0	03/24/05	8270
Bis(2-ethylhexyl)phthalate	< 5.0	03/24/05	8270
Chrysene	< 1.0	03/24/05	8270
Benzo(a)anthracene	< 1.0	03/24/05	8270
Benzo(b)fluoranthene	< 1.0	03/24/05	8270
Benzo(k)fluoranthene	< 1.0	03/24/05	8270
Di-n-octyl phthalate	< 5.0	03/24/05	8270
Benzo(a)pyrene	< 1.0	03/24/05	8270
Indeno(1,2,3-c,d)pyrene	< 1.0	03/24/05	8270
Dibenzo(a,h)anthracene	< 1.0	03/24/05	8270
Benzo(g,h,i)perylene	< 1.0	03/24/05	8270
Benzyl alcohol	< 1.0	03/24/05	8270
4-Chloroaniline	< 5.0	03/24/05	8270
2-Nitroaniline	< 5.0	03/24/05	8270
3-Nitroaniline	< 5.0	03/24/05	8270
4-Nitroaniline	< 5.0	03/24/05	8270
Dibenzofuran	< 1.0	03/24/05	8270
2-Methylnaphthalene	< 1.0	03/24/05	8270

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 77% Solids.

Chemist: Dennis L. Dobson *DLB*

< - Not Detected at Indicated Level

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APR 11 2005

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

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ENVIRONMENTAL REMEDIATION



# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: BE      Lab Number: 448202  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/23/05  
TOPEKA, KS 66612      Report Date: 03/30/05

Acct No: 4EM80      Site ID No.:      Sample Type: SOIL      Program Code: EP  
Site: B6-1      Depth: 0.5      Date: 02/15/05      No. Composit:      Time: 15:00  
Collected By: RANDY BROWN- BER

SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS	CONCENTRATION ( mg/Kg )	Analysis Date	EPA Method
Hexachloroethane	< 1.1	03/24/05	8270
Bis(2-chloroethyl)ether	< 1.1	03/24/05	8270
Bis(2-chloroisopropyl)ether	< 1.1	03/24/05	8270
N-Nitrosodi-n-propylamine	< 1.1	03/24/05	8270
Isophorone	< 1.1	03/24/05	8270
Nitrobenzene	< 1.1	03/24/05	8270
Hexachlorobutadiene	< 1.1	03/24/05	8270
1,2,4-Trichlorobenzene	< 1.1	03/24/05	8270
Naphthalene	< 1.1	03/24/05	8270
Bis(2-chloroethoxy)methane	< 1.1	03/24/05	8270
Hexachlorocyclopentadiene	< 1.1	03/24/05	8270
2-Chloronaphthalene	< 1.1	03/24/05	8270
Acenaphthylene	< 1.1	03/24/05	8270
Acenaphthene	< 1.1	03/24/05	8270
Dimethyl phthalate	< 1.1	03/24/05	8270
2,6-Dinitrotoluene	< 1.1	03/24/05	8270
Fluorene	< 1.1	03/24/05	8270
4-Chlorophenyl phenyl ether	< 1.1	03/24/05	8270
2,4-Dinitrotoluene	< 1.1	03/24/05	8270
Diethyl phthalate	< 1.1	03/24/05	8270
Hexachlorobenzene	< 1.1	03/24/05	8270
4-Bromophenyl phenyl ether	< 1.1	03/24/05	8270
Phenanthrene	< 1.1	03/24/05	8270
Anthracene	< 1.1	03/24/05	8270
Di-n-butyl phthalate	< 1.1	03/24/05	8270
Fluoranthene	< 1.1	03/24/05	8270
Pyrene	< 1.1	03/24/05	8270
Butyl benzyl phthalate	< 1.1	03/24/05	8270
Bis(2-ethylhexyl)phthalate	< 5.5	03/24/05	8270
Chrysene	< 1.1	03/24/05	8270
Benzo(a)anthracene	< 1.1	03/24/05	8270
Benzo(b)fluoranthene	< 1.1	03/24/05	8270
Benzo(k)fluoranthene	< 1.1	03/24/05	8270
Di-n-octyl phthalate	< 5.5	03/24/05	8270
Benzo(a)pyrene	< 1.1	03/24/05	8270
Indeno(1,2,3-c,d)pyrene	< 1.1	03/24/05	8270
Dibenzo(a,h)anthracene	< 1.1	03/24/05	8270
Benzo(g,h,i)perylene	< 1.1	03/24/05	8270
Benzyl alcohol	< 1.1	03/24/05	8270
4-Chloroaniline	< 5.5	03/24/05	8270
2-Nitroaniline	< 5.5	03/24/05	8270
3-Nitroaniline	< 5.5	03/24/05	8270
4-Nitroaniline	< 5.5	03/24/05	8270
Dibenzofuran	< 1.1	03/24/05	8270
2-Methylnaphthalene	< 1.1	03/24/05	8270

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 69% Solids.

Chemist: Dennis L. Dobson *DD*

< - Not Detected at Indicated Level

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APR 11 2005

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: BE      Lab Number: 448192  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/23/05  
TOPEKA, KS 66612      Report Date: 04/07/05

Acct No: 4EM80      Site ID No.:      Sample Type: SOIL      Program Code: EP  
Site: B6-2      No. Composited:  
Collected By: RANDY BROWN- BER      Depth: 0.5      Date: 02/15/05      Time: 15:35

SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS	CONCENTRATION ( mg/Kg )	Analysis Date	EPA Method
Hexachloroethane	< 1.0	03/24/05	8270
Bis(2-chloroethyl)ether	< 1.0	03/24/05	8270
Bis(2-chloroisopropyl)ether	< 1.0	03/24/05	8270
N-Nitrosodi-n-propylamine	< 1.0	03/24/05	8270
Isophorone	< 1.0	03/24/05	8270
Nitrobenzene	< 1.0	03/24/05	8270
Hexachlorobutadiene	< 1.0	03/24/05	8270
1,2,4-Trichlorobenzene	< 1.0	03/24/05	8270
Naphthalene	< 1.0	03/24/05	8270
Bis(2-chloroethoxy)methane	< 1.0	03/24/05	8270
Hexachlorocyclopentadiene	< 1.0	03/24/05	8270
2-Chloronaphthalene	< 1.0	03/24/05	8270
Acenaphthylene	< 1.0	03/24/05	8270
Acenaphthene	< 1.0	03/24/05	8270
Dimethyl phthalate	< 1.0	03/24/05	8270
2,6-Dinitrotoluene	< 1.0	03/24/05	8270
Fluorene	< 1.0	03/24/05	8270
4-Chlorophenyl phenyl ether	< 1.0	03/24/05	8270
2,4-Dinitrotoluene	< 1.0	03/24/05	8270
Diethyl phthalate	< 1.0	03/24/05	8270
Hexachlorobenzene	< 1.0	03/24/05	8270
4-Bromophenyl phenyl ether	< 1.0	03/24/05	8270
Phenanthrene	< 1.0	03/24/05	8270
Anthracene	< 1.0	03/24/05	8270
Di-n-butyl phthalate	< 1.0	03/24/05	8270
Fluoranthene	< 1.0	03/24/05	8270
Pyrene	< 1.0	03/24/05	8270
Butyl benzyl phthalate	< 1.0	03/24/05	8270
Bis(2-ethylhexyl)phthalate	< 5.0	03/24/05	8270
Chrysene	< 1.0	03/24/05	8270
Benzo(a)anthracene	< 1.0	03/24/05	8270
Benzo(b)fluoranthene	< 1.0	03/24/05	8270
Benzo(k)fluoranthene	< 1.0	03/24/05	8270
Di-n-octyl phthalate	< 5.0	03/24/05	8270
Benzo(a)pyrene	< 1.0	03/24/05	8270
Indeno(1,2,3-c,d)pyrene	< 1.0	03/24/05	8270
Dibenzo(a,h)anthracene	< 1.0	03/24/05	8270
Benzo(g,h,i)perylene	< 1.0	03/24/05	8270
Benzyl alcohol	< 1.0	03/24/05	8270
4-Chloroaniline	< 5.0	03/24/05	8270
2-Nitroaniline	< 5.0	03/24/05	8270
3-Nitroaniline	< 5.0	03/24/05	8270
4-Nitroaniline	< 5.0	03/24/05	8270
Dibenzofuran	< 1.0	03/24/05	8270
2-Methylnaphthalene	< 1.0	03/24/05	8270

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 828 Solids.

Chemist: Dennis L. Dobson *DLD*

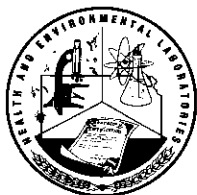
< - Not Detected at Indicated Level

# RECEIVED

Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

APR 11 2005

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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: BE      Lab Number: 448197  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/23/05  
TOPEKA, KS 66612      Report Date: 03/30/05

Acct No: 4EM80      Site ID No.:      Sample Type: SOIL      Program Code: EP  
Site: B6-3      Depth: 0.5      Date: 02/15/05      No. Compositd:  
Collected By: RANDY BROWN- BER      Time: 15:50

SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS	CONCENTRATION ( mg/Kg )	Analysis Date	EPA Method
Hexachloroethane	< 1.0	03/23/05	8270
Bis(2-chloroethyl)ether	< 1.0	03/23/05	8270
Bis(2-chloroisopropyl)ether	< 1.0	03/23/05	8270
N-Nitrosodi-n-propylamine	< 1.0	03/23/05	8270
Isophorone	< 1.0	03/23/05	8270
Nitrobenzene	< 1.0	03/23/05	8270
Hexachlorobutadiene	< 1.0	03/23/05	8270
1,2,4-Trichlorobenzene	< 1.0	03/23/05	8270
Naphthalene	< 1.0	03/23/05	8270
Bis(2-chloroethoxy)methane	< 1.0	03/23/05	8270
Hexachlorocyclopentadiene	< 1.0	03/23/05	8270
2-Chloronaphthalene	< 1.0	03/23/05	8270
Acenaphthylene	< 1.0	03/23/05	8270
Acenaphthene	< 1.0	03/23/05	8270
Dimethyl phthalate	< 1.0	03/23/05	8270
2,6-Dinitrotoluene	< 1.0	03/23/05	8270
Fluorene	< 1.0	03/23/05	8270
4-Chlorophenyl phenyl ether	< 1.0	03/23/05	8270
2,4-Dinitrotoluene	< 1.0	03/23/05	8270
Diethyl phthalate	< 1.0	03/23/05	8270
Hexachlorobenzene	< 1.0	03/23/05	8270
4-Bromophenyl phenyl ether	< 1.0	03/23/05	8270
Phenanthrene	< 1.0	03/23/05	8270
Anthracene	< 1.0	03/23/05	8270
Di-n-butyl phthalate	< 1.0	03/23/05	8270
Fluoranthene	< 1.0	03/23/05	8270
Pyrene	< 1.0	03/23/05	8270
Butyl benzyl phthalate	< 1.0	03/23/05	8270
Bis(2-ethylhexyl)phthalate	< 5.0	03/23/05	8270
Chrysene	< 1.0	03/23/05	8270
Benzo(a)anthracene	< 1.0	03/23/05	8270
Benzo(b)fluoranthene	< 1.0	03/23/05	8270
Benzo(k)fluoranthene	< 1.0	03/23/05	8270
Di-n-octyl phthalate	< 5.0	03/23/05	8270
Benzo(a)pyrene	< 1.0	03/23/05	8270
Indeno(1,2,3-c,d)pyrene	< 1.0	03/23/05	8270
Dibenzo(a,h)anthracene	< 1.0	03/23/05	8270
Benzo(g,h,i)perylene	< 1.0	03/23/05	8270
Benzyl alcohol	< 1.0	03/23/05	8270
4-Chloroaniline	< 5.0	03/23/05	8270
2-Nitroaniline	< 5.0	03/23/05	8270
3-Nitroaniline	< 5.0	03/23/05	8270
4-Nitroaniline	< 5.0	03/23/05	8270
Dibenzofuran	< 1.0	03/23/05	8270
2-Methylnaphthalene	< 1.0	03/23/05	8270

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 79% Solids.

Chemist: Dennis L. Dobson *DLD*

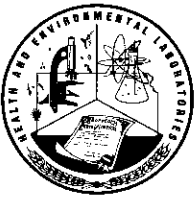
< - Not Detected at Indicated Level

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Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

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# DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment  
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



## REPORT OF ANALYSIS

### ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION      Analysis Code: BE      Lab Number: 448205  
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN      Date Rec'd: 02/23/05  
TOPEKA, KS 66612      Report Date: 03/30/05

Acct No: 4EM80      Site ID No.:      Sample Type: SOIL      Program Code: EP  
Site: B6-4      Depth: 0.5      Date: 02/15/05      No. Compositd:  
Collected By: RANDY BROWN- BER      Time: 16:00

SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS	CONCENTRATION ( mg/Kg )	Analysis Date	EPA Method
Hexachloroethane	< 1.0	03/23/05	8270
Bis(2-chloroethyl)ether	< 1.0	03/23/05	8270
Bis(2-chloroisopropyl)ether	< 1.0	03/23/05	8270
N-Nitrosodi-n-propylamine	< 1.0	03/23/05	8270
Isophorone	< 1.0	03/23/05	8270
Nitrobenzene	< 1.0	03/23/05	8270
Hexachlorobutadiene	< 1.0	03/23/05	8270
1,2,4-Trichlorobenzene	< 1.0	03/23/05	8270
Naphthalene	< 1.0	03/23/05	8270
Bis(2-chloroethoxy)methane	< 1.0	03/23/05	8270
Hexachlorocyclopentadiene	< 1.0	03/23/05	8270
2-Chloronaphthalene	< 1.0	03/23/05	8270
Acenaphthylene	< 1.0	03/23/05	8270
Acenaphthene	< 1.0	03/23/05	8270
Dimethyl phthalate	< 1.0	03/23/05	8270
2,6-Dinitrotoluene	< 1.0	03/23/05	8270
Fluorene	< 1.0	03/23/05	8270
4-Chlorophenyl phenyl ether	< 1.0	03/23/05	8270
2,4-Dinitrotoluene	< 1.0	03/23/05	8270
Diethyl phthalate	< 1.0	03/23/05	8270
Hexachlorobenzene	< 1.0	03/23/05	8270
4-Bromophenyl phenyl ether	< 1.0	03/23/05	8270
Phenanthrene	< 1.0	03/23/05	8270
Anthracene	< 1.0	03/23/05	8270
Di-n-butyl phthalate	< 1.0	03/23/05	8270
Fluoranthene	< 1.0	03/23/05	8270
Pyrene	< 1.0	03/23/05	8270
Butyl benzyl phthalate	< 1.0	03/23/05	8270
Bis(2-ethylhexyl)phthalate	< 5.0	03/23/05	8270
Chrysene	< 1.0	03/23/05	8270
Benzo(a)anthracene	< 1.0	03/23/05	8270
Benzo(b)fluoranthene	< 1.0	03/23/05	8270
Benzo(k)fluoranthene	< 1.0	03/23/05	8270
Di-n-octyl phthalate	< 5.0	03/23/05	8270
Benzo(a)pyrene	< 1.0	03/23/05	8270
Indeno(1,2,3-c,d)pyrene	< 1.0	03/23/05	8270
Dibenzo(a,h)anthracene	< 1.0	03/23/05	8270
Benzo(g,h,i)perylene	< 1.0	03/23/05	8270
Benzyl alcohol	< 1.0	03/23/05	8270
4-Chloroaniline	< 5.0	03/23/05	8270
2-Nitroaniline	< 5.0	03/23/05	8270
3-Nitroaniline	< 5.0	03/23/05	8270
4-Nitroaniline	< 5.0	03/23/05	8270
Dibenzofuran	< 1.0	03/23/05	8270
2-Methylnaphthalene	< 1.0	03/23/05	8270

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 76% Solids.

Chemist: Dennis L. Dobson *DL*

< - Not Detected at Indicated Level

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Duane R. Boline, Ph.D., Director  
Laboratory Customer Service - (785) 296-1620  
Laboratory Fax - (785) 296-1641  
CLIA No. 17D0648254

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ENVIRONMENTAL REMEDIATION





DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION Analysis Code: BE Lab Number: 448193
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN Date Rec'd: 02/23/05
TOPEKA, KS 66612 Report Date: 03/30/05

Acct No: 4EM80 Site ID No.: Sample Type: SOIL Program Code: EP
Site: B6-5 No. Compositied:
Collected By: RANDY BROWN- BER Depth: 0.5 Date: 02/15/05 Time: 16:30

Table with 4 columns: SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS, CONCENTRATION (mg/Kg), Analysis Date, and EPA Method. Lists various chemical compounds and their detection levels.

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 78% Solids.

Chemist: Dennis L. Dobson [Signature]

< - Not Detected at Indicated Level

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Duane R. Boline, Ph.D., Director
Laboratory Customer Service - (785) 296-1620
Laboratory Fax - (785) 296-1641
CLIA No. 17D0648254

BUREAU OF ENVIRONMENTAL REMEDIATION



DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION Analysis Code: BE Lab Number: 448204
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN Date Rec'd: 02/23/05
TOPEKA, KS 66612 Report Date: 04/07/05

Acct No: 4EM80 Site ID No.: Sample Type: SOIL Program Code: EP
Site: BURR - OFFSITE-1 No. Compositd:
Collected By: RANDY BROWN- BER Depth: 0.5 Date: 02/16/05 Time: 14:15

Table with 4 columns: SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS, CONCENTRATION (mg/Kg), Analysis Date, and EPA Method. Lists various chemical compounds and their detection levels.

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 72% Solids.

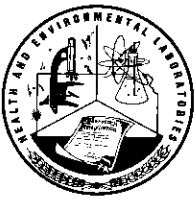
Chemist: Dennis L. Dobson < - Not Detected at Indicated Level

RECEIVED

APR 11 2005

Duane R. Boline, Ph.D., Director
Laboratory Customer Service - (785) 296-1620
Laboratory Fax - (785) 296-1641
CLIA No. 17D0648254

BUREAU OF ENVIRONMENTAL REMEDIATION



DIVISION OF HEALTH & ENVIRONMENTAL LABORATORIES

Kansas Department of Health and Environment
Forbes Field, Bldg. 740, Topeka, Kansas 66620-0001



REPORT OF ANALYSIS

ORGANIC CHEMISTRY

Report To: BUREAU OF ENV. REMEDIATION Analysis Code: BE Lab Number: 448196
Address: CURTIS SOB, SUITE 410, ATTN: RANDY BROWN Date Rec'd: 02/23/05
TOPEKA, KS 66612 Report Date: 03/30/05

Acct No: 4EM80 Site ID No.: Sample Type: SOIL Program Code: EP
Site: BURR-OFF SITE #2 No. Compositied:
Collected By: RANDY BROWN- BER Depth: 0.5 Date: 02/16/05 Time: 15:00

Table with 4 columns: SEMI-VOLATILE BASE NEUTRAL ORGANIC COMPOUNDS, CONCENTRATION (mg/Kg), Analysis Date, and EPA Method. Lists various chemical compounds and their detection levels.

Comment: All Results and Reporting Levels are on a Dry Weight Basis. Sample was 76% Solids.

Chemist: Dennis L. Dobson

< - Not Detected at Indicated Level

RECEIVED

APR 11 2005

Duane R. Boline, Ph.D., Director
Laboratory Customer Service - (785) 296-1620
Laboratory Fax - (785) 296-1641
CLIA No. 17D0648254

BUREAU OF ENVIRONMENTAL REMEDIATION

**Appendix D: Preliminary Removal Evaluation (PRE)  
Form**

**KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT  
BUREAU OF ENVIRONMENTAL REMEDIATION  
PRELIMINARY REMOVAL SITE EVALUATION/  
REMOVAL PRELIMINARY ASSESSMENT FORM**

**I. SITE NAME AND LOCATION**

**NAME:** Burr Property Site

**ADDRESS OR OTHER LOCATION IDENTIFIER:** 1927 E 1300 Road

**CITY:** Lawrence      **COUNTY:** Douglas      **STATE:** Kansas      **ZIP:** 66044

**TELEPHONE:**      **FAX:**

**DIRECTIONS TO SITE:**      **MAP ATTACHED:**   X  

The site is located on 1927 E 1300 Road approximately 2 miles north of Lawrence, Kansas, in Section 11, Township 12 South Range 19 East, Douglas County, Kansas.

**II. SITE REFERRAL INFORMATION:**

**REQUESTED BY:** Citizen Petition      **DATE OF REQUEST:** 07/04

**AGENCY/OFFICE:**

**MAILING ADDRESS:**

**CITY:**      **STATE:**      **ZIP:**

**TELEPHONE:**      **FAX:**

**SITE CONTACT:**

**AGENCY/OFFICE:**

**MAILING ADDRESS:**

**CITY:**      **STATE:**      **ZIP:**

**TELEPHONE:**      **FAX:**

## DEFINITION OF TERMS

**ATSDR** is the Agency for Toxic Substances and Disease Registry.

**CERCLA** is the Comprehensive Environmental Response Compensation and Liabilities Act, 42 USC §9601 et seq. (as amended).

A **FACILITY** is defined as any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works (POTW), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft or any site or area, where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

A **HAZARDOUS SUBSTANCE** means any substance, element, compound, mixture, solution, hazardous waste, toxic pollutant, hazardous air pollutant, or imminently hazardous chemical substance or mixture designated pursuant to the Clean Water Act (CWA), CERCLA, Safe Drinking Water Act (SDWA), Clean Air Act (CAA) or Toxic Substances Control Act (TSCA). The term does not include petroleum products, natural gas, natural gas liquids, liquefied natural gas, synthetic gas or mixtures of natural and synthetic gas.

The **LIMITATIONS ON RESPONSE** provisions of the NCP [40 CFR 300.400(b)] states that removals shall not be undertaken in response to a release: of a naturally occurring substance in its unaltered or natural form; from products that are a part of the structure of, and result in exposure within, residential buildings or business or community structures; or into public or private drinking water supplies due to deterioration of the system through ordinary use.

**NCP** is the National Oil and Hazardous Substances Pollution Contingency Plan 40 CFR §300-302.

**POLLUTANT or CONTAMINANT** includes, but is not limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions or physical deformations, in such organisms or their offspring. The term does not include petroleum products, natural gas, natural gas liquids, liquefied natural gas, synthetic gas or mixtures of natural and synthetic gas.). [40 CFR 300.5]

**RCRA** is the Resource Conservation and Recovery Act of 1976, Public Law 94-580, 40 CFR 250-299

A **RELEASE** is defined as any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment of barrels, containers, and other closed receptacles containing any hazardous substances or pollutant or contaminant), but excludes: workplace exposures; engine exhaust emissions; nuclear releases otherwise regulated; and the normal application of fertilizer. For purposes of the NCP, release also means threat of release. [40 CFR 300.5]

A **VESSEL** is defined as any description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel. [40 CFR 300.5]

## DEFINITION OF TERMS

**ATSDR** is the Agency for Toxic Substances and Disease Registry.

**CERCLA** is the Comprehensive Environmental Response Compensation and Liabilities Act, 42 USC §9601 et seq. (as amended).

A **FACILITY** is defined as any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly-owned treatment works (POTW), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft or any site or area, where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located; but does not include any consumer product in consumer use or any vessel.

A **HAZARDOUS SUBSTANCE** means any substance, element, compound, mixture, solution, hazardous waste, toxic pollutant, hazardous air pollutant, or imminently hazardous chemical substance or mixture designated pursuant to the Clean Water Act (CWA), CERCLA, Safe Drinking Water Act (SDWA), Clean Air Act (CAA) or Toxic Substances Control Act (TSCA). The term does not include petroleum products, natural gas, natural gas liquids, liquefied natural gas, synthetic gas or mixtures of natural and synthetic gas.

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**POLLUTANT or CONTAMINANT** includes, but is not limited to, any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions or physical deformations, in such organisms or their offspring. The term does not include petroleum products, natural gas, natural gas liquids, liquefied natural gas, synthetic gas or mixtures of natural and synthetic gas.). [40 CFR 300.5]

**RCRA** is the Resource Conservation and Recovery Act of 1976, Public Law 94-580, 40 CFR 250-299

A **RELEASE** is defined as any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment of barrels, containers, and other closed receptacles containing any hazardous substances or pollutant or contaminant), but excludes: workplace exposures; engine exhaust emissions; nuclear releases otherwise regulated; and the normal application of fertilizer. For purposes of the NCP, release also means threat of release. [40 CFR 300.5]

A **VESSEL** is defined as any description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water other than a public vessel. [40 CFR 300.5]

### III. REMOVAL SITE EVALUATION CRITERIA (40 CFR 300.410[E])

A. IS THERE A RELEASE OR THREAT OF RELEASE AS DEFINED BY THE NCP? YES  or NO

EXPLAIN: UNKNOWN

No metals were in excess of KDHE residential RSK levels within 200 feet of an occupied residence at the site. Low levels of polycyclic aromatic hydrocarbons (PAHs) attributable to an on-site fire pit were identified but the ash area is very small (less than three feet square). A documented significant release to surface soils or ground water was not identified at the site. Levels of arsenic in ground water slightly exceeded the RSK level in one sample, however the private well samples were within RSK levels.

B. IS THE SOURCE A FACILITY OR VESSEL AS DEFINED BY THE NCP? YES  or NO

EXPLAIN: UNKNOWN

The potential upwind sources include the abandoned Callery Chemical site and the currently operating Lawrence Energy Center (LEC).

C. DOES THE RELEASE OR THREAT OF RELEASE INVOLVE A HAZARDOUS SUBSTANCE, POLLUTANT, OR CONTAMINANT AS DEFINED BY THE NCP? YES  or NO   
UNKNOWN

EXPLAIN:

Lead, arsenic, cadmium and PAHs are hazardous substances as defined in § 302.4 of the NCP.

D. IS THE RELEASE SUBJECT TO THE LIMITATIONS ON RESPONSE? YES  or NO

EXPLAIN: UNKNOWN

No limitations on response exist at the site.

E. DOES THE QUANTITY OR CONCENTRATION WARRANT FURTHER REMOVAL RESPONSE OR REMOVAL SITE EVALUATION: YES  or NO   
UNKNOWN

EXPLAIN:

No significant area of impacted residential soil was identified, and private well results were within RSK levels for the metals of concern.

F. HAS A PRP BEEN IDENTIFIED? YES  or NO

CURRENT OWNER:

CURRENT OPERATOR:

PAST OWNERS:

G. WHAT IS THE CURRENT LAND USE AROUND THE FACILITY?

RESIDENTIAL  COMMERCIAL  RECREATIONAL  INDUSTRIAL  AGRICULTURAL

WHAT IS THE FUTURE ZONING OF THE AREA AROUND THE FACILITY?

RESIDENTIAL  COMMERCIAL  RECREATIONAL  INDUSTRIAL  AGRICULTURAL

H. REGULATORY/OPERATIONAL HISTORY OF THE SITE:

The site property is a residence in the Kansas River valley. No commercial operations other than agriculture have taken place at the site.



**IV. CONDITIONS TO WARRANT REMOVAL (940 CFR 300.415[b][2]):**

**A. IS THERE AN ACTUAL OR POTENTIAL EXPOSURE TO HAZARDOUS SUBSTANCES, OR POLLUTANTS, OR CONTAMINANTS? DEFINE THE MEDIA, PATHWAY AND RECEPTOR:** YES  NO

**GROUND WATER** YES  NO  UNKNOWN  RECEPTOR: local ground water  
**EXPLAIN:** The site property and adjacent areas are supplied with water from private wells. No elevated levels of hazardous substances were identified in the private well samples. One slightly elevated arsenic detection was identified; however this was in a direct-push sample and not the private well.

**SURFACE WATER** YES  NO  UNKNOWN  RECEPTOR: \_\_\_\_\_  
**EXPLAIN:** No surface water release has been documented. The Kansas River is located within 1/2 mile of the site.

**SOIL** YES  NO  UNKNOWN  RECEPTOR: \_\_\_\_\_  
**EXPLAIN:** A residence is located at the site. No elevated levels of lead, cadmium or arsenic above residential RSK levels were identified near the residence. Low levels of PAHs were identified in the fire pit on the property; PAHs are frequently encountered in ash and the area in question is small.

**WASTE** YES  NO  UNKNOWN  RECEPTOR: \_\_\_\_\_  
**EXPLAIN:** No wastes were identified other than *de minimus* amounts of ash near the fire pit.

**AIR** YES  NO  UNKNOWN  RECEPTOR: \_\_\_\_\_  
**EXPLAIN:** A release to air is possible, and the site will be referred to KDHE's Bureau of Air to determine if the site qualifies for additional high-volume air sampling.

**B. IS THERE ACTUAL OR A POTENTIAL FOR CONTAMINATION OF DRINKING WATER SUPPLIES?** YES  or NO

**EXPLAIN:**  
 A low potential for ground water contamination is present since the private well sampled for the PRE did not indicate elevated levels of heavy metals.

**C. ARE THERE HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS IN DRUMS, BARRELS, BULK STORAGE CONTAINERS OR TANKS?** YES  or NO

**EXPLAIN:** No abandoned hazardous substance containers were identified at the site.

**D. ARE THERE HIGH LEVELS OF HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS IN NEAR-SURFACE SOILS?** YES  NO  UNKNOWN

**SURFACE SOIL CONTAMINATION?** YES  NO  UNKNOWN

**SURFICIAL WASTES PRESENT?** YES  NO  UNKNOWN

**EXPLAIN:**



<b>CONTAMINATED SOIL EXCAVATION:</b>	YES	___	or NO	X
<b>EXPLAIN:</b> No significant area of contaminated soil identified.				
<b>REMOVAL OF DRUMS, TANKS, OR BULK STORAGE CONTAINERS:</b>	YES	___	or NO	X
<b>EXPLAIN:</b> No drums or containers are present.				
<b>CONTAINMENT, TREATMENT, OR DISPOSAL OF HAZARDOUS SUBSTANCES, POLLUTANTS, OR CONTAMINANTS:</b>	YES	___	or NO	X
<b>EXPLAIN:</b> No significant area of contaminated soil identified.				
<b>PROVIDE ALTERNATIVE WATER SUPPLIES:</b>	YES	___	or NO	X
<b>EXPLAIN:</b> The on-site private well did not indicate any hazardous substances above drinking water levels.				

**VI. REMOVAL SITE EVALUATION DETERMINATION AND REMOVAL PRELIMINARY ASSESSMENT FINDINGS AND RECOMMENDATIONS:**

**REMOVAL ACTION/ASSESSMENT/FURTHER REMOVAL SITE EVALUATION CONSISTENT WITH §§ 300.410-300.415 OF THE NCP RECOMMENDED:** YES \_\_\_ NO X

**FURTHER INTEGRATED CERCLA REMEDIAL SITE EVALUATION/RESPONSE CONSISTENT WITH THE NCP RECOMMENDED:** YES \_\_\_ NO X

**(Cite one or more of the criteria from SECTION III - REMOVAL SITE EVALUATION CRITERIA, as the basis for the above determination)**

	RELEASE OF HAZARDOUS SUBSTANCES NOT PRESENT		NOT A FACILITY OR VESSEL
	NOT A HAZARDOUS SUBSTANCE OR POLLUTANT OR CONTAMINANT		SUBJECT TO RESPONSE LIMITATIONS
<u>X</u>	INSUFFICIENT QUANTITY OR CONCENTRATION		WILLING/CAPABLE PRP RESPONSE
	NO ACTUAL OR POTENTIAL EXPOSURE THREATS	<u>X</u>	DRUMS, BARRELS OR BULK CONTAINERS NOT PRESENT
<u>X</u>	NO HIGH LEVELS OF CONTAMINANTS IN SURFACE SOILS	<u>X</u>	SITE NOT SUSCEPTIBLE TO ADVERSE WEATHER CONDITIONS
<u>X</u>	NO THREAT OF FIRE OR EXPLOSION	<u>X</u>	REFERRED TO ANOTHER PROGRAM

**(Identify one or more of the removal actions listed in Section V. POTENTIAL REMOVAL ACTIONS, as examples of the types of response actions which are recommended) NONE RECOMMENDED**

	SITE SECURITY - ACCESSIBILITY		DRAINAGE CONTROL
	IMPOUNDMENT STABILIZATION		SOIL CAPPING
	CHEMICAL CONTROLS		SOIL EXCAVATION
	REMOVAL OF DRUMS, BARRELS, ETC.		CONTAIN THREAT/DISPOSE OF WASTES
	ALT. DRINKING WATER SUPPLIES		SURROUNDINGS/OTHER (EXPLAIN)

**COMMENTS:**  
Extensive areas of contaminated soil are not present at the site. The private well was determined to not be impacted.

<b>VII. FIELD METHODS AND PROCEDURES</b>
--

See PRE Report
----------------

<b>VIII. FINAL REMARKS AND RECOMMENDATIONS</b>
--

The lack of significant observed contamination in soils and drinking water does not warrant further consideration of a removal action consistent with the NCP. The site may warrant additional consideration by KDHE's Bureau of Air and Radiation as a downwind monitoring point for the Lawrence Energy Center (LEC).
---

## Rebecca Powell

---

**From:** Linda Dale [KDHE] <Linda.Dale@ks.gov>  
**Sent:** Friday, March 18, 2022 10:32 AM  
**To:** Rebecca Powell  
**Cc:** kdhe.BERKORA; kdhe.DOEKORA  
**Subject:** RE: KORA Request 22-0479

Good morning,

I do not have any records for the site that you are requesting information for. **The Site is a Superfund site Bureau of Waste Management does not have VOC contamination documents.** I did a google search and found the information below, which gives you a name to contact at EPA.

Respectfully,

- [Contact Us](#)

## Superfund

### You are here:

[EPA Home](#) » [Superfund](#) » [Search Sites](#) » [Search Results](#) » Superfund Site Information

# Superfund Site Information

**FLOODPLAIN LANDFILL** (EPA ID: KSD981712391)

## Contacts

[Site Info](#) | [Aliases](#) | [Operable Units](#) | [Contaminants](#) | [Contacts](#)  
[Administrative Records](#) | [Reports and Documents](#)

Title	Name	Phone Number
Site Assessment Manager (SAM)	Paul Roemerman	(913) 551-7694



Linda Dale  
Compliance and Aid to Local Section  
Bureau of Waste Management  
785-296-6598

---

**From:** Rebecca Powell <rmpowell@ectinc.com>  
**Sent:** Friday, March 18, 2022 9:21 AM  
**To:** Linda Dale [KDHE] <Linda.Dale@ks.gov>

Cc: Lindsay Landin <LLandin@ectinc.com>

Subject: RE: KORA Request 22-0479

**EXTERNAL:** This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

Hi Linda,

Thank you for your response! Our records indicate that this property was transferred to the Bureau of Waste Management in 2012 per the attached. I see that there is VOC contamination. Are there any additional records on file for this property?

Thanks again,

**Rebecca M. Powell**

National Due Diligence Practice Leader | Site Assessment & Remediation

C: 989.802.4913



---

**From:** Lindsay Landin <[LLandin@ectinc.com](mailto:LLandin@ectinc.com)>

**Sent:** Thursday, March 17, 2022 10:23 PM

**To:** Rebecca Powell <[rmpowell@ectinc.com](mailto:rmpowell@ectinc.com)>

**Subject:** Fwd: KORA Request 22-0479

For Free State Floodplain landfill orphan

Lindsay R. Landin

Senior Technical Writer

Environmental Consulting & Technology, Inc.

C. 717.799.7960

E. [LLandin@ectinc.com](mailto:LLandin@ectinc.com)

---

**From:** Linda Dale [KDHE] <[Linda.Dale@ks.gov](mailto:Linda.Dale@ks.gov)>

**Sent:** Thursday, March 17, 2022 10:42:33 AM

**To:** Lindsay Landin <[LLandin@ectinc.com](mailto:LLandin@ectinc.com)>

**Subject:** KORA Request 22-0479

The Bureau of Waste Management has received your Open Records Request. The Bureau of Waste Management has no files pertaining to your request.

As stated on your attachment this is a **Superfund Site** and those are handled by EPA R7.

Please refer to the KORA number listed in the subject line if you have any questions.

Respectfully,



Linda Dale  
Compliance and Aid to Local Section  
Bureau of Waste Management  
785-296-6598



*KDHE.ks.gov*

**Kansas Department of Health and Environment  
Bureau of Environmental Remediation  
Identified Sites List Information**

**Project Code:** C402372566

**Site Status:** Transferred



**Site Name:** LAWRENCE CITY LANDFILL

**CERCLIS  
Number:**

**Other Names:**

**Address:** **City:** LAWRENCE

**Zip Code:**

**County:** DOUGLAS **River  
Basin:** KS - Lower  
Republican

**Latitude:** 39.029202 **Longitude:** -95.271004

**Program  
Name:** Landfill **Project  
Manager:** TRANSFERRED

**Contaminants:** VOC

**Environmental Use Control In Place ?** No

We are currently experiencing technical difficulties with requests for some documents. If an attempt to download an individual document from the "Documents/Photos Available" link does not return the expected results, please contact the Project Manager associated with the Identified Site or the Remedial Section at 785-296-1660. We are working to resolve this problem as quickly as possible and apologize for any inconvenience this may cause.

[Documents/Photos Available](#)  
(Opens in New Window)

#### Site Narrative:

The site is located approximately seven miles northwest of the city of Lawrence. It lies along the east side of the Kansas river between the river and the levy. The landfill operations began in 1970 and continued until 1981. Monitoring wells were installed in 1973 by KU as part of a research project. More wells were installed in 1975. Out of the total 24 wells at least five are recorded as destroyed. Only seven have been located since 2008. The wells are made of galvanized steel and may not be suitable for sampling. None of the wells has been sampled since 1986. An investigation took place in 1986 as a result of review of the landfill records and proximity to the Kansas River. Groundwater, sediment and surface water samples were collected to determine if the landfill was adversely affecting the river. Based on the results the Landfill was determined to be not significantly impacting

the river in a negative way. Once the landfill was closed it was designated as a wildlife preserve and continues to be used as such. The last site inspection was in November of 2008.

Site transferred to Bureau of Waste Management 1/1/12.

#### Legal Description

Township	Range	Section	Parcel	Description
12	19E	11		

#### Actions Completed

Activity Type	Activity	Start	Completed
SITE ACTIONS COMPLETE	Transfer Out of Bureau		01/01/2012

#### Actions Underway

Activity Type	Activity	Start	Completed
No Actions Underway Information Found			

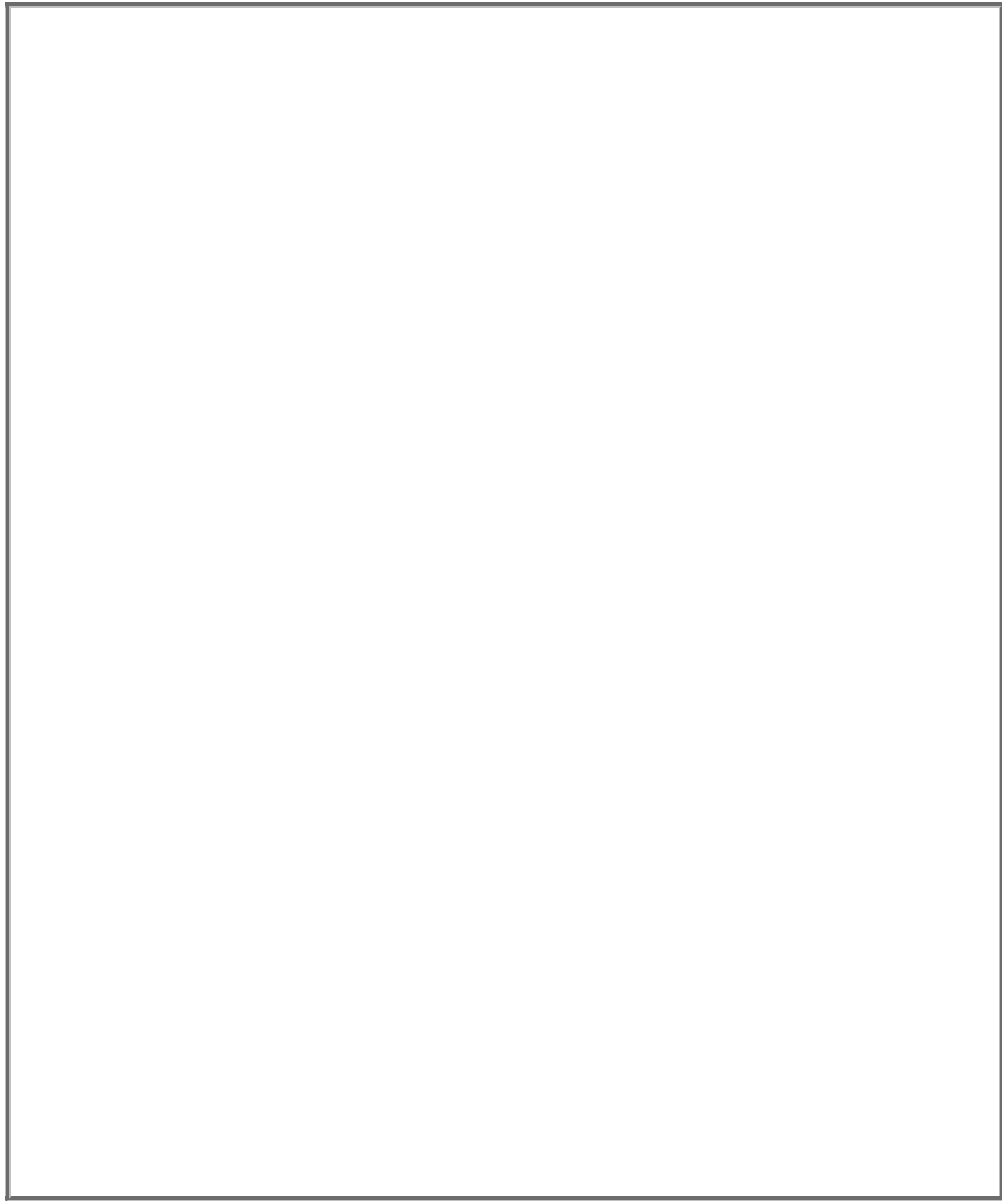
#### Actions Proposed

Activity Type	Activity	Start	Completed
No Actions Proposed Information Found			

#### Map of Identified Site

((One-mile radius circle around selected site))

[Click here for interactive map](#)



Types of Sites in Area

- ▲ Active
- ▼ Resolved
- ▼ Resolved with Restrictions
- Selected Site
- ▲ Transferred out of Bureau



## Appendix F

### Owner Interview Documentation

FOR INTERNAL USE ONLY	
ECT Project Number:	220238-0100
ECT Project Name:	Free State Solar
Date Received:	03/15/2022



### Owner Environmental Questionnaire

**INSTRUCTIONS:** Please complete the following questions to the best of your knowledge. Any description pertaining to the location(s) of identified features would be greatly appreciated.

Section, Township & Range (with quarter) and/or Addresses: Douglas County, Kansas

Owner Name/Entity: Daniel Strong

Contact Full Name & Affiliation: \_\_\_\_\_

Email Address: strongranch@embarqmail.com

Phone No.: (913) 669-5563

Other Site Personnel (Name & Contact Information): \_\_\_\_\_

1) How long have you owned and/or been affiliated with the property? 20+ years

2) What are the CURRENT uses of the property?  
Farmland / cropland

3) What are the PAST uses of the property?  
Farmland / cropland

4) What is the approximate age (or construction date) and size /square footage of current structure(s)?  
No structures are located onsite

5) If the property is currently vacant or undeveloped, do you know of any prior improvements? If yes, please describe.  NO  YES

6) Are you aware of any current or previous wells or septic systems? If yes, please provide approximate location(s).  NO  YES

Irrigation wells

**Owner Environmental Questionnaire**



> ectinc.com

7) Do any utilities currently service the property? If yes, please specify.  NO  YES

Electric and water

---

8) Are you aware of any storage, use, generation, or disposal of automotive, industrial, or agricultural chemicals, batteries, solvents, petroleum products, pesticides, or related regulated chemicals? If yes, please explain.  NO  YES

There are no storage structures onsite

---

9) Are you aware of any underground or aboveground storage tanks for any chemicals or petroleum products currently or historically located on the property? If yes, please explain and specify underground or aboveground.  NO  YES

---

10) Has the property been used as a waste landfill, dump, or disposal site? If yes, please identify and explain.  NO  YES

---

11) Are you aware of any fill material that has been placed on the property? If yes, please specify and indicate source of material.  NO  YES

---

12) Are you aware of any current or former oil or gas wells, or associated tanks/pipelines on the property? If yes, please identify and explain.  NO  YES

---

13) Are you aware of any current or former (i.e., filled) pits, ponds, or lagoons located on the property? If yes, please describe.  NO  YES

---

14) Are you aware of any past cattle dipping vats on the property?  NO  YES

15) Are you aware of any petroleum or hazardous waste discharges or releases to the environment, or contamination impacts to the site soil, groundwater, or surface waters? If yes, please describe.  NO  YES

---

---

## Owner Environmental Questionnaire



16) Are you aware of any pending, threatened, or past environmental litigation, proceedings, or notices of possible violations of environmental laws or liability or potential environmental concerns in connection with the property?  NO  YES

17) Are you aware of any past environmental assessment report(s) prepared for the property? If yes, are you able to provide a copy of the prior report(s)?  NO  YES

I certify to the best of my knowledge that the above statements and facts are true and correct. To the best of my knowledge, no provided material facts have been suppressed or misstated.

Completed By: Beth Jarvis via telephone interview Title/Company: \_\_\_\_\_  
(If applicable)

Signature: \_\_\_\_\_ Date: 03/15/2022

Relationship to site: \_\_\_\_\_

Please return a copy of the completed Owner Environmental Questionnaire form to **Environmental Consulting & Technology, Inc (ECT)** at:

<b>Email (preferred):</b>	<b>LLandin@ectinc.com</b>
Fax:	517-272-9703
Mailing Address:	ECT, Attn: Lisa Zuber 3125 Sovereign Drive Suite 9C Lansing, MI 48911-4240
Questions? Please contact Lindsay Landin with ECT at 717-799-7960.	



### WANT TO COMPLETE ELECTRONICALLY?

Please scan the QR code with your smartphone camera to be directed to the online form, or go to: <https://forms.office.com/r/Xgm2P6enzr>



## Appendix G

### State/Local Interview Documentation

## Rebecca Powell

---

**From:** Beth Jarvis  
**Sent:** Thursday, March 17, 2022 10:15 AM  
**To:** info@ldchealth.org  
**Subject:** RE: FOIA Request - Douglas County - Follow-up

Hello:

As a follow-up to an earlier email, I would like to inquire about the status of the FOIA request. Please let me know if there are any records available.

Thank you!  
Beth

---

**From:** Beth Jarvis  
**Sent:** Monday, March 14, 2022 11:09 AM  
**To:** info@ldchealth.org  
**Subject:** FOIA Request - Douglas County

Good morning:

ECT is conducting an environmental site assessment for an area of land located in Douglas County, Kansas. A general site map and available parcel information is included for your reference.

As part of this assessment, we are required to interview local government agencies about any potential environmental concerns pertaining to the property and its vicinity. We are hoping to receive any available records for this area (via email preferred) pertaining to:

- Wells,
- Septic systems,
- Storage tanks,
- Releases or incidents involving hazardous substances and/or petroleum products,
- Historical or active landfills,
- Dumping of materials,
- Remediation sites,
- Migrating contamination, and/or
- Any other environmentally sensitive records.

If no records are available, please let me know. I greatly appreciate your assistance.

### **Beth A. Jarvis**

Senior Project Coordinator | Site Assessment & Remediation

### **Environmental Consulting & Technology, Inc.**

1408 North Westshore Boulevard | Suite 115 | Tampa, Florida 33607  
M: 813-289-9338 | D: 813-549-4338 | C: 813-857-5567

## Rebecca Powell

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**From:** douglasccd1@gmail.com  
**Sent:** Monday, March 14, 2022 2:42 PM  
**To:** Beth Jarvis  
**Subject:** RE: FOIA Request - Douglas County

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Hi Beth,

Our office has no records regarding the area you have outlined in red. Nor do we have any records with those landowner's names.

Please let me know if you need anything else.

Best Regards,

Randy Winchester  
District Manager  
Douglas County Conservation District

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**From:** Beth Jarvis <bjarvis@ectinc.com>  
**Sent:** Monday, March 14, 2022 10:16 AM  
**To:** douglasccd1@gmail.com  
**Subject:** FOIA Request - Douglas County

Good morning:

ECT is conducting an environmental site assessment for an area of land located in Douglas County, Kansas. A general site map and available parcel information is included for your reference.

As part of this assessment, we are required to interview local government agencies about any potential environmental concerns pertaining to the property and its vicinity. We are hoping to receive any available records for this area (via email preferred) pertaining to:

- Wells,
- Septic systems,
- Storage tanks,
- Releases or incidents involving hazardous substances and/or petroleum products,
- Historical or active landfills,
- Dumping of materials,
- Remediation sites,
- Migrating contamination, and/or
- Any other environmentally sensitive records.

If no records are available, please let me know. I greatly appreciate your assistance.

**Beth A. Jarvis**

Senior Project Coordinator | Site Assessment & Remediation

**Environmental Consulting & Technology, Inc.**

1408 North Westshore Boulevard | Suite 115 | Tampa, Florida 33607

M: 813-289-9338 | D: 813-549-4338 | C: 813-857-5567



Virus-free. [www.avg.com](http://www.avg.com)

## Rebecca Powell

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**From:** kbritt@douglascountyks.org  
**Sent:** Wednesday, March 16, 2022 5:21 PM  
**To:** Beth Jarvis  
**Subject:** RE: FOI Request - Douglas County

Good afternoon, Beth.

Douglas County Consolidated Fire District No. 1 records do not show any calls for service for the locations requested. The Fire Chief added that he believes the area is primarily served by the City of Lawrence for fire protection.

According to the Douglas County Zoning and Codes Department, there have been no previous structures, dumping sites, or landfills, nor could they see anything of this nature on the current aerial. As for the underground storage tanks, hazardous materials, remediation sites, etc., these inquiries would have to be answered by the Kansas Department of Environment and Health.

Please let me know if I can be of further assistance. Thank you.

### Karrey Britt

Communications Specialist  
Freedom of Information Officer  
Douglas County, KS, Government  
1100 Massachusetts Street  
Lawrence, KS 66044  
Office: 785-330-2894  
Mobile: 785-393-4109  
Email: [kbritt@douglascountyks.org](mailto:kbritt@douglascountyks.org)  
*she/her/hers*

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**From:** Beth Jarvis <[bjarvis@ectinc.com](mailto:bjarvis@ectinc.com)>  
**Sent:** Monday, March 14, 2022 10:39 AM  
**To:** AD - Britt, Karrey <[kbritt@douglascountyks.org](mailto:kbritt@douglascountyks.org)>  
**Subject:** FOI Request - Douglas County

**\*\*\*This message came from outside of the douglascountyks.org domain - please follow best security practices and use extreme caution before opening attachments or links.\*\*\***

Hi Ms. Britt:

ECT is conducting an environmental site assessment for an area of land located in Douglas County, Kansas. A general site map and available parcel information is included for your reference.

As part of this assessment, we are required to interview local government agencies about any potential environmental concerns pertaining to the property and its vicinity. We are hoping to receive any available records for this area (via email preferred) pertaining to:

- Fires,
- Storage tanks,
- Releases or incidents involving hazardous substances and/or petroleum products,
- Historical or active landfills,
- Dumping of materials,
- Remediation sites,
- Migrating contamination, and/or
- Any other environmentally sensitive records.

If no records are available, please let me know. I greatly appreciate your assistance.

**Beth A. Jarvis**

Senior Project Coordinator | Site Assessment & Remediation

**Environmental Consulting & Technology, Inc.**

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M: 813-289-9338 | D: 813-549-4338 | C: 813-857-5567

## Appendix H

### Photographic Documentation

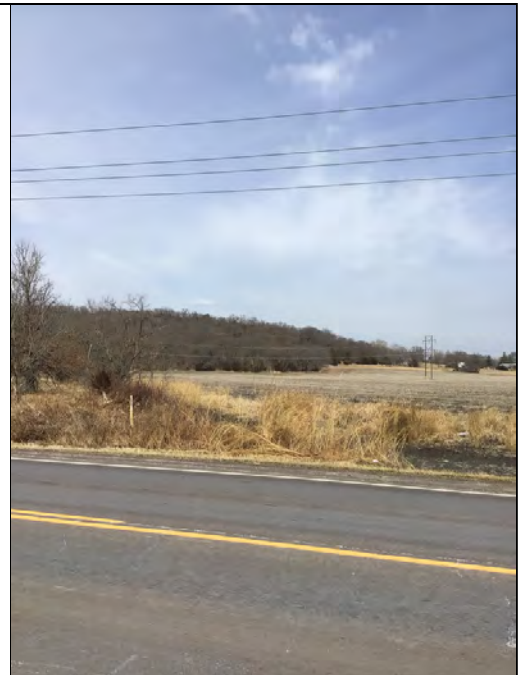
**Description**

VIEW OF NORTHERN PORTION OF SUBJECT PROPERTY FACING SOUTHEAST



**Description**

VIEW OF NORTHEASTERN PARCEL OF SITE FACING NORTH





**Description**

VIEW OF EASTERN-MOST PARCEL OF SITE FACING EAST



**Description**

VIEW OF SOUTHEASTERN PORTION OF SITE FACING NORTH



**Description**

VIEW OF SOUTHERN PORTION OF SITE FACING NORTH



**Description**

VIEW OF WESTERN PORTION OF SITE FACING EAST



**Description**

VIEW OF AG DRAIN'S WATER LEVEL CONTROL STRUCTURE



**Description**

VIEW OF AG DRAINAGE INFRASTRUCTURE OBSERVED ON CENTRAL-NORTHERN PORTION



**Description**

VIEW OF DRAINAGE SWALE LOCATED ON CENTRAL-WESTERN PORTION OF SITE FACING EAST



**Description**

VIEW OF DRAIN CULVERT BENEATH 1300 ROAD ON WESTERN PORTION OF SITE FACING EAST



**Description**

VIEW OF AG DRAIN TILE OUTLET AND AG POND LOCATED ON NORTH-CENTRAL PORTION OF SITE FACING WEST



**Description**

VIEW OF DRAINAGE LIFT-PUMP STATION (AND 550-GALLON FUEL AST) OBSERVED ON NORTH-CENTRAL PORTION OF SITE FACING NORTH



**Description**

CLOSE-UP VIEW OF 550-GALLON FUEL AST ASSOCIATED WITH POWER-GENERATED AG LIFT STATION FOR DRAINAGE SYSTEM



**Description**

VIEW OF SOUTHEASTERN PORTION OF SITE FACING NORTHWEST



**Description**

VIEW OF POLE-MOUNTED TRANSFORMERS OBSERVED ON EASTERN PORTION OF SITE



**Description**

VIEW OF TYPICAL NATURAL GAS INFRASTRUCTURE OBSERVED ON SITE



**Description**

VIEW OF TYPICAL FIBER CABLE INFRASTRUCTURE OBSERVED ON SITE (THIS VIEW ALONG SOUTHERN SITE BOUNDARY)



**Description**

VIEW OF WATER SUPPLY INFRASTRUCTURE OBSERVED ON WESTERN PORTION OF SITE





**Description**

VIEW OF TYPICAL ADJACENT PROPERTIES USED FOR AGRICULTURE



**Description**

VIEW OF NORTHERN ADJACENT AG LAND WOODED LOTS LOCATED ADJACENT OT THE NORTH FACING NORTH



**Description**

VIEW OF TYPICAL RESIDENTIAL DEVELOPMENT LOCATED ADJACENT TO THE NORTH OF SITE FACING NORTHWEST



**Description**

VIEW OF ELECTRICAL SUBSTATION LOCATED ADJACENT TO THE EAST OF THE SITE



**Description**

VIEW OF RAILROAD EASEMENT BISECTING NORTHEASTERN PORTION OF SITE FACING NORTHWEST



**Description**

VIEW OF MULTI-OPERATION COMMERCIAL DEVELOPMENT LOCATED ADJACENT TO THE EAST-NORTHEAST (FORMER FUELING STATION)



**Description**

VIEW OF RAILROAD EASEMENT AND COMMERCIAL DEVELOPMENT LOCATED ADJACENT TO THE EAST-NORHTEAST FACING NORTH



**Description**

VIEW OF TYPICAL RURAL RESIDENTIAL DEVELOPMENTS SCATTERED AS ADJACENTS



## Appendix I

### Resumes of Environmental Consultants

# > Rebecca M. Powell

## Due Diligence Practice Leader

Ms. Powell has more than ten years of professional experience in the environmental consulting industry. She is a specialist in environmental due diligence in support of nationwide wind, solar, and commercial/industrial developments. Ms. Powell has assessed more than two million acres of property for wind and solar development spanning dozens of states. As an Environmental Professional (EP), Ms. Powell has overseen the completion of multiple facets of due diligence (i.e., Phase I ESAs, Phase II subsurface investigations, desktop environmental reviews, and critical environmental issues analysis) for hundreds of wind and solar projects and thousands of commercial real estate transactions to date.



### PREVIOUS CAREER EXPERIENCE

#### **August Mack Environmental, Inc. | Glenview, IL & Livonia, MI**

Maintained multiple high-yield corporate accounts as primary consulting contact for lender, attorney, and developer clients. Managed personnel, budgeting, and completion of environmental due diligence and remediation services for hundreds of commercial, industrial, and renewable energy projects. Demonstrated proficiency and advised legal counsel regarding CERCLA liability protections and ASTM E1527 and ASTM E2247 standards and provided research and application of multiple state and federal regulations. Hosted continuing legal education (CLE) credit courses regarding wind and solar development processes, field techniques, State-specific remediation programs, and various ASTM Standards.

#### **AEI Consultants | Chicago, IL**

Managed the completion of environmental due diligence tasks for hundreds of commercial transactions and utility-scale wind/solar projects. Trained field staff with environmental sampling techniques and underground storage tank (UST) removal processes. Interpreted clients' risk tolerance levels and assisted project developers with de-risking proposed locations of infrastructure within areas of environmental impact while maintaining CERCLA liability protections.

#### **Atwell, LLC | Southfield, MI**

Assisted with several hundred Phase I ESAs consisting of individual parcels to multi-county area studies. Served as a field geologist for multiple remediation projects across the Midwest. Conducted soil, groundwater, and soil vapor sampling and directed subcontractors on investigation projects in Michigan, Indiana, and Ohio. Prepared Baseline Environmental Assessments for contaminated property in Michigan.

#### **LTBB Odawa Indians | Harbor Springs, MI**

Attended EPA, State and Tribal hosted trainings and conferences as part of the CERCLA 128(a) grant funding. Oversaw Phase I & II completion on trust property. Generated quarterly and annual progress reports for EPA review and provided opportunities for Tribal community outreach and education.

### EDUCATION

Graduate Coursework related to Sustainability & Natural Resource Management  
University of Connecticut  
B.S., Hydrogeology  
Central Michigan University

### CREDENTIALS/AFFILIATIONS

Member of Women of Renewable Industries and Sustainable Energy  
Member of American Institute of Professional Geologists  
Licensed Asbestos Inspector (MI & OH)  
40-hour OSHA HAZWOPER Certified

### AREAS OF EXPERTISE

All Appropriate Inquiries  
Landowner Liability Protections  
ASTM E2247 & E1527  
Environmental Sampling  
Groundwater Monitoring  
Risk-Based Corrective Action  
Remediation & Mitigation Programs  
Technical Reporting

# > Laura S. Campbell

## Senior Associate Scientist

Ms. Campbell has over 10 years of diverse environmental and natural resource consulting experience. She has conducted numerous site assessments, field surveys, and prepared comprehensive technical reports. She has a working knowledge in multiple disciplines, including natural resource management, site remediation, environmental/natural resource planning and permitting. Ms. Campbell has contributed to numerous hours of environmental field work, site reviews and report preparation for wetland, stream and floodplain assessments and delineations, Phase I & II ESAs, subsurface soil investigations, groundwater contaminant plume delineations, threatened/endangered habitat assessments, due diligence assessments, hazardous materials surveys, data analysis and renewable resource siting reviews.

### EXPERIENCE

#### **Various Utility / Fiber Optic Projects | Various Locations, MI**

Prepared desktop environmental features' reviews for several first network fiber optic projects throughout Michigan. Tasks included data and aerial interpretation, permitting research and issuance (state and local), mapping support, and completion of memoranda.

#### **Redevelopment Services | Clay Township, MI**

Assisted with wetland delineation report and regulatory status of an island site's natural resources. Drafted all components of Joint Permit Application submittal to MDEQ and USACE. Coordinated with development staff regarding development designs and siting, construction sequencing, and alternative analyses to minimize impacts to natural resources.

#### **Ecorse Road Redevelopment Project | Romulus, MI**

Assisted with wetland delineation report and regulatory status of site's natural resources. Drafted all components of Joint Permit Application submittal to MDEQ. Coordinated with development staff regarding development design and siting, construction sequencing, and alternative analyses to minimize impacts to natural resources.

#### **Wind Project | Gratiot County, MI**

Prepared an Environmental Due Diligence Review for a proposed wind project in Gratiot County, Michigan. Tasks included, desktop review and analysis of environmental data, coordination of agency correspondence, and report preparation.

#### **Wind Site Characteristic Study | Muskingum County, OH**

Assisted with site characteristic study development and review, compliant with U.S. Fish and Wildlife Service (USFWS) Tier II Guidelines for Wind Development for a proposed wind farm development in Ohio.

#### **Solar Critical Issues Analysis (CIA) | Branch County, MI**

Assisted with CIA development and review for the proposed solar farm development in Branch County, Michigan.

### EDUCATION

B.S., Environmental Science (Resource Development), Michigan State University

### CREDENTIALS

United States Army Corps of Engineers (USACE) Wetland Delineation Training

Michigan Department of Environmental Quality (MDEQ) Stormwater Construction Site Operator Training

Michigan Asbestos Building Inspector Training

OSHA HAZWOPER 40-Hour & 8-Hour Refresher Trainings

### AREAS OF EXPERTISE

Wetland Delineation & Stream Assessments

Environmental and Natural Resources Impact Evaluations

Phase I & II Environmental Site Assessments

Due Diligence Activities

Local Municipal, State & Federal Permitting Support

Threatened/Endangered Species Habitat Assessments

Asbestos Evaluations

Health and Safety Plans

# > Laura S. Campbell

Senior Associate Scientist

Page 2

## **Solar Critical Issues Analysis (CIA) | Ingham County, MI**

Assisted with CIA development and review for the proposed solar farm development in Ingham County, Michigan.

## **Critical Issues Analysis (CIA) | Oakland County, MI**

Assisted with CIA development and review for the proposed solar farm development in Oakland County, Michigan.

## **Environmental Services | Various Sites | Midwest USA**

Assisted with wetland delineation reporting and regulatory status of site's natural resources.

## **Natural Resource Permitting Support | Oakland County, MI**

Drafted formal Joint Permit Application submittal to MDEQ for 35-acre site in White Lake Township, Oakland County, Michigan. Coordinated with development staff regarding development design and siting, construction sequencing, and alternative analyses to minimize impacts to natural resources. Secured MDEQ permitting for the project.

## **Natural Resource Permitting Support | Oakland County, MI**

Drafted formal Joint Permit Application submittal to MDEQ requirement for 10-acre site in Waterford Township, Oakland County, Michigan. Coordinated with development staff regarding development design and siting, construction sequencing, and alternative analyses to minimize impacts to natural resources. Secured MDEQ permitting for the project.

## **Natural Resource Permitting Support | Oakland County, MI**

Drafted formal Joint Permit Application submittal to MDEQ requirement for lakefront redevelopment site on South Commerce Lake, Oakland County, Michigan. Coordinated with development staff regarding development design and siting, construction sequencing, and alternative analyses to minimize impacts to natural resources. Secured MDEQ permitting for the project.

## **PREVIOUS CAREER EXPERIENCE**

### **Numerous Electric Transmission Line | Various Locations, MI**

The projects involved the rebuild and/or construction of several 138-kV to 345-kV-sized transmission lines of over 250 cumulative miles of existing utility corridors within various counties of Michigan. Ecological services performed included desktop reviews, aerial interpretations, on-site wetland, stream, floodplain and natural communities, assessments/delineations, species habitat assessments, report preparations, species habitat assessments, and preparation of local soil erosion sediment control (SESC) permitting and Joint Permit Application natural features' permit applications.

### **Wind Energy Facility | Tuscola County, MI**

Assisted with Preconstruction ecological analysis and studies for a new wind energy facility in Tuscola County, Michigan. The initial project scope included a 64,000-acre evaluation area for the siting of turbine locations. Services included natural resource surveys and reports, wetland delineations, and wetland, stream, and floodplain permitting.

### **Numerous Proposed Wind Facilities | Various Locations, MI**

Prepared in-depth critical issues analyses for multiple siting purposes of proposed wind energy facilities involving several thousands of acres each in various counties in Michigan and Indiana. Tasks included desktop reviews, data analysis, permitting support, and report preparation.

### **Critical Issues Analyses at Various Solar Power Sites | Ohio, Pennsylvania & Texas**

Assisted with the preparation of critical issues analysis brief reports and permitting matrixes for potential solar energy facilities in Ohio, Pennsylvania, and Texas. Potential issues reviewed and ranked included all aspects of site development from local zoning issues to federal NEPA and Clean Water Act requirements.

### **Phase I Environmental Site Assessments (ESAs) | Multiple Vacant, Residential, Commercial and Industrial Properties | Throughout Michigan and the USA**

Conducted numerous Phase I Environmental Site Assessments which includes performing site reconnaissance, research of government and historical records, data interpretation and full authoring of issued Phase I ESA reports. Phase I ESA end-users have ranged from private individuals to national recognized lending institutions, as well as commercial and industrial entities.



# > Laura S. Campbell

Senior Associate Scientist

Page 3

## **Numerous Subsurface Investigation Projects | Numerous Clients | Various Locations, Michigan**

Conducted numerous surface and subsurface studies involving site investigation, characterization, and remediation for multiple commercial/industrial properties throughout Michigan. Investigative activities included developing site inspections, implementation of drilling programs and sampling plans, contractor oversight, data interpretation, and authoring and issuance of reports. Also assisted with sites requiring monthly, quarterly and semi-annual groundwater and domestic well monitoring activities, some exhibiting known groundwater contaminant plumes extending off-site and into residential areas.

## **Due Diligence Activities | Numerous Clients | Michigan**

Conducted and prepared multiple baseline environmental assessments (BEAs), and documentation of due care compliance for several industrial properties throughout Michigan in support of property acquisition and redevelopment. Also assisted with several Brownfield Redevelopment activities including plan preparation, project site research, data analysis and cost estimates. End users have ranged from municipal governments to residential developers.

## **Asbestos Inspections | Numerous Clients | Michigan**

Assisted in and/or conducted over 40 asbestos inspections within the State of Michigan. The inspections ranged from cursory investigations to modified surveys for projects ranging in size from single-family residences to commercial/industrial properties.

## **Health and Safety Plans (HASPs) | Numerous Clients**

Assisted in plan preparation and provided implementation consulting for several site-specific HASPs on environmentally impacted project sites. End users for the plans have included developers, contractors, and other consulting firms.

## **Grants & Executive Assistant | American Legacy Foundation | Washington, D.C.**

Provided special assistance to the President including speech drafting/editing, media interviews, presentations and all correspondence to the board of directors. Reviewed, tracked and approved program grant activities such as proposals, budgets, expenditures and contractual grantee compliance.

## **Development Associate | National Park Foundation | Washington, D.C.**

Duties included grant writing, event planning, preparation of marketing and fundraising materials, donor database management, product launch, prospect research and proposals, foundation grant writing, liaison to executive team/board of directions/fund trustees and managing intern team.

## **Legislative Intern | U.S. Senate-Office of John Kerry | Washington, D.C.**

Assisted with various aspects of federal public policy promulgation. Specific tasks included: policy research focused on natural resources, energy and public health; attending, monitoring and reporting on floor hearings and committee briefings; monitoring of pending legislation and policy adoptions; constituent correspondence, and staffed/prepared political events.

# > Sam Remmert

## Associate Scientist I, Natural Resources

Mr. Remmert received a B.A. in Biochemistry from the University of Kansas and a master's degree in ecology, evolutionary and organismal biology from Eastern Michigan University. Prior to receiving his master's, he worked at the Biodiversity Institute in the Ecology and Evolutionary Biology lab, as well as in the Entomology lab. Following receipt of his undergraduate degree, he began at SureTech labs, an agrochemical company, running mineral analysis. His focus has been on wetland ecosystem conservation. Mr. Remmert has also conducted field surveys and implemented habitat restoration projects for the Michigan Nature Association and Grand Traverse Regional Land Conservancy.



### EXPERIENCE

#### **Soldier Creek PCMM | Soldier Creek Wind, LLC | Corning, KS**

Collect data pertaining to bird and bat mortalities caused by the wind turbines.

#### **Dunns Bridge Solar | Dunns Bridge Solar Center, LLC | Indiana**

Avian nest surveys. Identify and mark boundaries for protected habitat to be avoided during construction.

#### **Crowned Ridge II | Crowned Ridge II Wind, LLC | South Dakota**

Storm Water Pollution Prevention Plan inspections and light maintenance of Best Management Practices to ensure compliance with state permits.

### PREVIOUS CAREER EXPERIENCE

#### **C.Papuensis Phylogenetics | Kansas University Ornithology Lab | Lawrence, KS**

Study Southeast Asian bird populations by sequencing the DNA of several species related to *Coracina papuensis* to better construct its phylogenetic tree. Perform DNA extractions, run PCRs and analyze data using Sequencer.

#### **Hydrophilidae Phylogenetics | Kansas University Entomology Lab | Lawrence, KS**

Assist graduate students to more accurately construct the water beetle phylogenetic tree by running PCRs for genetic markers (CAD, H3, 16S) and using GENEious to analyze/clean up sequences.

#### **Mineral Analysis | SureTech Labs & Land O'Lakes | Indianapolis, IN**

Work with a team of technicians running mineral analysis on soil and plant tissue samples using ICP spectroscopy and near infrared resonance.

#### **Field Surveying | Grand Traverse Regional Land Conservancy | Torch Lake, MI**

Site management working with a small team to conduct species surveys and remove invasive species.

#### **Graduate Teaching Assistant for Introductory Biology Lab | Eastern Michigan University | Ypsilanti, MI**

Teaching an introductory Biology Lab, as well as assisting other TAs with their classes and students.

### EDUCATION

M.A., Ecology, Evolutionary & Organismal Biology

Eastern Michigan University

B.A., Biochemistry

University of Kansas

### AREAS OF EXPERTISE

Wetland Delineation

Field Surveying

Invasive species removal

PCR

Gel Electrophoresis